TRANSPORT 2040

Las Cruces Metropolitan Planning Organization

2010 METROPOLITAN TRANSPORTATION PLAN

2010 - 2040

METROPOLITAN PLANNING ORGANIZATION

LAS CRUCES MESILLA DOÑA ANA COUNTY

June 9, 2010

LAS CRUCES METROPOLITAN PLANNING ORGANIZATION

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Acknowledgements

MPO staff would like to thank the former Mayor of the Town of Mesilla, Michael Cadena, for nearly 20 years of service on the MPO Policy Committee. His leadership provided continuity and stability across many changes in the MPO landscape.

MPO Staff would also like to thank Las Cruces City Councilors Dolores Archuleta and Gil Jones and Mesilla Trustee Carlos Arzabal for their tireless work on the MPO Policy Committee. Although they had moved on prior to the adoption of this document, their direction was felt throughout the development of this plan.

Special Thanks

MPO staff would like to thank two staff people from the MPO advisory committees who provided significant contributions to Transport 2040, but had moved on prior to adoption: Tim Sanders, Bureau of Land Management, and Paul Howard, Doña Ana County Planning.

Finally, MPO staff would like to thank various members of the community and government staff for providing noteworthy assistance to us during our public input, planning, and editing processes:

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Dennis Quintana, Doña Ana County
America Terrazas, Del Cerro Community Center
Adam Ochoa, City of Las Cruces
Susan Lowell, City of Las Cruces
Sasha King, Community Volunteer

Photos

Cover—Top to bottom: Las Cruces City Hall, Mesilla Town Hall, Doña Ana County Government Complex
Title Page: Transportation mural

LAS CRUCES METROPOLITAN PLANNING ORGANIZATION

RESOLUTION NO. 10-08

A RESOLUTION ADOPTING THE 2010 METROPOLITAN TRANSPORTATION PLAN (TRANSPORT 2040)

The Las Cruces Metropolitan Planning Organization (MPO) Policy Committee is informed that:

WHEREAS, the Las Cruces Metropolitan Planning Organization (MPO) is the transportation planning agency for the City of Las Cruces, the Town of Mesilla, and the urbanized area for Dona Ana County; and

WHEREAS, the United States Code 23 §450.322, requires that all MPO's throughout the country adopt a minimum 20-year Metropolitan Transportation Plan for their respective jurisdictions; and

WHEREAS, the Las Cruces MPO previously adopted a long range transportation plan in 2005 and has conducted extensive review and involved the public and other governmental agencies to prepare this 2010 Metropolitan Transportation Plan; and

WHEREAS, the 2010 Metropolitan Transportation Plan represents a continuous transportation planning effort through identified goals, objectives and policies for all modes of transportation and being financially constrained within the 30-year planning horizon; and

WHEREAS, the MPO Staff, as part of its public involvement process, held public input hearings in three phases from February 23, 2009 to May 18, 2010 and held fifteen stakeholder meetings with various organizations from August 21, 2008 to May 11, 2010 in order to solicit input about the 2010 Metropolitan Transportation Plan and the MPO Staff received numerous public comments during the comment period between April 1 and May 21, 2010, related to the 2010 Metropolitan Transportation Plan; and

WHEREAS, the 2010 Metropolitan Transportation Plan was recommended for approval by the Technical Advisory Committee at their meeting of June 3, 2010;and

WHEREAS, the 2010 Metropolitan Transportation Plan was recommended for approval by the Bicycle Facilities Advisory Committee at their meeting of May 26, 2010.

NOW, THEREFORE, be it resolved by the Policy Committee of the Las Cruces Metropolitan Planning Organization:

(I)

THAT the Las Cruces Metropolitan Planning Organization hereby adopts the 2010 Metropolitan Transportation Plan, known as Transport 2040 as shown in Exhibit "A" attached to this Resolution.

(II)

THAT the Las Cruces MPO Staff shall maintain a file of the actual public comments received for the 2010 Metropolitan Transportation Plan in the offices of the MPO.

(III)

THAT the MPO Staff and the Committees of the MPO are hereby directed to utilize existing documents and information for the continuous implementation of transportation plans and projects, including the annual Transportation Improvement Program (TIP) and Unified Planning Work Program (UPWP) and all ongoing or new plans and projects identified within the 2010 Metropolitan Transportation Plan.

(IV)

THAT the MPO Staff is hereby authorized to administratively update the 2010 Metropolitan Transportation Plan for spelling and grammatical errors, mapping errors or updates, the removal of identified projects as they are implemented and/or completed, or to reflect the implementation of projects on various data, graphics, maps, and charts contained within the Plan.

(V)

THAT the MPO Staff is hereby authorized to do all deeds necessary in the accomplishment of the hereinabove.

DONE and **APPROVED** this 9th day of June , 2010.

APPROVED:

Chair

Motion By:	Gill Sorg
Second By:	Nora Barraza
VOTE:	
Chair Thomas	Yes
Vice Chair Krahling	Yes
Councilor Pedroza	Yes
Councilor Sorg	Yes
Commissioner Duarte-Benavidez	Yes
Commissioner Perez	Yes
Mayor Barraza	Yes
Trustee Bernal	Abs
Trustee Flores	Yes

ATTEST:

Recording Secretary

APPROVED AS TO FORM:

Interim City Attorney

TRANSPORT 2040 OUTLINE

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1 Metropolitan Planning Organization Introduction

Brief History of MPOs and Transportation Legislation

Although MPO-like organizations have existed since the 1950's in some large cities like Chicago and New York, the history of MPOs begins in 1962 with the passage of the Federal Aid Highway Act. This legislation stated that metropolitan statistical areas (MSA) with populations larger than 50,000 must form organizations to review transportation needs at the regional level, rather than narrowly focusing on local issues. Initially, 224 MPOs were created by the mid-1960s. In 1973, MPOs began receiving funds to carry out the planning activities outlined in the federal highway legislation. Due to the trend of increasing urbanization, there are now at least 385 MPOs in the United States.

The next leap forward for MPOs came with the introduction of the Intermodal Surface Transportation Efficiency Act of 1991, or ISTEA. ISTEA created a structure under which funding for MPOs was increased, the metropolitan planning process was strengthened, the public and stakeholder participation process was required, and multi-modal solutions were recommended.

The next step in the progression of transportation legislation occurred with the adoption of the Transportation Equity Act for the 21st Century, or TEA-21. This bill continued guaranteeing levels of federal funding for highway and transit programs, built up safety programs, and invested in technology research and applications.

The current transportation measure is called the Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). It was signed into law on August 10, 2005. SAFETEA-LU increased funding for MPOs and focus on intermodal and multi-modal transportation needs, safety, and security. It also specifically outlined the need for integrated management and operation of transportation systems and facilities. This act expired on September 30, 2009. A new transportation bill is expected within 12 to 18 months of the adoption of Transport 2040.

A detailed discussion of the history of MPOs can be found at the New Jersey Transportation Planning Authority website: http://www.njtpa.org/Pub/report/hist_mpo/default.aspx.

Las Cruces Metropolitan Planning Organization Framework

The Las Cruces Metropolitan Planning Organization (MPO) is a federally-required, multi-jurisdictional planning agency responsible for transportation planning in the City of Las Cruces, the Town of Mesilla, and central Doña Ana County. While the majority of funding for MPOs is provided by the federal government, the local entities are required to contribute through a monetary match. The Las Cruces MPO was created in 1982 by the Governor after the metropolitan area exceeded a population of 50,000 in 1980. In general, the MPO was established to:

- direct multi-modal transportation planning,
- establish regional project priorities, and
- maintain eligibility to receive federal funds for the area transportation systems.

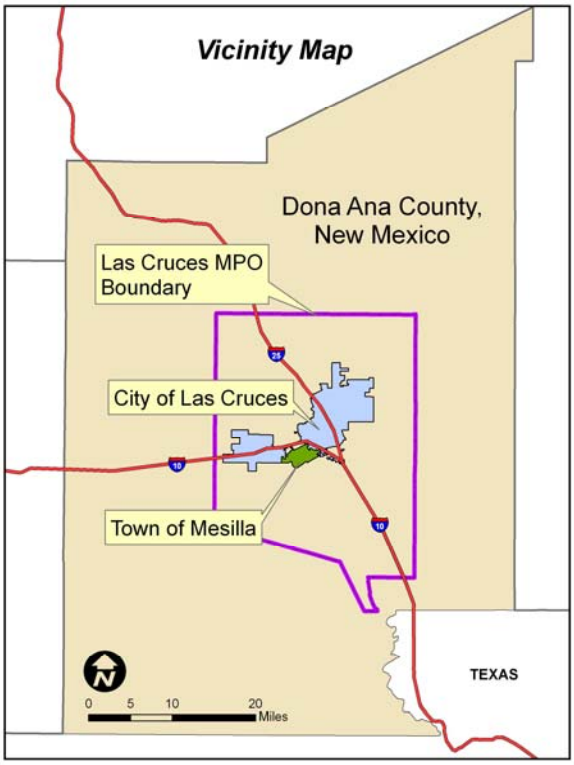


FIGURE 1-1
Las Cruces MPO Boundary and Vicinity

Joint Powers Agreement (JPA) and Boundary

The Las Cruces MPO is created under a joint powers agreement (JPA) between the New Mexico Department of Transportation (NMDOT), City of Las Cruces, Town of Mesilla, and Doña Ana County. The current JPA was approved in December 1989 and an update of the document is currently the subject of discussion. An update should cover issues such as the composition of the Policy Committee, opportunities for cooperation among the area entities, and equitable cost-sharing among the local jurisdictions. Also, the MPO will consider a name change to better reflect the regional nature of transportation and provide a better distinction between the MPO and City organizations. The name under consideration is Mesilla Valley MPO.

The boundary of the Las Cruces MPO encompasses central Doña Ana County, extending from Radium Springs in the northwest to Chamberino and Berino in the south, and includes the City of Las Cruces, the Town of Mesilla, and villages in Doña Ana County such as Organ, Mesquite, and Vado. The Las Cruces MPO is located in the southeast corner of New Mexico Department of Transportation District One. The State of New Mexico is divided into six NMDOT districts. Each district is represented by one Transportation Commissioner. District One consists of Doña Ana, Sierra, Socorro, Luna, Grant, and Hidalgo counties. Figure 1-1 shows the current MPO boundary.

Las Cruces MPO Structure

The Las Cruces MPO consists of a Policy Committee comprised of nine elected officials: three City of Las Cruces Councilors, three Doña Ana County Commissioners, and three Town of Mesilla Trustees. The chairs of each entity (Mayor of Las Cruces, Mayor of Mesilla, and County Commission Chair) appoint members from their respective boards to serve on the Policy Committee. The Policy Committee makes decisions regarding regional transportation planning and project priorities.

The Policy Committee is supported by two advisory committees: the Technical Advisory Committee (TAC) and the Bicycle and Pedestrian Facilities Advisory Committee (BPAC). Technical Advisory Committee members are staff members from various agencies listed in the chart below. Staff members are appointed by the directors of their departments. The Bicycle and Pedestrian Facilities Advisory Committee is made up of two groups: citizen representatives and staff members. Citizen representatives apply for and receive appointment through the Policy Committee. Staff members are appointed by the directors of their departments. Figure 1-2 illustrates the MPO Committee Structure.

The MPO is supported by a permanent full-time staff of a senior planner, two planners, a planning technician, and two part-time co-ops.

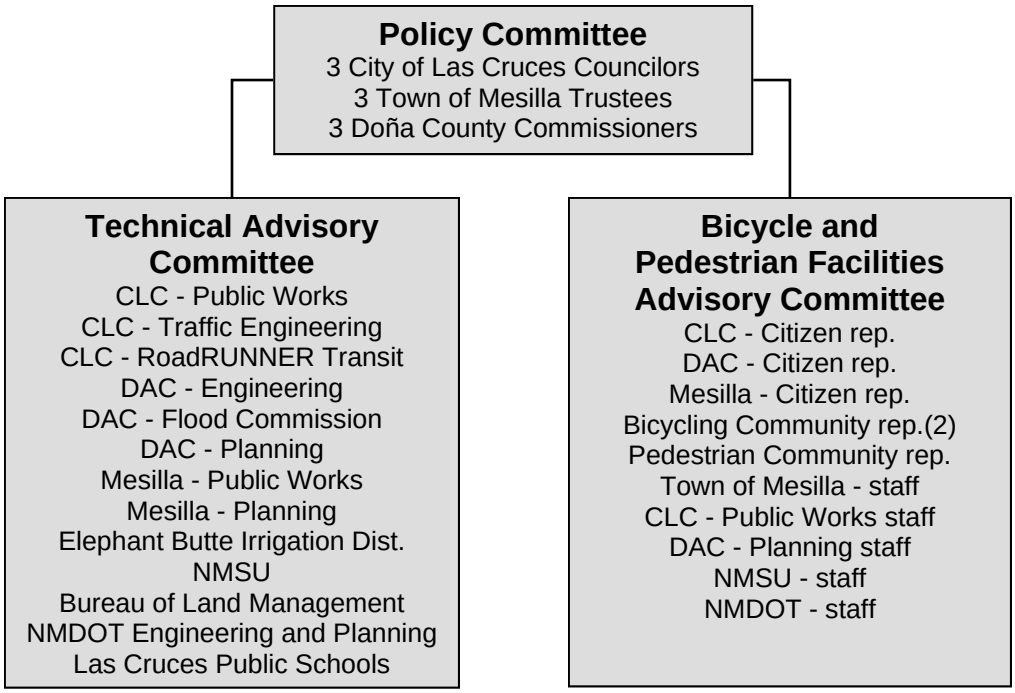


FIGURE 1-2
Las Cruces MPO Committee Structure

Core MPO Functions

There are five core functions of an MPO (The framework to carry out these core functions is detailed in the federal transportation regulations):

- Establish a setting: Establish and manage a fair and impartial setting for effective regional decision-making in the metropolitan area.
- Identify and evaluate alternative transportation improvement options: Use data and planning methods to generate and evaluate alternatives. Planning studies and evaluations are included in the Unified Planning Work Program or UPWP.
- Prepare and maintain a Metropolitan Transportation Plan (MTP): Develop and update a long-range transportation plan for the metropolitan area covering a planning horizon of at least twenty years that fosters (1) mobility and access for people and goods, (2) efficient system performance and preservation, and (3) good quality of life.
- Develop a Transportation Improvement Program (TIP): Develop a short-range (four-year) program of transportation improvements based on the long-range transportation plan; the TIP should be designed to achieve the area's goals, using regulating, operating, management, and financial tools.
- Involve the public: Actively engage the general public and other affected stakeholders in the four essential functions listed above. Figure 1-3 shows members of the public actively involved in the transportation planning process.

FIGURE 1-3
Public Input Meeting

Required MPO Documents

Federal transportation regulations outline four documents that MPOs are required to create, implement, and maintain in order to carry out the five core MPO functions. Figure 1-4 illustrates the relationships that exist between each of the documents. These are as follows:

Public Participation Plan (PPP)

The Public Participation Plan (PPP) guides public involvement activities conducted by the MPO. The PPP contains the goals for public involvement, as well as specific public involvement techniques and procedures. The MPO uses the public involvement processes to develop all of the other documents listed below and carry out many of the tasks listed in the Unified Planning Work Program.

Metropolitan Transportation Plan (MTP)

The Metropolitan Transportation Plan (MTP) is the long range transportation plan that guides planning, construction, operation and maintenance of an integrated, multi-modal transportation network. The MTP sets the regional transportation vision and priorities through a variety of principles and strategies providing a foundation for all of the tasks and projects delineated in the UPWP and TIP. MPOs that are not designated as transportation management areas, like Las Cruces MPO, update their MTPs every five years. This document, entitled TRANSPORT 2040, is the Las Cruces MPO's 2010 Metropolitan Transportation Plan.

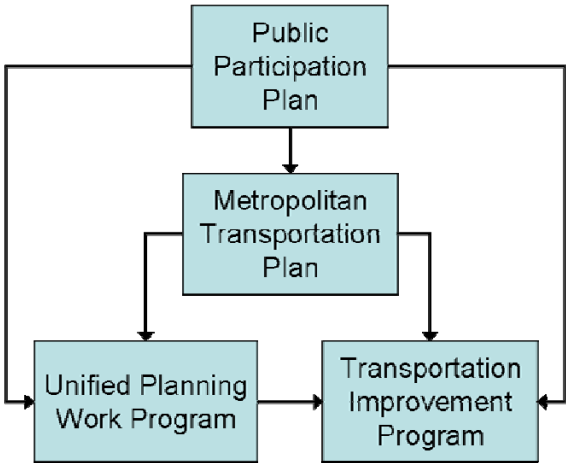


FIGURE 1-4
MPO Documents

Unified Planning Work Program (UPWP)

The Unified Planning Work Program (UPWP) is a biannual document that outlines transportation planning activities to be conducted by MPO staff as well as processes that MPO staff will participate in, but not oversee. The UPWP also includes a budget, allocating staff time and money toward accomplishing the tasks. The UPWP must be in compliance with the MTP.

Transportation Improvement Program (TIP)

The Transportation Improvement Program (TIP) is a short-range, financially constrained list of federally funded and/or regionally significant transportation projects determined by the Policy Committee. The list of projects is created in cooperation with residents, local governments, and the New Mexico Department of Transportation (NMDOT). The TIP must be in compliance with the MTP. The Statewide Transportation Improvement Program (STIP) includes, without alteration, all of the TIPs from the MPOs and the transportation projects from the rural planning organizations throughout the State. The STIP is maintained by the NMDOT.

Metropolitan Transportation Plan Purpose and Process

One of the core MPO functions is the preparation and maintenance of a metropolitan transportation plan (MTP). The MPO is required by federal regulations to update its MTP every five years. (U.S.C. 23 §450.322.c) The need for regular updates becomes clear when analyzing the evolving conditions in our region.

As our metro area continues to grow and accommodate a diverse population, it is necessary that we plan accordingly. Because of the warm, dry climate in our area and our unique local community, many people are choosing to relocate and/or retire to this area. Las Cruces has been ranked by Forbes magazine as one of the best small metro areas for business and careers. In addition, Las Cruces has a university and community college that enroll over 25,000 students per year, further adding to the population growth. As the population grows, the demands placed on the transportation system and the transportation modes people choose will significantly change.

The planning and public input processes conducted by the MPO are also required to comply with Title VI of the Civil Rights Act of 1964 (U.S.C. 23 §450.334.a.3) and the Environmental Justice Orders. The goal of Title VI/Environmental Justice is to ensure that people have access to meaningful participation and equitable distribution of the benefits and burdens of transportation services. Our region must support transportation options for all users. The diverse list of users includes low and moderate income populations, students, seniors, and the disabled, as well as the influx of new residents. Because the MPO area covers multiple jurisdictions the transportation system requires examination on a regional scale, both in light of the significant growth that has occurred over the last 10 to 20 years and the expected future growth.

The purpose of TRANSPORT 2040, is to:

- Identify current transportation needs and challenges through public and stakeholder input and technical analyses
- Use the analyses derived to make future projections and evaluate options
- Prioritize short and long-term strategies for maintaining and enhancing the area's transportation system and
- Develop implementation strategies and performance measures that will help achieve the desired results.

FIGURE 1-5
Public Participation Process for Transport 2040 Plan Development

❷ Existing Conditions and Future Scenarios

Introduction

Government's role, according to the New Mexico State Constitution, is to enact laws protecting public peace, health, and safety. Transportation and land use policies, codes, and practices have a major impact on the creation of healthy and livable communities thereby contributing to public health and safety. A variety of issues – from air quality to traffic safety for all modes - impact people's daily lives and their mobility opportunities.

One of the first steps to consider when developing a transportation plan is gathering information on existing conditions. It is imperative to understand the existing socio-economic, land use, environmental, and transportation conditions of a region before forecasting potential future conditions and deriving implementation strategies. In this chapter, current characteristics and future scenarios in the Mesilla Valley are covered as they relate to the following topics:

- Population Growth, Employment, and Location Efficiency
- Health and Safety
- Multimodal Transportation
- Regional Movement, Freight Corridors, and Security
- Natural and Cultural Resources

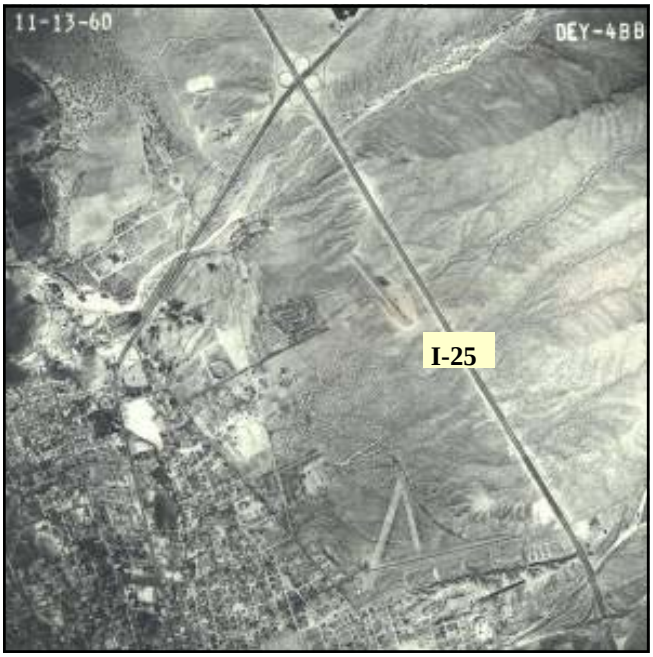
In this chapter, the discussion of the above topics will include a brief examination of national and state-wide studies and trends, and a more detailed discussion of the potential impacts of existing local and regional conditions. The identification of existing conditions and particularly future scenarios were developed hand in hand with the Vision 2040 long-range planning process (a joint comprehensive planning process between the City of Las Cruces and Doña Ana County).

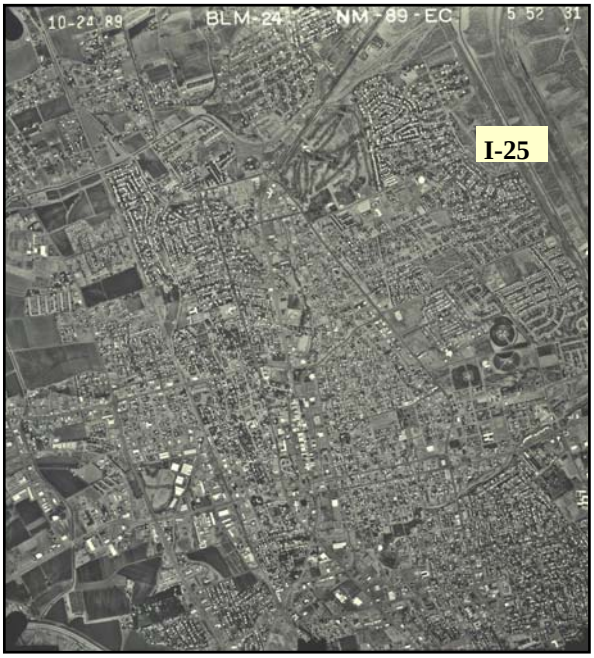
Characteristics of the MPO Region

The MPO region is located in south-central New Mexico. The Las Cruces metropolitan area is among the fastest growing areas in the State of New Mexico. Many people are choosing to relocate and/or retire to the Las Cruces region because of the sunny (average of 330 days of sunshine) and dry climate, and the unique local community. The Las Cruces metropolitan area has been ranked by several national organizations as one of the top places to retire and one of the top places for small metro areas for business. These rankings have been awarded by organizations such as the American Association of Retired Persons (AARP), Milken Institute, *Forbes*, and *Money Magazine*.

The Las Cruces Public School District is the second largest in the state, enrolling around 24,000 students. The Gadsden School District has 26 schools located in the southern portion of Doña Ana County that serve more than 14,000 students. Together, New Mexico State University (NMSU) and Doña Ana Community College (DACC) enroll over 25,000 students a year.

The City of Las Cruces is the second largest city in the state of New Mexico in terms of size and population. Many growth-related opportunities and challenges exist that require coordination among a variety of agencies and jurisdictions.





FIGURES 2-1 and 2-2
1960 and 1989 Aerial Photographs of Central Las Cruces illustrating almost 30 years of growth.

Population Growth

Because the MPO area covers the Town of Mesilla, the City of Las Cruces, and central Doña Ana County, the transportation system must be examined on a regional level, both in light of the significant population growth that has already occurred and the expected future growth.

Las Cruces experienced a 23.7% increase in population between 2000 (74,267) and 2008 (91,865). In Doña Ana County, there was a 15.4% increase in population between 2000 (174,682) and 2008 (201,603). In the Las Cruces MPO boundary area, the population was approximately 165,000 in 2008[1].

Figure 2-3 shows the projected population growth from 2008 to 2040 for the MPO Area, Doña Ana County (DAC), the City of Las Cruces, and some smaller communities in the region. According to the graph, between 2018 and 2023 the population will reach about 200,000 people for the communities within the MPO boundary area. Based on current federal transportation regulations, exceeding a population of 200,000 will establish the Las Cruces MPO as a Transportation Management Area.

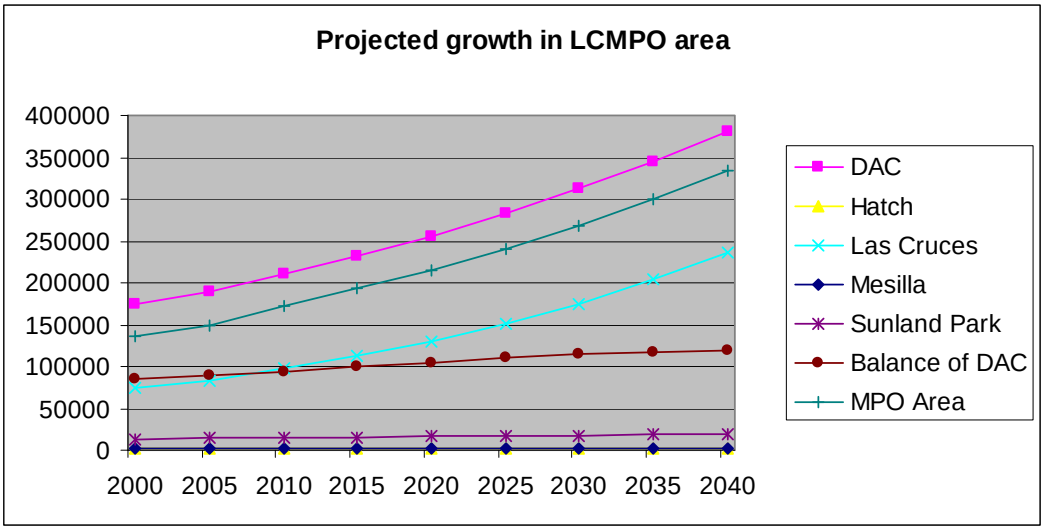


FIGURE 2-3
Projected Population Growth in Las Cruces MPO Area

The population projection represented by the MPO Area line is a combination of the projections for the City of Las Cruces, the Town of Mesilla, and some of the smaller unincorporated communities. The process for calculating the MPO Area projection required looking at the historical trends of some of the smaller communities within the MPO boundaries, and then applying individual growth rates based on those trends. Figure 2-4 shows the individual calculations used to create Figure 2-3, as well as the population growth estimates for the smaller communities within the MPO boundary.

A **Transportation Management Area** (TMA) incurs additional requirements beyond those of smaller urbanized areas:

- Transportation plans must updated every 4 years through a continuing and comprehensive transportation planning process carried out by the MPO in cooperation with the State and transit operators.
- The transportation planning process must include a Congestion Management System (CMS).
- The FHWA and the FTA must certify the transportation planning process no less often than once every three years.
- At a minimum, the policy board must include local elected officials, appropriate state officials and officials from public transportation agencies, and operators of major transportation modes.

Source: http://www.fhwa.dot.gov/planning/census/faqa2cdt.htm#q30

[1] Projected growth in LCMPO area was compiled using US Census estimates as a base and growth projected using historical residential building permit activity to locate population. Separate growth rates were used for each incorporated municipality within DAC. Unincorporated census-designated places were assumed to maintain their proportion of county population.

Projected Population Growth in Las Cruces MPO Area				
Graph Items	**2000**	**2010**	**2015**	**2040**
Doña Ana County	175013	209871	231714	380152
Hatch village	1657	1676	1709	1889
Las Cruces city	73577	97095	112560	235676
Mesilla	2220	2245	2302	2608
Sunland Park city	13334	14812	15568	19964
Balance of DAC	84225	94042	99575	120015
Other Items	**2000**	**2010**	**2015**	**2040**
DAC Population in El Paso MPO	13334	33115	34605	40899
Census-designated Places (CDPs)*				
Anthony	7904	8700	9049	9951
Chaparral	6117	6733	7003	7701
Doña Ana	1379	1518	1579	1736
Mesquite	948	1044	1085	1194
Radium Springs	1518	1671	1738	1911
Rincon	220	242	252	277
Salem	795	875	910	1001
Santa Teresa	2607	2870	2985	3282
University Park	2732	3007	3128	3440
Vado	3003	3306	3438	3781
White Sands	1323	1456	1515	1666
MPO Area Total	**136535**	**172506**	**192723**	**334420**

* Are included in "Balance of DAC"

FIGURE 2-4
Table of Projected Population Growth in Las Cruces MPO Area
CDPs added to the Las Cruces MPO area in 2005 were Radium Springs and Vado. The CDPs of Anthony, Chaparral, and Santa Teresa were added into the El Paso MPO in 2005.

Senior Population Growth

In 2005, the U.S. Census Bureau released projections about which states will grow the fastest through the year 2030. A particularly striking aspect of these projections is the increasing population of people over the age of 65. In fact, beginning in 2011 this age cohort will grow at a faster rate than the total population growth rate in every single state, with the greatest increases being in southwestern states.

The same U.S. Census Bureau projections showed that, in New Mexico, the population of people over 65 years of age is expected to increase by 141% from 1995 to 2025. As a result, New Mexico ranks as having the 10th fastest growing senior population in the United States. Figure 2-5 shows projected growth rates of each age cohort as a percent of total population in Doña Ana County. The graph indicates that growth rates for most of the age cohorts remain steady, but the age cohort of 65+ significantly increases to make up about 17% of the total population by 2025.

Households

Nationally, household trends include more single households and households without children; this is in part due to the increase in the senior population. Figure 2-6 shows

these past trends and future projections. While most national researchers agree that single-family detached housing will remain the preference for most home buyers, a dramatic change in housing demand is expected between large lot and small lot developments where smaller lots will be preferred. These trends will be accompanied with an increased desire for services and public transportation located near housing.

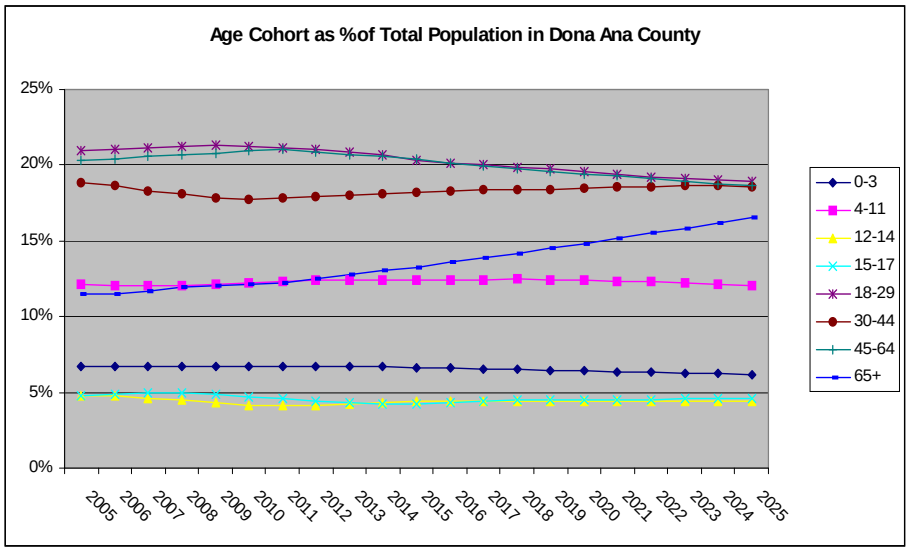
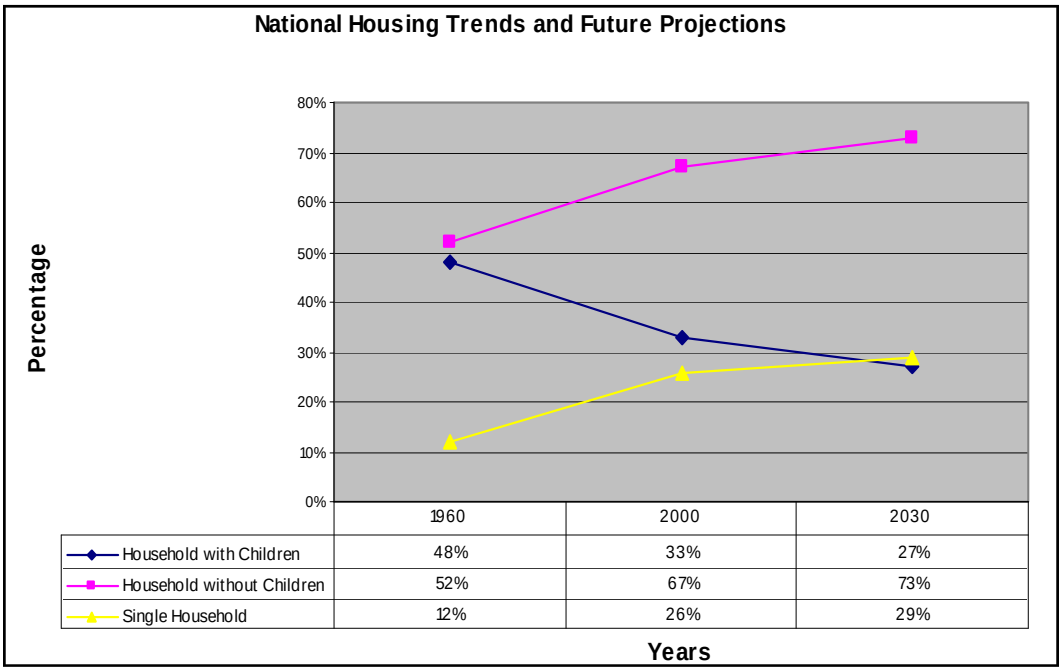


FIGURE 2-5
Age Cohort as a Percentage of Total Population in Doña Ana County

An analysis completed through the Vision 2040 planning process has shown a similar trend toward smaller lots in Doña Ana County (See Figure 2-7, page 12).



	1960	2000	2030
Household with Children	48%	33%	27%
Household without Children	52%	67%	73%
Single Household	12%	26%	29%

FIGURE 2-6
National Housing Trends and Future Projections
Source: Arthur C. Nelson, PhD, FAICP, Metropolitan Institute @ Virginia Tech

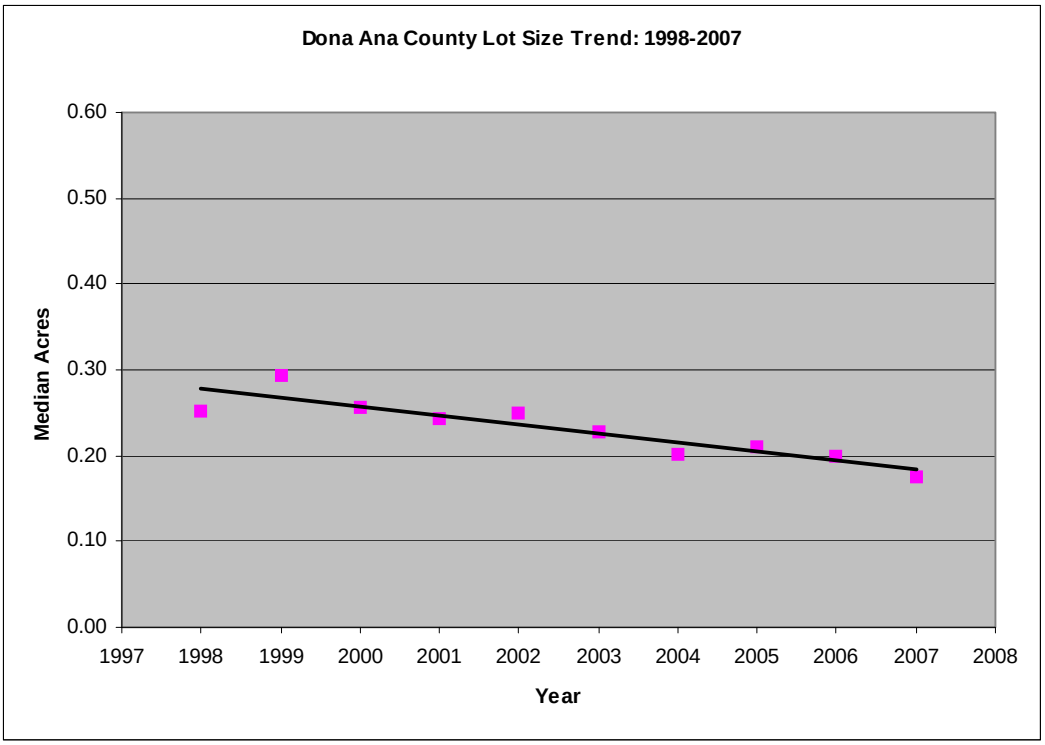


FIGURE 2-7
Doña Ana County Lot Size Trends
Source: Doña Ana County Community Development Department

Income and Disability

Several key statistics regarding income and disability from 2000 census data are noted in Figure 2-8, Socio-demographics Quick Facts 1. This table compares United States statistics to Doña Ana County data as they pertain to percent of persons with disabilities (ages 21-64), households below poverty, and households without an automobile. The most prominent difference between the national and local demographic data is the percentage of households below poverty in Doña Ana County (25.39%) compared to the United States (12.38%). This type of data is important because the MPO is responsible for planning a transportation system that offers mobility choices for all users.

For example, when conducting transportation studies and plans, the MPO identifies and maps the location of low to moderate income areas and evaluates the potential impacts from proposed transportation projects. Figure 2-9 shows the low to moderate income areas, slum and blight areas, and special survey areas for Las Cruces. Low to moderate areas are primarily residential in character where at least 51% of the residents in a census tract, census tract block group, or other officially recognized boundary, are low and moderate-income persons. Slum and blight areas are designated by the local government as meeting the State of New Mexico definition of slum and/or blight. Special survey areas are documented through accepted survey techniques (generally door-to-door surveys), and are primarily residential in character, where at least 51% of the residents are low and moderate income persons.

Socio-Demographics Quick Facts	% of Households Below Poverty	% of Persons with a Disability Ages 21-64	% of Households without an Automobile
United States	12.38	15.99	6.25
Doña Ana County	25.39	16.82	5.02

FIGURE 2-8
Socio-demographics Quick Facts
Source: 2000 Census

Population Growth Conclusion

As our population increases and ages, the need for safe, efficient, and affordable transportation services for all users of all abilities and incomes increases. The observed percentages of people with disabilities, households below the poverty line, and households with no automobile indicate there is a significant need for diverse set of transportation options. Another factor to consider is that the percentage of households without an automobile does not include households with only one vehicle. Members of these households may have to share driving needs and/or require public transportation for their trips. Based on the data provided in this section, the need for a variety of transportation options is evident both within the Las Cruces urban area and outlying communities throughout Doña Ana County.

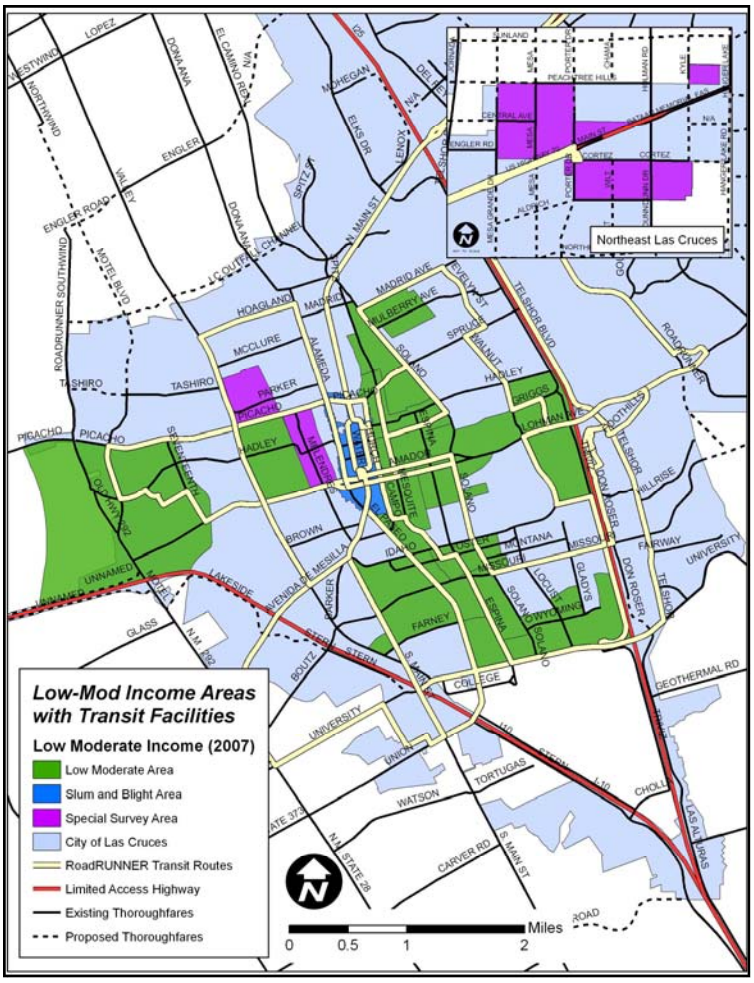


FIGURE 2-9
Low-Moderate Income Areas with Transit Facilities

Employment

Employment Sectors

Different employment sectors result in different transportation needs. For example, retail and hospital jobs have more dispersed and non-traditional hours than traditional 8-to-5 jobs. Therefore, identifying the distribution of jobs across employment sectors can be useful for understanding and predicting traffic congestion as well as planning service hours for public transportation. In addition, the location of employment centers, the types of employment, and the size of the work force also help to understand current transportation conditions and plan for future needs. These factors are important aspects of developing a Transportation Demand Model (TDM), discussed further in Chapter 4. A more detailed description of future transportation needs, as projected by the Las Cruces MPO travel demand model, is available in the section on Multimodal Transportation. As shown in Figure 2-10, the sector that employs the greatest number of employees in Doña Ana County is Government (32%), followed by Education and Health services (16%), Trade, Transportation, and Utilities (15%), Leisure and Hospitality (10%), and Professional Business Services (9%).

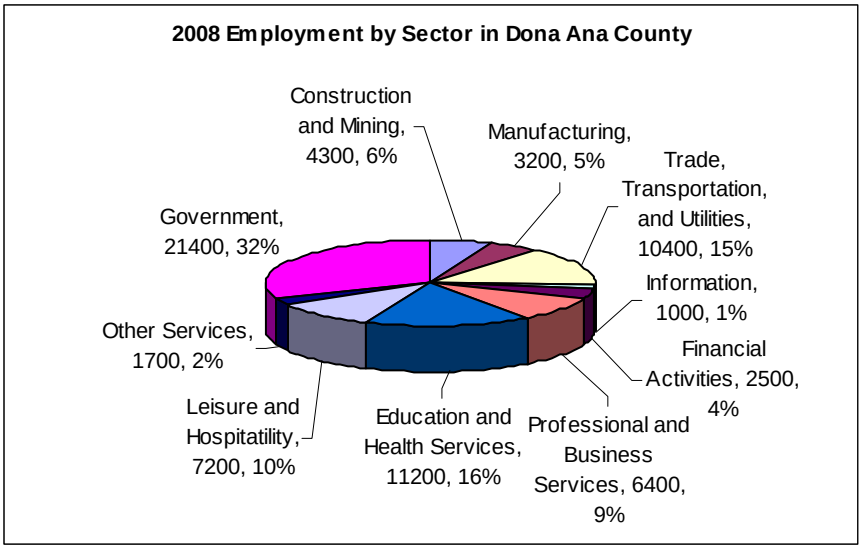


FIGURE 2-10
2008 Employment by Sector in Doña Ana County
Source: North American Industry Classification System (NAICS) data compiled by Mesilla Valley Economic Development Alliance (MVEDA)

Government

Government sector jobs employ the greatest number of people (double that of the second highest percentage for Education and Health Services). Government jobs also tend to have a high number of people in one location. For example, there are a large number of employees working in the Doña Ana County Government Center, the Las Cruces City Hall, the Federal Court House, and White Sands Missile Range. In addition, because these jobs (not including the police and fire services) are generally day jobs they contribute significantly to AM and PM peak hour traffic volumes.

Education and Health Services

Education and Health Services employs the second highest percentage of people. The location of hospitals, clinics, and educational institutions are significant destinations that must be easily accessible. In addition to the two main community hospitals (Memorial

Largest Employers in the MPO Area
500-999 Employees
Doña Ana Community College
Doña Ana County
Mountain View Regional Medical Center
NASA White Sands Test Facility
Sitel/Client Logic
Tresco, Inc.
Coordinated Care Corp.
1000-2999 Employees
City of Las Cruces
Gadsden Independent Schools
Memorial Medical Center
Wal-Mart
3000 + Employees
New Mexico State University
Las Cruces Public Schools

FIGURE 2-11
Largest Employers in Doña Ana County

Medical Center and Mountain View Regional Medical Center), there are a variety of retirement and assisted living centers, nursing agencies, and specialty hospitals in the region. The location of health services is important because hospitals, in particular, have a large number of employees who work different shifts throughout a 24 hour period. Finally, emergency services need uncongested and well-connected routes to hospitals.

Large educational employment centers consist of Las Cruces Public Schools (LCPS), Gadsden Independent Schools, New Mexico State University (NMSU), and Doña Ana Community College (DACC). NMSU is a hub of activity throughout the week and on weekends because of daytime and nighttime classes and special events held at the campus.

Other Large Employment Centers

Walmart and Sitel are noteworthy employment centers because of the number of people that they employ. Walmart also attracts many shoppers each day to its two 24-hour shopping stores. Finally, there are several industrial centers and other activity areas that have been master planned and/or are in the process of developing into important destinations. The following provides more information on industrial parks and activity areas.

West Mesa Industrial Park

The West Mesa Industrial Park is located south of the Las Cruces International Airport and I-10. The park area consists of 1,820 acres of land. The main goal for this research park includes light industry, general manufacturing, and aviation-related technology-based industries. Eighteen companies currently exist in the park and seventeen others are in the design and marketing phase. Future development includes an aerospace business park immediately south to support businesses and suppliers for Spaceport America.

Downtown Area

In 2004, The Las Cruces City Council approved a contract to proceed with the implementation of planning, design, and economic development strategies outlined in

the Downtown Revitalization Plan. Main Street Downtown is envisioned to be the cultural corridor of the Las Cruces city center, boasting museums, art galleries, theatres and unique shops, small restaurants, and the popular Farmer's and Crafts Market. Main Street will soon be reopening to automobile traffic, and a Main Street Plaza will be built.

University Area and the Arrowhead Research Park

New Mexico State University (NMSU) is located at the intersection of Interstate 10 and Interstate 25. NMSU is therefore strategically located to impact both the state and region as it strives to expand its academic and research programs to become one of the top tier research institutions in the United States. By the year 2020, NMSU expects to be in the top quartile of its defined peer institution group and expects its student population at the Las Cruces campus to grow to 25,000 within 20 years. The Arrowhead Research Park is located on the NMSU campus on a 257 acre parcel of

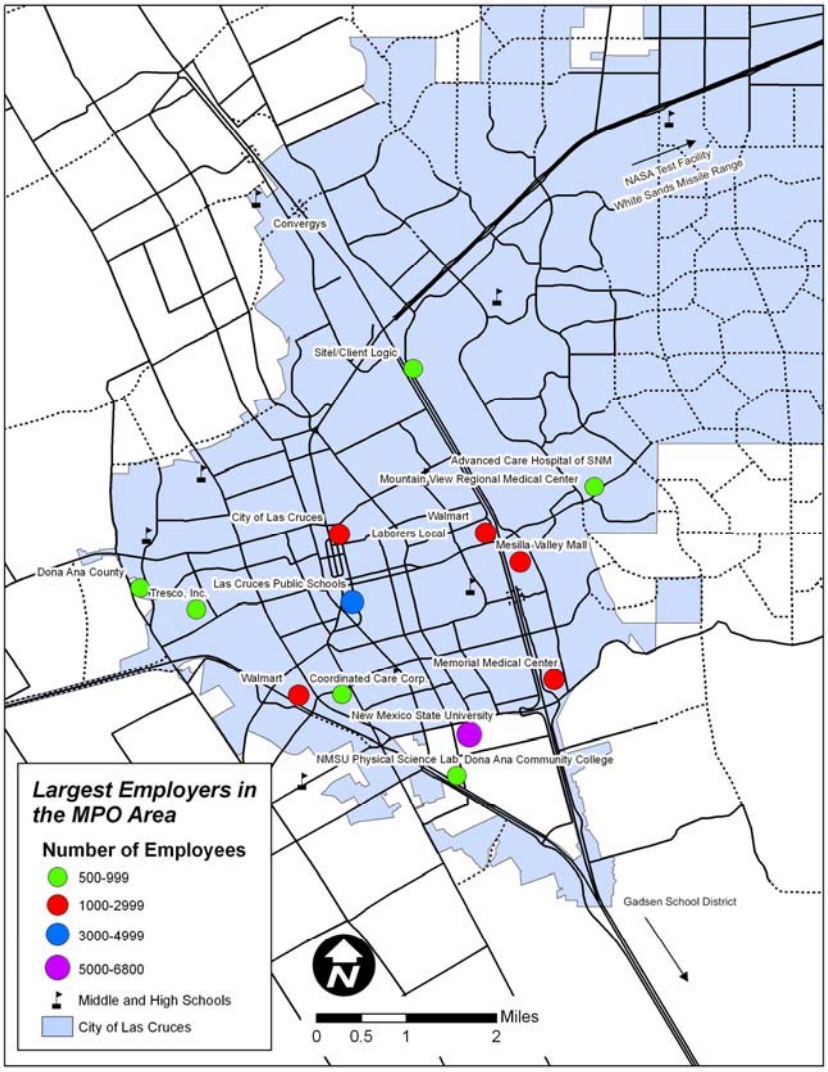


FIGURE 2-12
Location of Largest Employers in MPO Area

land. The main goal for this research park is to enhance technology transfer and to provide private enterprises with access to academic and technical resources, including a state of the art space and high tech communication networks.

Telshor-Lohman Area

The geographic center of Las Cruces is roughly at the intersection of Lohman Avenue and Telshor Boulevard. This intersection is flanked by a variety of commercial services including the largest mall in the area, the Mesilla Valley Mall. Along with the typical stores available at a mall, the Mesilla Valley Mall includes a movie theater and a food court. In the area of the mall are other commercial services including restaurants, a grocery store, various retail outlets, office buildings, and a hotel. Lohman Avenue serves as one of the main crossings of I-25 to the east mesa, in addition to US 70 and University Avenue. As a result, the intersection of Lohman and Telshor has the second highest volume of traffic in the metropolitan area. This area is the major destination and activity center in the MPO region.

Santa Teresa Industrial Parks

Although the Santa Teresa Industrial Park is not located in the MPO Area, staff felt that its inclusion was important because this border crossing has the potential for significant impact on the MPO region. Also, this activity center would be connected to the West Mesa Industrial Park by the proposed High Mesa roadway. The Santa Teresa Logistics Park is located adjacent to the border of Mexico and consists of 225 acres of industrial zoned land. The Bi-national Industrial Park at the Doña Ana County International Airport will be the site of international rail yards that will be relocated from downtown El Paso.

For 2008, the Mesilla Valley Economic Development Alliance (MVEDA) compiled data on the major employers in the region and classified them by number of employees. An employer had to have at least 500 employees to be a part of this list, Figure 2-11, page 15. Figure 2-12 shows the location of some of these major employers and their number of employees, including several of the locations listed above in Government and Health and Education Services.

Employment Conclusion

The economic stability of a region depends upon people being able to get to work and to educational opportunities. Clearly understanding the impact of the location and size of employment and activity centers in an area is vital to projecting future transportation needs. This includes the location of significant attractors such as large hospitals, universities, and governmental buildings. Also, the diversity of employment sectors, the geographic distribution of jobs, and the variety of work shifts provide additional clues to people's travel patterns and mode choices. To further explore this land use-transportation connection and its relationship to economic opportunities, the MPO recommends further study through the proposed transportation demand management plan in Chapter 4.

Location Efficiency

Housing location and transportation options can have a significant impact on a household budget. Housing costs are the largest household expense, yet transportation costs can also dramatically impact the household budget. Transportation costs can include purchase of a vehicle or bicycle, fuel, short and long-term maintenance, registration, insurance, and other fees. The largest indicator of current and future transportation costs are urban form (particularly proximity to employment centers and regional destinations) and access to public transportation. These costs can vary considerably across a metro area depending upon development patterns and transportation system connectivity. For example, widely dispersed retail shops, employment centers, and service providers can increase the impact of transportation costs on a household budget.

Urban form refers to the physical layout and design of the city. Urban design takes into consideration density, street layout, transportation and employment areas and urban design issues.

Source: City of Prince, Saskatchewan, Canada

Housing and Transportation Costs

Housing and transportation costs, as a part of household expenses, are steadily increasing as the nation continues to grow horizontally. Figure 2-13 illustrates the result of a national study completed in 2004 by the Bureau of Labor Statistics. According to the study, the percent of housing and transportation costs for the average American family is: 32% for housing and 19% for transportation. In auto-dependent exurbs, transportation costs increase to 25% of the household expenses. In contrast, the transportation cost is reduced to 9% of the household expenses in transit rich neighborhoods. Housing costs stay fairly consistent regardless of the location of development.

Rising transportation cost disproportionately affect households with low to moderate income. The results of the same 2004 study indicate that low income families may spend up to 55% of their household budget on transportation costs.

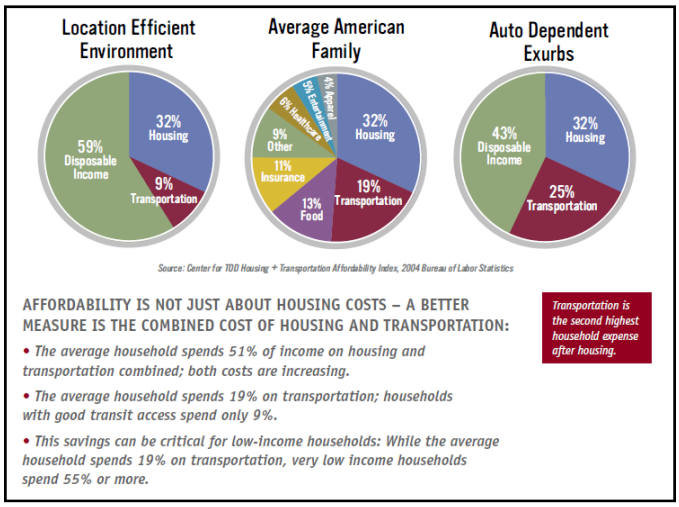


FIGURE 2-13
Combined Cost of Housing and Transportation
Source for Graphic: TOD 101 - Why Transit-Oriented Development And Why Now? (2007), by Reconnecting America

Housing and Transportation Index

The Center for Neighborhood Technology (CNT) has developed a Housing and Transportation Affordability Index based on detailed, peer-reviewed studies that correlate odometer readings and federal household

transportation surveys with local factors and data such as neighborhood density, street grid complexity, availability of transit, and housing costs as a percent of the area median income. Housing costs alone are traditionally considered affordable when they make up no more than 30% of a household income. However, when including transportation costs based on the location of the home, the true cost of housing decisions emerges.

Figure 2-14 is a map of Housing and Transportation Affordability Index in the Las Cruces area. The map on the left only displays housing prices as a percent of total income. The areas in yellow are ones where housing prices are less than 30% of income and areas in blue are 30% and greater. The map on the right displays housing prices plus transportation costs as a percent of total income. The areas in yellow are ones where the housing plus transportation costs are less than 45% of income and areas in blue are 45% or greater.

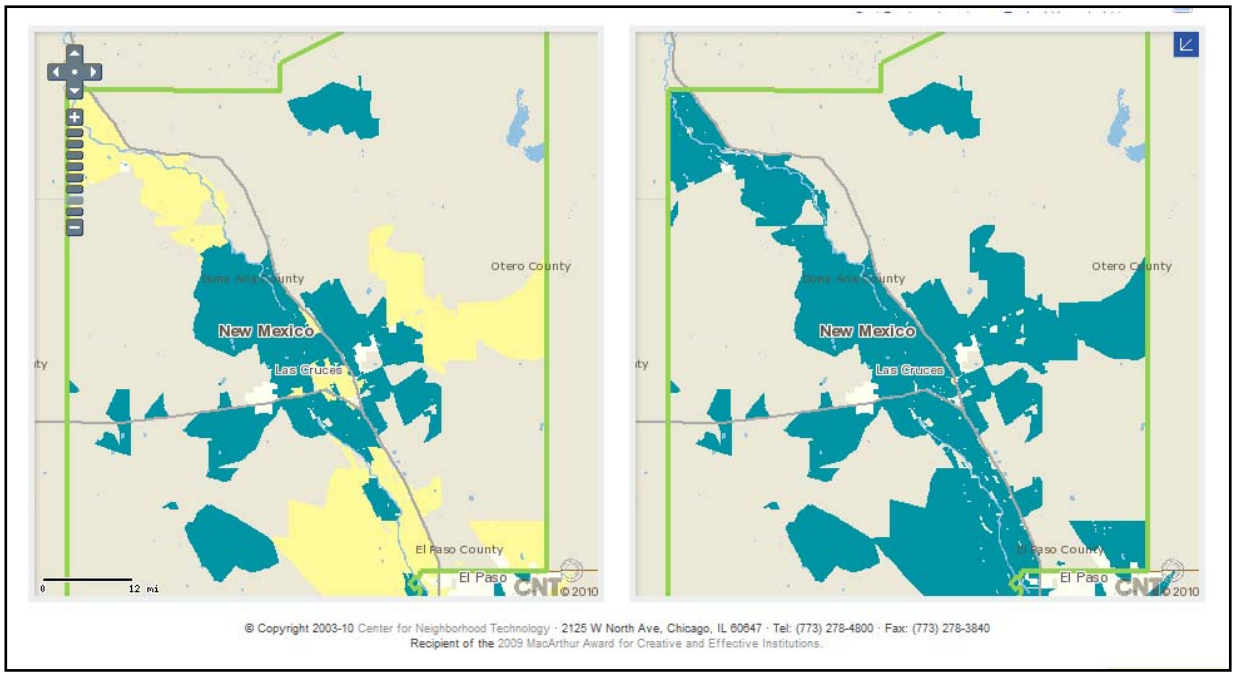


FIGURE 2-14
Las Cruces Housing and Transportation Affordability Index
Source: Center for Neighborhood Technology

Affordable Housing

In 2008, an affordable housing strategic plan was conducted by the City of Las Cruces. One of final recommendations was to increase density and disperse affordable housing, particularly along public transportation corridors. The Las Cruces MPO supports affordable housing strategies, particularly appropriate density and dispersion of affordable housing along with the location of mixed-use centers that can support transit oriented development (TOD).

Location Efficiency Conclusion

The relationship between the location of employment and activity centers and housing is an integral part of calculating the transportation costs for businesses, commuters, and individuals. When residents have a wide choice of destinations located near residential development they have more opportunity to utilize a variety of transportation modes. This, in turn, can reduce overall transportation costs and increase disposable income. Income spent within the region contributes more to the local economy and helps generate more tax revenue. Other economic benefits include reductions in parking requirements, decrease in automobile operation and maintenance costs (average of $3,000 per vehicle per year), and less traffic congestion.

A well-connected, multimodal transportation system offering diverse options is vital to connecting people to jobs, goods, services, education, and recreational opportunities.

Transportation costs can have a significant impact on low income families. This is of special note in Doña Ana County, because over 25% of households live below the poverty line. The combination of these factors could lead to lack of employment or underemployment, loss of educational opportunities, and reduced access to food and medical services. Additionally, many low income families may keep driving vehicles long after their useful life has expired leading to unsafe driving conditions for all transportation users.

Health and Safety

Vital to the future of the Mesilla Valley region are the health and safety implications of a poorly vs. well planned region. Some of the issues affected by transportation planning include changes in air quality (respiratory health), a built environment that encourages or discourages physical activity (obesity and weight related disease), crash incidents (injuries and fatalities), and mobility and accessibility for children, the elderly, and the disabled (direct routes to school and access to services).

Health Quick Facts 1:

In the United States:

- one in seven children is obese
- cardiovascular diseases are the leading causes of death for all Americans (roughly 1 million deaths per year)
- 74% of Americans are not regularly physically active
- 28% of those do not get any physical activity at all

FIGURE 2-15
Health Quick Facts 1
Source: Centers for Disease Control and Prevention

Health

The transportation system is part of the built environment. A poorly connected system combined with widely dispersed and segregated land uses contribute to poor health and a decrease in physical activity. Over the past 20 years the built environment has contributed to a decrease in health levels of U.S. citizens. The built environment can promote a sedentary lifestyle that contributes to heart disease, diabetes, certain cancers, and arthritis, as well as an overall diminished quality of life and increasing health care costs. In the United States, obesity among adults and children is at epidemic levels and is the fastest growing public health problem. This public health problem is costly to individuals as well as to the nation as a whole.

The **built environment** encompasses all buildings, spaces and products that are created, or modified, by people. It includes homes, schools, workplaces, parks/ recreation areas, greenways, business areas and transportation systems. It extends overhead in the form of electric transmission lines, underground in the form of waste disposal sites and subway trains, and across the country in the form of highways. It includes land-use planning and policies that impact our communities in urban, rural and suburban areas.

Source: Obesity and the Built Environment Department of Health and Human Services (DHHS)

Health Quick Facts 2:

In New Mexico:

- nearly 61% of New Mexico adults are overweight or obese
- an estimated $324 million is spent annually on adult medical expenditures are attributable to obesity
- in 2007 22% of adults report not engaging in any physical activity
- 17% of high school students did not engage in any physical activity in 2007

FIGURE 2-16
Health Quick Facts 2
Source: Healthier Weight Council Brochure

Health Quick Facts 3

- Structured interventions such as exercise programs and health club activities are important but exercise as a part of your daily routine is more likely to have an impact on long-term lifestyle changes and be more cost-effective (i.e., Dunn et al., 1999; Owen and Bauman, 1992; Sevick et al., 2000)
- Sesso and colleagues (1999) found that walking more than 10 blocks everyday resulted in a 33 % reduced cardiovascular disease risk
- Oja and colleagues (1998) reported that daily walking and bicycling to work improves the cardio-respiratory and metabolic fitness of previously inactive adults

FIGURE 2-17
Health Quick Facts 3

Many experts now believe there is a connection between decreased physical activity and the design of our towns and cities. Measuring the Health Effects of Sprawl: A National Analysis of Physical Activity, Obesity, and Chronic Disease was written in September of 2003 by Barbara A. McCann and Reid Ewing, with help from Rutgers University, the Surface Transportation Policy Project, and Smart Growth America (SGA). In this publication the authors review the many studies that have been done in the United States showing a "clear association between the type of place people live and their activity levels, weight, and health." This report also follows up on the study titled Relationship between Urban Sprawl and Physical Activity, Obesity, and Morbidity, which found a direct association between community form and people's health. The study concluded that "people living in counties marked by sprawling development are likely to walk less and weigh more than people who live in less sprawling counties." The study looked at 448 counties across the United States.

These studies signal that there is indeed a connection between land use patterns, active transportation opportunities, and growing obesity rates in the U.S. Additional studies have shown that people living in areas with increased opportunities for active transportation can experience improvements in overall health (See Figure 2-17). Ultimately, appropriate changes to our transportation and land use policies may be necessary.

Safety

Planning, designing, and constructing safe transportation facilities and corridors is the top priority for every governmental agency responsible for public transport. This guiding priority does not guarantee that crashes, injuries, and fatalities are eliminated, but provides the impetus to identify and mitigate dangerous routes and intersections and to reduce property damage and loss of life. Improving safety throughout the transportation system also reduces the economic impacts to the region by reducing the number of costly crash incidents and the associated congestion. Direct and indirect costs of traffic crashes include property damage, emergency services, medical bills, loss of time at work, and loss of life.

Motor Vehicle Crashes

Nationally, motor vehicle crashes are by far the leading cause of accidental death. (See Figure 2-18) Fortunately, according to the National Highway Traffic Safety Administration (NHTSA), since 2005 crash incidents have decreased from 43,510 to 37,261 in 2008 (most recent available numbers). Nevertheless, motor vehicle safety is a serious issue that needs to be addressed as a high priority in transportation planning.

NMDOT Safety Planning

On a state level, safety issues are incorporated into the NMDOT Statewide Multimodal Transportation Plan 2030 and the NMDOT Comprehensive Transportation Safety Plan (CTSP).

The Statewide Multimodal Plan addresses issues such as safety in construction zones, increasing pedestrian and bicycle safety, public awareness, and Intelligent Transportation Systems (ITS) solutions. The plan also supports Livable Communities and Complete Streets concepts that promote designing communities to facilitate walking, biking, and using public transit as alternatives to dependence on private vehicle usage.

The CTSP includes tasks such as an aggressive program aimed at reducing DWI (driving while intoxicated) fatalities and injuries, and reducing all motorized and non-motorized involved crashes through new policies, education campaigns, and improved design and maintenance. The NMDOT is also highly proactive in supporting Safe Routes to Schools (SRTS) programs.

FIGURE 2-18
Accidental Deaths in the United States During 2006

Safety Quick Facts 1:

In 2006 in New Mexico:

- 720 people were killed in crashes (26% were alcohol related)
- 24.8 per 100,000 people died in crashes compared to a national rate of 14.2 per 100,000 people

FIGURE 2-19
Safety Quick Facts 1
Source: New Mexico Department of Transportation, Traffic Safety Bureau, New Mexico Traffic Crash Information, District 1 Community Report

Finally, the NMDOT Multimodal Freight Study (Phase One Final Report) specifically highlights the safety needs of trade corridors and intermodal access routes that traverse disadvantaged neighborhoods. The study also identifies the need to address health and environmental concerns. More detailed information on freight is covered in the section on Regional Movement, Freight Corridors, and Security.

MPO Region Crash Data

MPO staff tracks crash statistics in the region. The crash statistics are provided by the University of New Mexico Division of Government Research (UNM-DGR). DGR receives crash data from the NMDOT Traffic and Safety Bureau that were collected from local police and sheriff departments. Several maps have been produced by MPO staff from data collected between 2005 and 2007. These include:

- a map of the crash rates for thoroughfare intersections in the City of Las Cruces
- a map of crash densities in the City of Las Cruces for motorcycle, pedestrian, and bicycle crashes

This data, along with the information available from the NMDOT District 1 Community Reports, provide a comprehensive look at potential safety issues in the MPO area.

Safety Quick Facts 2

In 2007 in Las Cruces area:

- Motor vehicle crashes accounted of 79% of all crash classes
- Passenger cars were the vehicle type most often involved in crashes (52%)
- The top two contributing crash factors were driver inattention and failure to yield
- There were seven fatal crashes
- The top two contributing factors for fatal crashes were alcohol involvement and driver inattention

FIGURE 2-20
Safety Quick Facts 2
Source: 2007 Las Cruces Community Report by the NMDOT Traffic and Safety Bureau

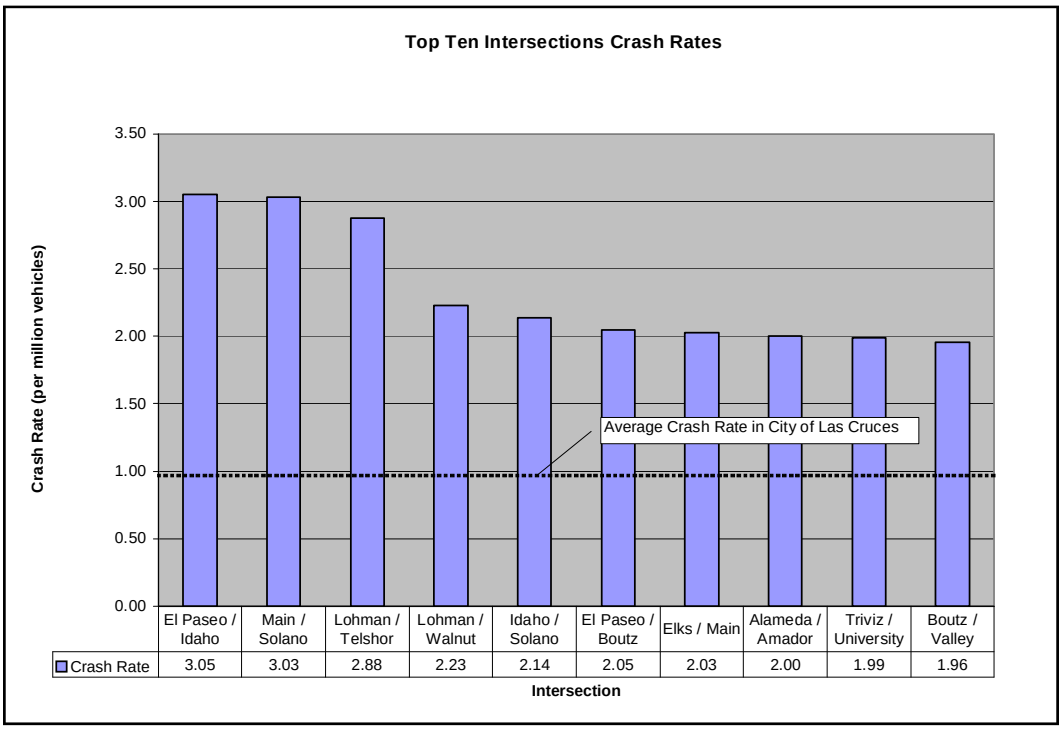


FIGURE 2-21
Top Ten Intersection Crash Rates in Las Cruces

Figures 2-24 - 2-27 on pages 27-30 are crash density maps for the MPO area:

- Pedestrian - Involved Crashes
- Bicycle - Involved Crashes
- Motorcycle - Involved Crashes
- Motor Vehicle - Involved Crashes

The highest crash densities for pedestrian-involved crashes are around the areas of NMSU, the El Paseo/Idaho intersection, and the Madrid/Solano intersection. The highest crash densities for bicycle-involved crashes are around the area of NMSU, the Solano/Idaho intersection, and the Missouri/Don Roser intersection. The highest crash densities for motorcycle-involved crashes are around the area of NMSU and along the Lohman-Amador corridor, specifically at the intersections with Telshor, Main, and Alameda. The highest crash densities for motor vehicle-involved crashes are along the Lohman-Amador corridor, specifically between Solano and Alameda and the intersection with Telshor, and at the area near El Paseo and Idaho.

