Final

EL PASO
Regional Growth Management Plan

City of El Paso
2 Civic Center Plaza
El Paso, Texas 79901

October 2009

List of Acronyms

AADT	Average Annual Daily Traffic
AC	Acute Care
ACCRA	American Chamber of Commerce Researchers Association
ACUB	Army Compatible Use Buffer
AFB	Air Force Base
AGRD	Average Gross Residential Density
AMR	American Medical Response
AQI	Air Quality Index
BAH	Basic Allowance for Housing
BEA	Bureau of Economic Analysis
BIP	Border Improvement Plan
BLM	Bureau of Land Management
BOTA	Bridge of the Americas
BRAC	Base Realignment and Closure
BRT	Bus Rapid Transit
BTS	Bureau of Transportation Statistics
CBD	Central Business District
CHIP	Children's Health Insurance Program
CHLT	Community Health Worker
CIP	Capital Improvement Plan
CMPO	Community Military Partnership Organization
COLI	Cost of Living Index
CVB	Convention and Visitors Bureau
DACC	Doña Ana Community College
DAEP	Disciplinary Alternative Education Program
DFPS	Department of Family and Protective Services
DoD	Department of Defense
DU	dwelling unit
ECA	Existing Conditions Assessment
EIS	Environmental Impact Statement
EMS	Emergency Medical Services
EPCC	El Paso Community College
EPEC	El Paso Electric Company
EPCESD	El Paso County Emergency Services District
EPIA	El Paso International Airport
EPPL	El Paso Public Library
EPWU	El Paso Water Utilities
ES	Elementary School
ETJ	extraterritorial jurisdiction
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FM	Farm-to-Market
FY	fiscal year
GIS	Geographic Information Systems
GRP	gross regional product
HAI	Housing Affordability Index
HGS	High Growth Scenario
HMA	Housing Market Analysis
HRMA	Housing Requirements and Market Analysis
HS	High School
HUD	Housing and Urban Development
I-	Interstate
IPED	Institute for Policy and Economic Development
ISD	Independent School District
ISO	Insurance Services Office
JLUS	Joint Land Use Study
LGS	Low Growth Scenario
LIHTC	low-income housing tax credit
LOS	Level of Service
LRTP	Long Range Transportation Plan
LTAC	Long-Term Acute Care
MDCS	Military Direct Care System
MGD	million gallons per day
MGS	Medium Growth Scenario
MGEC	Military Growth Expansion Coordinator
MHCF	military health care facility
MPO	Metropolitan Planning Organization
MS	Middle School
MTP	Metropolitan Transportation Plan
MUD	Municipal Utility District
MW	megawatt
MWR	Morale Welfare and Recreation
NAFTA	North American Free Trade Agreement
NMSU	New Mexico State University
OEA	Office of Economic Adjustment
ORCA	Office of Rural and Community Affairs
PDN	Paso Del Norte
PID	primarily-impacted district
POE	Port of Entry
POV	privately-owned vehicle
Pre-K	Pre-Kindergarten
PSB	Public Service Board
PTSD	post-traumatic stress disorder
PUMS	Public Use Microdata Sample File
QOL	Quality of Life
REDCO	Regional Economic Development Corporation
REMI	Regional Economic Model, Inc.
RGMP	Regional Growth Management Plan
SAZ	School Attendance Zone
SH	State Highway
SMART	Sun Metro Area Rapid Transit
SOC	Standard Occupational Classification
SOW	Scope of Work
SPEIS	Supplemental Programmatic Environmental Impact Statement
TAKS	Texas Assessment of Knowledge and Skills
TAMU	Texas A&M University
TAZ	Transportation Analysis Zone
TCA	Texas Commission on the Arts
TDHCA	Texas Department of Housing and Community Affairs
TEA	Texas Education Agency
TEPSAC	Texas Private School Accreditation Commission
THAI	Texas Housing Affordability Index
TIP	Transportation Improvement Program
TIRZ	tax-increment reinvestment zone
TMMP	Texas Metropolitan Mobility Plan
TPEIR	Texas P-16 Public Education Information Resource
TTC	Two Ton Creativity
TTUHSC	Texas Tech University Health Sciences Center
TWDB	Texas Water Development Board
UPRR	Union Pacific Railroad
U.S.	United States
USDOT	United States Department of Transportation
UTEP	University of Texas at El Paso
v/c	volume-to-capacity
WBAMC	William Beaumont Army Medical Center
WID	Water Improvement District
WSMR	White Sands Missile Range
WSURG	Workforce Solutions Upper Rio Grande
YTD	year-to-date

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EXECUTIVE SUMMARY

The Regional Growth Management Plan (RGMP) is the result of a two year effort focusing on the impact of Base Realignment and Closure (BRAC) activities and mission-related growth at Fort Bliss and White Sands Missile Range (WSMR). The RGMP addresses a wide range of topics covering physical needs and infrastructure, community services, quality of life, and fiscal mechanisms. It describes the current state of the El Paso region and evaluates the impact of expected growth for a range of scenarios (from no further military expansion to full expansion). This impact includes "induced" growth that the military buildup will generate in the City of El Paso, El Paso County, and other communities in the region.

The purpose of the RGMP is twofold. First, the plan describes regional physical, economic, and social infrastructure systems and assesses their ability to support BRAC-related development and associated growth. In this capacity, the RGMP is an informational document serving as a foundation for subsequent revisions to El Paso's Comprehensive Plan. Second, the RGMP presents a set of coordinated recommended actions allowing local leaders, citizens and businesses, as well as government agencies, to respond to the needs of communities impacted by anticipated growth demands.

The RGMP provides detailed information useful to government and citizens alike. It highlights areas where growth will occur and quantifies the amount of growth expected. It also points to those areas where shortages in personnel, facilities, and funding are likely to occur. When combined with a new Comprehensive Plan, El Paso will have the information needed to navigate this opportunity and allow it to serve the region beneficially for decades into the future.

Four key elements formed the basis of the research and recommendations contained in the RGMP:

1. Past and on-going studies by various government agencies.
2. The projections of Regional Economic Models, Inc. (REMI) economic-forecasting and policy analysis modeling.

3. The documented experiences of other BRAC-impacted areas.
4. The concerns, opinions, and information provided by communities, businesses and citizens.

At each major stage of the planning process, focus groups, community briefings, and issue conferences were held to inform citizens, businesses and interested groups on the progress and findings of this effort. These events also surveyed interested parties and gathered reactions, ideas and concerns relevant to the RGMP and the overall planning process.

BACKGROUND

The 2005 round of BRAC (unlike past BRAC actions), included a number of areas inside the United States where significant military growth would take place. The mission and size of Fort Bliss made it an ideal installation for expansion. Similarly, adjacent WSMR offers assets that could support future Army growth.

The region considered in the RGMP is El Paso County, Texas, and Doña County, New Mexico. Analyses in the RGMP focus on the City of El Paso, but when applicable, broaden the scope of analysis to other locations outside the two counties for particular issues. In order to provide a sense of possible future impacts, the RGMP presents a low, medium, and high level of estimated growth. The medium growth level is used throughout the report to represent the "most likely" scenario.[1]

Using funds from the Department of Defense's Office of Economic Adjustment (OEA), the City of El Paso contracted with Science Applications International Corporation (SAIC) and two major subcontractors, the Institute for Policy and Economic Development (IPED) at the University of Texas and Two Ton Creativity to create three products: (1) an Existing Conditions Assessment (ECA); (2) the RGMP; (3) and an Action Plan. These efforts address the following planning topics:

- Economic Development
- Land Use Planning
- Transportation and Circulation
- Public Utilities and Infrastructure
- Housing and Market Conditions
- Education
- Health and Social Services

[1] In May 2009, the Secretary of the Army reduced the end strength of Fort Bliss by one heavy brigade and decided not to send any brigades to WSMR. The range of growth scenarios presented in this report encompasses these two actions within the high growth scenario. Future decisions could bring similar actions to the region; therefore, from a planning perspective, the high growth situation is a valid reference point. As a consequence, the Secretary's actions resulted in little change to the text of this report and no change to its analyses.

- Public Safety and Emergency Services
- Quality of Life
- Fiscal Structure

The ECA, completed in September 2008, is available on the City's RGMP web site (http://www.elpasotexas.gov/RGMP/intro.html). The ECA describes existing conditions and projected growth to 2025 without further military increases. The RGMP utilizes the ECA as a baseline for comparison. It also captured the key opportunities and challenges perceived by civic leaders, stakeholders, and the public relating to foreseeable growth in El Paso.

The RGMP contains a summary of the ECA (Chapter 2 of this document) and a comprehensive impact assessment of each of the planning topics (Chapter 3 of this document) based on the three growth scenarios. The RGMP also addresses the issues of land use compatibility surrounding Fort Bliss and a new City of El Paso Subdivision Ordinance. The impact analyses quantify growth and impacts using a gap analysis approach (projected supply minus projected demand), where appropriate. The analysis of each topic is followed by a set of recommendations. The analyses incorporate input from the El Paso Metropolitan Planning Organization (MPO) and the City of El Paso Development Services Department on the geographic distribution of future population. The region covered by the MPO includes the cities of El Paso and Socorro, the towns of Anthony, Horizon City and Clint, Village of Vinton, El Paso County and Fort Bliss Army Reservation (portion in Texas), and City of Sunland Park and portions of Doña Ana and Otero counties in New Mexico.

Given the findings of the ECA and the impact of projected growth, three major issues emerged as the most urgent planning priorities:

- Housing – a potential regional shortfall of as many as 13,000 new units by 2012
- Education – the need for both new schools and personnel (most likely 2,200 teachers and 2,100 support personnel by 2025)
- Health – the need for as many as 5,100 additional provider personnel by 2025

Interwoven in these three issues is the imminent and pressing need for funds to support significant growth over a very short period of time. Complicating the very challenging near-term growth projections is the impact of the continuing recession, which started in September 2008 and created numerous unanticipated problems (e.g., multi-family housing developers unable to secure financing for construction). The size of the job recruitment requirements will be much greater than anything experienced in the region before. Finally, incoming soldiers and their families face the additional stress of moving to a new environment while coping with a new deployment to a combat area or an immediate return from a combat area. Most of these soldiers are young and nearly 70 percent are in grades E-5 and below. Building capacity in the community to support the particular needs of these families (many with young children), and

potential health concerns for soldiers returning from combat zones are particular challenges for El Paso.

The desired outcome for the RGMP is to provide a strong basis for subsequent short and long-range planning, such as updating the City of El Paso's Comprehensive Plan and Capital Improvement Plan. Taking these steps over the next months will provide direction and guide development decisions in the region and make this remarkable economic event a milestone in the development of El Paso as the leading city in the Southwest. The Action Plan (Appendix G) consists of a series of tables that list each recommendation detailed in the appropriate chapter in Section 3. For each recommendation the following are provided:

- Agency/entity responsible for implementation
- Proposed timing (6 months, 1 year, 2 years)
- Priority level (1 low, 2 medium, 3 medium high, 4 high)
- Estimated personnel needed and cost
- Suggested source of funds
- Next steps

These tables provide a menu of choices/options on how best to proceed, with a recommended roadmap for meeting the challenges outlined in the RGMP. Most of these concepts were presented in a series of meetings with interested parties and focus groups in El Paso during July 2009 in order to gain input on priorities and feasibility.

Implementing the Action Plan will require resources (a designated person or working unit) to track progress against performance measurements identified in the Action Plan. The tracking process should include a description of priorities, periodic review and status of each action with explanations on progress or variances from the expected results. This will allow agencies responsible for implementation to reevaluate what is working and what is not progressing and make appropriate adjustments in priorities and timelines.

The following are brief descriptions of each of the planning topics in the RGMP.

ECONOMIC DEVELOPMENT AND GROWTH

Existing Challenges. From 2005 to 2008 (the baseline year) the number of military troops and dependents coming to Fort Bliss increased by nearly 18,000. Note, however, that this is less than 30 percent of the nearly 59,000 troops and dependents expected by 2013. Employment in the region grew by just over 4 percent during those three years, but even this modest gain clearly demonstrated workforce training will be a major challenge in the near future. The need for spousal employment will be significant for families of young enlisted soldiers. Spanish language training at every age level will be a concern for military family members seeking employment.

Growth Impact. The net end state increase in troops at Fort Bliss is expected to be 25,000, with the net increase in dependents being over 34,000, based on the most recent decisions, but could be higher if WSMR gains an additional training mission. Non-military employment projections suggest job increases by as much as 97,000 by 2015 and further potential increases of an additional 50 percent by 2025. The job sectors with the largest projected increase are retail, food service, administrative/local government, and health care. Aggressive recruitment and workforce training are viewed as significant challenges for El Paso. The need for appropriate housing and investment in infrastructure will also be priority requirements. Expanded opportunities for small and minority businesses and an increase in the technical content of El Paso manufacturing jobs must also be addressed. The estimated growth-related short-term need (next five years) for skilled construction workers in El Paso is substantial, although the depressed housing and commercial development market has reduced overall demand. Despite the economic conditions, a positive demand for persons with building trade skills will continue for several years.

This expansion will cause the gross regional product (GRP) and personal income to grow significantly – with attendant increase in sales and property tax revenue. All of this is very good news for El Paso, but a significant effort will be required to successfully manage such economic expansion.

LAND USE

Existing Challenges. The City of El Paso has undertaken a series of recent planning initiatives: new subdivision regulations; a Smart Code development option in zoning ordinance; a parks and open space master plan; a storm water master plan; park design and construction standards; a drainage design manual; and an updated landscape ordinance. The incorporation of "Form Based" or Smart Code principles is designed to provide incentives to developers and enhance the permitting process. Lack of land use controls in unincorporated areas of El Paso County will continue to be a challenge, as will encroachment issues around Fort Bliss. The need for a new and revised comprehensive plan is paramount.

Growth Impact. The recently approved Subdivision Ordinance, with draft regulations, should have a significant impact, especially through planning needed public improvements before permitting. Requirements include providing a traffic impact analysis, storm water management, parks, and open space. As El Paso expands and becomes more populated, and as activities on Fort Bliss intensify, compatibility concerns will likely increase. To manage this "encroachment," many existing buffer zones need expansion and enforcement of requirements (such as building regulations or zoning codes). Examples from other BRAC-related areas are useful in addressing this issue (notably, Fort Drum, Fort Bragg, Fort Riley, and Fort Benning). The City of El Paso needs to work continually with Fort Bliss to avoid encroachment problems before such problems become irreversible.

TRANSPORTATION

Existing Challenges. The issues facing transportation planners today and in the years to come are complex, with no easy solutions. For example, El Paso ranks 47th among the 50 largest cities ranked for traffic congestion. In 2005, El Pasoans experienced an estimated productivity loss of $246 million while sitting in traffic. A survey of existing Sun Metro Transit users revealed the necessity for a strong transit system in the region since most regular transit users used the system to commute to work. Yet public transit ridership has declined by 15 percent in the last several years. The City of El Paso is one of the major international border cities with Mexico experiencing robust growth in economic activity; however, the increasing number of heavy truck, passenger vehicles, and pedestrian traffic at the border is causing congestion and severe delays along the existing major roadway networks affecting the study area region.

Access gates to Fort Bliss can also become congested and slow traffic on local roadways. Without improved secure access to the installation, ongoing expansion at Fort Bliss could cause significant morning and evening transportation problems with the gradual increase of up to 30,000 vehicles adding to average daily volumes both around the installation and within the commuting area of installation personnel.

Efficient and cost effective rail service is important for the economic vitality of the city; however, existing rail lines through the central business district cause a safety hazard and represent a public safety threat due to transport of dangerous materials through downtown and residential areas, cause noise and air quality impacts, and prevent potential redevelopment opportunities.

Growth Impact. The Supplemental Programmatic Environmental Impact Statement (SPEIS) written for Fort Bliss in 2007 detailed proposed improvements on the installation, but it is unclear to what degree these improvements would mitigate the impact of the addition of more than 20,000 military personnel, nearly 27,500 military dependents, and 2,700 government civilian personnel coming to Fort Bliss by the year 2013. For example, installation leadership indicates the need for six new entrance and exit gates to reduce traffic congestion in the morning and evening throughout the week. The SPEIS did not provide a detailed or long-range evaluation of regional transportation needs.

The transportation analysis of the RGMP details strategies concerning the region's ability to enhance multi-modal commuting to various destinations. In addition, the principles of Transportation Demand Management (i.e., trip reduction) should be explored and those that are most effective implemented. Funding for technology focusing on expedited processing, compliance monitoring, and traffic management at all the Ports of Entry should be obtained. Major investment in transit service and capital projects, as well as facilities for enhanced pedestrian and bike access, commuter rail, truck corridors, and intermodal facilities involving rail yards will be required within the next few years.

PUBLIC UTILITIES AND INFRASTRUCTURE

Existing Challenges. Infrastructure for the El Paso region includes such basic services as water supply and distribution, wastewater collection and treatment, solid waste disposal, storm water management, gas, electricity, and communications. Two thirds of the water supply in El Paso County is dedicated to agricultural production and is supplied by the Water Improvement District (WID). El Paso Water Utilities (EPWU) supplies 90 percent of the water required for municipal use within the county. The 2006 Far West Texas Water Plan projects the non-agricultural demand for water in El Paso County to reach 193,820 acre-feet/year by 2020. The same study estimates the current available supply based on existing infrastructure, contracts, and supply availability to be 175,732 acre/feet per year. EPWU, in projecting supply and demand, uses a lower per capita consumption rate and estimates that El Paso can absorb a population increase of 200,000 to 270,000 people with its existing supply and treatment capacity.[2]

The surge in regional growth will shorten the life expectancy of existing landfills. The recent denial of a long-term extension of an operating permit for a regional landfill in Doña Ana County only exacerbates this issue.

Growth Impact. Two new studies by the City of El Paso deal with projected demands on infrastructure as a consequence of growth. One study addresses potential annexation of areas within the city. The other study explores the use of impact fees to fund needed infrastructure. The estimate for water and sewer system capital improvements from 2009 to 2018 is over $312 million. New development designed to accommodate the housing needs of military families will necessarily be more compact with higher density development concentrated near transportation corridors. This land use pattern will require less total infrastructure for its support and result in more efficient, sustainable development; but the costs are, nonetheless, very significant. However, financing infrastructure improvements with revenue bonds places the burden on the entire community and is contrary to the assumption that growth should pay for itself. The landfill life expectancy for both Fort Bliss and the El Paso region may be less than the current 20-year projection. Regional coordination and cooperation will be required to address solid waste management issues. Joint planning, funding, and use might open up very significant opportunities and provide sufficient waste streams for trash to power opportunities. The most critical need is for rapid improvement and expansion of infrastructure to accommodate the impending growth before the impact of growth becomes a burden and not an opportunity.

HOUSING AND MARKET CONDITIONS

Existing Challenges. A Housing Market Analysis (HMA) prepared for Fort Bliss in 2008 (found in Appendix B of this document), indicated a need for 1,801 housing units above the existing supply within the community. The available supply of "affordable" housing for military families dependent on a Basic Housing Allowance (BAH) is a long-term challenge. The Army

[2] Bill Hutchinson. Communication with Michael Cortez, EPWU, April 2, 2009.

surveys of the cost of renting acceptable available housing annually, and uses this information to adjust the BAH. The very significant demand will put increased pressure on the price of rental housing, until supply begins to meet demand through new construction. This issue will significantly affect the families of incoming soldiers and new families, and both existing and new El Paso residents. This issue was clearly referenced in the outreach to the developer community and must be very carefully studied to avoid solutions that benefit one group while hurting another.

The national housing crisis of 2008, with attendant problems of declining home values, constricted credit markets, and the general effects of recession have combined to make the provision of rental housing for Fort Bliss families a very significant planning issue. Because the developers of multi-family housing and commercial developers are experiencing difficulty finding financing for otherwise deserving projects, the chances for timely increases in the supply of this element of the housing stock is in serious doubt.

Growth Impact. The HMA indicated that in addition to increasing the supply of affordable housing generally, the community will need to supply between 22,000 and 23,900 housing units to meet the military requirements for housing by 2013. Thus, the housing shortfall, when combined with organic growth in El Paso's population, is estimated to be from 9,700 to nearly 13,000 units. Credit problems for developers of multi-family can potentially exacerbate the creation of future supply. Adjustment of the BAH, the result of a yearly survey, will require careful monitoring by developers and Fort Bliss to insure that it accurately reflects the costs of acceptable rental units. If the BAH is not carefully adjusted, soldiers and their families will be placed under additional financial stress. While this will help military families, it can cause the local housing market to sustain higher rental rates than are affordable to most families. Providing affordable housing options will become an increasing concern for the city.

While military homeowners are expected to double between 2008 and 2013, military renters are estimated to quadruple because the majority of military families are likely to be young and not far advanced in rank. These families will mostly generate demand for apartment-type rental units; however, the demand for new homes off-post will increase for higher ranking military members. To meet this need for housing, the City of El Paso and other agencies should consider the following: partnering with developers and/or landowners to provide affordable housing; leasing of government-owned land and funding of infrastructure through city-backed bonds, as well as other creative incentives should be explored. Further, Fort Bliss and the community must work together to increase the number of units that will be built on post so that the need for adequate housing for all El Paso residents can be met. The range of financing options and government program funds described in this section must be expeditiously explored to ensure families can have access to assistance when needed.

EDUCATION

Existing Challenges. Public comment from citizens, local leaders, and interest groups confirm that there is no more important area of concern than the quality and availability of education. Three major issues face education and educational institutions in the El Paso area: construction of new and maintenance of existing facilities, providing sufficient numbers of personnel and support staff, and supplying necessary training and funding. With five of the nine school districts in the El Paso region categorized as "primarily impacted" by military relocations, the concern over a sharp increase in the numbers of children of military families is a major issue for planners. Estimates show that from 2006 to 2013, growth at Fort Bliss and the surrounding region will bring about 45,000 children age 10 or under. Surveys have shown that 17 percent of the schools in these impacted districts are already operating over their planned capacity levels, although not necessarily where military students will attend school. Concurrently, a substantial recruitment effort for qualified teachers and support personnel is needed, plus the demonstrated need for pre-K and day care programs and facilities. Since 2004, $800 million in bonding authority has been approved by voters in the region. While this authorization can meet present needs, it will fall short of the future needs created by BRAC relocations and other military growth-related activities.

Growth Impact. Workforce studies show that to maintain the current ratio of students-to-teachers, 1,212 additional teachers will be needed by 2015 and almost twice that by 2025. The support personnel required for that degree of growth could well exceed those figures. The recruitment and workforce training necessary to meet such demand cannot be overestimated. Outreach to incoming military spouses and early approval of credentials are potentially issues as is the need for local educational institution cooperation to combine capabilities for training El Paso residents for the thousands of prospective jobs resulting from military growth.

Creativity must also be applied to the search for school construction funding necessary to meet even the most modest goals. Reliance on bond issues has become even more problematic with the financial recession as both municipal income and constrained household budgets result in a general reluctance to approve new bond issues. While school districts have made very significant progress, more construction funding will be needed. The potential strains created by the significant predicted increase in municipal tax revenue and similar substantial increases for incoming student populations will assist in gaining approval for construction bond issues. Also, properly accounting for incoming military students in impacted schools will ensure that Federal reimbursement, although limited, is provided to those affected schools.