Motor vehicle crash rates are calculated by adding three years of crash data and dividing by traffic volumes.

The Crash Rate formula is the sum of the number of crashes between 2004 and 2006 multiplied by 1,000,000, then divided by the total traffic volume for the intersection and multiplied by the number of years and the number of days per year.

The formula is as follows: (Cnt04to06*1000000)/(VolTot*3*365)

Safety Quick Fact 3

The estimated cost for crashes per person in a medium sized metropolitan area is $1,204 whereas the cost per person of congestion is $276.

FIGURE 2-22
Traffic Conditions Quick Fact 2
Source: The AAA Crashes vs. Congestion Report.

These maps indicate that there are key locations where crash rates are high and further crash analyses are needed to determine cause and potential countermeasures. These locations are mostly at intersections of thoroughfares, but sometimes entire corridors need to be evaluated.

Motor Vehicle Crash Rate Map

In the City of Las Cruces, the calculated crash rate average among all thoroughfare intersections is .95 per million vehicles for the years 2004 through 2006. Figure 2-21, page 25 shows the top ten intersections with the highest crash rates. Appendix D lists all thoroughfare intersections with available data, and the associated crash rates. The Motor Vehicle Crash Rate Map for the City of Las Cruces, Figure 2-23, identifies the crash rates for all thoroughfare intersections.

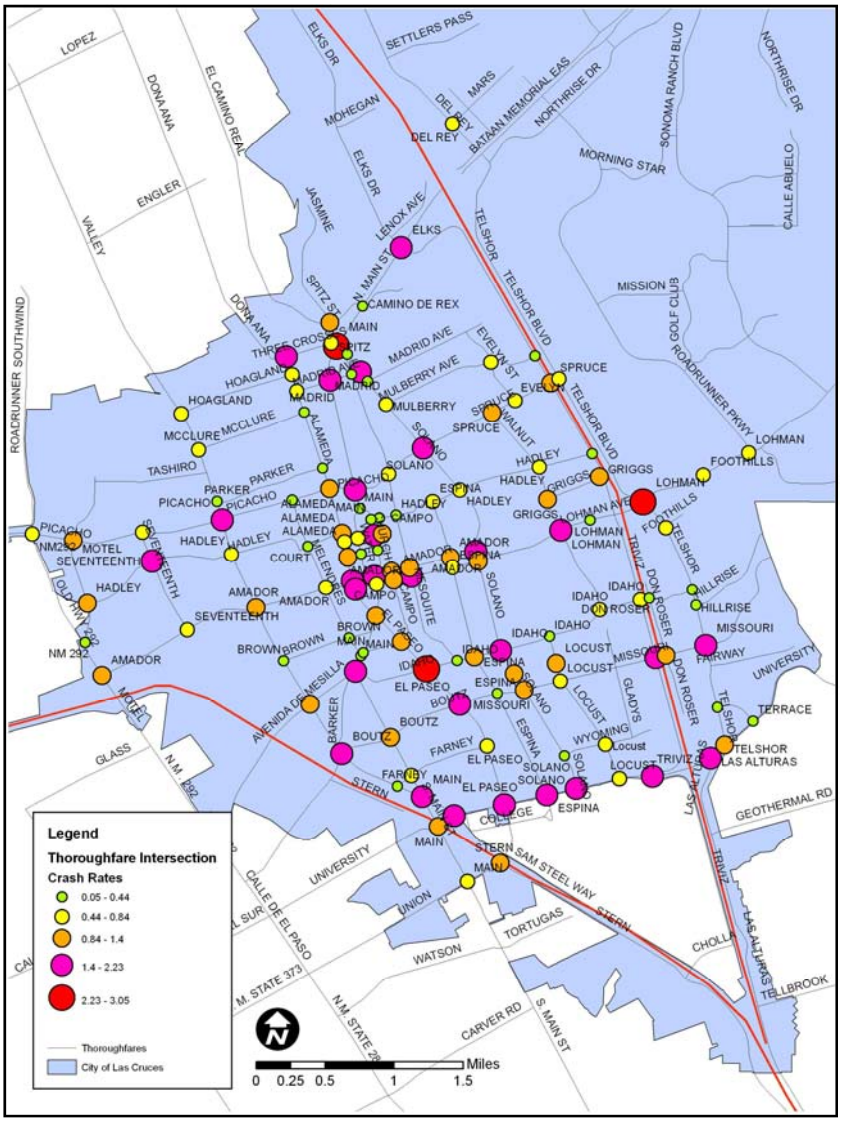


FIGURE 2-23
Thoroughfare Intersection Crash Rate Map for the City of Las Cruces
Source: University of New Mexico DGR and NMDOT Traffic and Safety Bureau

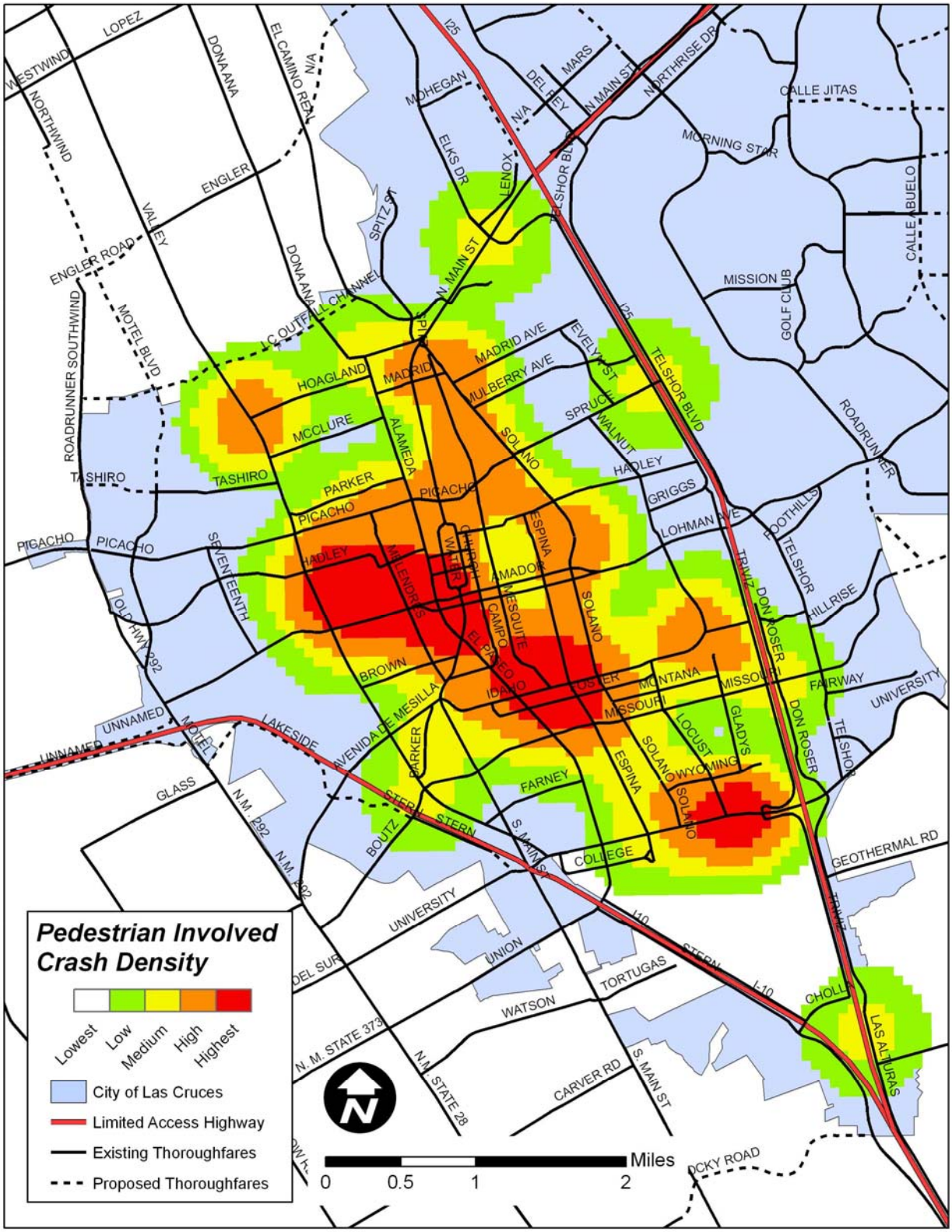


FIGURE 2-24
Pedestrian Involved Crash Density
Source: University of New Mexico DGR

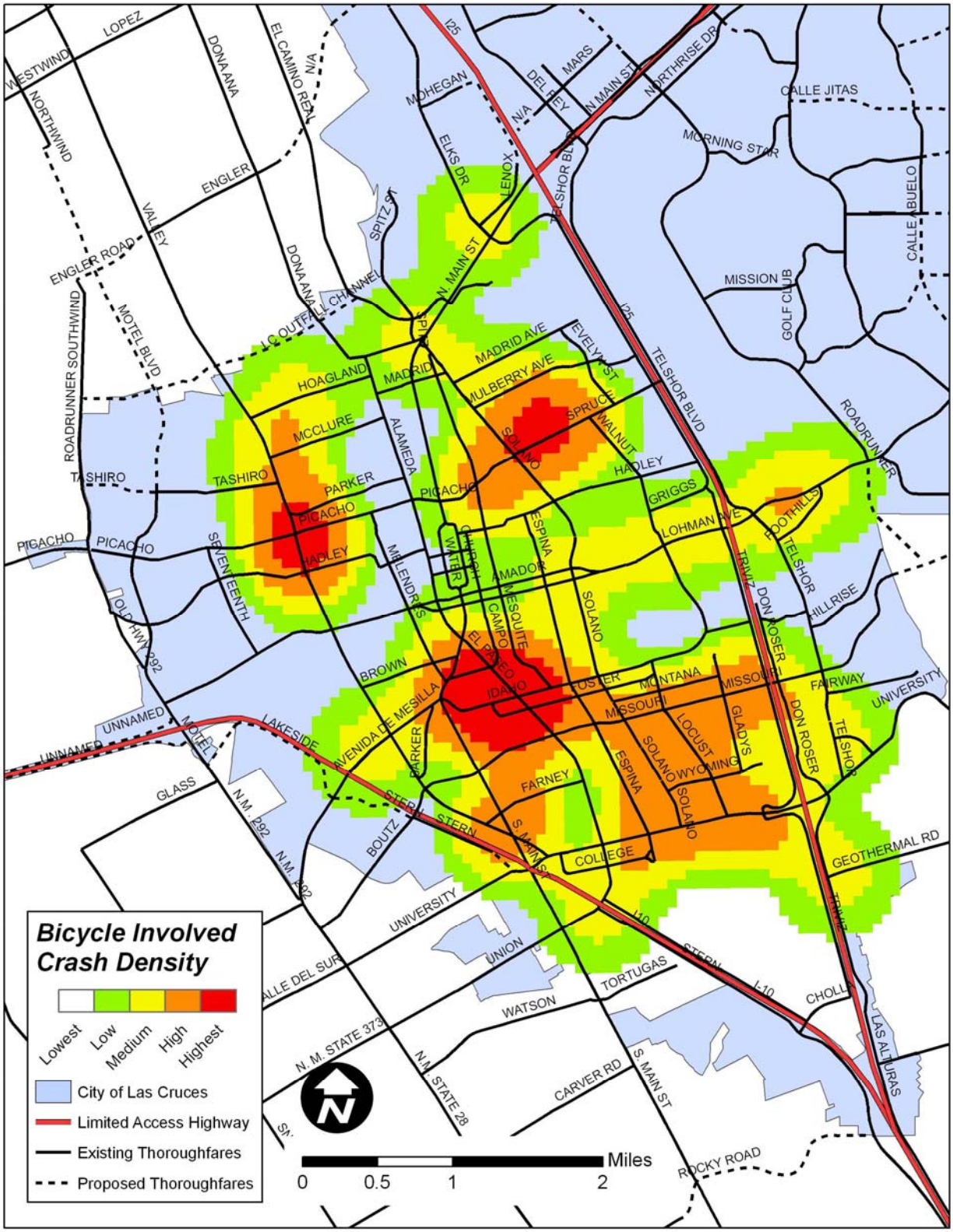


FIGURE 2-25
Bicycle Involved Crash Density
Source: University of New Mexico DGR

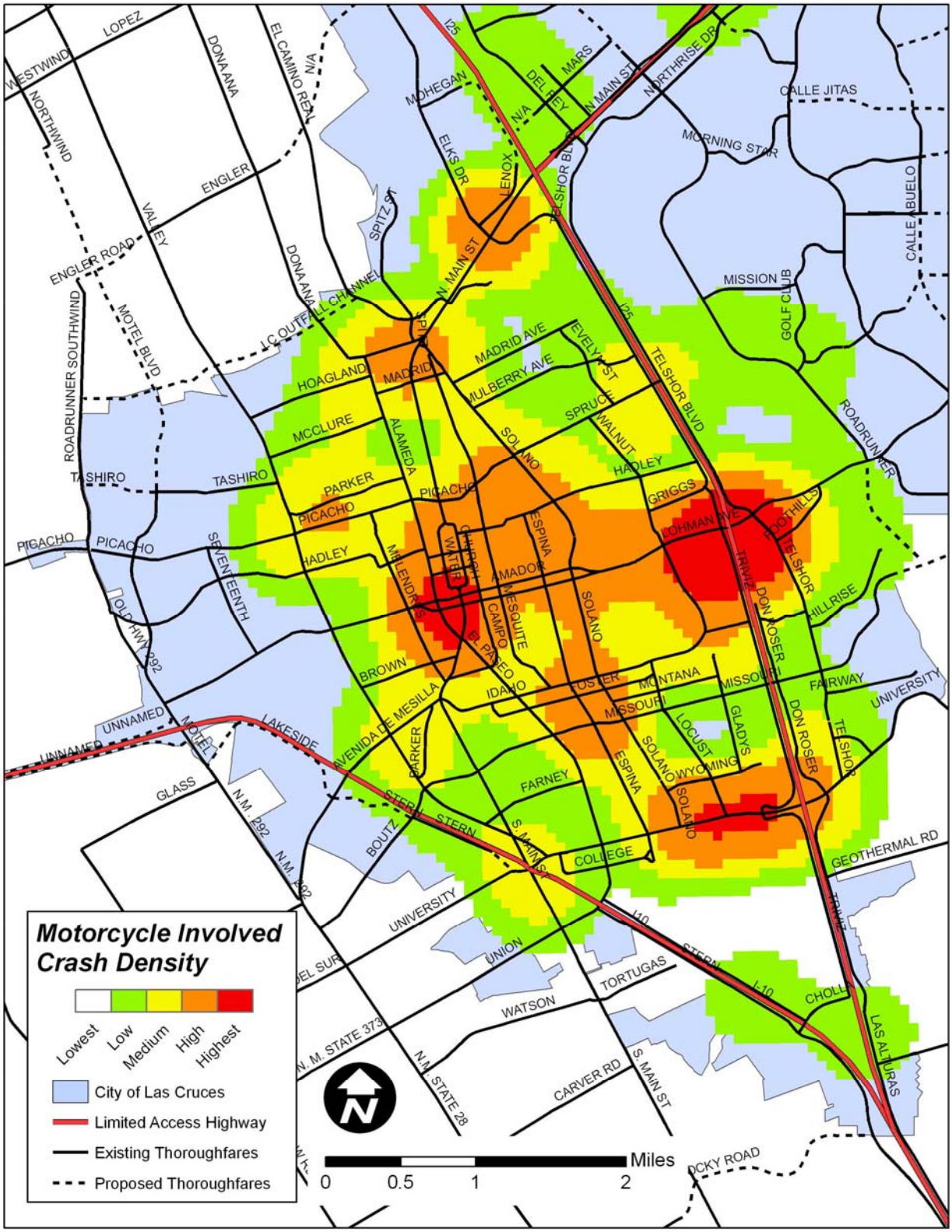


FIGURE 2-26
Motorcycle Involved Crash Density
Source: University of New Mexico DGR

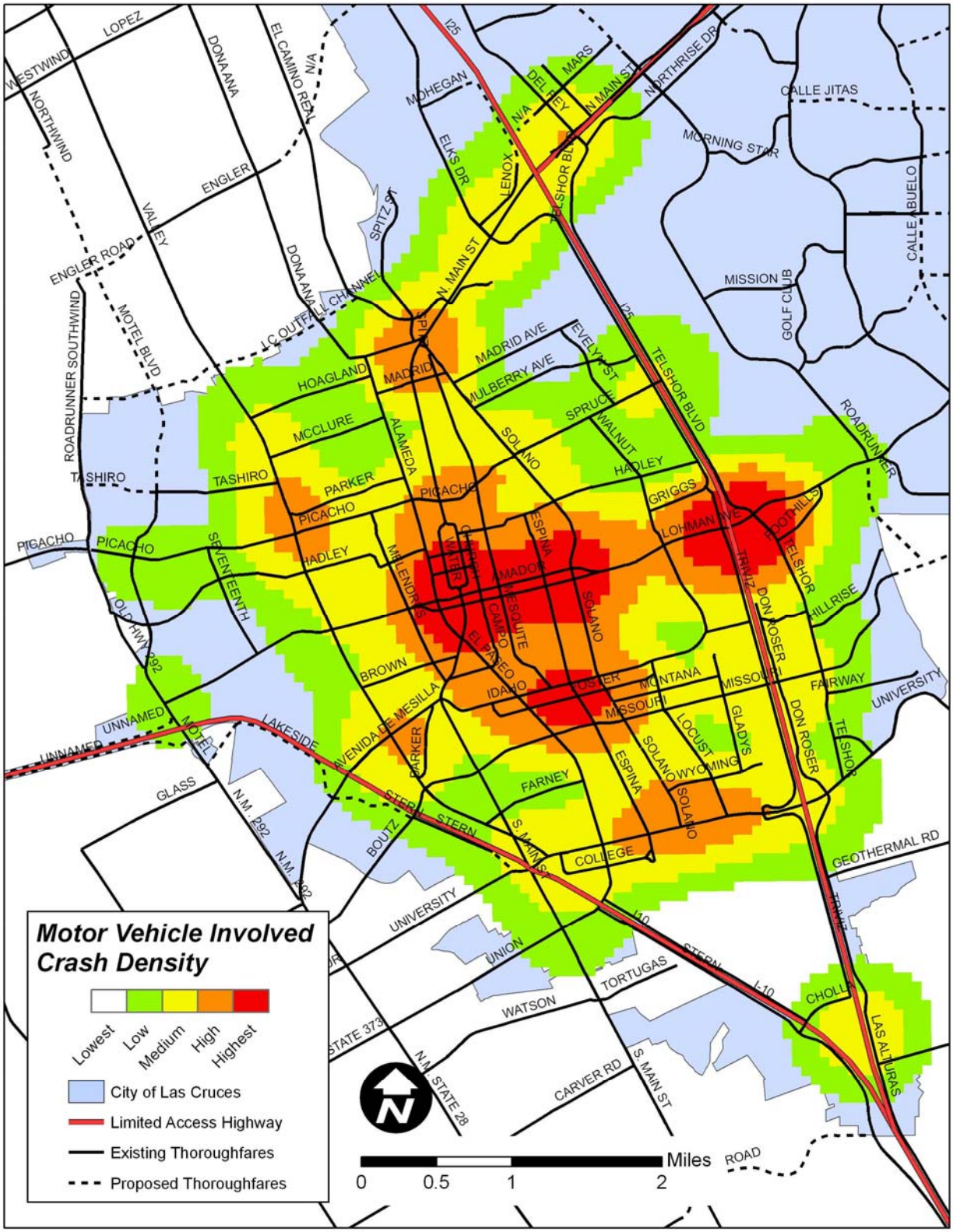


FIGURE 2-27
Motor Vehicle Involved Crash Density
Source: University of New Mexico DGR

These intersections should be a top priority for future studies and funding to identify and implement safety countermeasures. Further studies should also include a more thorough examination of crash types, time of day, and other behavioral and physical crash factors.

Safety Conclusion

Balancing the need for safe, efficient motor vehicle traffic flow with a built environment that supports safety and convenience for non-motorized modes of transportation is vital. Crashes caused by speed and driver inattentiveness can, in some cases, be mitigated through design changes, but safety can also be improved by enhancing public education and outreach. Safety and crash studies are being conducted by the NMDOT and the AARP in our area. A thorough analysis of urban and rural areas will be conducted during the development of the Safety Management Plan task in Chapter 4.

Multimodal Transportation

A built environment that integrates all transportation modes is essential for developing a well-functioning system. Transportation decision makers must consider the impacts of infrastructure investments and land development on mobility for all modes and safe connections to a variety of destinations. In addition, the smooth transition from one mode to another (intermodal transportation), such as connections between bicycle lanes and transit stops, create a complete and healthy transportation network that is safe and accessible to people of all ages and abilities.

Finally, for community cohesiveness and safety for children, neighborhoods should be people-oriented by providing safe streets for both motorized and non-motorized transportation. Streets are public spaces that all users should feel safe and comfortable using. This section provides a discussion of transportation conditions for all modes in the MPO region.

The Complete Streets principle states that streets should integrate all users and all modes safely and conveniently. The MPO and all three MPO member jurisdictions have adopted Complete Streets Resolutions: MPO (May 14, 2008), Town of Mesilla (June 23, 2008), City of Las Cruces (June 15, 2009), and Doña Ana County (December 8, 2009).

- Connectivity: Accessibility and Mobility
- Non-motorized Conditions: Pedestrian, Bicycle, and Trail
- Transit Conditions
- Automobile Traffic Conditions
- Travel Demand Modeling and Vehicle Miles Traveled

Connectivity

Increased connectivity is a necessary component of a well functioning transportation system in order to provide accessibility and mobility for all users. This requires that all transportation modes must be integrated throughout the system by appropriate design and highly connected networks.

Accessibility

Accessibility, defined as the ability to reach a desired destination, can be improved by diverse land use development in addition to increased transportation options. Land use is an important part of the congestion equation because land uses that are in closer proximity to residential areas can decrease the length of trips and provide more opportunity for modal choice. For example, nearby destinations with direct, safe, and barrier-free connections can increase the ability for all users to obtain goods and services from residential neighborhoods.

Mobility

Mobility, defined as the physical movement from one place to another, relates to the different modes or options that are available to move from point A to point B. Shifting trips to a wider variety of modes can help alleviate congestion; however, the transit, bicycle, and pedestrian systems need to be more convenient and well-connected in order to reduce congestion on roadways. In some areas, particularly rural areas of Doña Ana County, the most vital mobility issues are that public transportation is not available and street system connectivity is lacking. These issues significantly impact many people's ability to get from home to work or school.

Non-motorized Conditions

Non-motorized facilities include sidewalks, bicycle lanes, trails, and multi-use paths. Due to the geographic nature of the MPO area there are many opportunities for non-motorized, non-traditional transportation networks, including irrigation ditches and arroyos.

Pedestrian Conditions

With all new subdivisions in the City of Las Cruces, the developer is required to build sidewalks. In Doña Ana County, in most cases the developer is required to build shoulders but not sidewalks; however, sidewalks are required in areas that have urban-type zoning. Unfortunately, there are places where the sidewalks are discontinuous and/or are not ADA compliant. These conditions have contributed to a reduction of non-motorized transportation.

In order to improve pedestrian infrastructure, the local jurisdictions and the NMDOT ensure that pedestrians facilities are constructed or upgraded as part of transportation projects. Other potential improvements are contingent upon the local jurisdictions developing a comprehensive infrastructure inventory. Compiling this inventory could be assisted through initiating neighborhood assessments of the pedestrian environment. This type of data collection will help prioritize the future improvement of pedestrian facilities. Finally, another important component of improving the pedestrian environment is to establish areas or activity centers throughout the county that are of high priority for improving the walking environment.

According to the Center for Disease Control and Prevention, the number of students between the ages of 5 to 18 years walking and biking to school reduced from 42% in 1969 to 16% in 2001.

Bicycle Conditions

Because the Las Cruces MPO area has an outstanding climate, bicycles can be ridden almost year-round. Building a comprehensive network of bicycle facilities is one of the most important needs facing a developing multimodal transportation system in the MPO region. Without a complete system of bicycle facilities, bicycle riders are either forced to take a less direct and more time consuming route to get to their destination or choose another form of transportation. Some bicyclists prefer using in-road bicycle facilities that provide movement with the flow of automobile traffic and direct access to destinations. These facilities include bicycle lanes and wide curb lanes. Bicyclists are to be treated as vehicles in the road and are expected to follow the same traffic rules.

Since 2005, the City of Las Cruces has endeavored to become a Bicycle Friendly Community (BFC) through the League of American Bicyclists (LAB). In September 2005, the City of Las Cruces received an honorable mention from LAB. However, in 2008 when the city reapplied, an award or mention was not received. In an effort to progress more rapidly toward a BFC designation, the city initiated the BFC Task Force. The City of Las Cruces hopes to reapply for the BFC award in late 2010. Since 2002 the RoadRUNNER Transit has installed bicycle racks on all buses. As buses are replaced, bicycle racks will be included as standard equipment.

The Las Cruces Bicycle Friendly Community Task Force was formed in March 2009 in an effort to improve bicycling facilities, education, and enforcement throughout the city. The Task Force has three working groups: Education/ Encouragement, Engineering, and Enforcement. Citizens and city staff are working together to achieve a bicycle friendly status for Las Cruces.

Historic and Current Miles of Bicycle Facilities

The 2000 MPO Transportation Plan noted that 10.7 miles of in-road bicycle facilities had been developed. Most of those facilities were within the jurisdiction of the City of Las Cruces. They were developed during the late 1970s after the creation of the "Guidelines for Bridle Paths and Bicycle Lanes." By 2004 32.2 miles of new in-road bicycle facilities were developed for a total of almost 50 miles. Some of these were accomplished through significant construction projects such as US highway 70 Reconstruction, the extension of Lohman Avenue, and shoulder widening along Dripping Springs Road. Since 2004, with new construction and restriping of existing facilities, more lanes have been added to the bicycle network. Currently, in Doña Ana County there are 99 miles of bikeways (this includes share the road, shoulders, and lanes), and the portion within the City of Las Cruces includes 53 miles of bikeways.

Trail Conditions

A variety of paths are available in the MPO area. These paths include both paved and unpaved surfaces. Fifteen miles of paved multi use paths include Triviz, La Llorona, Sonoma Ranch, Union, and University (see the Trail System Priorities Plan for a map of these facilities).

Multi-use paths on independent rights-of-way can provide expansion of existing non-motorized facilities and unique connections to many destinations such as schools, parks, recreational facilities, and open spaces. However, it must be noted that the American Association of Highway Transportation Officials (AASHTO) recommends multi-use paths should be used in locations where intersecting conflicts can be minimized.

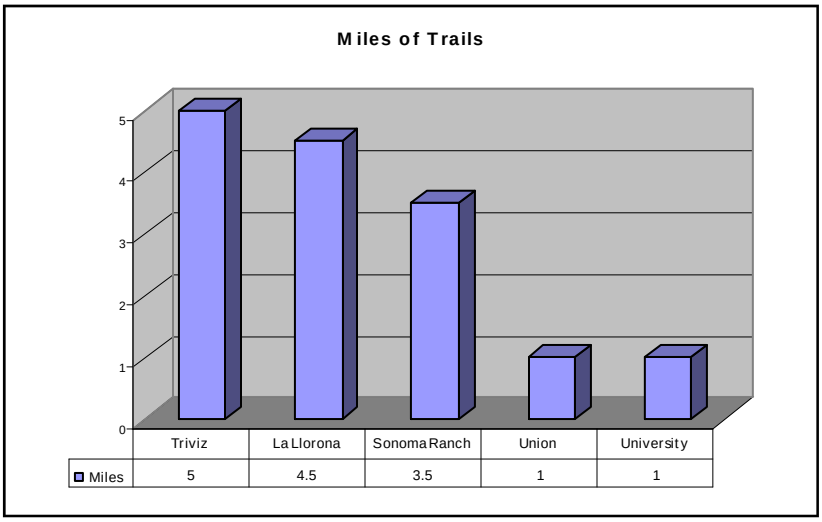


FIGURE 2-28
Miles of Multi-Use Paths

In September of 2009, the City of Las Cruces completed a Memorandum of Understanding (MOU) with EBID in order to begin developing a regional trail network along EBID laterals and drains. The MOU addresses liability issues, special use permits, and maintenance and operations. The MPO encourages Doña Ana County and the Town of Mesilla to enter into similar MOUs with EBID to create a complete regional trail network.

Transit Conditions

RoadRUNNER Fixed Route Service

RoadRUNNER fixed route service began operating in 1986 under the City of Las Cruces Public Services Department. Since then the system has grown from 4 routes to 8. Additional routes funded by NMSU and DACC have also been added including 3 routes on the NMSU campus, and one route that travels from the Mesilla Valley Mall transfer point to the DACC east side campus for a total of 12 routes. A 2006 transit network study recommended a new bi-directional route network, a set of additional routes along key corridors, and a site location and design for the new intermodal center. The southwest corner of Lohman and Alameda is the location selected for the new intermodal center and a design Request for Proposal is in process to develop the site. RoadRUNNER Transit is also considering an express route along Lohman and Amador.

The bi-directional (two way) route network was developed and implemented in 2008. Before 2008, regular fares were $0.50, with a discounted fare of $0.25 for students and seniors. After the implementation of the new bi-directional system, the fare increased in two phases from $0.50 to $0.75 and then finally $1.00. Further information on the plans for the transit system can be found in the 5-year Transit Strategic Plan. For most routes, the bi-directional network completes one direction of a route within 30 minutes, with headways currently at one hour. The system is intended to be easily scalable by adding additional vehicles. The current system connects the route at timed transfer points – Downtown, Mesilla Valley Mall, and at Venus and Northrise called the Venus Transfer Point. Figure 2-29 shows the current RoadRUNNER route system

Due to the major system change in 2008 the ridership numbers are difficult to compare.

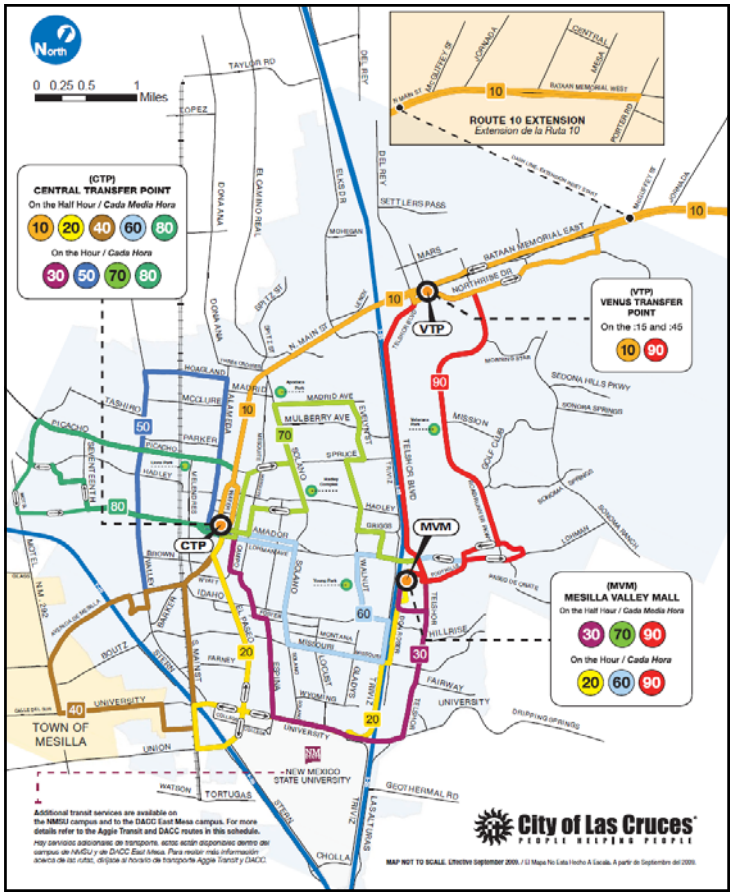
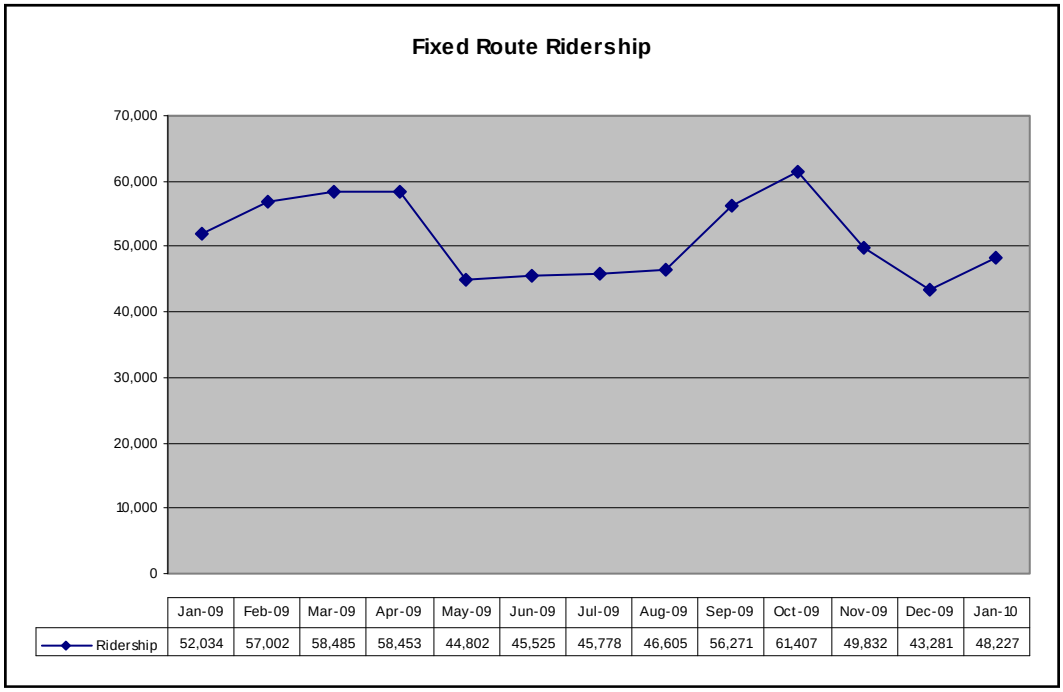
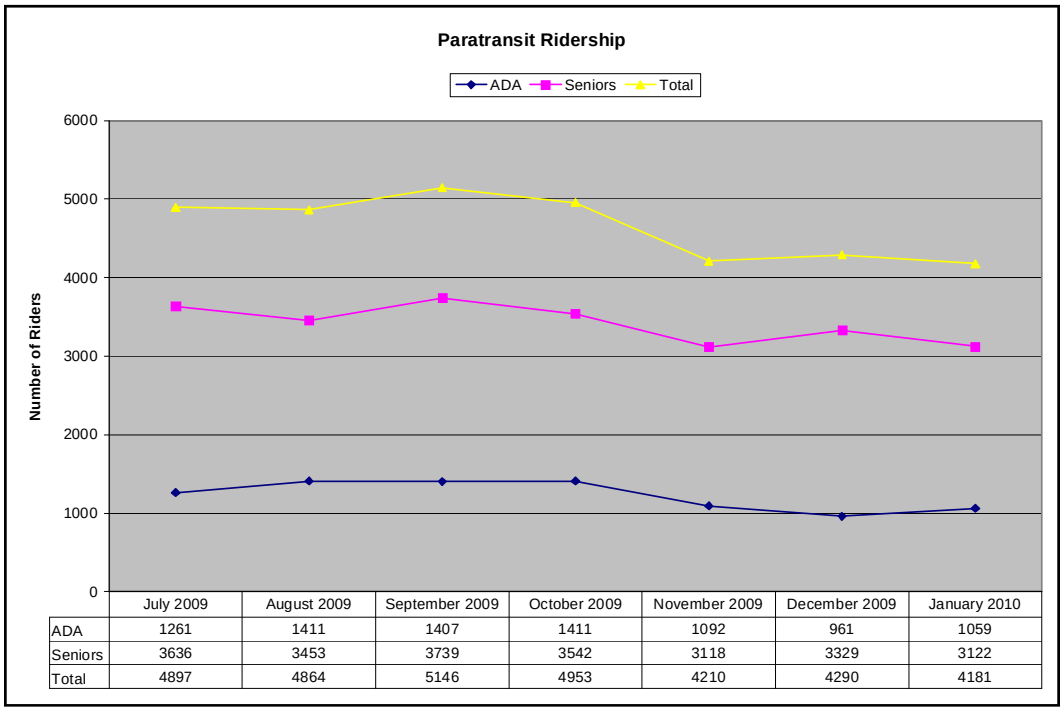


FIGURE 2-29
RoadRUNNER Transit Fixed Route Map



	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10
Ridership	52,034	57,002	58,485	58,453	44,802	45,525	45,778	46,605	56,271	61,407	49,832	43,281	48,227

FIGURE 2-30
RoadRUNNER Fixed Route Ridership
Source: RoadRUNNER Transit



	July 2009	August 2009	September 2009	October 2009	November 2009	December 2009	January 2010
ADA	1261	1411	1407	1411	1092	961	1059
Seniors	3636	3453	3739	3542	3118	3329	3122
Total	4897	4864	5146	4953	4210	4290	4181

FIGURE 2-31
RoadRUNNER Paratransit Ridership
Source: RoadRUNNER Transit

However, in 2009 the annual ridership was 656,590 over 306 days of service for an average daily ridership of 2,146 (See Figure 2-30, page 36). This represents a small decrease in ridership from 2008 which had an annual ridership was 671,727 over 307 days for an average daily ridership of 2,188.

Paratransit Service

Curb-to-curb demand-response paratransit service (also known as Dial-a-Ride) was established in 1986 along with the fixed route service. It originally operated within a ¾ mile radius of the fixed route service and was available to citizens who meet the qualifications of the Americans with Disabilities Act (ADA). This service is required by ADA in any area that offers fixed-route service. In 1994, Dial-a-Ride was expanded to include the entire City of Las Cruces. In 1997, the service was merged with senior transportation, and all seniors who registered with Senior Programs became eligible to ride. Its fares continue to be paid for by a City of Las Cruces subsidy, and as a result, this service is popular with seniors. Handling the increasing percentage of senior trips that are supplied by Dial-a-Ride service is a challenge. Dial-a-Ride service tends to be more convenient than fixed route service, because it is curb-to-curb and eliminates the need to walk to a bus stop. In 2005, the cost of providing one trip on fixed route service was $2.93, while the cost of providing one trip on Dial-a-Ride was $12.71. While this cost is a significant barrier to adding more vans and drivers, demand continues to rise, and seniors are often denied rides. Dial-a-Ride fares increased from $1.00 to $2.00 in 2008. Paratransit Ridership for July 2009 through January 2010 is shown in Figure 2-31.

Rideshare

Various public transportation activities are coordinated with the Rideshare Program of RoadRUNNER transit. These transportation programs include; commuter matching services, informal park-and-ride activities, education and awareness programs, carpool and vanpool support, and energy conservation and consumption programs. These services are available online at www.erideshare.com.

NMDOT Transit Services

Other fixed route services in the MPO area that connect to the urban transit system include the New Mexico Department of Transportation (NMDOT) Gold Route and the NMDOT Silver Route. The Silver Route provides service from New Mexico State University (NMSU) and the City of Las Cruces to White Sands Missile Range. The Gold Route provides service from Downtown City of Las Cruces, NMSU, Anthony, and El Paso, Texas.

These routes provide an economical option for commuters. According to the NMDOT Transit and Rail Bureau, riders receive a cost savings of $0.46 to $0.75 per mile compared to the cost of driving. Riders who have a Park and Ride monthly pass save

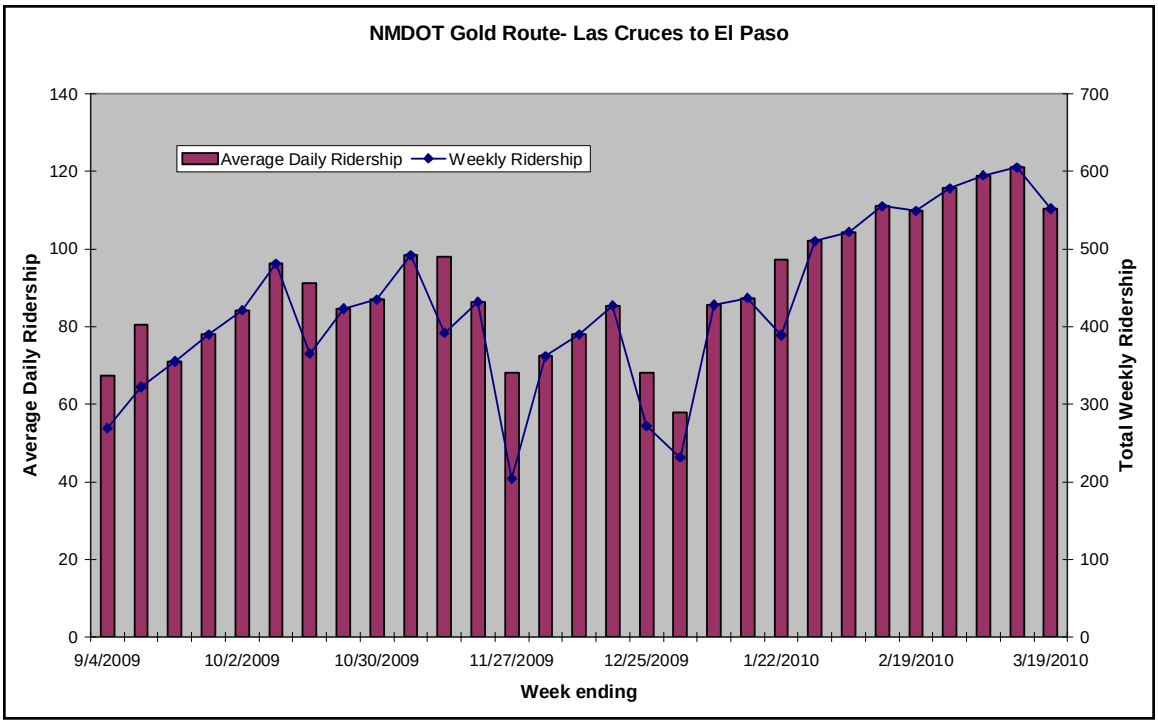


FIGURE 2-32
NMDOT Park and Ride - Gold Route Ridership
Source: NMDOT Rail and Transit Bureau

about $992 per month compared to the cost of driving. The service also demonstrates the potential ridership for possible future passenger rail service in this corridor. A conservative estimate of 302 passenger trips per day will result in 75,500 passenger trips per year in this corridor. Figure 2-32 provides the ridership for the Gold Route since its recent inception in September of 2009. For a statewide picture of the transit ridership over time, Figure 2-33 shows the statewide Average Daily Passenger Trips and Average Daily Ridership from 2004 to 2009.

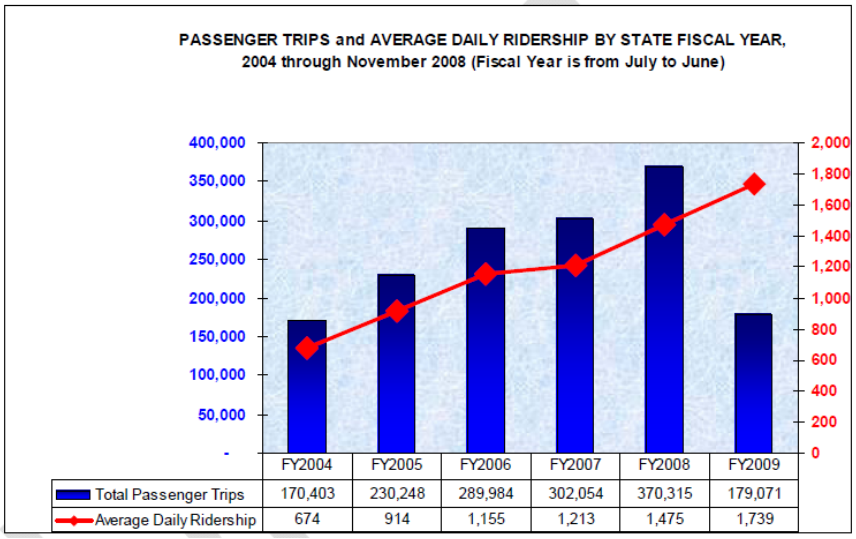


FIGURE 2-33
Average Daily Passenger Trips and Average Daily Ridership from 2004 to 2009
Source: NMDOT Rail and Transit Bureau

Greyhound and El Paso-Los Angeles Limousine also provide a local stop in the City of Las Cruces as a part of their networks. These services will relocate to the Intermodal Center upon completion of the project.

Rail

Commuter rail is a viable possibility in the future of the region, but would require considerable updates to the rail infrastructure and investment in passenger facilities. The South Central Regional Transit District completed a general feasibility study for developing a commuter line between El Paso and Las Cruces. A more detailed feasibility analysis of commuter rail in Southern New Mexico must be completed to examine the potential benefits and drawbacks. For comparison, the current ridership on the rail line between Albuquerque and Santa Fe is about 112,000 per month since the line was completed to Santa Fe in December 2009.

Statewide and Regional Public Transportation Planning Efforts

New Mexico Statewide Public Transportation Plan

The New Mexico Statewide Transportation Plan (SPTP) evaluates the demand and needs of rural public transportation, intercity passenger bus, and commuter rail systems throughout the State of New Mexico. The plan intends to provide clear and concise performance measures and prioritized projects to efficiently allocate limited funding resources. A draft is available at http://www.nmshtd.state.nm.us/main.asp?secid=11201.

South Central Regional Transit District (SCRTD)

The Regional Transit District (RTD) Enabling Act allowed for the creation of a transit district between two or more jurisdictions. In the MPO area, the SCRTD is one of three RTD's to receive $250,000 from the State to develop a regional plan. The SCRTD is comprised of the Counties of Doña Ana, Sierra, and Otero (and all incorporated Municipalities within). The SCRTD is intended to become a separate governmental entity with authority to finance, plan, construct, operate, maintain, and promote a regional public transit system. More information about the SCRTD is available at www.scnmtransit.com.

Coordinating Human Services Transportation Plan (CHSTP)

In 2008 the New Mexico Department of Transportation (NMDOT) developed a Coordinated Human Services Transportation Plan (CHSTP) provided broad recommendations for coordination efforts for the entire State, including Sierra, Socorro, and Doña Ana Counties. The Coordinated Mobility Action Plan (CMAP) developed by RoadRUNNER and the MPO expands upon the recommendations provided in the CHSTP. The CMAP document contains specific action items to increase transportation coordination in Doña Ana County. The action items were developed by a Steering Committee comprised of representatives from human service agencies and transportation providers. More information about CMAP is available at www.mpotransport.cmap.html.

Aviation Conditions

Las Cruces and Doña Ana County are served by three airports. Cargo, charter, and general aviation services are available via the Las Cruces International Airport and the Doña Ana County Airport at Santa Teresa. In addition, Foreign Trade Zones (FTZ) are located at both the Las Cruces and Santa Teresa airports. Commercial passenger air service for the region is provided by the El Paso International Airport.

The main airport in the MPO area is the Las Cruces International Airport, which was opened in 1942 as a military training facility. The airport is in the design process for a new traffic control tower, but does not have funding for construction yet. The current airport facilities consist of:

- Two lighted asphalt runways and one concrete runway with associated taxiways, blast pads, approach slope, end and edge lighting capable of supporting a Boeing 737
- An FAA-owned Instrument Landing System (ILS), an Automated Weather Observation System (AWOS), a Supplemental Aviation Weather Reporting Station, and a rotating beacon
- Light aircraft paved parking aprons, 150,000 square feet of hangar space, and 24,000 square feet of covered aircraft parking
- A bulk-storage fuel farm for aviation fuels
- A public commuter airline terminal suitable for 20,000 enplanements per year; however there is currently no scheduled airline service
- Three sets of Visual Approach Slope Indicators (VASIs) for Runway 12
- A Medium Intensity Approach Lighting System (MALSR) for Runway 30
- Two fixed base operators

Spaceport

The site for the Spaceport America is north of Upham, in Sierra County. This site will have a significant impact on the Las Cruces MPO area because Las Cruces is the closest urbanized area. For example, a large number of Spaceport employees will probably live in the region, and aerospace engineering and construction firms may locate in and around Las Cruces to support the Spaceport activities. Completion of the Spaceport is expected in 2011. More information about Spaceport America is available at www.spaceportamerica.com.

Automobile Traffic Conditions Quick Facts
• from 1960 to 1995 VMT has increase from 4000 to 9200 per person
• 75% of trips taken by car are less than 1 mile
• a person spends 65 minutes in a car per day

FIGURE 2-34
Automobile Traffic Conditions Quick Facts
Sources: USDOT; Surface Transportation 2000, Highlights from STPP's National Poll: American Attitudes Towards Walking and Creating More Walkable Communities, Mokdad A H, et al. J Am Med Assoc 1999;282:16, 2001;286:10

Automobile Traffic Conditions

This section includes information on Traffic Counts, Volume to Capacity Ratio (V/C), Level of Service (LOS), and Vehicle Miles Traveled (VMT). Many of these conditions are measured using the MPO travel demand model VISUM/VISSIM.

Traffic Counts

The MPO operates a traffic count program that provides data utilized by the public and a variety of stakeholders. MPO staff conducts counts for thoroughfare roadways throughout the region in 3-year cycles and does special counts for specific concerns that arise. Every year at least 1/3 of all thoroughfare segments, which are grouped by functional classification of collector or greater, will be counted. Every year the MPO provides a traffic flow map that shows counts for the previous 3 years. Figure 2-35 shows a portion of the 2009 traffic count map. The entire history of the traffic flow maps is available on the MPO website.

AADT, or Annual Average Daily Traffic, is the average number of motor vehicles traveling on a roadway during any 24-hour period throughout the year.

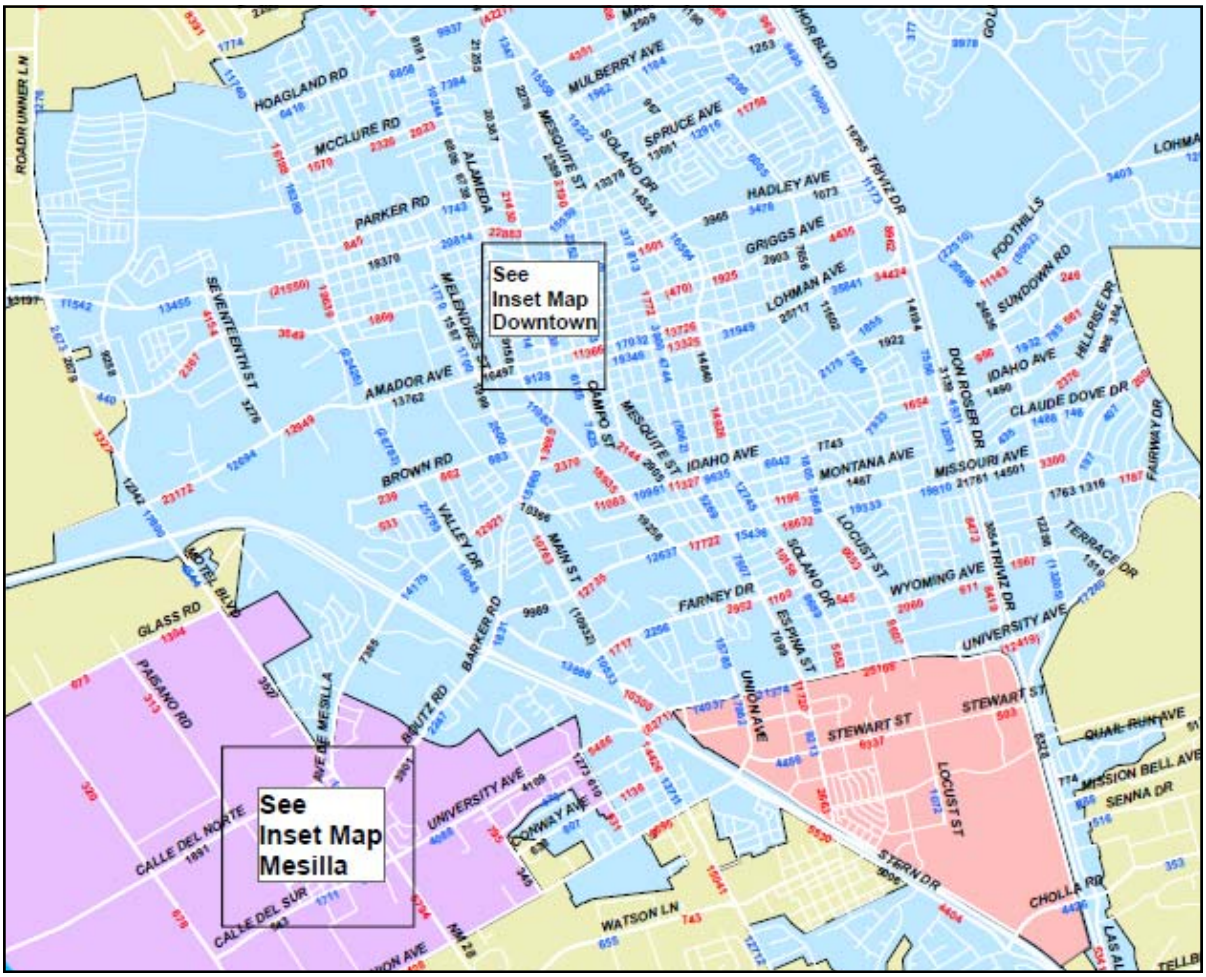
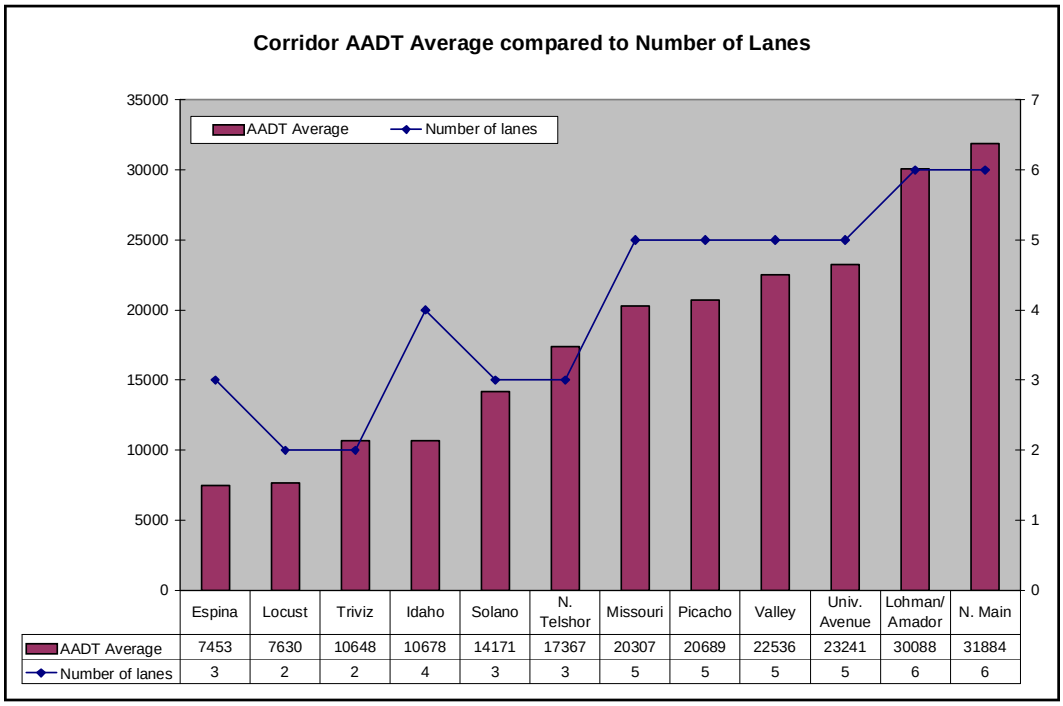


FIGURE 2-35
Las Cruces MPO Traffic Flow Map

Travel Lanes and AADT

The following comparison provides insight into how motor vehicle traffic volumes are being handled by roadways with a certain number of travel lanes, and also offers a perspective on how many lanes might be needed, or might not be needed, to handle said traffic volumes. Figure 2-36 shows the number of automobile traffic lanes compared to the average AADT of a street corridor.



	Espina	Locust	Triviz	Idaho	Solano	N. Telshor	Missouri	Picacho	Valley	Univ. Avenue	Lohman/ Amador	N. Main
AADT Average	7453	7630	10648	10678	14171	17367	20307	20689	22536	23241	30088	31884
Number of lanes	3	2	2	4	3	3	5	5	5	5	6	6

FIGURE 2-36
Corridor AADT Compared to Number of Roadway Lanes

In order to provide a conservative analysis, in all cases the segment of the corridor with the highest AADT was used. These roadways comprise most of the main thoroughfares in the central city. For example, Solano and N. Telshor seem to adequately handle 14,000 to 17,000 AADT with 3 lanes. Given its current measured traffic volume of 10,678 AADT, Idaho may operate as efficiently, or more efficiently, with 3 lanes rather than 4. One caveat to consider is that vehicle turning movements have a great impact on how well the roadway functions. Redistributing four travel lanes into 3 provides a better opportunity for safely executing left turns.

Volume to Capacity (V/C) and Level of Service (LOS)

In order to make decisions about when new lanes are needed and budget for roadway improvements, information is needed on motor vehicle Volume to Capacity ratio (V/C) and/or Level of Service (LOS). V/C uses a scale of 0 to one where one indicates the maximum value that the number of lanes of traffic on a given roadway can handle. V/C is a part of Level of Service. Level of Service includes V/C plus additional measures of traffic delay. Figure 2-37 shows the description of the six levels of

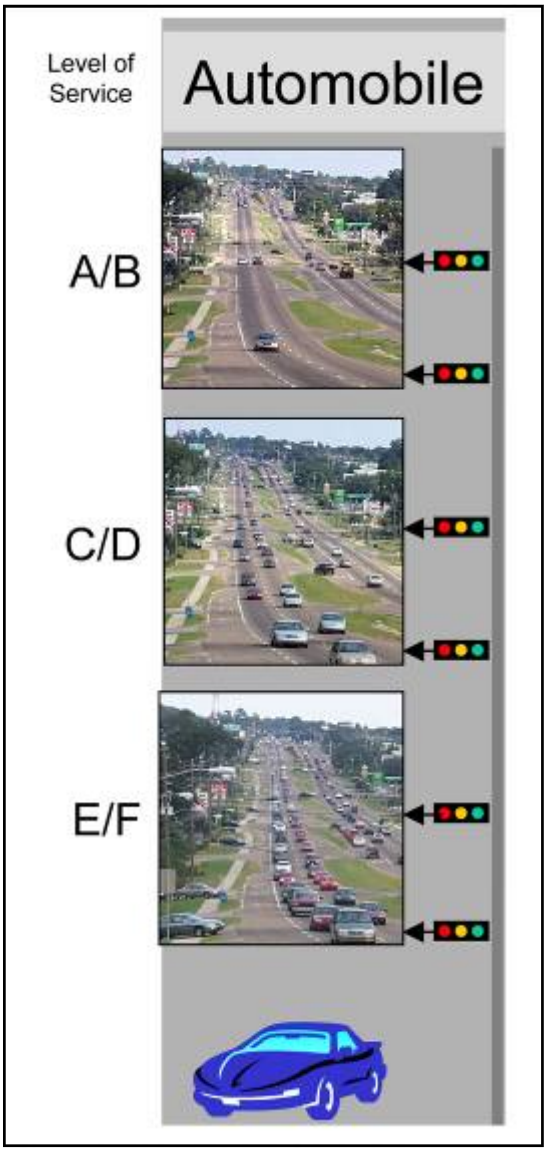


FIGURE 2-37
Automobile Level of Service
Source: Florida DOT Quality of Service Handbook, 2002

service (A-F). C/D is considered an acceptable level of service. LOS is only one of many factors that must be balanced when designing a roadway project. For example, land use activity is also an important component to consider.

Multimodal Conclusion

The region has seen a considerable increase in transportation infrastructure across all modes as the population of the MPO area continues to grow and diversity. However, an examination of the current conditions reveals that additional infrastructure expansion and upgrades are needed. Particularly noticeable are needed improvements to the pedestrian infrastructure, expansion of the in-road bicycle network, route expansion for RoadRUNNER transit, public transportation in rural areas, and maintenance of existing roadway facilities. Other traffic issues that need to be addressed are pinch points for west-east automobile travel in the region. In the next section, more analysis is done regarding these types of automobile traffic conditions through the use of the MPO's travel demand model and V/C analyses.

Travel Demand Modeling

A travel demand model is useful to evaluate a variety of existing conditions and future scenarios for the transportation system and identify potential infrastructure needs. For example, land use and roadway network parameters can be changed to simulate the impact of different transportation improvements and land use assumptions on the system.

Travel Demand Model Process
(Figure 2-38)

In VISUM, the jobs are organized into six categories: retail, industrial, high service, low service, schools, and hotel. The model creates a trip table based on the land use data. Then, using travel behaviors captured by the 2001 survey, the model assigns every trip to an origin and destination. Next, the model finds the best route for every trip on the road network. Best routing factors include trip length and time. The process does not stop until the model has reached equilibrium, meaning that no one trip can be changed without increasing total travel time for the entire system.

The travel demand model, called VISUM, also provides V/C ratio and Vehicle Miles Traveled (VMT) analyses for roadways in the MPO region. The parameters for the software were developed in coordination with the NMDOT, other MPOs in New Mexico, and the El Paso MPO. The travel behavior parameters in the model are based on the 2001 Las Cruces Household Travel Survey. VISSIM is an extension of VISUM that provides traffic simulations for a particular area, corridor, or intersection.

The VISUM model uses a schematic of major roadways and land uses to predict travel. The network also contains some generalized local roadways to offer a few access points into the system. The land uses are also generalized and located in Traffic Analysis Zones (TAZ). Each TAZ in VISUM is populated with housing and jobs. The model is calibrated to historic traffic counts conducted by the MPO.

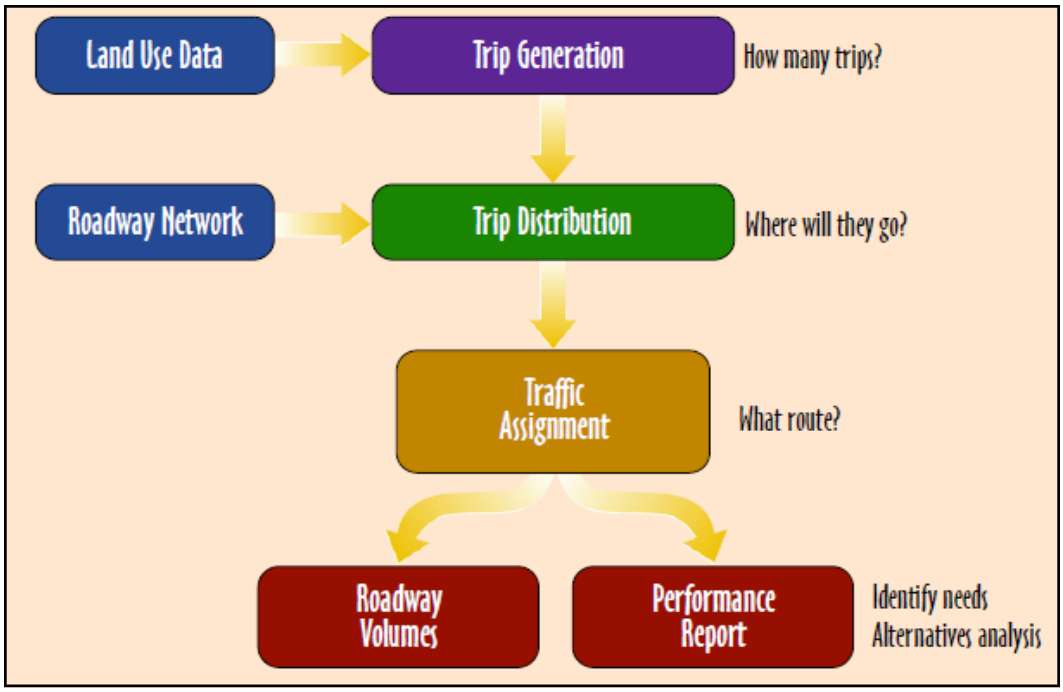
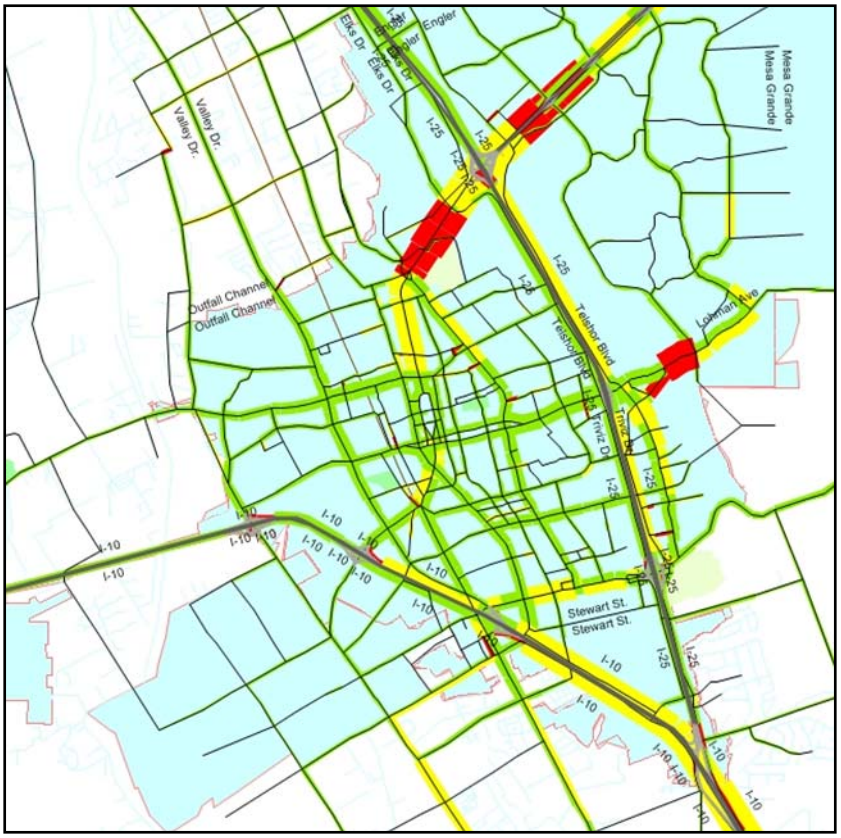


FIGURE 2-38
Travel Demand Model Process
Source: Cheyenne, WY Master Transportation Plan



FIGURES 2-39 and 2-40
Modeling Results for No-Build 2015 PM Peak and Build 2015 PM Peak

2015 PM Peak Modeling Results (Figures 2-39 and 2-40)

Auto volumes are represented by color bars on individual links. Green represents under utilized roadways, yellow segments are operating near capacity, and red shows where congestion may be encountered. In both the AM and PM period the worst traffic is experienced on North Main and on East Lohman.

MPO Regional Scenarios

MPO staff analyzed several future scenarios for the transportation system based on different roadway build outs (based on TIP projects) and different land use patterns (developed as a part of the Vision 2040 process). These scenarios included:

- No-Build scenario for 2015
- Build scenario for 2015
- Land Use 1 (Current Trend) for 2040
- Land Use 2 (Activity Centers) for 2040

Vehicle Miles Traveled Increase Compared to Increase of U.S. Population

During the period of 1970 to 2005, U.S. population increased by 46%; however, during that same period the number of vehicle miles traveled increased 169%.

Source: Lee C and Moudon AV (2004). Physical activity and environment research in the health field: Implications for urban and transportation planning practice and research. Journal of Planning Literature, 19 (2), 147-181. Growing Cooler: The Evidence on Urban Development and Climate Change

The maps on page 45 show the results of the 2015 scenarios and areas of the roadway network that may become congested at peak hours of the day (See Figures 2-39 and 2-40).

2015 No Build Scenario:

The No-Build scenario utilizes projected land use growth with the existing roadway network and includes improvements that are funded in the 2010-2013 MPO TIP. New facilities for the No-Build condition are the I-10 expansion from I-25 to the Texas State line and construction of an I-25 crossing in the vicinity of Engler/Kennedy. Total travel is estimated to be 6,873,783 Vehicles Miles Traveled (VMT) for an average weekday.

2015 Build Scenario:

The 2015 Build scenario contains the improvements funded in the No-Build plus additional projects such as the construction of Engler Road from Del Rey to Sonoma Ranch, and the construction of Mesa Grande from Onate High School to Lohman Avenue. An assumption was made that these improvements will be paid for by private funds as development occurs. Total travel is estimated to be 6,620,508 VMT for an average weekday.

For the 2040 scenarios, the Land Use 1 scenario analyzed a trend outcome. Existing land consumption and distribution patterns were projected into the growth areas of the region. The second scenario, Land Use 2, used compact activity centers surrounded by lower urban density development. Both scenarios were analyzed with a full build out of the Major Thoroughfare Plan.

Vehicle Miles Traveled (VMT)

Nationally, VMT has increased dramatically over the past 35 years (See Automobile Traffic Conditions Quick Facts, page 40). In fact, the percent increase of VMT has been rising at more than three times the percent of population increase. The increase in VMT is expected to continue unless there are significant land use and transportation policy changes. Regionally, there are 6.2 million miles of daily travel in Doña Ana County. By 2015 that number could increase to between 6.6 and 6.9 million miles every day.

Figure 2-41 provides a comparison of projected VMT based on the results of the 2015 Build and No Build scenarios as well as the 2040 Scenarios. These analyses compare the daily and per capita VMT changes.