Public/private partnerships of several different kinds must also be considered. Charter schools, day care, Head Start and other public programs need to be fully explored to identify current capacity and identify needed capacity. For example, Fort Bliss reports that it intends to provide facilities for less than 15 percent of the thousands of new military children in El Paso in need of

child care. Another critical ingredient is cultural difference: many relocating military families will not speak Spanish, a situation magnified in the impact on young children.

HEALTH AND SOCIAL SERVICES

Existing Challenges. Along with concerns over the capacity, funding, and availability of education and housing, few issues generate more concern than health care and social services. The El Paso region is now a considered a medically underserved area. Severe shortages in the medical, nursing, and dental professionals place El Paso significantly below the average for the state of Texas. Concerns center on the availability of hospitals and health care providers to serve the community, military medical services to be provided, and mental health care. Additionally, two important social services are of critical concern: affordable housing and affordable health care. Staffing constraints limit actual hospital capacity and therefore the number of licensed beds available to patients. Estimates suggest that El Paso needs an additional 700 doctors and 1,400 nurses just to maintain current service levels. Even with no further expansion at Fort Bliss, the expected need for medical personnel poses a critical training and recruitment challenge.

Growth Impact. The challenge facing planners in the area of health care is best characterized by the fact the region presently gains less than five physicians per year. To reach parity with other Texas counties for the family/general/internal medicine practitioner category by 2012, El Paso will most likely need to add an average of 70 physicians per year. However, there are other occupational considerations: the needs of military personnel and their families (especially those of returning combat troops); needs of families with children under the age of 12; and the needs of the elderly among El Paso's growing population. Between now and 2025, El Paso will need to train or recruit as many as 1,000 doctors of various disciplines, 2,000 full-time registered nurses, 900 pharmacists, 300 dentists, and 340 social workers. Retention is a major issue as well as indicated by observing projections of need by occupation for 2012 and 2025 as compared to what exists in 2008. A holistic and cooperative approach that emphasizes recruitment, training and retention must be adopted.

PUBLIC SAFETY AND EMERGENCY SERVICES

Existing Challenges. The planning, locating, and siting of police, fire, and emergency medical facilities is based on an analysis of such factors as functional operations, demographics, response times, street layout, municipal infrastructure, and historical context. In other words, need estimates are based on ratios to the characteristics of projected population – in addition to comparison with state and national averages. A major consideration is the integration with comparable first-responder provisions by the Army at Fort Bliss as well as the location of off-post housing complexes. The City of El Paso prepared a Comprehensive Staff Allocation and Needs Plan in 2007, which serves as a benchmark for the region. It is clear that the expected expansion of personnel at Fort Bliss will challenge both police and fire departments to improve existing levels of service as well as to meet future demands.

Growth Impact. With limited resources, the affected departments in both the city and the county have struggled to keep pace with growing demand. Municipal budgets need to be examined to ensure that currently identified capital needs will be met. Establishing a working committee consisting of city, county, federal, and military Public Safety officials is recommended. This committee would develop a strategic plan to address common concerns, issues, and objectives. Such collaboration has proved very effective for other Army posts. Volunteer fire districts should add paid staff to serve high growth areas. The paperwork volume attached to the work of the courts and the requirements of the legal records system will increase, burdening a system that is already strained. Adding capacity for the court system and providing for improved judicial space, technology, and staff skills will require future investment and funding.

QUALITY OF LIFE

Existing Challenges. Quality of life encompasses more than just recreational opportunities and cultural experiences. It also includes community features and characteristics that attract (and retain) inward migration and the qualified/trained workforce needed by the community. These factors can be divided into six categories: cost of living, education, health care, the environment, public safety, and leisure. Cost of living in El Paso is currently less expensive in the areas of housing, utilities, transportation, and health. While construction in on-going for a number of quality of life projects within Fort Bliss (under the Directorate of Morale Welfare and Recreation), incoming troops are arriving faster than such projects are available. When counting Federal, State, county and city parks, El Paso has a high ratio of population-to-park land (and much of this land is in a natural state). More park facilities with playground and recreational space are needed within the city. Funding for these elements are increasingly subject to budget pressures and it will require political will and community support to see that unnecessary constraints do not slow down the process and reduce the future quality of life for El Paso.

Growth Impact. The various factors in quality of life are a key ingredient in the recruitment and retention of needed personnel in such areas as health care and education. Due to the current recession, unemployment and low salaries are a growing issue. This is accentuated by the fact that the unemployment rate of military spouses is up to three times higher that of their civilian counterparts, and 77 percent of military spouses report that they need to work. As of January 2006, the city's capital improvement program (CIP) included 216 projects under the existing quality of life bonds authorizing over $256 million in funding. Fort Bliss has over $150 million for quality of life projects that will result in new child and youth facilities, 12 new child care centers, a 100,000 square foot fitness center, and a new aquatics center on the post. The city will face budget challenges to provide the same degree of planning for quality of life projects in the community where the majority of soldiers and their families will live. Coordination will be needed to open area public school recreational facilities for use by residents. Spousal employment opportunities must be greatly expanded and day care for incoming children will be a critical part of the answer. By the end of 2015, there could be as many as 17,000 new children (infants to three years old) in the El Paso region. If, for example, each family has two children of

this age, this represents 8,500 spouses that might hold a part-time or full-time job. Those workers are desperately needed but there is no organized plan to create facilities and workers to meet this need.

El Paso is a city with a very unique history and an excellent climate. These intrinsic qualities are opportunities for the city to emphasize when recruiting and attracting a skilled and professional workforce, such as doctors, teachers, social workers, etc. These qualities do not require investment other than fully promoting them.

FISCAL IMPACT

Existing Challenges. While Fiscal Year 2009 budgets of jurisdictions in the region were updated to reflect anticipated growth, the onset of the serious economic recession changed the equation, thus producing new challenges. While property valuation and property tax rates were established before the recognition of the full effects of the recession, the matter was complicated by subsequent declines in property values and reduced tax collection rates as well as reduced consumer spending (sales taxes). The REMI fiscal projections may not reflect potential incremental public financing impacts associated with public service and infrastructure gaps noted in earlier chapters. Data must be carefully examined since the figures for government sector spending as a share of gross regional product may be distorted by the amount of Federal construction spending beginning in 2007.

Growth Impact. Projections show that the per capita expenditures by local governments under the three growth scenarios are $200 to $600 lower than per capita expenditures under the 2008-baseline. Some effects of growth will contribute to the local tax base, thereby helping to offset the increases in fiscal budgets. For example, the construction of thousands of family dwelling units over the next several years will create a substantial new source of real annual income for the region. A recent study by the city on the effectiveness of impact fees indicates that allowable capital costs for incremental investment needed for growth can be an important plus. Conversely, the absence of such fees will adversely affect existing service populations. Jurisdictions will need to address the fiscal problems with creative instruments such as tax increment financing, incremental fees, public/private partnerships, shared equity arrangements, as well as aggressive pursuit of Federal grants. The city's dollar amount of outstanding bonds is less than one-fourth of the city's bonding capacity. A review of adopted impact fees is needed so that new developments bear the incremental costs of growth.

1.0 INTRODUCTION

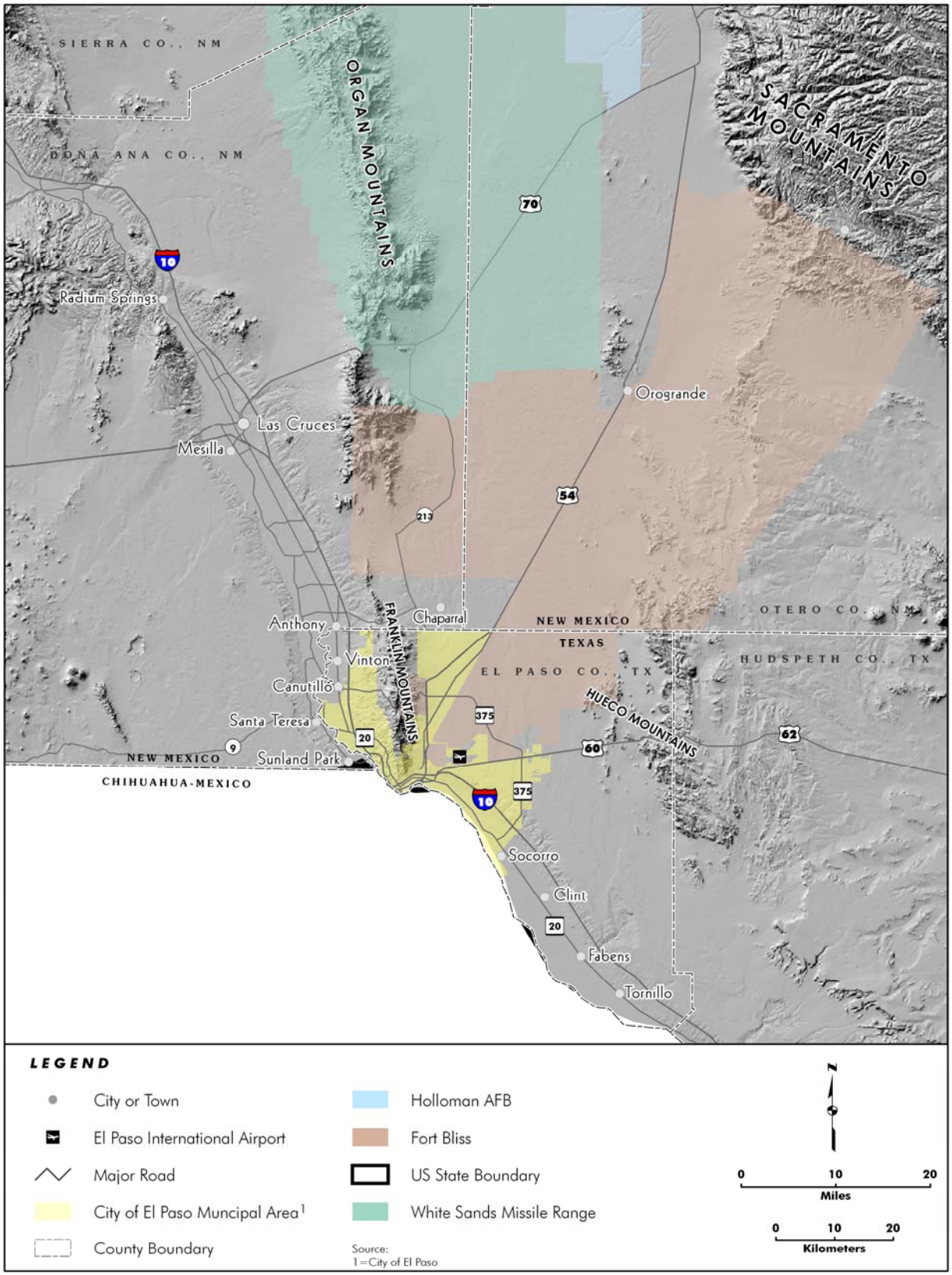
1.1 Background

This Regional Growth Management Plan (RGMP) prepared by the City of El Paso, Texas, addresses planning issues related to anticipated growth and development resulting from recent Army transformation and Base Realignment and Closure (BRAC) decisions. These decisions indicate that Fort Bliss, located in El Paso, Texas (**Figure 1.1-1**) will receive approximately 40,000 additional soldiers and family members between 2008 and 2012. Increases are also projected for White Sands Missile Range (WSMR) nearby in southern New Mexico. Combined with stationing actions that occurred between 2005 and 2008 and growth stimulated by soldier increases, the population of El Paso and the surrounding region may swell by approximately 10 percent over the next five years.

In 2001, Congress passed legislation initiating the fifth round of Base Closures and Realignments – beginning in 2005 and finishing by 2011. These BRAC rounds were an outgrowth of the end of the Vietnam conflict and the Cold War and a subsequent change in the methods and focus of the military. Funds available through the Department of Defense's (DoD's) Office of Economic Adjustment (OEA) originally targeted areas impacted by military manufacturing plant closings following the end of World War II and the Korean War. Unlike past BRAC rounds, however, the fifth round of BRAC included Federal recognition of, and aid to, areas that were ***gaining*** relocating military troops and support components. This one fact made the area planning effort even more complex.

The 2001 legislation triggered a detailed DoD analysis of locations in a unique position to accommodate significant increases in personnel and expansion of facilities. Coupled with the details of BRAC 2005 was a concurrent effort to relocate significant numbers of military units from bases outside of the continental United States.

Figure 1.1-1. Regional Location of El Paso, Texas and Fort Bliss



In many cases, BRAC realignment efforts included plans to relocate units and capabilities from one area to another so as to increase the compatibility of the missions of the units that remained with those relocating. This fact increased the logistical complexity of the installations gaining personnel, and necessitated an inordinate amount of construction (now totaling $5 billion at Fort Bliss) at the receiving installation as well as in the surrounding areas.

Fort Bliss became a prime gaining target of these decisions. With over one million acres of training lands, mostly located in New Mexico, Fort Bliss is one of the largest Army training installations in the United States (U.S.). Together with adjacent WSMR in New Mexico, over three million acres are available for military purposes. These two installations, plus co-located Biggs Army Airfield, have the advantage of being relatively unencumbered by incompatible encroachment currently. As a major metropolitan area, El Paso is served by a large highway and rail network. Located on the U.S./Mexico border with Ciudad Juárez, the area has become a cornerstone of North American Free Trade Agreement (NAFTA) inspired trade opportunities. These attributes make the El Paso area an effective platform for military operations.

As the DoD weighed options for the expanded use of Fort Bliss, it measured the process against five major themes, identified in its report to the Congress:

- **Support force transformation.** Forces returning from overseas will be transformed through technology enhancements, capabilities-based restructuring, and basing that provide the needed training infrastructure. Support functions within both the Active and Reserve Army components will be reorganized into capabilities-based combat forces.
- **Strategic Rebasing of Forces.** Rebase forces to address new threat, strategy, and force protection concerns. Dispersed forces and activities within the United States will be placed on more secure, military-controlled sites. This rebasing offers opportunities to increase combat power, enhance security, and promote efficiency while generating significant savings.
- **Consolidate business-oriented support functions.** Supply, maintenance, and medical functions will be consolidated to capitalize on proven, state-of-the-art business technologies and practices. Technical facilities, including research and development laboratories, will be consolidated to encourage better-focused investment strategies.
- **Promote joint and multi-Service basing.** Joint activities will be established in key administrative functions and selected training missions. A joint training environment will be created for initial pilot training for the new Joint Strike fighter. Other multi-Service basing will encourage integration and achieve economies of scale.

- **Achieve savings.** The recurring and aggregate savings will almost equal the total savings of all previous BRAC rounds. Restructuring support functions will generate unprecedented savings. The reduction of support personnel and disposal of land and facilities are less predictive of savings. In comparing the one-time cost to the total net present value, the DoD will realize two dollars in savings for every dollar in BRAC costs.

The capacity of the local community to absorb the effects of increased population is an important factor in planning for growth. It is generally considered a beneficial economic stimulus for a community to gain rather than lose a military presence; however, excessively rapid growth can present logistical and fiscal challenges in planning for and meeting short-term community needs and for managing growth with long-term desirable benefits.

While Fort Bliss and El Paso demonstrate a capacity to support change and growth, time and circumstances present some unanticipated challenges. First among these is the deepening recession and the concurrent strain placed on state, federal and local budgets. Related to this is the fact that the DoD estimate of costs to implement BRAC often fall short of what is needed. The experience of other communities and military installations confirms this: Maryland, Virginia, Kansas, North Carolina, and the Territory of Guam are examples of locations impacted by unintended cost consequences. **Table 1.1-1** lists installations and communities that have undergone major growth from BRAC decisions.

The recent change in national administration adds another variable in terms of anticipating accurately the actions and numbers of military personnel that may move to the El Paso area. New policies and the nation's response to global situations can result in changes in training priorities and future stationing decisions that could very well impact Fort Bliss.

The addition of large numbers of troops, along with dependents, contractors and induced local growth, the need for housing, transportation, schools, healthcare and other infrastructure will stretch both public resources as well as planning capabilities. The financial and fiscal impact of current Federal budget constraints indicates that such measures as public/private partnerships, tax increment financing, bond issues, incentives, and other creative instruments must come into play.

As several sections in this report detail, health care, housing, education, and transportation are particularly stressed by the impact of accelerated population increases from the arrival of troops and family members anticipated over the next few years. By recognizing these hurdles early, El Paso can plan and manage some of these issues, particularly using strategies and resources that have been successful at other locations. The El Paso area has a long history with Fort Bliss, so that local residents understand the mutual benefits of each to the other. This context provides a strong basis for Fort Bliss training-oriented growth into a DoD "power projection platform." At this point in time, potential growth impacts will require community support and investment in the physical, social, and institutional infrastructure needed for beneficial growth.

Table 1.1-1. Communities Affected by Major Military Growth Actions

Installation	Community/State
Fort Sam Houston	San Antonio, Texas
Fort Bliss	El Paso, Texas
Fort Carson	Colorado Springs area, Colorado
Aberdeen Proving Ground	Harford and adjacent counties, Maryland
Fort Lee	near Petersburg, Virginia
Fort Lewis/McChord AFB	near Tacoma, Washington
Redstone Arsenal	Huntsville and adjacent areas, Alabama
Fort Bragg/Pope AFB	Fayetteville and adjacent areas, North Carolina
Fort Benning	Columbus, Georgia area and adjacent areas in Alabama
Fort Knox	Hardin and adjacent counties, Kentucky
Fort Riley	Junction City and Manhattan areas, Kansas
Fort Drum	Watertown and adjacent areas, New York
Fort Sill	Lawton, Oklahoma
Fort Belvoir	Fairfax and other northern counties, Virginia
Fort Meade	Anne Arundel and adjacent counties, Maryland
Navy	
Bethesda National Naval Medical Center	Montgomery County, Maryland
Quantico Marine Corps Base	Prince William and Stafford counties, Virginia
Guam	Territory of Guam
Air Force	
Eglin AFB	Okaloosa and adjacent counties, Florida
Cannon AFB	Clovis and Portales areas, New Mexico

1.2 Purpose of the Regional Growth Management Plan

Recognizing the potential impacts and challenges of growth, the City of El Paso, with the help of funding from DoD's OEA, embarked upon this growth management planning effort. The purpose of the RGMP for El Paso is twofold. First, the plan describes the physical, economic, and social infrastructure systems within the region and assesses their ability to support BRAC-related development and associated growth within the affected area. In this capacity, the RGMP is an informational document and a foundation for subsequent revisions to El Paso's Comprehensive Plan. Second, the plan is to present a set of coordinated actions that allow impacted communities to accommodate anticipated growth demands.

Marshalling the concerns, resources and capabilities of the many stakeholders involved, the city directed that the resulting RGMP canvas, assess, and prioritize the following components:

- The current status of on-going planning efforts in each affected department and agency.
- The applicability of challenges and solutions from similar communities nationwide.
- The quantification of existing conditions as revealed by plans, documents, and research studies in each planning area.
- The identity, preferences, and capability of each stakeholder.
- The prospects for consensus on a range of possible timetables, requirements, and solutions.
- The possible resources available from local jurisdictions, regional and state agencies, as well as Federal and private sources.
- The means for creating widespread public understanding of the challenges and opportunities involved.
- Projections of impact over time in each planning area, establishing requirements for high, medium, and low levels of possible growth over time.
- Potential actions and sources of revenue to facilitate rapid growth.

This plan provides quantification of growth effects (e.g., as service demands, funding shortfalls, capacity concerns) requiring some kind of action in order to maintain a stable community. It draws upon lessons and strategies that have helped other communities meet similar challenges, while acknowledging the potential uncertainty resulting from new external economic forces. The RGMP contains an Action Plan (see Appendix G) with a menu of critical choices and options for the community and its leaders to endorse.

1.3 Planning Process

The planning team worked closely with community leaders and technical advisors in the development of the plan, including:

- The City of El Paso, which organized an initial kickoff meeting, providing invaluable guidance in the identification of major issues confronting the region due to the BRAC process that would bring 20,000 more troops and 27,000 more family members to Fort Bliss. After the initial kickoff meeting, discussions were held with the heads of each department within the city.
- The Team Bliss Base Transformation Office, which provided excellent background information regarding the timing of troop deployments, anticipated housing needs, and planned military facility expansions.
- The City of El Paso Development Services Staff and Project Manager, who provided invaluable data resources and contacts for the team as well as in-sight and counsel on sensitive topics and recommendations.

The planning team held numerous informal meetings and work sessions with local service providers, public officials, business groups, and not-for-profit entities to assess potential needs and infrastructure shortcomings. These meetings were instrumental in developing an Existing Conditions Assessment.

The findings of the Existing Conditions Assessment were presented to the community in a series of public meetings designed to solicit from the general public their concerns, ideas, and expectations for the plan.

Information gathered in the Existing Conditions Assessment was used as input to the Regional Economic Models, Inc. (REMI) policy insight model for the evaluation of the economic impacts associated with expansion at Fort Bliss. Output from the REMI model provides population and employment forecasts for El Paso County, Texas, and Doña Ana County, New Mexico (see Section 3.1).

1.4 Public Involvement

Community participation and stakeholder involvement play an essential role in successful growth planning and in the execution of those plans. A meaningful, inclusive process of stakeholder involvement has proven to be an important factor in past successful development efforts. Many previous projects in El Paso have benefited from, or even been made possible by, substantive community participation that generated neighborhood input and support. A successful information and outreach strategy increases the likelihood of a smooth transition for El Paso, area businesses, Fort Bliss, and other regional communities.

1.4.1 Communication

Public involvement is a key component of the El Paso RGMP. For that purpose, a Communication Plan identified avenues for engaging the community's input and participation in this planning process. The plan implemented the following vehicles for public information, input, and comments:

- Public Meetings
- Group Meetings
- Web site

The plan also identified key stakeholders, detailed various methods for reaching, briefing and engaging them in the planning process, and initiated the development of appropriate outreach materials (web site, advertisements, media contacts, brochures, etc.).

An interactive RGMP website linked to the City of El Paso's home page provides information and updates about the RGMP process, including Frequently Asked Questions (FAQs), meeting dates, and other pertinent data. This site is intended to be used as a public outreach/communication and internal program management tool. The layout and content of the site is designed to be consistent with other city-hosted web sites, and allows accessibility by the visually handicapped. A reproduction of the home page of the web site and other sample outreach materials can be found in Exhibit 3 (at the end of the document). A list of stakeholders can be found in Appendix A.

1.4.2 Public and Group Meetings

Initially, the RGMP study team participated in a week of meetings with key stakeholders and city managers. Information collected at that time was the basis for the Existing Conditions Assessment. These meetings were also used to gather the views of the various participants about the key issues and challenges facing El Paso from anticipated growth.

Subsequently, public meetings were held in August 2008 to gather public input and to inform the public of the progress of the RGMP. Two distinct types of meetings occurred in August 2008:

- Full team meetings presenting an overview of the Fort Bliss growth plan. In addition, a large public forum conducted in-depth discussions of existing conditions in several areas (including population, employment, education, health care, transportation, utilities, public safety, and quality of life). The power point presentation at these meetings is provided in Exhibit 1. Principal investigators and subcontractors were present at these meetings to answer questions and public comments were formally solicited.
- Focus Group meetings in which discussed elements of the Fort Bliss plan and existing conditions in a focus group with interest or information in a specific issue.

During the public meetings, a speaker provided information regarding their specific area of expertise, and then the floor opened for audience questions and comments (note cards were used to record these). Each presentation provided attendees a basic overview of the Fort Bliss vision and mission, strategic initiatives, growth reports, and the installation master plan.