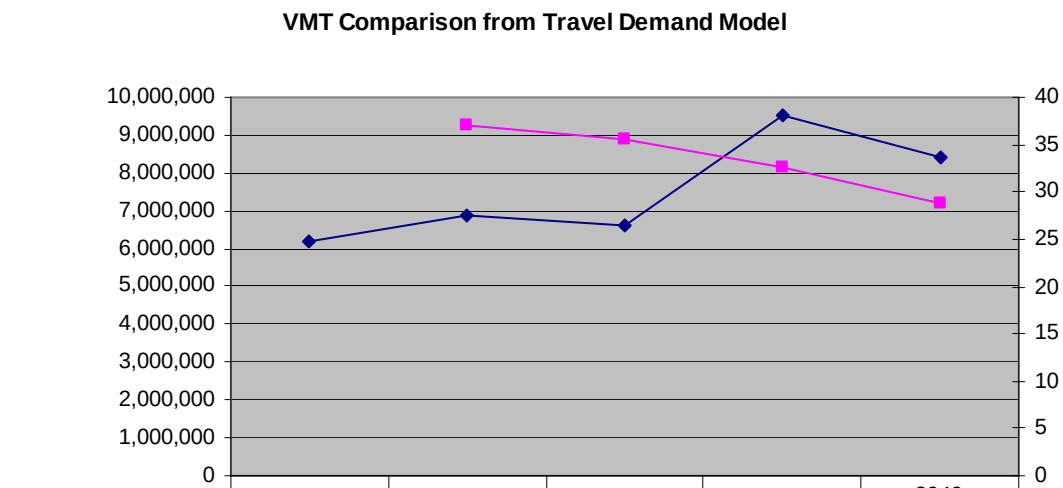
Scenarios Conclusion

In both 2015 scenarios, the highest congestion at peak hours is on North Main and Lohman. However, the model estimates that total daily Vehicle Miles Traveled of the Build scenario is 4% less than the No Build scenario. This reduction is accomplished by providing a more connected transportation system.

For the 2040 scenarios, both show that significant numbers of facilities experience congestion conditions during the peak hour of travel, however the alternative development scenario shows over 10% reduction in VMT.

The MPO recommends that the 2040 alternative scenario, combined with other methods to reduce the need for roadway widening, be pursued. For example, Intelligent Transportation Systems (explained in Chapter 4) utilizes technology to coordinate traffic flow across regional corridors. The different scenarios also may have an effect on the maintenance costs for local jurisdictions. For example, the 2040 alternative scenario will require fewer roadways miles than the trend scenario, thereby requiring fewer dollars to maintain and operate.

The 2040 alternative development scenario shows over 10% reduction in VMT.



	2010	2015 No Build	2015 Build	2040 Trend	2040 Alternative
VMT	6,178,577	6,873,783	6,620,508	9,507,587	8,415,880
Per capita VMT		36.96	35.60	32.50	28.77

FIGURE 2-41
VMT Comparison from Travel Demand Model Scenarios

Regional Movement, Freight Corridors, and Security

Doña Ana County is located on a vital cross country route that facilitates the movement of goods from major US seaports and international manufacturing and distribution regions. Major roadways and rail lines connect the Las Cruces MPO area to national and international facilities, such as the Santa Teresa Port of Entry, Foreign Trade Zones located at the Las Cruces and Santa Teresa Airport, White Sands Missile Range, NASA, the future Spaceport, El Paso, and Ciudad Juárez. Because of this location the Las Cruces MPO region has several transportation facilities that are important to regional, national, and international security. These include:

- Interstate Highway 10
- Interstate Highway 25
- U.S. Highway 70
- Las Cruces International Airport
- Burlington Northern Santa Fe (BNSF) rail line, and
- Santa Teresa Port of Entry

Interstate 10

Interstate 10 passes through the southern third of the MPO region connecting the area to the southern tier of US states - from Florida to California. I-10 traffic volume ranges from ~18,000 AADT west of Las Cruces to ~40,000 AADT south of the interchange with I-25. In addition, I-10 is the only cross continental freight corridor located in a frost free area. I-10 also has international connections to the Santa Teresa Port of Entry and Mexican Highway 2.

Interstate 25

Interstate 25 begins at the interchange with I-10 in southern Las Cruces and terminates in Montana. The average daily traffic on this facility ranges from ~16,000 AADT in the metro area to ~6,000 AADT north of Las Cruces. I-25 creates a transportation spine through the State of New Mexico connecting Las Cruces with Albuquerque and Santa Fe.

US Highway 70

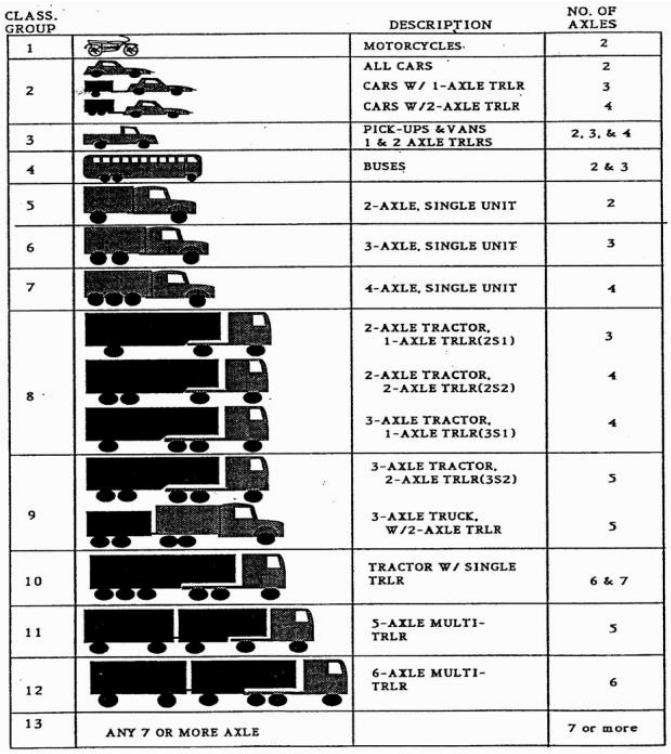
Within the MPO area, US Highway 70 diverges from I-10 at the Jackrabbit Interchange west of Las Cruces. US 70 is the only roadway that traverses the MPO area from east to west. In Las Cruces, Picacho Avenue and North Main Street make up US 70 through the city. East of I-25, the roadway becomes a controlled access highway with frontage roads. US 70 continues east to White Sands and Alamogordo. The average daily traffic on this facility ranges from ~11,000 AADT west of Las Cruces to ~37,000 AADT in the metro area, to ~24,000 east of Las Cruces.

Volume by Classification (VBC) Counts

MPO staff, through the traffic count program, has conducted Volume by Classification (VBC) counts in the region. The Vehicle Classification Chart in Figure 2-43 lists all of the vehicle classifications designated by FHWA. The Trucks category represents Class Groups 8 through 13 and Combo Trucks are multi-trailer trucks representing Class Groups 11 through 13. The VBC counts are from 2006 to 2008 and show classification counts for the following roadways:

Volume by Classification Quick Facts			
Street	**Termini**	**% Trucks**	**% Combo Trucks**
I-10	I-10 and I-25 Interchange	29%	
US 70	Temple to Elks	17%	9%
Valley Drive	Engler to Swartz	10%	1%
Valley Drive	Ave De Mesilla to Boutz	13%	7%
Main Street	Boutz to Farney	11%	4%
Main Street	El Paseo to Peter Piper	13%	7%
Main Street	Watson to Union	4%	Less than 1%
Solano	Hadley to Spruce	12%	5%
Solano	Mulberry to Madrid	10%	5%
Hoagland	Valley to RR	4%	Less than 1%

FIGURE 2-42
Volume by Classification Quick Facts



CLASS. GROUP	DESCRIPTION	NO. OF AXLES
1	MOTORCYCLES	2
2	ALL CARS	2
	CARS W/ 1-AXLE TRLR	3
	CARS W/2-AXLE TRLR	4
3	PICK-UPS &VANS 1 & 2 AXLE TRLRS	2, 3, & 4
4	BUSES	2 & 3
5	2-AXLE, SINGLE UNIT	2
6	3-AXLE, SINGLE UNIT	3
7	4-AXLE, SINGLE UNIT	4
8	2-AXLE TRACTOR, 1-AXLE TRLR(2S1)	3
	2-AXLE TRACTOR, 2-AXLE TRLR(2S2)	4
	3-AXLE TRACTOR, 1-AXLE TRLR(3S1)	4
9	3-AXLE TRACTOR, 2-AXLE TRLR(3S2)	5
	3-AXLE TRUCK, W/2-AXLE TRLR	5
10	TRACTOR W/ SINGLE TRLR	6 & 7
11	5-AXLE MULTI-TRLR	5
12	6-AXLE MULTI-TRLR	6
13	ANY 7 OR MORE AXLE	7 or more

FIGURE 2-43
Federal Highway Administration Vehicle Classification Chart

NMDOT Freight Study

NMDOT completed a study in 2009 that examined freight movement in the State of New Mexico. The key findings are related to both rail and truck intrastate, interstate, and through movement, international shipments, freight weight and value, and key trading partners for New Mexico.

New Mexico Freight Quick Facts

- The weight of freight totaled approximately 240.1 million tons in 2002. By 2035, the total weight is expected to increase to 525.3 million tons.
- The value of freight totaled approximately $253.6 billion in 2002. By 2035, the total value is expected to increase to approximately $1 trillion.
- Trucks are the dominant mode of freight transportation, handling over 71 percent of total weight and 86 percent of total value in 2002. By 2035, the total weight and value is expected to increase to 153.2 million tons and $180.4 billion, respectively.
- Rail movements handled approximately 22 million tons in 2002. By 2035, the total weight is expected to increase to 35.4 million tons.
- New Mexico's key domestic trading partners include Texas, Colorado, and Arizona.
- Three Asian countries (China, Malaysia, and the Philippines) constitute 53 percent of total New Mexico exports.
- New Mexico's border crossings are experiencing growth, driven by NAFTA trade and increasing congestion at border crossings outside the state. Between 1996 and 2006, the number of trucks crossing into the United States annually at the Santa Teresa Port of Entry (POE) nearly doubled from 18,463 to 36,905.

FIGURE 2-44
New Mexico Freight Quick Facts
Source: NMDOT

Security

Continuity of the transportation network is a critical element to any response. The NMDOT coordinates with the Strategic Highway Network (STRAHNET) system that identifies the system of public highways that provides access, continuity and emergency transportation of personnel and equipment in times of peace and war. NMDOT is also tasked with maintaining and updating the inventory of critical infrastructure, facilities, and transportation services. The NMDOT Planning Division is a member of the Anti-Terrorism Advisory Council (ATAC) that coordinates activities, develops policy, and implements strategic plans to combat terrorism. The Transit and Rail Division assisted in developing the terms and conditions under which buses used for Park and Ride services may be redeployed in response to natural and human-caused disasters.

The Las Cruces MPO is a coordinating member with the Doña Ana County Local Emergency Planning Committee (LEPC). The LEPC is a formal organization of agencies

responsible for maintaining the safety and security of the residents of Doña Ana County.

Conclusion

In 2002, freight movements travelling through the state account for a significant percentage of total freight shipments - approximately 35 percent (by weight) and 67 percent (by value). These movements, particularly when measured by value, are growing at a much faster pace than intrastate freight movements or freight with final destinations within the state. By 2035, through movements are expected to account for 75 percent of the total shipment value in the state, leading to additional truck trips along major trade corridors, particularly I-10 and I-40. The increased movements will result in an increase need for roadway maintenance and operations, including implementing Intelligent Transportation System technology. These needs will require funding through additional revenue sources as the state has already recognized that existing sources will not keep up with current demand.

Natural and Cultural Resources

The MPO region is in the Chihuahuan Desert and contains a unique agricultural community adjacent to the Rio Grande. The Rio Grande bisects the Mesilla Valley and currently traverses just west of the incorporated City of Las Cruces. The region has its roots dating back to civilizations from the early 1000's. El Camino Real which runs parallel to the Rio Grande through the area has been utilized as key transportation corridor for over 400 years.

Desert grasslands extend from the edges of the city to the lower slopes of the nearby Organ and Robledo Mountains. The desert grasslands are often separated by arroyos that carry water following rainy weather. These arroyos also serve as wildlife corridors. Preserving the cultural heritage and aspects of the unique desert environment are integral parts of maintaining the community's natural and cultural resources. In the desert environment, water can be a scarce resource; therefore, water conservation is a high priority for the region. There is also considerable concern for the protection of the natural environment and views of the mountains in both the valley and the grassland mesas. Other issues related to the natural environment include the need for shade due to the number of sunny days, and the wind's impact on health and air quality, particularly with respect to unimproved roadways. Finally, air quality mitigation and climate change issues, although not currently required to be evaluated by the MPO, will likely become part of future scenarios that the region will need to contend with.

The Las Cruces MPO supports the NMDOT Commitment to Environmental and Energy Action (2003):

> Promote innovative planning and design that avoids adverse impacts to the natural and human environment, including effects to neighborhoods, low income and minority populations, farmlands, endangered species, wildlife habitat, wetlands, water and air quality, visual resources, cultural landscapes, and archaeological and historic sites, and implement creative mitigation program to replace, restore, and enhance these resources.

This section includes:

- Identification of areas of Cultural and Environmental Importance
- Development of Thoroughfare Plan and Transportation Studies
- Air Quality and Greenhouse Gases

Identification of areas of Cultural and Environmental Importance

The MPO accesses or acquires national, state, and local geographic data to analyze impacts of proposed transportation improvements to areas of cultural and environmental importance. Figures 2-45 and 2-46 identify areas of cultural and environmental importance in the MPO area.

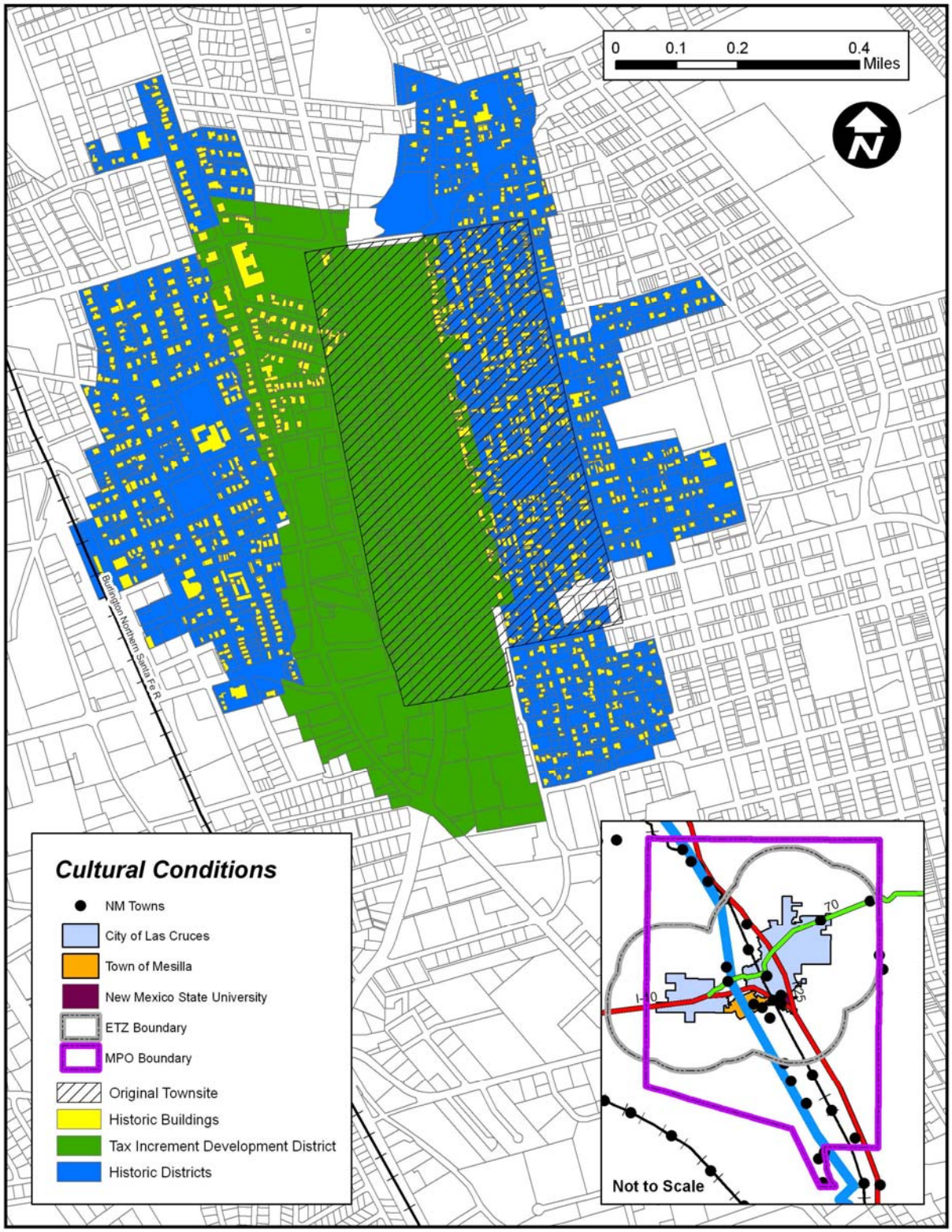


FIGURE 2-45
Cultural Conditions: historic districts, buildings with unique architectural styles, and neighborhood associations.

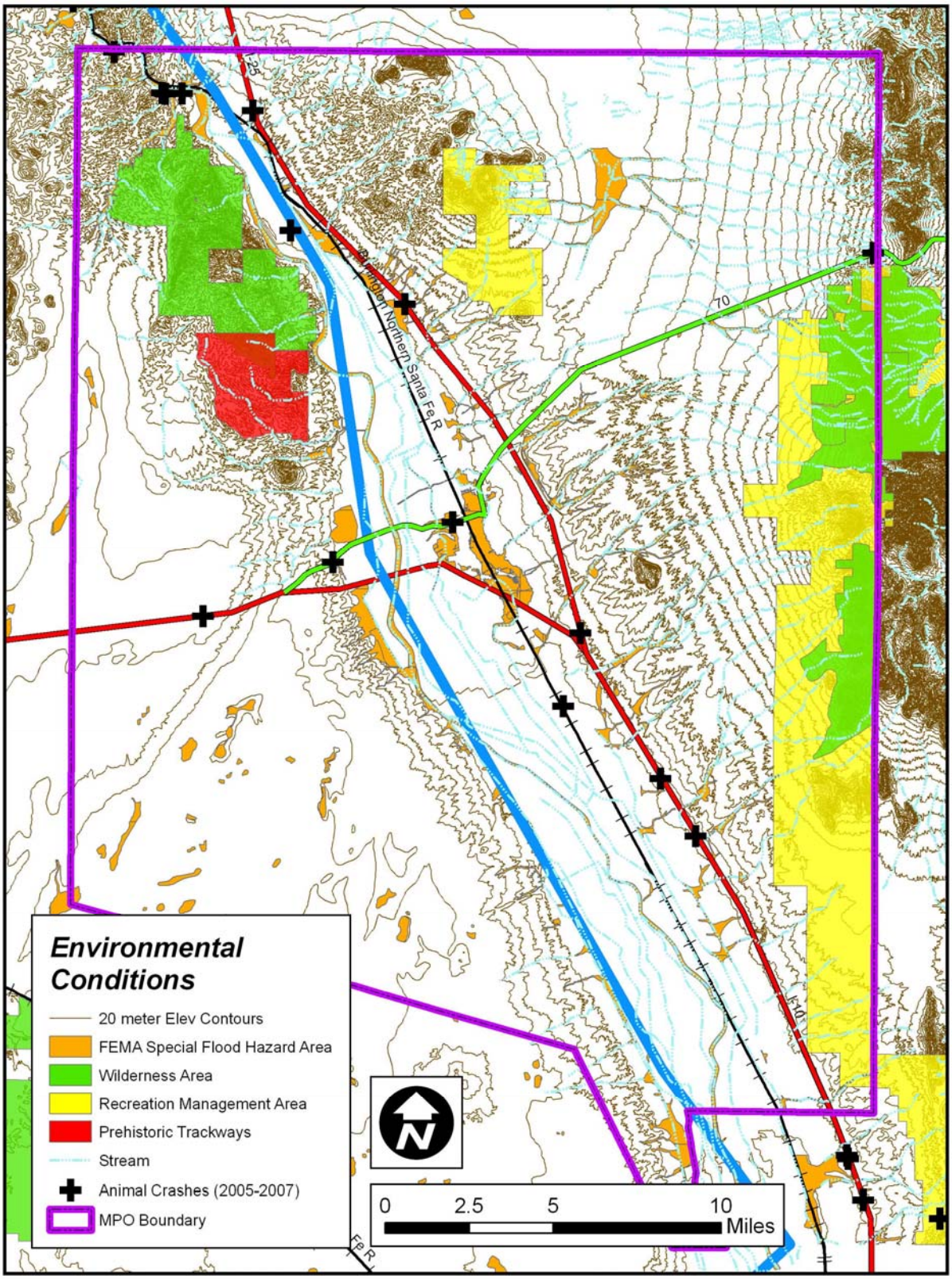


FIGURE 2-46
Environmental Conditions: wilderness areas, areas of critical environmental concern (determined by the BLM), animal involved motor vehicle crashes, and arroyo and flood areas.

Development of Thoroughfare Plan and Transportation Studies

Thoroughfare Plan

The development of the Thoroughfare Plan is an example of a process where cultural and natural conditions need to be addressed. MPO staff and Technical Advisory Committee members considered the location of arroyo crossings and wilderness areas when establishing thoroughfare alignments. In addition, some roadway alignments pass through fairly steep topography and near recreational areas maintained by the Bureau of Land Management (BLM). For example, the federal government recently designated the Prehistoric Trackways Park located west of the Rio Grande and north of Picacho Peak. Previously, a roadway alignment existed in that area that, if it remained, would pass through this park. As a result, the MPO, through agency and public coordination, identified a new potential alignment.

Transportation Studies: Study Areas and Corridors

When conducting transportation studies it is important to include the link between Planning level analysis and Project level analyses as they concern National Environment Protection Act (NEPA). A variety of tasks and information gathering steps are needed, including a robust public input process. A good discussion of how Madrid-Sonora Springs handled these issues can be found on the MPO website.

NMDOT's Project Identification Form/Scoping Report also provides insight into what types of information may be needed to prepare for future project level analyses. These include gathering information regarding the following:

- public support
- functional classification of the roadway
- project description and justification
- statement of purpose and need
- technical information, such as number of lanes
- pavement conditions
- traffic and accident information
- environmental information such as location or occurrence of active streams, archaeological sites, wetlands, air quality issues, noise increases, underground storage tanks and other hazardous waste sites, and drainage information
- existing right-of-way and right-of-way needed for the project
- relationship to other projects
- preliminary cost estimates

Addressing all of these issues is integral to ensuring that the natural environment and potential environmental impacts of land use development and transportation system expansion are assessed prior to construction of a project.

Air Quality and Greenhouse Gases (GHG)

Transportation is a major contributor to local air pollution and smog. These outcomes in turn have a significant impact on health conditions such as asthma and cancer. The six criteria air pollutants monitored by the Environmental Protection Agency (EPA) are: nitrogen oxides, carbon monoxide, volatile organic compounds, PM10 and PM2.5, sulfur dioxide, and ammonia. National statistics regarding air quality show an overall decrease (from 1990 to 2006) of criteria air pollutants, but an increase of carbon dioxide, especially from transportation sources.

Climate change refers to unstable weather patterns caused by increases in the *average* global temperature. As concentrations of GHGs increase in the earth's atmosphere they trap heat and contribute to an increase in global temperature. The increase of GHGs may be the fundamental cause of sea level rise and climate instability, such as floods and severe snowfall. The impacts of extreme weather events on the transportation system include: damage to transportation infrastructure and the economic cost of interruptions in the operation of the transportation systems.

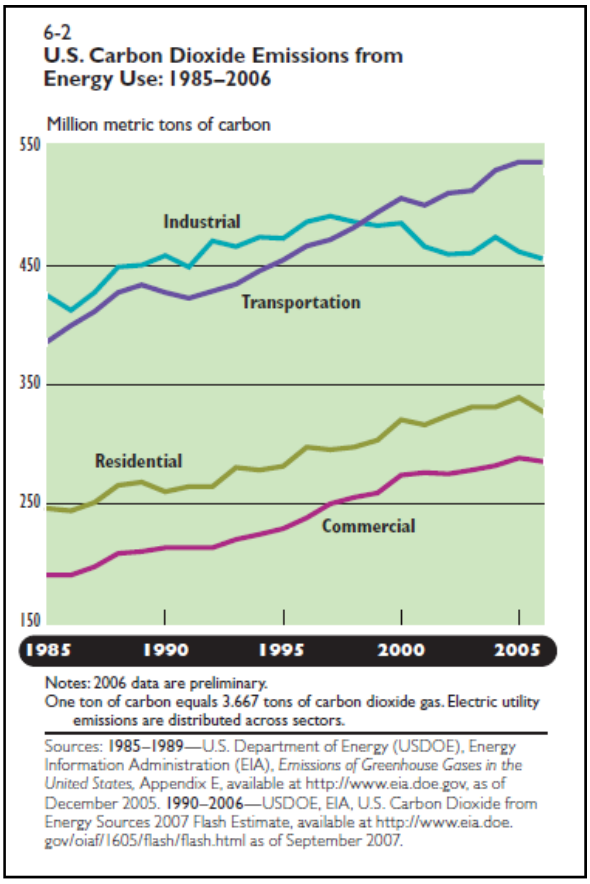


FIGURE 2-47
U.S. Carbon Dioxide Emissions from Energy Use: 1985-2006

Currently, carbon dioxide, a common emission from motor vehicles and the burning of fossil fuels, is not considered one of the criteria pollutants. Transportation systems account for between 20 and 25 percent of the energy consumption and carbon dioxide emissions in the United States. In fact, Greenhouse gases (GHG) from transportation systems are increasing at a faster rate than any other energy using sector (See Figure 2-47). Eighty-four percent of the United States' GHG emissions are composed of carbon dioxide (CO2). In addition, the United States produces more than one-third (36%) of the world's CO2 emissions (more than any other country in the world).

Doña Ana County and Air Quality

Of the six criteria pollutants monitored by the EPA, Doña Ana County faces two primary concerns: particulate matter and ozone. Particulate matter (PM) is high in our region due to the arid climate, seasonal winds, and agricultural activities throughout the valley. However, PM is also high in Doña Ana County due to a large number of unpaved roadways. Dust, particularly fine dust (PM 2.5), lifted into the air by motor vehicle traffic can remain in the atmosphere for hours at a time, especially during windy conditions. This dust is then inhaled causing health problems such as asthma.

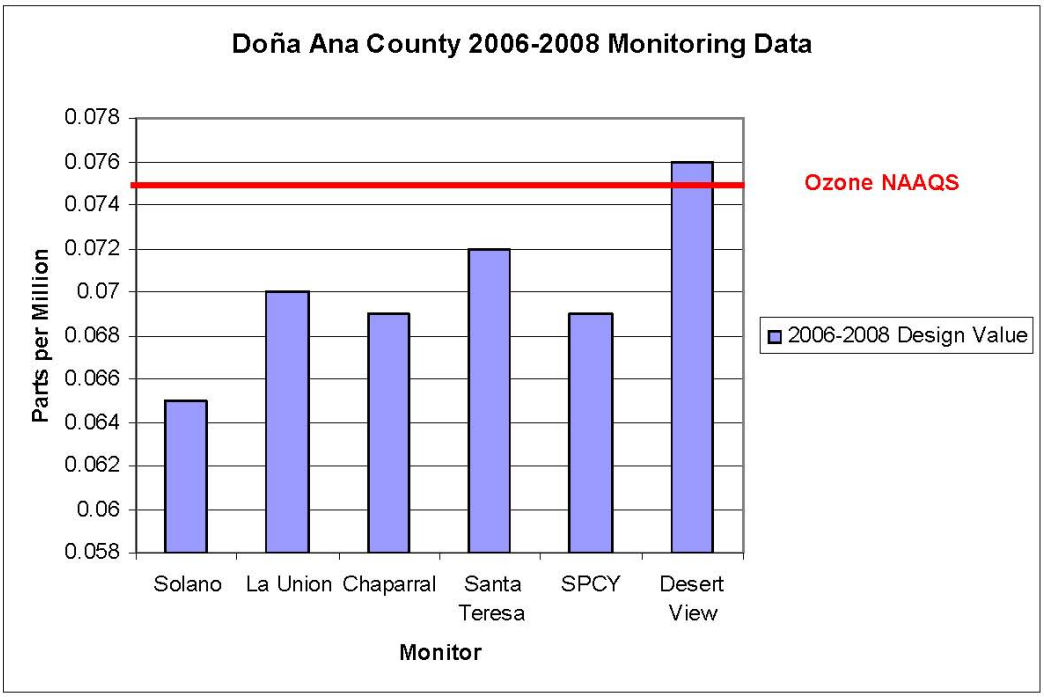


FIGURE 2-48
Doña Ana County 2006-2008 Monitoring Data
Source: U.S. EPA

Attainment area means any geographic area in which levels of a given criteria air pollutant (e.g., ozone, carbon monoxide, PM10, PM2.5, and nitrogen dioxide) meet the health-based National Ambient Air Quality Standards (NAAQS) for that pollutant. An area may be an attainment area for one pollutant and a nonattainment area for others.

In March 2008, the EPA revised the National Ambient Air Quality Standard (NAAQS) for the 8 hour measurement from 0.08 parts per million (PPM) to 0.075 PPM. Due to the adjusted standard, the New Mexico Environment Department recommended that the Sunland Park (0.078 PPM) area be classified as non-attainment. The decision in a subsequent law suit ruled that the EPA did not lower the standard enough based on its own scientific review. In January 2010 the EPA released a new rule for comment. The standard will be between 0.060 PPM and 0.070 PPM. Depending on the final value selected, the Las Cruces area (0.063 PPM) may be designated as non-attainment also. The MPO may be required to develop a congestion management plan that addresses air quality issues through performance measures if the Las Cruces area is designated non-attainment.

Nonattainment area means any geographic region of the United States that has been designated by the EPA as a nonattainment area under section 107 of the Clean Air Act for any pollutants for which an NAAQS exists.

State Emission Reduction Goal

The State of New Mexico has set forth a goal to reduce GHG emissions to 75% below 2000 levels by 2050 (See Figure 2-49, page 58). In anticipation of this region's growth and contribution to these types of emissions, the Las Cruces MPO is addressing potential air quality issues by evaluating the affect that land use strategies has on the vehicle miles traveled in Doña Ana County (See Traffic Modeling and VMT). In addition, by the 2015 update the MPO will begin using Mobile10 software to calculate emissions based on Vehicle Miles Traveled as calculated by the VISUM travel demand model.

Natural and Cultural Resources Conclusion

The MPO transportation planning process includes the identification of natural and cultural resources, a robust public involvement process to determine potential impacts to these resources, and an evaluation of ways to eliminate or mitigate potential negative impacts. This process both protects these resources and provides for enhanced urban and rural environments.

Maintenance area means any geographic region of the United States that the EPA previously designated as a nonattainment area for one or more pollutants pursuant to the Clean Air Act Amendments of 1990, and subsequently redesignated as an attainment area subject to the requirement to develop a maintenance plan under section 175A of the Clean Air Act, as amended.

Table 2. Overview of States' Long-Term GHG Emission Reduction Goals

State	Goal
Arizona	50% below 2000 by 2040
California	80% below 1990 by 2050
Florida	80% below 1990 levels by 2050
Illinois	60% below 1990 levels by 2050
Massachusetts	75–85% below 1990 long-term
Minnesota	80% below 2005 levels by 2050
New Hampshire	75–85% below 2001 long-term
New Jersey	80% below 2006 levels by 2050
New Mexico	75% below 2000 by 2050
Oregon	75% below 1990 by 2050
Vermont	75–85% below 2001 long-term
Washington	50% below 1990 levels by 2050

Source: Pew Center on Global Climate Change, "What's Being Done," available at: http://www.pewclimate.org/what_s_being_done/targets.

FIGURE 2-49
Overview of States' Long-Term GHG Emission Reduction Goals

Appropriate land use densities and planned developments that encourage the use of all modes should be given high priority. While land use decisions are not made by the MPO, the MPO can consider land use development when making transportation decisions. In addition, the MPO should continue to facilitate better coordination among local entities and regional and state agencies to ensure wise investments are made. Finally, considerable input is needed from environmental and cultural resource agencies and economic development organizations to ensure the integration of these issues into the transportation planning process.

❸ TRANSPORT 2040 Planning Process and Vision

Transportation Planning Initiatives

Federal Initiatives

TRANSPORT 2040 must comply with national transportation goals and address the federal planning factors in order to be eligible to receive federal funding for prioritized projects. For this MTP update, staff researched and considered issues being proposed for the next transportation bill, and included these in the vision and goals for this plan.

The most recent proposed federal transportation bill includes a much broader range of issues than previously addressed, such as increased focus on climate change, enhancement of rail transportation, and land use and transportation coordination. The bill also includes recommendations to simplify funding and planning categories that need to be addressed by State departments and MPOs. A quote below includes a summary of the intentions of the current proposed bill:

> "A bill to transform Federal surface transportation to a performance-based framework to reduce fatalities and injuries on our Nation's highways, address the mobility and access needs of people and goods, improve the condition, performance, and connectivity of the United States intermodal surface transportation system, provide transportation choices for commuters and travelers, promote environmental sustainability, public health, and the livability of communities, support robust investment in surface transportation, and for other purposes."

Sustainable Communities Partnership

In June 2009, the Partnership for Sustainable Communities was formed by the U.S. Department of Housing and Urban Development (HUD), the U.S. Department of Transportation (DOT), and the U.S. Environmental Protection Agency (EPA). These three agencies have pledged to ensure that housing and transportation goals are met while simultaneously protecting the environment, promoting equitable development, and helping to address the challenges of climate change. Federal funding opportunities have been made available to support local efforts to promote livable and sustainable communities.

The six livability principles associated with Sustainable Communities are as follows:

- Provide more transportation choices. Develop safe, reliable, and economical transportation choices to decrease household transportation costs, reduce our

nation's dependence on foreign oil, improve air quality, reduce greenhouse gas emissions, and promote public health.

- Promote equitable, affordable housing. Expand location- and energy-efficient housing choices for people of all ages, incomes, races, and ethnicities to increase mobility and lower the combined cost of housing and transportation.
- Enhance economic competitiveness. Improve economic competitiveness through reliable and timely access to employment centers, educational opportunities, services and other basic needs by workers, as well as expanded business access to markets.
- Support existing communities. Target federal funding toward existing communities—through strategies like transit oriented, mixed-use development, and land recycling—to increase community revitalization and the efficiency of public works investments and safeguard rural landscapes.
- Coordinate and leverage federal policies and investment. Align federal policies and funding to remove barriers to collaboration, leverage funding, and increase the accountability and effectiveness of all levels of government to plan for future growth, including making smart energy choices such as locally generated renewable energy.
- Value communities and neighborhoods. Enhance the unique characteristics of all communities by investing in healthy, safe, and walkable neighborhoods—rural, urban, or suburban.

In April 2010, HUD, DOT, and EPA released a booklet, entitled Leveraging the Partnership: DOT, HUD, and EPA Programs for Sustainable Communities, describing the partnership and each agency's commitment to promote the principles outlined therein. According to the DOT, its agency's function is to:

> "Serve the US by ensuring a fast, safe, efficient, accessible, and convenient transportation system that meets our national interests and enhances the quality of life of the American people, both today and into the future. DOT will work to promote livable communities and enhance the economic and social well being of all Americans by creating and maintaining a safe, reliable, integrated, and accessible transportation network. A multimodal transportation system increases choice, provides easy access to employment opportunities and other destinations, and improves the surrounding community. DOT will work to build on innovative ways of doing business that promote mobility and enhance the unique characteristics of our neighborhoods, communities, and regions."

Balancing Public Interest and Funding

The *2003 Surface Transportation Policy Project Poll* conducted by the United States Department of Transportation asked Americans about their access to transportation and where and how to focus limited funding. The results of the poll are listed below:

- 55% of Americans want to walk more
- 84% of Americans want streets designed for slower traffic

- 74% want their children to be able to walk to school safely
- 59% of Americans support investing in transit
- 66% of Americans support innovative solutions to congestion

National polls like these indicate that Americans want to have more mobility choices.

Funding has traditionally been available primarily to design freeways and has therefore created a well-functioning interstate system. It is time to focus more attention on community priorities and remember that roads are public space meant both for vehicle travel and community interaction. The future of our economy, our environment, and our social opportunities depend upon finding a balance between traffic flow, providing modal choice, and creating attractive, economically-thriving destinations.

Pursuing strategies that include safety first for the most vulnerable modes, increased connectivity of the street system, improved walking and bicycling conditions, enhanced employment of Intelligent Transportation Systems, and preservation of arroyos and trails can be steps towards reducing dependence on automobile travel and providing healthier more sustainable options for the community as a whole.

State Initiatives

A 2005 Executive Order from Governor Richardson formed a task force to make recommendations regarding ways to invest in the type of communities New Mexican's value. This task force travelled around New Mexico gathering input from local citizens, living in cities of all sizes (including Las Cruces), about the strengths of their communities. Recommendations found in the report entitled Our Communities Our Future: Create More Walkable Communities and More Mobility Choice from the Governor's Task Force New Mexico Toolkit for Community Growth and Sustainability (July 2007) included five main themes related to the future of our communities in New Mexico. They are based on querencia, or "a place where one feels safe, a place from which one's strength of character is drawn, a place where one feels at home." The five themes that came out of the task force were:

- create more walkable communities and more mobility choices,
- provide greater housing opportunities for all New Mexicans,
- enhance the environment and natural resources,
- preserve critical lands, and
- provide leadership in the livable economy of the future.

Although the State task force concluded its finding 2 years before the federal sustainable communities initiative, the links between statewide and national principles are evident. These links include diverse housing and transportation choices and meaningful economic development. In order to help local governments pursue some of these principles, the task force recommended forming a statewide planning office.

Local and Regional Initiatives and Projects

A variety of collaborative planning and engineering projects are being conducted throughout the MPO region. These initiatives exemplify the continued need and desire for a variety of transportation options, well-connected neighborhoods, and economic vitality. Listed below are some of the local projects and regional programs:

- The American Reinvestment and Recovery Act (ARRA) brought monies to our area that are being spent on constructing a multi-modal rural roadway in Berino, a multi-modal urban roadway in the City of Las Cruces, and pavement improvements in the Town of Mesilla.

- The NMDOT funded a Safe Routes to School (SRTS) coordinator for the Las Cruces area because of the strong interest in the program. Currently 3 schools have received about $60,000 for planning and project implementation. MPO staff is coordinating with Las Cruces Public Schools on completing a district wide assessment and action plan. SRTS programs make bicycling and walking to school a safer and more appealing transportation choice, thus encouraging a healthy and active lifestyle from an early age. Physical improvements that make it safer for kids to walk and bike benefit the community as a whole, providing opportunities for people of all ages to become more active.

- Doña Ana County recently finished an update of its roadway design standards that incorporated shoulders on all rural roadways—an application that increases safety for all modes—and takes into consideration land use activity when determining the best roadway design.

- Over the past two years, the Town of Mesilla, Doña Ana County, and the City of Las Cruces have all adopted Complete Streets resolutions.

- Healthy Kids Las Cruces, an initiative through the NM Department of Health, is a program that recognizes the interrelationships between individuals and the environment and focuses on Educational System, Food Systems, Healthcare System, Families and Community, and Community and Regional Planning. The NMDOH recognizes that improving the walkability of the built environment can have an impact on the health of its residents and improve opportunities for physical activity for all ages.

- The Prescription Trails program is a collaborative effort led by the NM Department of Health that focuses on providing a guide and prescription tablet for medical professionals to provide to their patients. This program relies upon having a good trail system in the region.

- NMSU is currently working on a parking management plan. NMSU also recently finished its Master Plan which includes recommended improvements to University Avenue and expanded public transit on and off campus.

- After the City of Las Cruces developed a master plan for the downtown in 2006, construction has begun to open up Main Street to vehicular traffic, changing traffic patterns in the area. The construction also involves making the area more connected and walkable in an effort to restore the economic vitality of downtown. This project will also include the city's first roundabout.

- The City of Las Cruces recently formed a Bicycle Friendly Community Task Force to implement road improvements for bicycling, improve education and outreach to cyclists and drivers, and increase enforcement of traffic laws.

- Las Cruces is one of only four US cities selected to participate in the 2010 Smart Growth Implementation Assistance (SGIA) program. This means that Las Cruces is receiving technical assistance from the US Environmental Protection Agency (EPA) and the US Departments of Transportation (US DOT) and Housing and Urban Development (HUD) to develop a vision for El Paseo that reflects community needs and desires.

- The University District Plan and Overlay was recently adopted, which included improved street connectivity and recognition of the link between land uses and the transportation system working in concert to develop a walkable area.

MPO staff will provide technical support and assistance with public participation to continue to support these and other projects and programs.

Public Participation Plan and Process

The MPO's four-step public participation process, as shown in Figure 3-1, helps guide the public involvement phases used for the development of the Metropolitan Transportation Plan. The graphic below illustrates our public input process as described in our Public Participation Plan (PPP). Each step builds on the previous steps and identifies a variety of options for developing regionally significant projects. The public input process for TRANSPORT 2040 included three phases of open house style meetings and continuous work with stakeholder groups and the MPO committees. This planning process enables transportation system alternatives to be described and evaluated prior to adoption of the MTP and development of projects.

Public Input Phases

MPO staff used a phased approach to implement the public participation process outlined above. Through these phases, staff compiled input from multiple individuals and organizations to guide TRANSPORT 2040 and incorporated these ideas into the Metropolitan Transportation Plan. The first phase gathered general ideas and issues from the public and stakeholders. During the second phase, staff presented the refined transportation vision and goals as well as proposed projects for the public to recommend priorities. The third phase involved the release and evaluation of the draft document, maps, and implementation strategies.

FIGURE 3-1
Las Cruces MPO Public Participation Process

Input was gathered through informational meetings, charrettes, open houses, questionnaires, emails, and continuous opportunities to provide input via the MPO website and MPO staff. The MPO invited all those who are on our master mailing list and receive our monthly e-Newsletter, all registered neighborhood organizations, and all members of our advisory committees to set up stakeholder meetings with MPO staff. In addition, the MPO welcomed invitations to speak with individuals and groups throughout the entire process. The PPP provides more detailed information on specific types of public participation techniques.

Open House Meetings

In Phase 1, the MPO facilitated 5 to 7-hour long open houses at alternate times in order to provide people with ample opportunity throughout the day to attend them. Six meetings were held in places geographically dispersed throughout the MPO planning area. Staff created storyboards with maps, information about key transportation topics, photos and other visual aids, and asked for feedback.

FIGURE 3-2
Las Cruces MPO Open House Meeting

The storyboard topics included:

- Vision Statement and Goals
- Thoroughfares
- Bicycle Facilities
- Pedestrian Priorities
- Trail Plan
- Bypass Priorities

Some questions surrounding these topics included:

- What thoroughfare connections do you think should be added or removed?
- What type of roadway facilities would you like to see?
- What values are important to the regional transportation system?
- What loop roads are vital to our region?

MPO staff received feedback from over 160 attendees. The comments are summarized in the conclusion of this section. The projects listed by the general public are included in the Transportation Projects Priorities List in Chapter 5. A full list of all the unedited comments is provided in Appendix A.

Stakeholder Meetings

Through the MPO website, MPO committee meetings, and the master mailing list, staff actively encouraged stakeholders to set up meetings with staff. MPO staff conducted at least 15 stakeholder meetings throughout the process. The diverse cross section of stakeholder groups included the Chamber of Commerce, neighborhood associations, bicycling and transit advisory groups, and planning and zoning

commissions. The MPO responded to each invitation and provided the group or agency with a presentation and opportunity to provide feedback. All of the information was used to determine specific projects and general issues that the MPO needed to address. All of the unedited comments for each stakeholder meeting are included in Appendix B.

Advisory Committee Meetings

The MPO advisory committee members provide a wide range of representation as shown in Chapter 1, Figure 1-2. The reasons for the diverse committee composition are: 1) MPOs are required to provide a robust public participation process, and 2) The MPO is required to consult and collaborate with state and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation. For example, MPO staff discussed and analyzed the Major Thoroughfare Plan with the Technical Advisory Committee (TAC) as it compared to the BLM Tri-County Regional Management Plan, and derived potential mitigation strategies. This type of comprehensive planning provides an active public participation component that is sensitive to natural and cultural resource information and the environment. It also incorporates a thorough analysis of alternatives that sets the stage for any potential National Environmental Protection Agency (NEPA) requirements that may occur at the project development stage.

8 Planning Factors

- Safety
- Security
- Economic Vitality
- Accessibility and Mobility
- Integration and Connectivity of people, freight, and modes
- Management and existing system
- Environment

Source: U.S.C. 23 § 450.306.a.1-8

TAC members also participated in 8 sub-committee meetings that covered the eight planning factors listed in the federal regulations. These meetings helped guide regional issues that the MPO must address. Some of the topics discussed at these sub-committee meetings included transit needs, the pedestrian, trail, and bicycle networks, automobile express roads, functional classification, right-of-way preservation, environmentally sensitive areas, and the need for an access management plan. For the complete list of meeting notes see Appendix C.

Web-based Questionnaires

MPO staff developed a series of web-based questionnaires through the MPO website at: http://lcmpoweb.las-cruces.org/T2040_getinvolved.html. They asked respondents to indicate project priorities, rank system needs and strategies, and provide any other ideas they felt would improve the overall transportation network. The results of the questionnaires are included in Appendix A.

General Public Comments Summary and Analysis

Roadways and Street Infrastructure

Overall there is a concern for more road connectivity, particularly west-east connections, but also completion of north-south roadways east of the dam. One suggestion was to provide more on/off access points along I-25. One person wanted a bypass that makes a car-free downtown and another said that a bypass is not needed. Some Intelligent Transportation Systems suggestions were made including lighted signs to notify drivers of upcoming and immediate traffic problems such as accidents, road hazards, and road closures. Dust maintenance issues were brought up a couple of times and access management was listed as an important goal.

The majority of comments about street infrastructure were related to pedestrian infrastructure, including issues such as adding crosswalks, ADA compliance, overall better sidewalk maintenance and connectivity, as well as removing obstacles, such as utility poles, from the sidewalks. There is also a desire for more trees, lighting, and more space for sidewalks. Lighting and more sidewalks were most frequently mentioned. More bicycle lanes and shoulders were often requested and paved roadways are needed in some places in the county.

Public Transportation

Generally, people wanted more visible bus stops, shelters that protect transit users from the wind and sun, more frequent service including express routes that link key destinations and recreational areas, and service later in the evening particularly for service jobs at the mall. One person mentioned that it is difficult to see at night to drive. There were also requests to better coordinate bus service with school schedules and provide more flexible routes for service throughout the whole day. Particularly in Doña Ana and the southern county, and the northeast part of the Las Cruces metropolitan area, a need for more public transportation was expressed.

Trail System

The most common comments about trails are that they should be made more available and well-connected. Specific trails that people would like to see, include the outfall channel and trails by Highway 70. There is also recurring mention of utilizing the Elephant Butte Irrigation District (EBID) facilities and making sure that trails and parks are available and open to the public. A few people mentioned locating trails in places that connect to other facilities and pedestrian activity locations.

Bicycle Facilities

Overall the focus on bicycle facilities is to have a more connected system that includes lanes, some trails, and safe bicycle routes to school. There were also a variety of maintenance issues brought up regarding cleaning the streets of debris. It

was suggested that there be more focus on bicycle boulevards and making the region more attractive to tourists by providing an improved bicycle system. Finally, there are several mentions of bicycle awareness and education for both bicyclists and drivers to improve safety conditions for all users of the roadways. Education and enforcement for pedestrian and driver safety was also recommended.

Vision and Green Transportation

There were several comments on the general vision for the region that included more emphasis on preserving the environment and the natural landscape. Connectivity and safety were also mentioned often. There were some green transportation related comments about harnessing wind and solar power, utilizing electric vehicles and providing facilities for recharging and, in general, developing a smart transportation system that promotes active transportation and supports transit hubs. Finally, there were a few comments about increasing transportation funding through increasing gas taxes or through vehicle registration.

Stakeholder Meetings Summary and Analysis

The MPO differentiates stakeholder groups from the general public in that these groups are formal, organized groups with special interests in transportation issues. As directed in the Public Participation Plan, invitations were sent to wide variety of stakeholder groups, including all registered Neighborhood Associations, advisory committees, planning and zoning commissions, and business organizations, to see if they were interested in speaking with the MPO about transportation. Additionally, MPO staff made themselves readily available to speak with any group that requested a presentation and provided multiple opportunities and outreach via the master mailing list, monthly meetings, and the MPO monthly newsletter. Finally, MPO staff both wrote down general comments that people provided and comments on specific projects (these items are also located in the Prioritized Plans and Projects part of Chapter 5). At some meetings, staff asked participants to identify their vision for the region and their top 3 priorities for the region.

In order to analyze the patterns within the stakeholder comments, the responses were divided into 5 categories. They are:

1. Planning, Education, Policy, Neighborhood needs, etc.
2. Transit, Pedestrian, Biking, Equestrian Facilities (reduce dependence on vehicles)
3. Preserve Agricultural Areas
4. Roadways
5. Parks, Trails, and Recreational Areas

Transit Advisory Board (TAB)

The TAB consists of individuals that represent the general public, one elected official, the transit administrator and the public services director, a senior community representative, and a representative from the disabled community. Not surprisingly, the TAB ranked concerns about transit as well as pedestrian and bicycle facilities very

high. The majority of the comments were suggestions on how to increase these facilities. The second greatest concern from members included comments on general planning (build out, but smart; arroyos crossings) and neighborhood specific planning issues (look at neighborhood needs). The need for more parks, trails, recreation facilities and better connectivity among these facilities came in at third. Additional roadway connections were also expressed and included an interest in the build out of Sonoma Ranch and Roadrunner Parkway. Only one comment was made about preserving our agricultural character.

Extraterritorial Development Review Committee Stakeholder (EDRC)

Members of the EDRC are engineering, planning, right-of-way, and flood commission staff from the City of Las Cruces and Doña Ana County. The EDRC is responsible for reviewing developments in the 5 mile ETZ area outside of the City of Las Cruces limits. Possibly because the EDRC is composed of staff members, the concerns that came up were somewhat different than those of the other groups. Some of the discussion revolved around planning issues (mapping arroyos and problems with siting public schools), roadways (right of way and connectivity issues), and transit, pedestrian, biking. There were also several comments about policy implementation and education. Overall, this group seems to feel that it needs more education (need to know more about the transportation plan, for example) and would like better communication and coordination among the various entities responsible for the planning of our community, particularly with VISION 2040.

When individuals where asked to pick their top three priorities, the following results were obtained: Top priorities focused on connectivity (2/3 of comments) for relief routes, interstates, and bicycle and pedestrian facilities. Also of high priority, was that the group wanted better communication regarding the Thoroughfare Plan and suggested that, for example, priorities be set to identify the top three most problematic areas. These comments all seem to speak to the need for better planning that includes greater communication among the various entities involved—city, county, ETZ, MPO, etc. In the second spot, staff members suggested more emphasis on transit, expressed concerns about how to handle existing constrained right-of-ways in order to include all modes, and indicated the desire for more education and discussion (possibly focusing on a specific roads or corridors). Third choices included considerable focus on the need to work on specific corridors or to do corridor planning (particularly in the ETZ), and the need for more east/west connections, and more bike routes.

Extra Territorial Zoning Commission (ETZ)

The ETZ was created to provide an area of coordinated planning between the city and the county. Because city and county zoning and ordinances are not the same, the ETZ process uses design guidelines from the city, and zoning designations from the county. The most frequent issues that came up in the discussion focused on transit and trail networks, planning and roadway issues came in second, followed by comments about parks, trails, open space, etc. No one mentioned preservation of agricultural areas.

Possibly because this group includes members outside of the City of Las Cruces, there were more suggestions made about transportation issues beyond the city limits. For example, additional bypasses—one on the north side of the city as well as a bypass from Mesilla to US 70—were both given top priority. Public transportation also scored in the top category (EBID trails, bike lanes, commuter rail). In addition, this group also showed some interest in implementation when they suggested better coordination with Las Cruces Public Schools (LCPS) for the planning of school sites and the need for impact fees in the ETZ.

Planning and Zoning Commission (P&Z)

The P&Z is composed of commissioners appointed by members of the city council. This commission reviews all non-administrative subdivision and zoning cases. Even though this commission primarily reviews plans for development, the focus of the meeting seemed to be more on traffic concerns. New development does, of course, have an impact on traffic patterns, and when new development is proposed, a common complaint from nearby residents is about increased traffic. In the general discussion, over half of the comments were on the traffic topics (mostly traffic flow problems, but also some concerns about safety). The next most frequent category discussed was transit. Most comments were requests for commuter rail with some concern about the need for right-of-way for bus pullouts as well as the possibility of moving sidewalks. One comment was about not being in favor of commuter rail and suggested eliminating the train through town and replacing it with a thoroughfare. Another comment focused on the cost of maintenance and operations for Rail Runner. In terms of planning, one person asked if this commission reviews annexations. Preserving agricultural areas was not mentioned. The topics of parks, open space, recreational areas, etc. did not come up either.

When individuals were asked to pick their top three priorities, four of the #1 choices were about roadways (particularly the need for a north and a west bypass). The remaining three #1 priorities were about commuter rail—two in favor and one asking for the train tracks within the city to be replaced with a roadway. Again, the majority of the second place rankings were about roadways (connecting I-10 and 70, or I-10 and I-25 on the north side of town, or making Telshor and Triviz one-way streets) and a concern about the safety of University Avenue. One person supported rail between El Paso and ABQ, and one person wanted to see a Madrid crossing over I-25 (for a complete review of this proposed project please see the MPOs Madrid/ Sonora Springs Corridor Report). Third place rankings also focused on traffic concerns—University Avenue, timed signals (also a # 4 choice), east/west traffic flow, and an interchange for the Arrowhead center on the NMSU campus. In summary, this group is very concerned about traffic issues and recommended that one-way streets, more interchanges, bypasses on both the north and west sides of town, and better timed traffic signals will make all the traffic flow more smoothly and, perhaps, keep the traffic out of the neighborhoods.

Chamber of Commerce

The Las Cruces Chamber of Commerce is a business organization whose goal is to support its members and sustain and enhance the economy. It has a committee specifically for discussing transportation issues. The Transportation Committee submitted its own list of priorities. They are:

1. Outfall Channel Bypass
2. I-10 Frontage roads from Airport Interchange to Motel Boulevard
3. Downtown Las Cruces Improvements
4. Madrid Grade Separate Crossing
5. Planning and improved circulation around Las Cruces Country Club
6. Arrowhead Interchange (Legislative Priority)

[The Transportation Committee noted that number four is now a dead issue and that number five should be coordinated through the MPO—the congestion needs to be alleviated.]

Suggestions from this group fall into two categories—roadways and pedestrian/bike/transit. Out of 23 suggestions, eight are for bike, pedestrian, transit projects (bike and pedestrian facilities, shoulder maintenance, crossings, integration with transit, and suggestions for new transit routes). A recommendation was made for rail, but not commuter rail between El Paso and Las Cruces. This group suggested a highway/rail corridor from Santa Teresa to the Las Cruces International Airport and Picacho Hills along west mesa with a connection over the river to I-25. Fifteen suggestions are for roadway projects and include the Las Cruces Chamber of Commerce's number one priority—the Arrowhead Interchange on I-10 at NMSU. The group also asked for I-25/University Avenue Interchange to be redesigned and for Triviz to be extended under University Avenue (this design is underway). Committee members also point to the need for some kind of bypass system around the city, and the committee would like to see I-10 frontage road improvements from Motel to the airport set as a priority.

This group is also concerned about the problems associated with school siting, especially the new high school on Dripping Springs and completion of roads in the downtown area and around the vacant county courthouse. Other items discussed include extending Alameda to Camino Real, building the outfall channel roadway, and a roundabout at Telshor and Lohman (reconstruction of this intersection has just been completed, but does not include a roundabout). Finally, the group mentions building out/connecting roadways on the east side (all of these projects are already on the MPO thoroughfare plan or the illustrative list of projects).

MPO staff met again with the Chamber of Commerce in Phase III. The main concerns were including the Transportation Committee's priority projects into Transport 2040. Staff was also given a map of a roadway alignment within the country club area and along the outfall channel.

City of Las Cruces District 6

District 6 lies along the eastern side of the city and, also, includes the Las Cruces Country Club area. Much of this area has been developed in the past decade or so and many of the attendees were new residents and senior citizens. The top category of comments for this group was pedestrian, rail, bike, transit concerns that ranged from wanting more and better public transportation to a general concern for availability of all modes of transportation. The second most frequently commented on category was planning issues. The residents in this area seem to be looking for neighborhoods that include more services and amenities, and would like to see improvements in ordinances and codes to include form-based codes, mixed use, lifestyle mini malls, and better coordination of land use and transportation planning that could result in more sustainable communities. Roadway issues placed third with concerns about more east to west connections, bypasses that circle the city, a wider I-10 to El Paso (already under construction), and better maintenance of existing roads. Parks, trails, open space, recreations areas came in fourth with an emphasis on connecting these facilities better. Included was a question about who pays for such facilities. One person expressed some concern for how we implement policy by improving coordination among the city, the county, and developers.

When asked to set priorities, the district 6 residents followed much the same pattern as the general comments that they provided. One resident noted ongoing problems with urban sprawl and the majority of #1 priorities requested more public transportation including safe and continuous bike lanes and energy efficient buses. In terms of roadways, District 6 residents, like other groups, are interested in redesigning the I-10 and I-25 Interchange (ongoing) and providing bypasses around the city. In addition, one resident suggested opening up Idaho to make it a collector. Other #1 priorities include more/bigger parks in District 6 as well as better connections between parks and trails. In second place, residents put emphasis on pedestrian and biking facilities (more sidewalks, walking and biking trails, refurbishing of old sidewalks, construction of missing sidewalks). Third place captured a majority of suggestions for roadway projects (Arrowhead interchange, more feeder routes, widen I-10, large boulevards, better roads, greater connections between towns.) Other priorities included support for electric cars and improved ADA facilities. Fourth place items include structuring development for minimum transportation as well as better traffic controls and development of rapid transit.

NMSU Campus Planning Committee

The NMSU Campus Planning Committee acts in an advisory capacity to the President, the Senior Vice President for Planning, Physical Resources and University Relations, and the Director of Facilities Planning and Construction to review plans for campus expansion and traffic flow, and to make recommendations on the location of new buildings and the effective use of existing facilities at New Mexico State University.

Topics of discussion centered primarily on multi-modal/integrated transportation and the need for adequate facilities for recreation, foot traffic, and bicycle traffic. One

person suggested that Las Cruces work to become a leader in green technology. When asked to choose priorities, this group focused primarily on public transportation (expansion of system to include nights and weekends and to connect educational institutions and to connect with other public transportation), biking and pedestrian facilities, and rail transportation. Three (out of 17) items on the priority lists focused on roadways.

Interagency Council

The Interagency Council is composed of staff members from a variety of social service agencies in the region and works on providing needed medical, education, housing, and other support services. Members of this group advocate for those who often cannot advocate for themselves and this group is also very knowledgeable about how government works—the importance of planning as well as ways to implement those plans. Because of the make-up of this group, most of the suggestions revolve around the acute transportation problems encountered by those who must depend on public transportation. Because of the clients these agencies work with, the members of the Interagency Council were able to provide specific examples of difficulties such as the need for transit service in both the northern and southern ends of the county, the lack of transportation to the prison, the need for transportation to the Ben Archer clinic and the Mesilla Valley Hospital, and other areas where social services are located such as the Picacho/Motel area. Because many members of this group are professionals, they are familiar with the need for policy implementation and thus made several suggestions in that area. They pointed out the need to communicate with elected officials, the problems of funding, the possibilities for making use of stimulus funding, and the need to provide feedback with regard to the upcoming federal transportation bill.

This group also pointed out that land use planning ought to include the placement of services close to residential areas and expressed concern over problems associated with the placement of social service agencies in locations that are not accessible by transit or where not much need exists. Members asked about the coordination of MPO planning with VISION 2040 and the status of a study on transit for the southern part of the county. This group had no comments on either preservation of agricultural areas or the need for parks, trails, open space, recreational areas, etc. In terms of roadways, this group had only two suggestions—more east/west connections and connections from the far northeast side of Las Cruces to the south.

Service Corps of Retired Executives (SCORE) Chapter

SCORE is a resource partner with the U.S. Small Business Administration. It is a nonprofit association dedicated to entrepreneur education and the formation, growth, and success of small business nationwide. Both working and retired executives and business owners donate their time and expertise as business counselors to help provide free counseling and low-cost workshops in their communities. The category with the most comments was roadways, mostly the various connections (N/S, Picacho Hills to I-10, US 70 to I-25) and issues with N. Main Street. This group made some

comments on transit and bicycle facilities, noting that more public transit is needed and that bicycle riding is an under-recognized transportation value to our community. One person also asked if there are plans to relocate the rail so that it doesn't run through the City of Las Cruces. This group also recognized the need for policy implementation and asked about the role of developers in this process and recommended contacting the women's business group. One planning issue was discussed—the need to stop development around the airport. No comments were made about preserving agricultural areas or the need for parks, open space, recreational areas, etc.

Las Esperanzas

Las Esperanzas is the neighborhood association for the south Mesquite neighborhood. It is a well organized neighborhood association in the city with its own overlay plan and design review committee. Except for a concern about loose dogs in the neighborhood, all of the comments from this group centered on pedestrian, transit, bike, and rail issues, and increased funding for these modes. There were no comments on roadways, preserving agricultural areas, or the need for parks, trails, open space, and recreational areas.

Alameda Depot Neighborhood

The Alameda Depot Neighborhood is another well organized neighborhood association with its own overlay plan. While five out of nine of the suggestions that came from the group focused on roadways, these suggestions were mostly tied to safety issues in the alameda depot neighborhood, or the damage to adobe homes from truck traffic and a desire to move truck traffic off of Picacho Avenue. Three suggestions were about public transportation—rail between El Paso and Albuquerque, the need for a viable city transit system to support a rail system, and a preference for the new multi-modal system to be located near the rail depot. There was one suggestion for a greenway system, which may be a reference to connecting trails and parks. No comments were made about Planning/Land Use/etc. or the need to preserve agricultural areas.

League of Women Voters (LOWV)

The League of Women Voters is a nonpartisan political organization that encourages informed and active participation in government. For this group, concerns about transit, pedestrian, bicycling, equestrian facilities, commuter rail, and regional transit (reduce dependence on vehicles) far outweighed any other concerns (14 out of 25 comments). In second place were concerns about roadways (9 out of 25), including the most common concerns about bypasses and east/west connections. There were a couple of comments about better amenities in neighborhoods so that travel can be reduced, and the problem of siting the new high school on Dripping Springs Road was brought up. No comments were made in regard to the preservation of agricultural areas or the need for parks, open space, and recreational areas.

Lower Rio Grande Mutual Domestic Water Association Board

A variety of issues were discussed at the MDWA work session. Many of the issues centered on paving more roadways and providing better maintenance of roadways. There were also some alignment concerns expressed, particularly with many west-east connections having dog legs that cause traffic problems. The NM 404 alignment was brought up a few times and the group expressed concerns about it being designated as an hazardous cargo route. It was recognized that better west-east connectivity was needed in the area. Other roadway infrastructure issues that people expressed concerns about were improving intersection capacity and turning movements, providing shoulders on all roadways, and the need for better pedestrian accommodations. Many people walk out of necessity, and utilize EBID facilities and existing paths. In addition, there are many children who walk to school creating a need for safer routes. Berino Elementary was cited as a location where there are many safety issues and a lack of pedestrian facilities. Transit was also brought up. The group cited a considerable need for transit in the area and mentioned that providing better service to Las Cruces could have an economic benefit for the region. The NMDOT Gold route would be better utilized if it had a stop in Vado because it is difficult to get to the main stop in Anthony. Finally, there were concerns about unpaved roadways as they relate to air quality, an interest in some limited access roadways to improve functionality, and an interest in extending the Las Cruces MPO boundary further into the southern county area.

Technical Advisory Committee Meetings Summary and Analysis

The following discussion items were organized a bit differently because the TAC focused specifically on the 8 planning factors when commenting on the development of the MTP.

Planning, Data Collection, and Management Plans

At the Technical Advisory Committee (TAC) sub-committee meetings a variety of planning methods and data analyses were discussed, including recommendations for developing management plans. Overall the TAC members saw a need for better coordination among governmental entities, large public services, businesses, and organizations to discuss planning issues early in the process. Also noted was a need to have stronger policies regarding all jurisdictions working together on all major decisions. Examples provided included the Magistrate Court relocation, and the location of new schools, and hospitals.

The development of an Access Management plan was identified as a top priority. The TAC members recommended that Access Management, not just Level of Service, should be considered on corridors when making transportation improvement decisions. In addition, policies need to be developed for retrofitting projects to utilize access management principles. Developing Access Management Plans seemed to be something that everyone on the TAC was interested in at least pursuing by getting together employees from the three jurisdictions to work together on a plan. MPO

staff will facilitate the discussion by sending out a formal invitation through the appropriate department heads.

Other items discussed with the TAC included using multi-modal Traffic Impact Analyses, expanding the travel demand model to account for all modes, and transportation financing strategies that would enable each jurisdiction to plan better for the impacts of new growth. For example, an issue was raised about whether the cost of new development should the cost of signal-timing improvements because new growth impacts traffic.

TAC members, in general, wanted more data and analyses in this Metropolitan Transportation Plan (MTP). Staff and TAC talked at length about specific data and technical information that the MPO could incorporate into their future planning documents. The change in the structure of the MTP from a policy heavy plan, to a plan that is organized more around data and implementation strategies was supported. TAC members were also in favor of many visual elements in the plan, including suggestions for an online interactive map, and computer-data kiosks (easily accessible data for the public at a computer station).

Another general planning issue of concern was air quality, particularly with respect to the Sunland Park area and the effect it will have on the Las Cruces area, but also with respect to unpaved roadways. Unpaved roads can be unsafe and can contribute to unhealthy levels of particulate matter in the environment. Planning for National Environmental Program Act project level analyses was also raised. For example, MPO staff and TAC members discussed the analyses the MPO uses while conducting corridor studies. As a result, staff researched the project level information NMDOT requests and will incorporate some of the suggestions into the Transportation Improvement Program (TIP) application process.

Congestion Management was also a topic of considerable concern. There was considerable discussion from the TAC about how to best address congestion issues that will arise as the region grows. Some examples of areas that TAC members felt were congested included the intersections of Elks/Main,Telshor/Lohman, and Valley/ Picacho, and Carver/NM 478 during peak hours. The intersection of Teshor/Lohman has recently been redesigned and expanded to accommodate heavy traffic volumes and additional lanes for turning movements.

With respect to congestion mitigation, there was discussion of the affect of the location of land uses on the transportation system, specifically service industries that are large trip generators, such as hospitals. It was suggested that the increasing diversity of land uses on the east side of the metropolitan area coupled with a connection of Sonoma Ranch from US 70 to University would be helpful in dispersing trips. Smart Growth and New Urbanism principles were also discussed. A specific request was made to have more volume to capacity (V/C) and traffic count analysis done in the County. A member representing the Town of Mesilla mentioned that congestion issues in the town are both positive in that they provide a nice

environment to walk around in, and negative in that the conditions are sometimes frustrating for drivers.

Education and Outreach

Education is greatly needed for drivers and bicyclists. Therefore, education on rules of the road was also discussed extensively. Education on general planning principles and ideas was also recommended—for example, the benefit of having commercial services in close proximity to residential areas. Some of the other education and outreach topics suggested include:

- requiring a permit for riding a bicycle (was also opposed)
- Department of Motor Vehicle inclusion of bicycle issues in driving permit exams
- information about yielding to pedestrians in the crosswalk
- taking into account people's perceptions when making decisions
- having a targeted Outreach and Focus Group
- more focus on arterials and collectors in the south County
- and a yearly data report to the committees

Data Collection Clearinghouse

The topic of data collection and the MPO being a resource center or clearinghouse for data came up a number of times. If the MPO was able to maintain more data and expand analyses on a planning level, that effort could, in turn, help the local jurisdictions prioritize projects, conduct analyses, and address current and future transportation issues. Data collection also needs to include tracking the impact that land use and zoning changes may have on traffic patterns and volumes and vice versa. An example is studying the before and after of the Solano Road Diet project. A "before and after" study of this project may include analyses of traffic crash data, turning movements, and impacts to businesses.

A variety of other data needs were suggested to MPO staff. Some suggestions were seasonal traffic differences, visually inspecting perceived congestion, routine turning movement counts, round-a-bout studies, crash rates, depiction of development patterns over time, demographic data to analyze the mobility and accessibility for people in the region, and a yearly transportation report card,.

Transit

There was considerable concern for people in the county, or in rural areas in general, having adequate access to transportation, particularly public transportation. Some residents have taken it upon themselves to organize park and ride and carpooling services, showing a need for expanded public transportation. In addition, many who live in the south County work in Texas, illustrating a need for good transit connection between Las Cruces and El Paso with appropriate stops located in between.. There was a discussion defining what preferential treatment for transit may include, such as, bus only lanes, pre-emptive signalization, etc., and how these might be employed in the future.

Another concern was ensuring that enough density is planned when doing transit oriented development; this discussion included questions about where stations would be beneficial and where growth might be restricted to low density development, or none at all. TAC members felt that transit hubs, destinations and/or activity centers, and corridors could play a role in good land use/transportation problem-solving.

Increased frequency of transit service was cited as a need, and more important than geographic coverage. In fact, it was felt that congestion issues cannot be addressed with transit without having considerably more frequent headways. A couple of suggestions included analyzing transit peak hour service to make better determinations on where to provide more express transit service, and changing pricing according to whether folks are riding at peak or non-peak hours. Another concern was how to fund paratransit. Federal regulations require paratransit service to all the areas that are served by the existing fixed route system – 65% of trips are through senior transit for dial-a-ride. There is also a large need for paratransit in the county areas.