Focus Group meetings were each designed to gather feedback from a particular group of El Paso stakeholders. Attendees were afforded the opportunity to voice concerns regarding the plan as well as the potential impact of increased numbers of personnel at Fort Bliss. The key issues raised in these meetings focused on health care (particularly mental health), education, housing, and general development. A more detailed summary of the meetings can be found in Appendix A.

A second series of outreach meetings was implemented during the third week of July 2009. Focus groups of the same type were held at City Hall on the topics of Subdivision Ordinance, Housing, Land Use, Transportation, Utilities, Economic Development, Quality of Life, Health & Social Services, and Education. The invitation list was comprised of those originally invited and individuals who expressed interest in specific issues during the intervening year. At each of these meetings (focus groups and general public meetings) views of attendees on the subjects presented were solicited.

Evening meetings were held during the same week in the western, central, and eastern parts of the city to provide opportunity for comment by a wider public. The meetings and focus groups were used to hear and gather views of attendees on the spectrum of subject areas in the RGMP. These comments were used to refine the Action Plan (Appendix G) and to identify areas of greatest public interest and/or concern. The presentation from the July 2009 meeting is provided in Exhibit 2.

1.4.3 Community Military Partnership Organization

The RGMP process will provide the City of El Paso with recommendations regarding the formation and structural organization of a Community Military Partnership Organization (CMPO). The formation of a CMPO is commonly identified as necessary step to ensure full accommodation for potential growth associated with BRAC changes. Although the city currently does not have a CMPO, in the past, numerous community concerns and initiatives (e.g.,

the Fort Bliss Desalination Plant project) were addressed cooperatively with Fort Bliss and various community entities including the Greater El Paso Chamber of Commerce, other local governmental organizations, and school districts.

Generally, the focus of the CMPO is on the community impact of BRAC and mission-related growth on a local regional economy and social services. In this case, the local regional economy includes not only El Paso but also White Sands Missile Range and Holloman AFB in south central New Mexico. Incorporating a broader regional perspective would enable the CMPO to include and identify stakeholders from local businesses, local communities, and local government, and to include appropriate representatives of regional and state government as well. This wide group of representatives would work with military officials to address the impacts of growth (in this case) and the logistics of responding to those using all avenues available to identify and implement growth management actions.

The lessons learned from earlier BRAC cycles provide the rationale for an inclusive membership. For instance, Maryland's Military Installation Strategic Planning Council demonstrated that a broad and representative membership found a common mission and goals that enabled its work to have continuity over changes in State Administration. Similarly, changes in local offices and in military commanders did not interrupt or delay the Council's work. While individual members of the Council experienced change, its schedule and direction did not. This was critical in keeping the state and congressional legislative contingent fully engaged and informed.

Experiences in other states indicate that more inclusive stakeholder involvement in the CMPO makes it easier to organize public outreach, involvement, and substantive input – especially when legislative or regulatory action is required. Thus, a widely representative CMPO would signal a mission beyond mere planning, and focus on quantifying and implementing efforts relating to impact. To handle the implementation functions, the CMPO would create a representative Growth Task Force.

Considering the major issues cited in almost all of the RGMP meetings, the following groups and areas of oversight should be considered for representative membership on the CMPO and its Growth Task Force:

- City elected officials
- Chambers of Commerce
- Utilities and authorities
- State legislature
- Congressional delegation
- Civic associations
- Regional Economic Development Corporation

- Military commands
- Clergy
- Realtors and developers
- Unions
- Planning agencies
- Texas Military Preparedness Commission
- Cultural and ethnic groups
- Advocates and representatives involved in education, housing and healthcare

With a representative membership, the Growth Task Force would perform the following role:

- Plan and sequence realistic growth actions/reactions
- Develop and engender consensus
- Act as a catalyst and gather substantive public comment
- Integrate military and civil concerns and programs
- Act as a one-stop/one-voice response center

In order to do these things effectively, the Growth Task Force (or a designated subset of members) would meet regularly (monthly) to consider various parts of the RGMP as they are drafted and to act as a hearing panel for appropriate (issue-related) public comment. Staging meetings in different areas of the city/county promotes inclusion of affected groups and associations. Proactive inclusion of media is also essential to this process. Meeting agendas should be prepared and circulated widely at least a week in advance. In addition, some sort of visual presentation associated with investigative field trips should be provided for in order to buttress the immediacy and responsiveness to public concerns.

Because many of the issues that the Growth Task Force will consider are complex, public understanding can be enhanced by presentations from recognized experts on topics of interest and concern. Also, local media can highlight these community events. The purpose is to construct a voice and a venue beyond (or in addition to) military announcements related to growth factors and mission changes.

The Growth Task Force would become a recognized center for distributing information and vetting public consideration on the various tasks, issues, and proposals. These could range from groundbreakings financial arrangements, annexations, military arrivals, specific proposals, business opportunities, to citizen concerns. This would serve as a clearinghouse and forum for ideas and information from various entities, including government, commercial, special interest groups, and individuals.

1.5 Structure of the RGMP

The initial phase of the RGMP consisted of a review and analysis of all existing studies, plans, and data (including interviews with the many stakeholders who were familiar with same). This produced the Existing Conditions Assessment, submitted to the City of El Paso in September 2008. This assessment provided a description of the current situation, and also addressed the issues, challenges, and opportunities for each of the planning topics addressed in the RGMP. Information was collected from current reports and plans, and from interviews and meetings with stakeholders and various governmental and non-governmental constituencies in the City of El Paso.

Concurrent with this effort, the University of Texas El Paso (UTEP) Institute for Policy and Economic Development (IPED) prepared population and economic projections based on current data and assumptions about military growth at Fort Bliss and other regional installations. Using the REMI model, projections were calculated for the years 2010, 2015, and 2020 (and for some planning elements, 2025) beginning with 2008 as a baseline year.

Chapter 2 of the RGMP presents a condensed summary of the Existing Conditions Assessment, including a brief description of the current situation and growth concerns for each of the planned topics in the RGMP.

Chapter 3 uses the REMI population and economic forecasts to describe potential impact of growth for each of the planning topics. It also reviews the city's subdivision ordinance, and encroachment and land use compatibility issues. Each topic also provides recommended future actions to solve, mitigate, or leverage potential growth impacts – including physical development, institutional, and fiscal actions.

The RGMP also includes seven technical appendices and four exhibits. The appendices provide additional detail on specific technical topics. The exhibits provide presentations and outreach materials for this RGMP effort and from the Fort Bliss Transformation Office.

The Action Plan (Appendix G) provides a compilation of recommended actions, using a tabular format. It will function as a tool for local planners and city officials for prioritizing actions and making timely sequential decisions addressing multiple growth issues. The Action Plan includes web links to information and various potential sources of funds (both public and private).

To make this plan reader-friendly, **Table 1.5-1** provides a succinct listing of topics addressed in the RGMP, showing the section of the document containing the most relevant information.

Table 1.5-1. Index of RGMP Contract Deliverables

Section	SOW Task	Deliverable	Section #
Public/Stakeholder Process			
1.4	#2	Public Communications/involvement plan	Appendix A
		Briefing charts presented to groups	Exhibit 1, 2
		Advertisement text for public meetings	Exhibit 3
		Event display posters	Exhibit 3
		Draft text for press releases	Exhibit 3
		Print material masters	Exhibit 3
		Website design	Exhibit 3
		CMPO structure (recommendation)	1.4
Economic Development and Growth			
3.1	#3	Regional baseline forecasts with and without BRAC effects	2.1, 3.1.1
		Scenarios based on state demographer population estimates	3.1.1
		Industry/sector forecasts – labor and workforce	3.1.2
		Industry/sector forecasts – gaps in supply chains	3.1.3
		Linking forecasts to New Mexico, Ciudad Juárez, Chihuahua in model	3.1.4
Future Land Use			
3.2	#4	Integration with previous land use study	3.2.1
		Summary on compatibility with Fort Bliss mission, infrastructure, and annexation plans	3.2.4
		Geographic Information System (GIS) maps of future land use for comparison to transportation, utility, emergency services, quality of life	Plates 1-5
Subdivision Ordinance Analysis			
3.3	#9	Evaluation of new subdivision ordinance	3.3.1
		Analysis of new regulations on quality of life issues, specifically any changes in parks and open space	3.3.1
		Assessment of impact on development costs, particularly affordable housing	3.3.1
Land Use Compatibility and Buffer Zones			
3.4	#13	Analysis of land use compatibility and the distribution of buffer zones surrounding Fort Bliss	3.4.2, 3.4.3
		Identification of existing buffer areas by type and function and evaluation as to effectiveness in the three growth scenarios	3.4.4
		GIS overlays reflecting land use conflicts, existing buffer zones and requirements for new buffers	Fig 3.4-5
		Recommendations for filling gaps	3.4.5
Transportation			
3.5	#5	Summary of proposed improvements and timing	3.5.2.7, 3.5.3.1, 3.5.5.2
		Summary of accessibility problems and strategies to address.	3.5.2.1, 3.5.3.1
		Alternative strategies with costs	3.5.5, 3.5.2.7, Table 3.5-7

Table 1.5-1. Index of RGMP Contract Deliverables *(Continued)*

Section	SOW Task	Deliverable	Section #
		GIS overlays showing proposed improvements	3.5, Plate 3
		Funding options for transportation improvements	Table 3.5-7
Public Utilities and Infrastructure			
3.6	#6	Analysis of existing utilities and infrastructure – capacity, use, demand	3.6.2
		GIS maps of service areas – compare with land use maps	Plates 4, 5
		Opportunities for regional cooperation	3.6.2
		Strategies to meet growth shortfalls and funding sources	3.6.3
Housing and Market Conditions			
3.7	#7	Report on housing marketability, affordability, accessibility	Appendix B
		Regional population and employment. Market and military data	3.7.3
		Description of the analysis method	3.7.1
		Findings on current and projected affordable housing availability	3.7.3
		Study summary – Housing Market Analysis	3.7.4
Education			
3.8	#8	Description of education data used	3.8.2
		Description of analysis method	3.8.3
		Analysis results – where and when enrollment exceeds capacity	3.8.3
		Recommendations for unified plan – structural and staffing issues	Appendix G
Health and Social Services			
3.9	#10	Assessment of current, planned health and social services	3.9.2
		Projections of demand for services	3.9.3
		Estimates of shortfalls by type of services	3.9.3
		Action plan with options on medical professional shortages	3.9.4
Public Safety and Emergency Services			
3.10	#11	Overview of current conditions and future demand	3.10.2, 3.10.3
		Recommendations on deficiencies and improvements	3.10.4
		Discussion of implementation options	3.10.3
		Timeline showing priorities through 2020	3.10.4
Quality of Life			
3.11	#12	Inventory of resources (parks, recreation, open space, etc.)	3.11.2
		Estimates of future demand for amenities	3.11.3
		Assessment of potential shortfalls	3.11.3
		Recommendations for investments in Fort Bliss projects	3.11.3
		Evaluation of previous quality of life bonds	3.11.2

Table 1.5-1. Index of RGMP Contract Deliverables *(Continued)*

Section	SOW Task	Deliverable	Section #
Fiscal Impact			
3.12	#14	Summary of review and findings of impact fee study	3.12.3
		Method for estimating impact of growth on property and sales taxes	3.12.4
		Options to enhance funding of gaps	3.12.4

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2.0 SUMMARY OF EXISTING CONDITIONS ASSESSMENT

This chapter provides baseline information and an assessment of the current situation for the following planning elements:

- 2.1 - Economic Development
- 2.2 - Land Use Planning
- 2.3 - Circulation and Traffic
- 2.4 - Public Utilities and Infrastructure
- 2.5 - Housing and Market Conditions
- 2.6 - Education
- 2.7 - Health and Social Services
- 2.8 - Public Safety and Emergency Services
- 2.9 - Quality of Life
- 2.10 - Fiscal Structure
- 2.11 - Other Planning Issues

2.1 Economic Development

In analyzing economic development as it relates the RGMP, it is important to understand the current contribution and impact of the military on the regional economy. To do this, forecasts developed for the RGMP assessed how military expansion between 2005 and 2008 affected two key areas of the economy: population and employment. These projections used the REMI model – a forecasting and policy analysis tool that helps researchers answer "What if…?" questions concerning the effect of policy initiatives (such as BRAC growth) on the economy of a region. The REMI model is dynamic, which means that it allows for year-by-year analysis after the

policy change is introduced. Examples of policy initiatives include demographic responses to changes in employment or income; labor participation and employment responses to changes in wages; wage rate responses to labor market changes; and consumer consumption responses to changes in disposable income and business costs/prices.

To answer these "What if…?" scenarios, the REMI model generates two estimates:

- The future of a regional economy – this is called a benchmark or ***baseline*** forecast.
- The effects on that baseline economy when a "shock," impact or change is implemented – this is called a ***simulation***, which incorporates the policy initiative.
    - The difference between the two estimates represents the effect of the policy action.

A two-region model representing El Paso County, Texas and Doña Ana County, New Mexico was developed for the RGMP, since both communities are impacted by military expansion. Prior to introducing the military impacts (the policy initiative), the model was adjusted to account for business and demographic changes that have occurred from 2006 to 2008, since these changes are not captured by the 2005 regional data sets used to build the model. Data for these updates were obtained from the Census Bureau, the Bureau of Economic Analysis, regional economic experts, the Fort Bliss Base Transformation Office, and WSMR Plans, Analysis and Integration Office. Two baseline forecasts were then developed to assess how the military's expansion between 2005 and 2008 has impacted the regional economy.

The first baseline forecast is termed **"2005-Baseline"** because it holds military troops, dependents, expenditures, and federal civilian jobs constant at their 2005 levels. Under this scenario, regional growth after 2005 results only from non-military population and economic expansion.

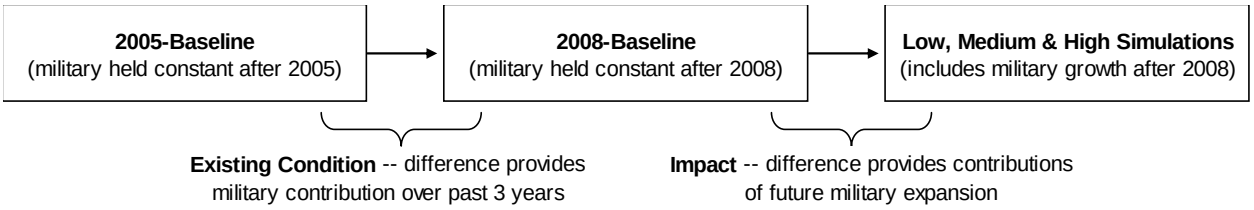
The second baseline forecast is termed **"2008-Baseline"** as it holds military troops, dependents, expenditures, and federal civilian jobs constant at their 2008 levels. Unlike the 2005-Baseline, the 2008-Baseline includes annual military increases between 2006 and 2008. Growth after 2008 is attributed only to non-military regional development.

The difference between the two baselines quantifies the military contribution over the past three years (depicted in **Figure 2.1-1**). The 2008-Baseline further serves as the benchmark for evaluating future military growth impacts between 2009 and 2013 (the impact from future growth is reported in impact assessment section of this report). The model used several key assumptions for the 2008-Baseline, listed below:

- The income of married deployed soldiers remained in the economic system, while earnings of single deployed soldiers were taken out of the region.

- The income of single soldiers who come to Fort Bliss for training remains within the economy, while only a percentage of earnings of married soldiers training at Fort Bliss remain in El Paso.
- Some Fort Bliss construction expenditures "leak" out of El Paso because materials are imported during construction and income leaves the area from personnel that work in the region temporarily and then leave once the project is complete.
- Federal civilian employment was adjusted downward to reflect Fort Bliss estimates of new federal civilian jobs on-post; however, many of these jobs are filled by the regional workforce.

Figure 2.1-1. Summary of Forecast Methodology



2.1.1 Overview of Existing Population, Employment and Gross Regional Product

This section reports data for both El Paso County in Texas and Doña Ana County in New Mexico. The following tables summarize differences in existing conditions between the 2005 and 2008 Baselines in El Paso and Doña Ana counties. **Table 2.1-1** and **Table 2.1-2** focus on the military population, while **Table 2.1-3**, **Table 2.1-4** and **Table 2.1-5** focus on total county population, employment and gross regional product, respectively. **Figure 2.1-2** compares military and non-military populations in the area for both the 2005- and 2008-Baselines.

Table 2.1-1. Military Population (Fort Bliss) – El Paso County

	2005	2008	Net
Military Troops	9,330	16,900	**7,570**
Military Dependents	15,330	25,534	**10,204**
Total	24,660	42,434	**17,774**

Source: Fort Bliss Transformation Office – FMWRC/MCEC Model

Table 2.1-2. Military Population (WSMR) – Doña Ana County

	2005	2008	Net
Military Troops	277	360	**83**
Military Dependents	421	547	**126**
Total	698	907	**209**

Source: WSMR Plans, Analysis and Integration Office – SAMAS/TAADS Model

Table 2.1-3. 2008 Population Differences

County	2005-Baseline	2008-Baseline	Net
El Paso	732,757	750,586	**17,829**
Doña Ana	202,014	202,549	**535**
Total	934,771	953,135	**18,364**

Source: Institute for Policy and Economic Development, UTEP

Table 2.1-4. 2008 Employment Differences

County	2005-Baseline	2008-Baseline	Net
El Paso	365,270	385,026	**19,756**
Doña Ana	92,914	93,754	**840**
Total	458,184	478,780	**20,596**

Source: Institute for Policy and Economic Development, UTEP

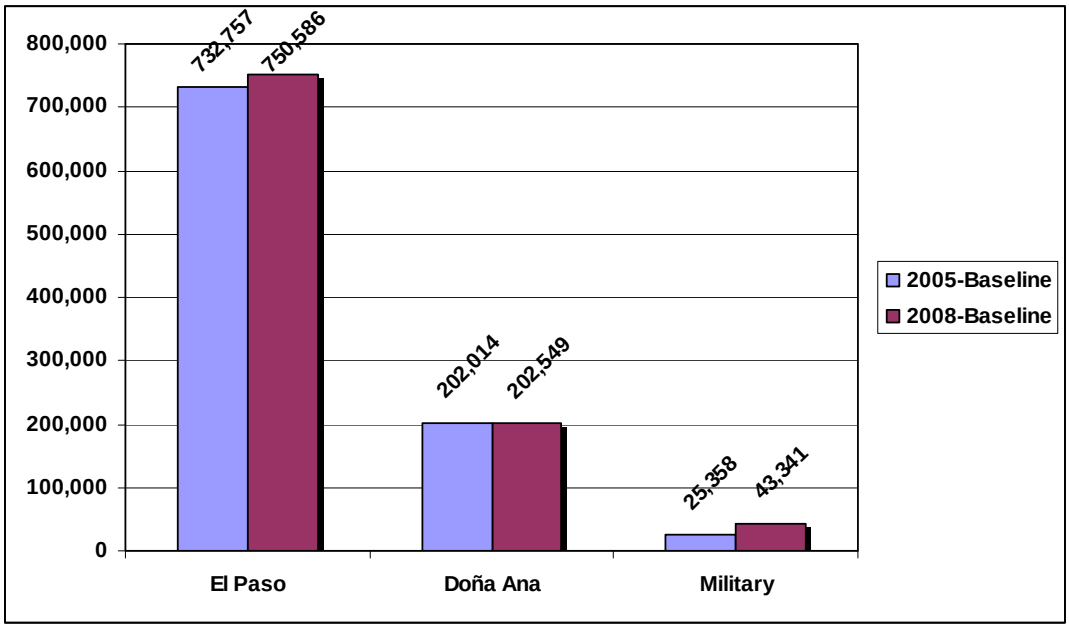
Table 2.1-5. 2008 Gross Regional Product Differences

County	2005-Baseline	2008-Baseline	Net
El Paso	17,139	18,120	**981**
Doña Ana	3.954	3.988	**0.03**
Total	17,143	18,124	**981**

Source: Institute for Policy and Economic Development

Note: All Gross Regional Product values are in millions (chained 2000 $)

Figure 2.1-2. Regional Population and Military-Related Portion



2.1.2 Current Situation

The two-county population was estimated at approximately 953,100 as of 2008, with roughly 750,600 persons residing in El Paso County and 202,500 in Doña Ana County (Table 2.1-3). The portion of the military-related population (troops and family members) of El Paso County is

approximately 5.7 percent. The portion of military-related population in Doña Ana County is less than one percent. Comparing baselines in Table 2.1-3 reveals that the military growth between 2005 and 2008 has led to a regional increase of almost 18,400 persons. Most of this increase in population has resulted from the estimated 18,000 military troops and dependents who have relocated to Fort Bliss and WSMR over the past three years (Tables 2.1-1 and 2.1-2). In terms of demographics, this expansion has led to an addition of more than 4,600 children of school age (pre-K through high school) and over 3,800 new adults, excluding troops, of working age.

Including the military, full- and part-time employment as of 2008 was estimated at 385,000 in El Paso County and 93,800 in Doña Ana County (Table 2.1-4). Additional military arriving since 2005 has resulted in a regional increase of 20,600 jobs, of which 7,570 are accounted for by the growth in military troops at Fort Bliss (considered federal military employees). The three-year military growth has also resulted in an increase of the gross regional product. An additional $981 million (adjusted for inflation) in spending by consumers, businesses and government in El Paso County can be attributable to military growth (Table 2.1-5). The majority of this increase is consumer spending, meaning that the military expansion has directly benefited households, with more expected in the coming years.

2.1.3 Challenges and Opportunities

Economic challenges and opportunities will only increase as the region prepares for a more pronounced wave of military personnel and family members. Some key challenges that currently need to be addressed include the following:

- Almost 18,000 additional military troops and dependents over the past three years, while substantial, is only 30 percent of the over 50,000 troops and dependents expected over the next five years. Future population growth will have a much greater impact on the region's infrastructure than the impacts already observed in key areas such as housing, schools and medical services, among many others. Keeping pace with these demands is a major challenge and opportunity facing El Paso. Part of this challenge is financing and investing in growth and development before it becomes self-sustaining through taxes and revenues of a larger population base.
- Regional growth implies not only the need to hire additional labor; it also requires anticipating the correct occupational mix that will support and develop economic activity in a direction that leads to improved quality of life for residents. This requires training beyond current capabilities and the financial flexibility to invest in workforce development in a timely fashion. Efficiently targeting financial investment in workforce training is a challenge for business and educational leaders alike.
- A larger available workforce increases competition for jobs between the existing civilian workforce and incoming military dependents in the labor force. This further constrains opportunities for the lowest wage bracket jobs, particular in retail trade, which is the largest employment sector of the regional economy. Training providers and higher

learning institutions are confronted with the task of improving skill sets so that workers can climb the employment ladder.

- Training in English or Spanish as a second language is a particular need in El Paso considering its proximity to Juárez, Mexico and the economic connectivity of the two cities. Employers in many industries, especially in service industries, generally favor or require bilingual capable applicants. This preference is an employment obstacle to many military spouses dealing with the demands of a bilingual culture. Spanish language training/opportunity at every age level is an area of concern for military families. Conversely, existing retraining programs are not designed to help Spanish speaking residents, many of whom are over 50 years old and compete with younger bilingual applicants for lower paying work. English language training is an area of concern for this part of the workforce.
- Bottlenecks in government contracting and restrictive qualifying criteria (such as bonding capacity requirements) are hurdles for local businesses, often making new opportunities inaccessible. This translates into less direct benefit for the local economy. Streamlining the contracting process and maintaining suitable review and qualifying standards are challenges for both the government and private sector in order to increase El Paso supplier participation.