Bicycling

There was a general understanding that bicycle facilities are not well connected at this point. Providing crossings over the interstate was brought up—perhaps some that are just bicycle/pedestrian crossings. Some informal crossings already do exist—for example, under I-10 and I-25—that could be formalized to provide more connectivity. Cycle zones were discussed. Cycle zones are a Portland, Oregon initiative that looks at various factors of the transportation network in a roughly 2 x 2 mile area that are then compared to determine the benefits and drawbacks of an area for supporting bicycle transportation. This sort of analysis recognizes the different needs of different areas because of unique barriers, topography, and street connectivity. There was an interest by TAC members overall in developing better performance measures and utilizing similar measurable goals like the cycle zone analysis. A city bike loan program was also brought up.

Safety

Safety was an issue that came up for all modes. The topic discussed most was bicycling safety and bicyclists and drivers of vehicles following the rules of the road. There were also some pedestrian and driver safety concerns. More speed, crash, and turning analyses were recommended for automobile related studies. In addition, there seems to be a need for more accurate bicycle/pedestrian crash reports. As far as further data analyses on crash data, it was recommended that the crash in relation to age, time of day, and time of year would be beneficial. Assessing safety issues in residential areas was also brought up and traffic calming measures were recommended.

Other safety issues include the misconception that crosswalks always make an area safer for pedestrians, but in reality great care needs to be taken when placing crosswalks. Cell phone usage when driving was also brought up. Finally, shoulders

would be beneficial on county roads for safety purposes.

Narrowing of Residential Roads and Providing More Connectivity

Connectivity came up often in the TAC meetings. This was an issue from a variety of stakeholders and public, even if it was not specifically articulated as connectivity. For example, subdivisions are sometimes hard to navigate through because they only have one access point, or if there are two points they connect to the same roadway. There needs to be more than one connection in different directions for overall connectivity.

There is some resistance to increasing connectivity from people living in residential neighborhoods; however, at the same time, there are concerns over timely emergency services which would be improved with connectivity. In addition, traffic calming techniques could be employed with increased connectivity that would slow down any through traffic. In many cases, just narrowing roadways in residential areas would be beneficial. However, this would need to be done with particular focus on ensuring enough width for emergency access. This requires further collaboration with the fire departments and the neighborhoods. Some educational component of this issue included discussing the health and safety benefits, providing more prototypes or pilot projects in the area, and using modeling and simulations to illustrate the impact of additional vehicle trips on a neighborhood.

Roadways

The TAC was very supportive of mapping the congested areas using the travel demand model. This information is shown in Exiting Conditions and Future Scenarios. There was also a general concern about traffic in the region as we grow and how to handle land uses such as new school placements and commercial land. A recommendation was made for a policy to encourage the state to change its laws regarding what impact fees can be used for. West-east traffic congestion was mentioned often by TAC and other groups. This is a complex issue because of the difficulty in providing west-east connections over I-25 and the dam. The Madrid-Sonora Springs study provided considerable feedback with respect to providing a fly-over connection. For example, in a letter to the MPO, the Army Corp of Engineers expressed serious concerns about the impacts of building a roadway over the flood control dam.

There was also a concern over road build out in rural versus urban areas, particularly making sure that roadways in rural areas are not widened where the character of the area does not support it, and providing smooth road design transitions from rural to urban areas. In the southern county area, the consensus was that west-east connections were also needed (in this case over the river and railroad tracks), and that generally existing roadways should be used, but in some cases new connections need to be studied.

The TAC also discussed loop roadways, such as the proposed High Mesa Road, connecting to the rail freight system, and being sure to coordinate this with El Paso

MPO. Other issues included the need for more interchanges along I-10 in the south valley between Las Cruces and El Paso and an interest in the loop roads and what the priorities are for them. MPO staff did ask this question during public input and found that overall the High Mesa and Weisner connections seemed most important. Also, alignments for the thoroughfares need to be worked on specifically for arroyo crossings, around A Mountain, Goat Hill, and other steep terrain. These issues were all addressed with the new Functional Classification and Proposed Thoroughfare Plan.

For visualization purposes the scale of maps seemed appropriate to the TAC members and there was an interest in seeing different colors to show congestion on roadways as time progresses in order to better plan for improvements. The TAC also expressed the desire for the Volume to Capacity ratios to be displayed on a map for long range planning. A map was included in the Existing Conditions and Future Scenarios chapter that shows the V/C for the region in 2015 utilizing the categories of underutilized, well-utilized, and over utilized roadways. Finally, the West Mesa Industrial Area was a concern as far as thoroughfares and transit. The TAC wanted to know what connections would be provided and how the area would be serviced by transit. When the City annexed this area the MPO indicated as a condition that roadways needed to be planned when new development occurred. The transit service component will best be evaluated in the city's Long Range Transit Plan.

Trails and Access to Recreation

Overall the interest in the trail system focused on looking first at main laterals and main connections in the area. Out of a lengthy discussion developed a recommendation of an inner loop and outer loop for the area. There was also an interest in how the development of a trail system could be integrated into the subdivision process. Some discussion on the cluster subdivision ordinance occurred in addition to how conservation areas could be developed with trails. Recreational areas are generally located on the periphery and may need to be served by some radial routes that come off of the main loop systems. It was the consensus that most of the connections should be on alternate networks, but sometimes in order to make complete connections the trail would need to be adjacent to a roadway, perhaps utilizing a wide sidewalk. Separate paths along roadways should only be used when there are minimal conflicts.

There was also a discussion whether to pave trails or not, considering equestrian travel needs. Overall, it was agreed that most trails should be unpaved. One idea was that perhaps more of the inner urban loop is paved and outer loop is unpaved. Equestrian needs are very specific and there are existing loops that could be accommodated. Some main concerns are not having access blocked at culverts and bridges over arroyos and interest in having some easements on BLM lands where trails are already established. Important destinations noted for trail users were parks, BLM lands, and the Bosque Park.

It was also recommended that Pajaro Road might provide a southern connection for the larger rural loop. Getting across the river is an issue—Mesilla Dam provides access but there may be some legal issues. In order to provide a better trail system in general there needs to be relationships formed with IBWC, connections to the river, and provisions in subdivision ordinances. The outfall channel was specifically mentioned as a connection that should be improved as a paved trail. Finally, recognizing the difference between recreational and utilitarian uses was deemed an important topic to pursue further.

Conclusion

The transportation vision, policy, goals, and principles were derived from public and stakeholder input, MPO committees, and federal, state, and local transportation planning initiatives. In addition, all of the different avenues of input were analyzed for patterns, coalesced, and transformed into general challenges and specific projects that needed to be addressed. The specific projects derived from all of the public and stakeholder comments are available in Chapter 5, Prioritized Projects and Plans.

The comments from the general public, the stakeholders, and the TAC covered many important topics and overall showed a need for improving all modes of transportation in the area and improving regional planning and technology. As an example, some groups were focused more on roadways and others on transit, but all modes were important aspects of the system and some needed more improvements and maintenance than others. In rural areas, general road paving and maintenance issues, as well as presence of sidewalks, were top priorities. In addition, connectivity and safety issues came up fairly consistently throughout the comments. Finally, the need for evaluating transportation impacts to the environment and coordinating land use development with the transportation system is very evident.

Vision, Core Policy, Goals, and Principles

Coordinated Land Use and Transportation

Chapter 2 discussed the current transportation and land use conditions in the MPO region and outlined future scenarios based on proposed changes in land use patterns, the transportation network, and population growth. That discussion was followed, in this chapter, by details recounting planning processes and projects underway at the federal, state, local levels. Finally, the diverse public input processes were analyzed to determine response patterns and understand the key issues, concerns, and desires of area residents.

These conditions, future scenarios, planning processes, and public comments lead to the development of a concise vision for the future of our transportation system. The associated core policy, goals, and principles provide the basis for implementing this vision as outlined in Chapters 4 and 5. It is clear that the federal, state, and local initiatives have arisen as a result of the growing desire for safer, healthier, and well connected multimodal transportation. In addition, it is necessary to plan our land use and transportation systems together so that the region grows in a smart and efficient manner that takes into account the three pillars of sustainability—people, economy, and the environment.

The three pillars of sustainability within the context of Transport 2040 are:

- People—the transportation users within the region and those who pass through the area.
- Economy—the land use activities and the transportation of people, goods, and services within and through the region.
- Environment—the natural and human-made forms within the region.

The three pillars of sustainability are not simply conceptual elements existing in a planning document. Creating a smart and efficient transportation system requires a balanced approach utilizing the three pillars of sustainability. Land use location and type and the transportation network and modes are the working parts of these elements. As a result, well-coordinated changes in land use patterns and/or the transportation network should result in positive impacts on these elements and their relationships to each other.

Transport 2040 Vision:
Serve all transportation users by planning, implementing, and maintaining a transportation system that coordinates land use and transportation planning.

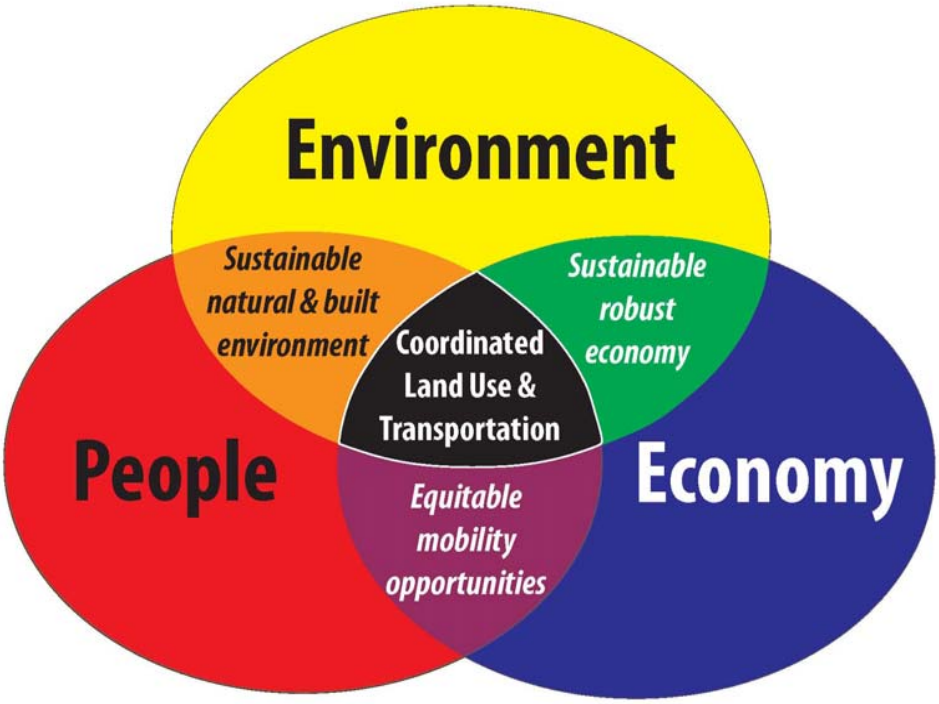


FIGURE 3-3
Transport 2040 Vision

By following this Vision we are able to promote a sustainable natural and built environment, robust economy, and equitable mobility opportunities.

Core Policy

In order to keep the plan simple and active, one core policy sets the framework for the three main goals. The core policy is a statement emphasizing the necessity of coordinating land use and transportation in order to achieve sustainable communities. It provides a direct connection between the MPO and the efforts of the City of Las Cruces and Doña Ana County's Vision 2040 and associated comprehensive plans. One Objective and one Action item go along with the core policy to emphasize the connection between the transportation system and the land use patterns developing in our region. The Mobility Zones concept that is intended to help implement this Core Policy is discussed further in Chapter 4.

There is not a universally agreed upon definition for sustainability; however, since the 1980s the word *sustainability* has been used to refer to human sustainability on planet Earth. According to the Brundtland Commission of the United Nations; "sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs." In many fields of study, it has been noted that this requires the balance of environmental, social, and economic demands (the "three pillars" of sustainability).

Core Policy:
Achieve sustainability through coordinated Land Use-Transportation Planning

Objective:
Coordinate the expansion of the transportation system with the Vision 2040 land use plan

Action:
Utilize the Mobility Zones concept for short term project prioritization, analysis and improvements of system operations, and long range planning efforts

Beyond the Core Policy, three main goals will be used to achieve an appropriate balance in developing our transportation system. These main goals have accompanying principles and strategies.

Transportation Goals

Sustainability, in the context of this plan, is the equitable convergence of environmental, economic, and community elements through coordinated land use-transportation planning and implementation. Therefore, the vision has three overlapping goals: to support a robust economy, preserve our unique environment and cultural character, and enhance our mobility opportunities through community efforts. In order to provide very clear direction and understanding of the basis on which decision making occurs, the goals for the MPO are defined below:

Sustainable Robust Economy is the convergence of Environment and Economy elements. This goal is focused on integrating land uses with well connected transportation systems to develop an economic environment that provides timely access to a wide-range of jobs, services, education, and recreational opportunities. This supports a strong economic base that breeds innovation, self sufficiency for local businesses, expanded regional trade opportunities, and conservation of natural resources.

Sustainable Natural and Built Environment is the convergence of Environment and People elements. This goal entails a balance between built and natural environments that promote physical activity, social interaction, and the sustainable use of resources. The goal can be achieved through land use and transportation integration and design that enhance the unique characteristics of communities, and by investing in safe, healthy, and walkable neighborhoods. Application of this goal can minimize negative impacts to natural resources and help improve quality of life.

Transport 2040 Goals:

1. **Integrate land uses with well connected transportation systems to develop an economic environment that provides timely access to a wide-range of jobs, services, education, and recreational opportunities**
2. **Balance the built and natural environments to promote physical activity, social interaction, and the sustainable use of resources**
3. **Provide a variety of transportation choices that serve all users through developing safe, reliable, and convenient transportation modes**

Equitable Mobility Opportunities for People is the convergence of People and Economy elements. This goal is focused on providing a variety of transportation choices that serve all users through developing safe, reliable, and convenient transportation modes. Different areas of the region will be served with a variety of transportation options based on their range of needs while endeavoring to maintain system efficiency.

Transportation Principles

The transportation principles are listed below. Following the list is a definition for each principle. These principles are intended to be fulfilled through implementation strategies in Chapter 4. Because the implementation strategies may relate to one or more principles, in order to fulfill them appropriately the principles are first defined and demonstrated.

1. Maintain and improve the existing transportation system first and foremost
2. Connect people to jobs, goods, services, education, and recreational opportunities
3. Preserve natural, cultural, historical, and agricultural resources
4. Promote and design healthy and livable communities
5. Provide and improve multi-modal options and accessibility for all users
6. Increase safety for all users starting with the most vulnerable modes

Maintain and improve the existing transportation system first and foremost:

Preserving the existing transportation system may consist of traditional maintenance activities such as resurfacing and reconstructing roadways, improving pedestrian access with repaired sidewalks, or rebuilding bridges. Additionally, preservation of the existing system also requires applying transportation systems management and operations to improve safety, decrease travel delays, and provide traveler information. Systems management and operations may include upgrading traffic signal systems for better coordination, applying Intelligent Transportation Systems (ITS) technology for improved transit and emergency services, and using dynamic message signs for special event and traffic incident management.

Expansion of the transportation system is inevitable and needed in a growing region like the Mesilla Valley. However, even the new links of a growing network will not function well without maintaining the existing transportation system. The expansion of the regional transportation network must be accomplished in a cost effective manner so as to not strain needed resources from the existing system.

Connect people to jobs, goods, services, education, and recreational opportunities:

Connecting people to destinations requires complete networks. These networks include corridors connecting activity centers, well connected neighborhoods, including fewer cul-de-sacs and private streets in gated communities, and well-distributed land use patterns throughout the region.

People throughout the region benefit through improved access to the opportunities they desire. Goods and services are more accessible which can aid in acquiring nutritious food, health care, and other necessities of life. Better access to educational services can lead to opportunities for upward mobility in the job market.

Better connections throughout the community provide people with improved opportunities for increasing their quality of life and supporting local programs.

Improved access to destinations increases business sustainability. Access to a well-connected network allows businesses to reduce transportation costs and expand their target audiences, thereby becoming more competitive within the region. Tourism also benefits from improved accessibility by encouraging more residents and visitors to the area to visit local and regional attractions.

Preserve natural, cultural, historical, and agricultural resources:

Transportation investments impact the environment and the course of development patterns. New roadways encourage development and increased automobile use that effect air and water quality, noise, and safety. Sometimes new roadways can segment natural assets, including important ecosystems and potential open space. Cultural and historical resources, such as structures, local events, and archeological sites, can also be adversely affected by an ever-expanding network.

Exploring new methods for addressing environmental and cultural impacts are essential. This includes consulting with state and federal land use agencies and stakeholder organizations before projects are designed and implemented. For example, well designed projects can sustainably integrate aspects of the existing natural environment with the built environment while lessening the disruption of natural habitats or existing water flows. Encouraging more sustainable and energy efficient designs and applications are important parts of preserving natural, cultural, historical, and agricultural resources.

Promote and design healthy and livable communities:

Transportation infrastructure can be an integral part of supporting physical activity and social interaction and therefore improving the overall health of our communities. A livable community means the creation of sustainable urban and rural environments that foster walking, biking, and transit, while reducing dependency on the private automobile. Developing quiet but active neighborhoods and lively activity centers with streets that are designed for pedestrians as well as automobiles, helps decrease the use of the automobile for short trips and daily commutes. This can be achieved by balancing the need for smooth automobile traffic flow with street design that fits the context of our neighborhoods and supports safety and convenience for other modes of travel.

Context sensitive design features include pedestrian-scale building placement and height, mixed land uses, and sustainable patterns of development (appropriate distribution, density, and diversity of land uses). Overcoming barriers to safer neighborhoods, such as fast vehicle traffic and wide intersections that are difficult for pedestrians to cross, allows people to walk and bike to their everyday needs, to school, and to neighborhood parks. Business areas that are more conducive to non-

motorized travel can also entice visitors to stop, stroll, and shop. By providing streets that are designed for all users and that shift more trips to non-motorized modes, the overall safety of the roadway for drivers increases as well.

Provide and improve multi-modal and intermodal options and mobility for all users:

Multi-modal transportation refers to integrating multiple transportation modes through the process of planning, implementing, and maintaining transportation systems. Intermodal means a smooth transition of people and goods from one mode to another during a single trip. This approach to providing transportation addresses the mobility of all system users, including the disabled, elderly, children, students, and commuters. Promoting multimodal options also provides a more comprehensive and inclusive approach to addressing the costs of congestion, accidents, parking, and vehicle ownership.

For many people, being able to comfortably walk to your car from a business, bike to the nearest transit station, or have access to car-sharing are critical transportation assets. Providing more options for reliable, safe, and economical travel can provide a variety of benefits such as lower household transportation costs, congestion mitigation, and a decrease in negative impacts to the environment. Ultimately, multi-modal options can offer households a better quality of life and improved personal mobility.

Increase safety for all users starting with the most vulnerable modes:

Safety, in this context, is focused on reducing crashes and saving lives across all modes of transportation. Well designed facilities are a major factor in improving safety. For example, the design of the roadway may encourage higher speeds even though the intent is to build in room for non-typical vehicles and account for driver error. Also, the fatalities and injuries from crashes along with the associated economic costs, including time lost on the job and healthcare, can quickly overburden households.

Safety is a prominent feature in transportation funding. For example, transportation investments that are funded through the MPO process are required to have a safety evaluation as a factor in their rating system. In addition, the NMDOT annually awards funding for safety projects to local jurisdictions throughout New Mexico.

Improving the safety of the system with a focus on the more vulnerable users can lead to a reduction in crashes, injuries, and fatalities for all modes. Improving transportation facilities at the more vulnerable places, such as intersections, should also be a priority and can lead to an overall decrease in traveler delay and associated economic costs. Finally, safety is not just about creating better facilities, but also includes a variety of education and outreach components that are essential to the success of creating safer transportation systems.

Achieving a Balance

Coordinated transportation and land use policies and practices can have a major impact on the creation of healthy and livable communities, traffic noise and air pollution, affordability of housing and access to services and recreational opportunities. These issues effect people's daily lives and their mobility opportunities. Identifying natural, environmental, and cultural resources can help preserve important aspects of our environment and at the same time provide increased economic opportunities. A balance between built and natural environments that promote physical activity and the sustainable use of resources are essential to the region's overall well being.

Vision 2040

Because of this symbiotic relationship between land use and transportation it is essential that, first and foremost, when planning for transportation there is a high level of coordination with the land use plans for the area. This coordination is being realized through Vision 2040 efforts. Vision 2040 is a regional visioning and comprehensive planning project between the City of Las Cruces and Doña Ana County. The Las Cruces MPO, as the regional transportation planning body for central Doña Ana County and City of Las Cruces is actively coordinating land use and growth management concepts in Vision 2040 with the existing and proposed regional transportation networks. Coordinating the planning processes for Vision 2040 and Transport 2040 provide an opportunity for the development of a compatible vision and goals.

In April 2010, Doña Ana County and the City of Las Cruces agreed upon the vision for the region as a part of Vision 2040. The vision is as follows:

> We envision a future that supports growth and quality of life. This future respects and balances the natural environment with new economic and agricultural opportunities, while addressing our unique historical and cultural connections.

The Vision Statement is guided by proactive planning that embraces the following shared and interrelated principles derived from public input:

- We respect our mountains, desert environment, and river
- We believe in a future in which we live within the capacity of our land and natural resources to support and sustain us
- We embrace our community character and respect our local culture
- We value bringing the unique design characteristics of our historic communities into the development of new places
- We need a multimodal network that connects people with each other as well as economic, recreational, and educational opportunities

The Transport 2040 Vision, Core Policy, Goals and Principles are compatible with the vision and direction being pursued through the Vision 2040 planning process, particularly the need for a multimodal network that connects people and opportunities.

Sustainable Land Use and Transportation

A well-coordinated land use and transportation plan is necessary for an efficient transportation system. For example, the success or failure of public transportation depends upon diverse and compact land use patterns in key locations, with efficient spacing between those locations. This type of development does not mean all areas must become more dense and diversified. Areas with lower density, or rural areas, are able to maintain their character *because* they are supported by land use patterns that are more compact and diversified. This type of smart growth supports development that includes the preservation of agriculture, biking and walking opportunities, and open space and trail networks.

4 Strategy Toolboxes

Introduction

In order to implement the aforementioned Vision, Core Policy, Goals, and Principles, various strategies have been developed. The strategy toolboxes outline approaches to linking land use and transportation through a variety of methods and set the stage for developing future projects. In order to develop accessible, connected regional networks and to encourage the use and expansion of transportation facilities, the implementation strategies herein focus on partnerships, policies, community design, and education and outreach.

As outlined in Chapter 1, the MPO's Metropolitan Transportation Plan provides the direction for the rest of the MPO documents. The Strategy Toolboxes that follow will form the basis of the work items in the Unified Planning Work Program (UPWP). The UPWP has sections related to the daily work that the MPO does that includes short range and long range planning, administrative duties, corridor studies, and other specific tasks.

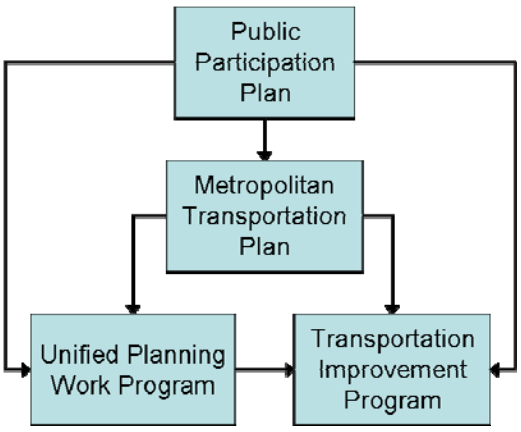


Figure 4-1
MPO Documents

The strategies have been grouped into six Strategy Toolboxes. Each section within this chapter describes a strategy toolbox and is organized as follows: definition, example, potential benefits, and associated policies and tasks. Because the elements of the Vision being addressed are overlapping, each toolbox may address several Principles at once.

- Land Use and Design Elements
- Green Opportunities
- Management Plans
- Resource and Outreach Center
- Process Development
- Mobility Zones

Land Use and Design Elements ■LD

Promoting appropriate land use patterns and design is an integral part of supporting an efficient and sustainable transportation system. Transportation patterns are highly effected by land use diversity, density, and distribution (3 D's). Therefore, this plan examines the 3 D's of land uses in urban, suburban, and rural areas throughout the Mesilla Valley. Design elements include items such as utilizing a variety of traffic calming techniques, encouraging transit oriented development, and supporting area planning. Planned Unit Developments, if properly utilized according to the purposes stated in the Comprehensive Plans, provide a flexible approach to applying the land use and design elements discussed in this section and achieving the transportation vision and goals.

The MPO does not have land use authority and does not enforce land use and transportation coordination. However, one of the main functions of the MPO is to provide a forum to better coordinate land use and transportation efforts, particularly long range and comprehensive planning. Therefore, the MPO has worked with the City of Las Cruces and Doña Ana County in the development of Vision 2040 and supports the conceptual idea of growth areas along with simultaneous preservation of natural and rural environments. In comparison to continuing with existing growth patterns, these growth areas, if implemented, have shown through MPO modeling efforts to reduce the vehicle miles travelled by about 11% (see Existing Conditions and Future Scenarios). The following are land use and design elements that support the growth area model, the 3 D's of land use, and a well-designed transportation system:

- Land Use Diversity, Density, and Distribution
- Sector Planning
- Form Based Code
- Context Sensitive Design Solutions
- Complete Streets
- Designing Thoroughfares
- Transit Oriented Development

Land Use Diversity, Density, and Distribution

Land Use diversity is a measure of the variety of land uses within a given area. Diversity is exemplified by a pattern of interspersed land uses, including a full range of activity types such as commercial, residential, and office. Diversity promotes shorter trips for daily services and results in more transportation options by making non-motorized trips more viable. Diversity promotes a better mix of employment, housing, and service activities in a given area resulting in potentially less time and money being spent on transportation needs.

Density is the measure of the average amount of units of a given land use type within a geographic area. Residential units are usually stated in dwelling units per acre and

commercial and office units are described in gross floor area relative to land parcel area (commonly referred to as Floor to Area Ratio or FAR). A FAR can also be used to measure density of mixed use developments. Density should be applied at appropriate locations across a given area in order to provide a variety of housing choices, support urban and rural environments, and sustain an efficient public transportation system. Height limitations should be considered adjacent to low density residential areas, but otherwise used sensibly.

Land use distribution measures clustering and dispersion of land use patterns across a given area. Clustering is providing a mix of land uses that work well together, for example, a commercial cluster could include a bank, dry cleaners, and apartments. A neighborhood cluster could include a school, a library, and single-family units. Dispersion, on the other hand, means that these clustered land uses are interspersed throughout a neighborhood or community providing residents with access to multiple destinations by using shorter and fewer trips. The appropriate combination of clustering and dispersion provides the best mix for mitigating congestion, providing opportunities for physical activity, and addressing air quality issues.

Applying the 3 D's of land use is a critical component of achieving better places to live. By putting uses in close proximity to one another, alternatives to driving, such as walking or biking, once again become viable. Mixed land uses also provide a more diverse and sizable population and commercial base for supporting viable public transit. The 3 D's enhance the vitality, safety, and security of an area by attracting pedestrians back onto the street and helping to revitalize community life. Public spaces and pedestrian-oriented retail again become dynamic and attractive destinations for people to gather.

Associated Policies:

- through the use of the Vision 2040 Growth Principles, encourage local communities to adopt active-friendly land uses and to plan for active transportation choices in their general plans

Associated Tasks:

- continue coordination with Vision 2040 planning processes

Sector Planning

A Sector Plan is a fine-grained planning document for a relatively small geographic area that addresses, among other things, specific land use and transportation needs. Aspects of the area that the community wants to see protected or improved are determined through extensive public and stakeholder input processes and a thorough evaluation of existing conditions. The plan also includes a list of prioritized policy and project recommendations. A Sector Plan may include a distinct zoning code as part of the policy recommendations.

While plans range in scope and detail from large-scale Comprehensive plans to Sector Plans and Overlays, all plans are intended to work together to support a desired direction for economic, environmental, and social aspects of development. This approach recognizes that planning and development issues in a growing region are numerous and complex, requiring a flexible approach designed to respond both to area-wide and neighborhood scale issues.

Associated Policies:

- support establishment of planning areas as discussed in the city's Comprehensive Plan
- encourage local jurisdictions to develop a sector planning process

Associated Tasks:

- coordinate transportation planning with sector planning processes

Form Based Code

Form based codes apply rules to development according to criteria that are typically dependent on lot size, location, proximity, and other various site- and use-specific characteristics. Form-based codes differ from Euclidean zoning codes (like the ones currently used in Las Cruces and the ETZ) in that they focus more on the appearance of a building and its relationship to its surroundings, and less on what goes on inside the building. Therefore, form-based codes are often viewed as more flexible. This type of zoning can help relieve congestion by combining the appropriate placement of land uses with a well-connected transportation network. Ultimately, form based codes emphasize creating and restoring walkable, diverse, compact development that offers a variety of living choices (including townhomes, apartments, live-work spaces, and lofts). Form based codes also support development that include a full range of services, including entertainment and cultural activities, within a 5-10 minute walk of every residence.

Associated Policies:

- encourage local jurisdictions to develop a form based code and offer it as an option to developers
- encourage special districts to utilize a form based code

Associated Tasks:

- coordinate transportation planning with form based code zoning processes

Context Sensitive Design Solutions (CSS)

Context Sensitive Design Solutions (CSS) seeks transportation solutions that improve mobility and safety while complementing and enhancing community values and objectives. CSS is considered in two scales: 1) the broad context created by the surrounding neighborhood, district, or corridor, and 2) the immediate physical context

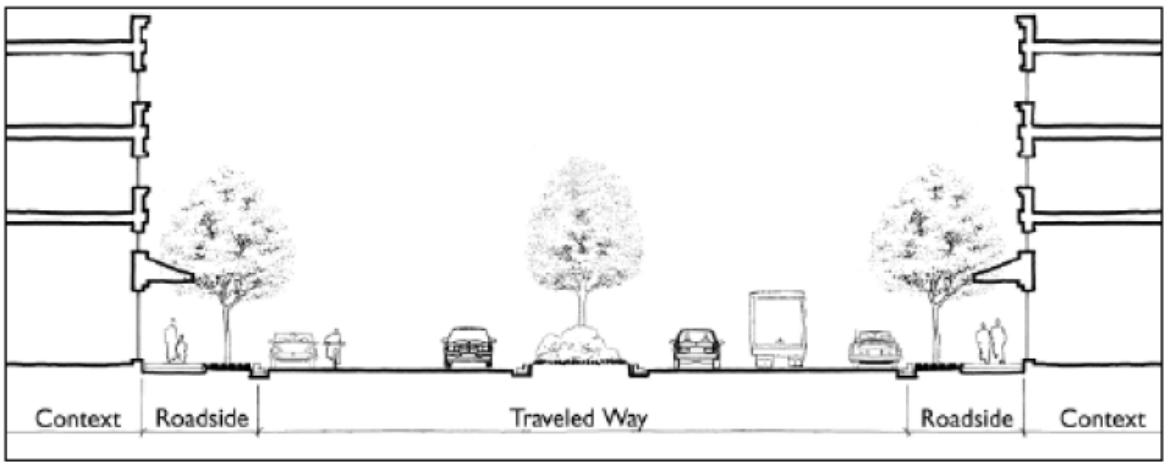


Figure 4-2
Context Sensitive Design Solutions: Corridor Scale Cross Section

created by buildings and activities. An examination of these contexts through a robust, collaborative public input process will result in design parameters for the context, roadside, traveled way, and intersections (See Figure 4-2). The examination should include maintaining safety and mobility, as well as aesthetic, social, economic, and environmental values and opportunities.

While the elements of context can combine in almost infinite varieties, the Institute of Transportation Engineers report Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities uses four context zones to define and categorize urban areas: suburban, general urban, urban center, and urban core. Much like the "rural" and "urban" classifications used in selecting design criteria in AASHTO's A Policy on Geometric Design of Highways and Streets, context zones are an important determinant of basic design criteria.

Complete Streets

Complete Streets are defined as streets that are designed and operated to enable safe access for all users, including children, seniors, and those with disabilities. Complete Streets address both policies and design standards requiring consideration of all users in planning, design, construction, and maintenance of the traveled way and roadside. The Town of Mesilla, the City of Las Cruces, and Doña Ana County have all adopted Complete Streets resolutions.

Complete Streets includes design elements such as bicycle lanes, pedestrian buffers, curb extensions, narrow residential roadways, and improved signal timing. Design standards offer flexibility and enhanced safety for all users while providing minimum standards, a range of options, and an efficient development process. Figure 4-3, page 96, shows a street prior to implementing Complete Streets concepts, and then the same street after a simulated Complete Streets application. The figure illustrates

Complete Street Example. Photos from CompleteStreets.org

Figure 4-3
Complete Streets Applied to a Roadway Cross Section

how the Complete Streets concept is combined with CSS through improvements to the traveled way, roadside environment, and corridor context (building setbacks and heights).

A formerly incomplete street could be "completed" by implementing a road diet. A road diet is a reduction in the number of auto lanes for a given section of roadway, where the remaining width is then reallocated to provide multi-modal transportation that did not previously exist. An example is shown in Figure 4-4, where four lanes of through auto traffic are converted into two through auto lanes, a continuous center turn lane, and two bicycle lanes.

Designing Thoroughfares

A recent report completed by the Institute of Transportation Engineers (ITE) and the Congress for New Urbanism (sponsored by FHWA and EPA) called Designing Walkable Urban Thoroughfares: A Context Sensitive Approach gives specific guidance on street cross sections, intersection design, and design control flexibility that is practical and comprehensive. These recommended practices provide a way to balance the issues encompassing user mobility, land use diversity, community interests, and environmental concerns. This approach reduces or eliminates the need for exceptions and variances through its inherent flexibility.

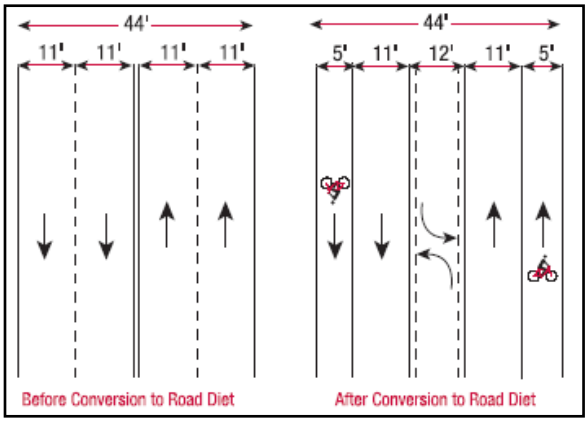


Figure 4-4
Example of Road Diet

The ITE report recommends addressing safety concerns by designing thoroughfares for speeds that are the same as or 5 miles over the target speed, instead of 10 to 15 miles over the target speed. The

report also recommends special emphasis on intersection design, particularly addressing pedestrian safety. Other safety measures include traffic calming techniques such as narrowing vehicle travel lanes, widening sidewalks, and adding curb extensions and medians.

Associated Policies:

- utilize complete street designs - provide for all modes of transportation - when building or reconstructing streets
- incorporate proper signage requirements
- require adequate links to new transit as well as improved access for existing transit, including safe, convenient bicycle lanes, and pedestrian routes
- incorporate bicycle parking and storage in key transit-oriented locations
- new or improved roadways shall provide minimum 4-foot (1.2 meters) paved shoulder or bicycle lane, where feasible
- sidewalks shall provide a minimum 5-foot paved, unobstructed walking surface
- parkways shall provide a minimum 3-foot (1 meter) buffer between the roadway and the sidewalk in all urban areas
- support the use of narrow residential roadways
- require a non-motorized path at the head of all cul-de-sacs
- support pilot projects that explore innovative transportation facility design
- support Sustainable/Livable Communities' effort – coordination among Housing and Urban Development (HUD), Department of Transportation (DOT), and Environmental Protection Agency (EPA)

Associated Tasks:

- assist City of Las Cruces in updating Design Standards
- support the utilization of Context Sensitive Design Solutions
- set modal priorities for thoroughfare corridors through CSS design practices
- develop a traffic calming toolbox
- identify appropriate locations to incorporate shared-use paths along rivers, canals, utility right-of-ways, railroad or freeway corridors, within college campuses, within or between parks and cul-de-sacs, and anywhere else natural barriers exist

Transit Oriented Development (TOD)

Transit Oriented Development (TOD) is a compact mixed-use development, which contains a mix of uses such as housing, jobs, shops, restaurants and entertainment, designed to maximize access to public transportation. TOD brings many of the aforementioned land use and design elements together to create a pedestrian-friendly built environment that efficiently supports transit, and provides mobility and accessibility for all users. The center of a TOD is surrounded by relatively high-density development with progressively lower-density development spreading outward from the center. TODs generally are located within a radius of one-quarter to one-

half mile (0.4 to 0.8 km) from a transit stop, as this is considered to be an appropriate scale for pedestrians. TOD neighborhoods increase economic value for the public and private sectors, provide for a lifestyle that's convenient, affordable, and active, and create a sense of community and place for both new and existing residents.

Associated Policies:

- support TOD in appropriate corridors through land use and zoning decisions such as:
- efficient location of land uses (3 D's) so people can walk, bike and take transit
- a rich mix of housing, jobs, shopping and recreational choices
- economic value for the public and private sectors, and for both new and existing residents a sense of community and of place

Associated Tasks:

- assist City of Las Cruces with developing a long range transit plan

Green Opportunities ☐GO

Green Opportunities consist of finding solutions to transportation issues that have the least possible impact on the environment. Some of the transportation related impacts on the environment include air quality, noise pollution, water pollution caused by run-off, increased storm water caused by impervious surfaces, wildlife habitat fragmentation, and greenhouse gas emissions. These impacts stem from the amount of fuel consumed, the type of fuel consumed and the amount and location of pavement.

Additional Green Infrastructure resources are available at www.epa.gov/ greeninfrastructure

Low Impact transportation is about promoting the use of energy efficient vehicles and designing compact mixed-use communities that include accessible and convenient alternatives to driving. Green Transportation Hierarchy (See Figure 4-5), is a concept that puts low-cost, space efficient, and zero or low environmental impact transportation modes first. In this hierarchy, trucks (even though they have a significant carbon impact) are not last because they perform fundamental commercial functions.

The lowest impact and greenest mode of transportation is walking. However, there are other types of low-impact transportation including hybrid and electric vehicles and vehicles powered by bio-fuels. Hybrid vehicles are powered by a combination of an internal combustion engine and an electric engine. Bio-fuel engines are powered by fuels derived from plant sources such as vegetable oil.

Figure 4-5
Transportation Mode Environmental Impact
Source: Environmental Transportation Options and Transportation Alternatives

Green Infrastructure refers to a set of practices that mimic natural processes to retain and use storm water. Applications of green infrastructure in a transportation setting can include the use of soils, porous pavement, and green streets. Green streets integrate rain gardens and swales into the street design to retain and treat storm water while beautifying streets and calming traffic. Additional considerations include using plant types that are suitable for the local arid climate and that have natural filtration properties. Implementing green infrastructure practices can provide economic, environmental, and social benefits. For example, planting vegetation along a roadway can help reduce the urban heat island effect and improve air quality.

Associated Policies:

- support development of the proposed City of Las Cruces Sustainability Plan

- encourage other entities to consider similar sustainability plans
- support pilot projects that explore innovative green opportunities, such as green infrastructure
- support development that contributes to reduced storm water volume and velocity and fewer storm water overflow events
- support investment in locally and sustainably derived bio-fuels
- support investment in bio-fuels
- support appropriately dispersed, compact mixed-use developments, such as low-impact development (LID)

Associated Tasks:

- develop a Green Streets Infrastructure pilot project
- investigate electric car charging stations
- pursue car sharing program
- pursue bicycle sharing program

Management Plans

Management plans provide a coarse-grained tool (i.e. system-wide or corridor perspective) to analyze the transportation network and its relationship with the surrounding land uses. These plans can address a wide range of policies, programs, services and products that influence how, why, when and where people travel. The intended result is that travel behaviors become more sustainable. For example, after evaluating system-wide information, such as traffic volumes, crash data, and vehicle miles traveled (VMT), countermeasures may be applied to improve traffic management.

In the Volume to Capacity map in Chapter 3 it is evident that two corridors handle more traffic than any others, North Main and Lohman. These corridors may benefit from countermeasures such as improving the land use diversity, additional public transportation investment, and the implementation of Intelligent Transportation Systems (ITS) to better utilize existing capacity.

Also noted in Chapter 3, there are transportation security issues in the MPO area. The MPO is an active participant with the Doña Ana County-City of Las Cruces Local Emergency Planning Committee (LEPC), particularly with the Natural Hazards Committee. The LEPC maintains the All Hazards Mitigation Plan that discusses emergency evacuations, contingency measures, and communications interoperability. The MPO will continue to participate with the LEPC and provide assistance with developing an emergency evacuation route plan. Additionally, the MPO will, through these established coordination efforts, assist with developing and implementing transportation projects, strategies, and services.

In order to minimize congestion and plan for future traffic impacts, the MPO is developing work items to assist the local jurisdictions with analyzing their traffic demand and help identify mitigation opportunities and funding. Some of the work items that need to be addressed are as follows:

- Planning and Environmental Linkages
- Access Management Plan
- Safety Management Plan
- Parking Management Plan
- Transportation Demand Management Plan
- Transportation Asset Management
- Safe Routes to School

Planning and Environmental Linkages

Planning and Environmental Linkages offer a coordinated approach between system level planning, project level decisions, community needs, and sensitivity to historical, cultural, and environmental concerns. The Metropolitan Transportation Plan provides system level planning for the region which may include conceptual design, identifying project locations, and analyzing land use patterns and other cultural and natural resources. Project level decisions are made through the study corridor process where community needs and historical, cultural, and environmental concerns are gathered through the MPO's public participation process.

5 Core MPO Functions

Establish a setting
Identify and evaluate alternative transportation improvement options
Prepare and maintain a Metropolitan Transportation Plan (MTP)
Develop a Transportation Improvement Program (TIP)
Involve the public

Associated Policies:

- support the National Environmental Protection Agency (NEPA) process through well-coordinated land use and transportation planning and the five core MPO functions

Associated Tasks:

- develop a map that illustrates historical, cultural, and environmental areas of importance and their relationship to the transportation system
- cooperate with Vision 2040 efforts on a view shed analysis

Access Management Plan

According to the Transportation Research Board (TRB), access management is the systematic control of the location, spacing, design and operation of driveways, median openings, interchanges, and street connections. It also encompasses roadway design treatments such as medians and auxiliary lanes, and the appropriate spacing of traffic signals. By managing roadway access, local governments can improve public safety, reduce traffic congestion, support multimodal transportation, and improve the appearance and quality of the built environment. In addition, access management can reduce the need and cost of widening roadways and reduce the number of conflicts between automobiles and pedestrians.

Associated Policies:

- encourage local entities to promote shared access for commercial development

Associated Tasks:

- assist local jurisdictions in developing Access Management plans
- begin inventory of traffic signal spacing

Safety Management Plan

A safety management plan is a systematic approach for evaluating crash locations, types, and causes. This approach also includes analyzing crash patterns, such as clustering, and dispersion factors like crash location, time, day, and user behavior. The Safety Management Plan will evaluate countermeasures to address safety issues.

It will also include cost-benefit analyses of injuries, fatalities, and property damage compared to the costs of congestion and countermeasure implementation. Decreasing the economic, social, and environmental costs of crashes to the community is a part of developing sustainable communities. For example, focusing on thoroughfares with above average crash rates can provide insight into cost-efficient and context sensitive design and connectivity features that improve safety.

Associated Policies:

- all transportation planning and projects should improve safety for all users, with particular focus on the most vulnerable users

Associated Tasks:

- develop a safety management plan with local jurisdictions

Parking Management

A parking management plan can improve the efficiency of parking facilities and their relationship to a well-functioning transportation system. A plan begins with an inventory of a geographic area's parking facilities and a projection of parking needs. Then, a plan outlines policies, programs, and strategies to more efficiently use existing facilities and determine appropriate facility expansion. Some principles to address in a parking management plan are consumer choice, circulation patterns, shared parking opportunities, and peak management. Applying parking management plans can provide benefits such as reducing development costs and impervious surfaces and utilizing flexible design. Ultimately, a parking management plan should support a balance between parking needs and creating inviting business environments.

Associated Policies:

- support the development of shared parking policies

Associated Tasks:

- develop a parking management plan with local jurisdictions

Transportation Demand Management

Transportation Demand Management (TDM) is a comprehensive approach to handle travel demand issues for all modes using a set of technical tools and evaluations based on a set of locally determined performance measures. These issues are examined through various means related to the Why, When, and Where people travel for each mode, shown in Figure 4-6, page 104. The Why addresses a person's purpose for travel; the When addresses the time of travel (particularly comparing peak and off-peak hours); and the Where addresses whether the travel destination is local or regional. Finally, considering the recent population growth in the region and the continuation of this trend despite difficult economic times, TDM offers a diverse set of solutions to manage expected growth and the resulting transportation demands.

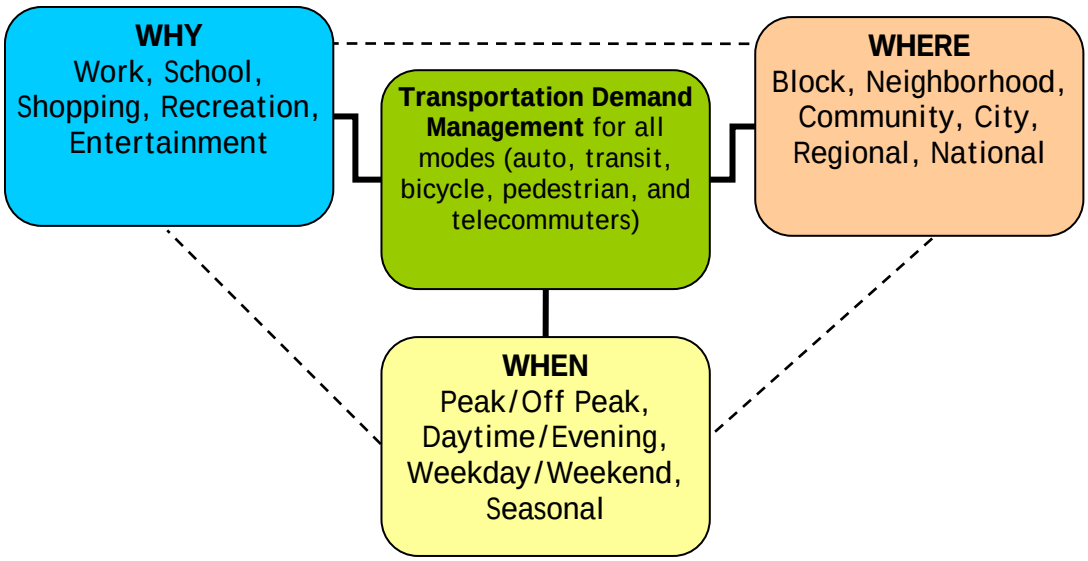


Figure 4-6
Transportation Demand Management Model

Some solutions might include construction projects that add vehicle capacity (e.g. toll roads), adding modal or temporal variety to travel options, and diversifying land use patterns. Adding vehicular or public transportation capacity may require roadway widening, improving connectivity, or applying Intelligent Transportation Systems (ITS) technology. Innovative ITS solutions can assist agencies with responding to and clearing crashes, improving traffic signal timing, and offering traveler information. Improving connectivity by adding a short section of roadway or trail is a simple, low-cost project that can be rapidly constructed and may have broad public support.

Time management solutions could include employers offering flexible work hours or telecommuting opportunities to help decrease peak hour traffic. In smaller urban areas, like Las Cruces, key activity centers will experience a reasonable level of congestion; but congestion does not occur throughout the day. It is not possible, nor an efficient use of resources, to eliminate all congestion in all locations. Prioritizing projects through citizen and stakeholder input is vital to applying limited funds to projects that meet regional goals. In all cases, the solutions need to work together to provide an interconnected network of transportation services.

Associated Policies:

- provide a balanced and diversified approach to manage transportation
- provide solutions to change the travel time usage patterns
- provide a variety mode choices
- support diversifying and well - distributed development patterns
- utilize technology to improve the efficiency of maintenance and operations for existing infrastructure and transportation systems
- support the improvement of existing traffic flow by applying demand management solutions before adding lane capacity

- strategically add auto and transit capacity in congested corridors

Associated Tasks:

- develop a transportation demand management plan with local jurisdictions

Transportation Asset Management

Transportation Asset Management is a strategic framework to prioritize allocation of transportation resources and infrastructure maintenance. The purpose of an asset management plan is to support cost-effective decision making processes for operating and maintaining the transportation network—one of the eight planning factors. A management plan must include an asset inventory for all modes together with an assessment of the value, function, and ways to ensure their maximum useful life. The plan must also identify funding sources for asset repair and replacement.

Associated Policies:

- support the development of a transportation asset monitoring program
- application of asset management plan shall include incorporating modal options for all users

Associated Tasks:

- develop a transportation asset management plan with local jurisdictions
- use the unfunded project list to seek funding for capital replacement projects

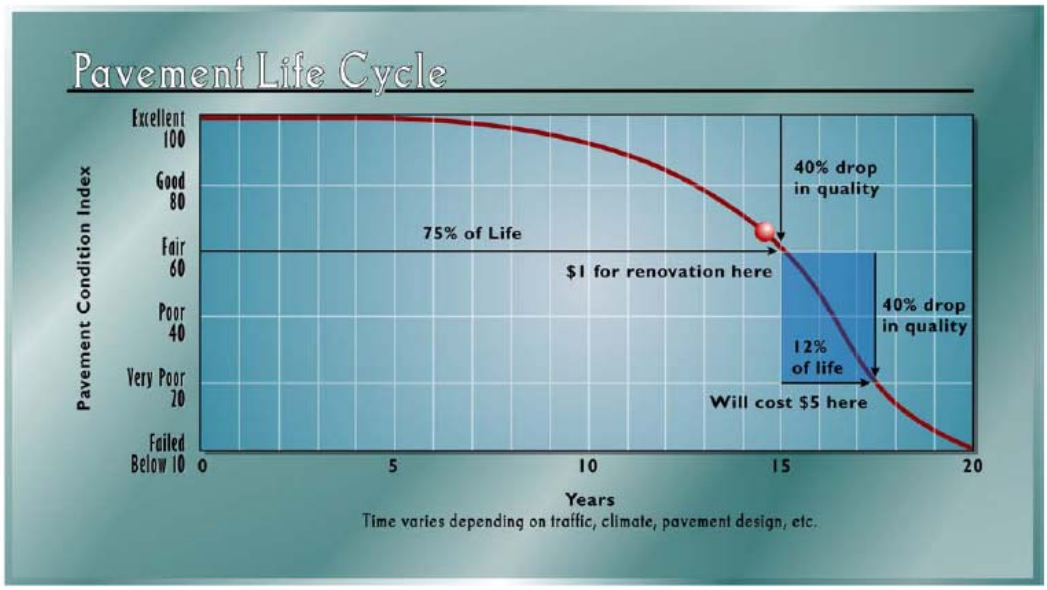


Figure 4-7
Pavement Life Cycle
Source: Cheyenne, WY Master Transportation Plan

Safe Routes to School Program

Safe Routes to School (SRTS) programs examine conditions around schools using the "6 E's" of engineering, education, encouragement, enforcement, evaluation, and equity. The program pursues projects and activities that improve safety and reduce traffic in the vicinity of schools. As a result, these programs make bicycling and walking to school a safer and more appealing transportation choice thus encouraging a healthy and active lifestyle from an early age. Physical improvements that make it safer for kids to walk and bike benefit the community as a whole, providing opportunities for people of all ages to become more active. Safe Routes to School efforts are sustained by parents, schools, community leaders and local, state, tribal, and federal governments to improve the health and well-being of children by enabling and encouraging them to walk and bicycle to school.

Associated Policies:

- continue to expand the Safe Routes to School (SRTS) program
- continue to fund a position for SRTS coordinator

Associated Tasks:

- develop the district-wide SRTS action plan
- assist in developing action plans for individual schools
- assist each school and the district with identifying funding sources and implementing projects

Resource and Outreach Center ▣RO

In order to implement the policies and accomplish the associated tasks outlined in this plan the MPO needs to create a Resource and Outreach Center. The MPO intends to emphasize our role as a resource for data and information related to metropolitan transportation planning and public involvement techniques. This means keeping up with the latest technology and providing a physical and electronic library for the community and local jurisdictions.

In general, the MPO will emphasize our role as a Resource and Outreach Center by providing:

- data and information on current and future transportation conditions
- clarification of the Transportation Demand Model developed for the MPO
- technical assistance with public participation planning and visualization techniques
- educational seminars and classes on land use and transportation planning
- webinars on a variety of planning and engineering related subjects
- a library of best practices in planning and engineering fields

Some of the more specific tasks that may come out of the aforementioned responsibilities include, but are not limited to, the following:

Data Collection

- safety-related data, including crashes
- neighborhood pedestrian network assessments using a walking audit
- continue traffic counts program
- use traffic counts to calibrate the travel demand model within every 5 year update
- begin including pedestrian and bicycle traffic counts
- collaborate with El Paso metropolitan area on a Travel Behavior Study
- compile population data as an affiliate of State Data Center/Business and Industry Data Center

Local Assistance

- assist RoadRUNNER transit with planning for ADA facility improvements
- assist City of Las Cruces with development of a public participation plan
- support enforcement, such as landscape and pet ownership responsibilities

Education and Outreach

- support education on traffic laws
- increase access and distribution of MPO 101 documents
- education about Transportation Improvement Program (TIP)
- provide modal-focused website pages

The Resource and Outreach Center would benefit from being physically housed together with long range planning and Geographic Information Systems (GIS) staff from Doña Ana County and the City of Las Cruces. A transportation engineer would also be an important addition to the team. With this organizational structure the MPO and local jurisdictions would then be able to provide more comprehensive support and assistance with implementation and updates of all types of long range plans for the region, and better coordinate on land use and transportation issues that arise.

In order to assist the local jurisdictions with making informed decisions and provide continuous and effective outreach it is important to provide access to materials and planning best practices. Implementation of any plan needs to be supported by up-to-date data and a comprehensive education and outreach program. Some of the concepts introduced above require additional explanation. The following items provide more detail on documents and concepts that the MPO is exploring through our efforts in creating a more visible Resource and Outreach Center.

Visualization Techniques

Visualization techniques help facilitate the public, stakeholders, and decision makers understanding of transportation and land use planning issues. MPO staff incorporates visualization techniques into all tasks to better explain technical terms and transportation planning concepts. For example, many different types of graphics, such as tables and charts to display data, and aerial photography and maps to illustrate planning activities, are integrated throughout MPO documents and presentations.

MPO staff uses Geographic Information Systems (GIS) and aerial photography to create maps of study corridors, trail systems, bicycle routes, and roadway classifications. All of these visualization techniques are applied liberally throughout MPO documents and the MPO website. MPO staff will expand its visualization techniques through the use of VISUM traffic demand modeling software and VISSIM simulation presentations. VISUM software assesses how well the transportation network functions based on changes in population growth and land use decisions. These assessments are visually depicted by different line widths, colors, and numerical values. VISSIM is a micro-simulation software that demonstrates how changes in transportation network can impact the travel demands on a neighborhood, community, and/or Safe Routes to School.

Walking Audit

A walking audit is a process that inventories and rates how pedestrian-friendly the built environment is within any neighborhood. The audit is conducted by using a checklist that identifies elements such as whether or not the pedestrian system is direct, continuous, safe and secure, and provides for amenities and visual interest. Through an assessment of walking conditions, local jurisdictions in cooperation with

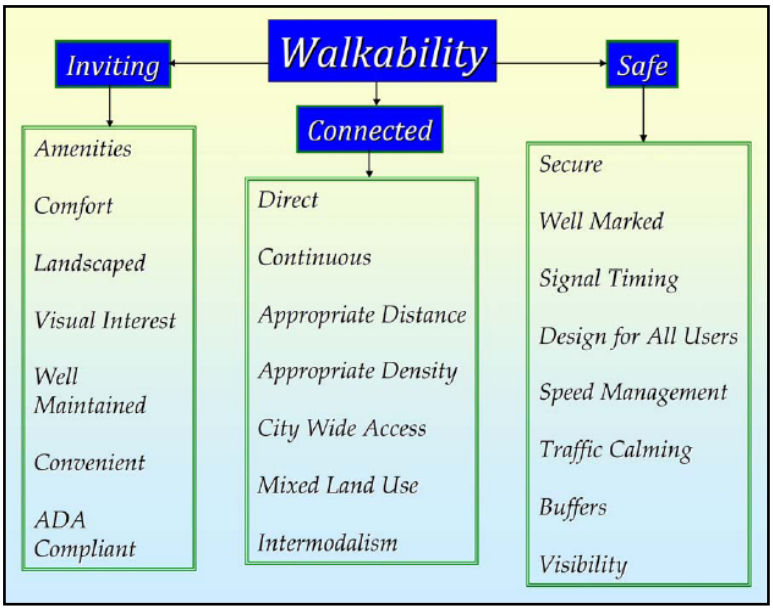


Figure 4-8
Elements of Walkability

residents can define objectives, prioritize projects, and track the progress of improvements to the existing and future pedestrian network.

MPO 101 Documents

The MPO 101 publications are all available in a binder, on a CD, or through the website. MPO 101 publications include documents vital to understanding MPO organization, functions, and processes. Documents include maps, Metropolitan Transportation Plan (MTP), Transportation Improvement Program (TIP), Public Participation Plan (PPP), federal regulations and other guidelines. The MPO 101 book is a constantly updated as work products are amended, new projects are brought forward for inclusion in the TIP, and new federal regulations are passed.

Traffic Count Program

Regional traffic counts are collected and analyzed through a program operated by the MPO. The traffic counts are collected for thoroughfares and randomly selected local roads on a three-year cycle. Some of the counts are vehicle classification counts which show how many vehicles of various types are traveling on a particular street. At the end of each calendar year the MPO office produces a traffic count map for the previous three count cycles.

Process Development PD

Process Development includes general and step by step written procedures that provide guidance on issues such as right-of-way (ROW) preservation and Development Review. Processes can be fluid and may require amendments as they are applied and evaluated. The processes covered in this section include those that the MPO develops and maintains, and those in which the MPO participates. Most MPO processes are discussed in the MPO's Public Participation Plan and the MPO Bylaws.

Associated Policies:

- support local jurisdictions' development review processes

Associated Tasks:

- upon completion of new JPA by NMDOT and local jurisdictions, review and update Bylaws as needed

MPO Processes:

- ROW Preservation
- Thoroughfare Alignments
- Study Corridors
- Transportation Improvement Program (TIP) Application

Local Assistance:

- Development Review
- Multimodal Level of Service

MPO Processes

Right-of-way (ROW) Preservation

The MPO, through the development of the Current Functional Classification and Proposed Thoroughfare Plan (Major Thoroughfare Plan), identifies the functional classification and alignments of arterials and collectors in the region. This process provides regional functionality and preserves ROW for future development. These widths pertain only to the amount of ROW preserved. Build-out of the roadway should be determined based on criteria explained in the land use and design elements section.

In most cases, right-of-way preservation will be determined by the MPO based on the City of Las Cruces and Doña Ana County Design Standards documents, and the ROW requested is measured from the centerline of the roadway. The location of the centerline of the roadway can vary and it is up to the surveyor to show the location of the centerline. In other cases, ROW may have already been acquired when the design standards called for a different width, and therefore may be narrower or wider than the current request.

There are some exceptions to the cases above. For example, the ROW request may vary based on an MPO or local jurisdiction's Study Corridor report, or a determination of constrained ROW (explained below). Also, if a parcel of land is adjacent to a water conveyance facility rather than a roadway, additional ROW is not requested. A case where this does not apply is when a proposed roadway is located on a water conveyance facility (e.g. Outfall Channel). On NMDOT roadways the MPO may request ROW, but ultimately defers to NMDOT. City of Las Cruces and Doña Ana County may ask for additional ROW at intersections to ensure better traffic flow management for all modes.

Constrained Right-of-ways (ROWs)

Constrained right-of-ways (ROWs) are roads that are restricted from adding through lanes to meet current or future capacity due to physical, environmental or policy constraints. A roadway may be physically constrained by immediately adjacent development, topographic constraints, or when a facility has reached the maximum motor vehicle lane per design standards. Also, a roadway may be policy constrained by impacts of roadway expansion on the environment, neighborhoods, and/or local communities. For example, MPO staff has conducted study corridor reports of which the outcome consists of a recommendation to constrain the ROW for the area based on existing conditions and community input.

Usually, constrained ROWs exist in built out areas of the City of Las Cruces and in historical centers of unincorporated communities. However, rural areas may also have constrained ROWs due to environmental and topographic concerns. MPO will not ask for additional ROW in these cases. For constrained right-of-ways, the MPO recommends priority be given to strategies such as traffic signal optimization, access management, parking and loading restrictions, and parallel facilities improvements.

During the development review process, the following process should be used to determine if a ROW is constrained and to what extent:

1. analyze entire right-of-way segment between two thoroughfare intersections to average existing ROW
2. analyze entire right-of-way segment between two thoroughfare intersections to determine percentage of build out
3. analyze entire right-of-way segment between two thoroughfare intersections to determine potential for future subdivision
4. determine if MPO staff is conducting or has completed a study corridor report
5. if 80% of the segment is built out then the average existing ROW is used to determine the amount ROW acquired
6. additional ROW at the intersection could be requested regardless of the percentage of build out
7. all determinations of constrained ROW should consider current and future land use context and associated traffic impacts as determined by staff

Associated Tasks:

- develop a constrained ROWs map

Thoroughfare Alignments

The process of identifying the location of existing thoroughfares and locating new alignments for proposed thoroughfares includes studying land uses and topography, as well as providing a well-connected roadway system. In addition, the thoroughfare alignments have certain spacing requirements as outlined in the Federal Functional Classification Guidelines. Finally, thoroughfares are placed, whenever possible, on a shared property or section line in order to evenly distribute property acquisition for public right-of-way.

Occasionally land use changes and other issues are identified that require revisions to the alignments. Therefore, the MPO has a process to evaluate thoroughfare alignments depending on the degree of change proposed and, most importantly, the impact a change would have on affected property owners.

When an applicant is seeking to realign an MPO thoroughfare the following criteria must be included and addressed:

1. description of the proposed change(s), including extent of right-of-way realignment, map of proposed realignment, and identification of applicable topographic, drainage, cultural, historical, or environmental issues
2. explanation of the reasons for the proposed change(s)
3. indication of whether the request does or does not shift the responsibility of right-of-way preservation on any current or new property owners
4. if a shift in the responsibility of right-of-way preservation occurs, the applicant must obtain a signed, written agreement regarding the new alignment by all parties
5. if the realignment is not significant (less than ~300 feet) and all parties agree on the shift of responsibility of right-of-way preservation the request will be processed administratively by MPO staff
6. if the realignment is significant (~300 feet or more) and all parties do not agree on the shift of responsibility of right-of-way preservation the request will be taken through the full amendment process which is outlined in the MPO's Public Participation Plan
7. if the realignments is not significant (less than ~300 feet) and all parties do not agree on the shift of responsibility of right-of-way preservation the request will be taken through the full amendment process which is outlined in the MPO's Public Participation Plan
8. MPO staff determines the intended location of the original alignment centerline

Area Plans and Study Corridors

Area plans and study corridors are undertaken in corridors or areas that are in need of intensive study to determine potential transportation needs. These are conducted on an "as-needed" basis. Studies can be initiated by a written request if a member jurisdiction identifies a transportation issue not previously discussed in the MTP, when a proposed TIP project is not in compliance with the MTP, or if the MPO Policy Committee requests a specific study.

The process for these types of studies is outlined in the Public Participation Plan. Some of the items in this process include determining the target audience (Study area size), identifying alternative options through public input, and determining preliminary cost estimates, benefits, and potential issues to address through the National Environmental Policy Act (NEPA) process.

Associated Tasks:

- MPO staff will conduct study corridors as requested and approved by the Policy Committee

Transportation Improvement Program (TIP) Application

All Metropolitan Planning Organizations shall, in conjunction with State and effected Transit operators, develop a Transportation Improvement Program. This is a financially constrained list that includes projects for which construction and operation funds can be reasonably expected. The project application process allows local entities to request that projects be considered for addition to the TIP. All projects, funded or unfunded, must be consistent with the Metropolitan Transportation Plan. The TIP includes all regionally significant transportation projects, regardless of federal, state, or local funding. Full details about this process can be found in the Public Participation Plan and the TIP application document.

Associated Tasks:

- expand unfunded project list
- review and make minor amendments to TIP application to ensure its consistency with the Metropolitan Transportation Plan (MTP)

Local Assistance

Development, Construction, and Zoning Review

City of Las Cruces, Doña Ana County, and the shared Extraterritorial Zone (a five mile buffer around the City of Las Cruces boundaries) each have review processes for new development and redevelopment. Development reviews may include new subdivisions, infill development, and lot line adjustments. The MPO participates in the development review processes as a reviewer for all agencies listed above, and a voting member of the Design Review Committee (City of Las Cruces) and Extraterritorial Design Review Committee (Extraterritorial Zone). The City of Las

Cruces and the Extraterritorial Zone each have review processes for new construction. Construction review may include new subdivisions, commercial buildings, and new roadways. City of Las Cruces, Doña Ana County, and the shared Extraterritorial Zone each have zoning review processes for new and existing land parcels. Zoning review may include zoning changes, special use permits, and planned unit developments.

Development Review

During the development review process MPO staff may provide comments based on the following rationale:

- creating a multi-modal and well connected roadway network
- accounting for land use and transportation impacts on traffic generation and accessibility for all users
- encouraging traffic calming techniques, where applicable
- encouraging access management

Pedestrian system

The MPO may comment on pedestrian connectivity within and between subdivisions. MPO staff may ask for pedestrian access along drainage tracts or utility easements where technically feasible. General street connectivity is encouraged.

Trail system

The MPO may comment on trail systems that provide alternate transportation routes and connect with in-road bicycle and pedestrian facilities. MPO staff may ask for these to be indicated as part of the proposed trail system. As per the direction provided by American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities, trails along ROWs independent from arterial roadways (i.e. arroyos) are preferable.

Public Transportation system

The MPO may comment on public transportation facilities such as pull-outs, bus shelters, facilities that comply with the Americans with Disabilities Act (ADA), and lighting to serve pedestrians using the transit system. The MPO encourages direct pedestrian and bicycle connections to transit facilities.

Aviation

Las Cruces International Airport represents a significant investment of public money (local, state, and federal) to a facility that is an economic engine to the region. The MPO may comment on preservation of airport reserve areas for new passenger terminal facilities and future air cargo and/or regional airline maintenance facilities. Airports also can be impacted by incompatible surrounding land uses; tall buildings in flight paths and residential development that can limit the hours of operation for the airport. The MPO does not support zone changes that increase the opportunity for incompatible land uses in the designated Airport Overlay Zone.

Construction Review

During the construction review process MPO staff may provide comments concerning context sensitive design solutions, roadway cross sections, parking, lighting, and signage as they relate to MPO goals and principles. The MPO also recommends designs that minimize conflict between modes and provide for all users as well as appropriate speeds. The MPO's policy calls for bicycle lanes on construction of all new thoroughfares. In constrained ROWs, the MPO recommends providing for all modes as best possible using Complete Streets principles. The MPO does not support cross sections that do not include bicycle lanes or shoulders.

Zoning Review

During the zoning review process MPO staff may provide comments concerning the effect of proposed land uses on the transportation system due to traffic generation. During this process, the MPO also provides information to the local jurisdiction about traffic counts, roadway function, and location of public transportation facilities.

Planned Unit Developments (PUDs) are reviewed through the zoning review process. PUDs provide pubic benefits in exchange for the consideration of multiple variances from the zoning code. The MPO comments on land use and transportation issues for PUDs because of the flexible nature and intent of the PUD process. The MPO may recommend public benefits. Sometimes the MPO will ask for anticipated traffic generation and connectivity measures.

Multimodal Level of Service

Level of Service (LOS) is a traffic engineering term that describes traffic quality. Traffic quality is a measure of traffic density (or a measure of congestion) and is closely linked to transportation time (delays and interruptions). While LOS is traditionally applied to motor vehicle traffic, it can be applied to bicycling, walking, and other transportation modes (See Figure 4-9, page 116). To distinguish its use with motor vehicle traffic, it can also be referred to as 'level of stress,' 'level of quality,' and 'bicycle or walking suitability.'

Level of Service is different for pedestrians than it is for drivers or bicyclists. For pedestrians, Level of Service provides a measure of a roadway segment's performance with respect to pedestrians' primary perception of comfort, convenience, and safety. This metric helps with designing a roadway for factors such as sidewalk width as well as separation and buffering from traffic.