Overall growth has brought new job opportunities and increased the talent pool. This perspective is highlighted by the following:

- Many initiatives and incentives are already in place to meet the challenges of city growth: property and sales tax rebates; state fund for innovation and commercialization; and downtown revitalization projects and tax reinvestment policy. Benefits from these programs can continue to expand if made more visible and accessible to local businesses and investors.
- Ongoing recruitment efforts by REDCO and the El Paso Economic Development Department are strategic to increasing the area's industrial base and providing greater employment and higher wage opportunities for the workforce. Many of these efforts have been aided or driven by expansion at Fort Bliss. Target industries include advanced manufacturing/suppliers/services to complement defense technologies (such as Future Combat Systems) and maquiladora production in Juárez, as well as industries in the life sciences (including medical manufacturing), alternative energy and data management.
- New initiatives, such as the newly accredited four-year Texas Tech School of Medicine and the expansion of UTEP School of Nursing and College of Health Sciences, provide the valuable physical and human-based infrastructure to support a life sciences cluster. This is the foundation for an entirely new and high-paying employment base for the region.
- Professional jobs supporting the maquiladora manufacturing sector in Juárez are expanding opportunities and expertise on both sides of the border.

- Military spouses are a significant source of talent. Making their capabilities known to El Paso employers and providing targeted training for high demand jobs will assist this segment of the workforce find jobs.
- The expanding retirement population (civilian and military) can provide special opportunities, since the experience of the older workforce is a resource for specialized skills and leadership.

2.2 Land Use Planning

This section addresses three elements, each connected in the planning process: future land use, subdivision ordinance, and compatible buffer zones around Fort Bliss. Although the study area for the RGMP encompasses El Paso County, Texas, and Doña Ana County, New Mexico, the most significant effects on land use from military expansion of Fort Bliss will be felt within 20 miles of the installation. For this reason, the City of El Paso, its extraterritorial jurisdiction, and other communities within this 20-mile region of influence are the focus of the land use element. **Figure 2.2-1** shows the boundary of the City of El Paso and the Extraterritorial Jurisdiction zone.

2.2.1 Overview of Existing Land Use Conditions

The following figures summarize existing conditions in the El Paso region that will influence development and future land use opportunities. **Figure 2.2-2** shows the estimated allocation of acres for several different land use categories. The chart illustrates that about one third of the land area is vacant. **Figure 2.2-3** illustrates residential building permits by dwelling type from 2004-2008. Single Family Building permits for the El Paso Metropolitan Area declined from a high of 4,333 in 2005 to 2,774 in 2008; however, over 1,900 multi-family dwelling units were permitted in 2007 and 2008, a substantial increase over previous years. New home prices rose dramatically in El Paso between 2003 and 2005 when compared to the rest of Texas. **Figure 2.2-4** shows average new home cost in El Paso has increased at a faster rate than the State of Texas from 1998-2008.

The City of El Paso has undertaken the following recent land use planning initiatives:

- Adoption of new Subdivision Regulations
- Adoption of a Smart Code development option
- Adoption of a Parks and Open Space Master Plan
- Adoption of a Stormwater Master Plan
- Adoption of Park Design and Construction Standards
- Adoption of Drainage Design Manual
- Adoption of an updated Landscape Ordinance.

Figure 2.2-1. El Paso City Boundary and Extraterritorial Jurisdictions

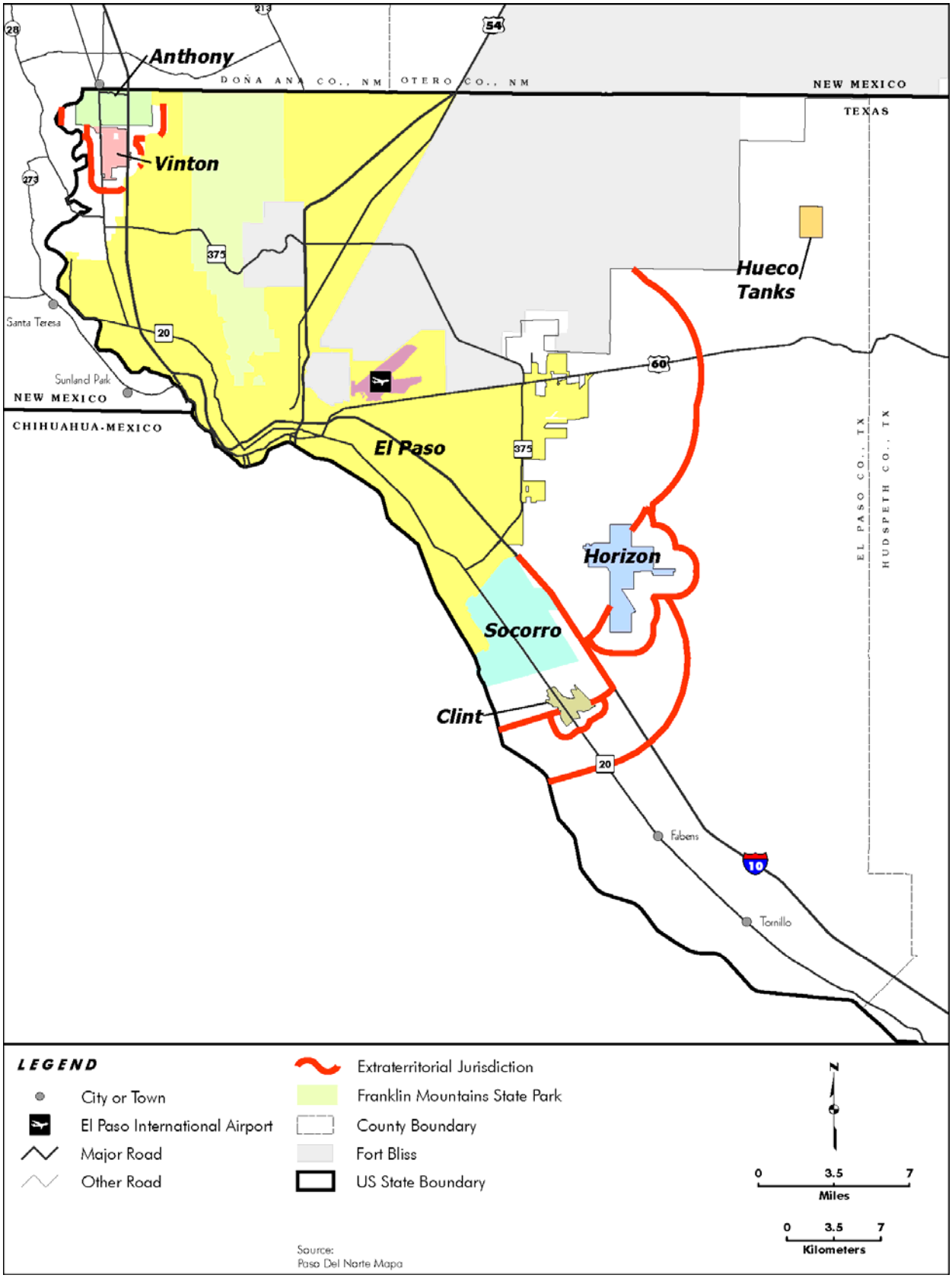


Figure 2.2-2. Land Use in El Paso

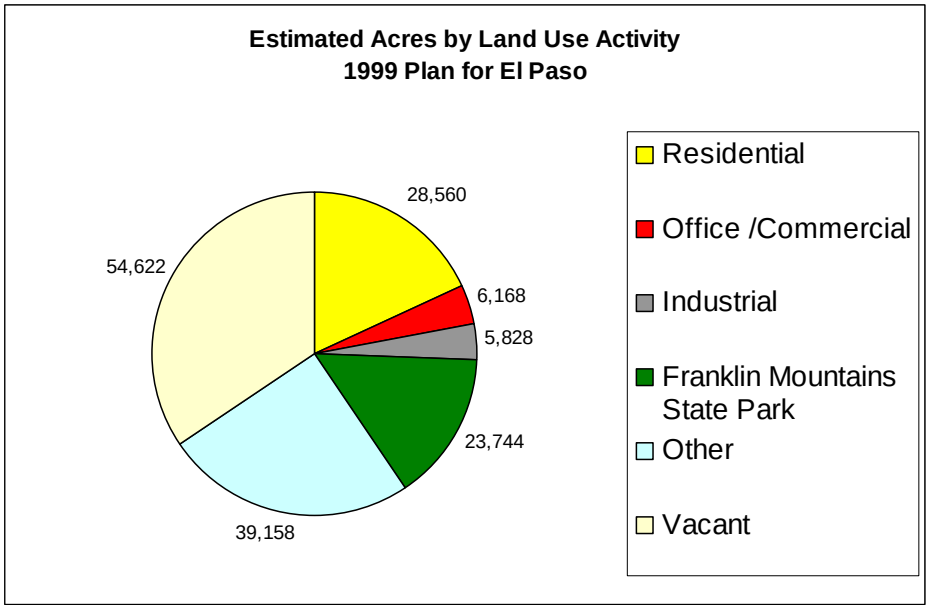


Figure 2.2-3. Residential Building Permits in the El Paso Metropolitan Area

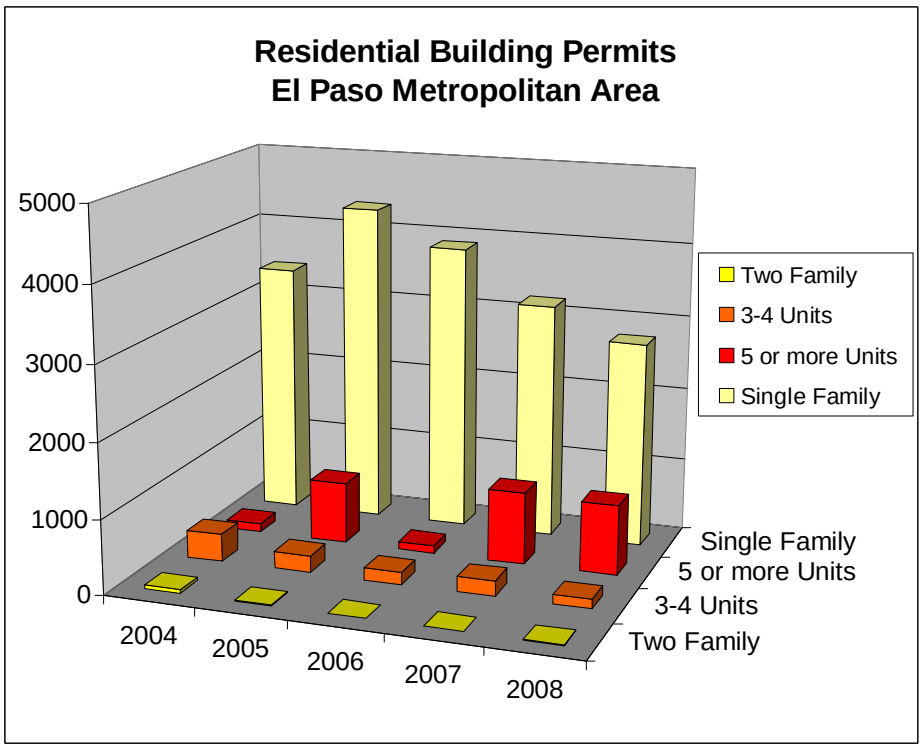
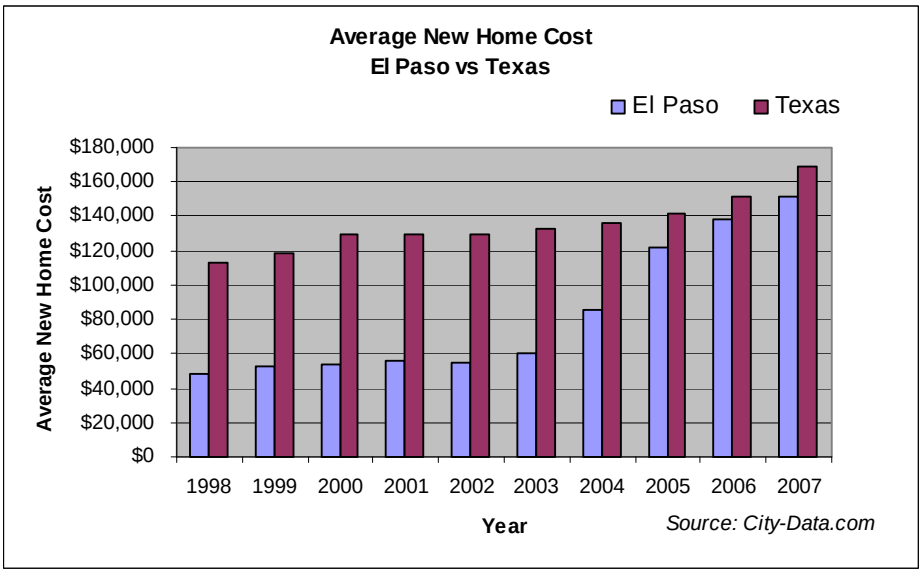


Figure 2.2-4. Average New Home Cost, El Paso vs. Texas



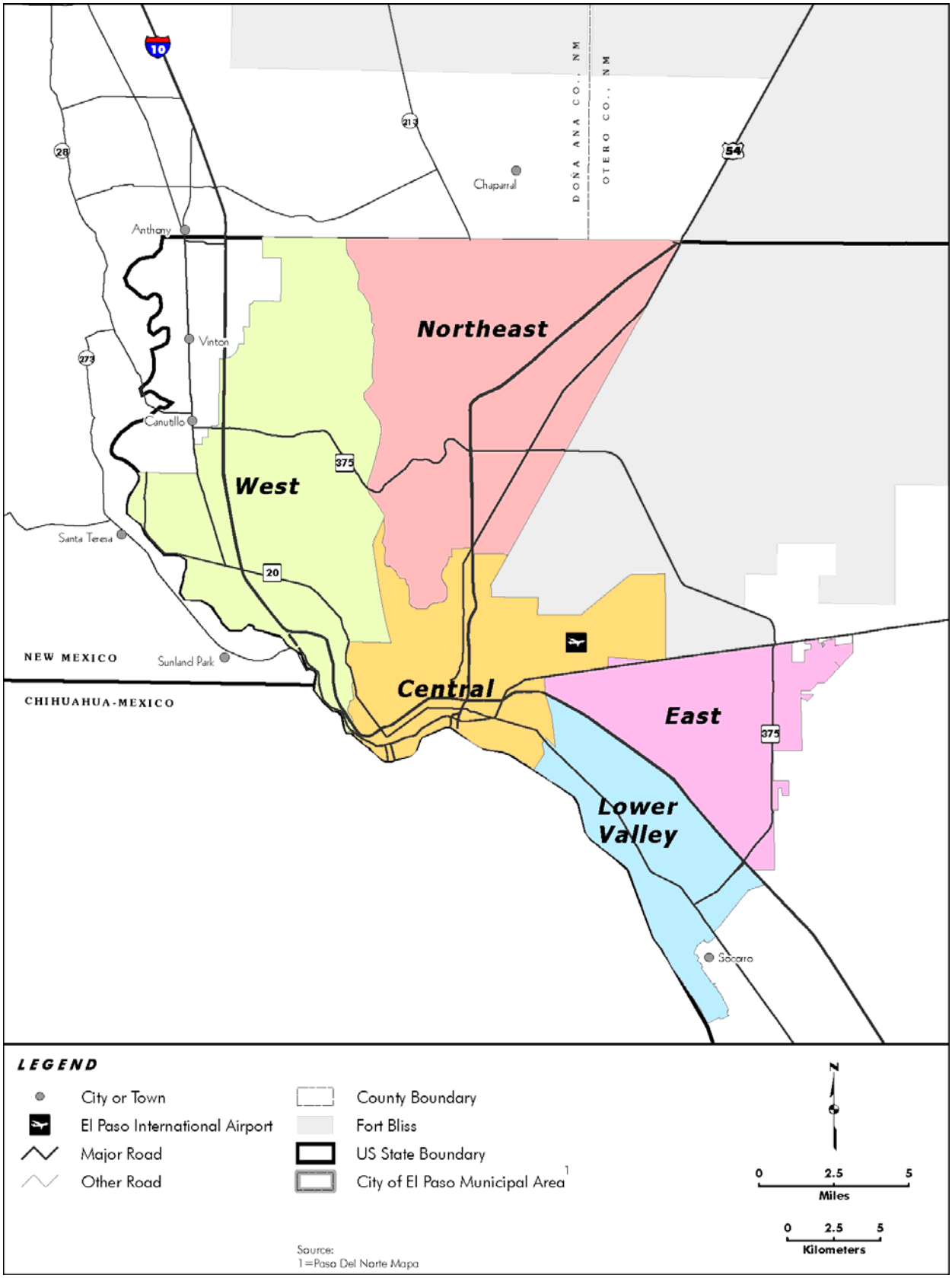
2.2.2 Current Situation

The Plan for El Paso, the city's Comprehensive Plan, estimates that by 2025, the City of El Paso will grow in area from 158,080 acres (in 1999) to 170,880 acres. Much of this growth is currently occurring in the Northwest, East, and Northeast planning areas of the city (see **Figure 2.2-5**).

The City of El Paso has adopted zoning and subdivision ordinances as a regulatory means of implementing the land use goals and objectives of the Comprehensive Plan. Subdivision regulations govern the conversion of raw land into buildable lots and parcels and ensure that there is adequate provision for public utilities and services. The current land use pattern is shown in **Plate 1** (at the end of the document). Through its zoning code, the city regulates the types of land uses allowed, the intensity or density of development, the height, bulk and placement of structures, the amount of parking required and its design, and requirements for landscaping and other aspects of land use and development.

Current generalized zoning in El Paso follows a traditional model that divides the city into various use districts or zones. The Zoning Code has 15 classifications for Residential use, six for Commercial use, and four for Industrial use. In addition, there are 12 Special Purpose zones for addressing special situations such as the preservation of unique resources or the facilitation of mixed-use projects through more flexible development standards.

Figure 2.2-5. City of El Paso Planning Areas



2.2.3 Challenges and Opportunities

The following land use issues are viewed as major challenges to future development and land use within the region:

- Lack of land use controls in unincorporated areas of El Paso County and premature platting covering thousands of acres in the eastern and lower valley areas of El Paso County present a significant challenge to growth management within the region.
- Encroachment of new residential development and infill around the boundaries of Fort Bliss in El Paso and adjacent counties could constrain activities on Fort Bliss. Conversely, expansion of Fort Bliss training operations could negatively impact the quality of life and viability of existing neighboring homes and businesses. The Joint Land Use Study program offers a planning framework in which the community and the military work cooperatively to resolve civilian and military encroachment issues to their mutual benefit.
- El Paso is in a position to shape its future with the adoption of Smart Growth principles and more widespread use of community goals in future development, such as:
  - Sustainability and adherence to Smart Growth principles
  - Affordable housing
  - Pedestrian/transit oriented development
  - Mixed Use

Preservation and Open Space

- It is important to identify clearly the community goals and priorities for future growth and management in a comprehensive planning process. These goals would be included in an updated El Paso Master Plan/Comprehensive Plan. Once adopted, the updated vision and goals will serve as a basis for changing the Zoning Code to implement and enforce land use controls that achieve the desired benefits for El Paso.
- The City of El Paso has incorporated Smart Code principles as a new title in the city's ordinances. How well Smart Code principles are tailored to address community values and character will determine whether it will be an effective development strategy.
- In light of significant increases in activity as a potential result of growth, the City of El Paso can undertake a careful review of building and subdivision codes to identify enforceability issues, evaluate the adequacy of its permit review process and permit inspection capacity, and provide training to city employees where required.

2.3 Circulation and Traffic

Transportation is defined as the movement of goods and people from place to place, and in general refers to air, water, and ground vehicles and those services that make use of these vehicles and their infrastructure. Roadways are an example of a transportation infrastructure for automobiles, trucks, and buses to carry both people and goods.

The study area for this element of the RGMP focuses on the El Paso Metropolitan Planning Organization (MPO) area, a region that includes the City of El Paso and Fort Bliss Army Reservation in the State of Texas, other neighboring cities, towns, and counties, as well as portions of counties in the State of New Mexico.

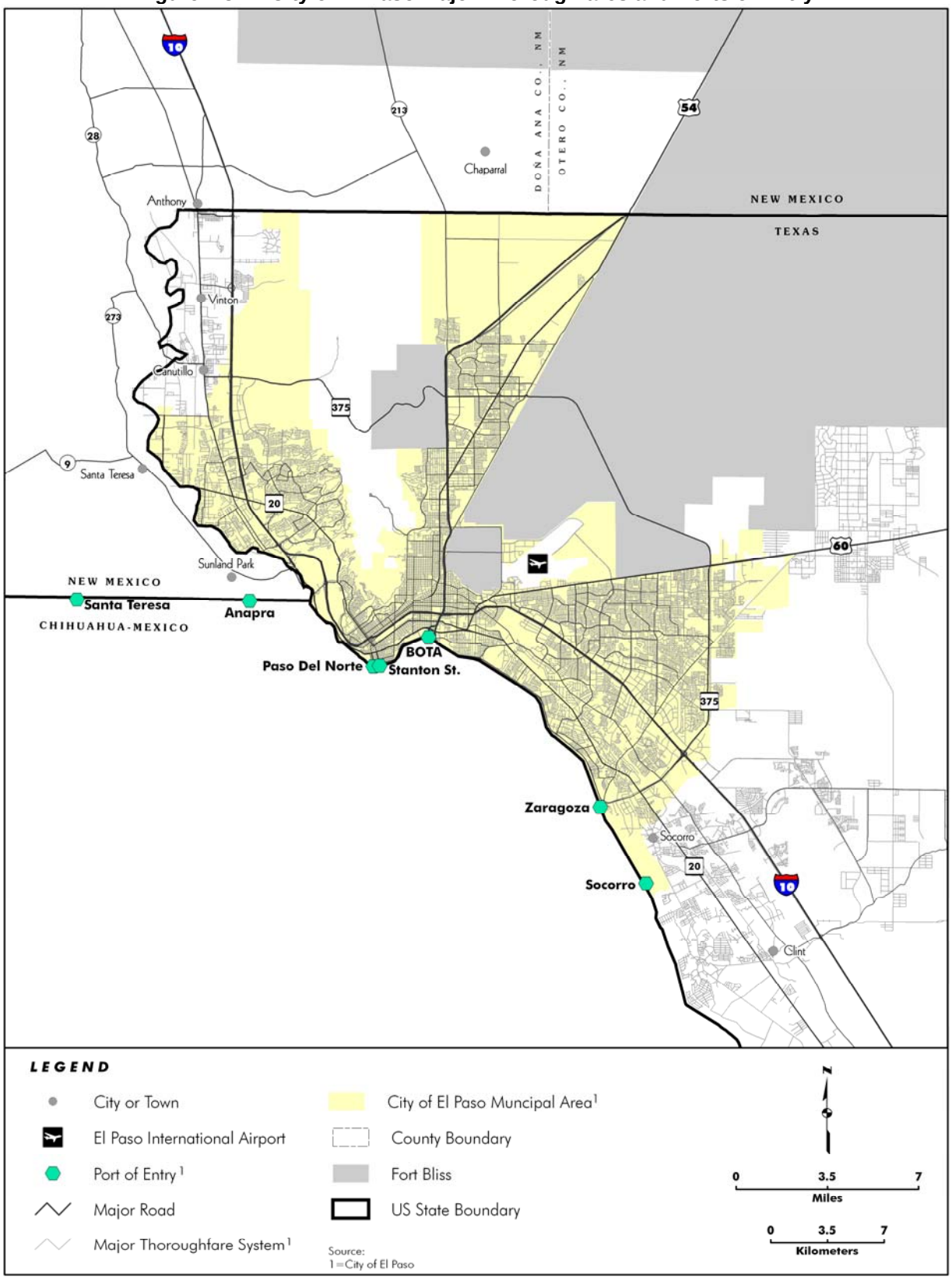
2.3.1 Overview of Existing Transportation Conditions

Serious to severe congestion existed on major roadways in the City of El Paso under the 2007 population growth and traffic demand conditions. Many roadways currently operate at unacceptable levels and require improvements. Proposed expansions at Fort Bliss are expected to add traffic on the existing congested infrastructure. The impact on the local and regional road network was evaluated in 2007 and suggested further degradation of Level of Service (LOS) on some area roadways is likely to occur.

The City of El Paso is one of the major international border cities with Mexico experiencing robust growth in industrial, manufacturing and other trans-border economic activity. **Figure 2.3-1** illustrates the major thoroughfares and Ports of Entry (POEs) serving the city. The introduction of the North American Free Trade Agreement (NAFTA) stimulated trans-border economic activity, collectively increasing traffic and service volumes on the existing infrastructure and roadway network. The Bureau of Transportation Statistics (BTS) Intermodal Transportation Database indicates about 750,000 trucks enter the U.S. at El Paso yearly. At vehicular POEs, traffic delay and bottlenecks caused by commercial vehicles (freight traffic) hinder non-commercial passenger vehicles increasing the overall vehicular delay, traffic congestion on the regional roadway network, traffic safety concerns, bridge/roadway degradation, and maintenance. This hindrance affects retail potential, workers crossing daily, mostly from Mexico into the U.S., and non-commercial trans-border traffic for both pedestrians and privately-owned vehicles (POV).

Truck trips for the El Paso area in the year 2005 are projected to increase by approximately 40 percent over the next 25 years.

Figure 2.3-1. City of El Paso Major Thoroughfares and Ports of Entry



The City of El Paso and Texas Department of Transportation are addressing current issues through a variety of actions including:

- Funding for existing roadway network widening and new loop construction
- Promoting Smart Growth techniques in proposed developments
- Construction of new bike path and pedestrian walkways
- Adopting new transit routes and bus schedules with funding for more buses and transit shelters
- Identifying and developing existing roadways to serve as new truck corridors
- Improving capacity and access at POEs

2.3.2 Current Situation

The Existing Conditions Assessment indicated that congestion in the El Paso metropolitan area occurs primarily during the morning and evening peak hour periods. The traffic operating characteristics, capacity, and congestion of an existing roadway segment can be measured using the volume-to-capacity (v/c) ratio. V/C ratios are associated with a LOS parameter, typically graded with the letters A, B, C, D, E, and F. LOS A corresponds to the least congested condition, and LOS F the most congested. The existing roadway capacity is adequate during the off-peak hours; however, during existing peak hours, some major highways and principal arterials operate at an unacceptable LOS, with traffic volume exceeding allowable capacity by as much as 25 percent. The 2030 "No-Build" scenario indicates that almost all the major freeways and principal arterials would operate at unacceptable LOS of E or F (exceeding allowable capacity by 25 percent) if construction planning is not undertaken directly. **Figure 2.3-2** shows projected congestion by the year 2035 (projected from 2005 volumes) on the existing roadway network.

There are eleven access gates around the Fort Bliss Main Cantonment and new East Biggs area (see **Figure 2.3-3**). Most of the existing gates have two entry lanes and experience little or no congestion at the entry points. If the population of Fort Bliss increases substantially, congestion would likely back up onto local roadways.

Figure 2.3-2. City of El Paso Projected Congestion – 2035

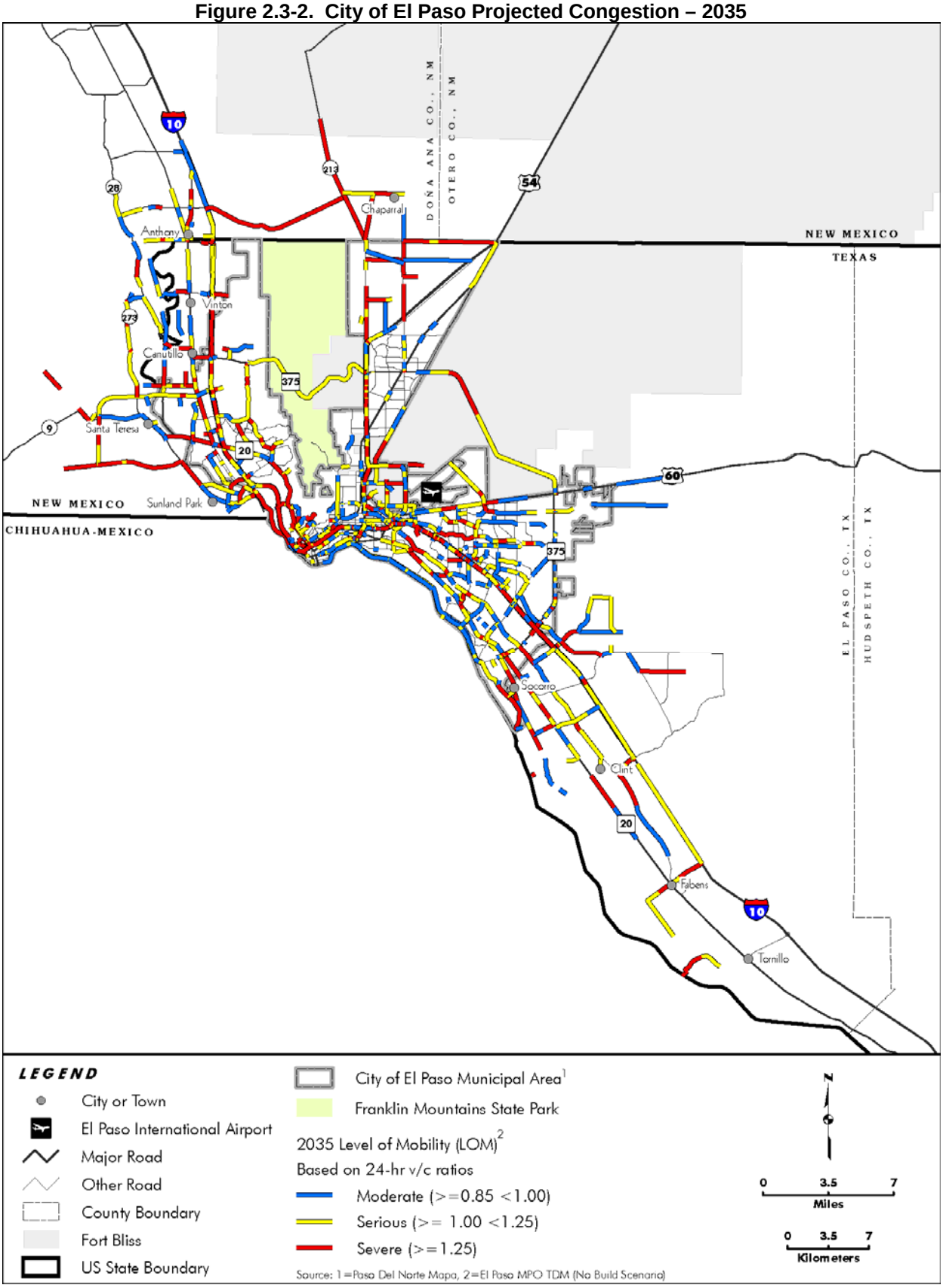


Figure 2.3-3. Fort Bliss Access Gates – Current and Proposed

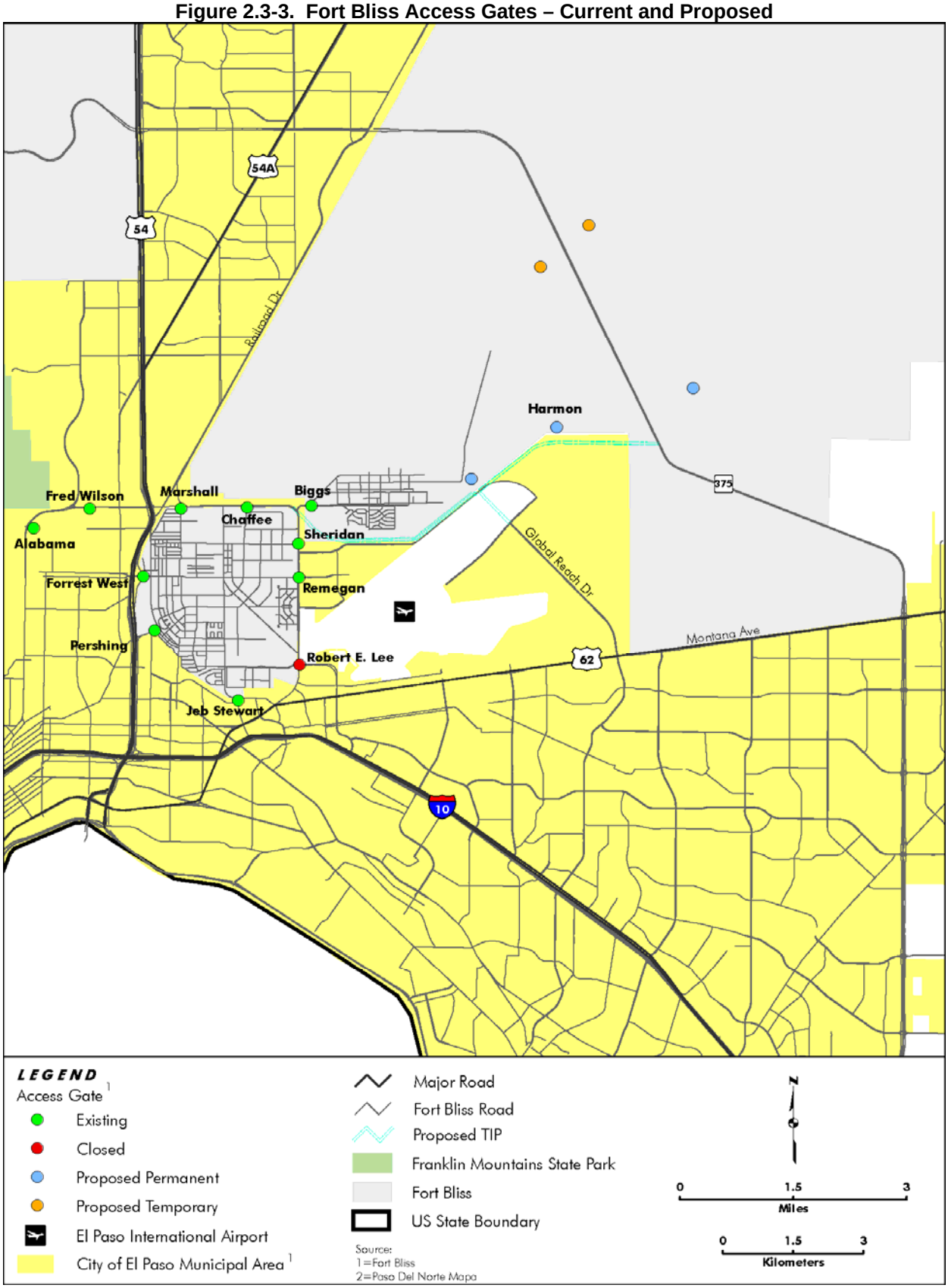
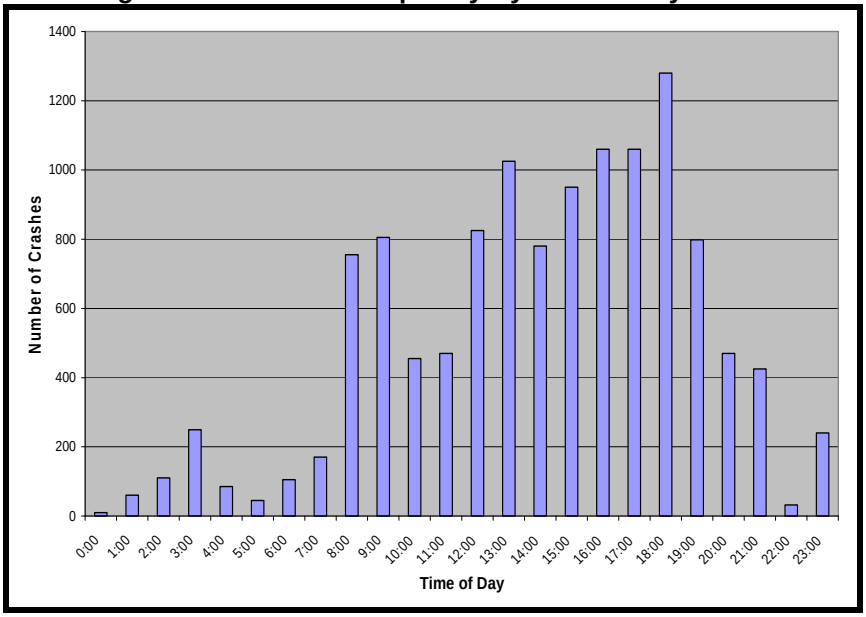


Figure 2.3-4 provides crash frequencies by time of day during the year 2005**.** The crash data indicates the highest number of traffic crashes occurring in the evening peak hour between 5:00 to 6:00 pm when traffic congestion is highest at most locations.

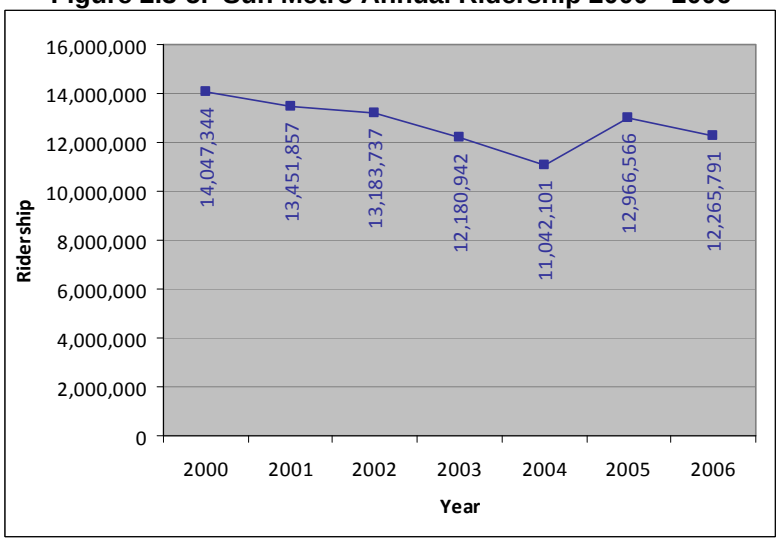
Figure 2.3-4. Crash Frequency By Time of Day – 2005



Passenger car, commercial trucks, and pedestrian traffic demand at the POEs in the El Paso region have demonstrated sharp increases, requiring the need for alternative transportation modes for passenger and goods travel.

Figure 2.3-5 shows the Sun Metro Transit serving the urban El Paso region has experienced some decline in annual ridership since the year 2000. The monthly ridership demand for the rural area transit service provided by El Paso County has remained essentially constant.

Figure 2.3-5. Sun Metro Annual Ridership 2000 - 2006



2.3.3 Challenges and Opportunities

The following issues will have a major influence on the existing roadway network and infrastructure:

- Understanding future land development patterns and anticipated changes in population density and commuting patterns will influence where thoroughfare system improvements should be made. Growth can be directed to areas through proactively providing access and mobility in the thoroughfare system. Coordination between MPO and regional planners is essential for making key decisions and integrating mutually supportive planning actions.
- Planned improvements for POEs do not provide a decisive solution for overcoming current and increasing congestion and delays.
- The BRAC expansion could add an additional 30,000 cars on El Paso roads, non-inclusive of contract professionals. Traffic volumes will exceed network capacity of an already overburdened system.
- Fort Bliss gate capacity expansion and the addition of new gates needs further evaluation to avoid augmenting already severe congestion and blockage of leader roads immediately outside existing gates blocking the roadway.
- Both local roads and highways and the major I-10 corridor are congested and at maximum capacity during peak hours.
- Implementing future mass transit projects will require major financial investment and major commitment of land resources to establish or expand corridors. This will require local and regional cooperation and initiative.
- Freight train traffic is increasing, while the need for commuter rail is heightening. The city needs an assessment of the current use of the rail system. There may be opportunities to use alternative rail infrastructure to free up existing lines for new commuter rail service.
- Other specific challenges that demand improvement include:
  - Providing for traffic volumes on local roadways to and around key facilities such as Fort Bliss Access Control Points (entry gates), medical centers, large shopping centers, downtown, and campuses.
  - Providing runway capacity and capability for an expected increase in outbound air freight volume from El Paso International Airport.
  - Reducing waiting times and congestion at border areas by streamlining processing through the POEs.

2.4 Public Utilities and Infrastructure

This section addresses the various types of utilities and infrastructure necessary to support human development. A community or a region's ability to sustain new growth and development is largely dependent on its ability to provide basic services such as water supply and distribution, wastewater collection and treatment, solid waste disposal, storm water management, gas, electricity, and communications.

The region considered in this section corresponds to the service areas of the various utility providers for residents of El Paso County.

2.4.1 Overview of Existing Public Utilities and Infrastructure

Nearly two-thirds of the water supply in El Paso County is supplied by El Paso Water Improvement District (WID) #1 mostly for agricultural production. El Paso Water Utilities (EPWU) supplies 90 percent of the water required for municipal use (see **Figure 2.4-1**).Water supply for El Paso County is projected to expand from about 150,000 acre-feet/year to about 250,000 acre-feet/year by 2060, keeping pace with growing demand (see F**igure 2.4-2**).

Facts at a glance:

- The Public Service Board of EPWU administers the water, sewer and stormwater utility services for the City of El Paso.
- EPWU supplies 97.5 million gallons of potable water and treats 58 million gallons of wastewater each day.
- EPWU operates four wastewater treatment plants with a combined capacity of 94.2 million gallons per day (MGD).
- The Clint Landfill, operated by the City of El Paso, is the only permitted public landfill in El Paso County. Last year the landfill received over 430,000 tons of waste.

Figure 2.4-1. El Paso County Water Suppliers

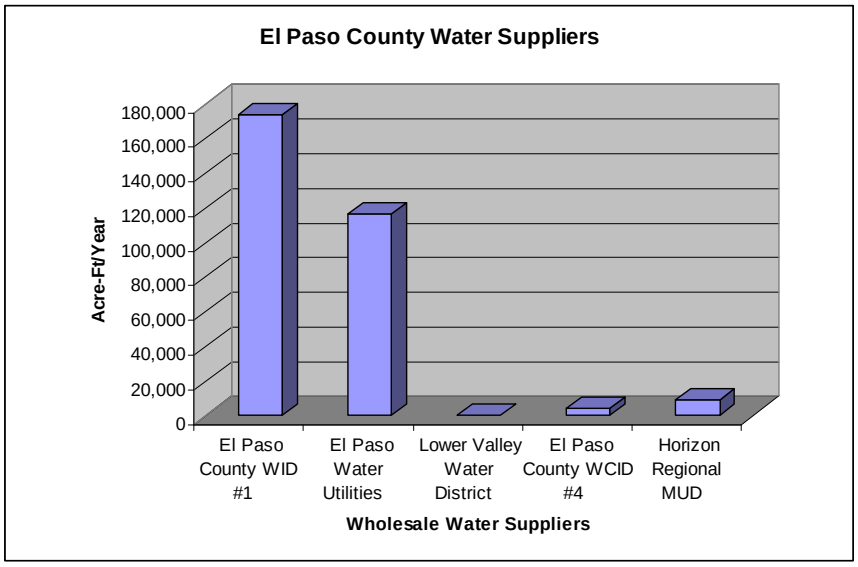
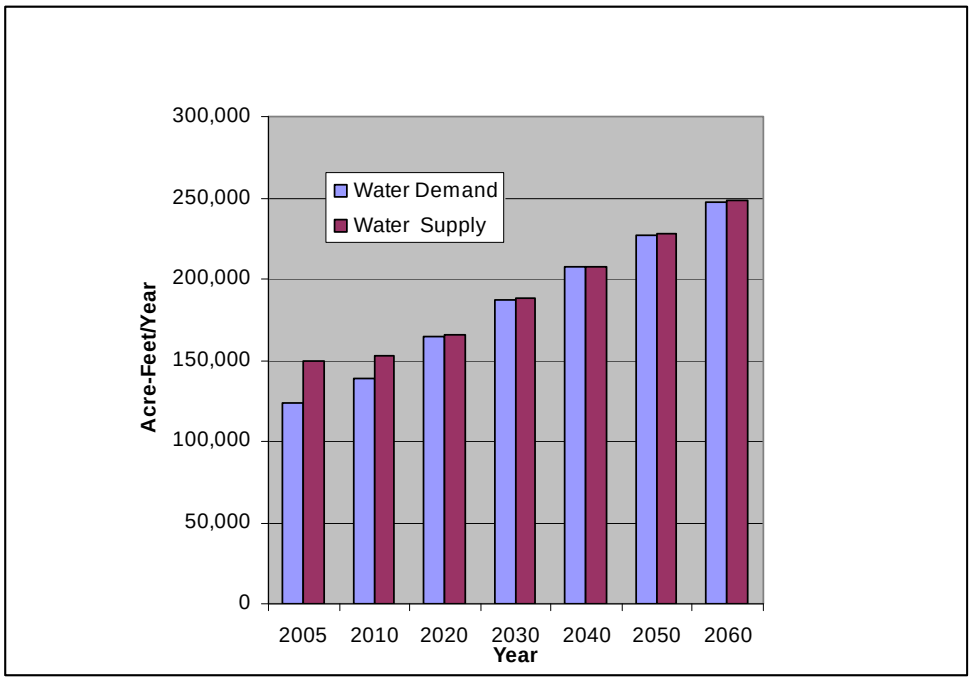


Figure 2.4-2. El Paso County Water Supply and Demand Comparison



2.4.2 Current Situation

Water. EPWU supplies about 90 percent of all municipal water in El Paso County. El Paso relies on both ground and surface water to meet its supply needs. Most, but not all, areas of El Paso can be served by both surface and ground water supplies. The city leases agricultural water rights to divert water from the Rio Grande and pumps ground water from the Hueco and Mesilla Bolson aquifers. Due to concerns that this aquifer may someday be depleted, El Paso adopted a

Water Resource Management Plan, which calls for increased use of Rio Grande water, promotion of water conservation measures, and expanded reuse of reclaimed water.

EPWU operates two treatment plants that treat water drawn from the Rio Grande. Water quality is poor and requires a high level of treatment. Total demand for water has been declining since the late 1990s, which EPWU attributes to improved conservation practices.

EPWU currently supplies over 4.6 MGD of reclaimed water for use on golf courses, city parks, school grounds, apartment landscapes, and for industrial uses. Another five MGD of reclaimed water is used in the operation of the treatment plant or injected back into the Hueco-Bolson for recharge.