Bicycling Level of Service also differs from motor vehicle LOS. For bicyclists, LOS also provides a measure of a roadway segment's performance with respect to their primary perception of comfort, convenience, and safety. The presence of a bicycle lane or signed, shared use facility may increase the quality of service, even on a heavily traveled motor vehicle route. The MPO maintains the Mesilla Valley Bicycling

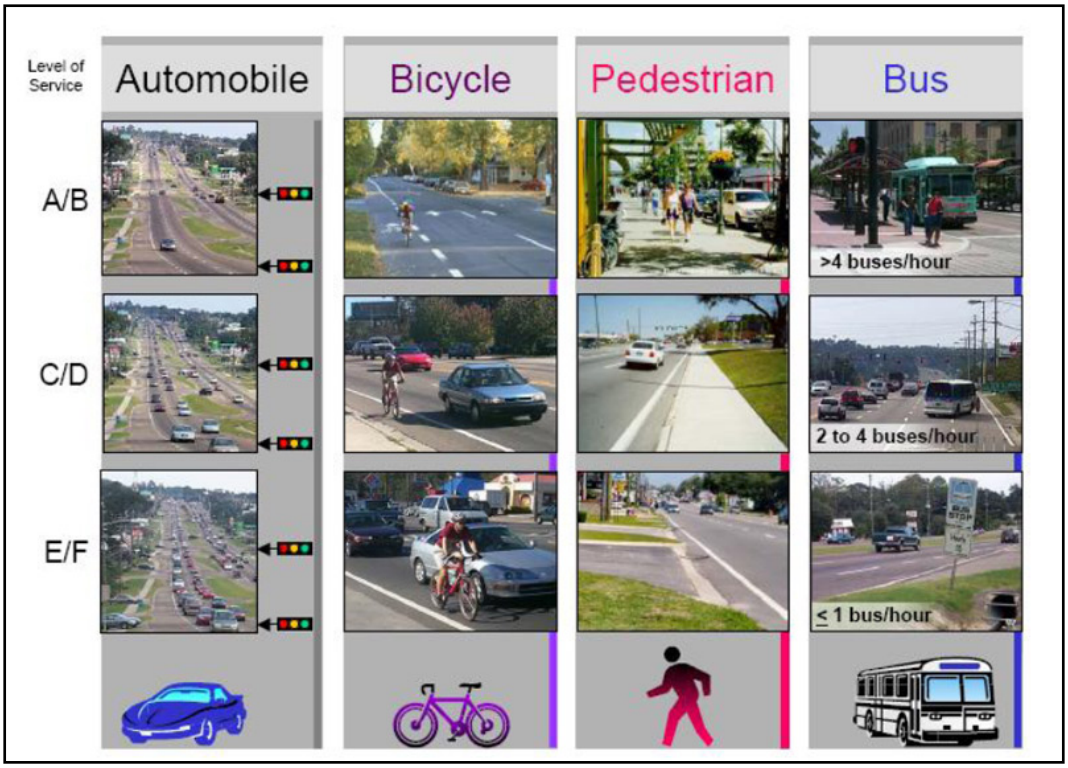


Figure 4-9
Multi-Modal Level of Service
Source: FDOT Quality/Level of Service Handbook

Suitability Map which indicates routes that may be more or less suitable for riding based on measured, weighted criteria.

Associated Tasks:

- maintain Mesilla Valley Bicycling Suitability Map
- develop a mobility zone assessment for multimodal level of service

Associated Policies:

- encourage local jurisdictions to include multimodal level of service performances measures in their development review processes

Mobility Zones

Mobility Zones can be best described as geographic areas within which planning tools are applied to assess characteristics (spatial patterns and relationships) of the physical environment. These characteristics may include land use density, distribution, and diversity, crash rates, multimodal networks, and system connectivity. The initial assessments that the Las Cruces MPO focused on included street connectivity indices, access to land uses, transportation mobility for all modes, and safety analyses.

See Figure 4-10 for an example of a Mobility Zone and its associated Connectivity Index (CI):

A noteworthy feature of the Mobility Zone assessments is that they provide a fine-grained tool to analyze the transportation network and its relationship with the surrounding land uses using readily available Geographic Information Systems (GIS) software. For small to medium sized MPOs the current travel demand model may not be fine-grained enough to illustrate the impacts of new land development proposals, regional transportation infrastructure, and local projects on the transportation system. Mobility Zone assessments attempt to better illustrate the transportation system needs and possibilities. Eventually, the Mobility Zones provide a way to measure whether we are attaining the vision, goals, and principles of Transport 2040.

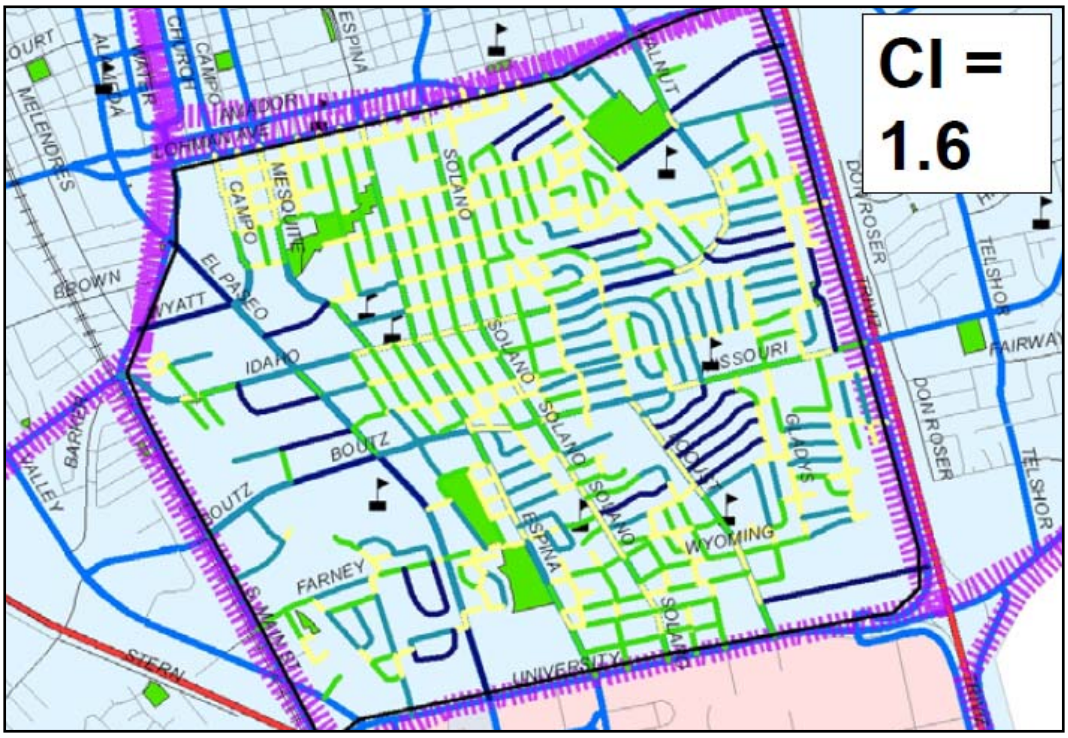


Figure 4-10
Mobility Zone and Associated Connectivity Index

Mobility Zone assessments also provide a practical tool to connect the theory of sectors or Growth Areas (as proposed in Vision 2040) to geographic areas in the county, regardless of their urban, suburban, or rural nature. In addition, the application of the Mobility Zones illustrates how Smart Growth concepts can be applied to new growth as well as redevelopment and infill projects.

Finally, Mobility Zone assessments are a tool to assess the outcome of policy and implementation strategies intended to create more livable communities. Performance measures derived from these assessments can be used to evaluate a development or master plan throughout the review process for local jurisdictions. For an example of a performance measure: Across each Mobility Zone transect (urban, suburban, and rural) the values of each characteristic are compared to determine an optimal range. Then, each zone is assessed to establish how well it performs relative to that range. In addition, the characteristics within a single Mobility Zone (MZ) are evaluated to rank strengths and weakness. These methods provide a way to prioritize improvements and measure progress towards coordinating land use and transportation and developing more sustainable communities.

If a development occurs within a particular MZ, then that development must meet the minimum value of the optimal range. This will ensure that a MZ will not fall below the optimal range for that development pattern. Over time, this process will also help raise the assessed levels to best meet the optimal range. If the development goes above and beyond the optimal range an incentive or bonus can be applied, however, this will be up to the local jurisdiction to decide what is appropriate.

The Mobility Zones can also be used during the development review process to ensure proposals are supporting a connected multi-modal transportation environment. Recommendations for development review analyses include maintaining optimal connectivity indices and minimum land use diversity percentages. The MPO, through research and outreach efforts, will provide the jurisdictions with assistance in gathering data and developing processes for these types of analyses.

The Mobility Zone assessments are intended to address all six transportation principles. The short names of each principle are listed below in bold. They are as follows:

- *Maintain and improve the existing transportation system first and foremost (Maintain and Improve)*
- *Connect people to jobs, goods, services, education, and recreational opportunities (Provide Connections)*
- *Preserve natural, cultural, historical, and agricultural resources (Preserve Resources)*
- *Promote and design healthy and livable communities (Livable Communities)*
- *Provide and improve multi-modal options and accessibility for all users*

(Multimodal Options)

- *Increase safety for all users starting with the most vulnerable modes (Increase Safety)*

For example, Maintain and Improve might be assessed through identifying traffic volumes in a Mobility Zone, Provide Connections may include a connectivity index, Preserve Resources may include the amount of Open Space preserved, Livable Communities may include the number of parks and schools in a given area, Multimodal Options may include the amount of bicycle lane miles, and Increase Safety may include a comparison of crash rates. The MPO has developed a list of potential assessments and the principles that they could address (See Appendix E); however, the initial assessments the MPO will focus on include the network connectivity index, access to land uses, transportation mobility for all modes, and safety analyses.

Associated Policies:

- encourage the use of mobility zone assessments to create performance measures for all developments

Mobility Zones Assessments

The MZ assessments are organized into priority sets. See Appendix X for a detailed methodology of each assessment and a matrix of assessment values for each mobility zone. In the parenthesis following each assessment title is the associated transportation principle being addressed. The first priority set of assessments that will be done by MPO staff includes the following:

Street Connectivity Index (Provide Connections)

Methodology and Benefits:
Street Connectivity Index will be measured by dividing the number of street links by the number of nodes. A more dispersed street network will have a higher connectivity value. The connectivity of a road or path network directly impacts the ability to use multiple modes of transportation. A well-connected network includes short block lengths and minimal dead-ends/cul-de-sacs. As connectivity increases, travel distances decrease and access to services and route and mode options increase.

Land Use Diversity (Livable Communities)

Methodology and Benefits:
Land Use Diversity is the percentage of each land use function (Figure 4-11) within the geographic area of a mobility zone. A better land use mix increases accessibility for all users.

	Land Use Function
1000	Residence or accommodation functions
2000	General sales or services
3000	Manufacturing and wholesale trade
4000	Transportation, communication, information, and utilities
5000	Arts, entertainment, and recreation
6000	Education, public admin., health care, and other inst.
7000	Construction-related businesses
8000	Mining and extraction establishments
9000	Agriculture, forestry, fishing and hunting

Figure 4-11
Land Use Codes and Functions

Intersection Crash Rate Average (Increase Safety)

Methodology and Benefits:

Intersection Crash Rate Average is a calculation of the average number of crashes at each thoroughfare intersection over a 3 year period divided by the current traffic volumes. Identifying intersections with above average crash rates for the City of Las Cruces and Doña Ana County can be used to prioritize safety improvements.

Bicycle Facility Connectivity Index (Provide Connections)

Methodology and Benefits:

Bicycle Facility Connectivity Index will be measured by dividing the number of street links with in-road bicycle facilities by the number of nodes. A more dispersed bicycle facility network will have a higher connectivity index. A well-connected bicycle network encourages bicycling for shorter trips by increasing route options and access to destinations.

Bicycle Facility Miles (Multimodal Options)

Methodology and Benefits:

Bicycle Facility Miles is the measurement of the total miles of in-road bicycle facilities on thoroughfares or parallel routes in comparison to the total miles of thoroughfare roadways within a mobility zone. This provides an indication of how many miles of thoroughfare roadways integrate bicycle mobility. This same type of measurement should be done for pedestrian facilities once a sidewalk inventory is completed.

School Walking Catchment (Livable Communities)

Methodology and Benefits:

School Walking Catchment is a service area created by measuring a specific distance from each school along the street network. The measurement is based on studies that have determined how far a person will walk to certain destinations, in this case a school. The School Walking Catchment illustrates how well connected the streets are to school locations and measure the walking potential and accessibility to those destinations. A catchment also helps determine where to focus pedestrian infrastructure improvements.

Transit Stop Walking Catchment (Provide Connections)

Methodology and Benefits:

Transit Stop Walking Catchment is a service area created by measuring a specific distance from each transit stop along the street network. The measurement is based on studies that have determined how far a person will walk to certain destinations, in this case a transit stop. The Transit Stop Walking Catchment illustrates how well connected the streets are to transit stops and measure the walking potential and accessibility to nearby destinations. A catchment also helps determine where to focus pedestrian and transit infrastructure improvements.

Park Walking Catchment (Livable Communities)

Methodology and Benefits:

Park Walking Catchment is a service area created by measuring a specific distance from each park along the street network. The measurement is based on studies that have determined how far a person will walk to certain destinations, in this case a park. The Park Walking Catchment illustrates how well connected the streets are to parks and measure the walking potential and accessibility to those destinations. A catchment also helps determine where to focus pedestrian infrastructure improvements.

Street Segment Length (Multimodal Options)

Methodology and Benefits:

Street Segment Length is the measurement of the street segments within a mobility zone. The measurement is the statistical distribution of the street lengths including the minimum, maximum, and the standard deviation (measure of the street length variability). Street Segment Length is being used as a proxy for block length. Shorter block lengths (street segments) encourage modal choice and promote non-motorized transportation for shorter trips.

Miles of Existing and Potential Trail Facilities (Preserve Resources)

Methodology and Benefits:

Trail Facility Miles is the measurement of the total miles of existing trail facilities (including multi-use paths) compared to total miles proposed within a mobility zone. This provides an indication of which zones have existing trails and how complete the trail network is within a zone.

Miles of 4-lane Roadways (Maintain and Improve)

Methodology and Benefits:

Miles of 4-lane Roadways is the measurement of the total miles of 4-lane thoroughfare roadways within a mobility zone. This provides an indication of how many miles of thoroughfare roadways may be candidates for road diets. A small value, or a value of zero, is most desirable. Implementing road diets (4-lane to 3-lane conversions) can have a positive impact on mode choice and safety for all users.

Percent of Unpaved Roadways (Maintain and Improve)

Methodology and Benefits:

Percent of Unpaved Roadways is the measurement of the total miles of unpaved roads in comparison to the total miles of roadways within a mobility zone. This provides an indication of how many miles of roadways require infrastructure improvements. Extensive networks of unpaved roadways can lead to air quality, safety, accessibility issues.

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5 Prioritized Plans and Projects

Through an extensive public input process the MPO has developed priority plans to support the implementation of complete networks and a safer transportation system, particularly for more vulnerable modes such as pedestrians. Pedestrian safety is emphasized because all modes have a pedestrian component. For example, when driving to a shopping center a part of the trip includes a safe and convenient walk from the parking lot. In addition, disabled persons and seniors rely on having quality pedestrian facilities connecting to public transportation in order to access goods and services on a daily basis.

The following system priority plan maps provide guidance on identifying, developing, and implementing projects, as well as a system for evaluating projects for inclusion in the Transportation Improvement Program (TIP). For example, a project will get more points if it is identified on multiple priority plans. Also, in an effort to support preserving and maintaining the existing transportation infrastructure, the MPO supports new and innovative funding mechanisms for implementing these priorities, and expanding the current unfunded illustrative project list.

Finally, each plan consists of a map identifying important components of the priorities plan and informational text on the sidebar. These maps are readily available on the web, and will be emailed or printed by request. Small copies of the maps are included at the end of this section.

Pedestrian System Priorities Plan

The Pedestrian System Priorities Plan is a map that identifies crucial pedestrian corridors, intersections, and regional area destinations that need infrastructure improvements. This plan also shows the pedestrian catchments around schools along the street network. The catchments show how possible it is to walk to school if you live within a 1/2 mile of the school The numbered corridors, intersections, and areas were identified not only through this MTP update but were also identified with the development of the MPO Pedestrian Plan and incorporated into this document.

Associated Tasks:

- develop pedestrian projects task force with local jurisdictions
- continue to expand MPO Safe Routes to School program
- provide a crash and proximity analysis for County areas

Public Transportation System Priorities Plan

The Public Transportation System Priorities Plan is a description of the future transit system. It is envisioned that the future transit system will be better coordinated with activity centers in order to support transit-oriented development opportunities. The

future transit system should be based on establishing bi-directional express service corridors to encourage regional trips, and provide neighborhood circulator systems that feed into the stations along those express corridors. Examples of corridors that would benefit from express service are Lohman/Amador and Main Street. The Mobility Zone areas should provide the framework within which the circulator systems operate.

Expansion of public transportation should also include introducing new types of systems such as Bus Rapid Transit (BRT) and light rail. Connecting the urban system to rural and regional systems, such as the New Mexico Department of Transportation Gold (connecting Las Cruces-Anthony-El Paso) and Silver (connecting Las Cruces-White Sands) bus routes are vital to the success of public transportation in the region. A proposed commuter rail link between Las Cruces and El Paso is being discussed by the South Central Regional Transit District (SCRTD), the City of Las Cruces, and the City of El Paso. For a more detailed analysis of regional public transportation and rail needs, please see the SCRTD Service and Financial plan at http://scnmtransit.com.

Associated Tasks:

- assist RoadRUNNER transit in developing the Long Range Transit Plan
- continue to assist with implementation of the RoadRUNNER 5-Year Strategic Plan
- continue to support SCRTD and a gross receipts tax as a dedicated funding source
- pursue a rail feasibility study for the Las Cruces-El Paso Corridor

On the Map:

The Public Transportation System Priorities Plan map contains the tiered priorities as well as explanations of transit oriented development and different types of public transportation systems that could be implemented in the future.

Bicycle System Priorities Plan

The Bicycle System Priorities Plan is a map that identifies current and future in-road bicycle facilities throughout the MPO area. The facilities outlined in this plan are intended to create a well-connected bicycle transportation system using the roadway network. The plan prioritizes in-road facilities into three levels, or tiers, that will create a bicycle network across the region. Tier 1 bicycle routes will be the bicycle arterial network that will connect major destinations and provide continuous routes across the region. Tier 2 bicycle routes will act as minor bicycle arterials to complete the network of intra-regional travel. Tier 3 bicycle routes will round out the network as collectors between neighborhoods and the bicycle arterial network. These tiered routes combined with a well-connected local street network will offer all transportation users a convenient, safe routes to travel.

On the Map:

The Bicycle System Priorities Plan map contains the tiered priorities as well as explanations of different types of bicycle facilities, recommended lane widths, and bicycle policies for the region.

Functional Classification and Proposed Thoroughfares Plan **(Major Thoroughfare Plan)**

Also known as the Major Thoroughfare Plan, this map combines important features of the thoroughfare system development: Current roadway functional classification, future functional classifications for purpose of right-of-way preservation, and preliminary roadway alignments. This map is not intended to determine right-of-way widths; final right-of-way widths will be based on local jurisdictions' design standards and the application of adopted complete streets policies. This map was developed using the Federal Highway Administration Functional Classification Guidelines.

A significant change from the previous Major Thoroughfare Plan is the alignments of Collectors. Collectors serve specific functions within the hierarchical road system, distributing traffic between neighborhoods and arterials and providing increased access across shorter distances and at slower speeds. In order to achieve these functions, as well as preserve the context of the neighborhoods they serve, the MPO has set parameters and templates for the build out of collectors rather than indicate their exact alignment on the map. These parameters will provide enhanced alignment flexibility. For example, the connectivity component is more important than the roadway alignment which may need to be altered to account for topographic and storm water velocity.

Associated Policies:

- collectors within any 1 square mile (approx.) of planned arterials shall maintain a connection to arterials in every cardinal direction and to each other
- a collector shall not directly continue for more than 1.5 miles in any given direction
- a collector should contain 2 or 3 vehicle lanes, bicycle lanes in each direction, and pedestrian facilities on both sides appropriate to the roadway context
- recommend maintaining existing routes and connections where feasible

On the Map:

The Functional Classification and Proposed Thoroughfares Plan (also known as the Major Thoroughfare Plan) map contains the functional classification for existing and proposed roadways, a summary of the functional classification guidelines, roadway type percentages, and parameters for aligning collectors.

Trail System Priorities Plan

The Trail System Priorities Plan is a map that indentifies current and potential future trail locations within the MPO area. The plan prioritizes trail facilities into three levels, or tiers, that will create a trail network across the region. Tier 1 trail routes will be the trail arterial network that will connect major destinations and provide continuous routes across the region. Tier 2 trail routes will act as minor trail arterials to complete the network of intra-regional travel. Tier 3 trail routes will round out

the network as collectors between neighborhoods and the trail arterial network. The trails outlined in this plan are intended to augment the roadway transportation system by providing additional networks for bicyclists and pedestrians.

The governing boards of each member jurisdiction have passed resolutions in support of a loop trail system around central Las Cruces and extending into Mesilla and Doña Ana County. The proposed loop trail includes the following routes: Triviz Multi-use Path, the Outfall Channel, La Llorona Trail, Calle del Norte, New Mexico Highway 28, and University Avenue. Improvements needed to create this loop include paving, trail amenities, and shoulders along well-traveled roadways.

Many of these trails are located along arroyos and Elephant Butte Irrigation District (EBID) facilities. Use of EBID facilities require a Special Use permit by the local jurisdiction and a willingness to provide for liability insurance. The plan prioritizes trails that the residents and stakeholders would prefer to be improved or left unimproved. The MPO encourages the local jurisdictions to utilize these existing networks for a comprehensive regional trail system that connects important destinations for pedestrians, bicyclists, and equestrian use.

Associated Tasks:

- increase access to regional recreational activities
- protect the natural environment of Arroyos and enhance them with trail development
- support Loop Trail resolution

On the Map:

The Trail System Priorities Plan map contains text on the identified tiered network (the loop and spoke system), examples of improved and unimproved trail facilities, and a discussion of potential pavement types.

Transportation Projects Priorities Plan

The Transportation Projects Priorities Plan is a map that brings together projects for all modes that are on a list to be funded, or are on the TIP and already funded. The map illustrates the following types of projects:

- projects funded in the 2010-2013 TIP
- prioritized illustrative unfunded projects
- American Recovery and Reinvestment Act (ARRA) prioritized funded and unfunded projects
- corridors that would benefit from Intelligent Transportation Systems (ITS) applications
- transit projects that can not be illustrated on the map

Transportation Projects Input

The following section is a list of projects and their associated status (measure or explanation of progress). This list of projects was derived from comments received during the first and second rounds of the public participation process for Transport 2040. The comments are from MPO committee meetings, general public open houses, and stakeholder meetings. The comments are provided as they were written or expressed. Staff addressed all these comments as best possible in this section and throughout the plan. For example, each item is listed by the location of the project, the issue or improvement that was suggested, and the status column provides information on how the comment was addressed.

Truck Traffic and Loop Roads

Truck Traffic

The discussion of freight corridors in Chapter 2 revealed that many roadways within the MPO area carry significant commercial vehicle volumes. One route that the public commented upon most was US 70 (Picacho and Main Street), and the high volume of truck traffic and its associated environmental impacts. Based on public input, MPO staff recommends two possible truck routes that may alleviate the aforementioned public concerns. In addition to the proposed routes, MPO staff is also proposing a re-designation of US 70 on Main/Picacho to a local roadway (non-highway) and to not permit Hazardous Cargo (HC).

The routes recommended below will require additional right of way and infrastructure upgrades. They are as follows:

1. Doña Ana Interchange along El Camino Real, Engler, and Motel to Picacho
2. Engler (requiring an Interchange at Engler), and Motel to Picacho

A concern that came up often from the general public was truck traffic near existing neighborhoods, particularly off of Main Street/US 70 and Picacho near the downtown area. The perception was that through truck traffic is too great and that if possible it should be re-routed.

Currently, there is design work being done on the I-10/I-25 interchange that should help alleviate some of these concerns. At this time, truckers choose not to use the I-10/I-25 interchange because the geometry lends itself to turnovers. However, even with improvements to this interchange, there are additional projects worth considering that might also address this concern, such as extending Triviz under University to connect directly into NMSU. This particular issue warrants additional study.

Loop Roads

MPO staff also received input on loop roads around the metropolitan area. This subject matter came up early in the planning process so staff focused specifically on evaluating loop roads in our public participation process. There are four quarters of the area that are being looked at and an additional southern loop road suggested by staff and the Technical Advisory Committee (not in order of priority or importance):

Location	Route	Status
Northeast Loop	Arroyo Road (Weisner Road to Doña Ana Interchange)	Requires build out as development occurs
Northwest Loop	Engler Road Extension (Motel Boulevard to I-10)	Requires build out as development occurs. Portion is on BLM land
Southwest Loop	High Mesa Road (West Mesa Industrial Park to Santa Teresa)	Mostly on BLM land – requires public funding
Southeast Loop	Weisner Road (I-10 to US 70)	On BLM and State land - requires build out as development occurs and public funding
Southern Loop	Unnamed Road (Weisner Road to High Mesa Road)	A portion goes through BLM land and existing agricultural farms - requires build out as development occurs

In the northeast, the northern-most Principal Arterial for east-west travel was reassigned from Dragonfly Avenue to Arroyo Road between Weisner and I-25. The new alignment was created to avoid negatively impacting the recreational opportunities and areas of environmental concern within the BLM land in the Doña Ana Mountains. Most of Arroyo Road will most likely be built out as development occurs. However, about two miles of the roadway are within the BLM area and other funding sources will have to be identified for construction.

The previous route for the northwest loop road was reassigned to a new route that forms an extension of Engler Road. The new route provides an additional river crossing, intersects Shalem Colony, and skirts around the south side of Picacho Hill. The new route was identified because of the new legislation designating the area north of Picacho Hill as the Prehistoric Trackways National Park.

The southwest loop road is High Mesa Road. This roadway connects the West Mesa Industrial Park and I-10 with the Santa Teresa area, and is intended to be a limited access roadway. Projects in the Santa Teresa area such as an existing border crossing, a master planned community development, and a transportation/industrial complex will support an additional southern route. Most of the truck traffic around the City of Las Cruces travels along I-10. Therefore, High Mesa Road is most likely to have the greatest impact on relieving any future congestion on I-10 as the freight system expands and growth occurs. High Mesa can also serve as a secondary route in case of a closure on I-10. This roadway would be a prime candidate for a toll road, but tolling requires enabling state legislation.

The southeast loop road is Weisner Road. This roadway connects to Mesquite Interchange on I-10, and is the eastern-most roadway on the Thoroughfare Plan. This roadway ultimately connects with US 70 at the Weisner Interchange, and is intended to be a limited access roadway. Weisner Road provides a more direct connection from El Paso to White Sands. Baylor Canyon Road was suggested as an alternative; however, staff doesn't feel this is the best choice. In the last MTP, Baylor Canyon was downgraded to a local road in order to be sensitive to the natural environment at the edge of the BLM recreational management area.

A southern loop road option traversing south of the City of Las Cruces across the valley was recommended during the public input process. This road would connect the southern end of Weisner Road near I-10 with High Mesa Road through the proposed Brazito Interchange. The loop road, shown on the Major Thoroughfare Plan, would provide an additional river crossing and include a portion of Snow Road.

Interchanges and Grade Separation

These items are grouped together because of the significant justification required to develop a project on Interstate ROW, and because they require a high level of coordination with the NMDOT and FHWA. Several interchange and grade separation projects were mentioned throughout the public input process. For example, I-10/ Vado Interchange was mentioned repeatedly as a concern for the Vado community because vehicles are rolling through and not stopping at this intersection.

Project list organized by Status:

Location	Issue/Improvement	Status
I-10/Vado Interchange	Safety concerns; possible roundabout	Under construction (GRIP project)
University/I-25 Interchange	Traffic circulation and NMSU access	Under study
Jack Rabbit Interchange	Safety concerns; correct interchange geometry	Under study
Arrowhead Interchange	Traffic circulation and NMSU access	On MPO unfunded illustrative list
I-10/Brazito Interchange (I-25 and Mesquite Interchanges)	Connectivity; 1 mile spacing between interchanges	On MPO unfunded illustrative list
I-25 Interchange (Engler)	Engler under pass upgraded to interchange	Proposed on Major Thoroughfare Plan
Peachtree Hills/Taylor grade separation crossing across I-25	Increase connectivity across I-25	Proposed on Major Thoroughfare Plan
Madrid grade separation crossing across I-25	Increase connectivity across I-25	Proposed on Bicycle Priorities Plan
Idaho grade separation crossing across I-25	Increase connectivity across I-25	Proposed on Bicycle Priorities Plan
Wells extension (I-10 to Main Street)	Increase connectivity	Not feasible due to NMSU and cultural impacts (Tortugas community)

Intersections

During public input various improvements to thoroughfare intersections were recommended. MPO staff will prioritize other intersections based on crash rate analyses of thoroughfare intersections.

Project list organized by Status:

Location	Issue/Improvement	Status
Telshor/Lohman	Intersection reconstruction; capacity and turning movements	Under construction; completion in 2010
Downtown Main Street	Street redesign including roundabouts	Under design and construction
Idaho/El Paseo	Highest crash rate in City, including pedestrian and bicycle crashes, line of sight, overall geometry	Under study and design
Picacho Hills/US 70	Signalization requested	DAC application for safety funding
Roundabouts	Analyze intersections for feasibility of roundabouts	MPO coordination with local entities
Hoagland/Alameda	Left turn line of sight, ROW acquisition, potential signalization	City's CIP? MPO coordination with CLC
Spruce/Triviz	More queuing space for east bound left turn lane	City's CIP? MPO coordination with CLC
Melendres/Amador	Recommendation to have a signal due to crash incident	Needs crash analysis

Existing Thoroughfare Improvements

In many cases, the public mentioned that existing roadways needed improvements. For example, funding for ITS enhancements was mentioned as an important part of improving overall traffic flow. The projects below are In line with the MPO goals to preserve and enhance the existing system.

Project list organized by Status:

Location	Issue/Improvement	Status
I-10 (I-25 Interchange to State line)	Safety concerns; additional travel lanes and median reconstruction	Under construction (GRIP)
El Paseo	A Complete Streets corridor connecting Downtown to NMSU	Under study
Roadrunner Parkway (US 70 to Lohman)	Redesign as a Complete Street	On MPO unfunded illustrative list
University Avenue (I-25 to Mesilla town limits)	Upgrade and integration of bicycle, pedestrian, and transit	On MPO unfunded illustrative list
Various corridors and intersections	Intelligent Transportation Systems (ITS) technology; traffic signal optimization	MPO coordination with local entities
US 70 (Main to Valley)	Redesign roadway to slow traffic for businesses. For example, a 3 lane roadway with pull offs and parking	MPO coordination with CLC and NMDOT
NM 478 (Vado to Berino)	Roadway deterioration and shoulders needed	MPO coordination with NMDOT
NM 189 and NM 227	Roadway deterioration and shoulders needed	MPO coordination with NMDOT
US 70 to Airport frontage roads	Roadway deterioration and shoulders needed	MPO coordination with NMDOT
Telshor and Triviz	Turn lane is not needed, possibly make these one-way roads	One-way roads not feasible. Turn lane removed from Triviz

New Thoroughfare Connections

MPO staff conducts future capacity analyses using VISUM (travel demand software). The Major Thoroughfare Plan shows the roadway connections needed to maintain a well operating transportation system.

Project list is organized by Status:

Location	Issue/Improvement	Status
Triviz (University Avenue underpass)	Connectivity to NMSU	Under study
Sonoma Ranch (US 70 to Dripping Springs)	Proposed Principal Arterial	MPO unfunded illustrative list
Missouri (east end to Sonoma Ranch)	Proposed Collector	MPO unfunded illustrative list
Roadrunner Parkway (Lohman to Sonoma Ranch)	Proposed Minor Arterial	Proposed on Major Thoroughfare Plan
High Mesa Road extension (Jackrabbit Interchange to Anthem)	Proposed Principal Arterial	Proposed on Major Thoroughfare Plan
Outfall Channel roadway	Proposed Collector	Proposed on Major Thoroughfare Plan
Alameda extension to Camino Real	Improved connectivity	Proposed on Major Thoroughfare Plan
Porter Road (US 70 to Dripping Springs)	Proposed Principal Arterial	Proposed on Major Thoroughfare Plan
Dunn Drive (US 70 to Lohman)	Proposed Minor Arterial	Proposed on Major Thoroughfare Plan
Roadrunner Parkway (north end to Settlers Pass)	Proposed Minor Arterial	Proposed on Major Thoroughfare Plan
Improved circulation around Las Cruces Country Club	Proposed Collector	Proposed on Major Thoroughfare Plan
Rinconada (north end to Settlers Pass)	Proposed Minor Arterial	Proposed on Major Thoroughfare Plan
Carver Road (NM 28 to NM 478)	Road widening to increase traffic capacity	Proposed on Major Thoroughfare Plan

Pedestrian Improvements

A variety of pedestrian safety and connectivity concerns and proposed improvements were brought up during the public input process. These were organized into Intersections, Signage and Striping Corridors, and Districts/Areas.

Project lists organized by Status:

Intersections		
Location	**Issue/Improvement**	**Status**
Pedestrian bridge over University	Staff and students crossing	Studied during University District planning process
Walton/Lohman	Longer timing for crosswalk	MPO coordination with CLC; count down pedestrian signals
Walnut/Lohman US 70/Main Elks/Main Union/S. Main University/Jordan Golf Club/Roadrunner US 70/Sonoma Ranch	Safety concerns	MPO coordination with CLC and NMDOT
Pedestrian bridge over Lohman at Walton	Wide intersection that is very difficult for people to cross, especially elderly and disabled (near transit stop)	Planning study and cost analysis needed
Pedestrian/Bicycle bridge over I-25 (connecting to Mesilla Valley Mall)	Connectivity and public transportation accessibility	Planning study and cost analysis needed
Pedestrian bridge or tunnel on Lohman at Hermosa Heights	School children crossing this very busy street could also help improve auto traffic flow	Planning study and cost analysis needed

Signage and Striping		
Location	**Issues/Improvement**	**Status**
Mesquite neighborhood to downtown, for example, at Hadley and Griggs	More painted crosswalks	MPO coordination with CLC bicycle and pedestrian improvement program
Klein Park	Crosswalks and warning signs (Children Playing)	MPO coordination with CLC bicycle and pedestrian improvement program
Downtown Federal Building	Better marked crosswalks across from building	MPO coordination with CLC bicycle and pedestrian improvement program
Las Cruces Downtown and Library	Better marked crosswalks from neighborhoods	MPO coordination with CLC bicycle and pedestrian improvement program

Corridors		
Location	**Issue/Improvement**	**Status**
Idaho (Main to Solano)	Sidewalks, utility poles, ADA issues, road diet	Under study
El Paseo (Downtown to University)	Pedestrian corridor improvement project	Under study
North Telshor (Lohman to Northrise)	Sidewalks, ADA issues (west side NMDOT ROW)	MPO unfunded illustrative list
Solano (Main to University) Alameda (Hoagland to University) University (NM 28 to Don Roser) US 70/Spruce (Valley to Telshor) Mesquite (Spruce to Idaho) Espina (Idaho to University) Walnut (Spruce to Idaho) Hoagland (Valley to Alameda) Madrid (Alameda to Evelyn) Missouri/Boutz (El Paseo to Telshor) Idaho (Walnut to Triviz)	Pedestrian corridor improvement projects	MPO coordination with CLC and NMDOT
Melendres	Improved sidewalks	MPO coord. w/ CLC
Locust	Utility poles	MPO coord. w/ CLC
Alameda	Utility poles	MPO coord. w/ CLC
Carver Road	Shoulders	MPO coord. w/ DAC

Districts and Areas		
Location	**Issue/Improvement**	**Status**
Central Business District	Overall connectivity and access per Downtown Main Street Master Plan	Under design and construction; Main Street re-opening
University Avenue District	Overall corridor redesign to be more pedestrian oriented	MPO unfunded illustrative list
Mesquite Historic District	General sidewalk improvements needed	MPO coord. w/ CLC
Alameda Depot District	General sidewalk improvements needed	MPO coord. w/ CLC
ADA transition plan	Prioritized ADA plan	MPO coord. w/ CLC
Pedestrian sidewalk improvements program	General sidewalk improvements plan	MPO coord. w/ local entities
Crosswalks and warning signs at parks	Concern over kids crossing at park sites	MPO coord. w/ CLC
Mesilla Valley Mall	Access to mall for pedestrians is poor	MPO coord. w/ private property owners
Walmart on Valley	Overall pedestrian connectivity and access	Planning study and cost analysis needed
I-25 and Lohman	Access for pedestrians to nearby businesses and transit is poor, sidewalk improvements needed	Planning study and cost analysis needed

Bicycle Improvements

A variety of bicycle safety and connectivity concerns were brought up during the public input process. These were organized into Corridors and Intersections.

Project lists organized by Status:

Corridors		
Location	**Issue/Improvement**	**Status**
Espina	Bicycle lanes	MPO coord. w/ CLC; Bicycle Friendly Community Task Force
University Avenue (NM 28 to Town of Mesilla limits)	Shoulders	MPO unfunded illustrative list; TOM safety application submitted
University Avenue (Town of Mesilla limits to Locust)	Bicycle lanes	MPO unfunded illustrative list
North Telshor	ADA improvements and bicycle lanes	MPO unfunded illustrative list
US 70/North Main bridge widening	Bridge not wide enough for bicycle lanes or pedestrians	Tier 1 Bicycle Priority
Walnut (Lohman to Griggs)	Road diet	Tier 1 Bicycle Priority
Las Alturas (University to Mesquite Interchange)	Road deterioration and bicycle lanes / shoulders	Tier 1 Bicycle Priority
Elks Rd (north of Mohegan)	Bicycle lanes	Tier 1 Bicycle Priority
Stern	Road deterioration and bicycle lanes / shoulders	Tier 1 Bicycle Priority
Valley north of outfall channel	Shoulders	Tier 1 Bicycle Priority
Valley south of outfall channel	Reconstruct shoulders, badly deteriorating	Tier 1 Bicycle Priority
Idaho (Main to Solano)	Road diet	Tier 1 Bicycle Priority
Alameda (Picacho to Main)	Road diet	Tier 1 Bicycle Priority
Griggs	Wide street needs bicycle lanes for traffic calming	Tier 1 Bicycle Priority
Spruce (Main to Triviz)	Road diet	Tier 2 Bicycle Priority
Lohman	Bicycle lanes	Tier 2 Bicycle Priority
Foothills (Telshor to Lohman)	Road diet	Tier 3 Bicycle Priority
Soledad Canyon	Shoulders	Tier 3 Bicycle Priority
I-10 frontage roads to Corallitos (MPO boundary)	Bicycle lanes/shoulders	Tier 3 Bicycle Priority
Walton (Lohman to Griggs)	Road diet	MPO coord. with CLC

Intersections		
Location	**Issue/Improvement**	**Status**
Bicycle detection at signalized intersections	Bicycles are not detected and rider has to dismount to push crosswalk button	MPO coord. w/ CLC; Bicycle Friendly Community Task Force
Bring bicycle lanes up to intersection	Most auto- bicycle crashes occur at intersections	MPO coordination with local entities

Trail Improvements

The trail system priorities consist of first a central loop system and then an extended loop and spoke system. These loop systems connect some important destinations and neighborhoods to provide a complete network around the City of Las Cruces and into Doña Ana County and Mesilla. A trail connection may include a roadway or multi-use path. The following are comments from the public and MPO committees on critical connections and area attractions.

Project lists organized by Status:

Connections		
Location	**Issue/Improvement**	**Status**
Alameda arroyo	Designated trail	Proposed Tier 1 Trail System Priorities Plan; CLC RTP application submitted
Outfall Channel	Connectivity; part of central loop	MPO unfunded illustrative list
Over Las Cruces Flood Control Dam	Connectivity	Proposed Tier 1 Trail System Priorities Plan
Connection to Bosque Park	Improve Calle del Norte bridge crossing	Proposed Tier 1 Trail System Priorities Plan
La Llorona Trail extension (North to Doña Ana School Rd and South to Pajaro Rd)	Connectivity; part of extended loop	Proposed Tier 1 Trail System Priorities Plan
Las Cruces Arroyo South Fork	Designated trail	Proposed Tier 1 Trail System Priorities Plan
Hadley Street (Triviz to Downtown)	Bicycle Boulevard	Proposed Tier 1 Trail System Priorities Plan
Las Cruces Drain (Outfall Channel to Calle de Norte)	Connectivity within central loop	Proposed Tier 1 Trail System Priorities Plan
Acequia Madre (Downtown to NMSU near El Paseo)	Overall pedestrian connectivity and access per Downtown Main Street Master Plan; Paved path along EBID ROW	Proposed Tier 1 Trail System Priorities Plan
South side of Tortugas Hill (A Mountain)	Multi-use path	On BLM land

Recreation Areas (Important Destinations)	Status
Bosque Park	Tier 1 connection
Recreational Area in Doña Anas	Tier 1 connection
Las Cruces Flood Control Dam	Tier 1 connection
Rio Grande	Tier 1 connection
Tortugas Mountain	Tier 1 connection
Prehistoric Trackways Park	Tier 2 connection
Picacho Peak	Tier 3 connection

Public Transportation Service

A variety of public transportation planning efforts have been completed or are underway, including a 5 year Transit Strategic Plan for the City of Las Cruces, a Coordinated Mobility Action Plan for Human Services transportation (CMAP) for Doña Ana County, the Service and Financial plan for the South Central Regional Transit District (SCRTD), and the development of a long range Transit Plan for the City of Las Cruces.

A variety of public transportation projects are either underway or in the initial planning phases. A regional bus route (the Gold line) overseen by the NMDOT connects Las Cruces to Anthony and El Paso along I-10. The new Intermodal Center on the corner of Alameda and Lohman is in the design phase. In the future, there may be the opportunity for Heavy Commuter Rail, Light Rail, Bus Rapid Transit, and Express Bus routes. The feasibility of rail between El Paso and Las Cruces has gained attention recently with a bill introduced to the House and Senate in 2009. In addition, Governor Richardson has pushed for a high speed rail line between Denver, CO and El Paso, TX.

RoadRUNNER Bus Service	
Item	**Status**
Transit route from Motel to Mountain View along Lohman/Amador	5 year Transit Strategic Plan (Short term)
Service to Elks area	5 year Transit Strategic Plan (Short term)
Service to Del Rey area	5 year Transit Strategic Plan (Short term)
Service out further on US 70 to Weisner Road or Brahman	5 year Transit Strategic Plan (Medium term)
Service along Main and Solano to University	5 year Transit Strategic Plan (Medium term)
Las Cruces to Anthony service along NM 478	Part of Long Range Transit Plan Study

Capital Infrastructure	
Item	**Status**
Schedules at all bus stops	5 year Transit Strategic Plan (Medium term)
Purchase Hybrid and Electric buses	5 year Transit Strategic Plan (Long term)
Venus transfer point improvements including Park and Ride	5 year Transit Strategic Plan (Long term)
ITS real-time information	5 year Transit Strategic Plan (Long term)
Passenger counting ITS support	5 year Transit Strategic Plan (Long term)
Park and Ride facilities at exits on I-10 from NMSU to Anthony and US 70	Part of Long Range Transit Plan Study

The public input listed below is organized by Item and Status. The Status column includes mostly planning related activities because transit funding, at this time, is provided by federal formula funding with a match by the local entities. New Mexico is one of three states that do not have dedicated State public transportation funding.

Project lists organized by Status:

Express Route Service	
Item	**Status**
Modern street car from Downtown to NMSU	Under study
Express route along Lohman/Amador	5 year Transit Strategic Plan (Short term)
Express route along US 70	5 year Transit Strategic Plan (Short term)
Express routes along Main/El Paseo	Part of Long Range Transit Plan Study
Express route along Solano	Part of Long Range Transit Plan Study
Express route along University	Part of Long Range Transit Plan Study

Underserved Areas	
Item	**Status**
East Mesa DACC connection	Bus connection between Mesilla Valley Mall and campus began in 2009
Senior transportation from Vado to Las Cruces, especially at night	Included in SCRTD plan
Social service agencies in Picacho/Motel area	Part of Long Range Transit Plan Study
Service to Doña Ana serving Ben Archer, Dental Clinic, and La Clinica	Part of Long Range Transit Plan Study
Daily van for rural communities	Included in CMAP Action Plan
Station in Vado	Included in SCRTD plan
Increase rural service connections to City transit system	Included in SCRTD plan

Rail Service	
Item	**Status**
Rail service (Las Cruces to Albuquerque)	Included in SCRTD plan
Rail service (Las Cruces to El Paso)	Included in SCRTD plan; highest priority
Stop at Spaceport	Included in SCRTD plan
Stop at Radium Springs	Included in SCRTD plan
Stop at El Paso Airport	Included in SCRTD plan
Stop at UTEP	Included in SCRTD plan

Other concerns with explanation

The following projects suggested during public input were separated from the main lists. An explanation is provided.

Location	Explanation
Fix crosswalk warning lights at 999 W Amador	Project completed
Bicycle lanes on Avenida de Mesilla	Project completed
Bicycle lanes on Dripping Springs	Project completed
Roundabout at Telshor and Lohman	Intersection improvements already in progress
Madrid crossing over I-25	Study area completed with recommendations
Carver Road	Issue not clearly defined (Issues more clearly defined through Phase 3 public comments)
Bypass from Mesilla to US 70	Issue not clearly defined
Eliminate train through town – make the ROW into a Thoroughfare	Eliminates any possibility for commuter rail and requires BNSF justification
Convert Triviz and Telshor, north of Lohman into one-way roads – add connectors between access road and across I-25	Requires extensive Interchange Justification Report (IJR) and ROW acquisition
Reduce slope at St. Augustine Pass	Not technically feasible
Interchange at US 70 and Del Rey or Roadrunner Parkway	Not technically feasible; geometry too close to I-25 Interchange

Local Jurisdiction Issues	
Location	**Explanation**
Pave Swannack Road	Local road; DAC maintenance
Maintenance on Dripping Springs and better signage for Bicycle lanes	DAC maintenance
Overgrown grass along edges of Telshor and Missouri	CLC maintenance

Summary and Conclusion

In most cases, projects recommended were included in the priority plans. In some cases, planning studies or further analyses are needed, and in other cases planning studies are underway that will be addressing many of the recommendations. Some of the projects recommended will also be addressed via one of the toolbox strategies. Finally, in Chapter 6, the financial plan is presented along with associated needs in the MPO area, of which these projects were incorporated.

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6 Financial Plan

Federal transportation bills fund and regulate all federal transportation activities. One requirement found in federal transportation bills is that the Metropolitan Transportation Plan (MTP), the Transportation Improvement Program (TIP), and State Transportation Improvement Program (STIP) must be financially constrained. According to 23 U.S.C. 450.104, financially constrained or fiscal constraint "means that the metropolitan transportation plan, TIP, and STIP includes sufficient financial information for demonstrating that projects in the metropolitan transportation plan, TIP, and STIP can be implemented using committed, available, or reasonably available revenue sources, with reasonable assurance that the federally supported transportation system is being adequately operated and maintained." The purpose of this requirement is: 1) to ensure that funding sources for needed investments are identified and 2) that reasonably reliable means to maintain and operate the existing federally funded transportation system are demonstrated.

Financial Summary, Assumptions, and Available Tools

Total federal, state, and local funding revenues for the 30-year planning horizon of Transport 2040 are estimated to be $1,847,957,838. The breakdown of the estimate by funding source is illustrated in Figure 6-1. Total capital expenditures for roadways

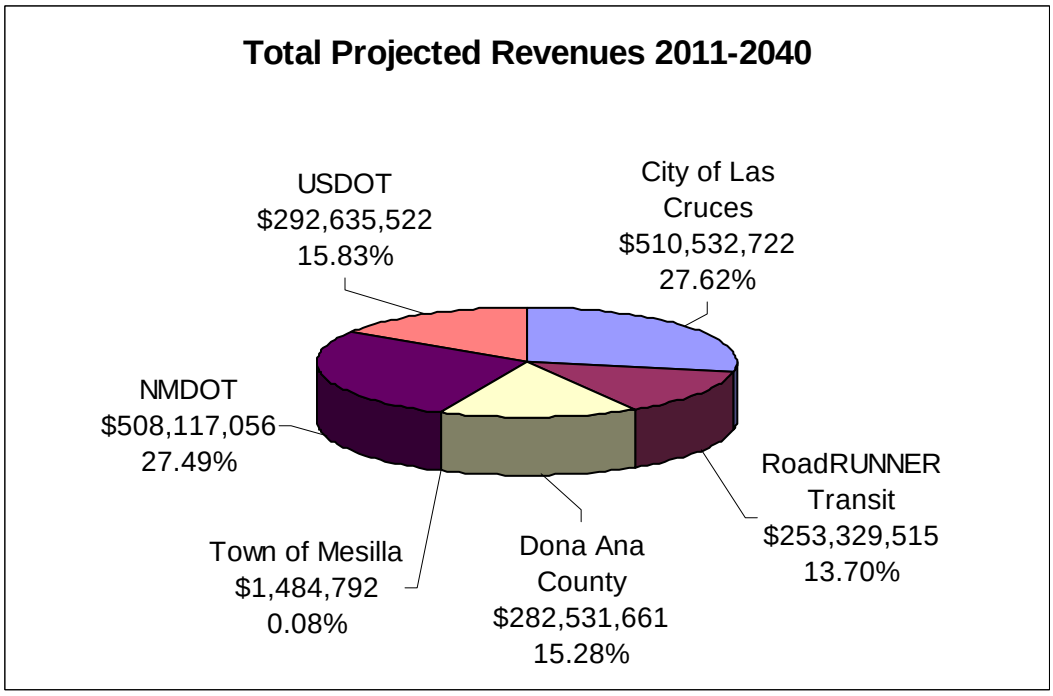


Figure 6-1
Total Projected Revenues 2011-2040

and transit are estimated to be $754,872,133. Operation and Maintenance (O & M) expenditures are estimated to be $682,041,785. Total capital and O & M expenditures for the 30-year planning horizon of Transport 2040 are estimated to be $1,436,913,918.

Several assumptions were made to estimate potential revenue that would be available to the Las Cruces MPO area. First, it was assumed that the revenue from each source would grow at the same rate (2% per year). Second, an assumption was made that the state would spend 30% of its revenues on capital projects. Statewide costs for administrative support, debt service, etc. were taken out prior to distribution. Figure 6-2 shows NMDOT expenditures for a typical year. Third, it was assumed that the proportion of revenue available would be equal to the proportion of the region's population to the state (9.6% for the Las Cruces region). Finally, the amount of state funding available for NMDOT maintenance activities was assumed to equal the projected costs for current maintenance activities.

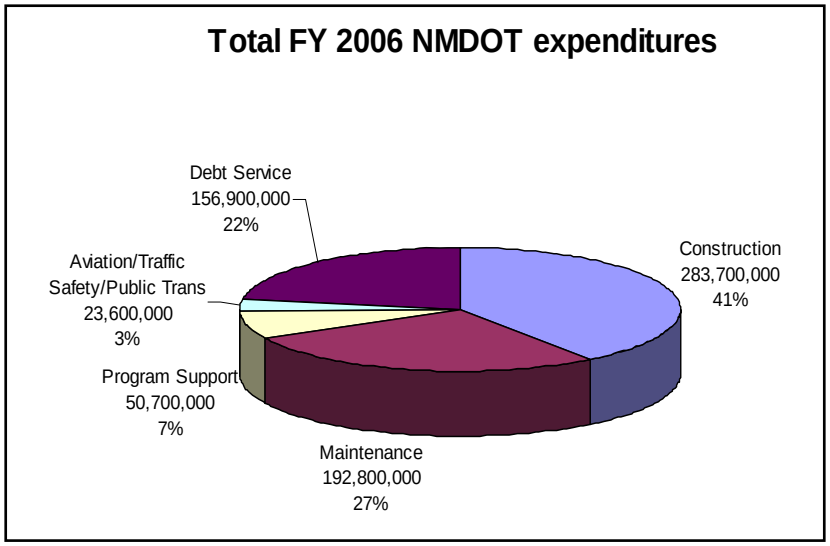


Figure 6-2
Total Fiscal Year 2006 NMDOT Expenditures

Many funding tools are available to construct new transportation projects and keep the existing transportation system operating and maintained. Funding sources include federal and state programs, such as fuel and sales taxes, as well as local and private funds. This chapter documents the financial strategy used to fund regional projects, programs, and activities covered in the transportation plan. Potential revenue sources are summarized and future revenues from these sources are estimated. Also, the expenditures to meet the projected transportation needs for the Las Cruces region through the year 2040 are estimated. The expenditures include those required to meet general administrative needs and the operation and maintenance of the existing transportation system.

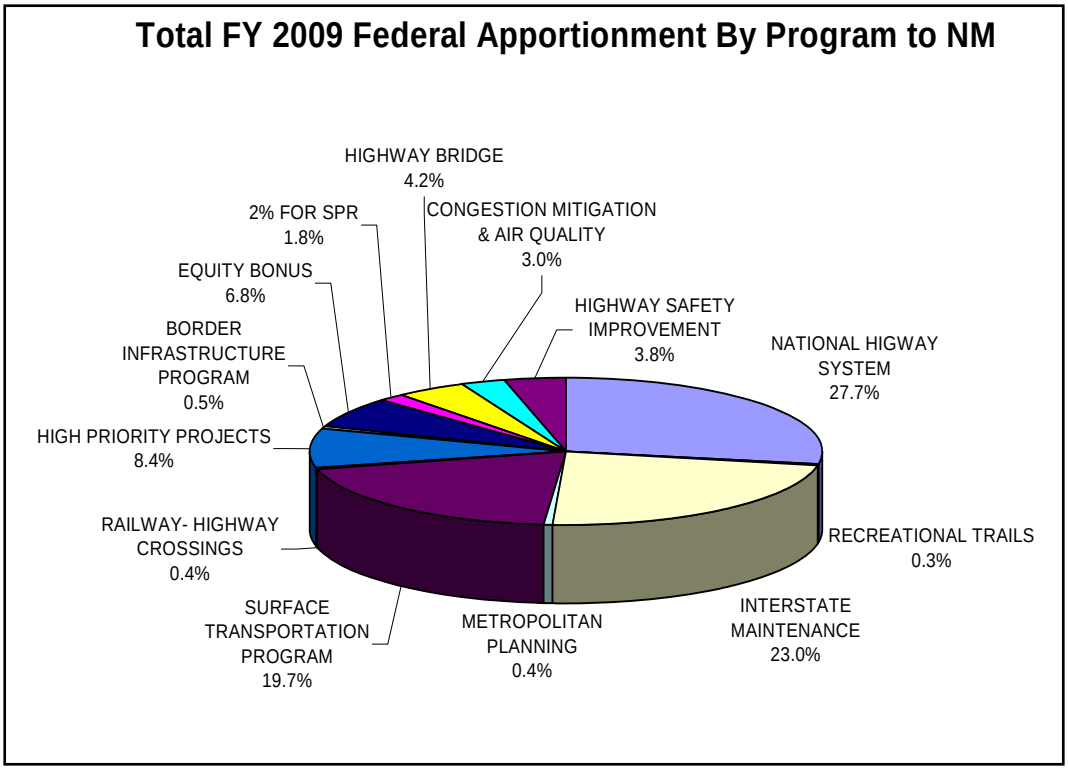
Proposed Revenues

Federal Funding

Federal funding for transportation in New Mexico is transferred from the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) to the NMDOT. Funds are specifically allocated to various statewide programs and to the six

Federal Apportionment to New Mexico	FY 09
Interstate Maintenance	84,376,695
National Highway System	101,484,293
Surface Transportation Program	72,222,251
Highway Bridge	15,471,614
Congestion Mitigation & Air Quality	10,893,828
Highway Safety Improvement	14,007,193
Railway - Highway Crossings	1,588,797
Recreational Trails	1,166,877
Border Infrastructure Program	1,879,602
Safe Routes to School	1,122,276
Metropolitan Planning	1,519,833
High Priority Projects	30,920,000
Equity Bonus	24,852,278
2% for State Planning Research (SPR)	6,598,124
GRAND TOTAL	**368,103,661**

Figures 6-3 and 6-4
Total Fiscal Year 2009 Federal Apportionment to New Mexico



NMDOT Districts. The Las Cruces MPO is within District 1 which is comprised of Doña Ana, Luna, Hidalgo, Sierra, Grant, and Socorro counties.

Primary sources of revenue for the Federal Highway Trust Fund (FHTF) are:

- fuel taxes
- 18.4 cents per gallon for gasoline
- 24.4 cents per gallon for diesel
- heavy vehicle fees
- heavy vehicle use tax for trucks over 55,000 pounds
- 12 percent sales tax on new trucks over 33,000 pounds
- tire tax for tires over 40 pounds.

Increases to federal fuel tax rates were last authorized in 1993, and therefore the purchasing power of federal funding sources has steadily eroded over time as material and labor costs have increased. It is clear to many at the federal level that current funding levels must be reexamined and new sources of revenue for the FHTF must be explored. Ongoing discussions by the House of Representative's Finance and Transportation and Infrastructure Committees have included revenue options such an increase in fuel tax and a user fee based on vehicle miles traveled.

Funding from the federal level has historically been an important revenue source for delivering transportation projects in New Mexico. For example, New Mexico's authorized apportionment of federal funds for fiscal year 2009 was estimated to be $368,103,661 and represents approximately 49% of annual revenue for the NMDOT. The federal funds are divided into a variety of programs, as indicated in Figures 6-3 and 6-4, page 143. The New Mexico Department of Transportation (NMDOT) determines where these funds are used based on its statewide needs.

Estimated STP funding available for TRANSPORT 2040	
2011	7,213,443
2012	7,357,712
2013	7,504,866
2014	7,654,963
2015	7,808,063
2016	7,964,224
2017	8,123,508
2018	8,285,978
2019	8,451,698
2020	8,620,732
2021-2025	45,759,888
2026-2030	50,522,614
2031-2035	55,781,048
2036-2040	61,586,785
Total	**292,635,522**

Figure 6-5
Estimated STP Funding through 2040

From the total apportionment, $72,222,251 is allocated to the Surface Transportation Program. The majority of monies spent in the MPO area are typically from the National Highway System (NHS) and the Surface Transportation Program. The NHS monies are used to construct improvements on the urban and rural roads that are a part of the NHS system (Major Highways and Principal Arterials). The Surface Transportation Program (STP) funds provide discretionary funding used for planning, Transportation Enhancements, bridge projects on public roads, transit capital projects,

an intra-city and intercity bus terminals and facilities. STP funds can be used on all federal-aid-highways (Major Thoroughfare Plan), including the National Highway System (NHS). Transportation Enhancements are funds for creating or improving walking and bicycling facilities, other safety improvements, or preserving rail corridors for conversion into walking/biking trails. Also part of STP funds are the Highway Safety Improvement Program (HSIP) funds that are used for projects that improve safety or mitigate dangerous conditions on roadways, at intersections, or for walkers and bicyclists.

The amount of STP programmed for the Las Cruces area can vary widely based on NMDOT priorities. In small to medium MPOs with a population less than 200,000, like Las Cruces, the NMDOT allocates STP funds in the Las Cruces MPO area based on a collaborative process between the NMDOT, MPO, and public transportation providers. In developing revenue forecasts for Transport 2040, MPO staff assumed that the Las Cruces MPO region would receive a percentage equal to the region's proportion of state population (9.6%).

Secondary federal sources include:

- Recreational Trails Program – provides funds for the creation or maintenance of new or existing trails for non - motorized travel.
- Safe Routes to School Program (SRTS) – funds infrastructure improvements or educational activities that make it safer for students to walk or bike to school.
- High Priority Projects Program – commonly known as 'earmarks', provides designated funding for specific projects.
- Transportation, Community, and System Preservation (TCSP) – intended to improve efficiency of the existing transportation system by reducing environmental impacts and the need for new infrastructure.

State Funding

In addition to the federal apportionment, major transportation sector funding sources in New Mexico include the state gasoline tax, special fuels tax, weight-distance tax, vehicle registration fees, motor vehicle excise tax, leased vehicle gross receipts and surcharges, trip tax, driver's license fees, and other. The current state gasoline tax is 18.8 cents per gallon and the diesel fuel tax is 22.8 cents per gallon. These funds are administered by the NMDOT. The allocation of state revenues is determined by the State Transportation Commission.

Based on the aforementioned assumptions, the estimated amount of state funding available in the MPO area for capital projects from 2011 through 2040 is $677,489,408. The estimated funding amount for NMDOT operation and maintenance activities through 2040 is $33,171,301.

Local Funding

Funding for capital projects and street operations and maintenance for the City of Las Cruces (CLC), Doña Ana County, and the Town of Mesilla are mainly derived from each jurisdiction's share of the gross receipts tax, property tax, and gas tax. The largest source of funding is from gross receipts tax. The funds received from these taxes are fluid, based on local economic conditions and each jurisdiction's priorities. Because each jurisdiction is required to have a balanced budget, revenue shortfalls usually manifest themselves in delayed projects.

For the purposes of Transport 2040 it is assumed that each jurisdiction will allocate general fund revenues to maintain the current level of service. The three MPO members, City of Las Cruces, Town of Mesilla, and Doña Ana County, are expected to spend $22,721,629 on the transportation system in fiscal year 2011 and are projected to spend $793,875,745 of local funds through the horizon year of Transport 2040.

Transit Funding

Currently, the City of Las Cruces under the Public Services Department operates a bus system called RoadRUNNER transit. Primary revenue sources for RoadRUNNER transit are federal grants, user fees (fares and passes), and a transfer from the CLC general fund. Federal grant amounts vary year to year due to earmarks related to the fleet replacement schedule. Total funding for fiscal year 2011 is anticipated to be $6,627,365. Projected funding through Transport 2040's horizon year is $253,329,515.

Other Funding

Private funding is a significant source of road building in the MPO area. All new local roadways are constructed as new developments are constructed. Additionally, both DAC and CLC subdivision ordinances require that developments are responsible for building half of the improvements for adjacent thoroughfares and 100 percent of thoroughfares within their boundaries. The location of future thoroughfares is determined by the Current Functional Classification and Proposed Thoroughfare Map (aka. Major Thoroughfare Plan). The value of these improvements is difficult to estimate since the costs are not required to be reported. Additionally, these roadways are constructed as the real estate market can bear the cost.

Total Revenues

Based on federal, state, and local funding, total revenues for implementation of the 30-year planning horizon of Transport 2040 are estimated to be $1,847,957,838. The breakdown of the estimate by funding source is illustrated in Figure 7-3.

Projected Expenditures

Federal regulations require that the MTP demonstrate that the region is able maintain and operate the transportation system. This section will examine the details of all costs (federal, state, local, and private) associated with building, maintaining and operating the transportation system. In order to more accurately estimate costs over a long term planning horizon, the federal regulations require the application of an inflation factor called Year of Expenditure Dollars (YOE). The MPO has applied a 2% YOE factor to all cost projections, as determined in cooperation with the NMDOT and other New Mexico MPOs.

Capital

Capital costs (Figure 6-8, page 148) for roadways were estimated by looking at current Infrastructure Capital Improvement Programs for the CLC and DAC. NMDOT costs were estimated by reviewing NMDOT projects currently on the MPO TIP. In all cases, project costs were converted to 5-year bands and inflated yearly to the year 2040.

Operations and Maintenance

Operations and maintenance costs were derived from evaluating historical costs from each entity responsible for its portion of the transportation system in the MPO area. An inflation factor of 2% was then applied yearly throughout the 30-year plan horizon.

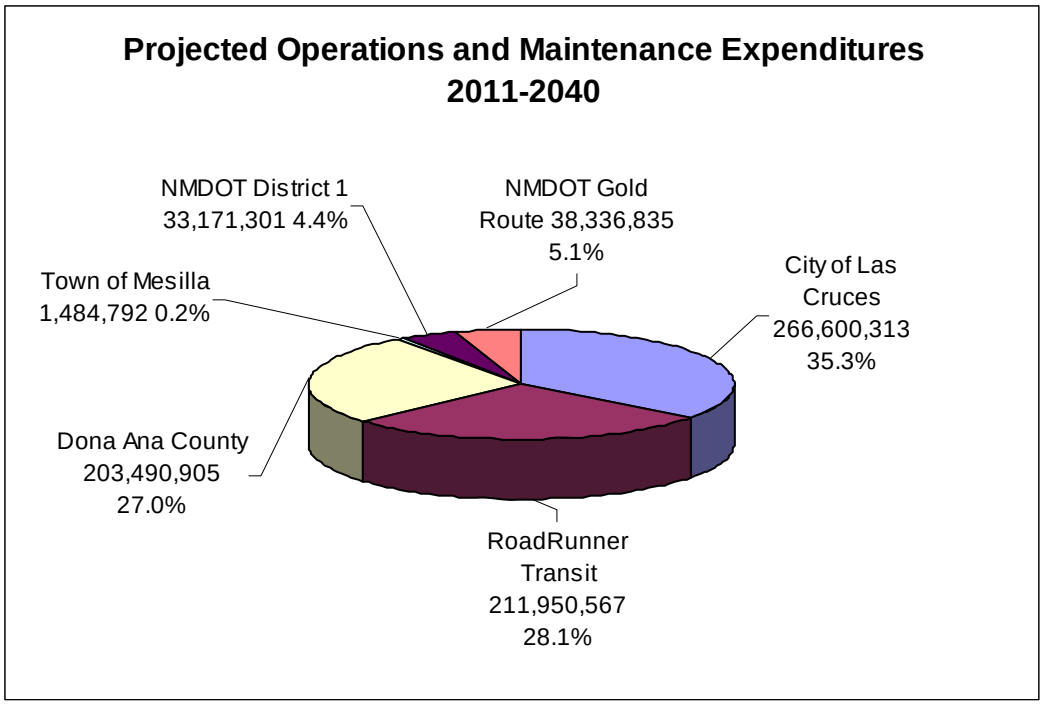


Figure 6-6
Projected Revenues for Capital and Operation and Maintenance

Total estimated operations and maintenance costs are $682,041,785 in the MPO area. The breakdown of estimated expenditures over the plan horizon is illustrated in Figure 6-6.

Public Transportation

RoadRUNNER capital costs were estimated by utilizing the CLC RoadRUNNER Strategic Plan, updated in 2009. The plan identified two new facilities, a downtown intermodal center and a new operations center. As shown in Figure 6-7, page 148, the largest capital expense will be purchasing replacement vehicles through Transport 2040's horizon year.

NMDOT Gold Route

The NMDOT Transit and Rail Division provides weekday Park and Ride bus service between downtown Las Cruces and downtown El Paso. The service is funded by NMDOT public transportation funds, user fees, and a Federal Transit Administration (FTA) grant managed through El Paso County. The service, including capital and operations and maintenance costs is currently contracted out to All Aboard America. The yearly cost is 945,000.

Total Expenditures

Capital expenditures for roadways and transit are estimated to be $754,872,133 for Transport 2040. Total expenditures for capital projects and system operations and maintenance for the plan horizon year, 2040, are estimated to be $1,436,913,918.

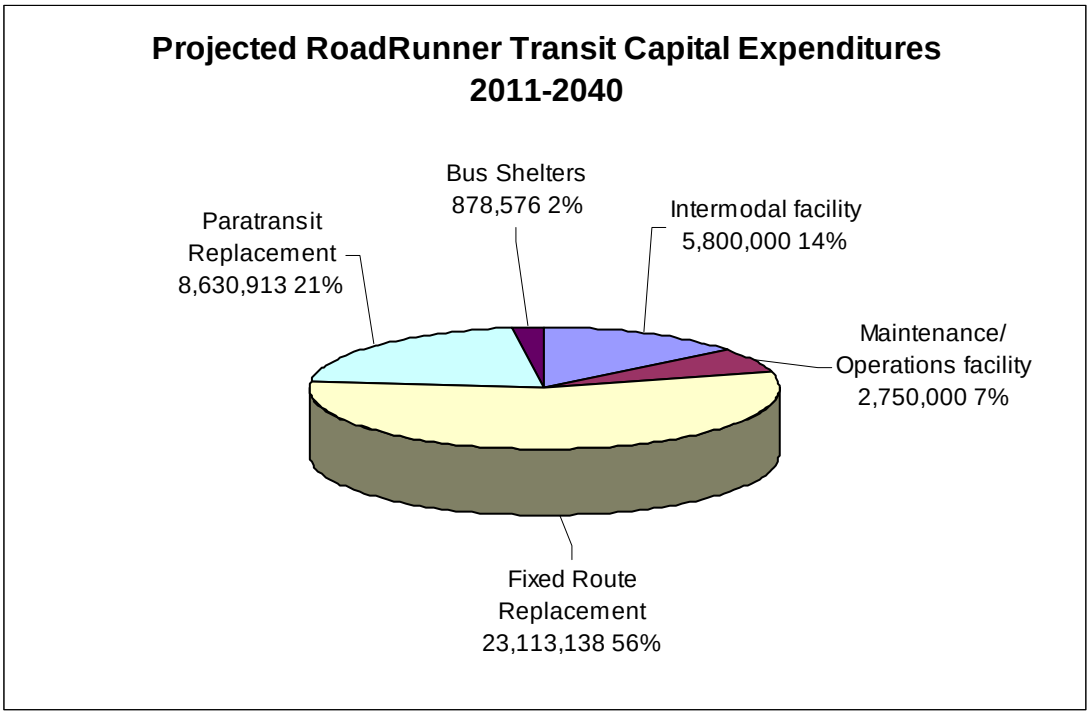


Figure 6-7
RoadRUNNER Transit Projected Capital Expenditures through 2040

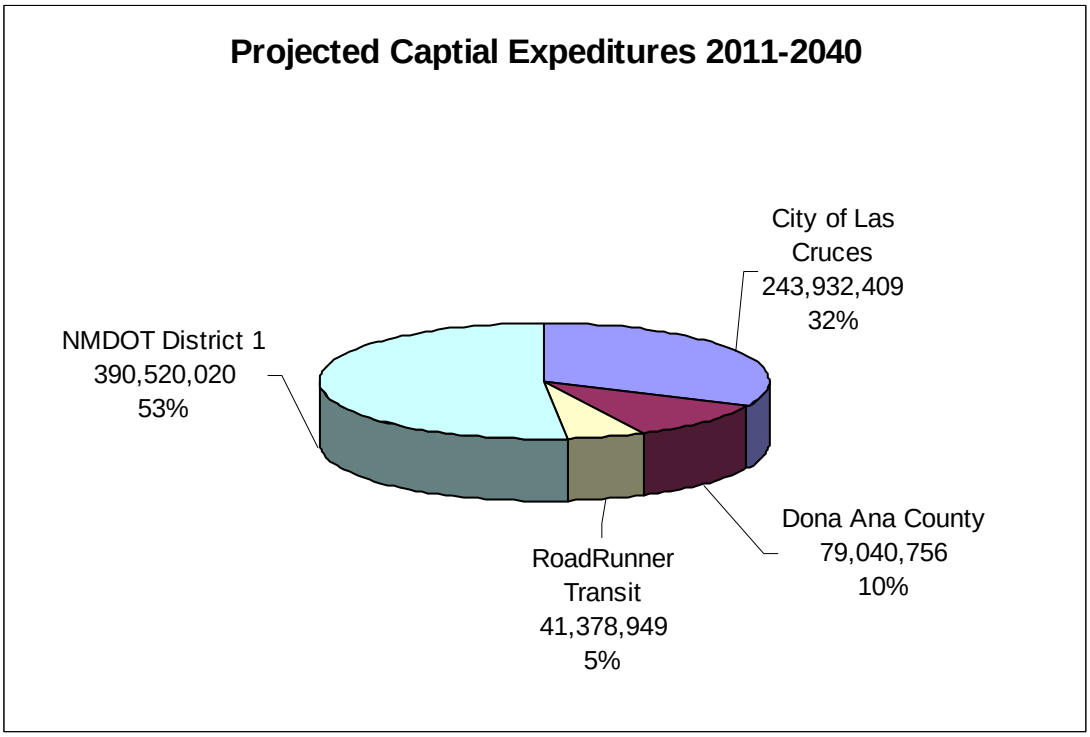


Figure 6-8
Projected Capital Expenditures through 2040

Projects Included for Projection of Illustrative Needs		
Name	**Work Description**	**Estimated Cost**
TOM - University	Reconstruct two lane roadway to provide a continuous paved six foot shoulder	$900,000
DAC - Camino Real and Doña Ana	Realign intersection of El Camino Real and Doña Ana School road	$900,000
LCPS - Dripping Springs	Road widening and signalization	$7,000,000
DAC - Fairacres	Road widening to 44' policy section	$3,000,000
CLC-Outfall Channel	Non-motorized trail	$695,606
LCPS - S Sonoma Ranch	New roadway construction	$9,000,000
TOM - Calle del Norte	Reconstruct two lane roadway to improve drainage and provide a continuous paved six foot shoulder	$2,500,000
LCPS - Missouri	New roadway construction	$3,500,000
NMSU - University	Redesign and reconstruction of University Avenue to include improved bicycle, pedestrian, and transit facilities	$9,000,000
CLC - Peachtree Hills	Construction of minor arterial for access to new school facilities	$2,315,180
CLC - N Sonoma Ranch	Construction of major arterial for access to new development	$10,978,675
North Telshor- Summit to Nacho Dr.	Mill And Inlay - Add Bicycle Lanes	$1,000,000
Roadrunner Parkway- Lohman to US 70	Median reconstruction, pavement widening, Mill and Inlay - Add Bicycle Lanes	$2,000,000
Snow Road (NM 372)	Mill and Overlay	$2,100,000
Brahman Road	Road and Drainage Improvements	$200,000
Dragon Fly Road	Road and Drainage Improvements	$200,000
Shrode Road	Road and Drainage Improvements	$400,000
Amador Avenue	Road and Drainage Improvements	$2,000,000
Blue Topaz	Road and Drainage Improvements	$300,000
El Molino Phase V	Road and Drainage Improvements	$2,000,000
Comanche Road	Road and Drainage Improvements	$115,000
Solano Avenue	ADA Improvements	$240,000
Swannack Road	Road and Drainage Improvements	$525,000
Main Street Plaza	Road and Drainage Improvements	$3,500,000
NMDOT-Mesquite Bridge replacement	Replace aging bridge	$5,500,000
NMDOT-Vado Pedestrian Accessibility	Addition of pedestrian facilities over I-10 Bridge	$240,000
NMDOT- West Frontage Rd. from Cholla to Mesquite	Raise profile grade and drainage improvements	$12,000,000
NMDOT East Frontage Rd. from Cholla to Mesquite	Raise profile grade and drainage improvements	$12,000,000
NMDOT - Vado Interchange	Roundabout intersections on east and west sides	$2,107,000
Mesquite Interchange	Ramp modifications	$2,217,000
TOTAL ESTIMATE		**$98,433,461**

Figure 6-9
Projects Included for Cost Projection of Illustrative Needs

Illustrative Needs

Unfunded projects (illustrative list)

Every two years, the MPO issues a call for projects letter to solicit project applications to consider for inclusion in the MPO's Transportation Improvement Program (TIP). The applications are ranked and included in the illustrative portion of the TIP. The MPO also ranked project applications for the American Recovery and Reinvestment Act (ARRA) from each of the three MPO members. These projects represent current needs that lack clearly identified funding sources. Over time, these projects may be funded through each entity's Infrastructure and Capital Improvements Program, if federal funding is not obtained. These projects were used as a proxy to project unfunded needs through Transport 2040's horizon year.

While it is not possible to precisely know all of the projects that will be requested in the later years of Transport 2040, it is assumed that these projects represent a level of need at the local level. Projects that were excluded from the projection are interchange projects (such as Arrowhead and Engler) and commuter rail that are infrequent and high enough in estimated cost to skew the analysis (See Figure 6-11).

These projects were assumed to be Transport 2040's unfunded needs for the 2011-2020 period. The values were then projected out by 5-year bands to form an estimate for the planning year horizon.

Projected Illustrative needs	
2011	9,843,346
2012	10,040,213
2013	10,241,017
2014	10,445,838
2015	10,654,754
2016	10,867,849
2017	11,085,206
2018	11,306,911
2019	11,533,049
2020	11,763,710
2021-2025	59,994,920
2026-2030	61,194,818
2031-2035	62,418,715
2036-2040	63,667,089
Sub-Total projected	**355,057,435**
Major Interchange improvements	$73,628,000
Grand Total Projected	**$428,685,435**

Figure 6-10
Total Unfunded Projects Cost Projection

Projects excluded for projection		
Name	**Work Description**	**Estimated Cost**
NMDOT- Engler Interchange	Design and construct an interchange at Engler/ Kennedy roads	$10,000,000
NMDOT I-10/ I-25 Interchange	Reconstruction and realignment of major systems interchange	$36,628,000
NMDOT-Brazito Interchange	New interchange at Brazitos	$7,000,000
NMSU - Arrowhead	Design and construct an interchange at I-10 and the Arrowhead Research Park at NMSU	$20,000,000
TOTAL ESTIMATE		**$73,628,000**

Figure 6-11
Projects Excluded from Cost Projection of Illustrative Needs

Potential Funding Sources and Revenues for Transport 2040			
Roadway Funding Sources	**Estimated FY 11 Funding**	**Historical Character**	**Anticipated Funds through 2040**
CLC General Fund	$6,571,677	CLC share of GRT and property tax devoted to operation and maintenance of city roadways	$266,600,313
CLC CIP Fund	$7,733,917	CLC Capital Improvement Program used for transportation projects	$243,932,409
DAC General Fund	$5,016,035	DAC share of GRT and property tax devoted to operation and maintenance of county roadways	$203,490,905
DAC CIP Fund	$3,380,000	DAC Capital Improvement Program	$79,040,756
TOM General Fund	$20,000	TOM share of GRT an property tax devoted to operation and maintenance of town roadways	$811,362
State Gasoline tax	$3,488,189	18.8 cents per gallon State gasoline tax	$141,509,117
State Special fuels tax	$3,087,540	22.4 cents per gallon State diesel tax	$125,255,563
State Weight Distance Tax	$2,432,511	New Mexico imposes a weight-distance tax on owners, operators, and registrants of intra and interstate commercial vehicles with a declared gross vehicle weight in excess of 26,000 pounds.	$98,682,292
State Vehicle Registration	$2,273,523	Vehicles that must be registered in New Mexico generally include passenger vehicles, trucks, motorcycles, recreational vehicles, motor homes, buses, manufactured or mobile homes, trailers and off-highway vehicles, such as ATVs or snowmobiles.	$92,232,469
Other State revenues	$1,243,283	Other NMDOT revenue sources include the trip tax, vehicle transaction fees, driver license fees, oversize/overweight fees, penalty assessments, and Road Fund interest.	$50,437,616
USDOT	$7,213,443	Surface Transportation Program-Discretionary funding that may be allocated to urban system	$292,635,522
RoadRunner transit operating funds	$5,224,565	Federal 5307 transit funds and local match to provide for operation costs in small urban areas	$211,950,567
RoadRunner capital funds	$1,402,800	Federal 5309 capital improvement funds and local match	$41,378,949
NMDOT Gold Route	$945,000	FTA and NMDOT Rail and Transit funds for operation of commuter bus	$38,336,835
TOTAL ESTIMATED FUNDS			**$1,847,957,838**

Figure 6-12
Potential Funding Sources and Revenues for Transport 2040

Commuter rail

A great deal of interest in establishing commuter rail between Las Cruces and El Paso has been displayed by citizens, stakeholders, and elected officials during Transport 2040's public meetings. The South Central Regional Transit District (SCRTD) commissioned a Rail Feasibility Study in response to this same desire. This study is the basis for Transport 2040 cost estimates. The estimated capital costs range between $175,000,000 and $735,000,000. The wide range is due to uncertainty in the costs of ROW. Annual operating costs would be estimated at $12,300,000 per year.

Potential revenue for implementation of commuter rail is:

- cost sharing with City of El Paso, Texas Department of Transportation (TXDOT), and El Paso County
- GRT funding through SCRTD authority
- NMDOT Transit and Rail Division
- federal rail initiatives

Financial Plan Conclusion

Based on estimates of federal, state, and local funding, total revenues for implementation of the 30-year planning horizon of Transport 2040 are estimated to be $1,847,957,838. Total expenditures for capital projects and system operations and maintenance for the 30-year life of the plan are estimated to be $1,436,913,918. Total funded and unfunded needs are estimated to be $1,865,599,353. Although potential revenues come close to meeting the projected costs of both funded and unfunded projects, there is no guarantee that the Las Cruces region will receive resources based on its proportional population. Each unfunded project will have to compete for funding on a statewide basis with projects from other regions. Additionally the potential for commuter rail in the region exposes a need for more transportation revenue at the federal, state, and local levels.

Federal Transportation Bill

SAFETEA-LU, the most recent federal transportation bill, expired in September 2009; however, it has been extended several times. A new transportation bill is being developed and could have a significant impact on the transportation funding. Revenue is expected to double and funding categories to be streamlined into 4 to 5 categories. Further flexibility to move funds between FHWA and FTA is also being considered. Unfortunately, at this time the proposed increases in funding can not be expected. Therefore, in order to help fund the transportation system in New Mexico, the New Mexico Legislature commissioned a study on the status of transportation funding in the state and, through town hall meetings, evaluated a variety of potential revenue sources. Other funding mechanisms that are available include federal grants, private-public partnerships, and borrowing. The following section summarizes the HM 35 and some other transportation funding mechanisms.

House Memorial 35

Recommendations from the HM35 process included short and long term funding options, public awareness, forging partnerships, and finding new transportation revenues for projects. The findings of the study, known as HM 35 (Entire report is available on the MPO website), generally found that revenues from transportation sources are being redirected away from transportation investment. The study estimates that if all transportation sector revenues were available to the transportation system that an additional $169 Million would be available statewide.

These additional revenue sources are:

1. **Motor Vehicle Excise Tax (MVET).** None of the revenue from the current 3 percent MVET tax is being spent on transportation. This source generally keeps pace with inflation without the need for rate adjustments, since the tax is assessed as a share of vehicle values, which historically have increased in line with inflation. The full dedication of this source would provide about $136 million more revenue annually. The 19-year revenue total (2008 to 2026) would come to about $2,448 million.

2. **GRT on Transportation Construction Activities.** A gross receipts tax (GRT) of 5.0 percent is currently collected for construction activities. Contractors currently pay about $14 million annually in GRT to the State on the value of approximately $300 million worth of state-funded transportation projects on average per year. If this source were dedicated to transportation, the 19-year revenue total (2008 to 2026) would come to about $266 million. This amount is net of the share that GRT provides to local governments.

3. **Improving compliance of weight-distance tax and trip tax.** If stepped up enforcement of the weight-distance tax were to net 25 percent more revenue over the current stream, this would result in about $19 million more revenue annually. This would generate a total of $335 million over the next 19 years.

The study also examined potential new revenue sources. Short term revenue sources include:

1. **Increase the statewide GRT.** Add 0.25 cents to the existing 5.0 percent GRT and dedicate the annual $121 million to transportation. This would generate a 19-year total of $2,179 million.

2. **Charge a 5 percent GRT on gasoline sales.** If the statewide GRT were applied to gasoline sales, it would generate about $116 million more revenue annually and a 19-year total of $2,082 million.

3. **Charge a 5 percent GRT on special fuel sales.** If the statewide GRT were applied to diesel and other non gasoline fuel sales, it would generate about $78 million more revenue annually and a 19-year total of $1,404 million.

4. Increase vehicle registration and transaction fees. This proposal would mimic a similar proposal being studied in Colorado, where the increase is calibrated by the axle weight. The average across all vehicle types would be about $69. These annual registration fees would be dedicated to the maintenance and preservation costs for state highways. This increase in the flat annual fee would generate about $122 million annually or approximately $2,192 million over 19 years. If this increased were indexed at 3 percent, this source would generate $160 million annually and approximately $2,880 million over 19 years. If indexed at 6 percent, the new annual charge would generate about $213 million annually and $3,836 over 19 years.

5. **Authorizing increases in local sources.** Some MPOs and RPOs have opportunities to raise their own revenues, which for most if not all MPOs and RPOs would be a GRT dedicated to transportation: The yield would vary widely from MPO to RPO. The highest grossing local option GRT would be the Mid-Regional Council of Governments (MRCOG). The yield from a one quarter-cent GRT would generate about $40 million annually or about $760 million over 19 years. A one-half-cent GRT would generate about $80 million annually or about $1,520 million over 19 years.

6. Indexing gasoline tax. If the current 17-cent gas tax rate was indexed to inflation at 3 percent annually, the additional funds would average $25 million annually or about $455 million over 19 years. A 6 percent annual increase would generate approximately $60 million more revenue annually or $1,089 million over 19 years. These amounts take into account projected improvements in vehicle fuel efficiencies.

7. Indexing special fuels tax. If the current 21 cent tax rate was indexed to inflation at 3 percent annually, the additional funds would average $31 million annually or about $565 million over 19 years. A 6 percent annual increase would generate approximately $76 million more revenue annually or $1,363 million over 19 years. These amounts take into account assumed improvements in truck fuel efficiencies.

8. Index existing vehicle registration and transaction fees. The current annual registration fees range between $21 and $27 per vehicle. If these fees were indexed at 3 percent, this source would generate about $19 million annually or approximately $341 million over 19 years. If they were indexed at 6 percent, the higher fees would generate about $46 million annually or $819 over 19 years.

9. Index weight-distance tax and trip tax. Even if improved enforcements yield significant increases in yield, these fees are flat and thus do not track with inflation. In order to maintain parity with raising construction and maintenance costs, indexing the fees at 3 percent annually (and maintaining the short-term

improvement in compliance) could increase revenues by about $25 million more revenue annually or $451M over 19 years. If the rate for indexing the fees were set at 6 percent annually, we should expect an increase of about $60 million more revenue annually or $1,088M over 19 years.

If all nine of these existing sources were enacted and dedicated to state transportation needs, NMDOT would receive between $577 million and $850 million more revenue each year, or between $11 billion and $16 billion over 19 years (2008 to 2026).

Other Potential Revenue Sources

Other revenue streams beyond the traditional federal, state, and local funding programs are also important to investigate. Some options follow:

New Starts/Small Starts Discretionary Grant Program

New Starts and Small Starts have helped make possible dozens of new or extended transit fixed guideway systems across the country—heavy rail, light rail, commuter rail, bus rapid transit, and ferries. New Starts projects are typically greater than $250 million in total project cost, requesting greater than $75 million in New Starts funding. The Small Starts program supports fixed guideway projects smaller than the New Starts cost thresholds. Participation in the New Starts and Small Starts programs requires completion of a legislatively directed process for planning and project development.

Transit Investments for Greenhouse Gas and Energy Reduction (TIGGER) Program:

TIGGER grants are awarded to public transit agencies for the implementation of new strategies for reducing greenhouse gas emissions or reducing energy usage from their operations. These strategies can be implemented through operational or technological enhancements or innovations.

Sustainable Communities

This is a new program that is being developed through a collaborative partnership between HUD, FHWA, and EPA. HUD's 2010 appropriations include $150 million for a Sustainable Communities Initiative to improve regional planning efforts that integrate housing and transportation decisions and increase the capacity to improve land use and zoning, and $50 million for an Energy Innovation Fund to enable the Federal Housing Administration and the Office of Sustainable Housing and Communities to catalyze innovations in the residential energy efficiency sector that have promise of replicability and help create a standardized home energy efficient retrofit market.

Toll Collection/User Fees

Facilities could be constructed through the selling of bonds and be operated and

maintained by toll collections. There are currently no existing toll facilities in the region due to state law that prohibits tolling. If tolling were legalized, revenue estimates would depend on traffic volumes of the roadway, trip length, and an established user fee.

Public/Private Partnerships

Public/private partnerships are another option for financing transportation facilities. These ventures could include a variety of project from roadways, bridges, right-of-way, pedestrian facilities, and signalization to parking facilities, transit improvements (including shelters), operational improvements, and providing matching funds for transportation improvement projects (including enhancement projects).

Borrowing

Borrowing allows the region the opportunity to build a project sooner, with the understanding that the borrowed money will need to be repaid out of future revenue streams. This could be accomplished through the issuance of bonds.

New Mexico Transportation Commission

District 1 is represented on the New Mexico Transportation Commission board. It is important that we work with our representative and the board to receive as large a portion as possible of the federal and state transportation funding allocated to New Mexico.

APPENDIX A

General Public Comments

General Comments

Open House Public Input Meetings (usually held for 4 hour periods):

MPO staff actively sought involvement from the general public through a wide variety of techniques during all three phases of the planning process. These techniques included the MPO master mailing list, e-newsletters, MPO website, online questionnaires, and open house style public meetings. MPO staff made a concentrated effort to visit the public at locations that would be most convenient to them, particularly when utilizing open house meetings. The meeting locations were also strategically located throughout the area so that they covered as much geographic area as possible. Staff endeavored to engage people of all ages, backgrounds, and abilities.

During the open house public meetings listed below, staff provided a presentation regarding transportation planning processes and regulations and an update about the Transport 2040 process. Staff then encouraged members of the audience to provide written comments to elaborate on their vision for the regional transportation system and to indicate specific projects they would like to see completed. Attendees thoughts were captured on maps, storyboards, and large note pads located throughout each meeting site.

The comments provided to MPO staff through these meetings are included in unedited form for public consideration and staff analyses. In some cases, MPO staff responses are also included in order to directly respond to questions raised by members of the public.

Phase 1

February 23 2009 Del Cerro Community Center
February 24 2009 Doña Ana Community Center
March 4 2009 East Mesa Recreation Center
March 6 2009 Mesilla Town Hall
March 7 2009 Branigan Library

Phase 2

September 28 2009 Mesilla Town Hall
October 1 2009 Doña Ana Community College
October 6 2009 Del Cerro Community Center
October 8 2009 Doña Ana Community Center
October 13 2009 Doña Ana County Government Center
October 17 2009 City Hall

Phase 3

April 1, 2010 DAC Commission Chambers

April 14, 2010 DAC Commission Chambers
April 20, 2010 DAC Commission Chambers
April 28, 2010 Columbia Elementary School
May 4, 2010 CLC Council Chambers
May 6, 2010 DAC Commission Chambers
May 10, 2010 Del Cerro Community Center
May 11, 2010 DAC Commission Chambers
May 12, 2010 DAC Commission Chambers
May 18, 2010 DAC Commission Chambers

General Comments (Numbers next to the comments indicate individuals who marked that they agreed with the comment.)

Sidewalk cracks too big for skateboarding
Education and awareness for bicyclists and motorists
Road signs at state level
Bike trails
More connected bike lanes/trails, N-S and W-E 1
Evening loop route
City, NMSU barcrawl
All lateral ditch banks smooth and or paved
Solano nice with bike lanes 1
Keep lanes clean
Promotion of bike use via good safe routes and possibly the elimination of sales taxes on bike and bike goods (good for tourism too)
Enforcement of laws and education of violating bikers to keep on good terms with cars
Less emphasis on facilities for expert riders
More emphasis on facilities to attract new inexperienced riders
End of trip facilities
Coordinate with EBID for the possibility of bicycle trails along drain
Catch up with other cities - huge bicycle need in this city, includes bicycle awareness
Better bike access to downtown
Comprehensive public education on sharing the road
Bike lanes require physical barriers between the lanes and traffic for biker safety/usability
Sweep gutters and shoulders more frequently
Bypass is not needed
Emphasize rail freight, not trucks
Create a bypass that makes a car free downtown
Do something interesting to University Avenue
No right turn on red
More on/off access from I-25
More trees on roadways

More lights on roadways	4
More room for sidewalks on roadways	5
Add shoulders on roadways	2
Pave the roadways in Vado	2
Preserve environment	2
Conserve natural landscape	
Dust issues maintenance	2
More/better connectivity	
Public transportation	2
Public transportation at night because can not see to drive	
Service daily, morning and weekday	
Have a walkway for seniors	
Green Transportation	
Long term facilities for recharging electric vehicles and promoting their use	
Active transportation and transit	
Design a smart transportation system with transit hubs that in turn drive land use decisions	
Vehicle registration funding	
Increase gas tax funding	
Express how transportation is funded in dollar value	
Places to excercies, walk, a park and trails in Vado	
Better crossing/crosswalks	
Maintain crosswalks	
More bicycle lanes	4
Bus stations in Vado	
Need driver and pedestrian education	
Need driver and pedestrian enforcement	
More countdown pedestrian signals	
More ADA compliance	
Sidewalk connectivity into commercial developments	2
Need public transit to english classes in Doña Ana and to Ben Archer	
Need more efficient bus service	
Need express routes with a handful of hubs (Downtown, West Mesa, East Mesa, North of US 70, East Mesa South of US 70 all linked.	
Less frequent looping weekend routes to recreational areas and in the summer	
Coordinate bus schedule with school schedule	
Need bus service from 5am to 10pm	
Need route flexibility with time to have more service hours in the day	
All a GD wast of time and money - all the projects	
Trails are more useful to people if they have numerous entry locations with streets on a continuous grid. No development should be closed to pedestrian traffic on areas bigger than a city block	2
Trails connected to other facilities	
Trails by EBID facilities	

Our paths should be the locations for pedestrian activity
Use the sidewalks
Better sidewalk maintenance
Need enforcement regarding yielding to pedestrians in crosswalks
Remove utility poles from sidewalks
Need physical space between sidewalk, trail, and road
Burm allows for formally planted trees, trash pickup, utility poles that don't obstruct pedestrian traffic
Crosswalks by parks is meaningful
Access Management an important goal
Bike routes to school
Harness wind and solar for electric buses and trolleys
Electric buses and trolleys
Radio notification of accidents/hazards/road closures
Porter should give Talavera another route into town
Lighted signs to notify of upcoming and immediate traffic problems
Need to continue with east-west connections
Think red light cameras are dangerous
Like Triviz roadway with multi-use path 1
Use outfall channel for trail not roadway
Parks need to be well patrolled
Need recreation trails to walk with children and ride bikes
Connected trails
Make sure that trails or defacto trails stay open and are promoted e.g. trail and tunnels around Burn Lake have been blocked by construction
More parks with walking trails up by Highway 70
Visible bus stops
Shelters during hot weather
Information at nearest intersections…"nearest bus stop is…"
Bus service for night jobs - restaurants and mall
Increased bus stop intervals around 15 minutes as opposed to 1 hour

Specific Projects (Numbers next to the comments indicate individuals who marked that they agreed with the comment.)

Frontage roads with bike lanes
Bike detection at intersections
Bridge too narrow on North Main
Bike lanes on Elks
Road diet for Walnut-Idaho-Avenida de Mesilla
Road diet for Foothills (Telshor-Lohman)
Bike lane Lohman-Roadrunner
Need wider shoulders on NM 28
Wider shoulder on Valley for bikes
Bicycle land on Soledad Canyon road

Bike route around south side of Tortugas Hill - Dripping Springs is dangerous	
Bike lanes on Valley	
Bike lanes on Lohman	
Bike lanes on University up to the organs - sweep, paint and sign	
Bike lane on Espina (especially in/near University)	
Re-route highway 70 away from town	
Reduce slope at St Augustine Pass	
Connect Baylor Canyon to I-25, I-10	
Connect Weisner to I-25, I-10	
Interchange at US 70 and Del Rey or Roadrunner	
Hoagland/Alamede intersection improvements	
Increase left hand turn lane on Spruce heading east at Triviz	
Vado I-10 interchange/intersection in Vado	
Pave Swannack Road	
Improve existing Vado-Berino roadway connection	
Pave main road in Vado to Interstate	
Senior transportation from Vado to Las Cruces	2
Daily van to surrounding communities	
Transportation to/from Las Cruces and El Paso	3
Transportation from Vado to El Paso	2
Public transportation Anthony to Las Cruces	
Rail service to Albuquerque	5
Rail service to El Paso	9
Express bus route	
Park and Ride sites at every exit on I-10 from NMSU to Anthony and on US 70 underpasses	
Pedestrian improvements to University Area	3
Pedestrian improvement to El Paseo (NMSU to Downtown)	
Sidewalks on Melendres	
Pedestrian path over Las Cruces dam	2
Pedestrian access into Mesilla Valley Mall	
Access to Mesilla Valley Mall over/under freeway	
Bus out Weisner Road or Brahman or further	
Rail service from Las Cruces to Radium Springs	
Overgrown grass along edges (Telshor - Missouri)	
ADA accessibility along Telshor	
Remove utility poles from sidewalks on Locust and Alameda	
Please fix crosswalk warning lights at 999 W. Amador Avenue	
Better sidewalks in Mesquite Historic District	
Electric and hybrid vehicles	
Make University from Mesilla to NMSU more bike friendly	
El Paseo a complete street corridor connecting downtown to NNMSU	
Completing Sonoma Ranch and Roadruner	1
Need river to mountains trail	

Trail that connects to Bosque Park
Longer timing for crosswalk at Elks/Main
More painted crosswalks from Mesquite neighborhood to downtown, for example at Hadley and Griggs
Crosswalks/warning signs at Klein Park (children playing)
Bus to Doña Ana exit of I-25 for Ben Arche, esp. Dental Clinic
Bus service to east mesa DACC

Written Comments and MPO Staff Responses

COMMENT 1:
Dear MPO,
I have only had a brief review. I intend to look further and comment again.

The Public Comment Form: You have a phone number for Community Development that has no extension for MPO. Extra time and confusion.

Thoroughfare Priority Map: N. and S. Fairacres are indicated as 3-lane. This cannot happen with existing ROW. We, the neighborhood, voted for a constricted (constrained?) ROW at the MPO public input meeting USING EXISTING ROW. However, according to MPO the ROW is 44 feet. There is not 44 feet of ROW. This problem has been noted frequently and recorded frequently at every public meeting on Fairacres. We do not want our neighbors giving up irrigation ditches, wells, front yards for the 44 feet. This is the context sensitivity promised. We want to retain the two-lane and bike lane design.

This area should not be used as a high-speed shortcut, but retain the rural character. The road to use connecting Picacho to Mesilla is Motel Blvd. When S. Fairacres (not N. Fairacres) was changed from collector to arterial by the MPO, there was no explanation, no rationale. We protested the classification to no avail. The "build out" has not happened. There are serious infrastructure problems confronting any plans for high density development here.

The Town of Mesilla has agreed to retain two lanes on S. Fairacres for the portion under their jurisdiction (Mesilla Bridge to Tres Sendas). This will agree with Calle del Norte as well (also designated an arterial).

Trail System Map: Arroyo/trail going to west mesa is mapped wrong. Extend trail along Picacho Drain to Bosque (if landowner permission). Town of Mesilla's newly annexed areas are not included on these maps as Mesilla.

Thank you,
Sandy Geiger, 5991 Tres Sendas, LC, 88005, 526-5972

MPO RESPONSE:
Thank you for your review and comments. We will amend the public comment form to include a direct phone number. We will work to correct the mapping of the trails.

We are also reviewing the functional classification of all thoroughfares in the MPO area as part of the Transport 2040 effort. In the case of Fairacres Road (north and south) its length alone probably merits an arterial classification. That said, however, the MPO recognizes that the character of the area needs to be respected. The Town of Mesilla and certain parts of unincorporated Doña Ana County wish to retain a rural character even though they lie in the Census recognized Urbanized Area. In order to reconcile these conflicting conditions the MPO, through Transport 2040, hopes to expand the flexibility of roadway design guidelines that direct roadway construction.

Doña Ana County has adopted design guidelines for rural arterials that do not compel two or more lanes in each direction. Instead, arterials can be constructed with one lane in each direction plus a shoulder and turn lanes where warranted. The discussion of a three lane cross section at the MPO level was intended to show that such a facility could be fitted in the corridor. In the end, it is up to Mesilla and Doña Ana County to decide what the final design would look like.

It would be our hope that our transportation plan would be able plan a transportation system that is responsive to the vision of local plans like the Mesilla Master Plan and Doña Ana County's Comprehensive Plan and plan thoroughfares that serve the rural parts of the MPO area. Fairacres Rd is not the only road in the MPO area that serves a regional function yet would not ever normally have the traffic volume to need more than one lane in each direction.

In closing, I think that the Policy Committee supports Fairacres retaining its rural character while attempting to correct current deficiencies (addition of shoulders). MPO staff is diligently working on a policy framework that will enable this to happen. Again, Sandy, Thank you for your comments and I look forward to your continued involvement in the process.

COMMENT 2:
Comments from Liz Van Lauwe, Transit Advisory Board member

Page 1: delete word "is"
RESPONSE: Staff has deleted word

Page 16: need space after Figure 3-3, need change in wording on side box
RESPONSE: Staff has made changes

Page 16: can't see Hatch beneath Mesilla on graph
RESPONSE: Staff will work with graph to try and make it clearer – may not be possible to change however

Page 29: impact of low income seniors whose health care costs continue to increase
RESPONSE: Staff does not feel that health care costs should be addressed in this section on Housing and Transportation costs; however staff will add wording regarding health care costs in the Health and Safety section (page 32)

Page 37: Legend is confusing. Lowest = white but what about areas within Las Cruces limits. Are they lowest if not green, yellow, orange, or red? Are there no higher levels in Mesilla?
RESPONSE: Because of the amount of data available at this time the crash maps are City centered, however, MPO staff will address crashes in Mesilla and Doña Ana County as our safety planning evolves. Staff will also work with map to make the representation of lowest clearer. Currently, if it is not green, yellow, orange, or red it is in the lowest category.

Page 45: How do these (Historic and Current Miles of Bicycle Facilities) compare to number of miles of major, minor, collector streets?
RESPONSE: This is a very good question. It will be answered through Mobility Zone analyses.

Page 48: Increase size so letters aren't' dropped i.e. Sept. Nov. Dec.
RESPONSE: Changes have been made to the graph.

Page 51: Hard to read font.
RESPONSE: Changes have been made to the graph.

Page 64: What is effect of drug war on these numbers?
RESPONSE: Numbers are regarding NM freight from an NMDOT study. Staff does not have statistics on this potential connection.

Page 85: Is there map of transit and bike paths which show all school and distance to transportation infrastructure?
RESPONSE: The maps located in Chapter 6 Priority Plans and Projects have the location of transit, bicycle lanes, and schools located.

Page 91: But more stops and starts – how does this impact air quality.
RESPONSE: This section talks about promoting shorter trips for non-motorized transportation through diverse land use planning. Shorter trips might in fact decrease impacts on air quality. Diverse land uses might also help promote trip-chaining for automobile travel.

Page 97: Any possibility for policies and funding on better mortgages for homes – big in TODs?
RESPONSE: Staff doesn't feel that the MPO forum is the right venue for mortgage policies.

Page 99: Are there policies by CLC, DAC, NMSU, feds or other government entities to give priority parking to car poolers? Are there policies by CLC, DAC, etc. to pay for transit passes? I know feds do in other areas (D.C. and Denver). Have RoadRUNNER offer guaranteed ride home program for regular carpoolers and transit commuters.
RESPONSE: These are all good ideas. Staff will work on incorporating them into the Transport 2040 document. Some of the transit issues will be addressed in the Long Range Transit Plan.

Page 112: How is access by fire, PD and emergency services assured?
RESPONSE: The fire department is a reviewing agency on development. The Thoroughfare system is proposed as a complete connected system. Other ways that this issue may be addressed are to work towards better street connectivity, possibly using a Connectivity Index (CI) during the development review process.

Page 119: Repeat of paragraph above.
RESPONSE: MPO staff will amend this section to delete repetitiveness.

Page 123: Typo.
RESPONSE: MPO staff will fix typo.

Page 123: (Light Rail) is too expensive. Why mention when highly unlikely? What about HOV lanes? Increase bus commuter like Gold Line.
RESPONSE: MPO staff is providing a plan based on input from a variety of stakeholders of which Light Rail was of interest to some. In addition, MPO staff does not want to leave out a particular mode without first pursing all the potential transportation types for public transportation (from bus systems to high speed rail). Finally, for the time frame of this plan (2010 to 2040), light rail may in fact be a possibility. HOV could also be viable in the future – MPO staff will incorporate potential HOV into the plan.

Page 169: (re: Public Transportation Capital Costs) Does this include increasing fleet size to accommodate express routes or extend hours of service?
RESPONSE: Express routes and/or extended hours of service can be addressed without a significant increase in fleet size – it is the operating costs that will need to increase significantly and therefore these types of items are addressed in that section.

Page 170: (re: Sonoma Ranch and University) If schools are paying for improvements can these fund be used as match for other CLC construction in area?
RESPONSE: Estimated costs for these projects include federal dollars and local match – the schools are not paying for these improvements.

Page 174: (re: capital and operating costs for commuter rail) this is unrealistic.
RESPONSE: Currently the capital and operating costs for commuter rail cover a wide range. Additional studies are needed to identify more exact costs.

COMMENT 3

I live off of Carver Road and am an avid cyclist – for commuting to work (NMSU), errands, and pleasure. It takes me approximately 10 minutes by car and 15 minutes by bike to get to and from work. I often feel safer biking because I can avoid the traffic jams on Main St. during rush hour by riding on the irrigation canal just to the east of Main St. However, getting to and from the irrigation canals is dicey during rush hour, and there really is no other option open to me that would improve the situation. Therefore, I am pleased to see that Carver Road is slated as a 2nd tier bicycling path. However, in the table on page 122, for the Carver Rd. entry the explanation is "Issue

not clearly defined."

There are several important issues with Carver Road:

1. There's no safe way for children to walk or ride their bikes to Tombaugh school if they don't live in the neighborhood directly to the north. The road does not have a consistent shoulder, and where it does widen out, it is usually too full of tall weeds to walk through.
2. Because kids can't get to school safely by walking or bicycling, parents drive them to school, which leads a huge amount of congestion on this two-lane road. Drivers that are dropping off or picking up students frequently have to wait through 2-3 light cycles at the corner of Carver and Main. Incidentally, this is also where there is an extremely narrow shoulder (where the railroad tracks intersect), and there are frequently crashes.
3. Development of former agricultural land in the valley is continuing despite the economic downturn, increasing both the population of the school and the congestion of the road. Carver road is one of the easiest within about a mile for drivers to go between Main St. (Hwy 478) and Hwy 28. As development continues throughout this section of the valley, Carver will become considerably impacted by the flow of traffic.
4. Businesses are being built near the intersection of Carver and Main, including a storage unti and a Laundromat/car wash – both of which are bringing in more drivers. Fenn's market on Main St. is also the closest location to get convenience items. More land in this area is up for sale. I think many people would appreciate being able to access these businesses safely.
5. There is also a fire station at the corner of Hwy 28 and Carver. Widening the road a bit would improve the fire station's access to Main St.

My suggestions for improvement are:

1. Widen the road to accommodate a walking/biking path on both sides of the road.
2. Create a crosswalk in front of the school.
3. Make a clear path for bikes and pedestrians across the tracks, including a lane and a crosswalk across each road (there is a walk button, but no crosswalk).

Thanks again for all of your hard work on this plan. It looks great so far.

Sincerely,

Christine Laney

MPO RESPONSE

Christine, thank you for taking the time to clearly outline issues that exist along Carver Road. MPO staff agrees that any proposed solutions must improve the transportation system to all users and all modes.

First, the table you reference on page 122 will be updated. We received a comment from another resident about Carver Road, but they did not go into detail. Therefore, we simply said that the issues that were raised were not clearly defined. Now that they have been defined, we will add the issues and proposed solutions to the tables on the preceding pages. They will be grouped according to proposed bicycle,

pedestrian, and automobile improvements.

Second, we will examine the trail and bicycle priorities plans to see if a logical and safe connection can be made from the west side of the railroad tracks to the irrigation facilities on the east side of Main St. This connection may encourage others to use bicycling to transport themselves as you do.

Finally, we appreciate your interest in encouraging children to walk and bike to school as well as creating safe routes for them to do so. The MPO's Safe Routes to School Coordinator, Naoma Staley, has recently completed a site survey around Tombaugh Elementary and found many of the same issues you noted. She will be working with the school and neighbors to create a Safe Routes to School action Plan to identify engineering solutions to Carver Road. The action plan will hopefully lead to funding the projects necessary to creating safe routes for students.

We appreciate you taking the time to review Transport 2040 and send us your comments. Your input is vital to our planning efforts and to moving forward with improvements to our transportation system.

COMMENT 4

George Pearson

Major Thorough Plan:

1) Downtown area shows construction at Hadley instead of Las Cruces, why?

RESPONSE: Hadley (Campo to Triviz) and Las Cruces (Alameda to Campo) are identified as collectors within the Downtown Area. These roadways are eligible for federal funding to construct transportation projects.

2) Baylor Canyon Road?

RESPONSE: Baylor Canyon was downgraded to a local road and is no longer eligible for federal funding.

3) Are other river crossings needed between Picacho and Shalem Colony and/or Calle del Norte and Mesilla Dam?

RESPONSE: MPO staff and the TAC have identified two additional river crossings. The first would be between Picacho and Shalem Colony - an extension of Engler Road. The second would be located just south of the Mesilla Dam connecting proposed High Mesa and the proposed extension of Weisner Road.

Public Transportation Plan:

Why not show future multi-modal transfer centers?

RESPONSE: The current version of the Public Transportation Priorities Plan identifies proposed locations for multi-modal transfer centers.

In-Road Bicycle Facilities:

1) Change Triviz from STR to trail

RESPONSE: Triviz now has bicycle lanes as well as a multi-use path.

2) Solano lanes?
RESPONSE: Solano Avenue is a Tier 1 route on the Bicycle System Priorities Plan.

3) NMSU has separate plan (not part of MPO) – didn't see Outfall Channel or rest of loop on map or other bike friendly task force suggestions, in particular El Paseo and Idaho.
RESPONSE: The trail loop plan is on the Trail System Priorities Plan.

4) Add I-25 frontage roads
RESPONSE: Stern and Las Alturas are Tier 1 routes on the Bicycle System Priorities Plan.

5) Map shows Haynor but the route is on Hadley (confusing).
RESPONSE: This type-o has been corrected.

Trail System Plan:
1) Make clear that city loop is planned with connections to Rio Grande trail system.
RESPONSE: The trail loop plan is on the Trail System Priorities Plan.

2) What about Mesilla Valley Bosque Park as destination?
RESPONSE: The Mesilla Valley Bosque Park is identified as a destination on the Trail System Priorities Plan.

Pedestrian:
1) Lohman/Telshor not listed.
RESPONSE: Lohman/Telshor was not identified as a prioritized intersection on the Pedestrian System Priorities Plan. Recent improvements have been made to the intersection, some of which may have improved pedestrian access.

Trail/bike:
1) Reopen box culvert between Walmart and Home Depot.
RESPONSE: MPO Staff will forward comment to Michael Johnson, City of Las Cruces Public Works Director.

Online Questionnaire Responses

During Phase 2 of the public input process, MPO staff developed a series of online

questionnaires. The questions and multiple response choices were based on comments received from the public and stakeholders during the first round. The intent was to look for patterns in the responses and include the analyses in the plan. Overall, the online questionnaires did not receive a lot of respondents, but did reveal some interesting response patterns. The links to the questionnaires were distributed through the master mailing list and developed using Survey Monkey.

The questionnaire topics were divided into main categories:

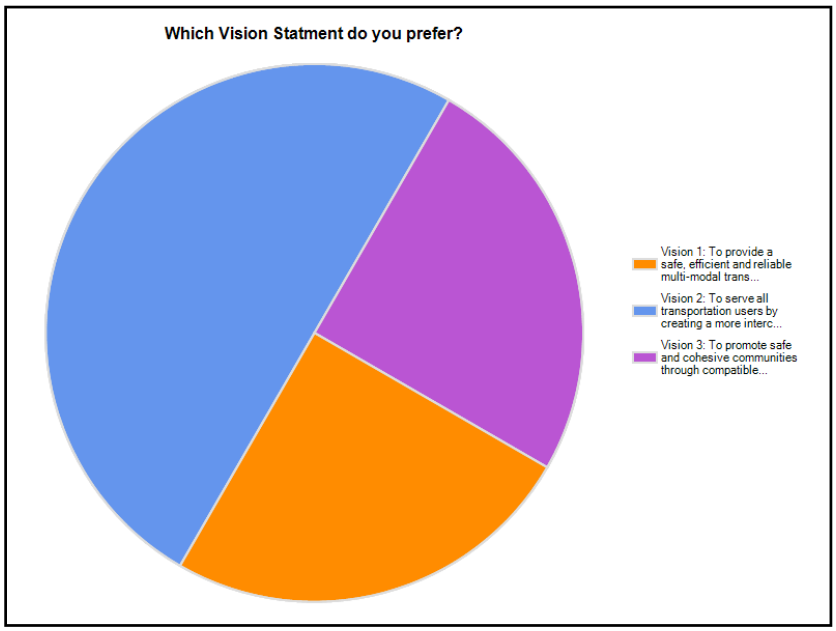
- Vision, Goals, and Principles (12 responses)
- Bypass/Loop Roads (11 responses)
- Thoroughfares (13 responses)
- Bicycle Network (39 responses)
- Public Transportation (27 responses)
- Pedestrian Priorities (12 responses)
- Trail Network (9 responses)

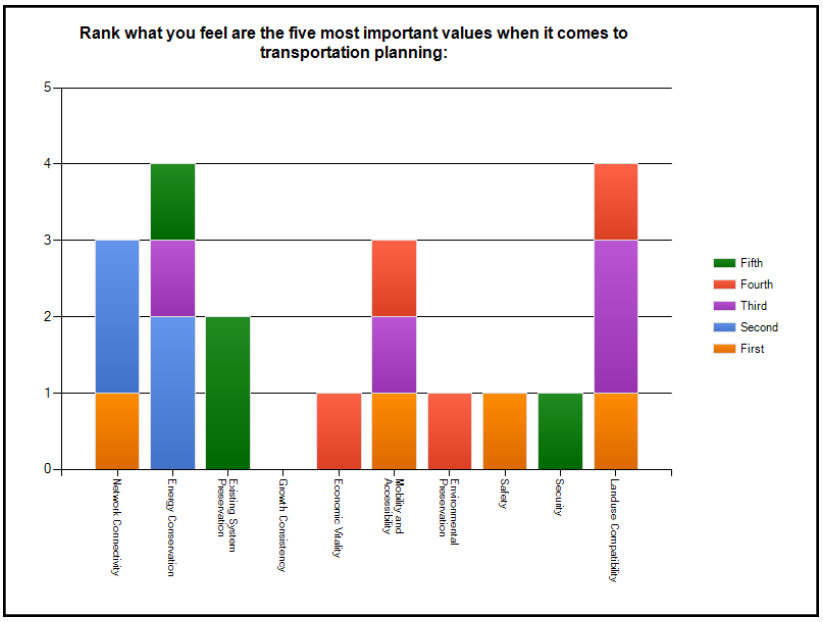
One apparent pattern was that some preferred to take one questionnaire and not others. For example, the questionnaires about transit received many more responses than any other one. Also, individual questions within questionnaires received more responses than other questions. The question most responded to was "Please rank your choices for regional bus service connections" with 21 responses.

Vision and Goals

Phase 1 - 4 responses

1. Which Vision Statement do you prefer?
2. Rank what you feel are the top five most important values when it comes to transportation planning:





3. Please provide three top priorities for transportation projects in our region:

1. Some form of transit between Las Cruces and El Paso
2. commuter rail between Las Cruces & El Paso
3. urban trail that connects rio grande to triviz trail
4. rail connecting LC with ElP

1. Enhanced bus transit in Las Cruces
2. restriping of Idaho to a 3 lane roadway
3. bike lanes

1. Transition to bike and pedestrian friendly University Ave
2. reconfiguring all of el paseo
3. interconnected trail/multi-use paths

4. Please provide any other information you would like to relay about the MPOs overall vision, our goals and priorities:

No responses provided.

Phase 2 - 8 responses

1. Please provide any comments you have concerning the Vision Statement:

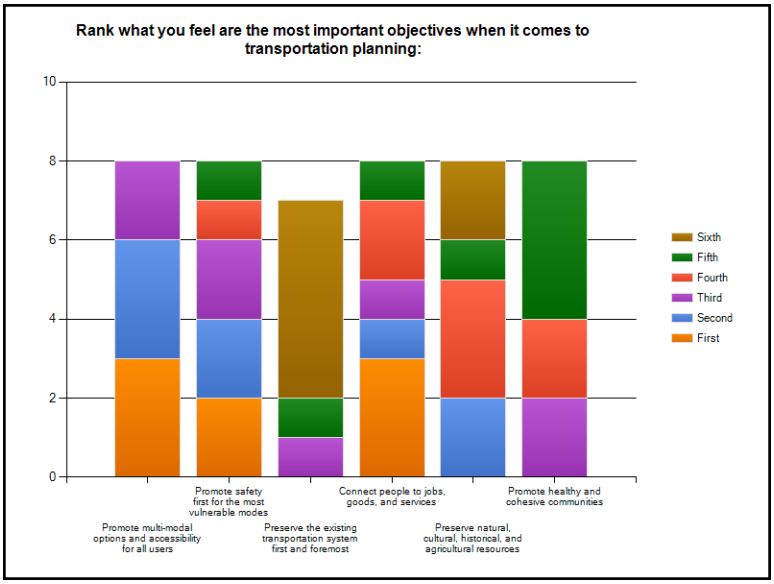
1. Very comprehensive and well expressed.
2. Adoption of a Complete Streets ordinance and its philosophy hat transportation be developed from the pedestrian upwards instead of car and truck mobility will go a long way to help the city grow in a more equitable and community friendly environment. It has also been proven to foster growth in business and economics. In other words it helps to build communities that business want to move to and people want to relocate or stay where they grew up.
3. I like that you include ALL users. And about Economy I would like to add that railway improvements should be encouraged along with Interstate highway

improvements
4. great job!
5. i like the vision statement a lot, and i like the graphic a lot.

2. Please provide any comments regarding the Core Policy:

1. At this point, the connection between Transportation planning and Land Use seems a bit vague - the terms could use a bit more focus, maybe. I think the idea is - Land Use says where everything is or will be, and then it's the job of transportation to hook it all up so people can make use of it. Then, but doing Land Use Planning so transportation works well and people have an easy time getting where they need to go, everything works better. And part of getting there more easily means less use of energy, time, frustration, etc etc.
2. Would only ask if this plan is in tandem with El Paso, Texas MPO?
3. hard to understand but I think that zoning can have a large impact on the transportation needs like having a grocery store closer to home reduces length of trips required
4. Land use and transportation connection is vital
5. i like that you're explaining what it is and how to achieve it. i think this particular example is a bit difficult because the reader has to know what vision 2040 is to understand the core policy. i think a better example would be one that's more tangible, for example something that relates to a specific problem like pedestrian safety or improving transit options.

3. Rank what you feel are the most important objectives when it comes to transportation planning:



4. Do you feel the above objectives encompass the transportation issues in our area or do you feel that other objectives need to be added?

1. Yes
2. It might be well to include a more specific mention of energy efficiency - or the ability to bias transportation plans in that direction in the future. Or maybe note

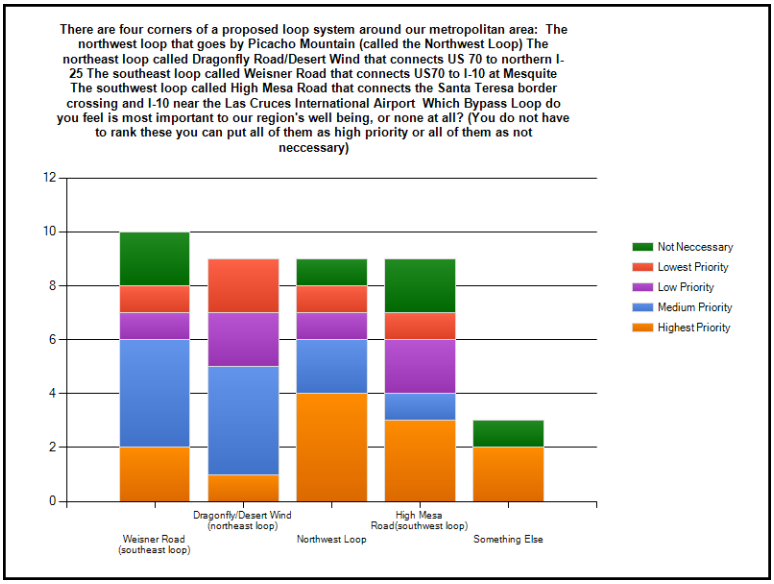
the difficulty of making that sort of change if it isn't built into the planning of the communities and larger areas from the start, eg if the places people need to go are in many different areas, and far from their homes, transportation will need to hook them all up - wastefully.

3. Provide more support to the Carpool/Vanpool initiatives in the short term.
4. I like all of the objectives. Connecting people to jobs/services seems less important than improving the accessibility of our streets to non polluting transportation. Community streets should be a goal for all new developments
5. i think this covers it.

Bypass/Loop Roads

Phase 1 only - 11 responses

1. Which Bypass do you feel is important to our region's well being, or non at all?

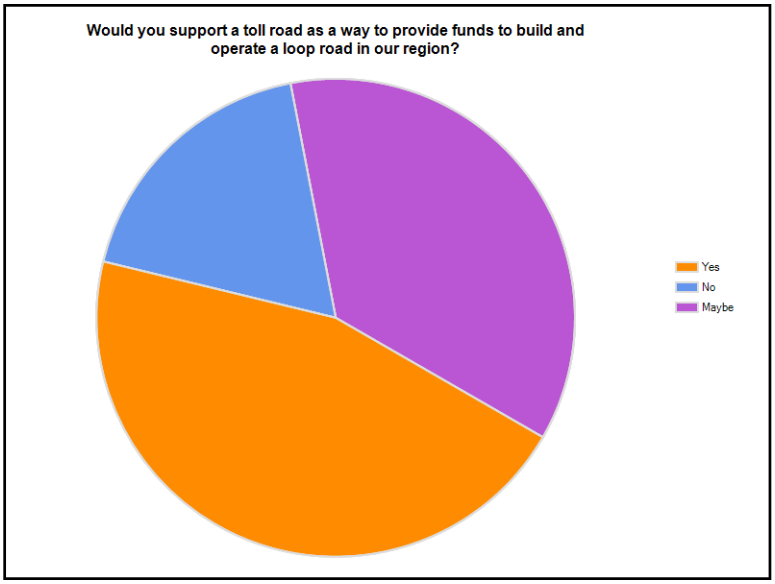


2. Please state why you chose the highest priority in the question above:

- This area is the most populated area and has the most traffic problems.
- The Northwest Loop will take heavy traffic headed to I-25 N around the city instead of directing it through the city on Picacho Avenue and North Main Street.
- Allow Interstate and El Paso commuter traffic to bypass the busy I25 corridor in Las Cruces.
- Northwest loop - very hard to get to I-10 from northeast part of town. High mesa road - good connection to Santa Teresa, which is booming right now.
- Weisner is too close to the Organs. I wouldn't use any of the other proposed loops.
- I don't know a lot about interstate traffic, but it just seems likely that both I-10/ I-25 by-pass options would have a greater impact than the I-25/Hwy 70 options, just because the traffic volume is greater on the interstates (an assumption I am making).

- Connects two planned industrial areas
- Because it is a true truck reliever and could be a toll road.
- Bypass vitality. why would we do this?

3. Would you support a toll road as a way to provide funds to build and operate a loop road in our region?



4. Please provide any other information you would like to relay to the MPO about Bypasses in our region:

- Be certain to include a multiuse pathway as part of any Bypass plans. They did this quite effectively in the SLC area. The pathways are frequently connected to roadways so people can access them by parking and getting onto the path. There are benches and overpasses so that users are not forced to cross heavy traffic on street levels.
- I would support toll roads for a bypass because it seems likely that trucks would pay the tolls but it would act as a deterrent to auto traffic, which you would want to discourage from using a bypass so that they come through Las Cruces for economic reasons. also you would want to think of some way to discourage development along the bypasses -- make it very difficult to developBe very clear about how they would function, how they would be paid for, and how access would be granted (if at all).

Thoroughfares

Phase 1 - 7 responses

1. Please list important destinations that you feel are of high priority to be served by new thoroughfares:

- As Las Cruces expands and the ETZ expands along with the city, we need a circle route especially on the East Mesa and Sonoma Ranch areas to connect to I-10 without coming down I-25.

- Relief to downtown area by providing by-passes to I-10 & I-25
- Most destinations are already well served. New destinations should be built on existing facilities where possible, and when roadways need to be extended, they should only be extended incrementally, not for long distances to reach a single destination.
- bosque park, A mountain,

2. Please list thoroughfare connections that you feel need to be added or removed from the network:

- For those heading West they should have a circle route around the Northern end of the current City Limits.
- Picacho/Spruce to Roadrunner
- NW bypass will be expensive and environmentally disrupted with little demonstrable benefit. NE bypass should be redirected to align with Dona Ana interchange. Plan must define what is meant by "bypass".
- make weisner the last thoroughfare

3. Please list roadway features such as lighting, sidewalks (width), street trees, and other aspects of the roadway that you would like to see:

- Lightning should be provided at intersections. In the City trees are nice but the open highway like I-70 forget the trees, sidewalks and bike lanes. Bikes should not be on interstate roads. They should be on the surface streets that parallel the freeway.
- If you have a median, it must be landscaped. Separate sidewalk from traffic with bike lane or planting strip. Use cross section appropriate to surrounding land use.
- a planting strip between the road and the sidewalk

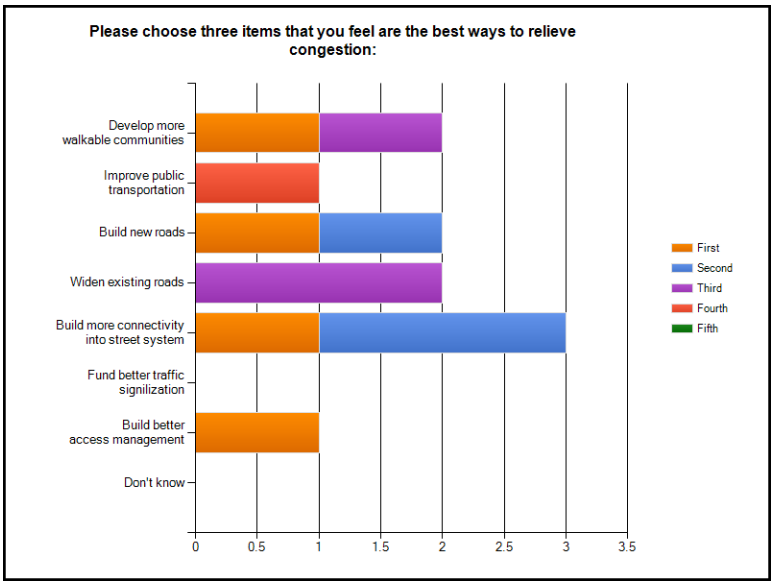
4. Please provide three top corridor/roadway priorities in our region that you feel need to be built or need to be improved (no ranking order is implied):

1. a north-south roadway on the eastern part of current city limits - Dunn/ Holman
2. I-25/University interchange
3. Main street (downtown section)
4. sonoma ranch

1. a freeway connector road from I-25 to I-10 westbound
2. Arrowhead interchange
3. engler underpass

1. a circle route around the metropolitan area
2. University Avenue (include in road bike lanes and wider sidewalks)
3. univeristy avenue

5. Please choose three items that you feel are the best ways to relieve congestion:



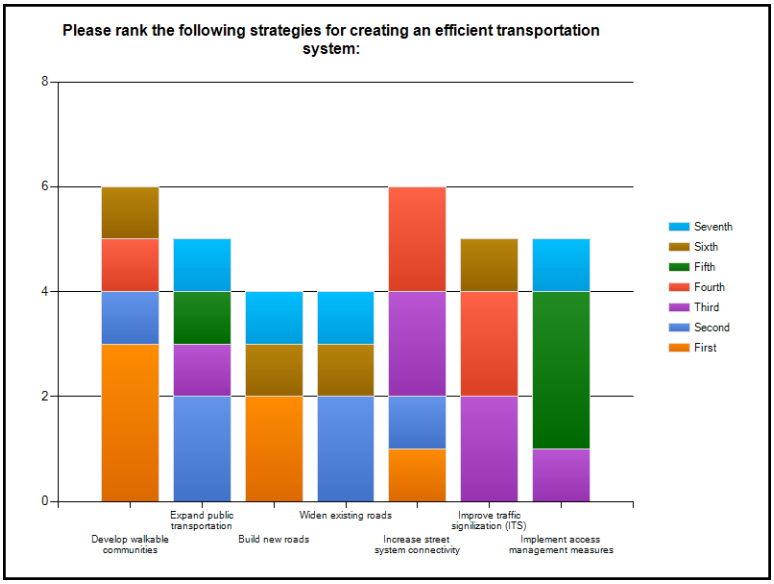
6. Please provide any other information you would like to relay to the MPO about the Thoroughfare Plan in our region:

1. Don't delay "thinking out" the solutions to our current problems. It will cost ten time more if you wait to many years to start making the changes needed to improve traffic flow.
2. Connector proposed for Las Cruces Outfall Channel does not have sufficient right of way to provide for a connector system. It would be major expense for a minimal benefit
3. The list in number 5 does not include the only element that will relieve congestion and that is to curb development entirely and to significantly reestablish what we already have. Congestion in a city is not going to get better as long as a city decides to become a metropolitan area. Las Cruces has made the determination to be large, as large is better, and will not be able to avoid traffic congestion. In fact, Las Cruces has taken steps to make traffic congestion. By eliminating a walking downtown, the city has chosen this direction. Widening existing roadways, building new roads, adding more traffic lights, building better access management (whatever that is) all contribute to congestion, in reality. When thoroughfares are built and improved, roads become more accessible and use increases. A major bypass around the city will only provide for more growth and not improve the quality of life. The bypass, if there is to be one at all, should be a pedestrian and bike path, nothing more. Driving west into the setting sun on Picacho, for example, should be taken into consideration, when roads are improved. The repaving of all existing roadways and the paving of any new roadways should be made with material that allows water to go through it so that it can be returned to the watertable.

Phase 2 - 6 responses

1. Please provide three top corridor/roadway priorities in our region based on the projects shown on the Thoroughfare Priorities map (no ranking order is implied):

- Sonoma Ranch Blvd completed at both ends, from Dripping Springs through to Arroyo Road
- Lohman/Amador
- Engler from Jornada to I-25 with an interchange
- Telshor
- Del Rey completion - why isn't Roadrunner north on the list?
- N. Main



2. Please rank the following strategies for creating an efficient transportation system:

3. Please list roadway features such as lighting, sidewalks, street trees, and other enhancements that you would like to see in your area:

- I live where it's dark and dusty, and like it that way - no problems. Seems like Building New Roads and Widening Existing Roads both - only when done in concert with good LUA and other planning - contribute to expanding public transportation, which should always be on the list. But good, safe, easy to use roads are good for public transport as well as for my own car. Maybe keep the roads small and narrow so if we get too many cars on them there will be traffic jams, and I'll leave the car home and take the bus.
- Higher Speeds on Larger thoroughfares, streetscapes, mitigate traffic/pedestrian conflict (i.e. school zones)
- Wider sidewalks and a parkway between auto traffic and pedestrians
- I'm happy with what I've got, but in general, street trees and sidewalks are nice.
- Development of a non-automobile based transportation plan; bike/pedestrian facilities; enforcement of traffic laws.
- street trees

Bicycle Network

Phase 1 - 32 responses

1. Please list important destinations that you feel are of high priority to be served by bike lanes or share the road facilities:

- NMSU, downtown Las Cruces
- Walmart on Valley Drive. Save-Mart/Nellies/Brewery area near Hadley and Valley. Branigan Library. Mesilla Plaza, there has to be a better way to get to Mesilla from Las Cruces. Downtown Mall.
- Churchs, schools, stores
- My financial Institution, First Light FCR on Foster via El Paseo/Alameda. NMSU from north to sound via Solano and Espina. City of Las Cruces new building. Doña Ana County building on Motel Blvd.
- Getting from Univ. Ave. North on El Paseo to drugstores and grocery stores on El Paseo. Biking west on Univ. to Mesilla plaza area and east on Univ. from Mesilla to University. Biking and walking from El Paseo stores area to Munson Senior Center.
- Grocery stores, schools, work, entertainment centers (i.e. downtown, mesilla, university), routes in major directions througout town (i.e. north and south up valley, Doña ana road, solano, alameda, el paseo; east west along cross streets avenida de mesilla/idaho, lohman and amador, etc.)
- Mesilla, Las Alteras, Downtown
- Work
- From the East Mesa to NMSU and East Mesa to downtown to Picacho, and East Mesa to Mesilla. There are no safe roads to ride on currently east of I-25 except the Frontage road on 70 which limits where you can safely go on the east side.
- Downtown, Mesilla, NMSU, Telshor/hospital areas
- Telshor
- From everywhere to NMSU and back.
- Downtown Area; NMSU; High Schools; Middle Schools
- All area high schools and middle schools Downtown NMSU
- Organ, NMSU, Mesilla Plaza, Radium Springs, Airport, Anthony, Anthony Gap
- Downtown mall, public library, everywhere on and near campus, mesilla
- all businesses whose parking lots are over-crowded: popular restaurants downtown, post office
- NMSU campus. Public schools. Downtown Mall. Public buildings such as city govt, library, etc. High use public areas such as Mershite, Field of Dreams, public pools,
- NMSU
- NMSU Campus, Albertson's, Toucan--basically any grocery store (except Walmart,

because it is always much more dangerous around Walmart), the mall, a hospital (for workers).

- University Mesilla Valley Mall Downtown Area High Schools Dripping Springs area, especially with new High School coming Low income areas, where people may rely on bicycles for transportation
- NMSU
- The mall, the largest businesses (Convergys on Del Rey, Sitel on Telshor) downtown/city offices, the hospitals, WalMart and shopping centers.
- University, Downtown
- NMSU Public Schools Downtown Mall Doña Ana, nm Organ, nm Aguirre Springs
- commercial centers, nmsu
- All area high schools, NMSU, new City Hall/Library, County gov't complex
- all major destinations in vicinity: downtown LC, NMSU, Mesilla, foothills, river
- University area, the dam, the river, downtown

2. Please list corridors/roadways that you feel are of high priority to have bike lanes or share the road facilities?

- Valley Dr. and/or Main St., Solano Dr., Lohman/Amador, Idaho
- Valley Drive between University and Picacho. It has a very thin area between the road and the edge of the pavement. There is a very wide area of gravel along each side that could be used for dedicated bike lanes. This would be an important continuation of the lanes that currently run from Triviz to university and all the way down university to Valley, where it ends abruptly. it would be the logical next step in a route that could circle the main part of las cruces.
- McCombs, state line, County line in Chaparral N.M
- Solano from Missouri to University Epina from Las Cruces to University Alameda/ El Paseo from Picacho to University An East - West corridor that links the west LC to east LC possible Spruce
- North Valley, atleast provide a smoother surface on the existing shoulders for bike travel. Especially from, approximately Engle RD in the north to University in the south. Alameda, extend existing bike lane north to Doña Ana/ 3 Crosses Road.
- Stern, Las Alteras, Fairacres, Rt28
- north,south,east ,west, major arteries
- In-road bike lanes on North Telshor, Northrise and Sonoma Branch would help with north and south commuting on the East Mesa. Roadrunner would be great for in-road too and for road calming. And then bike lanes on Spruce, Missouri and University would help the east and west commuting. Also, being able to cross under 1-25 north of the I-25 / 70 interchange and in-road facilities from Elk to Trivis to University would be another essential route. Please note the mutli-

purpose path is not good for cyclist to use, it is actually more dangerous then riding on the road. Completing the Solano in-road lanes along with better markings on Espina and Hadley would make it easier to get around town.

- Valley Dr.north to Doña Ana, Picacho Av. east to Telshor, Main St. Elks north to Doña Ana, Lohman/Amador from Motel to Mountain View Medical, Roadrunner.
- SonomaRanch, Roadrunner Prkwy
- Stern
- Hadley; Alemeda; Solano; Telshor from Commerce to Northrise
- Valley Drive Missouri Ave South Main North Main Telshor Lohman
- University to Mesilla Watson Lane from Mesilla to Stern Drive
- boutz/Misouri, university ave,Avenida de mesilla, Valley Dr especially (maybe being the worst road to bike on in LC!)
- Alameda\El Paseo, Valley, Main St, Lohman Avenue\Amador (downtown area)
- Cross town routes such as Triviz, Solano, Spuce, Main, Roadrunner, Sonoma Ranch, Valley, Lohman / Amador etc..
- Roadrunner Parkway, Lohman
- Anything on El Paseo, Three Crosses, University/Triviz
- Picacho Ave from Picacho Hills to Downtown Telshor Dripping Springs Rd. El Paseo Solano University Ave Stern
- University Avenue Espina Avenue
- Along Lohman and Telshor or parallel streets nearby. Bicyclists need to be able to safely access similar routes that cars need to access. The busiest roads (cars) are also the routes that should be served by bicycle lanes or paths.
- Lohman ave, Main street, Idaho
- All streets! Hadley needs bike lanes, especialy east end, Triviz-Solano Espina Telshor needs bike lanes again on the northern half Locust Solano Valley Doña Ana Rd Camino Real Main street Las Alturas! Stern Union Solano needs road diet all the way to university
- something east-west at various points from north to south, such as university or union to the south; missouri or idaho in the middle; spruce or madrid to the north, etc. also, valley drive, telshor and espina
- Road diets for Solano (esp. Missouri-University), Idaho/Walnut, Campo, Alameda (Picacho-Amador, at least), Walton. Lane diets on El Paseo, N Telshor. Reconstruction of University with bike lanes. Shoulder rehab on Valley. Add shoulder to N Main at outfall channel.
- University Avenue El Paseo Main

el paseo, north telshor, roadrunner, valley, main street

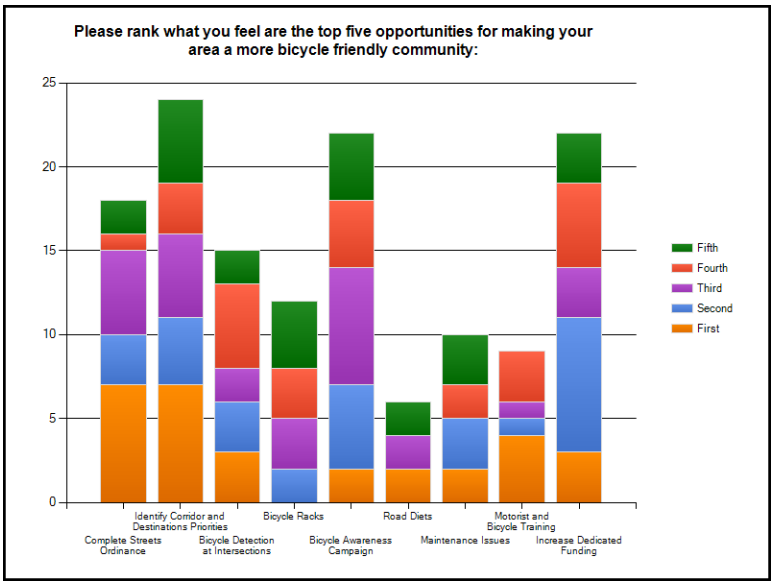
3. Please list local roadways that you feel would be conducive to bike boulevards:

- All principal avenues and streets
- Juniper which is parallel to Spruce
- Idaho east of Solano to Lohman
- El Paseo. I can't even walk to First Christian Church all the way from Univ. Ave. and Paseo. Or at least it's tough going in portions without sidewalks. Would like to be able to both walk and bike to destinations on El Paseo and east and west on Univ. Ave.
- Melendres, Alameda, Espina, Streets in the University area neighborhood between El Paseo and Locust, Univeristy and Missouri.
- Several roads around Mesilla, University, I used 4 if them in tucson. find a similar parallel side street
- Hadley; Alemeda
- Missouri, especially near Espina and Solano Main St, especially near downtown
- Madrid
- Farney, Ave de Mesilla, university ave west of Interstate, Espina Locust or Solano
- Alameda, Triviz, Idaho
- Roadrunner Parkway, Lohman
- Anything on El Paseo, Three Crosses, University/Triviz
- Locust and/or side streets coming off Locust.
- University Avenue Espina Avenue
- Golf club road, Idaho ave, Alameda area streets
- University
- Downtown LC Hadley University Telbrook
- One of the narrow roads connecting Mesquite neighborhood to downtown. Several options there.
- University Avenue El Paseo Espina, all roads conntecting within city core
- Griggs

4. Please provide three top corridor/roadway priorities in our region that you feel need new or need to have improved bike lanes (no ranking order is implied):

- Solano or Espina
- Valley or Main
- Lohman/Amador or Idaho
- Valley Drive between University and Picacho
- Union Drive between Main Street and University

- Espina Drive between University and Idaho
- Mc Combs
- state line
- County line
- Telshor from Del Ray to Lohman
- Solano from Missouri to University
- Spruce from Main to Telshor
- North Valley
- El Paseo
- Alameda
- Stern
- Las Alteras
- Fairacres
- University
- Valley
- lohman
- Sonoma Branch Blvd
- Telshor/N. Telshor/Northrise
- University Ave/Drpping Springs
- Valley Dr. from NMSU to Doña Ana
- Lohman/Amador
- Main St. full length
- Missouri
- Valley
- Main both North & South
- Hadley
- Alemeda
- Solano
- Valley Drive
- Missouri Ave
- Telshor
- University
- Telshor all the way from Delray to University
- University
- Misouri
- Valley
- Valley
- El Paseo
- University
- Roadrunner
- Solano
- Missouri
- NMSU
- Solano
- Picacho
- El Paseo
- Espina Avenue as a route to NMSU
- Telshor
- Lohman
- Missouri Ave
- Lohman
- Main
- Telshor
- Las Alturas
- Missourri
- valley drive
- missouri
- University
- Solano
- Lohman/Amador (connect/improve existing facilities)
- Griggs
- el paseo
- Solano



5. Please rank what you fell are the top five opportunities for making your area a more bicycle friendly community:

6. Please provide any other information you would like to relay to the MPO about in-road bicycle facilities in our region:

- road construction signs should not be in the lane of traffic. this congests as it requires bikes to be in the auto lane. thx for the consideration in this matter.
- Please fix the road markings at the intersection of Union and Main St. Going SW on Union way from Campus, you get to a turn lane that isn't marked well. The arrow is either blackened out on purpose or by road use. So MOST people in the right lane going SW on Union turn right onto Main St. But if they try to go straight onto Union, there is a blocked off lane before the turn lane that goes north on Harrelson. Please clarify if this spot, right in front of that auto place on the NE corner of Union and Main, is actually a dedicated turn lane or not. I think it should be as you can't legally go straight onto Union from this lane, it would technically require you to make an illegal mid-intersection lane change. This is of course a problem for bikers because they don't expect cars in that right lane to go straight, and when they do, it can cause an accident.
- I'm pleased with the improvements that have been accomplished: Complete Streets Resolution passed; the Solano Road Diet; the re-striping of Triviz with bike lanes; the new soon to be released LC Share the Road Brochure; and the recently formed Task Force for Las Cruces to be come a Bike Friendly Community. We have come a long way and we still have much to accomplish - I am grateful for the MPO's leadership on this and the City's support of these initiatives.
- All major thoroughfares should probably have sidewalks and bike lanes. Get out and move! should be our watchword. Stay trim! Save gas! And save the earth! I don't live in Cruces year round, but when there, I need room to bike and walk!
- build it
- You are doing a great job! The passing of Complete Streets will help ensure that new roads are properly planned for pedestrian and cyclists along with motorist.