In searching for new sources of water supply, EPWU and Fort Bliss entered into a partnership to construct the world's largest inland desalination plant. The Kay Bailey Hutchinson Desalination Plant produces 27.5 MGD of fresh water by converting previously unusable brackish groundwater from the Hueco-Bolson.

The 2006 *Far West Texas Water Plan* estimates that by 2060, the demand for municipal water will increase 82 percent from 2000 levels. EPWU has developed and integrated strategy to meet this increased demand and although the population projections used in the *Far West Texas Water Plan* do not account for the anticipated spike in growth resulting from the Fort Bliss BRAC Initiative, EPWU estimates that with continued conservation practices and planned resource development their present infrastructure is able to absorb 200,000 to 270,000 more people in the region.

Wastewater. The EPWU operates four plants with a combined treatment capacity of 94.2 MGD, which treat wastewater generated by El Paso residents and Fort Bliss. The current average daily throughput is about 58 MGD. The Northwest Wastewater Treatment Plant treats wastewater from residential and industrial sources in the west and northwest parts of the city. The Haskell Street Wastewater Treatment Plant serves the central part of the city. The plant can discharge effluent to either the Rio Grande River or the American Canal where it provides irrigation water to farmers in the Lower Valley. In exchange for this irrigation water, the EPWU obtains credits for surface water supplies. The plant has also added sand filtration capabilities and a one million gallon elevated storage tank to provide reclaimed water to local parks, schools, industries, and a local golf course. The Roberto Bustamante Wastewater Treatment Plant serves the east, southeast, and Lower Valley parts of the city. The Fred Harvey Water Reclamation Plant is located in Northeast El Paso, and uses tertiary treatment to produce reclaimed water to drinking quality level. Part of the reclaimed water is reinjected into the Hueco-Bolson and provided to local industries, a local golf course, and other customers for irrigation and dust control activities.

Solid Waste Management. The Environmental Services Department provides solid waste collection services to residents and commercial business within the City of El Paso. The

collected waste is transported to a city-owned landfill (Clint site) located southeast of El Paso. The Clint Landfill also accepts waste from private haulers that collect waste from the neighboring communities and county residents. Under current conditions, the Clint Landfill has a life expectancy of 20 years. The city also owns an inactive landfill site located in the far northwest part of El Paso, the McCombs Landfill.

The Camino Real Landfill, a privately operated facility is located in Sunland Park, New Mexico. Classified as a regional landfill, it accepts municipal and commercial waste, construction and demolition waste, and special wastes such as industrial solid waste, and petroleum contaminated waste and wastewater treatment plant sludge. In 2006, Camino Real Environmental, Inc., the landfill operator, applied to the State of New Mexico for a ten-year Solid Waste Facility Permit renewal. In July 2008, the state denied the permit and instead renewed the existing permit for one year.

Fort Bliss maintains a government-owned 102-acre landfill. A private contractor collects on-post domestic waste for disposal at the landfill. The landfill's permit allows it to also accept construction and demolition waste. Fort Bliss has an aggressive waste recycling program, and all paper, plastic, aluminum containers, and metal scrap from artillery use are recycled.

Energy. El Paso Electric Company (EPEC) generates and distributes electricity through an interconnected system to customers in west Texas and southern New Mexico. EPEC has a total generating capacity of 840 megawatts (MW) and can purchase additional power from the Four Corners Plant near Farmington, New Mexico. The EPEC's System Expansion Plan identifies improvements needed to maintain system reliability through 2015. The plan anticipated a large but unknown load from the Army's BRAC expansion. EPEC is confident they have sufficient capacity to serve the needs of Fort Bliss.

El Paso Natural Gas provides gas to the region. Texas Gas Services, a Division of ONEOK, owns and maintains the distribution lines. Texas Gas Service provides gas to residential, commercial and industrial customers primarily in Austin, El Paso, and the Rio Grande Valley.

Communications. AT&T (formerly Southwestern Bell) provides basic phone service to El Paso and the county. Time Warner holds the cable service franchise with the City of El Paso. Most major national service providers offer wireless telephone services. Broadband wireless internet services are available to El Paso and surrounding communities.

2.4.3 Challenges and Opportunities

- Much of the land within the east and lower valley of El Paso's Extraterritorial Jurisdiction (ETJ) zone is platted in small lots, but no investment in infrastructure has occurred. The region faces challenges to find financial mechanisms to fund infrastructure expansion ahead of development and where it desires growth to occur.
- A surge in regional growth would shorten the life expectancy of the existing landfills. The situation presents an opportunity to reconsider solid waste management on a regional

basis, and the adoption of integrated conservation practices such as waste stream reductions, waste to energy, and other applications in addition to landfilling.

- Long-term plans to bring desalinized water to El Paso from outlying areas will require investment in treatment plants and distribution infrastructure. EPWU is engaged with the Far West Texas Water Planning Group in promoting a regional approach to water resource management.
- Revenue bond financing makes utilities expansion funding a reasonable alternative to explore.
- Lack of data concerning available capacity and current consumption/generation rates can make planning difficult; this is a concern in almost all utility areas.

2.5 Housing and Market Conditions

Sufficient, affordable housing is a necessary component to support economic growth. Current and projected housing supply and demand define the supply balance and the requirements for supporting infrastructure and the need for affordable housing projects in the market area. This planning element evaluates projected needs in consideration of the particular behavior (for buying and renting) and household income levels anticipated for the El Paso market.

The study area for this element of the RGMP incorporates a generalized "housing market area," which in some cases includes not only data for the City of El Paso, but also for housing in other neighboring cities, towns, and counties, as well as portions of counties in the State of New Mexico.

2.5.1 Overview of Existing Housing Market

The overall housing stock in the El Paso market area is estimated to total 253,654 units, with single-family homes comprising 71.5 percent of that total.[3] Multi-family units are 21.8 percent of the total housing stock and 6.7 percent are mobile homes. Vacancy rates were estimated to be 6.0 percent in 2008, below the national average of 7.0 percent. Most of the current housing stock in the area was constructed from 1970-1989, with a recent surge in housing construction seen from 2000-2008. **Table 2.5-1** and **Table 2.5-2** provide an overview of the housing market in the El Paso area.

Table 2.5-1. El Paso Housing Market Area Indicators – 2008

2008 Indicators	
Total Housing Stock	253,654
Occupied Housing Units	238,348
Total Vacant Units	15,306
One Bedroom	37,863
Two Bedroom	57,169
Three Bedroom	109,860
Four-Plus Bedroom	38,974
Owner-Occupied Units	154,428
Renter-Occupied Units	83,290
Average Household Size	3.08

Source: 2008 Housing Market Analysis, Fort Bliss, Texas

[3] *2008 Housing Market Analysis, Fort Bliss, Texas*. Robert D. Niehaus. May 2008

Table 2.5-2. Historic Construction Permits (by Decade)

Year Constructed	Number	Percent
1939 or earlier	12,163	4.8
1940-1949	10,196	4.0
1950-1959	28,130	11.1
1960-1969	31,817	12.6
1970-1979	48,648	19.2
1980-1989	42,951	16.9
1990-1994	17,653	7.0
1995-1998	18,426	7.3
1999-March 2000	6,132	2.4
April 2000-2008	37,291	14.7

Source: 2008 Housing Market Analysis, Fort Bliss, Texas

2.5.2 Current Situation

While the current supply of housing is readily documented, market response to increased demand can be estimated and measured to determine whether shortfalls of housing, particularly affordable housing, will occur. Estimates and locations of planned developments can be identified through contacts with regional developers and the City of El Paso Departments of Community and Human Development and Development Services. Future longer-term growth will be based on the REMI economic projections.

Median home prices (shown in **Figure 2.5-1**) have risen slightly in 2008, reaching $134,600, up from $131,900 in 2007. **Figure 2.5-2** shows the number of residential sales from 2000-2008. Home sales declined in 2007 compared to sales in 2006, with lower sales still in 2008. Housing is relatively affordable in El Paso with a housing affordability index of 1.15 in the 2nd quarter of 2008. An affordability index rising above 1.0 indicates a family is more able to afford a median priced home. The housing affordability index for first time homebuyers is 0.70, indicating a need for additional affordable housing. About 65 percent of the housing in the El Paso market area is owner occupied.

Figure 2.5-1. Median Sales Prices of Residential Property in El Paso 2000-2008

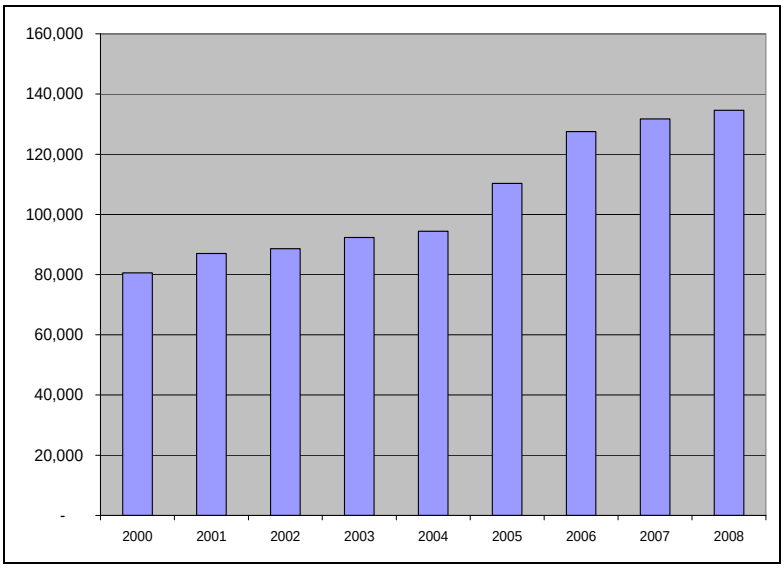
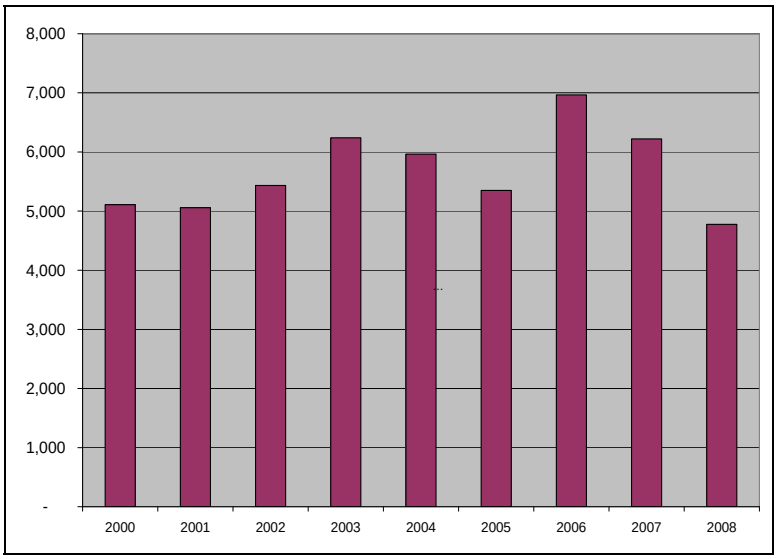


Figure 2.5-2. Residential Sales in El Paso 2000-2008



For 2006 and 2007, the average number of building permits for new residential units would maintain an adequate supply to the housing market even with an increased demand of about 1 percent as population is estimated to have grown from 725,559 in 2006 to 734,669 in 2007. In 2006, some 3,166 residential units were permitted followed in 2007 with 3,578 residential permits in El Paso County.

The 2007 rental vacancy rate for El Paso is estimated at 6.3 percent, up slightly from 5.5 percent in the previous year. This level of vacancies indicates that the rental market is in relative balance between supply and demand.

A draft Housing Market Analysis (HMA) prepared for Fort Bliss in 2008 reported that an estimated 3,603 military families and 289 unaccompanied personnel were homeowners out of the 8,579 families and 1,099 unaccompanied personnel who require community housing.[4] The HMA indicated that there was a need for 2,223 housing units in addition to those available in the community to meet the military needs for family housing at the time of the study.

2.5.3 Challenges and Opportunities

- With anticipated growth, the increased demand for housing will lessen availability of housing at all levels, drive up prices of both "for sale" housing as well as rental housing. This would impact the availability of affordable housing. Affordability, purchase, and rental assistance programs will become very important and need to be addressed in growth management planning.
- Current information indicates that military families tend to rent dwelling units at almost twice the rate as non-military residents. Home ownership encouragement programs will be needed.
- Projecting and providing the correct mix of rental vs. owner occupied units to meet the needs for both owner and renters is difficult to predict. This makes it difficult for developers to anticipate what type of projects to undertake.
- If the cost of housing (rental or home buying) increases due to market pressure, Basic Allowance for Housing (BAH), even though adjusted annually, may not keep pace with rapidly increasing housing costs.
- El Paso faces challenges to identify visions and goals for new community development and then to adopt these concepts in updated plans, zoning code changes and other regulations and ordinances, as needed.

[4] *2008 Housing Market Analysis, Fort Bliss, Texas*

2.6 Education

Education is correlated with the economic well-being and quality of life of a region. As El Paso grows and absorbs an influx of military families, providing sufficient capacity and quality education to children, as well as providing higher education opportunities for the college-age population, including military personnel, is a concern. This assessment provides background on current and projected student capacity needs (preschool through higher education) in light of El Paso's rapidly growing population. It focuses on the school districts primarily affected by changes in population in El Paso resulting from expansion at Fort Bliss.

2.6.1 Overview of Existing Public Education

Figure 2.6-1 shows the major independent school districts (ISDs) serving El Paso County residents and the locations of schools within each district. **Tables 2.6-1** through **2.6-4** provide an overview of education access in El Paso County. Three ISDs, El Paso, Socorro, and Ysleta comprise 86 percent of students. The El Paso ISD (the largest) has the highest percentage of military family students (7.8 percent). It also has the lowest percentage of economically-disadvantaged and Hispanic students. All but two ISDs (Socorro and Tornillo) had lower graduations rates than the State of Texas as a whole.

Table 2.6-1. School Districts by Type of School and Number of Students

District	Schools/Student Population (2007-2008)							
	Elementary		Middle		High		Total	
	Schools	Students	Schools	Students	Schools	Students	Schools	Students
Canutillo	5	2,736	2	1,247	1	1,634	8	5,617
Clint	6	5,362	3	2,263	3	2,861	12	10,486
El Paso	56	30,015	15	13,141	11	18,240	82	61,396
Socorro	25	21,424	7	5,742	5	11,263	37	38,429
Ysleta	38	24,410	11	6,483	7	13,228	56	44,121
Anthony	1	391	1	160	1	226	3	777
Fabens	3	1,211	1	573	1	726	5	2,510
San Elizario	4	1,932	1	816	1	998	6	3,746
Tornillo	1	467	2	483	1	298	4	1,248
Total	**139**	**87,948**	**42**	**30,908**	**31**	**49,474**	**212**	**168,330**

Source: Academic Excellence Indicator System, Texas Education Agency, 2008 (counts exclude alternative programs)

Table 2.6-2. Remaining Bond Revenue for New Public School Projects

Bond	Total (millions)	New Schools Remaining	Planned Student Capacity
El Paso 2007	$230	7 (5 ES, MS, HS)	4 ES (2,636); MS (1,224)
Ysleta 2004	$252	2 (PK, ES)	PK (600); ES (600)
Socorro 2004	$189	3 (ES, 2 HS)	ES (600); HS (1,200)
Clint 2006	$90	3 (ES, MS, HS)	--
Canutillo 2006	$39	1 (ES)	ES (675)

Table 2.6-3. School District Profiles vs. Texas

School District	% Economically Disadvantaged	% Hispanic	% Graduated	$ per Pupil	Students per Teacher
Canutillo	78.0	94.3	59.0	11,982	14.1
Clint	84.7	95.5	77.4	9,169	16.7
El Paso	68.2	81.3	70.8	9,445	14.0
Socorro	72.9	93.1	78.1	9,498	15.8
Ysleta	80.7	91.5	76.5	10,185	15.1
Anthony	100.0	96.7	65.4	8,975	13.9
Fabens	93.9	98.5	70.7	11,178	14.3
San Elizario	96.6	99.4	67.1	11,485	14.2
Tornillo	96.0	99.4	78.9	9,541	14.9
Texas	**55.3**	**47.2**	**78.0**	**10,162**	**14.5**

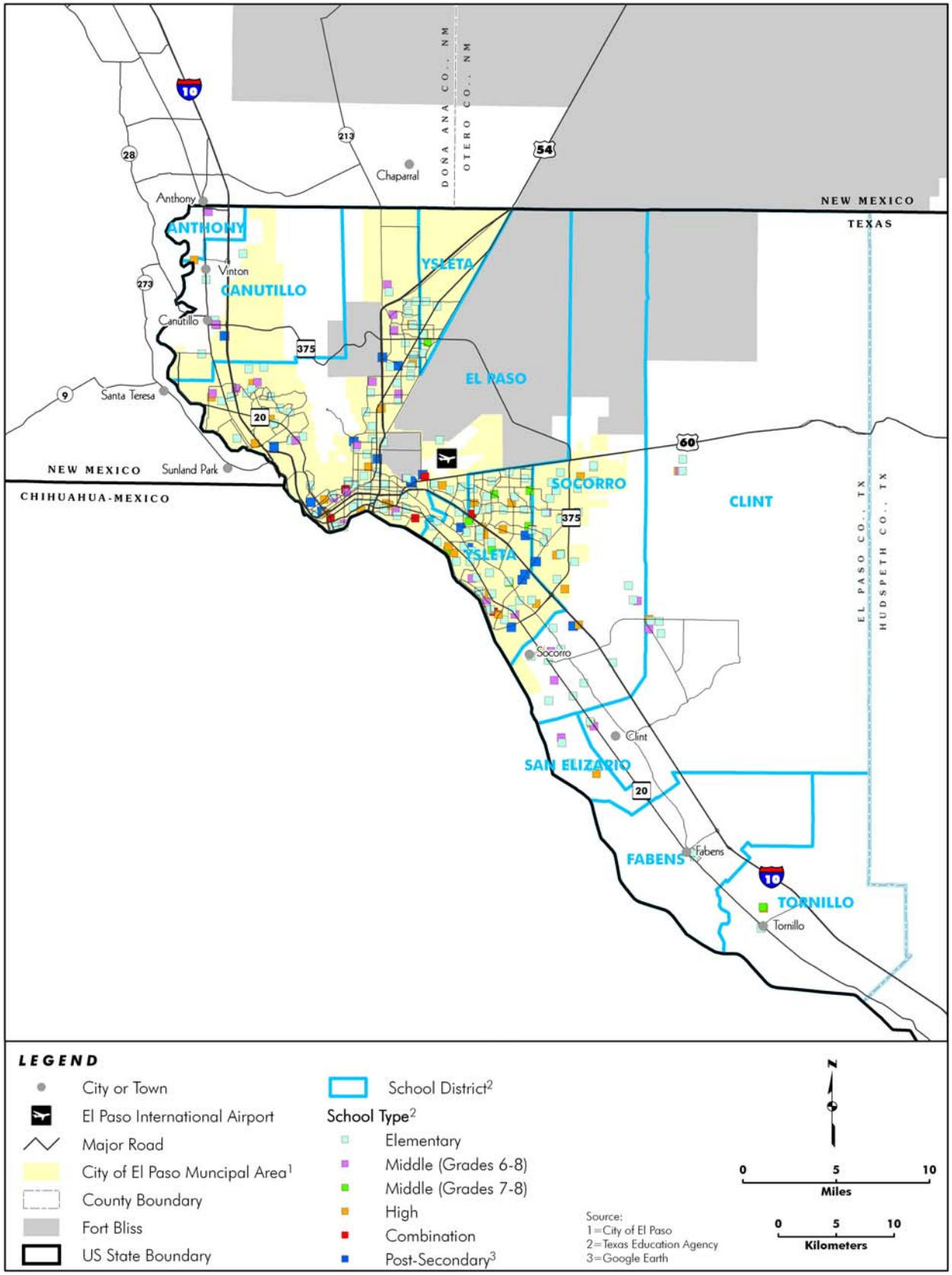
Source: Texas Education Agency 2008

Table 2.6-4. Military Family Students by School District

School District / School Type	Students of Military	Total Students	% Military
El Paso	**4,777**	**60,928**	**7.8**
High	952	17,716	5.4
Middle	830	13,104	6.3
Elementary	2,995	30,108	9.9
Ysleta	**536**	**44,676**	**1.2**
High	74	13,586	0.5
Middle	90	6,568	1.4
Elementary	372	24,522	1.5
Socorro	**1,169**	**39,499**	**3.0**
High	306	12,087	2.5
Middle	142	5,780	2.5
Elementary	721	21,632	3.3
Clint	**196**	**10,376**	**1.9**
High	36	2,754	1.3
Middle	39	2,249	1.7
Elementary	121	5,373	2.3
Canutillo	**77**	**5,628**	**1.4**
High	24	1,598	1.5
Middle	15	1,279	1.2
Elementary	38	2,751	1.4
Total	**6,755**	**161,107**	**4.2**

Source: Respective school districts.
Note: Total number of students in Table 2.6-4 differs slightly from those in Table 2.6-1 due to differing sources.

Figure 2.6-1. City of El Paso Independent School Districts



2.6.2 Current Situation

Pre-school. Child care is important for households with two working parents and, in particular, will be an important issue to address for relocating military spouses who have no family ties in the area and seek employment. There are four types of childcare operations regulated by the Texas Department of Family and Protective Services (DFPS): 1) listed family home, 2) registered childcare home, 3) licensed child care home, and 4) licensed child care center. The first two are only allowed a capacity of 12 children and DFPS records indicate there are 86 registered child care homes and 397 listed family homes. There are an additional 433 licensed child care homes and licensed child care centers in El Paso County with a capacity for 27,345 children.5

School-Aged. Over the last four school years, the Socorro, Canutillo, and Clint ISDs have witnessed significant enrollment increases each year relative the other ISDs.[6] This increase is indicative of the eastward and westward population growth of El Paso. Table 2.6-1 shows enrollment data by school type and district. The three largest districts in terms of student population are El Paso, Ysleta, and Socorro, comprising 84 percent of the total number of Pre-K to 12th grade students. Because of eastward growth, Socorro is rapidly gaining ground as the second largest school district in El Paso County. In addition, because of El Paso's land boundaries with the State of New Mexico, Fort Bliss, and Mexico, eastward growth is the most viable pattern and will become more important in future years. Table 2.6.2 shows enrollment profiles for the nine El Paso County ISDs. All districts have a majority economically disadvantaged student population.

For Pre-K to 12th grade public education, El Paso County encompasses nine ISDs: Anthony, Canutillo, Clint, El Paso, Fabens, San Elizario, Socorro, Tornillo, and Ysleta (see Figure 2.6-1). Of these, Canutillo, Clint, El Paso, Socorro, and Ysleta ISDs have been identified as "primarily-impacted districts" (PIDs) by BRAC.[7] All five PIDs have held at least one successful bond election since 2004. These bond initiatives often serve to finance new school construction and renovations to existing schools. Table 2.6.2 summarizes each PID's bond totals including the year they were passed, the schools included in the respective bond that remain to be built (16 total), and the student capacity of the eleven schools that are currently under construction or have already been planned for construction (no data was available for Clint ISD). In sum, there is additional planned capacity for a total of 600 pre-K students, 4,511 elementary students, 1,224 middle school students, and 1,200 high school students.