Until it is part of City of Las Cruses, Doña Ana and Mesilla code is will always be a battle to make this area a bike friendly community.

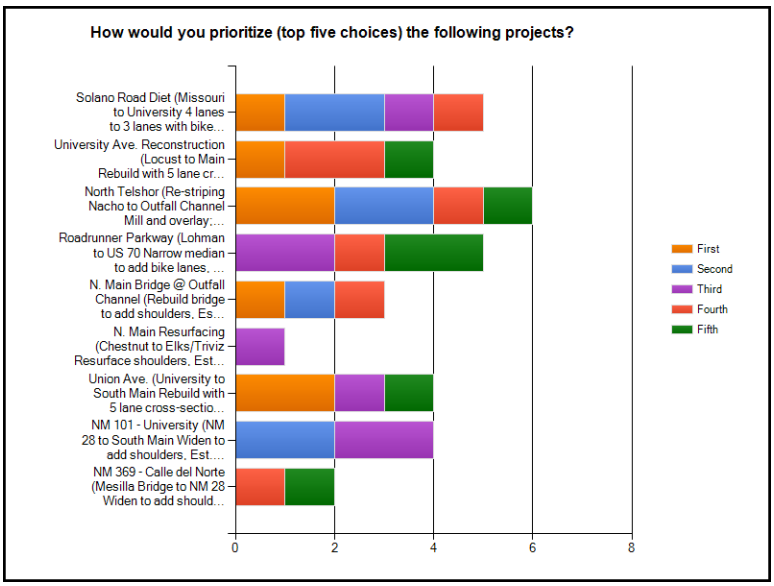
- Thank you for your efforts to make Las Cruces safer for cyclists. Please consider adding more bike lanes as your top priority. The roads that have share the road signs but no bike lanes, such as Telshor in some areas, are not safe and effective routes for cyclists. The share the road signs are a nice gesture, but in general, they do not seem to actually make motorists more willing to share the road. Also, when you add bike lanes to a road, such as Solano, please make it a complete effort. It is scary to ride on Solano because the bike lane ends so suddenly. Motorists and cyclists do not seem to know what to do at the beginning and end of the bike lane on Solano, and it is creating a dangerous situation.
- No road maintenance signs in the bike lanes!! Sweep the bike lanes so they can be used by bikes.
- In-road facilities go hand in hand with heavy motorist education about our rights, safety, and laws we BOTH need to follow.
- The top priority in my view is to have more bicycle lanes painted in. I am one of many people who would only use my bicycle if I were sure I wouldn't have to get on a major roadway without lanes (like Valley, Main, Lohman, University) to get around town.
- Las Cruces is a small enough that you could get anywhere on a bike if proper and safe routes were available. Combined with our climate, we could be a national model for how to benefit from being a bike friendly city. Spin off benefits to brag about would be greening of the city, improved health of the population, decreased fuel use, etc. Kids staying in shape while having independence in transportation to school and activities. So many benefits, a winner all around.
- The more bicycles on the street, the more cars will become used to, aware of, and will expect bicycles to be on the streets. Drivers and cyclists need to be advised about their duties and rights on sharing the road.
- I am an avid cyclist, I ride with a local club and obey traffic laws. I greatly appreciate the cities efforts to become increasingly more bike friendly. Year round bike riding is a great asset to the community, let's make cycling and commuting by bike safer in Las Cruces.
- Bicycle lanes and paths that end abruptly are not conducive to safe riding. Please consider adding to existing bicycle lanes first. As a second priority, please review roadways that have little or no shoulder or are in disrepair and resolve those issues.
- Our roads need more complete bike lanes. At least some streets need full length bike lanes as an example of the space that is required for a bike. I feel more streets need marked bicycle lanes because drivers are very rude in this area and do not return courtesys. Bike lanes are more important for novice riders but making novices feel comfortable is important to get some cars off of the road. Most streets in Las Cruces that have bike lanes only have the marking for a small

fraction of the road and are very rough and often dirty in the bike lane. A Complete Streets Ordinance would help the city require that new streets are engineered more correctly and more usable and safely for all users.

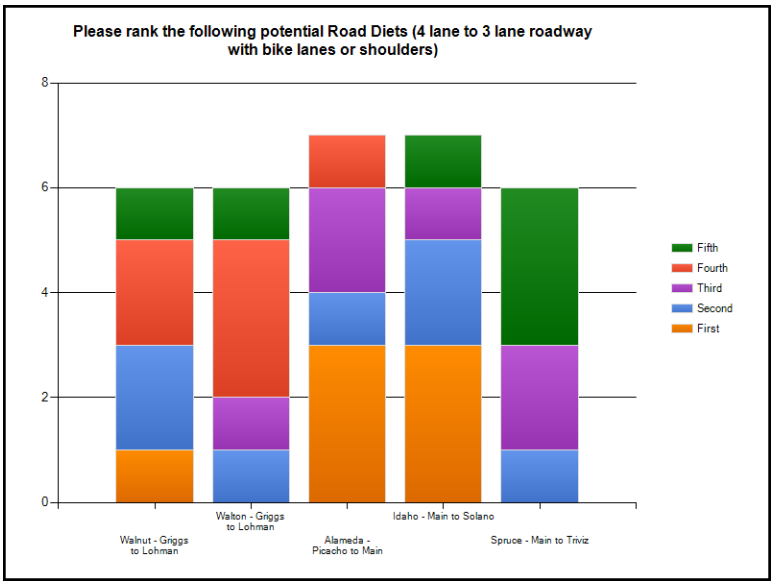
- We need to do a better job of integrating bike facilities at intersections. This is where most crashes occur, and intersection treatments are lacking or confusing. Perhaps sharrows are a solution in some cases?

Phase 2 - 7 responses

1. How would you prioritize (top five choices) the following projects?



2. Please rank the following potential Road Diets (4 lane to 3 lane roadway with bike lanes or shoulders)



3. Please take a look at the Tier I (red) and Tier II (blue) networks in the Bicycle Priorities map and provide us with three links/segments of the roadway that you feel should be made a higher or lower priority:

1. Ave de Messilla to Idaho to Walnut
2. University Ave (lower): There are already several alternative east/west routes with low traffic
3. bicycle priorities map is not accessible right now
4. northrise
5. Espina

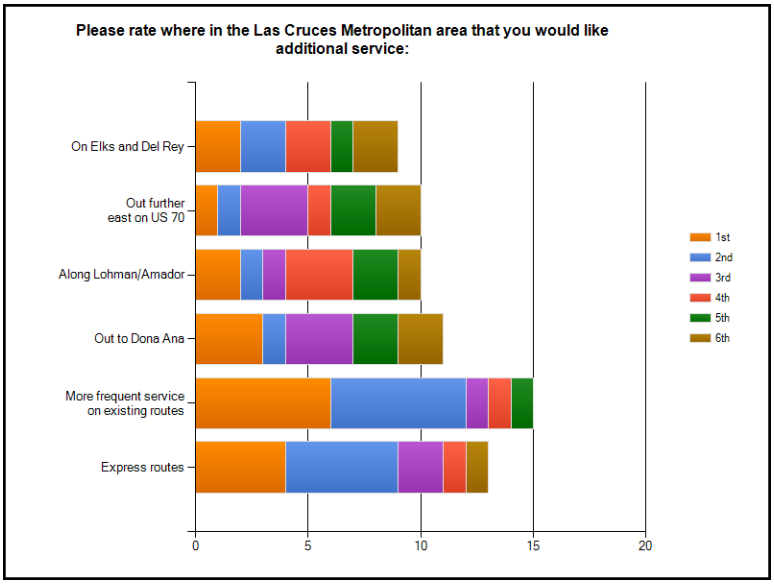
1. Boutz
2. Lohman Ave between downtown and Telshore (higher): Very cut-throat stretch of road for a cyclist
3. telshor
4. Telshor

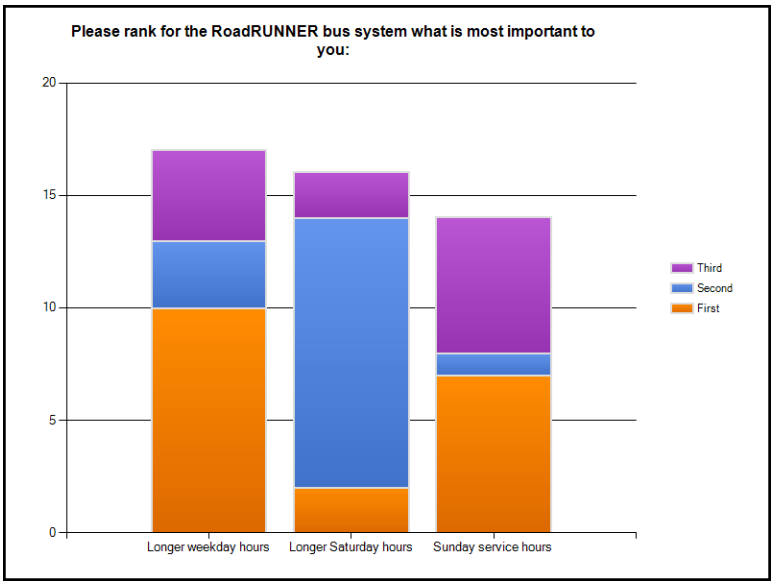
1. Griggs
2. Boutz/Missouri between Calle de El Paso and Solano (higher priority): Especially near the high school
3. roadrunner
4. Downtown

Public Transportation

Phase 1 - 23 responses

1. Please rate where in the Las Cruces Metropolitan area that you would like additional service:





2. Please rank for the RoadRUNNER bus system what is most important to you:

3. Please list important destinations that you feel need to be served by transit in our region:

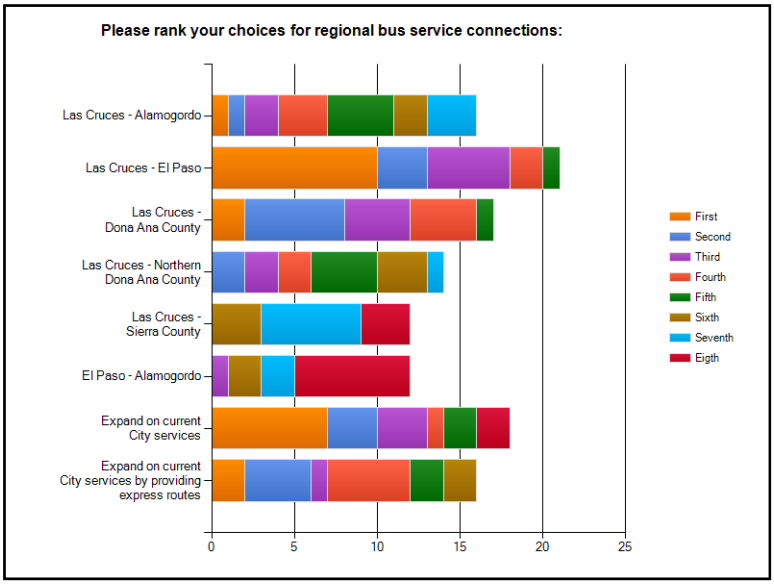
- Schools, churchs, stores, mail office, etc.
- From Chaparral, NM to Anthony From Chaparral NM to Las Cruces From chaparral NM to El Paso We need transportation in the town of Chaparral, to the schools, to Chaparral Learning Center, to the Clinics, to the Bank, to the stores, etc.
- school, groceries, laundry, and entertainment.
- Most important to me is the route south to the colonias: San Miguel, Mesquite, La Mesa, Vado and south. I would like to see this route serve NMSU and connect to a central transfer stop for the rest of the city/county. There are a lot of people down there working at the university & a rail, bus, or van route could save a lot of gasoline and traffic on Hwys 28 and 478.
- Chaparral
- NMSU, Hospitals, Downtown, Picacho, Airport, Mesilla, East Mesa, NASA, White Sands
- From all over, to and from NMSU. Bus route on Stern to extend to new housing south.
- Corner of Northrise and Roadrunner Parkway
- Please see response for (4).Service to and from El Paso Airport, Las Cruces Shuttle is a rip off.
- Elks drive
- We should have more frequent service to the larger employers. For example, there is no service to Convergys on Del Rey even though they employ more than 700 people.
- Convergys Call Center on Del Rey Blvd. and Mesilla Valley Hospital on Del Rey. Division of Vocational Rehabilitation on Nevarez. Sunland Park Casino.

- NMSU, downtown, hospitals, El Paso,
- Doña Ana, Vado, Mesquite, La Mesa, Organ and DABCC

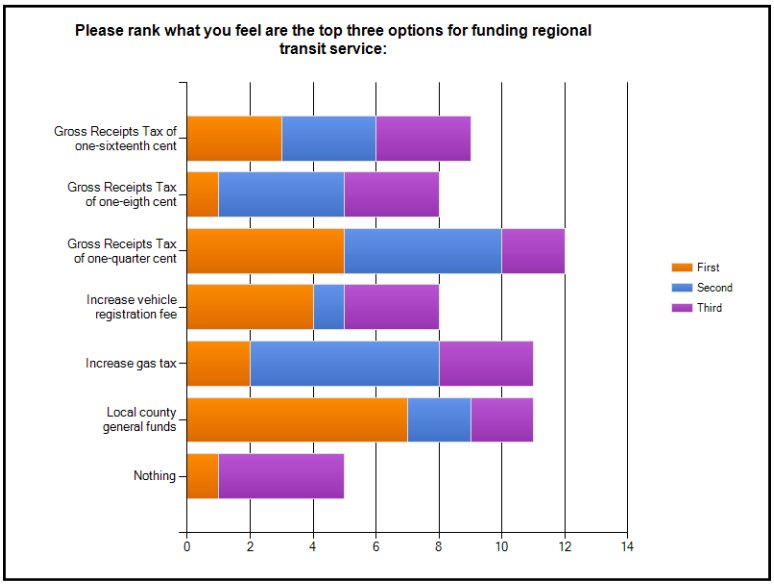
4. Please list corridors/roadways that you feel are of high priority for transit service:

- state line,county line, and all maccombs
- From Lisa St. in Chaparral to 404 From Lisa St. in Chaparral to I-10
- ohara road, I-10, and streets in chaparral.
- Hwy 28 and Hwy 478.
- Lisa Street in Chaparral to Rt404 to Gadsden Community College and to Anthony, connexion and/or continuation to Las Cruces and continuation to Las Cruces
- University Ave, Trivis, Solano, Alameda, Rt. 28, Main St., Elks. El Camino Real Lohman, Missouri, Spruce, Boutz/Idaho
- Stern
- Roadrunner Parkway Northrise Drive Telshor Blvd
- University Avenue should be treated as a "hub" much like how CTP is, meaning there should be most (if not all) routes servicing other areas of Las Cruces originating from University Avenue stops, without the need for people getting on University Avenue to make transfers to get to certain places. I'm suggesting this for University Avenue because it would service a lot of NMSU students who might want to get to the commercial area / cinema (Telshor) near the mall on the east side, or the other commercial area on the west side (near the big Wal-Mart), for example, WITHOUT having to go to CTP first.
- Del Rey should be a high priority
- North Valley Drive. Northrise Drive when the third Walmart opens there next year.
- Lohman/Amador, University Ave, Main St/El Paseo, Telshor
- Lohman/Amador

5. Please rank your choices for regional bus service connections:



6. Please rank what you feel are the top three options for funding regional transit service:



7. Please provide any other information you would like to relay to the MPO about our regional transit system:

- it is very necessary to have transportation Chaparral N.M-El Paso,Tx
- Park and Ride areas should be provided for outlying areas that contain bike racks or else have bike carrying capability on the bus/rail.The priority needs to be on supporting alternatives to individual car based transportation. I commute by bicycle and I find that the decision made by the traffic department do not support alternatives to individual passenger cars.
- The RoadRUNNER Transit homepage really needs an overhaul, or at least better organization and updating. For one thing, general service hours are not even stated. The organization of the updates and news just seems haphazard - kind of like as updates come in they are just pasted at the top of the page. It just looks messy and ugly, and makes future updating harder. Case in point is the conflicting information posted in the left column that says new maps will be available in August, while the news update has a later note saying new schedules will be available from Oct 1 (which is itself outdated).
- I have left Las Cruces precisely because I do not drive a car, and could never get where I wanted to go. Once last March, I had a sore throat, and it took 3 hours to get from my office to the doctor to the pharmacist to home. Not because of the doctor or pharmacist, but because of not enough bus service. It would have taken a half-hour more, but I walked from Telshor and University to University and Triviz to get a different bus. I am now retired, and of course no one knows how long we will have the capacity to go places on our own, so I don't want to repeat that trip. (Dial-a-ride is great if you can schedule your sore throat 3 days

in advance, and if you remember to remind people the night before that they are scheduled to pick you up.) Gabriel Lampert 695 48th Avenue, #1 San Francisco CA 94121 gabriel@nmsu.edu

- Make the current bus stop signs a highly visible color from far away...like a bright yellow, lime green or orange, they can be hard to see in order to pull the stop cord in time.
- The system is currently under-utilized because it does not run frequently enough or serve enough destinations. The routes should be realigned with destinations used most frequently - large employers, shopping districts, city offices, etc. Too many busses run mostly empty because they are on routes or at times that are not needed. The city should consider partnering with businesses to determine routes/times that will work best for riders.
- The routes have changed so much since the March 2008 schedules were printed, that now a person has to carry around extra maps and pages with route changes on them. Route 10 no longer gores to Mesilla Valley Mall , but the route map still shows that it does. We need new current schedules for Roadrunner ASAP. Bring the Railrunner through from Belen South to El Paso or at least to Sunland Park Casino. Get the Regional Transit Center built. Move the transfer point at MVM out of the fire lanes and give us benches there and shade and a large scale route map and close to the public restrooms.

Phase 2 - 4 responses

1. Which of the roadways labeled in red should be priorities for express routes:

1. Engler
2. I-10
3. Lohman/Amador
4. [don't have the map to look at]

1. Del Rey
2. I-70
3. US 70/Main

1. SRB
2. I-25
3. Valley

2. Which of the transit centers in yellow should be priorities for current and future stops:

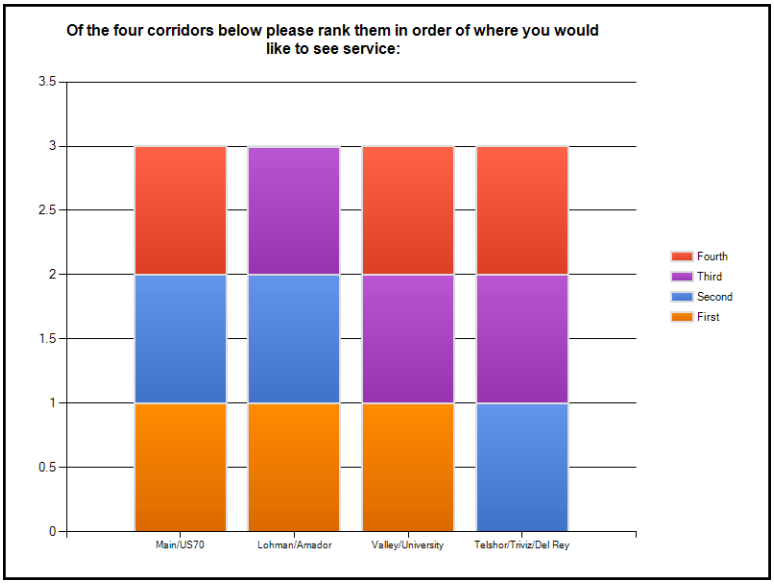
1. Serving folks who go to/from White Sands daily
2. University Area

1. Serving folks who go to/from Downtown

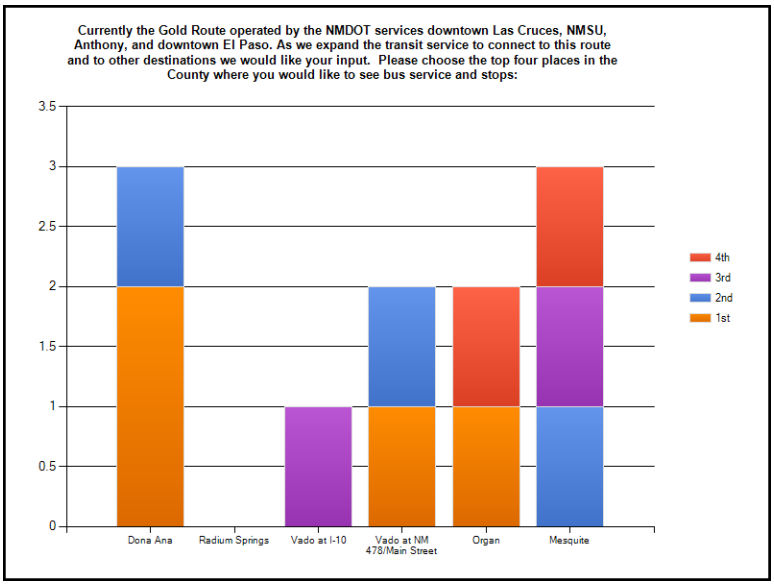
2. Lohman/Sonoma Ranch

1. High traffic routes and points
2. Dona Ana

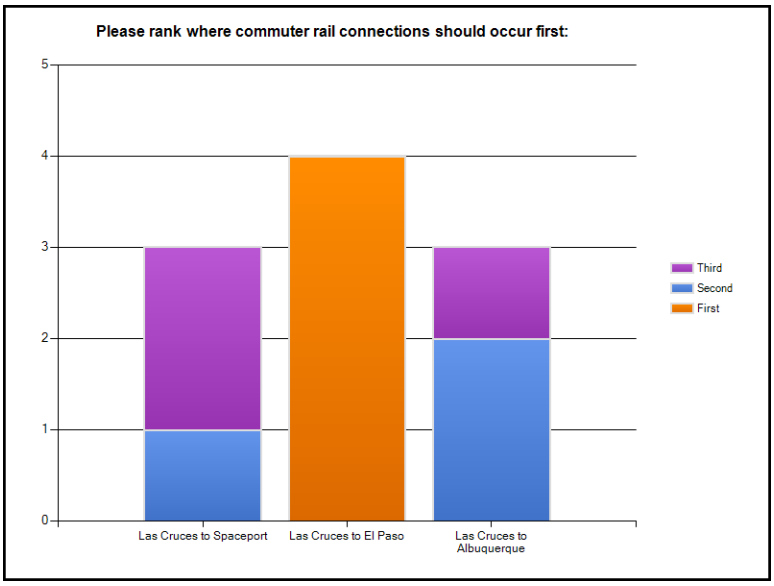
3. Of the four corridors below please rank them in order of where you would like to see service:



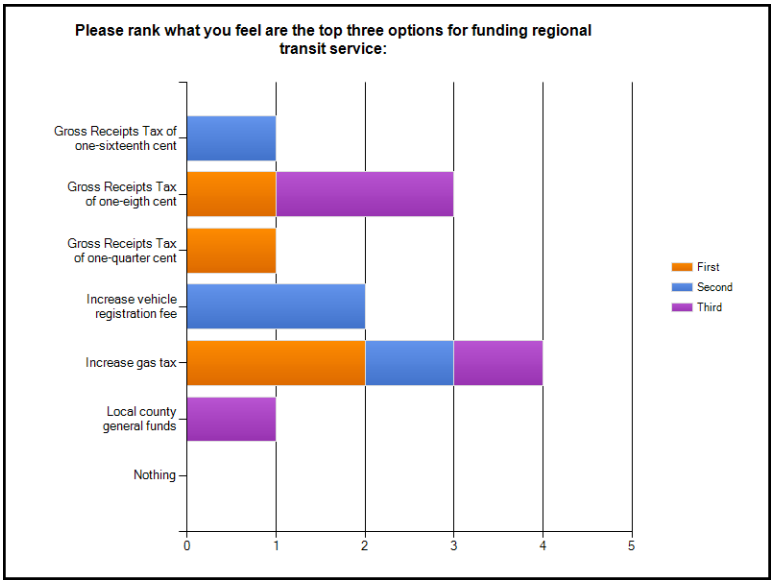
4. Please choose the top four places in the County where you would like to see bus service and stops:



5. Please rank where commuter rail connections should occur first:



6. Please rank what you feel are the top three options for funding regional transit service:



Pedestrian Priorities

Phase 1 - 8 responses

1. Please list destinations/activity centers/areas that you feel are of high priority to become more pedestrian oriented:

- NMSU, downtown mall, Mesilla Valley Mall, Porter area where the pool and new recreation facilities are being planned.
- Corner of Solano and Madrid
- Triviz should have overpasses at Spruce and Missouri so that users are not forced to cross these heavily travelled intersections. For an example of what I am talking about see the Tramway Paths in Albuquerque.
- University Avenue including crossing I10 so that people could walk from the Farm

and Ranch Museum to New Mexico State University without breathing truck and automobile fumes.

- NMSU area, downtown
- EBID system, connectivity throughout city to University, downtown, Mesilla, river, foothills, arroyos
- Solano/Main, El Paseo/Idaho, University Area, Downtown, new walmart area

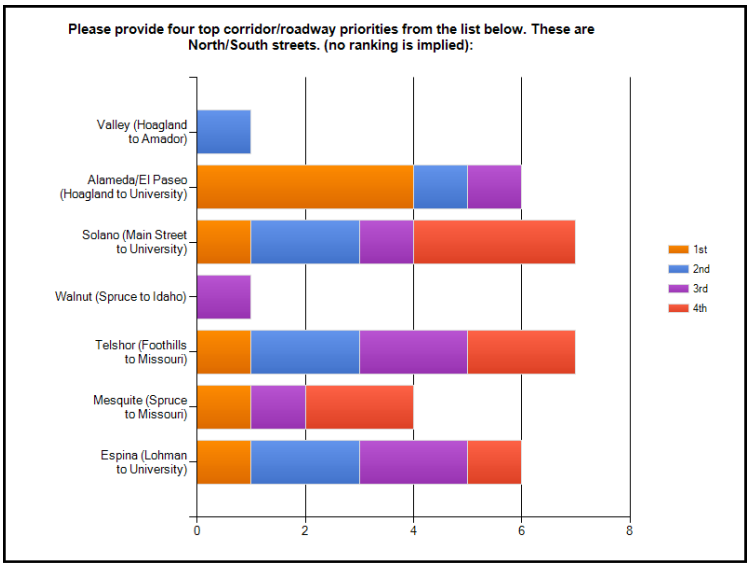
2. Please list corridors/roadways that you feel are of high priority to have pedestrian improvements:

- same as above
- From Main Street to City Hall and the Library, a designed sculpture overpass which includes a covered walkway, providing views of the Organ Mountains and surrounding areas
- Main Street, El Paseo, University Ave, Lohman Ave (anyplace where transit is a priority)
- El Paseo/Idaho, University Ave, Lohman/Walnut
- Solano, El Paseo, North Telshor

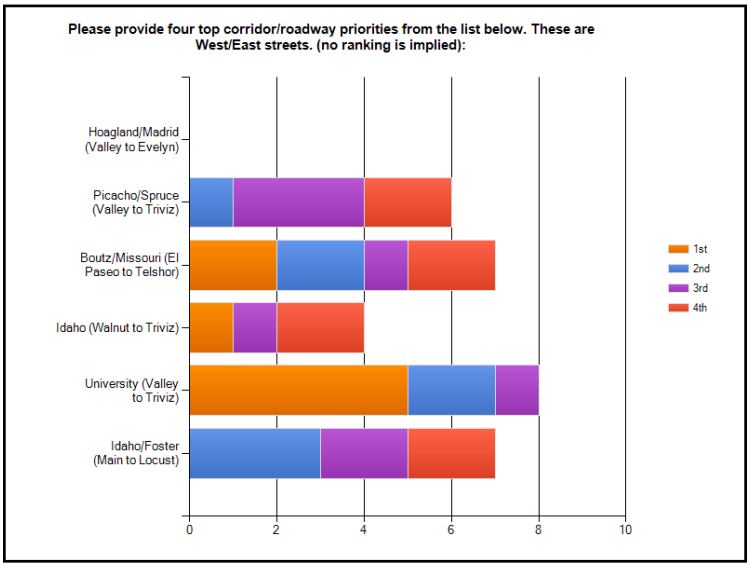
3. Please list pedestrian amenities that you feel should be more available:

- Cross walk alarms for the blind
- Triviz should have overpasses at Spruce and Missouri so that users are not forced to cross these heavily travelled intersections. For an example of what I am talking about see the Tramway Paths in Albuquerque.
- walking paths, including sidewalks with covered benches along the way as are already available in some places. destination stops where walkers can "make a day" of it leading to some things that we already have in Las Cruces, such as museums, coffee shoppes, restaurants, mural walls, galleries... accessible desert hiking areas that people can walk to from their homes.
- safe, comfortable crossings, sidewalks that aren't so exposed to traffic, shade (at least periodically)
- traffic calming elements, more shade trees planted in wide enough areas that they thrive, wider sidewalks & all elements of pedestrian orientation in downtown & university districts--improve shade, width, windows, building orientation, signage, move vehicular access & parking behind buildings, etc.
- bus shelters, count down crosswalk signals, shorter crosswalks, medians

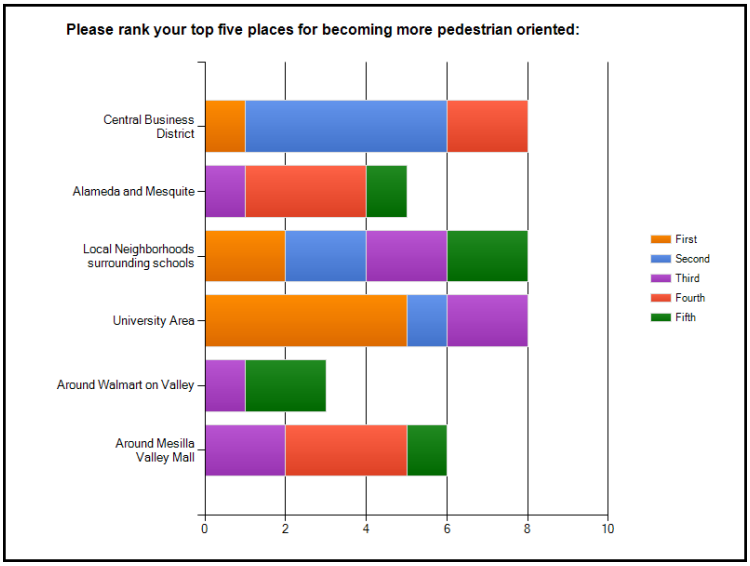
4. Please provide four top corridor/roadway priorities from the list below. These are North/South streets. (no ranking is implied):

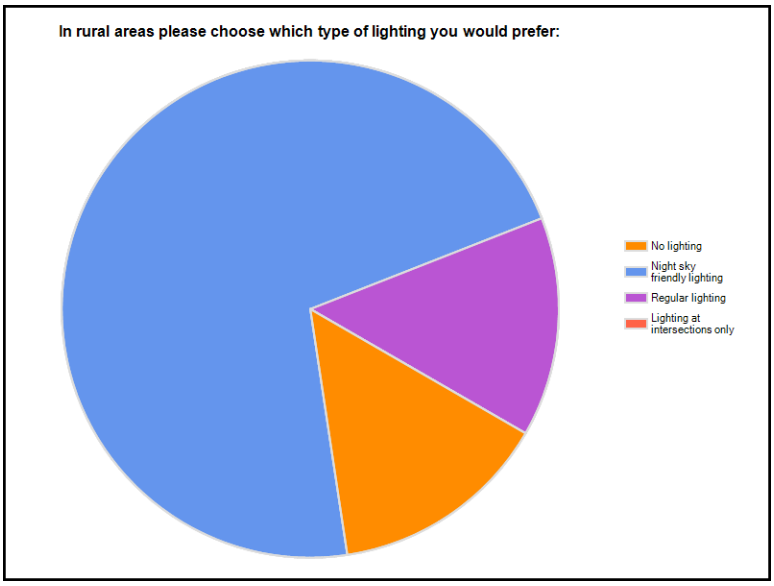


5. Please provide four top corridor/roadway priorities from the list below. These are West/East streets. (no ranking is implied):



6. Please rank your top five places for becoming more pedestrian oriented:



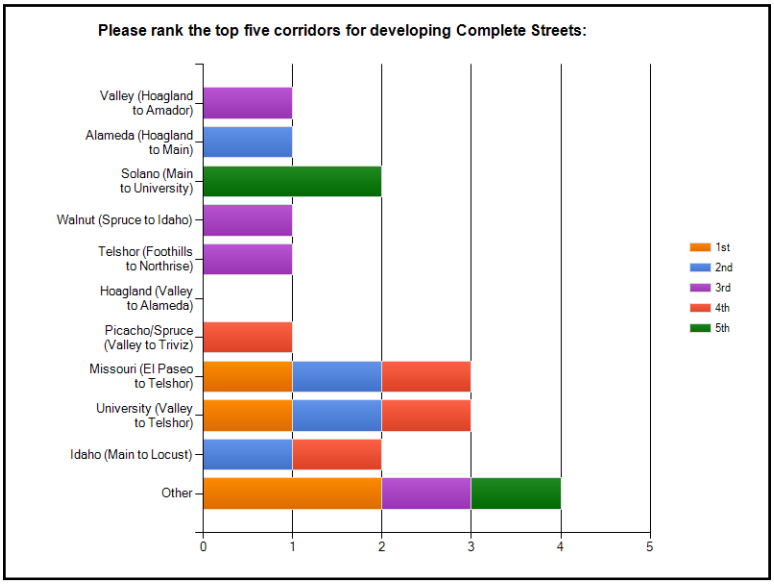


7. In rural areas please choose which type of lighting you would prefer:

8. Please provide any other information you would like to relay to the MPO about pedestrian facilities in our region:

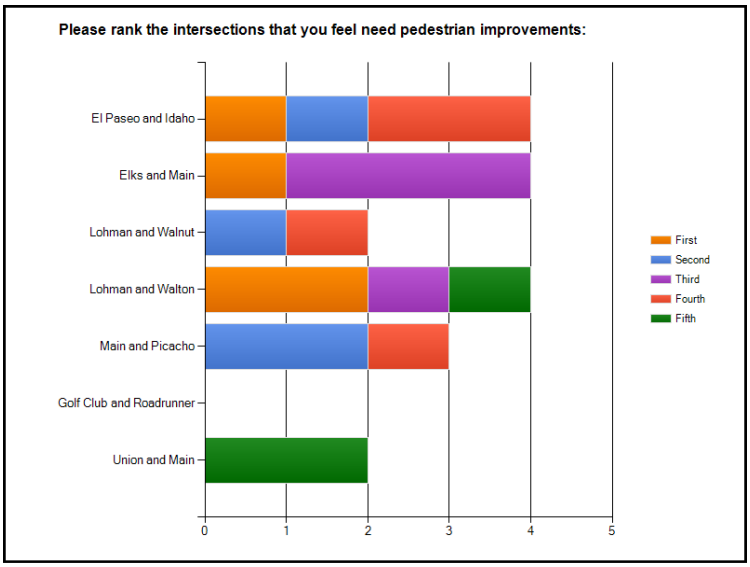
- Pedestrian paths should not be next to major traffic. These paths are far better than none, but pretty much defeat the purpose of pleasurable walking.

Phase 2 - 4 responses

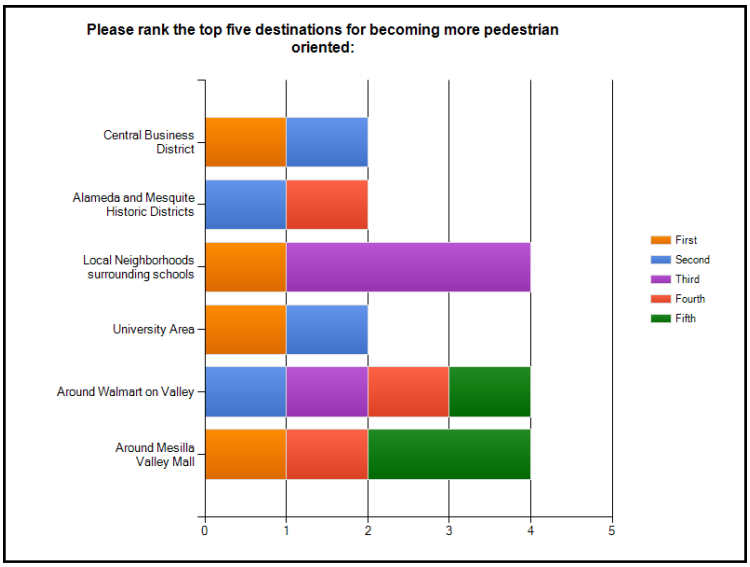


1. Please rank the top five corridors for developing Complete Streets:

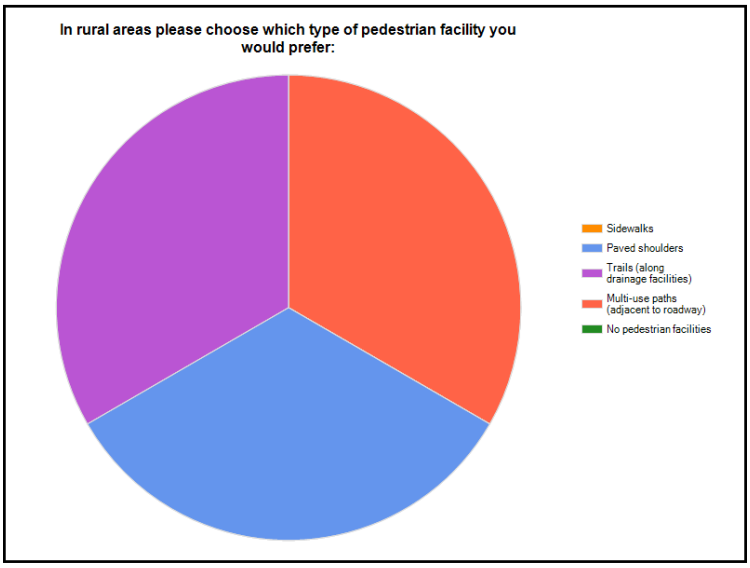
2. Please rank the intersections that you feel need pedestrian improvements:



3. Please rank the top five destinations for becoming more pedestrian oriented:



4. In rural areas please choose which type of pedestrian facility you would prefer:



Trail System

Phase 1 - 7 responses

1. Please list important destinations that you feel could be served by a trail:

- New Mexico State Parks encourages the MPO to identify the Rio Grande corridor and all of the communities along the river as important destinations that could be served by a river-side trail.
- Veterans park.
- The new aquatics center.
- The new multimodal bus stop.
- Downtown.
- Mesilla.
- West NMSU.
- Del Rey-Dona Ana.
- Onate, Mayfield, Las Cruces High
- Downtown Las Cruces
- New Mexico State Universtiy from all directions
- The NASA Withdrawal from all directions
- The New Mexico Farm and Ranch Heritage Museum
- The new swimming complex from every direction.
- Dripping Springs from Tortugas Mountain
- LaLlona (spelling!) from Downtown
- The Robledos from Downtown
- The Dona Anas from Shalom Colony Road
- The new state bosque park from Downtown
- NMSU, Mesilla, foothills, river, arroyos,
- Rio grande, north and south valley, downtown

2. Are there any loop trails or connections in your neighborhood that you would like to see happen?

- There is a serious disconnect between the bicycle commuter corridors. A cyclist using the Triviz Multi Use pathway cannot leave the pathway except on roads that are subject to crowding and heavy automobile use, e.g. Missouri Avenue, Telshor Blvd. If you extended the Triviz pathway heading east across Telshor along the spillway and brought it around to connect to Venus between the Staybridge Suites and Peter Piper Pizza cyclists/pedestrians would be routed around the congested Sam's Club/Telshor 12/Commerce Drive area so they could safely connect with the Bataan Memorial bike way. The same problem is encountered at the east end of the University Avenue Bike Path near the Zeta Tau House. University Avenue becomes much too narrow. Bicyclists are routed off through a lawn and the trail is broken up and cracked something awful. There needs to be a safe and sane way to get from the University Avenue Path to the Triviz Path. Perhaps this needs to be an overhead sidewalk similar to those on the Tramway Path in Albuquerque.

- EBID trails being paved would make for many back alley connections that help users stay off of busy roads
- Trails from all parts of the NASA Withdrawal, including the County Cemetery, connecting to existing trails in the Organ Mountains
- Complete the loop and connect the Triviz and River trails at the north and south ends.
- yes a trail to the area of the new potential high school

3. What sort of trail surfaces and amenities would you like to see?

- Trails on both sides of the roads with Smooth surfaces and a center line with signs denoting to stay right. Dotted center lines and stay right signs will help with the usefulness and safety of these trails
- dirt paths with some covered shelters along the way
- Maps and way-finding are important. It is not necessary to pave all of them, but compacted surfaces would be nice to allow strollers with decent sized wheels.
- pervious paving, plant identifiers, trash receptacles
- unpaved but well marked

4. Please provide three top trail priorities in our region (no ranking order is implied):

- Alternative means commuters need commuting corridors. Something is needed that goes East to West through the middle of the city. Hadley would be good if you could reduce the auto traffic on it.
- Connect the Northern end of town East to West with a connected trail
- existing trails on BLM land in all areas at all sides of the city of las cruces should be retained
- Outfall Channel
- urban trail
- Extending Solano's bicycle lanes to the south to connect with University Avenue
- EBID canals for helpful connector trails
- Something linking downtown Las Cruces to Mesilla
- river to mountain trail
- Alameda would be an excellent arterial to bring bicycle commuters into the downtown area if you could reduce the speed and traffic congestion.
- Paved trail on las cruces dam
- Something linking Mayfield HS area to University
- north to south valley trail

5. Please provide any other information you would like to relay to the MPO about trails in our region:

- New Mexico State Parks is working with a diverse group of people and organizations in Dona Ana Co. to plan for and develop the Rio Grande Trail. We think this trail initiative should be a part of the overall planning for trails in the

MPO's planning area.

- If the city is serious about becoming bicycle friendly, then ALL proposed changes should be reviewed by bicyclists because whoever is making decision within the city is not taking into account the MPO master plan or the effect on bicycles. Here is a case in point. The connection between the Triviz Multi Use Pathway (near Ruby Tuesday's and Telshor) and Northrise Drive is listed as a "Shared Use Roadway." The city recently restriped the intersection of Telsor/Northrise and Del Rey. According to the MPO Northrise from this point is planned as a Bike Lane. The engineers made this intersection considerably less safe for cyclists riding South by reducing the road to one lane going straight with the other lane becoming a right turn only lane. Bicyclists who want to go straight to connect with the Triviz Multi Use Pathway must merge with traffic and have cars speeding by them on the right to merge onto Del Rey. The situation gets worse as the cyclist crosses Del Rey and finds that cars merging from Del Rey onto Telshor headed south don't even need to yield anymore. The only way to preserve life and limb is for the cyclist to stop in the closed section of the thru lane and wait until there is no one barreling towards Telshor from Del Rey. Whoever made this decision was not thinking that bicyclists use this area. They do so quite frequently.
- "Stay right" signs please. Just like Albuquerque's trails. They will help with the usefulness and safety of these trails. Trails on just one side of a road cause force cyclists to ride on the wrong side of the road which can be very dangerous and makes them harder to see at intersections. Smaller trails on both sides of the road would be more useful to me.
- So many trails exist in the MPO region and none or very few have been included in development plans. This should change. These trails and arroyos such as those in the NASA Withdrawal should be preserved and used by people for access to neighborhoods, shopping, and general well-being. Cemented arroyos already in existence should be opened up for public access as they provide some interesting pathways through existing neighborhoods. Any arroyos treated in this way in the future should be accessible to the public. When these sorts of structures are built, they should be made of porous material so that water can seep back into the ground.
- trails should be plentiful, free & interconnected

Phase 2 - 2 responses

1. Please provide three top trail link priorities in our region based on the projects shown on the Trail Priorities map (no ranking order is implied):

- outfall channel
- acequia madre
- north fork arroyo
- Outfall Channel
- University
- Acecia Madre

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APPENDIX B

Stakeholder Meeting Notes and Comments

Stakeholder Meetings:

MPO staff actively sought involvement through a wide variety of stakeholder groups. These groups included planning and zoning commissions, neighborhood associations, business organizations, and other community-based coalitions.

During the meetings listed below, staff provided a presentation regarding transportation planning processes and regulations and an update about the Transport 2040 process. Staff then encouraged the audience to provide written comments to elaborate on their vision for the regional transportation system and on specific projects they would like to see completed. The items related to specific projects are also included in Chapter 5 under the title Transportation Projects Input.

The comments provided to MPO staff through these meetings are included in their unedited form for public consideration and staff analyses. In some cases, MPO staff responses are also included in order to directly respond to questions raised by stakeholder groups.

August 21, 2008 Transit Advisory Board
August 28, 2008 EDRC
December 4, 2008 ETZ Commission
September 16, 2008 Planning and Zoning Commission
October 17, 2008 Chamber of Commerce
November 5, 2008 City of Las Cruces District 6
November 5, 2008 NMSU Planning Committee
December 12, 2008 Interagency Council
January 15, 2008 SCORE Chapter
March 3, 2009 Las Esperanzas
March 23, 2009 Alameda Depot Neighborhood
May 11, 2009 League of Women Voters
January 13, 2010 Lower Rio Grande MDWA Board Work Session
March 31, 2010 Mesilla Valley Bicycle Coalition
May 4, 2010 Chamber of Commerce
May 11, 2010 City of Las Cruces District 5
May 18, 2010 Comments from David Roewe on behalf of the Building Industry Association of New Mexico

Transit Advisory Board Meeting, August 21, 2008

Notes:

- Take into consideration the needs of the equestrian community when creating trails
- Provide direct connectivity from the Equestrian Center at NMSU to trails
- Look at neighborhoods needs as far as services, such as transit and commercial
- How to handle the many arroyo crossings (flood issues)
- Need transit to Elks and Del Rey
- Shift development patterns to be more walkable
- Distribute the services available and provide more connectivity to them
- Ensure that recreational areas are served and connected
- Make better walking links to Mesilla Valley Mall (Idaho was specifically mentioned)
- Build out, but smart
- Zoning to compliment current and future land uses
- Provide multi-use areas
- Maintain agricultural/rural character in some areas
- Provide for all modes of travel, including equestrian
- Need better north/south connectivity that may occur with build out of Roadrunner and Sonoma Ranch
- Extend Roadrunner to University
- Consider elevated rail
- Increase carpooling opportunities
- Consider express bus routes or BRT
- Look at commuter possibilities for existing railroads
- Look for regional connections for public transportation
- Build parks and provide access to parks
- Remember that with trails – some people recreation area another's nuisance (such as ATVs)
- Remember that arroyos move and this fact needs to be planned for
- Need more west/east connections, including bicycle and pedestrian only

EDRC Stakeholder Meeting, August 28, 2008

Notes:

- Las Cruces Public Schools sites are a concern with respect to the Thoroughfare system
- Mapping arroyos would be useful
- Interstate By-Pass recommended, particularly Weisner but all are important
- Important to expand bus system to serve new schools
- ROW preservation important
- Need to identify roads where ROW preservation is not feasible and determine

potential alternate routes
- Education of permitting staff is needed (i.e house on Kennedy)
- Coordinate with Vision 2040
- City-County transitions need to be taken into consideration – where and how do they occur (at certain intersections for example)
- Connectivity of Thoroughfares is important
- Coordination is important

Vision Cards/Three Top Priorities:

1. Connectivity and Relief Route
2. Educate Staff (more staff)
3. Speak about certain corridors more specifically

1. Bicycle and pedestrian facilities and connectivity
2. Public transportation facilities/options
3. Corridor specific planning, particularly those in the ETZ re: coordination between County/City.

1. Communication regarding Thoroughfare Plan
2. Constraints on existing ROWs – how do we handle?
3. Connection between the east and west of Las Cruces – limited connection (i.e. Lohman, Hwy 70, University, etc…)

1. Focus on, for example, the three most problematic areas
2. Break down discussion further – example focus on specific road
3. Where is the Transportation Plan?

1. Connector limited access highway between I-10 and I-25
2. Transit
3. Bike routes

ETZ Commission Meeting, December 4, 2008

Notes:

- Parks – Location and Maintenance
- Schools – Location issues
- Bypass of US 70
- Red light cameras on all new intersections
- University Corridor
- Public transit on campus
- Trails on ditch banks
- Education for motorists and cyclists
- Transit system expansion

Vision Cards/Three Top Priorities:

1. Another Bypass on North (Engler?) to help get around north side of town
2. Jack Rabbit Interchange and High Mesa Road to Santa Teresa
3. Picacho route through town - eliminate or move

1. Dealing with EBID for trails and bike lanes
2. Picacho Hills to Airport? Going south
3. Pubic Transit expansion

1. Need rail transport between Doña Ana or Radium Springs and El Paso similar to that between Albuquerque and Santa Fe
2. Need more exits from I-10 South between University and Mesquite to decrease traffic load up the Valley from South to North

1. Bypass from Mesilla to US 70
2. Better traffic flow on Lohman at peak hours
3. Longer areas for bicycle paths
4. Secondary exits for Picacho Hills

1. Placement of schools
2. Bike trail mandatory on all major roadways
3. Carver Road!

1. Additional public transport
2. Use of ditches for trails
3. Incorporate walking/biking trails with all new roads

1. Impact fees or other mechanism for granting "waivers" to roadway improvements with new developments in ETZ for money to be used at future time when improvements make sense
2. Concrete/immovable/non "waivable" regulations regarding roadway improvements in new developments
3. TA on all developments (Big/Small) by Unbiased entity

Planning and Zoning Commission Meeting, September 16, 2008

Notes:

- Crash data @ Del Rey and Mars
- Where are updates to crash data? How often?
- Do we review annexations?
- Plans for north bypass – US 70 or I-10 to I-25 (2)
    - Significant cost increases since initial plans

    - Accommodate truck traffic
- Rail links to El Paso and Albuquerque (2)
- More east-west connections
    - Downtown destination
- Time traffic signals better
- Eliminate train through town
    - Make the ROW into a thoroughfare
- High speed rail from El Paso to Spaceport
- Convert Triviz and Telshor, north of Lohman, into one-way roads
    - Add connectors between access road and across I-25
- How much does RailRunner cost?
- Bus pullouts
    - Need more ROW (staff comment)
- Additional traffic concerns on University and Union due to convention center and hotel
- Use Geothermal as a thoroughfare through campus
- Connect Wells through Tortugas to Main Street
- Develop traffic plans to handle large events
- Moving sidewalks
- Make public transit fun to use

Vision Cards/Three Top Priorities:

1. North Bound Route I-10 to Hwy 70
2. South Bound Route I-10 to Hwy 70
3. Exit/Entrance South of University

1. By-Pass from north end of town from west to east
2. Safety of University Avenue

1. Del Rey to Doña Ana Exit 4 Lane
2. I10 to I25
3. Arrowhead interchange

1. High speed rail between El Paso and Spaceport
2. One way north on Telshor and One way south on Triviz with North of Lohman with crossovers
3. North Bypass Corridor

1. By Pass to west of town I-10 to I-25
2. High speed rail El Paso to ALBQ
3. East/West traffic flow in Las Cruces
4. Timed signals to move traffic more efficiently

1. Replace train tracks with major road
2. Connect I-10 with I-25 north of town
3. Timed stop lights for less stopped traffic

1. Establish L.C. = El Paso commuter service by rail
2. Go for the Madrid crossing over I-25
3. Clarify thinking about University Avenue – if improvements are to be made both sides and both ends, traffic will become impossible – how will this be handled?

Chamber of Commerce Input Meeting, October 17, 2008

Notes:

- N/S transit route from past Mohegan to University along Elks, Main, and Solano and N/S transit route from CTP to Stern along El Paseo
- W/E transit route from Motel to past Memorial Medical Center along Lohman and Amador
- Chamber #1 priority – Arrowhead Interchange on NMSU/I-10
- Chamber Priority – I-10 Frontage Road Improvements from Motel to Airport. Mapped along south side.
- Chamber Priority – Downtown Las Cruces roads.
- Engler underpass.
- Need to plan around vacant County Courthouse to include transportation – Chamber Priority
- Extend Alameda to Camino Real and build outfall channel
- Highway and Rail from Santa Teresa along west mesa to Airport and up Picacho Hills to connect over the river to I-25 – note on previous item about the Punta Colecta Project
- Need true southern ring road
- Need Bike Lane/Shoulder maintenance on Dripping Springs
- Need bike, pedestrian, and Transit integration along University
- Pedestrian access at I-25 and Lohman to businesses
- Redesign University and Improve/build Arrowhead
- Improve I-10 and I-25 Interchange
- Put Triviz through under University
- Roundabout at Telshor and Lohman
- Bike/Ped crossing over I-25 at Idaho
- Address traffic concerns with new High School
- Need to build out/connect roadways on east side – Missouri, Sonoma Ranch, Porter, Dunn, and Weisner.
- NW loop road connecting Engler to US 70 and I-10 interchange.
- Connection from Spruce over the highway to the dam for pedestrians and bicyclists.

From the Meeting Agenda the Transportation Committee has a list of priority projects these are:

1. Outfall Channel Bypass
2. I-10 Frontage roads from Airport Interchange to Motel Boulevard
3. Downtown Las Cruces Improvements
4. Madrid Grade Separate Crossing
5. Planning and improved circulation around Las Cruces Country Club
6. Arrowhead Interchange (Legislative Priority)

Number four is now a dead issue. Number five should be coordinated through the MPO – the congestion needs to be alleviated.

City of Las Cruces District 6 Meeting, November 5, 2008

Notes:

- More public transportation
- Less individual transportation
- Missing sidewalks
- ADA transition plan
- Open space, trails, parks, biking – that is CONNECTED!
- Bus system
- Multi-modal center
- Green vehicles
- Neighborhood with services
- Pedestrian oriented
- Zoning?
- Transit oriented development
- Form-based codes
- Sustainable Communities
- Mixed Use
- Land use and Transportation
- Lifestyle mini malls

Vision Cards/Three Top Priorities:

- Promote people to walk, carpool or using public transportation more and drive less in order to reduce fuel consumption and better for our environment (less pollution).
- I would like to see more west to east traffic flow.
- Able to use transit to go to work, shop, go out for dinner.
- A system of Public Transportation that is used by most people in area.
- Interconnected paths and parks.
- Have a major bypass or bypasses circling the city/county.
- Make I-10 to El Paso wider/add another lane.

- A coordination of plans – City, County, and developers.
- I would like to know who is going to pay for open spaces and parks. Costs are not absorbed by developers only passed on to future buyers (affordable housing?).
- Easy to leave the car in the garage.
- Most amenities for a neighborhood are within walking distance.
- Maintain the roads.
- Sustainable multi modal/mode neutral system of transportation with focus on mass transit, bikes and pedestrians.

1. Redesign of University from I-25 to I-10.
2. Redesign Interchange @ 10 and 20
3. Interchange @ Arrowhead

1. Open up Idaho Ave. to a Collector. Start buying houses.

1. Emphasize Public Transportation
2. Personal cars OK but not primary
3. Support electric cars
4. Structure development for minimum transportation

1. Problem: urban sprawl

1. Circle routes
2. H/M (Hazardous Materials) routes
3. Feeder routes

1. Energy efficient buses
2. More improved routes as city expands
3. ADA improved availability

1. Have interconnected paths/parks
2. Mass transit, monorail
3. Widen I-10 to El Paso
4. Better traffic controls, synchronize lights by traffic

1. More (bigger) parks in Sonoma and east area
2. Add in walking trails (or biking trails)
3. Continue concept of large boulevards/open spaces

1. Bike lanes that are safe and continuous
2. Sidewalks where none exist in older neighborhoods. Mine built in 70's and early 80's.
3. Better Roads – smooth and well connected, no odd turns

1. More transit
2. Fix missing sidewalks
3. Connect cities/towns in the area
4. Rapid transit

1. Public transportation available in all areas
2. Pedestrian pathways

NMSU Campus Planning Committee, November 5, 2008

Vision Cards/Three Top Priorities:

- Integrated modes to include vehicular, public transit, cycling, and pedestrian within the same transportation corridor.
- Integrated, multi-modal
- The city anticipates the growth that will continue to take place in our community. Provide park facilities for adequate recreation, foot traffic and bicycle traffic. Las Cruces to be a leader in developing green technology.
- Easy, inexpensive, public transport to all campuses, downtown, and white sands.
- Integrated Public Transportation and Thoroughfares

1. Ideas for Triviz, Telshor: center turn lane is wasteful. [Drawing off 2 northbound lanes on Triviz and two southbound lanes on Telshor]

1. More extensive and more frequent bus routes
2. Interface with transport to ELP and Albuquerque (etc.)
3. Light rail North and South (ELP and ABQ).

1. Electric car access routes in town and bike
2. Better bus transport to ALL parts of town – including East Mesa campus to NMSU
3. Rail to airport (El Paso) from University and UTEP

1. Schedule bus to areas outside of city limits in parts of the county to link into the city transportation system
2. Bike lanes on Valley Drive to Taylor Rd North
3. Crossover Bridge on University Ave

1. More East-West Major roads
2. Widen North South Roads
3. Plan with Developer

1. Expand public transit
   - Weekend and Night

- Service to Education Facilities including DACC East Mesa Campus

2. Adequate cycling/running paths throughout the City
3. Connections for/between mass transit systems i.e. El Paso/Las Cruces

Interagency Council Meeting, December 12, 2008

Notes:

- There is a need for expanded bus service (nights and weekends).
- It might be helpful to have additional transfer points for Roadrunner Transit. Additionally, there could be a role for smaller buses.
- It would be very helpful for Roadrunner Transit (or another such system) to extend itself into southern and northern Doña Ana Counties. The need in the rural areas is acute. It should be a long range goal to provide such service to the southern part of the county.
- There is a serious issue about the fact that there is no transportation to the prison. This makes it difficult for family members to visit. It would be appropriate to consider providing some bus transportation (perhaps also in relation to the airport). Recidivism, nation-wide, is about 70% with about 45% in New Mexico. Studies show that recidivism is reduced where there is contact with family members.
- Bicycle lanes were bought up as an important issue.
- The Community of Hope has a serious transportation problem. When clients need to see a physician, they are sent to Ben Archer which is located some distance away. Ben Archer does have transportation for clients with insurance, but people from the Community of Hope do not fit into this category. Getting them to and from the clinic places an enormous burden on the staff.
- There is a problem with the lack of transportation to Mesilla Valley Hospital. When people get discharged, they have to walk a substantial distance to get to a bus line.
- Is there a way of providing more east/west crossings in Las Cruces? It was pointed out that this is important for emergency response – not just the convenience of people who want to get from the west to east side of Las Cruces.
- Future connections from the far northeast side of Las Cruces to the south was discussed.
- Concern was expressed about transportation options on the East Mesa. It was pointed out that land use planning (placing services closer to homes) could be one way of approaching this issue. There is already a hub of City of Las Cruces activity planned adjacent to Porter Road.
- There was a question about how the MPO planning is coordinated with Vision 2040.
- Some years ago the MPO staff was asked to look into a transit study (along with citizen petitions) for southern Doña Ana County. It was pointed out that this is formally part of the El Paso MPO (because the travelshed is related to El Paso).

However, the two groups coordinate closely.

- There needs to be transportation from Anthony to Las Cruces (not just Anthony to El Paso). This is a topic that can be addressed by a proposed Regional Transit District.
- Light rail from Las Cruces to El Paso would be desirable (and perhaps from Las Cruces to Santa Fe).
- There is an issue on the west side of Las Cruces about getting people to places like Doña Ana. Many of the state social services agencies are located in the Picacho/Motel area.
- Consider the possibility of infrequent bus transportation to north and south Doña Ana County. Possibly this could even be handled by a for-profit organization.
- This is a land use point. When locating social services agencies, it is important to place them in areas that are accessible and where the need is substantial.
- All of these concerns need to also be communicated to elected officials. Remember that implementation rests with the local jurisdictions.
- Funding is always a central issue. One possibility that is being considered is the creation of the South Central Regional Transit District, which would have taxing authority.
- There are a number of groups (including the MPO working with local jurisdictions) working on developing a list of projects that can be done in New Mexico using the proposed economic stimulus package.
- The current National Transportation Funding Bill is set to expire in September 2009. Everyone should pay close attention to whether the renewal is passed in a timely fashion and what it contains.
- There is a transportation web site (www.gotellthepresident.org) where citizens can register their opinions about transportation planning. There are also many opportunities to get involved in local transportation planning. One possibility is the Coordinated Human Services Transportation Committee.

Service Corps of Retired Executives (SCORE) Chapter Meeting, January 15, 2008

Notes:

- Recommend we contact the Women's Business Group
- How are developers involved in this process?
- What is the Airport boundary area and are we planning for this? Recommendation to put a stop to developing in this area.
- Are there plans to re-locate the rail so it doesn't run through the City of Las Cruces
- Recommended N/S connections with roadways
- Good public transit to link west to east from Picacho to other services
    - Some people choose to live in a rural area and public transit may not be able to serve them
- Need connection from Picacho Hills to I-10

- Need connection from US 70 to I-25 down south
  - Re-route trucks on Weisner
- I-10 to I-25 North Main street is a problem with trucks
  - Not enough trucks to require another bypass
- Bicycle riding is an under recognized transportation value to our community

Las Esperanzas Comments, March 3, 2009

Notes:

- Concern over loose dogs when walking around neighborhood
- First priority for rail should be from Las Cruces to El Paso
- Need better marked crosswalks in neighborhood
- Better marked crosswalks across from Federal Building and from neighborhood to downtown, and on mesquite street to library
- At Klein park a warning signal for children at play
- Bik paths/trails throughout the neighborhood
- Espina, Griggs, Tornillo all need bike facilities
- Schedules at all bus stops
- Longer hours of transit service and Sunday service
- Expand public transportation over widening of roadways
- Fund transit
- Fund transit with a gas tax

Alameda Deport Neighborhood Meeting, March 23, 2009

Notes:

- Vehicle safety issues on Melendres crossing Amador – two recent accidents, request for a light
- Rail Las Cruces – El Paso and Albuquerque
- Evaluate Alameda for the vibration from trucks that causes cracking in adobe structures
- Readdress Picacho and the divider – recommend a 3 lane roadway with pull offs for parking and transit and for slower traffic and safety around businesses
- Find another way for trucks to get around town besides Main/Picacho
- Make links or gateways to a greenway system
- Need viable City transit to make rail system work
- Prefer different location near the rail depot for the intermodal center
- Bypass around north end of town
- Truck only Interstate

League of Women Voters, May 11, 2009

Notes:

- Plans in the future for a eastern bypass (loop) relieving congestion on I-25
- Possibility of an I-25/I-10 interchange north of the present one

- Need to become more bike friendly i.e. protected lanes both for "biking" and turning (Tucson as a model)
- Definitely pursue "light rail" along I-25 corridor
- Expansion of lanes of I-10 (truck lanes throughout City)
- Need for more hiking/biking designated trails
- Improve and lengthen the run along Rio Grande
- Extend present hiking trails along I-25 both south and north
- Consider hiking/biking trails in the NE developing area
- What about more E to W roads across Las Cruces (alternatives to Lohman/ Amador), Missouri/Boutz and University – Missouri/Boutz does not go through past Telshor
- Solano – are you looking at changing Solano and the bike lanes – it really raises havoc NOW with traffic at peak hours without enough lanes south from Amador
- My concern is what will happen with traffic when we have the new High School
- Better Dial a Ride service
- Better street care
- I think priorities are – rail transport ALB-LC-EP, public transport for rural areas, and development of neighborhoods with amenities so travel is reduced
- Cycling – many people would ride bikes but most streets are unsafe except in newer residential districts and trails
- Provide for some more safe places for bicycling – perhaps a master plan
- Specific suggestions for street connections which are there in dirt but not developed and would help out traffic flow off Del Rey
- Connect Roadrunner (from the pines development – Settlers Pass – to Bataan)
- Connect Settlers Pass from Roadrunner to Rinconada (Binns property but has not been made more passable)
- Buses – run them out further to residential districts that are newer ad work on more direct routing to common places that people want to go
- Rail – commuter rail between cities like extending Railrunner from Albuquerque to Santa Fe to Las Cruces to El Paso
- Is inter-city light rail feasible?
- Everyone I know who bikes in the City has been hit and injured – I've been run off the road and had some close calls – I've invented shortcuts and ride-arounds to shopping areas

Lower Rio Grande MDWA Board Work Session
January 13, 2010

Items to follow up on:

- Follow up on federal funds for Berino Road – how much $, when will construction begin? Will it be completely rebuilt? How to handle the redoing of water utilities line?
- Contact EP MPO about some issues - Shrode road – near Berino elementary

school – lots of traffic and needs improvements
- Check on if 404 is going to be designated as a Hazardous Cargo (HC) route
- Put EP MPO alignments/proposals on map
- NMDOT gold route schedule needs a map
- Show land ownership and aerials on maps

Existing roadway improvements:

- Many road are not improved or taken care of – maintenance and operations issues
- Joy road – paving issues
- Some east-west roadways that could use improvements are 228, 192, 227, 189 and 226
- NM28 and NM478 could also use improvements
- All roadways would benefit from shoulders for tractors, walking, and biking
- Traffic seems to flow from La Mesa up to San Miguel and over to Mesquite to the Interchange – the connection from La Mesa to Vado is difficult because of the narrow bridge crossing and the dog leg
- 189 and 227 need widening and new alignments
- O'Hara road (404) needs widening
- Lots of people walking on Berino Road as well – needs pedestrian accommodations
- Issues of keeping water lines undercover especially in Desert Sands area
- Mesquite and 478 – hard to turn plus gets backed up and train tracks are a barrier – needs intersection improvements

Roadway and trail alignments and connections:

- High Mesa road is seen as a good project for diverting through traffic away from the valley - connect from Domenici Road/Santa Teresa border crossing to the Las Cruces Airport
- Other potential west-east connections are sunshine road and farm land road but the land owner's in this area would probably not be supportive of a main arterial going through
- Consider making improvements to existing connections first
- Mesquite road and Berino road also have dog legs and therefore alignment issues – they also don't directly connect to the Interstate
- Run Shrode road all the way to Stern – is currently going to 478
- Need a west-east connection before Brazito that connects between 478 and Stern – might use Yucca, E. Organ, Harper or Snow Road
- Trail from O'Hara into Anthony needs to be extended – lots of people walking on this to town

School issues:

- Concern about elementary schools - steer traffic away from them

- Some of the canals are used for walking to school and could be improved
- Need an education campaign for bikers that ride against traffic
- Need to work on safe routes to school (for example, walking school bus so that kids can have parental supervision on their way to school)
- School attendance boundaries are an issue because a good amount of the kids are too far away to walk or bike

Transit issues:

- Need public transit and better walking facilities - overall Transit could have a positive economic impact on Las Cruces if it were made more convenient to get from the rural county areas to the City center
- Would be a good idea to have a stop for the Gold Route in Vado and circulator routes to bring people in from the small communities to Anthony and Vado (sometimes the biggest problem is getting to the stop)
- Reasonable rate for transit would be $2.00 + additional discounts
- There is reliance on getting rides to, for example, doctor's office in Las Cruces
- A smaller van once or twice a day that brought people into Anthony and Las Cruces would be very beneficial

Pedestrian/bike accommodations:

- People walk to water office to pay utility bills
- Lots of people are walking along 460
- Walking path on EBID facility near 227 is not used nor maintained
- Overall – lots of people walking out of necessity
- In Vado – kids walk and bike up to truck stop

Other Issues:

- Interest in seeing MPO boundary area moved further south in order into incorporate more of New Mexico because of governmental authority and other types of services like emergency services that are centered in NM
- Blowing dust from unpaved roadways is an issue – air quality concerns
- Limiting access on some of the main roadways that people use would improve their functionality
- Concern with narrow ROW of 404 – what is the potential for expansion – may not be a good road for the HC connection and also has a dog leg

From David Roewe on behalf of the Building Industry Association of Southern New Mexico, May 18, 2010

OPENING STAFF RESPONSE: (The rest of staff's responses are found throughout the following message)

Dear Mr. Roewe,

Thank you for taking the time to provide comments on Transport 2040. Your

comments present a recurring concern that the aim of this plan is to get people out of their cars. The aim of Transport 2040 is not to prohibit or even suggest prohibiting vehicular travel, but to promote opportunities for the citizens and visitors to choose other transportation modes. The MPO realizes that cars are the dominant form of transportation and certainly will remain so for the foreseeable future. However, this plan also addresses needs for pedestrians, and bicyclists, and public transportation users. Each of our three member jurisdictions (City of Las Cruces, Doña Ana County, and the Town of Mesilla) have passed Complete Streets Resolutions and the City of Las Cruces has been pursing a Bicycle Friendly Designation since 2005. The MPO and MPO staff feel that these are positive steps for the region.