A considerable majority of children of military personnel attend El Paso ISD schools located in the northeast part of El Paso (Table 2.6-4). Currently, at El Paso ISD, 2,995 military children

[5] "Search for Child Care Center or Home." Department of Family and Protective Services (DFPS) 2008. http://www.dfps.state.tx.us/Child_Care/Search_Texas_Child_Care/ppFacilitySearchDayCare.asp.
[6] Academic Excellence Indicator System, Texas Education Agency (TEA) 2008. http://www.tea.state.tx.us/perfreport/aeis/.
[7] Interview with Mathew McElroy, Military Growth and Expansion Coordinator, City of El Paso. June 10, 2008.

attend elementary schools, 830 attend middle schools, and 952 are in high schools, for a total of 4,777 students. The Socorro ISD educates a total of 1,169 military children, 721 of whom are in elementary, 242 in middle and 306 in high school. YISD enrolls 372 elementary, 90 middle and 74 high school military children (536 total). The Canutillo and Clint ISDs together educate another 273 military children. Of the total 6,755 military children reported in the five PIDs, 63 percent attend elementary, 16 percent attend middle and 21 percent attend high schools.

Higher Education. In higher education El Paso lags behind other cities in the southwest region, with over 50 percent of the population 25 years and older lacking any kind of higher education, compared to 40 percent in nearby university cities of Albuquerque and Tucson. However, higher education is very accessible with several institutions serving the region: UTEP, consisting of eight colleges, El Paso Community College (EPCC) consisting of five-campuses plus an expected Fort Bliss campus in fall 2011, Park and Webster Colleges (located at Fort Bliss), as well as several University of Phoenix satellite locations. For fall 2008, UTEP reported an enrollment of 20,458, with 60 percent enrolled on a full-time basis,[8] while EPCC reported 25,011 students, not including continuing education students.[9]

Another higher education institution serving the region is the University of Texas School of Public Health, which offers a master's degree and a certificate in public health.[10] Texas Tech University Health Sciences Center opened a four-year School of Medicine in August 2009. Nearby institutions in Doña Ana County that also serve commuting El Pasoans include New Mexico State University (NMSU) consisting of nine colleges, and Doña Ana Community College (DACC). For fall 2008, NMSU reported 17,200 full- and part-time students[11] and DACC 8,336 students in credit programs.[12]

Teacher Certification. With regards to educator supply, El Paso has six institutions – Region XIX, Alternative Certification for Teachers Now, Teachers for the 21st Century, Texas Teaching Fellows, Texas Alternative Certification Program, and UTEP – that offer teacher certification programs.[13] Between fall 2004 and fall 2007, these institutions produced 1,872 certified teachers.[14] Of these, nearly one-half (50 percent) of all certifications were awarded in the 2005-2006 school year, and nearly one-third (32 percent) were in the area of General Elementary certification.

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[8] "The University of Texas at El Paso 2007-2008 Fact Sheet." The University of Texas at El Paso 2008. http://admin.utep.edu/Default.aspx?tabid=50864.

[9] Interview with Registrar's Office, El Paso Community College. June 13, 2008.

[10] University of Texas School of Public Health, El Paso Regional Campus website 2008. http://www.sph.uth.tmc.edu/elpaso/default.aspx,.

[11] "Quick Facts, New Mexico State University." New Mexico State University 2008. http://www.nmsu.edu/Research/iresearc/QuickFacts/Factsheets/Fact_Brochure_Spring08.pdf.

[12] "Doña Ana Community College Quick Facts." Doña Ana Community College 2008. http://dabcc.nmsu.edu/us/qfacts.shtm.

[13] State Board for Educator Certification webpage 2008. http://www.sbec.state.tx.us/SBECOnline/edprep/region.asp.

[14] "Teacher Production by Certification Area and Program." Texas Public Education Information Resource (TPEIR) 2008. http://www.texaseducationinfo.org/tpeir/topic_certificate.aspx. Accessed 6/13/2008.

There are also eight vocational schools in El Paso that collaborate with Workforce Solutions Upper Rio Grande (WSURG) to provide training in "high-demand" occupations.[15] WSURG provides full or partial financial support for the following education fields: 1) pre-, elementary, middle, secondary, and special education teachers 2) teacher assistants 3) alternative teacher certification and 4) education administration.

2.6.3 Challenges and Opportunities

The following education challenges and growth issues were identified for this assessment:

- Attracting (or training) and retaining teachers continues to be a primary concern given the growth dynamics of the region in recent years. This issue will only increase in importance with the large influx of school-aged children anticipated over the next five years.
- Increasing graduation rates is one of the most critical challenges facing public education in El Paso. Of the nine ISDs, only Socorro, Fabens, and Tornillo have graduation rates that exceed the state average of 80.4 percent. Additionally, El Paso schools underperform on the state-mandated Texas Assessment of Knowledge and Skills (TAKS) test, as well as on average SAT and ACT scores.[16] While educational attainment in El Paso is below the state average, it also signifies an opportunity for improving the economic well-being and quality of life of the region.
- Several school districts face funding shortages needed to finance expansion (in staff, programs and facilities). Two specific education issues confront ISDs in the El Paso area. First, as noted in Table 2.6.2, the Socorro ISD successfully passed a bond election in 2004; however, it failed at passing a crucial bond in 2007 for $397 million. As a result, the Socorro ISD, which is reaching capacity, faces a needed bond election to address their rapid student growth.
- ISDs receive federal impact aid for educating military children. As more military children enter the school system, equitable reimbursement may become more of a concern for ISDs as they seek to offset the lost revenue from families who, because they are living on-post, do not pay property taxes. Consequently, careful accounting of military student populations is important to ensure impact aid will assist in remedying taxation inequalities, especially since impact aid per student is less than property tax revenues per student.
- Because a large portion of existing and incoming households qualify for Head Start services, early coordination of applications and estimation of needs is, and will continue to be critical to prepare for additional parents and children.

[15] Interview with David Coronado, Labor Market Analyst, Upper Rio Grande Workforce Development Board. June 10, 2008.

[16] Academic Excellence Indicator System. TEA 2008. http://www.tea.state.tx.us/perfreport/aeis/.

- Expanding capacity for bi-lingual education programs for all ages and education levels (both Spanish to English, and English to Spanish) is a major challenge for El Paso. This issue will become even more critical in El Paso as the number of soldiers increases at Fort Bliss.
- In the area of higher education, UTEP and EPCC have capacity to absorb more students directly from the soldier population and their dependents in the short to medium terms, but may require new strategies to meet long-term enrollment levels.
- The degree to which higher education faculty can service Fort Bliss with special courses on-post may be limited by faculty resources and by professional accreditation requirements for off-campus programs. As the military population increases, this concern will grow.
- Vocational training for serving military members and spouses presents both an opportunity and challenge. Providing specific training for career advancement, qualifying for jobs in the civilian market and meeting certification requirements are all significant areas. Making these services available close to the work and homes of soldiers and spouses will impact acceptance. Training opportunities must be identified and expanded over time.
- At present, early outreach to incoming service members, spouses and families describing available education-related employment and requirements will ease employment preparation efforts by identifying job requirements and training opportunities. Outreach efforts and effectiveness will become even more critical in the near-term.

2.7 Health and Social Services

This section describes the existing supply and distribution of health care facilities and professionals and the availability of social services. The discussion focuses on hospital inventory, health care provider access, military medical services, mental health care, and three important social services – affordable housing, affordable health care, and supplemental food programs.

2.7.1 Overview of Existing Health and Social Services

Table 2.7-1 lists the class of service and bed capacity of the 22 hospitals serving the El Paso area. Of the hospitals in the El Paso area, six have bed capacities over 250 and provide acute care services. Eleven are small (less than 100 beds) and generally provide a niche service. **Table 2.7-2** shows that the number of health care professionals per capita fell far below seven-county averages in all but certified nurse aides. **Table 2.7-3** lists 40 social service providers in the El Paso area. A wide range of services are represented; for example, transportation, counseling, healthcare, legal services, and emergency shelter.

Table 2.7-1. El Paso Area Regional Hospitals

Facility	City	Class[1]	Beds	
			Licensed	Staffed
R.E. Thomason General Hospital	El Paso	AC	327	255
William Beaumont Army Medical Center	El Paso	AC	209	--
Del Sol Medical Center	El Paso	AC	336	327
Las Palmas Medical Center	El Paso	AC	317	285
Providence Memorial Hospital[2]	El Paso	AC	508	478
Sierra Medical Center	El Paso	AC	351	351
Sierra Providence East Medical Center	El Paso	AC	110	60
East El Paso Physicians Medical Center	El Paso	AC	40	40
El Paso Specialty Hospital	El Paso	AC	31	31
El Paso LTAC Hospital	El Paso	LTAC	15	15
Triumph Hospital El Paso	El Paso	LTAC	40	29
Mesa Hills Specialty Hospital	El Paso	LTAC/SN	60	60
El Paso Psychiatric Center	El Paso	P	74	74
University Behavioral Health of El Paso	El Paso	P	120	49
Las Palmas Rehabilitation Hospital	El Paso	S-R	40	--
Highlands Regional Rehabilitation Hospital	El Paso	S-R	41	41
Mountain View Regional Medical Center	Las Cruces	AC	168	142
Memorial Medical Center	Las Cruces	AC	286	286
Advanced Care Hospital of Southern NM	Las Cruces	LTAC	20	--
Mesilla Valley Hospital	Las Cruces	P	125	125
Peak Psychiatric Hospital	Santa Teresa	P	36	36
Rehabilitation Hospital of Southern NM	Las Cruces	S-R	40	40

Sources: American Hospital Directory 2009; Chavez 2009.

Notes:

1. Classes: AC – Acute Care; LTAC – Long-Term Acute Care; P – Psychiatric; R – Rehabilitation; SN– Specialty Nursing.
2. Includes 110 beds dedicated to children for its children's hospital.

Table 2.7-2. Health Professionals in El Paso County

Profession	El Paso County			Texas Seven County Average		
	Total	Population per Professional	Professionals per 100,000 People	Total	Population per Professional	Professionals per 100,000 People
Medical Professions						
Direct Patient Care Physicians	824	911	110	3,260	482	208
Primary Care Physicians	354	2,120	47	1,264	1,242	81
Physician Assistants	81	9,266	11	320	4,910	20
Nurse Professions						
Registered Nurse	3,969	189	529	12,931	121	823
Licensed Vocation Nurse	1,105	679	147	3,693	425	235
Nurse Practitioners	136	5,519	18	431	3,641	27
Certified Nurse Aides	3,060	245	408	6,143	256	391
Promotoras	62	12,106	8	44	35,575	3
Dental Professions						
Dentist (General)	135	5,560	18	731	2,147	47
Dental Hygienists	209	3,591	28	650	2,415	41

Source: Texas Department of State Health Services, August/September 2008.

Note: Seven-county average, used as reference to compare with El Paso, includes Bexar, Dallas, Harris, Lubbock, Nueces, Tarrant, and Travis.

Table 2.7-3. El Paso County Social Service Providers

Provider	Counseling	Financial Literacy	Emergency Shelter	Health Education	Healthcare	Education/ Mentor	Child Development	Training/ GED	ESL/ Citizenship	Housing/ Financial	Legal	Transport
Adult and Adolescent Counseling Center	•											
Advocacy Center for Children of El Paso	•				•							
Aliviane	•											
American Cancer Society	•			•								
American Red Cross				•								
AVANCE	•						•	•				
Battered Women Shelter	•		•									
Bienvivir Senior Health Services					•							•
Big Brothers Big Sisters of El Paso						•						
Boys and Girls Club of El Paso		•		•		•						
Candlelighters of El Paso	•						•			•		•
Center Against Family Violence	•		•									
Centro de Salud Familiar La Fe		•			•	•		•	•			
Centro San Vicente	•						•					
Child Crisis Center of El Paso									•		•	
Diocesan Migrant and Refuges Services										•		

Table 2.7-3. El Paso County Social Service Providers *(Continued)*

Provider	Counseling	Financial Literacy	Emergency Shelter	Health Education	Healthcare	Education/ Mentor	Child Development	Training/ GED	ESL/ Citizenship	Housing/ Financial	Legal	Transport
El Paso Affordable Housing												
El Paso Child Guidance Center	•											
El Paso Diabetes Association	•			•								
Envision Hospice					•							
Family Service of El Paso	•											
Franciscan Education Project												
Hospice of El Paso	•				•							
Jewish Family and Children's Services	•											
La Mariposa Hospice	•				•							
La Mujer Obrera	•					•		•				
La Posada Home	•	•		•	•	•				•		
LULAC-Project Amistad		•			•							•
Lutheran Social Services, Inc.					•		•					
Northeast Teen Network					•		•					
Planned Parenthood of El Paso	•			•	•							
Project ARRIBA	•							•				
Project BRAVO					•	•				•		
Project Vida	•			•	•	•	•			•		
Salvation Army												
Sun Metro												•
United Way			•	•	•		•					
Volar Center for Independent Living	•				•							•
YMCA	•						•					
YWCA	•	•		•			•	•				

Source: IPED based on data provided by or obtained for respective social service providers, 2008.

2.7.2 Current Situation

2.7.2.1 Health Care Facilities

Information on regional hospitals is provided in Table 2.7-1. Hospital categories include acute care, long term acute care, children's, rehabilitation, and psychiatric.[17] The corresponding number of licensed beds gives an indication of a hospitals' maximum patient capacity, while the number of staffed beds provides a measure of a hospital's actual/current capacity. A small hospital contains from six to 99 licensed beds and a large hospital contains 100+ licensed beds. Below is a summary of the region's hospitals:

[17] El Paso's only licensed specialty hospitals are rehabilitation hospitals (note: Thomason's new children's hospital will be licensed as a specialty hospital [interview with Irene Chavez, 2009]). However, there are a few hospitals that provide specialty services such as skilled nursing, sports medicine, wound care, diagnostic imaging, cardiology services, emergency services, specialized short term rehabilitation, etc.

- *Acute Care* (AC) – El Paso contains seven large and two small AC hospitals including a 327-bed community hospital (R.E. Thomason Hospital – now known as University Hospital), a 209-bed military hospital (William Beaumont Army Medical Center – [WBAMC]), five large private hospitals with a combined number of 1,622 beds, and two small hospitals with a combined number of 71 beds. Las Cruces (Doña Ana County) houses two large private AC hospitals with approximately 454 beds.
- *Long-Term Acute Care* (LTAC) – There are three small LTAC hospitals in El Paso with an approximate bed count of 115.[18] One of the three also provides specialized nursing services. In addition, a 20-bed LTAC hospital recently opened in Las Cruces.
- *Children's Hospitals* – By 2011 El Paso will have two children's hospitals. The existing children's hospital at Providence dedicates 110 beds to children. Construction of the Thomason Children's Hospital (to be known as University Children's Hospital) will take place between 2008 and 2011 and will add 140 children's beds once complete.
- *Rehabilitation Hospitals* – In El Paso there are currently two rehabilitation hospitals with approximately 81 beds.[19] There is one 40-bed rehabilitation hospital in Las Cruces.
- *Psychiatric Hospitals* – There are four psychiatric hospitals in the region: a 36-bed private hospital in Santa Teresa, New Mexico (Doña Ana County), a 125-bed private hospital in Las Cruces and two hospitals in El Paso – a 120-bed private hospital and a 74-bed State hospital. The latter, El Paso Psychiatric Center, is managed by the Texas Department of State Health Services and provides hospitalization to the citizens of far West Texas based on availability.

At present, staff constraints limit actual hospital capacity and thus the number of licensed beds available to patients. Additionally, the available hospital "room for growth" may not be sufficient to handle increased demand due to military expansion at Fort Bliss.

2.7.2.2 Health Care Services and Professionals

With respect to workforce, El Paso faces severe shortages in the medical, nursing, and dental professionals. For example, comparing El Paso to the average number of professionals per 100,000 residents found in seven counties in Texas, – Bexar, Dallas, Harris, Lubbock, Nueces, Tarrant, and Travis – El Paso has approximately 54 percent the number of direct patient care physicians, primary care physicians and physician assistants; about two-thirds the number of registered nurses, licensed vocational nurses and nurse practitioners; and approximately 38 percent the number of general dentists (Table 2.7-2). According to a Texas Senate

[18] Southwestern General Hospital was previously a 110-bed acute care hospital, but has changed ownership and is now a 15 bed LTAC hospital. The hospital plans to provide up to 33 beds by the end of 2009 (interview with Irene Chavez, 2009).

[19] Highlands Regional Hospital is a 41-bed hospital and Las Palmas Rehabilitation Hospital is a 40-bed hospital. A 40-bed hospital, Sierra Providence Physical Rehabilitation Hospital, closed in March 2009. Sierra Providence also closed its outpatient rehabilitation facility at that time. It is unclear whether or not the inpatient facility will continue as a rehabilitation hospital under different ownership.

Subcommittee (2008),[20] El Paso needs an additional 600 medical doctors and 2,000 nurses to meet current need. Military expansion between 2005 and 2008 has already added significant demand in health related occupations and these shortfalls will come under more strain as the region gains nearly 59,000 additional troops and family members over the next five years.

At Fort Bliss medical services are administered through the military direct care system (MDCS), which is made up of three components: 1) TRICARE, 2) primary care physicians and 3) military treatment facilities (MTFs)/military health care facilities (MHCFs). TRICARE is a third party medical insurance program primarily for active duty and retired service members and their families. The program combines military health care resources and supplements them with civilian health care networks. Military medical services are also provided at WBAMC through a combination of medical technicians serving with active duty soldiers and other healthcare professionals from within the MDCS. On-post facilities are intended to serve all active duty service members and their families as well as deploying and redeploying troops – excluding military retirees.[21] The first line of medical care for active duty soldiers is the appropriate unit aid station and then the Soldier and Family Medical Clinic.[22]

Service members will have access to several new facilities either planned or under construction that are intended to meet some of the projected needs of arriving solders. Projects include a new clinic under construction on Fort Bliss, a planned 150,000 sq. ft. facility expansion to WBAMC for women's services, a 146,000 sq. ft. primary health care facility (with dental and mental health services), and a 50,000 sq. ft. facility for vision and dental care.

Despite the variety of services available in the community, El Paso County is facing a significant mental health services shortfall. The increased number of military personnel likely to put down roots in the community, in particular soldiers returning from combat with PTSD, coupled with the lack of mental health services for military dependents is one potential cause. Another potential cause is a commensurate increase in the number of military children requiring mental health support within area schools. These factors could potentially overburden on already taxed mental health system.[23]

In addition to the Fort Bliss expansion, several other factors will contribute to the stress on community mental health services, including:[24] 1) caseloads are expected to increase in a system already functioning beyond capacity; 2) alternative coverage and reimbursement models such as Mutual Employer Welfare Associations or Mutual Employer Trust adopted in other states cannot

[20] State of Texas 2008. Texas Senate Subcommittee on Base Realignment and Closure, Report and Recommendations to the 81st Texas Legislature. December. http://www.senate.state.tx.us/75r/Senate/commit/c655/c655.InterimReport80.pdf.
[21] State of Texas 2008. BRAC Report
[22] The Official Post Guide and Telephone Directory. Commissioned by Fort Bliss, Laven Publishing Group. http://www.lavenpublishing.com/healthcare1.html.
[23] Mental health focus group of community mental health leaders funded by the Greater El Paso Chamber of Commerce and conducted by IPED, UTEP on June 13, 2008. University of Texas El-Paso.
[24] UTEP 2008

be adopted under the existing Texas State Board of Insurance licensing rules; 3) private mental health care professionals are sometimes reluctant to accept TRICARE patients due to reimbursement issues; and, 4) loss of mental health professionals due to attrition of aging providers without sufficient replacements, out-migration to better paying jobs in other communities, and agency downsizing leading to insufficient funding to support current staffing needs.

2.7.2.3 Health and Affordable Housing Services

In El Paso, three critical social services are in high demand: *affordable housing*, *affordable health care* and *the food stamp program*, (also known as the Supplemental Nutrition Assistance Program). The inadequacy of health provider supply and insufficient accessibility to health care in El Paso increases demand for social assistance services. The regional need for greater social service is best illustrated by the number of persons enrolled in Medicaid and the Children's Health Insurance Program (CHIP). In 2007, about 140,094 persons (19 percent of the population) were enrolled in Medicaid in El Paso.[25] Seventy-four percent (103,700) of these were children under the age of 18 years and 29 percent (40,627) were under the age of five (comparable data for Doña Ana County is unavailable).

With regard to basic shelter and affordable housing, the Housing Authority of the City of El Paso assists qualified low income families, the elderly and disabled with several public housing alternatives.[26] For availability of healthcare services, Centro de Salud Familiar La Fe and Centro San Vicente are two primary health care providers that target low-income residents in El Paso. These two entities primarily serve the Health Professional Shortage and Medically Underserved Areas, such as South El Paso (historically, one of the poorest neighborhoods in El Paso) and rural areas in El Paso County not within El Paso's city limits. As of April 2008, the number of food stamp recipients in El Paso was 138,521 (18.2 percent of the population), 1.9 times the Texas average of 9.6 percent.[27] Current economic conditions and anticipated competition in the job market will likely exacerbate this situation. Table 2.7-3 shows the diverse set of social services provided in El Paso.

2.7.3 Challenges and Opportunities

Health care is a significant issue in the minds of El Paso leaders. Fort Bliss leadership, in testimony before the Texas Senate subcommittee, described off-post health care as its second priority after housing. The Greater El Paso Chamber of Commerce describes health care as its second priority after transportation. The following is a compilation of current and prospective health and social services challenges facing the region as it prepares for Fort Bliss expansion**.**

[25] Texas Health and Human Services Commission, Monthly Medicaid Eligibles File Extract 2008. http://www.hhsc.state.tx.us/research/.
[26] Housing Authority of the City of El Paso website 2008 http://www.hacep.org/.
[27] "Texas TANF and Food Stamps Enrollment Statistics." Texas Health and Human Services System 2008. http://www.hhs.state.tx.us.

- The basic growth dynamics of the region, including military-driven growth, will continue to pressure the area's underserved health and social services environment. Meeting the health and social services needs of this young and fast-growing population is a particular challenge.
- There is a general shortage of professionals in all areas of health care. El Paso must be able to produce, recruit, and/or attract additional physicians, nurses, dentists, and allied health professionals. The current number of health degrees/certificates generated annually is not sufficient to meet the existing demand for professionals that graduate from these programs.
- While the inflow of doctors to Texas is favorable because of its malpractice rules, the recruitment of physicians into El Paso has been especially difficult. The Texas licensing process takes eight or more months, as compared to New York, where the maximum certification time is 30 days, and 45 days in New Mexico.[28, 29] Once physicians establish their practice, they face low insurance reimbursement rates and a patient base consisting of a large number of TRICARE, Medicaid, or uninsured individuals.
- A large portion of the area's population, in particular lower income persons, has difficulty accessing health care services.

From the supply side, UTEP School of Nursing has indicated the following:

- One strategy to meet health care needs of regional residents and military beneficiaries is to secure state and/or federal funding to hire the faculty and staff required to increase enrollment in both undergraduate and graduate nursing programs.
- Additional funding can also be used to provide greater incentives to hospitals/clinics and preceptors to expand educational opportunities as well as to increase clinical capacity by incorporating weekend and evening rotations.
- It is experimenting with simulation education to increase students' clinical competencies as a way to stretch tight faculty funding and circumvent clinical access difficulties.