Transport 2040 outlines the spending of nearly $1.5 billion dollars for transportation improvements in the region over the next 30 years. Seventeen percent of these funds (mostly from the Federal Transit Administration) will go towards public transportation. The remaining 83% is spent on maintaining, operating and expanding the roadway system. Twenty percent of the projects making up the illustrative list (projects submitted to us without identified funding sources) are bicycle and pedestrian projects and 80% are projects improving motor vehicle facilities. Additionally, these percentages do not include proposed, unfunded Interstate Highway Interchange projects which skew the percentages due to their high costs.

A second general concern seemed to focus on the use of national and state-wide trends and data, as well as a lack of local information, throughout the analyses provided in Chapter 3. A variety of local, state, and national data was integrated into each section to provide a clear picture of our local area and how our goals and vision fit into the state and national discussions. Responsible long-range planning requires this type of broad, comprehensive review and analysis.

Thank you again for taking the time to provide detailed comments. MPO staff will address needed changes and provide clarification of key items based on your comments. Staff's detailed responses are provided below.

From: David Roewe [mailto:daver@biasnm.org]
Sent: Tuesday, May 18, 2010 10:44 AM
To: Scott Krahling; 'Karen Perez'; Sharon K. Thomas; Gill Sorg; Olga Pedroza; lbenavidez@donanacounty.org; Andy Hume; John G Hadley; 'Sid Graft'; 'Isaac Chavez'; 'W. RON CAMUNEZ'; 'William Mattiace'
Subject: Las Cruces MPO Comments on the Transport 2040 plan

Comments on the Proposed Transport 2040 Plan

Social Engineering. The predetermined outcome supported by conveniently applied data.

This document looks and smells exactly like the "Vision 2040" plan that was ripped by both the County Commission and the City Council at the last two joint meetings of the two bodies.

It has little if any resemblance to the needs of the people of Doña Ana County or the City of Las Cruces and needs to be brought back to reality.

I understand that the Federal Government requires a multi modal transportation plan for eligibility for funding, however, this radical of a plan has no place in our community as it's "Long Range Plan".

Here are my comments and concerns:

1. The map for the large employer destinations on page 27 is misleading. It indicates the majority of large employers are in the central core of the city. The school district office may in downtown but 3-5,000 employees are not located there. The County is not considered a major employer, Wal-Mart has multiple locations, the retail sector on N main is ignored. This project is being touted as a regional plan yet it does not mention White Sands or NASA as a major employer or is inclusive of their transportation needs. It also does not address the agricultural employers or the needs for their transportation.

   RESPONSE: The map should be labeled in the LC MPO area and that change will be made for the final draft. Also, NASA will be added to the map. Although White Sands is outside of the MPO area, it is a major regional employer and a discussion of its impact is already included in the text of the document.

2. On page 29 we again are being led with stats from the Chicago based CNT (Center for Neighborhood Technology) which is being criticized for it's one solution fits that is designed to get people out of their cars and into public transportation. Why are we using data from Chicago to formulate our plans in Las Cruces? Light rail is CNT's solution to most problems and it should not have a place at the table in this conversation. We do not have the population

   RESPONSE: CNT used Las Cruces housing and transit data and federal travel surveys to prepare the map. Transport 2040 does not contain a recommendation for Light Rail. This section only discusses housing and transportation costs for residents so they are aware of the geographic component of transportation costs.

3. Page 32-33- Health and Safety. I am confused, this is a transportation plan, why is this plan dealing with the obesity and physical activity. The study cited by Rutgers entitled "XXXX" (why is no title associated with this study?), is reflective of the same concept in the Vision 2040 Plan that is promoting the predetermined conclusion that we must have walk able communities and using an unnamed study

as the basis to come to the conclusion that weight, obesity and lack of exercise as the need for denser communities and that by government forcing people together they will exercise more.

RESPONSE: Regarding the development of a metropolitan transportation plan, Chapter 23 U.S.C. 450.306.a.5, Scope of the Metropolitan Transportation Planning Process, states that the plan will address factors such as, "Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns."

There are clear links between health and transportation. Currently, the USDOT, EPA, and HUD are working together to address livable communities.

"XXXX" was a placeholder in the first draft for the Rutgers article entitled Designing and Building Healthy Places.

4. The statistical data on traffic and accidents is the only truly local study that was done. All other studies or surveys done in this report came from national studies.

   RESPONSE: Local land use data from the City of Las Cruces and Doña Ana County is used. Employment numbers came from an analysis created by the Mesilla Valley Economic Development Alliance. Local census data is used for population, age, and demographic analyses.

5. Why aren't trails part of the Parks Department? We fund roads with gas taxes, yet this proposal is to build walking and bicycle trails that are used for recreation with fund that are earmarked to build roads. Why are sidewalks not considered as part of the transportation plan.

   RESPONSE: The Federal Highway Administration (FHWA) has funding that is eligible to use on trail systems (Transportation Enhancement). A project must be included in the metropolitan transportation plan (MTP) to be eligible for this funding. Trails provide valuable transportation links for non-motorized modes as well as corridors through many areas that do not yet have improved roadways.

6. There has never been a single study in Las Cruces that shows the amount of bicycle commuters. How many people are using the bike lanes now needs to be determined so that we use solid information to come to the appropriate decisions.

   RESPONSE: MPO is first working on developing a well-connected system - see the Bicycle System Priorities Plan. This type of system is based on the well-connected system that already exists for motor vehicle users. MPO staff will be evaluating several proposed methods for gathering traffic counts for bicycling and walking.

7. On page 44/45 we are talking about improving walking conditions. Is there an inventory of streets that don't have sidewalks in Las Cruces? Again, there has been no survey or study to show how many feet of sidewalks need to be constructed and where they are located. City staff indicates they are in the older part of town, but this is an area where impact fees are not being considered as part of the service area that impact fees can be used.

   RESPONSE: In chapter 5, MPO staff has identified the development of an asset management plan as an important step toward determining where transportation facilities are lacking or are in need of repair. An asset management plan would include a comprehensive infrastructure inventory. Compiling this inventory could be assisted through initiating neighborhood assessments of the pedestrian environment. This type of plan will assist all of our member agencies with more efficient operation and maintenance of existing facilities as well as prioritizing future improvements.

   We also talk bridle paths on this page. If you are going to include access for bikes, then do you have to include horse paths as well?

   RESPONSE: The term bridle paths was used in the title of a local planning document referenced in the plan.

8. Page 45 talks about bicycle facilities and becoming a bicycle friendly community. The majority of the city and its future growth are on the east mesa which is steep. We are also projecting our future population will be older people. Lohmann is steep, walking is difficult and riding is almost impossible, then consider an 80 degree day, much less a 96 degree day. The chances of injury to a senior citizen are significant. This plan is trying to get seniors citizens out of their vehicles.

   RESPONSE: In order to represent their constituents interests, the City of Las Cruces has adopted a policy to become a bicycle friendly community.

9. (No text for this item in the original email communication.)

10. Page 48 does not have a number for total annual ridership on transit just the figures ####, it would be nice to have that figure. When I asked staff, the could not provide a number of riders per month or annually nor could I get an accurate number for the Las Cruces to El Paso commuter bus

    RESPONSE: "####" was a placeholder in the first draft. Total annual ridership is 656,590. Figure 3-30 details monthly ridership through 2009.

11. On Page 50, how much money is being spent on rideshare promotion and staffing, what is the cost/benefit ration.

    RESPONSE: Historically, Rideshare has been funded at a level of $68,700 through grants from the New Mexico Environment Department (NMED) and the NMDOT. Beginning in fiscal year 2010 NMED will no longer provide their $30,000 grant.

12. Commuter rail is not a viable or cost effective form of future transportation. Where did this information come from? Who is on the South Central Regional Transit District? How are they appointed?

    RESPONSE: The SCRTD is comprised of 11 governments in southern New Mexico and coordinates regional transit issues. Local representatives to the SCRTD are Councilor Thomas, Commissioner Saldana-Caviness, and Mayor Barraza. They were appointed by their governing bodies. The information for the estimates regarding commuter rail are found in the draft feasibility study under consideration by the district appointees.

13. Page 56-Multi Modal Conclusion--"Particularly noticeable are needed improvements to pedestrian infrastructure expansion and the in road bicycle network". Please give me details of what improvements to pedestrian infrastructure expansion means and describe expansion to the bicycle network. This document goes from traffic accidents to traffic counts to cost of congestion versus crashes and all of a sudden here is the conclusion that focuses on improvements to pedestrian and bicycle expansion which is completely opposite of where it should be.

    RESPONSE: Transport 2040 contains only two exclusive pedestrian projects: ADA improvements on Solano for $240K and addition of pedestrian facilities over I-10 Bridge near Vado also for $240K. The remainder of pedestrian improvements should be accomplished through following Complete Streets policies. Also of note is that federal regulations require that pedestrian improvements, particularly addressing ADA issues, must be completed when improvements are made to any roadway.

    See Chapter 6, Transportation Projects Input for a complete list of projects proposed by the public during the MPO's public input process.

14. Page 58- I am glad to see the recognition of the need for the Engler Road from Sonoma Ranch to 1-25, is this going to expand to Valley so we have some real traffic improvements? The cost being paid by "development" is flawed, even with Impact fee's. At the present number of $3,000 per home transportation Impact fee, there will not be enough to build out Sonoma Ranch to Dripping Springs, Mesa Grande to Lohman and then Engler Road much less the other major expansions of

Road Runner North and Rinconada. Even at 1,000 new starts a year inside Las Cruces, that will only provide $3 million dollars per year and that is assuming the economy comes back.

RESPONSE: Improvements to Engler are proposed to extend at least to Valley Drive and may, in the long-term, include an extension north of the airport. MPO staff was not involved in developing the fee structure for impact fees. Your comments regarding impact fees will be forwarded to Mike Johnson, Public Works Director for the City of Las Cruces.

15. Page 69-Climate Change this is questionable science as is the green house gas issue. Why are they part of our transportation plan? Climate change is a theory that suggest man can control climate. It does not belong in our transportation plan

RESPONSE: The comments regarding climate change indicate that human activity has a direct impact on the environment, rather than controlling the climate. Throughout the discussion of the topic of climate change, staff uses phrases such as "may be" and "contribute to" to indicate that the discussion of climate change has not concluded. However, a responsible analysis of the impacts of transportation must include a mention of the topics of greenhouse gases and climate change.

In January 2010 the EPA released a new rule for comment. The standard will be between 0.060 PPM and 0.070 PPM. Depending on the final value selected, the Las Cruces area (0.063 PPM) may be designated as non-attainment also. The MPO may be required to develop a congestion management plan that addresses air quality issues through performance measures if the Las Cruces area is designated non-attainment.

16. Page 82 –Please define sustainability in the Core Policy? The statement does not make sense. Who defined that sustainability is the EQUITABLE convergence of environment, economic and community elements. Who makes the decision that something is equitable? Who created these goals? Staff could not give me these answers

RESPONSE: There is not a universally agreed upon definition for sustainability; however, since the 1980s the word *sustainability* has been used to refer to human sustainability on planet Earth. According to the Brundtland Commission of the United Nations; "sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs." In many fields of study, it has been noted that this requires the balance of environmental, social, and economic demands (the "three pillars" of sustainability). Because of the comments we received from the public about

sustainable transportation and the importance of the land use and transportation connection, and because of the current state (NMDOT HM 35) and national discussions (US DOT Sustainable Communities) in the transportation fields regarding these issues, MPO staff developed some definitions that were in line with universally established definitions of sustainability, and that also addressed local, state, and national concerns.

17. Page 84-principles "Preserve natural, cultural historical and agricultural resources" "Promote and design healthy and livable communities" This is something in the 2040 plan, not a transportation plan.

    RESPONSE: Regarding the development of a metropolitan transportation plan, Chapter 23 U.S.C. 450.306.a.5, Scope of the Metropolitan Transportation Planning Process, states that the plan will address factors such as, "Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns."

    There are clear links between operating, maintaining, and expanding a transportation network and preserving natural, cultural, historical, and agricultural resources that the community deems important.

18. Page 86 really is the page that defines this entire process as a farce. This page clarifies that all you want is to get people out of their cars, to walk, bike and take public transportation for all their everyday needs. I quote page 86 **"A livable community means the creation of sustainable urban and rural environments that foster walking, biking and transit while reducing dependency on the private automobile." "Help decrease the use of the automobile for short trips and daily commutes" "Business areas that are conducive to non motorized travel". "By designing street for all users and that shift more trips to non motorized modes."**

    RESPONSE: As stated at the beginning of staff's response, we intend to offer ideas to expand people's transportation options throughout the region. Note that the statements provided above simply point out benefits of using smart growth and livable community planning techniques. The principles of smart growth and livable communities can be applied to a wide variety of subdivision and commercial property layouts. As previously stated, all three member jurisdictions have adopted Complete Streets policies and guiding principles. Also noteworthy is the fact that the U.S. Departments of Transportation and Housing and Urban Development and Environmental Protection Agency have partnered to create an interagency partnership to promote sustainable communities

19. Page 87-So if I understand this section, if we get automobiles off the street then

this will save lives. If people walked and rode their bikes, then it would be safer. Where does this information come from?

RESPONSE: Complete streets provide safer, more convenient facilities for all modes of transportation. For example, streets with well-defined facilities for all users reduce conflicts for automobile traffic turning movements.

20. Page 89-This poll was found for it's convenience to help achieve a pre determined conclusion. We are basing our future growth plans on what people want in large metropolitan cities that don't have our weather or topography issues. Staff describes this process as "a robust public input process", please define robust. This process has been robust with t special interest bicycle groups that want someone else to pay for their trails and bike lanes. Let's be honest and upfront on who the "robust input" came from.

    RESPONSE: The poll referenced in this plan was conducted by the US Department of Transportation and is applicable to this plan as they approve MPO plans. Please refer to Appendices A-C to review all of the unedited comments from public meetings, stakeholder meetings, and meetings with our Technical Advisory Committee.

21. Page 95 –Complete Streets-you talk about reducing traffic lanes to provide for bike lanes, eliminating parking place, this is the mindset that you just want us out of our cars.

    RESPONSE: These statements support locally adopted Complete Streets policies.

22. Page 99- Support proposed City of Las Cruces sustainability plan-How can you support something that you have not seen?

    RESPONSE: MPO supports the development of the plan. This policy will be clarified.

23. Page 106-Begin including pedestrian and bicycle traffic counts-You have been touting how much we need bicycle paths and you have absolutely no local data. Yet on page 107 you tell us that you are visualizing techniques that are applied liberally throughout MPO documents and website, so you are visualizing a future based on information you haven't got yet. Traffic counts are done on an ongoing basis, yet why has nothing been done in the past to gauge walkers and bicyclists?

    RESPONSE: Data collection for non-motorized modes is a nationwide challenge. Automatic counters are insufficient for measuring those modes. MPO staff is researching ways to collect this data. Until then, our public involvement process, as well as that of the City and County, indicates that there is desire for these

facilities to be implemented.

24. Page 141-What is the estimated cost of the new thoroughfare connections?

    RESPONSE: These projects are derived from the public participation held for plan development. Not all projects have had a detailed engineer's cost estimate prepared. Please see Chapter 7 for those projects that may interest you that have a cost estimate already prepared.

25. Page 142-What is the estimated cost of the pedestrian improvements?

    RESPONSE: These projects are derived from the public participation held for plan development. Not all projects have had a detailed engineer's cost estimate prepared. Please see Chapter 7 for those projects that may interest you that have a cost estimate already prepared.

26. Page 144- what is the estimated cost of signage and striping?

    RESPONSE: These projects are derived from the public participation held for plan development. Not all projects have had a detailed engineer's cost estimate prepared. Please see Chapter 7 for those projects that may interest you that have a cost estimate already prepared.

27. Mankind's initial travel was on foot, then went to horseback and wagons, to trains, then to bicycles and then to the automobile, now the City wants to start the course to reverse all our previous transportation progress forcing the citizens of Las Cruces to ride your bike or walk so the carbon footprint will be minimized as you get out of your car.

    RESPONSE: Mankind engages in many forms of transportation; then and now. We are required to look at conditions for all users and modes.

28. What is the monthly cost to run the bus system to El Paso and what is the income stream. How much money per month is the bus system loosing? $945k.

    RESPONSE: $945,000 per year divided by 12 months is $78,750 per month. Revenue to operate the system is provided by the Federal Transit Administration and directed through the NMDOT. Please contact NMDOT for operating statistics.

29. We are spending 28 per cent of our transportation dollars on public transportation and we don't know how many people we are serving and at what cost? The budget is $6.6 million dollars

    RESPONSE: Twenty eight percent represents the proportion of maintenance and

operating costs for public transportation. When all funding is considered, that percentage drops to 17%. The total funding is comprised of funds from the Federal Transit Administration (FTA) plus the required local match. If that local match was not made, those funds would be reallocated to Santa Fe and Farmington.

30. What is the estimated cost to run rail service from Las Cruces to El Paso?

    RESPONSE: From Chapter 7 page 141: The estimated capital costs range between $175,000,000 and $735,000,000. The wide range is due to uncertainty in the costs of right of way. Annual operating costs would be estimated at $12,300,000 per year.

31. What is the annual ridership of Roadrunner? Is it true that Roadrunner is being subsidized 94.7%?

    RESPONSE: From Chapter 3 page 42: in 2009 the annual ridership was 656,590. Farebox recovery typically ranges from 10-12%.

32. Page 173-A great deal of interest in establishing commuter rail. What is the source of that statement? Is it local interest or from the interest of national sources? What survey indicates that or is it just someone's opinion. What constitutes a great deal of interest?

    RESPONSE: Commuter rail has been a topic of discussion at recent joint El Paso-Las Cruces City Councils meeting and has garnered interest from Congressmen Teague and Reyes. Also, the topic was repeatedly brought up during public comments during first two rounds of Transport 2040.

33. After meeting with staff at the open houses last week, I asked for details on a number of issues that I have not received, including the number of people being served by public transportation, the number of riders to El Paso and back on the commuter bus, how many buses per day are going to El Paso and what is the amount of subsidy (percentage) the taxpayer is paying per rider for the commuter bus and for each Road Runner rider. I asked for the name of the Rutgers study that was quoted. I have not received any of this information.

    RESPONSE: Gold Route ridership is provided in Figure 3-32. Please contact NMDOT for operating statistics.

34. My point on the public transportation questions is what is the cost benefit ratio. I was only answered that this is a poor county and it is our (governments) obligation to provide public transportation because many people do not have cars. I asked, "How many people in Las Cruces do not have cars?" No one could give me an

answer. However I was told that it was a violation of Title 6 of the Civil Rights Laws not to provide transportation. This needs to be clarified.

RESPONSE: Cost-benefit ratios are not the only tools to measure the effectiveness of public services, including roadways. Public services require subsidies to operate, maintain, and expand facilities and hire personnel. Benefits from the public transportation system include providing people with access to jobs, services, and society and viable transportation options.

Quick Facts Box 1 on page 18 with data from 2000 Census show that Doña Ana County has double the national percentage of households below the poverty line. Five percent of households in Doña Ana County do not have a car. Additionally, from the 2001 Las Cruces Travel Survey, 6.07% of households in the Las Cruces Metropolitan Statistical Area do not own a car and another 33.72% only have one car.

Metropolitan planning is subject to the following Department of Justice guidelines. According to the publication Transportation Planning Process: Key Issues, published by the Federal Highway Administration, "The goal of Title VI/ Environmental Justice (EJ) is to ensure that services and benefits are fairly distributed to all people, regardless of race, national origin, or income."

The bottom line is that this "Plan" is seriously flawed and does not represent what is going on or the true future transportation needs of the region. This plan needs to be an objective, factual plan. It is filled with opinion and subjective comments that make it anything but objective as the true future of our transportation needs.

As it is presented it is social engineering. Too many conclusions are made based on opinions, data that comes from major cities or national studies and worst of all, conclusions are being made with out local studies or surveys of actual bike riders, bus riders or asking the public if they want to pay the $793 million this program is expected to cost over the next 30 years.

Thank you for your time in considering these comments.

Dave Roewe
Executive Director
BIA of Southern New Mexico

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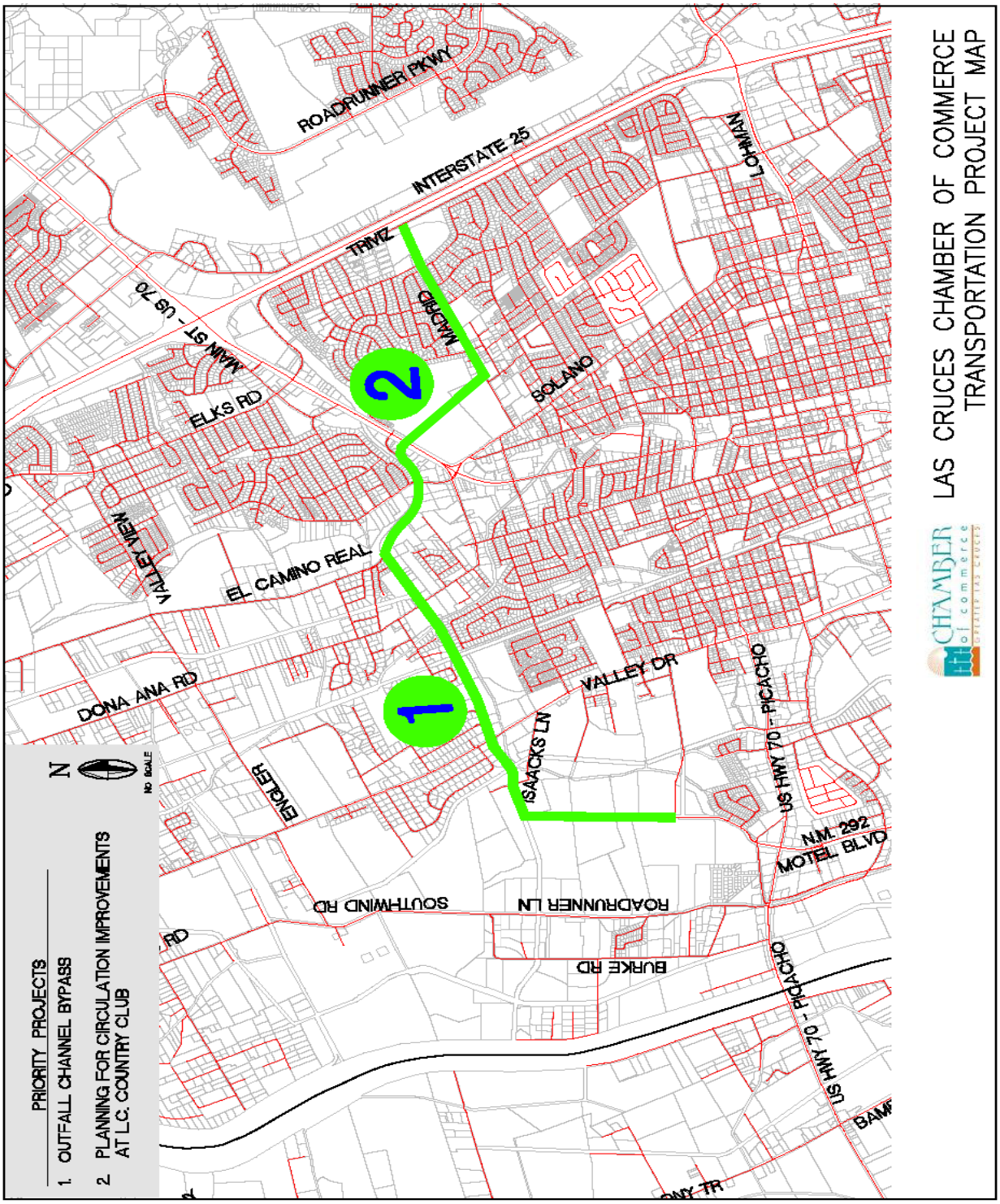
Greater Las Cruces Chamber of Commerce
May 18, 2010



APPENDIX C

MPO Technical Advisory Subcommittee Meetings

Technical Advisory Committee (TAC) Meetings/Topics Discussed:

TAC monthly meetings beginning in 2008
November 6, 2008: Land Use and Transportation and the Major Thoroughfare Plan
December 5, 2008: Air Quality and Planning and Environmental Linkages
December 11, 2008: Performance Measures and Congestion Management
December 11, 2008: Safety and System Maintenance and Operations
March 13, 2009: Pedestrian and Trail Planning
March 20, 2009: Transit and Bike Planning
March 12, 2010: Transport 2040 Map Review
March 19, 2010: Transport 2040 Map Review

Technical Advisory LRTP Kick Off Committee Meeting, November 6, 2008

Topic: Land Use and Transportation and the Major Thoroughfare Plan

Notes from Easel Pad:

- Concern about taking into consideration the Military influx
- Level of Congestion mapping a good idea using the Cheyenne example of LOS parameters
- Remember that the market and the placement of a roadway drive development when planning
- Need to get private sector perspective
- Need to bridge community gap – not sure what this means??
- Questions about if the MPO boundary area needs to be revisited?
- RTD is important for its regional scope. Need to include, for example, transit service to Sunland Park
- Concern about schools placements and traffic – i.e. on Jornada and Sunland
- Concern about commercial development at arterials being auto-centric - idea to have commercial areas adjacent to arterials and not bisecting
- Access Management needs to be looked at
- US 70 highway designation may want to be made distinct by showing it labeled as I-25 to I-10 rather than Main and Picacho
- Lubbock, Texas as example for on and off ramps??

TAC Subcommittee on Air Quality and Planning and Environmental Linkages, December 5, 2008

Agenda:

Overview:

National:

National Statistics

USDOT Vision for 2030

State:
Governor's Task Force Vision
NMDOT Guiding Principles
NMDOT Commitment to Environmental and Energy Action

Regional:
Example Environmental Mitigation maps
Current MPO Long Range Transportation Plan Policies
Local Air Quality Issues
Up and coming Environmental Issues
Planning and Environmental Linkages

Feedback:
Analysis of Thoroughfare Alignments and Environmental Mitigation
Discussion of overall Planning and Environment Vision and Goals
What are we missing?

Notes:

National statistics regarding air quality and wetland mitigation. The overall decrease of key air pollutants, but the increase of carbon dioxide, especially as it relates to transportation.

Air quality in our area: there is some potential for all of DAC becoming a maintenance area due to air quality issues in the Sunland Park area. Ozone is in violation in this area. Particulate pollutants are also high – these are mostly from unpaved roadways. Lowering speed limits can sometimes be helpful.

United States Department of Transportation's overall goals/visions for the future of our transportation system including: Safe and Less Congested, Energy Independent. And Environmentally Sustainable

Our Communities Our Future Governor's Task Force a report that includes information about Air Quality and Transportation issues in New Mexico. An entire toolkit on transportation and on our environment and natural resources is available.

New Mexico Department of Transportation's Guiding Principles which include:

- Multimodal Transportation
- Environmental Responsibility
- Partnership with Local Governments
- Partnership with Tribal Governments
- Safety and Security

- Efficient Use of Public Resources
- Economic Vitality

The NMDOT also is committed to, in their **Commitment to Environmental and Energy Action** (2003), the following (this is one item of 9):

> Promote innovative planning and design that avoid adverse impacts to the natural and human environment, including *effects to neighborhoods, low income and minority populations, farmlands, endangered species, wildlife habitat, wetlands, water and air quality, visual resources, cultural landscapes, and archaeological and historic sites*, and implement creative mitigation program to replace, restore, and enhance these resources.

MPO Policies as they relate to environmental issues were discussed. These are included in a separate file and you are strongly encouraged to evaluate them. Organization of the next long range transportation plan as it relates to being more connected and integrated instead of separate elements. A section particularly focused on environmental issues.

Other items discussed:

- What constitutes rural and urban areas and how the transportation system relates to these different environments?
- What type of density is needed for good Transit Oriented Development? (Recommendations where at least 15 units/acre).
- Need to identify areas that need to be restricted from growth and maintain rural character, and those places where the urban area could become denser.
- The link between Planning level analysis and Project level analysis as it concerns NEPA and other environmental assessments. A discussion of how Madrid-Sonora Springs handled these issues.

Map Discussion:

A map was analyzed that contained information on BLM lands, areas of critical environmental concern, recreation, and special managements areas. Trails (cultural, recreational, and historical), 20 foot contours, wetlands, wilderness areas, arroyos, flood plains, historic districts, low moderate income areas, animal involved crashes, and land ownership were included.

- Roads particularly in the southern area of the county and whether they should be along existing roadways or new areas (particularly west/east connections).
- Need for west/east connecting roads.
- Limited access roadways were suggested.

- Not widening existing roads was suggested, as was maintaining rural character.
- Access Management policies and guidelines.
- Coordination with EP MPO, especially as it relates to the connection with their loop roadways that could eventually extend to High Mesa road.
- Railroad yard and potential of freight rail along the southwest side of the Las Cruces metropolitan area.
- Connectivity as an important aspect of the thoroughfare system particularly as it relates to collectors.
- Concern was expressed over maintaining the bike lane systems on arterials and collectors.
- Rural versus Urban transitions as important to handle better or provide some policy on.
- Recommendation of a policy to encourage the state to change their laws regarding what impact fees can be used for.
- Public Transportation is very needed in the county/rural areas.
- Arroyo crossings need to be at 90 degree angle when aligning thoroughfares.
- Terrain and BLM designations could change some alignments, particularly the northwest loop, around goat hill, and around A mountain.

TAC Subcommittee on Performance Measures and Congestion Management, December 11, 2008

Agenda:

Overview:

Performance Measures, Congestion Management Process and Transportation Demand Management
Types of Measurement Areas
Example Process and Screening
Alternative Performance Measures
Definition of Traffic Congestion
LC MPO Model V/C Example

Feedback:

What should the performance goals be?
What are some good performance measures?
How would we like congestion to be determined and depicted?
What can the MPO realistically track and be responsible for?

Notes:

Accessibility (the ability to reach desired destination)

Accessibility can be improved by land use development in addition to transportation options and modes. Land use is important as land uses that are in closer proximity to residential areas can decrease the lengths of trips and perhaps provide more possibility for another mode to be used.

Some examples include:

- Smart Growth and New Urbanism principles
- PicQuik on University and Don Roser is an example of how traffic patterns may be altered by land use patterns
- Walmart is another example of changing traffic patterns especially on the east side

Mobility (the physical movement from one place to another)
Mobility has to do with the different modes and therefore options that are available to move from point A to point B.

Some issues include:

- Bike facilities disconnected
- Transit service is lacking in County areas
- West/East roadway connections are needed

Congestion Management, Level of Service and Volume to Capacity Ratio
Volume to Capacity analysis needs to be extended to the county areas and data collected on traffic volumes on certain arterials. Forecasts are needed that will show the V/C ratio or equivalent LOS in the future in order to answer questions of when we need to add lanes and start budgeting for the improvements of certain roadways. City of Las Cruces uses travel time as a performance measure calculating the time it takes to get from A to B on the arterial system.

Some examples of congested areas include:

- Elks/Main intersection is very especially during NMSU school year
- Telshor/Lohman is a congested intersection
- Town of Mesilla has congestion issues that are both positive in that they provide a nice environment to walk around in and frustrating for drivers

Areas in County that could be congested:

- Carver Road
- Ohara (Anthony)
- Shalem Colony
- Bamert
- Lisa
- McCombs (Chaparral)
- Valley and Picacho

Access Management
Access Management needs to be considered in LOS and policies developed for

roadways as well as retrofitting opportunities
Turning movements need to be considered and tracked

Environmental, Social, and Health Issues
Unpaved roads can be unsafe and unhealthy as well as detrimental to the environment creating particulate matter increases
Over 30% of people do not have access to transportation, especially in the County area
Other demographics from the new census will also be useful to explore these issues

Safety
Safety is an issue for all modes. Most discussed was bicycling safety, sharing the road with automobiles and some pedestrian concerns. However, safety is an issue that some traffic calming be needed. The actual speed on a corridor is important to track for safety purposes. One of the performance measures on the Solano road diet is related to a decrease in crashes and speed studies which from a safety perspective is beneficial for all modes.

Some safety issues include:

- Crosswalks are perceived to be safe, but are not always safer – care needs to be taken when placing crosswalks
- Safety needs to be considered in relation to bicycle facilities, bicycle and driver behavior, and cell phone usage.
- Lohman is hard to cross safely in part because there is not enough time to get all the way across, especially for the elderly
- Summit Court and Telshor is perceived as a dangerous crosswalk
- Crash data could be explored in relation to age, time of day, and time of year
- County has narrow two land roadways without shoulders

Education
Education is greatly needed for drivers and bicyclists. Education needed on rules of the road was also discussed. Education on general planning principles and ideas also need to be considered, for example, the benefit of having commercial services in close proximity to residential areas.

Some education ideas include:

- A permit for riding a bicycle
- Department of Motor Vehicle inclusion of bicycle issues in driving permit exams
- Education on appropriate usage of bicycles for school children
- Going to people/groups and discussing the issue of driver and cyclists sharing the road
- New Mexico is Yield State which means that you must yield to pedestrians in the crosswalk that are walking within the crosswalk in the direction that you are

travelling
- State law says that bicyclists should act as vehicles, but also does not explicitly make it illegal for bicycling on sidewalks

Public Outreach and Coordination

Public outreach can be very difficult. It is important to not dismiss subjectivity, and remember that in some cases perception is everything.

Some ideas include:

- Ask as oppose to invite
- Take into account people's perceptions when making decisions
- Have targeted Outreach and Focus Groups
- Tap into different groups, especially before and after projects
- Provide incentives for people to come and get their bike permit for example
- Permits could also be a disincentive however because some people simply will not register (especially in the County), such as low-income, illegal citizens, or those that have a felony
- EP MPO coordination and recognition of projects on arterials (especially in the south area of the County)
- Yearly report to committees

Data Collection Clearinghouse

Data collection and the MPO being a resource center or clearinghouse for data came up quite a few times. If the MPO was able to maintain data and provide analyses on a planning level that could then help the local jurisdictions in their prioritization and project level analyses this would be very useful for current and future transportation issues. Data collection also needs to be done for the impact that land use and zoning may have on traffic patterns and volumes.

Solano project was discussed. How does this road diet affect the overall traffic flow? How can we study the before and after? What types of performance measures were used? Recommendations for crashes, speed studies, turning movements, and travel time.
Solano, for example, could be dispersing traffic. Is actually there more traffic on parallel streets?

Other ideas suggested:

- Need to consider corridor studies where a whole segment is analyzed
- Seasonal traffic differences, for example on University to determine through versus destination traffic
- The kind of traffic is produced by different land uses
- Identifying areas of congestion now and in the future
- Data warehouse for jurisdictions and public

- Getting base line traffic count information for the County
- Going out and looking at perceived congestion
- Providing a yearly report card
- Where are the traffic counts being done in the County – coordination needs to take place on this
- Routine turning movement counts
- Taking a look at Anthony round-a-bout on S. Main
- Crash Rates – Intersections and Segments
- Centralized database including history of traffic and crash data
- Depiction of development patterns over time and potential for future land use development in certain areas of the region – coordinate with Vision 2040 on this
- Demographics for mobility and accessibility in metropolitan area
- Collect regionally oriented data

TAC Subcommittee on Safety and System Maintenance and Operations, December 11, 2008

Agenda:

Safety

What makes safety an important factor in transportation planning?

What are the roles of MPO and state DOT in transportation safety?

Identify effective strategies to reduce crashes.

Analyze crash data.

Four E's of transportation safety – Engineering, Enforcement, Education and Emergency Services.

Help identify focus areas and funding priority.

Participate in developing safety campaigns.

Coordinate with State Strategic Highway Safety Plan, law enforcement agencies, and emergency service providers.

Help develop safety management systems that monitor accident locations over time.

Systems Maintenance and Operations

What is System Maintenance and Operations?

What are the requirements for considering management and operations in the transportation planning process?

What is role of MPO?

Identify Strategies

Coordinate all agencies

Develop performance measures

What is role of State DOT?

Rural coordination and essential part of coordination because they have

responsibility for a significant portion of the transportation system

Notes:

Access Management Plans seems to be something that everyone is interested in at least pursuing by getting together employees from the three jurisdictions working together on a plan. MPO Staff needs to send out a formal invitation through the appropriate department heads.

West Mesa Industrial Area is a concern as far as thoroughfares and transit. How will we service the area and provide connections?

Southern County area is in high need of transit services. Park and ride and carpooling are already taking place with teachers in the southern county area. In addition, many who live in Chaparral, for example, work in Texas citing a need for good transit connection between Las Cruces and El Paso with appropriate stops in between.

There was a discussion of what preferential treatment for Transit is such as, bus only lanes, pre-emptive signalization, etc. and how these might be employed in the future.

There was also a discussion of the location of land uses, specifically services that are large trip generators, such as hospitals, and how this affects the transportation system, specifically as it relates to congestion. It is possible that, in part, with the east side of the metropolitan area filling in and the connection of Sonoma Ranch all the way from US 70 to University that this may be helpful in dispersing trips.

The need for better coordination among governmental entities and other large public services, businesses, and organizations to discuss planning issues sooner was cited. There needs to be a stronger policy regarding all major jurisdictions working together on all major decisions. For example, is there discussion/coordination about the Magistrate Court moving, location of new Schools, and hospitals?

Transit hubs and destinations and how activity centers and corridors could play a role in good land use/transportation problem-solving was discussed and recommended.

Crash data and traffic counts information was discussed and the technical information available on the web was presented. The University of New Mexico Division of Governmental Research has all sorts of crash data available on the web and in GIS form. There seems to be a need more accurate bicycle/pedestrian crash reports. We also need to expand modeling to account for all modes.

TIAs were discussed. There may be a need to expand TIAs to account for multi-modal analysis and a more regional analysis of the location of a new service/school etc. and its impact on the overall transportation network.

Infrastructure planned in advance would be helpful for supporting the capacity to handle new growth. Does this mean support of Tax Increment Financing? With new growth on the edges – does there need to be responsibility for paying for the consequential signal-timing improvements needed, for example.

It was recommended that it is clear that there is data and research that backs up what is in plan to show that it is not just the opinion of the MPO but best practice. It was discussed that perhaps having technical documentation as supplements to the plan could provide thorough support documentation.

Matrices from the NMDOT Safety Plan were reviewed and it was recommended that these types of graphs and visuals be used with perhaps footnotes or supplements with more detailed technical information. This may provide for more flexibility with updating the plan as well when situations change over time.

TAC Subcommittee meeting on Pedestrian and Trail Planning, March 13, 2009

MPO staff brought maps from our public input meetings to show feedback we received on the MPO Vision and Goals, the pedestrian planning and priorities, and the trail system map. We also discussed the new layout of the maps.

Notes:

- The visuals such as the pictures of different types of facilities on the maps seemed positive – these allowed for a better idea of the types of facilities from a design and for example from a parent's standpoint because they should that there could be drainage channels along the trail
- Photos or information depicting difference between paved, unpaved, lit, unlit, etc. would be useful
- Other items that might be included on the maps would be schools, major activity centers, parks, bus routes
- A possibility of an online interactive map would be beneficial
- Kiosks that provide information for people on how to use bus system, bike facilities, etc. would be beneficial
- Outfall channel could be improved as a trail
- Look for destinations that people would like to go to such as La Llorona park/ trail and other important drains/laterals
- Recognize the difference between recreational and utilitarian uses
- Suggestion of an inner loop and outer loop
- Sections near/along Hadley that need to be focused on
- Recreational areas are periphery and may need to be served by some radial routes

- Most of the connection should be on alternate networks but sometimes in order to make complete connections would need to bring the trail adjacent to the roadway
- Separate paths on roadways only when feasible and minimal conflicts
- Need to have a good access management plan to deal with conflicts for trails if adjacent to major roadways
- Need access to Bosque park by trail
- Around Pajaro road may be a southern connection of a loop
- Getting across the river is an issue – Mesilla Dam provides access but may be some legal issues
- Need to work with IBWC
- Connection from Snow road to river would be beneficial but would need some sort of provisions in a subdivision ordinance in order to acquire ROW in advance if through property that could be subdivided
- Need to look at making certain trail priorities
- Look at subdivision regulations and how they handle trails
- Use laterals in Mesilla
- Parks need to be connected
- Subdivisions are sometimes hard to navigate through because they only have one access point or if there are two they connect to the same roadway – need to provide more than one connection in a different direction for overall connectivity even if it is just for bicyclists and pedestrians
- Some concern over how well neighborhoods would like this
- Some concern over emergency issues
- Need to talk with the fire department about this
- Need education about connectivity and the health and safety benefits
- Need more public input on this
- Good prototypes to show people would be helpful
- Possibly show people through modeling/illustration what 400 more trips means
- Some discussion on cluster subdivision ordinance and how conservation areas could be developed with trails
- Look first at main laterals and don't worry about smaller ditches – stick to main connections
- Continue to have good connections and some bridges as needed
- Mesilla Drain goes into Burn Lake and ends up in Mesilla
- Doña Ana lateral is a good connection
- Doña Ana Drain
- Park Drain
- Discuss whether to pave or not to pave
- What are equestrian considerations?
- Perhaps more inner loop is paved and outer loop is unpaved
- City arroyo plan is discussing providing buffer along arroyos and working on developing design standards to provide trails

- Do there need to be equestrian accommodations in urban areas?
- Equestrian needs are very specific and there are existing loops that could be accommodated – some main concerns are not having their access blocked at culverts/bridges over arroyos and interest in having some easements on BLM lands where trails are already established
- Should be GIS files at some point from public lands groups

TAC Subcommittee meeting on Transit and Bicycle Planning, March 20, 2009

MPO staff brought maps from our public input meetings to show feedback we received on the MPO Vision and Goals, the bicycle planning and priorities, and the transit planning for RoadRUNNER transit and the South Central Regional Transit District.

Notes:

- Transportation needed to/from rural communities to Las Cruces
- Information on where current transit goes but also the future plans and the frequency of service
- Overall there is a need for more frequent transit service – having very convenient transit service would be the only way to truly address some congestion issues with transit service
- Peak hour service needs to be analyzed and determined where this is needed
- Question as to whether there will be service fees for the regional transit system
- Discussion on charging less or more at peak hours
- Discussion of vehicle miles travelled and congestion pricing and whether these are foreseeable in our area
- Interest in where Park and Rides are and how to improve them
- JARC (Job Access Reverse Commute) federal money was discussed that Las Cruces can receive but needs matching funds for - may be useful for providing a looped route if a LC-EP commuter bus service is started
- There is some talk of a commuter bus service being started the coming summer
- Discussion of city bikes or loan a bike program
- How do we best fund paratransit? Federal regulations require paratransit service to all the areas that are served by the existing fixed route system – 65% of trips are through senior transit for dial-a-ride
- There is also a large need for paratransit in the county areas
- Concern over a need for more crossing over the interstate – perhaps some that are just bicycle/pedestrian crossings
- Some informal crossing already exist, for example, under I-10 and I-25 that may also be formalized to provide some connectivity
- Cycle zones were discussed. Cycle zones are a Portland, OR initiative that looks at various factors of areas of the City that are then analyzed to determine in

what respects each area needs improvement. This sort of analysis recognizes the different needs of different areas because of the barriers, topography, street connectivity and other issues they face.

- There was an interest in overall developing better performance measures and utilizing similar measurable goals like the cycle zone analysis.
- Discussed activity centers depicted on maps – these are general locations that the MPO expects many trips to end at. A draft GIS analysis of the proximity of large activity centers in the Las Cruces area was done that shows a roughly 2 mile distance along the street network from each other. It was discussed whether there were schools in all these buffers – this will be looked into.
- Walking to school was considered a very important part of the transportation system.

Other comments:

- Need more interchanges along I-10 in the south valley between Las Cruces and El Paso
- Possibility of having a map with existing facilities and the plans and then another map with proposed facilities
- Interest in the Bypasses and what the priorities are for them
- Scale of maps seemed appropriate
- Interest in different colors to show as time progresses what and where the plans are for improvements to be made - Cheyenne maps were nice examples
- Would like Volume to Capacity ratio shown visually on a map for the long range plan

APPENDIX D

Thoroughfare Intersection Crash Rates

THOROUGHFARE INTERSECTION CRASH RATES					
Street_1	Street_2	Crashes 2004-2006	Average 2004-2006	Crash Rate	Traffic Volume
EL PASEO	IDAHO	97	32	3.05	29055
MAIN	SOLANO	119	40	3.03	35873
LOHMAN	TELSHOR	140	47	2.88	44465
LOHMAN	WALNUT	96	32	2.23	38361
IDAHO	SOLANO	51	17	2.14	21745
EL PASEO	BOUTZ	75	25	2.05	33456
ELKS	MAIN	95	32	2.03	42781
ALAMEDA	AMADOR	46	15	2.00	20974
TRIVIZ	UNIVERSITY	70	23	1.99	32171
BOUTZ	VALLEY	47	16	1.96	21887
AMADOR	SOLANO	64	21	1.92	30504
ALAMEDA	LOHMAN	40	13	1.88	19385
AMADOR	THREE CROSSES	25	8	1.83	12457
MADRID	SOLANO	32	11	1.80	16234
MAIN	PICACHO	69	23	1.79	35127
AVE DE MESILLA	MAIN	50	17	1.79	25443
MAIN	VALLEY	40	13	1.75	20883
SEVENTEENTH	HADLEY	14	5	1.74	7353
SOLANO	SPRUCE	60	20	1.73	31596
MISSOURI	TELSHOR	50	17	1.68	27217
MADRID	MAIN	47	16	1.66	25925
CHURCH	LAS CRUCES	18	6	1.60	10286
PICACHO	VALLEY	64	21	1.53	38147
MESQUITE	LOHMAN	22	7	1.53	13161
MISSOURI	TRIVIZ	53	18	1.51	32009
SOLANO	UNIVERSITY	48	16	1.50	29234
UNIVERSITY	VALLEY	27	9	1.50	16412
LAS ALTURAS	UNIVERSITY	29	10	1.50	17710
ESPINA	UNIVERSITY	57	19	1.46	35673
EL PASEO	UNIVERSITY	54	18	1.45	33955
AMADOR	MAIN	43	14	1.45	27128
MAIN	UNIVERSITY	28	9	1.40	18288
MOTEL	PICACHO	37	12	1.38	24415
AMADOR	MESQUITE	27	9	1.29	19075
MISSOURI	SOLANO	36	12	1.28	25721
AMADOR	ESPINA	23	8	1.28	16418
SPRUCE	TRIVIZ	29	10	1.27	20779
GRIGGS	TRIVIZ	16	5	1.22	11954

THOROUGHFARE INTERSECTION CRASH RATES					
Street_1	Street_2	Crashes 2004-2006	Average 2004-2006	Crash Rate	Traffic Volume
AVE DE MESILLA	VALLEY	52	17	1.19	40070
AMADOR	CAMPO	23	8	1.18	17816
EL PASEO	MAIN	37	12	1.16	29206
EL PASEO	WYATT	29	10	1.16	22737
LOHMAN	SOLANO	55	18	1.11	45084
DON ROSER	MISSOURRI	30	10	1.10	25018
ALAMEDA	GRIGGS	14	5	1.10	11602
CAMPO	LOHMAN	27	9	1.09	22550
HADLEY	MOTEL	16	5	1.08	13507
LOCUST	MONTANA	6	2	1.07	5107
TELSHOR	UNIVERSITY	27	9	1.05	23383
GRIGGS	WALTON	13	4	1.05	11344
MONTANA	SOLANO	16	5	1.04	14060
ESPINA	IDAHO	18	6	1.03	15987
ALAMEDA	COURT	12	4	1.02	10772
BOUTZ	MAIN	25	8	1.01	22576
EL CAMINO REAL	SPITZ	11	4	0.99	10173
STERN	UNION	22	7	0.98	20503
CAMPO	LAS CRUCES	11	4	0.98	10212
SPRUCE	WALNUT	16	5	0.96	15284
AMADOR	VALLEY	42	14	0.93	41264
ALAMEDA	PICACHO	31	10	0.92	30671
AMADOR	NM292	25	8	0.88	25992
LOCUST	WYOMING	9	3	0.84	9737
LOHMAN	MAIN	25	8	0.81	28079
FARNEY	MAIN	11	4	0.79	12733
NM292	PICACHO	13	4	0.78	15189
ALAMEDA	HOAGLAND	10	3	0.76	12091
LOHMAN	ROADRUNNER	9	9	0.74	11139
MULBERRY	SOLANO	15	5	0.74	18513
HADLEY	SOLANO	16	5	0.71	20714
HADLEY	VALLEY	18	6	0.71	23247
HADLEY	WALNUT	7	2	0.70	9195
DEL REY	MARS	8	3	0.70	10393
HOAGLAND	VALLEY	13	4	0.69	17212
ESPINA	LOHMAN	17	6	0.68	22897
SPITZ	THREE CROSSES	13	4	0.68	17509
LOCUST	MISSOURI	18	6	0.67	24701

THOROUGHFARE INTERSECTION CRASH RATES					
Street_1	Street_2	Crashes 2004-2006	Average 2004-2006	Crash Rate	Traffic Volume
EVELYN	MULBERRY	2	1	0.67	2731
MESQUITE	SPRUCE	11	4	0.62	16083
LAS CRUCES	WATER	7	2	0.61	10479
IDAHO	TRIVIZ	7	2	0.61	10495
FOOTHILLS	LOHMAN	20	7	0.60	30562
EL PASEO	FARNEY	12	4	0.60	18292
SEVENTEENTH	PICACHO	14	5	0.59	21831
ALAMEDA	LAS CRUCES	8	3	0.58	12527
AMADOR	MELENDRES	13	4	0.57	20742
MAIN	UNION	15	5	0.56	24289
FOOTHILLS	TELSHOR	18	6	0.55	30156
IDAHO	WALNUT	3	1	0.54	5090
ESPINA	HADLEY	1	1	0.54	1689
SPRUCE	TELSHOR	13	4	0.53	22384
MCCLURE	VALLEY	10	3	0.52	17476
ALAMEDA	MADRID	7	2	0.51	12566
LOCUST	UNIVERSITY	18	6	0.49	33339
EVELYN	SPRUCE	7	2	0.49	13032
SEVENTEENTH	AMADOR	8	3	0.49	15050
CHURCH	GRIGGS	8	3	0.44	16524
MAIN	WATER	6	2	0.43	12706
IDAHO	LOCUST	4	1	0.42	8712
MAIN	MELENDRES	7	2	0.38	16912
CAMINO DE REX	MAIN	15	15	0.37	37013
ALAMEDA	MCCLURE	4	1	0.36	10177
DON ROSER	IDAHO	2	1	0.34	5447
SOLANO	WYOMING	3	1	0.33	8426
ALAMEDA	PARKER	3	1	0.32	8655
GRIGGS	WATER	6	2	0.32	17119
IDAHO	MESQUITE	5	2	0.32	14220
BROWN	VALLEY	9	3	0.31	26634
CAMPO	HADLEY	2	1	0.30	6183
IDAHO	TELSHOR	7	2	0.29	22222
HADLEY	MESQUITE	1	1	0.29	3162
LOHMAN	WALTON	12	4	0.28	39651
ESPINA	MISSOURI	7	2	0.27	23955
BROWN	MELENDRES	1	1	0.26	3524
COURT	MELENDRES	1	1	0.24	3735

THOROUGHFARE INTERSECTION CRASH RATES					
Street_1	**Street_2**	**Crashes 2004-2006**	**Average 2004-2006**	**Crash Rate**	**Traffic Volume**
MESQUITE	SOLANO	3	1	0.23	12003
MADRID	MESQUITE	2	1	0.23	7782
MULBERRY	TRIVIZ	2	1	0.22	8255
MELENDRES	PICACHO	5	2	0.22	20419
PARKER	VALLEY	4	1	0.22	16270
TELSHOR	TERRACE	3	1	0.19	14653
HADLEY	TRIVIZ	2	1	0.16	11076
HILLRISE	TELSHOR	3	1	0.13	21515
CHURCH	HADLEY	1	1	0.12	7634
MADRID	SOLANO	2	1	0.10	17732
NM 292	MOTEL	1	1	0.07	13789
MAIN	WYATT	1	1	0.06	15917
FARNEY	VALLEY	1	1	0.06	15605
TERRACE	UNIVERSITY	1	1	0.05	18003

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APPENDIX E

Mobility Zone Assessment Matrix

SUSTAINABLE LAND USE AND TRANSPORTATION		
Priority 1	**Principles**	**Mobility Zone (MZ) Assessments**
1	Provide Connections	Street Connectivity Index
2	Livable Communities	Land Use Diversity
3	Increase Safety	Intersection Crash Rate Average
4	Provide Connections	Bicycle Facility Connectivity Index
5	Livable Communities	School Catchment
6	Provide Connections	Number of crossings from one MZ to another
7	Multimodal Options	Block Length
8	Provide Connections	Transit Stop Catchment
9	Multimodal Options	Bicycle Facility Miles
10	Maintain and Improve	Miles of Unpaved Roadways
11	Maintain and Improve	Miles of 4-lane roadways
12	Livable Communities	Park Catchment
Priority 2	**Principles**	**Mobility Zone (MZ) Assessments**
1	Increase Safety	Area of High Bike Crashes
2	Increase Safety	Area of High Pedestrian Crashes
3	Livable Communities	Land Use Distribution (Patterns)
4	Livable Communities	Land Use Density (Units per Acre, Floor to Area Ratio)
5	Increase Safety	# of Intersection Crash Rates above City average
6	Livable Communities	Jobs per Acre
7	Livable Communities	New/Housing per Acre
8	Maintain and Improve	Vehicle Miles Traveled
9	Multimodal Options	Transit Miles
10	Livable Communities	Number of Schools
11	Livable Communities	Number of Parks
12	Maintain and Improve	Mobility Zone Interconnectivity
13	Preserve Resources	Miles of Existing and Potential Trail Facilities
Priority 3	**Principles**	**Mobility Zone (MZ) Assessments**
1	Preserve Resources	Area of Open Space
2	Maintain and Improve	Density-miles of roadway per area
3	Provide Connections	Average distance within zone to commercial destinations
4	Preserve Resources	Area of Parks

APPENDIX F

Major Thoroughfares with Constrained Right of Ways

Constrained Right-of-ways (ROWs)

Constrained right-of-ways (ROWs) are roads that are restricted from adding through lanes to meet current or future capacity due to physical, environmental or policy constraints. A roadway may be physically constrained by immediately adjacent development, topographic constraints, or when a facility has reached the maximum motor vehicle lane per design standards. Also, a roadway may be policy constrained by impacts of roadway expansion on the environment, neighborhoods, and/or local communities. For example, MPO staff has conducted study corridor reports of which the outcome consists of a recommendation to constrain the ROW for the area based on existing conditions and community input.

Usually, constrained ROWs exist in built out areas of the City of Las Cruces and in historical centers of unincorporated communities. However, rural areas may also have constrained ROWs due to environmental and topographic concerns. MPO will not ask for additional ROW in these cases. For constrained right-of-ways, the MPO recommends priority be given to strategies such as traffic signal optimization, access management, parking and loading restrictions, and parallel facilities improvements.

During the development review process, the following process should be used to determine if a ROW is constrained and to what extent:

1. analyze entire right-of-way segment between two thoroughfare intersections to average existing ROW
2. analyze entire right-of-way segment between two thoroughfare intersections to determine percentage of build out
3. analyze entire right-of-way segment between two thoroughfare intersections to determine potential for future subdivision
4. determine if MPO staff is conducting or has completed a study corridor report
5. if 80% of the segment is built out then the average existing ROW is used to determine the amount ROW acquired
6. additional ROW at the intersection could be requested regardless of the percentage of build out
7. all determinations of constrained ROW should consider current and future land use context and associated traffic impacts as determined by staff

The tables on the following pages list the currently identified constrained right-of-ways. The list does not include all constrained right-of-ways in the MPO area. The 7-step process listed above should be applied to determine if a roadway should be added to the list. If it determined that a roadway is constrained, please notify MPO staff and we will amend the list.

MPO staff will work with each jurisdiction to put together a complete list and a map to accompany the list.

Road	Classification	Segment	Established ROW
17th St.	Collector	Amador to Picacho	50
Boutz	Principal Arterial	City limits to Stern	40
Boutz	Principal Arterial	Stern to Valley	90
Boutz	Principal Arterial	Valley to El Paseo	100
Boutz	Principal Arterial	El Paseo to Espina	80
Boutz	Local	Espina to Solano	50
Boutz	Local	Solano to Locust	40
Campo	Minor Arterial	Arizona to Lohman	30-55 (varies)
Campo	Minor Arterial	Lohman to Picacho	65
Campo	Minor Arterial	Picacho to Chestnut	50
Don Roser	Collector	Terrance to Missouri	150
Don Roser	Collector	Missouri to Crestview	100
Don Roser	Collector	Crestview to Mesilla Valley Mall	75
El Paseo	Principal Arterial	University to Main	80
Espina	Minor Arterial	Wells to University	50
Espina	Minor Arterial	University to Boutz	60
Espina	Minor Arterial	Boutz to Idaho	50
Espina	Minor Arterial	Idaho to Utah	60
Espina	Minor Arterial	Utah to Amador	70
Espina	Collector	Amador to Griggs	45
Espina	Collector	Griggs to Las Cruces	80
Espina	Collector	Las Cruces to Augustine	50
Farney	Collector	I-10 to Espina	50
Hoagland	Collector	Valley to KaltenBach Armijo Lat.	50-60 (varies)
Hoagland	Collector	KaltenBach Armijo Lat. To Alameda	40
Hoagland	Collector	Alameda to L.C. Lateral	50
Idaho	Principal Arterial	Main to Burley	60
Idaho	Minor Arterial	Burley to Lees	45-55 (varies)
Idaho	Minor Arterial	Lees to Morman	60
Locust	Minor Arterial	Payne to University	40
Locust	Minor Arterial	University to Idaho	60
Locust	Minor Arterial	Idaho to Bellamah	50
McClure	Collector	Valley to Neleigh	50
McClure	Collector	Neleigh to Alameda	40
Melendres	Collector	Main to Mountain	60
Melendres	Collector	Mountiain to Picacho	50
Melendres	Local	Picacho to Parker	60
Mesquite	Minor Arterial	Idaho to Utah	65
Mesquite	Minor Arterial	Utah to Colorado	50
Mesquite	Minor Arterial	Colorado to Soledad	40
Mesquite	Minor Arterial	Soledad to Kansas	35
Mesquite	Minor Arterial	Kansas to Poplar	45
Mesquite	Minor Arterial	Poplar to Oasis	60
Mesquite	Minor Arterial	Oasis to Solano	50
Missouri	Principal Arterial	Espina to East End	70

Road	Classification	Segment	Established ROW
N. Telshor	Minor Arterial	Lohman to Commerce	55
N. Telshor	Minor Arterial	Commerce to Del Rey	70
Northrise	Collector	Del Rey to End	75-90 (varies)
Picacho	Principal Arterial	Rio Grande Bridge to Roadrunner	140
Picacho	Principal Arterial	Roadrunner Ln. to 630' W. of 17th	100
Picacho	Principal Arterial	630' W. of 17th to Mesilla Drain	120
Picacho	Principal Arterial	Mesilla Drain to Valley	100
Picacho	Principal Arterial	Valley to Melendres	80
Picacho	Principal Arterial	Melendres to Main	70
Picacho	Principal Arterial	Main to Campo	60
Picacho	Principal Arterial	Campo to Virginia	30-40 (varies)
Picacho	Principal Arterial	Virginia to Solano	50
Roadrunner Pkwy	Principal Arterial	Lohman to Las Cruces Arroyo	150
Roadrunner Pkwy	Principal Arterial	Las Cruces Arroyo to US 70	120
Roadrunner Pkwy	Principal Arterial	US 70 to Sun Ridge	60
Solano	Principal Arterial	University to Plain	50
Solano	Principal Arterial	Plain to Boutz	80
Solano	Principal Arterial	Boutz to Lohman	60
Solano	Principal Arterial	Lohman to Amador	70
Solano	Principal Arterial	Amador to Griggs	80
Solano	Principal Arterial	Griggs to Madrid	65
Solano	Principal Arterial	Madrid to Main	100
Sonoma Springs	Collector	west of Sonoma Ranch	70
Spitz	Minor Arterial	Three Crosses to El Camino Real	70
Spitz	Collector	El Camino Real to Turner	60
Spitz	Collector	Turner to Cedardale	50
Spruce	Principal Arterial	Campo to Walnut	65
Spruce	Principal Arterial	Walnut to Telshor	80
University	Principal Arterial	NM 28 to Mc Dowell	40
University	Principal Arterial	McDowell to 900' E. of Bowman	45
University	Principal Arterial	900' E. of Bowman to Turrentine	120
University	Principal Arterial	Turrentine to Locust	75
University	Principal Arterial	Locust to Telshor	95
University	Principal Arterial	Telshor to City Limits	55
Valley	Principal Arterial	University to Picacho	150
Valley	Principal Arterial	Picacho to Swartz	80-90 (varies)

APPENDIX G

Definitions

For the purposes of this plan the following definitions shall apply:

AASHTO – American Association of State Highway and Transportation Officials

Accessible Vehicle – A public transportation vehicle that provides allocated space and/or priority seating to be accessed by individuals who are disabled.

Americans with Disabilities Act of 1990 (ADA) – This Act mandates sweeping changes in building codes, transportation and hiring practices to prevent discrimination against persons with disabilities, not just in projects involving federal dollars, but all new public places, conveyances, and employers. The significance of ADA in transportation is mainly felt in terms of transit operations, capital improvements, and hiring.

Annual Average Daily Traffic (AADT) – denotes average daily traffic is averaged over one calendar year.

Bicycle and Pedestrian Facilities Advisory Committee (BPAC) – A subcommittee of the Policy Committee composed of citizens and staff members representing all local governments within the planning area. The BPAC provides technical advice regarding bicycling and walking facilities to the Policy Committee.

Bicycle Facilities – A general term denoting improvements and provisions made by public and private agencies to accommodate or encourage bicycling, including parking facilities.

Bicycle Lane (Bike Lane) – A portion of a roadway which has been designated by striping, signing, and pavement markings for the preferential or exclusive use of bicycles.

Bicycle Path (Bike Path) – A bikeway physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way.

Bicycle Route (Bike Route) – Any roadway upon which a bicycle lane is not designated but which may be legally used by bicycles.

Bikeway – Any road, path, or way which in some manner is specifically designated as being open to bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes.

Capacity – Maximum hourly rate at which pedestrians or vehicles can reasonably be expected to traverse a given point or section of roadway during a given time-period under prevailing roadway, traffic, and control conditions.

Connectivity Index – An objective measure of the connectivity of transportation facilities for a subdivision. It is equal to the number of links divided by the number of nodes. (See Link and Node definitions.) For the purposes of this plan, it includes only those links and nodes entirely within a subdivision.

Corridor – An area of land whereby the movement of goods and people could occur upon further investigation.

Demand Response Service – Any system of transporting individuals, including the provision of designated public transportation service by public entities and the provision of transportation service by private entities, including but not limited to specified public transportation service, which is not a fixed route system.

Freeway – Controlled access, multi-lane, high speed roadway designed for the safe unimpeded movement of large volumes of traffic.

Frontage Road – Road parallel to multi-lane divided roadway which separates local traffic from higher speed through traffic.

Geographic Information System (GIS) – Computerized data management system designed to capture, store, retrieve, analyze, and report geographic/demographic information.

Grade Separation – The intersection of two or more transportation facilities where no access ramps are provided between the two.

Headway – Time interval between transit revenue vehicles passing a specified point.

Highway – A general term denoting a public way for purposes of vehicular travel, including the entire area within the right-of-way.

Limited access highways should be designed to have grade-separated interchanges and no direct access to abutting properties. These highways should be designed to accommodate the safe, unimpeded movement of large volumes of traffic at high speeds over long distances.

Principal arterials should be designed to have a large multi-modal carrying capacity and provide long distance, cross-town movement. Direct property access should be limited and shared among commercial and regional uses and on-street parking should be prohibited.

Minor arterials should be designed to have a medium multi-modal carrying capacity and provide traffic movement rather than direct property access. Direct access should be limited or shared and on-street parking should be prohibited.

Collector streets should be designed to transition the requirements of traffic movement and property access while providing a connection between arterial and local streets. Residential access should be discouraged, but on street parking may be allowed.

Major local streets should have optional designs that facilitate safe and direct access to properties that have industrial or commercial uses on either or both sides and with access to or connecting collector or arterial streets.

Local streets should have optional designs that facilitate safe and direct access to individual properties, especially in residential areas. On-street parking should be allowed. Streets should be designed to encourage neighborhood identity and discourage through traffic.

Intermodal Transportation – The term referring to the interaction between people, goods, services, and different modes of transportation. Intermodal transportation is the movement of persons or goods involving the use of at least two modes of transportation. An intermodal facility is where a user or commodity transfers from one mode of transportation to another in route to a destination.

Level of Service (LOS) – The term used to indicate the amount of congestion. LOS is based on factors such as speed, travel time, freedom to maneuver, traffic interruptions, comfort, convenience, and safety. Level of service designations range from A to F, with LOS A representing no congestion and LOS F having gridlock.

Link – A section of a transportation facility (e.g., street, sidewalk, path) between intersections of facilities serving the same transportation mode.

Metropolitan Planning Organization (MPO) – The agency designated by the Governor (or Governors in multi-state areas) to administer the federally required transportation planning process in an urbanized metropolitan area with a population greater than 50,000.

Mode – A method by which the movement of people and goods are transported out. (i.e. a "car" or a "bicycle" or a "bus".)

New Mexico Department of Transportation (NMDOT) – The state agency responsible for the

administration and maintenance of the state and federal highway systems in New Mexico.

Node – A point where two or more links come together, or where one link ends (e.g., a cul-de-sac).

Paratransit - Alternative forms and sizes of public transportation vehicles that are accessible and used for the transportation of persons with disabilities.

Park-And-Ride – Parking garages and/or pavement used for parking passengers' automobiles, either free or for a fee, while they use public transportation system facilities. Park-and-Ride lots are generally established as collector sites for rail or bus service. They may also serve as collector sites for vanpools and carpools. They sometimes serve as transit centers.

Peak Hour – An hour during which the maximum amount of travel occurs in a 24-hour period.

Policy Committee – The Metropolitan Planning Organization's forum for cooperative decision-making and policy guidance composed of elected officials representing all local governments within the planning area.

Right-Of-Way (ROW) – Denoting land, property, or interest therein, usually in a strip, acquired for or devoted to transportation purposes; or the right of one mode or vehicle to proceed in a lawful manner in preference to another mode or vehicle.

Single Occupant Vehicle (SOV) – A non-commercial vehicle with only one occupant.

Statewide Transportation Improvement Program (STIP) – A four-year program of transportation projects to be funded through federal and state funding.

Technical Advisory Committee (TAC) – A subcommittee of the Policy Committee composed of staff members representing all local governments within the planning area. The TAC provides technical and professional advice to the Policy Committee.

Trail – An unpaved or dirt bicycle facility having its own right-of-way or grade-separated right-of-way whose primary purposes is to provide access to recreational facilities or is used for recreational purposes.

Transit – Movement of large numbers of people through a transportation corridor by means of publicly-owned or franchised facilities capable of carrying large numbers of people in a single vehicle. The words, "public transportation" may also be used to refer to a more generalized meaning of the large or mass movement of people.

Transportation Improvement Program (TIP) – A four-year transportation investment strategy, required at the metropolitan level, which addresses the goals of the long range plans and lists priority projects and activities for the region. (At the state level, the TIP is known as a STIP)

Unlinked Passenger Trips – The number of passengers who board public transportation revenue vehicles. A passenger is counted each time he/she boards a vehicle, even though he/she may be on the same journey from origin to destination.

Vehicle Classification – Typology of vehicles based on axles, axle groups, and axle spacing. In the United States, all types of vehicles are grouped into thirteen categories for federal reporting.

Vehicle Miles Traveled (VMT) – Used as an area-wide measure. It may be calculated by summing data on a link bases or by multiplying average trip length (in miles) by the total number of vehicle trips.

APPENDIX H

Acronyms

AADT	Annual average daily traffic
ADA	Americans with Disabilities Act of 1990
ARRA	American Recovery and Reinvestment Act
BLM	United States Department of the Interior, Bureau of Land Management
BPAC	Bicycle and Pedestrian Facilities Advisory Committee
CFR	Code of Federal Regulations
CTSP	Comprehensive Transportation Safety Plan
CMAQ	Congestion Mitigation & Air Quality
DOT	United States Department of Transportation
EJ	Environmental justice
EPA	United States Environmental Protection Agency
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FY	Fiscal year
ICIP	Infrastructure and Capital Improvement Program
ISTEA	Intermodal Surface Transportation Efficiency Act (preceded TEA-21)
ITS	Intelligent transportation systems
LCMPO	Las Cruces Metropolitan Planning Organization
LOS	Level of service
MPO	Metropolitan planning organization
MTP	Metropolitan Transportation Plan
NEPA	National Environmental Policy Act of 1969
NHS	National Highway System
NMDOT	New Mexico Department of Transportation
PC	Policy Committee of the Las Cruces MPO
PPP	Public Participation Plan
RTD	Regional Transit District
SAFETEA-LU	Safe, Accountable, Flexible and Efficient Transportation Equity Act—A Legacy for Users
SRTS	Safe Routes to School
STIP	Statewide Transportation Improvement Program
STP	Surface Transportation Program
TAC	Technical Advisory Committee
TAZ	Transportation analysis zone
TE	Transportation Enhancements
TEA-21	Transportation Efficiency Act for the 21st Century
TIA	Traffic impact analysis
TIP	Transportation Improvement Program
TOD	Transit Oriented Development
Title VI	Title VI of the Civil Rights Act
UPWP	Unified Planning Work Program
USDOT	United States Department of Transportation
UZA	Urbanized area
V/C	Volume to capacity ratio
VHT	Vehicle hours traveled
VMT	Vehicle miles traveled