From the access side, the military has indicated the following:

- Planned increases in capacity at WBAMC may not keep pace with the needs of incoming service members and their families. Providing adequate services to the growing number of military retirees and their families is a particular area of concern. In cases where non-MDCS TRICARE providers, including private sector health care providers, hospitals and pharmacies, are chosen by Fort Bliss military families for their healthcare needs, additional civilian resources will be consumed, thus impacting the available capacity of El Paso's healthcare professionals and services.

[28] Interview with Irene Chavez, Former CEO, Providence Memorial Hospital. December 2008.
[29] Interview with Bob Cook, President, El Paso Regional Economic Development Corporation. May 13, 2008.

- Significant concern has been expressed over care of returning service members suffering from PTSD. The Army is addressing this problem but there are concerns that with the very significant number of combat arms service members coming to Fort Bliss, special emphasis must be placed on this issue.
- The Greater El Paso Chamber of Commerce estimates over 110,000 military, retiree, guard and reserve members and their families are currently eligible for TRICARE assistance. Fort Bliss leadership indicates, however, that on-post medical services are not intended to provide care to retirees.[30] This places this demand on local medical facilities and providers.
- El Paso and Fort Bliss need to be especially conscious of the burdens placed on spouses and their families when a service member is deployed. Social service organizations can play a key role by providing assistance to the whole family, including financial counseling and big brother/sister assistance to help spouses cope with single parenting. Faith-based, school-based, and governmentally-based program leaders need to integrate capacities to deal with significant expansion in need.

Points identified by leaders at the State Legislative Discussion Regarding Healthcare include the following:[31]

- The capacity to train people in Allied Health professions does not meet the current demand for such training. More training and education programs with higher capacities are needed especially in fields where there are more qualified students applying to programs than can be accepted. Faculty shortages limit the ability to expand and create new programs however. Factors contributing to a shortage of faculty include heavy workloads, turnover due to retirement and an aging workforce, salary disparities between academic and private industry, cost of education and high incidence of debt, and low level of interest in academic careers. Fort Bliss expansion may increase the demand in these high demand fields. To address this issue, it is recommended that programs and capacities be expanded via additional funding. One particular funding challenge, however, is that allied healthcare is often overlooked.
- There is an opportunity to develop a pipeline from certification and associate level degrees to bachelor's degrees for Allied Health professions, the result of which transitions workforce from lower paying to higher paying positions. This can help increase interest in low-interest areas by providing motivation to enter these fields. Fort Bliss expansion may also provide an opportunity to fill in gaps; more spouses relocating to the region and seeking employment may be interested in these areas.

[30] State of Texas 2008. BRAC Report
[31] State Legislative Discussion Regarding Healthcare, organized by Senator Eliot Shapleigh and the Greater El Paso Chamber of Commerce. November 17, 2008.

- Most, if not all, military personnel have TRICARE. Ensuring parity in reimbursement rates locally will motivate acceptance of TRICARE. The same argument can be applied to CHIP, Children with Special Needs Program, Medicaid and Medicare reimbursement rates.[32] Higher reimbursement rates have been shown to have a positive impact on a physician's decision to accept Medicaid,[33] whereas low reimbursement rates may drive away physicians and dissuade others from relocating to El Paso.
- Providing health and social services that supplement military services can help to ensure the success of programs. Capacity should be increased to meet current needs and potential increases brought on by military personnel and families. For example, although Fort Bliss may provide services to military veterans that experience life-altering injuries (such as amputation), ensuring that military veterans get the assistance they need can be facilitated by increasing local capacity in all aspects of rehabilitation from the basics of activities of daily living, to mental health to orthopedics, dental, pain management, and physical rehabilitation.
- Stakeholders have the opportunity to develop legislative proposals that provide solutions to regional healthcare and social service challenges. Cooperative efforts need to be explored in order to find solutions to financing, recruitment, and retention issues. Special focus needs to be made in finding alternative solutions associated with funding shortages.

Other healthcare challenges and opportunities identified in this study include the following:

- Physicians tend to practice within the community where they serve their residencies.[34] Under this assumption, the new medical school in El Paso will contribute more physicians to the region; however, if the rate at which physicians are produced is not sufficient to meet the needs of a growing population, there will be an ever widening gap between available physicians and the needs of the community. The gap can be expected to widen within a short time frame due to military expansion in the region.
- Presently, there are 70 physicians in training, 27 interns, and 43 residents at WBAMC. There are also more than 100 officers and enlisted soldiers training in other medical specialties on any given day. There are also opportunities for medical students throughout the nation to perform rotations at the medical center.[35] This is an opportunity to introduce and attract physicians to the El Paso region and acquaint medically trained

[32] The Texas 81st Legislature is looking into proposals to increase provider reimbursement rates for CHIP and Medicaid.

[33] Texas Medical Association, John Holcomb, MD, Texas Physician Testify on Medicaid, Senate Finance and State Health and Human Services Joint Hearing on Medicate Rate Methodologies. September 16, 2008. http://www.texmed.org/Template.aspx?id=7172.

[34] "New Medical School and Children's Hospital Boosts El Paso, Texas Healthcare Market." Reuters. December 3, 2007. http://www.reuters.com/article/pressRelease/idUS113488+03-Dec-2007+PRN20071203.

[35] "William Beaumont Army Medical Center History." William Beaumont Army Medical Center 2009. http://www.wbamc.amedd.army.mil/Orientation/WBAMChistory.asp.

soldiers to UTEP School of Nursing, which can potentially increase the pool of candidates for the program.

- Increased enrollment to UTEP School of Nursing and ensuring students complete their degrees will increase the numbers of qualified nurses. Ensuring that hospitals provide competitive salaries to retain nurses will fill in gaps in this area.
- Increased enrollment to UTEP current accelerated bachelors and masters programs will increase the numbers of qualified health professionals.
- Adding more accelerated bachelors and masters programs at UTEP for all health professional careers will also increase the numbers of qualified health professionals.

2.8 Public Safety and Emergency Services

This element examines various public safety agencies responsible for providing police fire and emergency services to residents within the planning area. The El Paso Police and Fire Departments are an integral part of municipal public safety services. Police and fire personnel are the "first responders" to local emergencies ranging from minor traffic accidents to natural disasters and terrorist actions. The planning, locating and siting of police, fire and emergency medical facilities is based on an analysis of numerous factors including functional operations, demographics, response times, street layout, municipal infrastructure, and historical context. Areas outside the City of El Paso rely on the County Sheriff's office and volunteer fire departments for public safety services.

2.8.1 Overview of Existing Public Safety and Emergency Services

Table 2.8-1 provides an overview of the critical performance measures for the City of El Paso Police and Fire Departments.

Table 2.8-1. 2008 El Paso Police and Fire Department Statistics

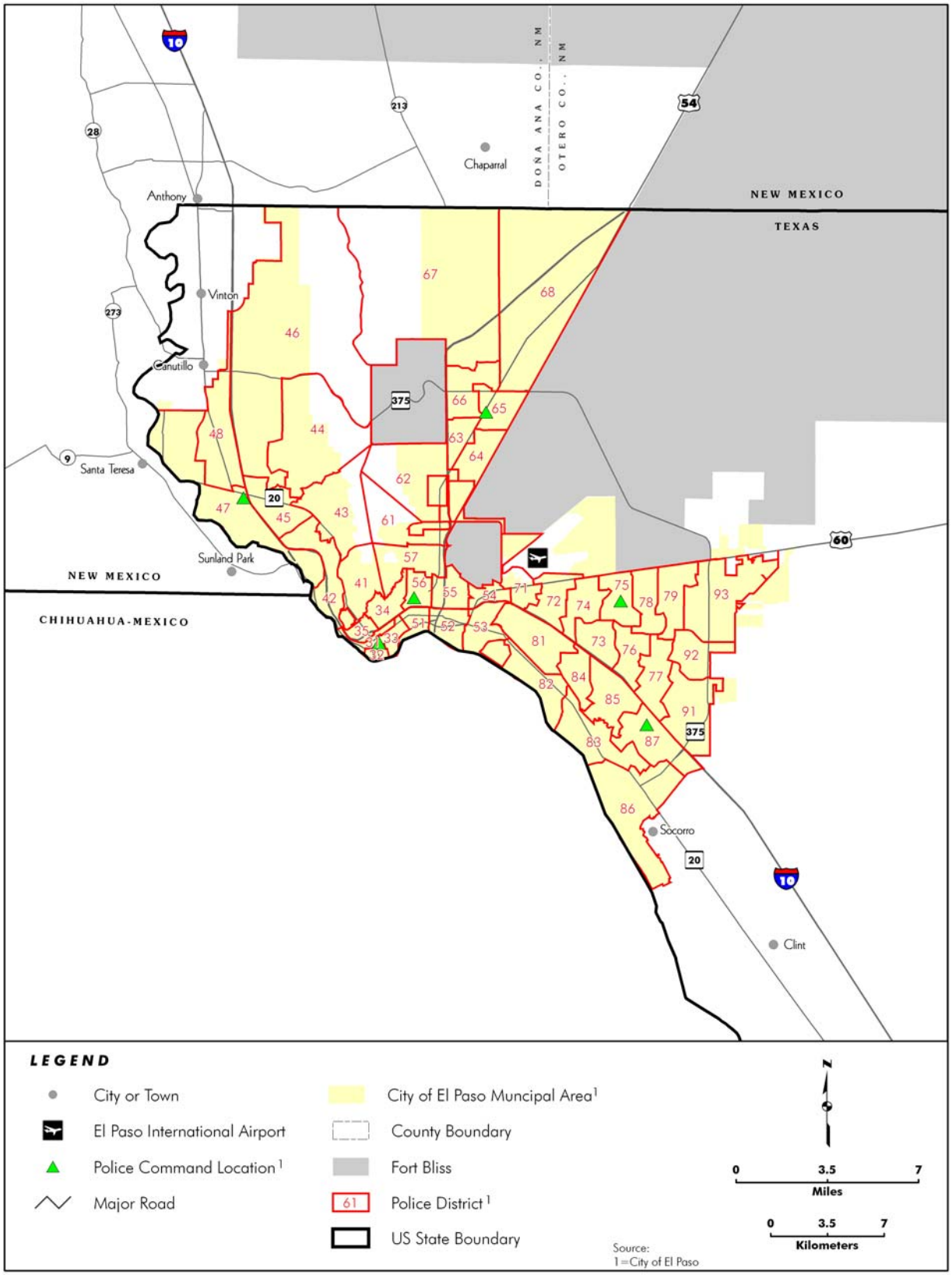
Police Department	
Law Enforcement Personnel	1,348
Number of 911 Calls Dispatched	521,412
Average Response Time	16:06
Number of Regional Command Centers	5

Fire Department	
Uniformed Fire Personnel	815
Number of Fire Responses	2,081
Number of Medical Responses	49,716
Number of Fire Stations	35
Average Response Time	4:17

2.8.2 Current Situation

Law Enforcement. The City of El Paso Police Department has jurisdiction within its city limits and covers an area of 250.9 square miles (about 160,600 acres) and a population of about 638,500. Police Department personnel work out of six primary facilities: the Police Headquarters building and five Regional Command Centers geographically distributed throughout the city. **Figure 2.8-1** shows the location of the City of El Paso Police Command Centers and Police District Boundaries.

Figure 2.8-1. City of El Paso Police Command Centers and District Boundaries



A Comprehensive Needs Assessment, prepared by the City of El Paso in 2007, found that current number of authorized police officers per capita was below the national average; however, El Paso's authorized staffing level was slightly higher than the average of comparable cities. At the time of the study the actual strength of the department was well below the authorized level, indicating recruitment and training is a challenge facing the El Paso Police Department. Actual staffing levels have since increased to near authorized strength. The Assessment also identified shortfalls in existing police facilities. In anticipation of future growth as well as to relieve pressure on other regional commands, the report anticipates the need for a new regional command center on the far eastern side of the community. The Assessment went on to recommend a number of major improvements to existing facilities. Funding for these improvements is not included in the city's Capital Improvement Plan (CIP) to date.

The El Paso County Sheriff's Office is responsible for the first-line response to crime and public safety concerns within the unincorporated areas of El Paso County. The Sheriff's Office also provides assistance to other police agencies within El Paso County and provides detention services for area law enforcement agencies.

The Fort Bliss Law Enforcement Battalion is responsible for law enforcement activity on the entire extent of the federal installation. All military housing areas and the William Beaumont Army Medical Center are patrolled by Military Police. Both the Military Police and the El Paso police patrol the leased military housing area, located within an El Paso residential neighborhood.

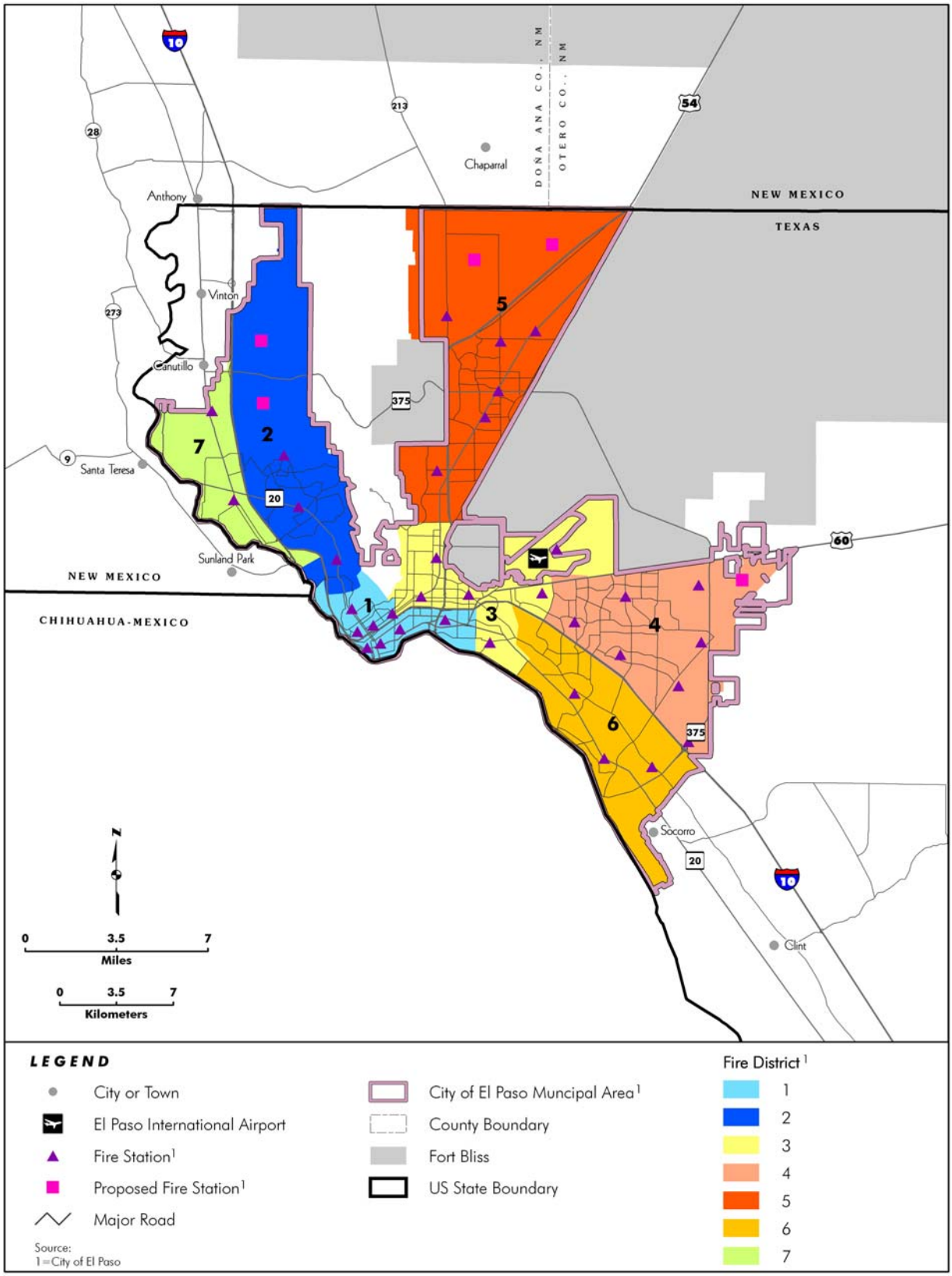
Fire and Emergency Response Services. The El Paso Fire Department is a full-service fire department responding to all calls involving fires, medical emergencies, and hazardous materials events in the City of El Paso. There are currently 34 fire stations with another under construction. According to information from the department, it responds to over 63,000 emergency calls annually. The El Paso Fire Department achieved a Public Protection Classification rating of Class 1 by the Insurance Services Office (ISO). Class 1 represents exemplary public protection, and only about 1 percent of all municipal fire departments receive a Class 1 rating.[36] **Figure 2.8-2** shows the location of the City of El Paso's Fire Districts.

The City of El Paso provides life stabilization transport services throughout the city via the emergency medical services division of the El Paso Fire Department. In 2005, the El Paso Fire Department increased the number of ambulances by 36 percent. In 2007, the fire department responded to 64,099 emergency calls for service.

In planning for growth, the Fire Department's Planning Division recommends that new development should be within a 1.5-mile radius of a fire station in order to maintain acceptable emergency response times.

[36] Interview with Luis Flores, Planner II, El Paso Fire Department. April 14, 2008.

Figure 2.8-2. City of El Paso Fire Districts



El Paso Fire Department provides mutual aid to El Paso County under the terms of Mutual Aid Agreements. Small communities and rural areas in El Paso County also rely on volunteer fire departments for fire protection and emergency services. The La Tuna and West Valley Fire Departments serve the northwest communities of Vinton, Canutillo, Anthony, and La Tuna. The Lower Valley communities of Socorro, Clint, San Elizario, and Fabens also have volunteer fire departments. The rural area of east El Paso County is served by the Horizon City Volunteer Fire Department and Montana Fire Rescue, Inc.[37]

The El Paso Fire Department provides mutual aid to Fort Bliss Military Base under the terms of the Mutual Aid Agreements. Fort Bliss Fire Department is responsible for fire protection on the Main Cantonment Area and nearby training areas. The Department maintains four fire stations.

2.8.3 Challenges and Opportunities

- Cooperation is needed on a regional level to address the areas where mutual support between military installations and communities is either informally or formally in place or needed for a variety of community and public services.
- El Paso Police Department identified the recruitment and training of new police officers as a major challenge facing the Department. The Comprehensive Needs Assessment (2007) indicates that in 2006 department staffing was well below authorized levels. Retention of officers may become more of an issue as local police officers are being recruited for border patrol and other law enforcement positions.[38]
- Expanding all services is challenge as the urban limits expand and areas infill. This may require new facilities and redefining boundaries of existing service areas.
- While training of new public safety officers is a significant challenge, retention of trained peace officers, emergency medical service personnel and firefighters is even more important since the investment in training these men and women has already been made. The city and county face the task of accomplishing both.
- More soldiers and their families may be living off-post than in the past, increasing the demands on local police and emergency services.
- Concerns that the stresses for families of soldiers returning from combat may cause higher numbers of domestic issues could place more demands on police and emergency response services. Also, there are similar concerns that soldiers may have more special needs for crisis intervention as they adjust to life after returning from assignments in combat zones.
- A surge in growth within El Paso County may put a strain on the court system, which is already experiencing delays in misdemeanor case loads. The civil court system needs

[37] Interview with Luis Flores, Planner II, El Paso Fire Department. April 14, 2008.
[38] *Comprehensive Staff Allocation and Needs Plan – Final Report*. Magellan Research Corporation. May 2007

review to ensure adequacy of service from deed registration through trial facilities and juror identification and qualification.

- The average daily number of inmates held in the El Paso County adult detention facilities is at 86 percent of its total capacity. Rapid population increases may result in higher numbers of prisoners, exceeding capacity of the jail system in the near future.
- The City of El Paso could update the CIP with fundable improvement projects such as those identified in the Comprehensive Needs Assessment and the Facility Assessment and Strategic Plan for the El Paso Police Department to get them into the funding stream.
- The city can leverage existing plans and assessments to provide a basis for identifying projects and moving them into the funding stream for future capital investments.
- Many of the colonias in rural areas have inadequate fire protection and response times.
- At present, limited availability of funds makes obtaining higher staffing for Doña Ana County Sheriff's Department levels a challenge.
- The City of Las Cruces and Doña Ana County are working cooperatively to prepare a regional comprehensive plan addressing infrastructure requirements over the next 30 years.

2.9 Quality of Life

Quality of life involves many aspects of a community, from providing recreational opportunities and cultural experiences to ensuring economic prosperity and public safety. Quality of life can also be viewed as community amenities and characteristics that act as "pull factors" to attract inward migration and the qualified/trained workforce needed by the community. Quality of life factors for the El Paso region are divided into six categories: cost of living, education, health care, the environment, public safety, and leisure. This overview deals with existing measures for cost of living, leisure, and quality of life issues on-post at Fort Bliss and recent City of El Paso budgetary allotments to Quality of Life Services departments. The remaining quality of life factors are covered in their respective sections of this report.

2.9.1 Overview of Existing Quality of Life

Tables 2.9-1 through **Table 2.9-4** provide an overview of quality of life amenities in El Paso and Doña Ana counties. Table 2.9-1 shows that cost of living in El Paso is lower than the national average and nearby Las Cruces. Quality of life funding, as reported in Table 2.9-4, has not grown at the same rate in El Paso as funding for all city services and departments.

Table 2.9-1. ACCRA Cost of Living Index

Category (% Weight)	Las Cruces	El Paso	National Avg.
Composite (100%)	102.9	92.6	100

Source: C2ER 2008, ACCRA Cost of Living Index Calculator
Note: ACCRA - American Chamber of Commerce Researchers Association

Table 2.9-2. Inventory of Culture and Arts in El Paso and the Surrounding Areas

	El Paso	Las Cruces
Museums	12	8
Art Galleries	10	36
Performing Arts	13	14
National Register Properties (City)	45	15
Places of Worship	234	113

Source: El Paso Community Profile 2008, El Paso CVB 2008, Las Cruces CVB 2008, www.alamogordo.net, www.cloudcroft.net, www.ruidoso.net, National Register Information System, C2ER 2008

Table 2.9-3. Inventory of Recreational Opportunities in El Paso and the Surrounding Region

	El Paso	Las Cruces
Movie Screens	101	26
Golf Courses	12	4
Shopping Centers	5	6
Zoos	1	0

Source: El Paso CVB 2008, Las Cruces CVB 2008, www.alamogordo.net, www.cloudcroft.net, www.ruidoso.net, C2ER 2008

Table 2.9-4. City of El Paso Fund Appropriations, Summary by Function

Function	Adopted FY 2006	Adopted FY 2007	Adopted FY 2008	% Change FY 2006-2008
Quality of Life Services	$60,729,765	$61,001,722	$64,559,437	6.3
City Total	$582,425,368	$617,123,454	$663,914,410	14.0

Source: City of El Paso, Office of Management and Budget, City Budget

2.9.2 Current Situation

As indicated in Table 2.9-1, the cost of living in El Paso (92.6) is lower than the national average (100) and lower than the cost of living in Las Cruces (102.9).[39] More specifically, El Paso is relatively less expensive in the areas of housing, utilities, transportation, and health.

The City of El Paso has a total of 175 parks containing approximately 2,698 acres of parkland and natural areas. This translates into approximately 4.4 acres of parkland for every 1,000 residents.[40] The City of El Paso currently allocates fewer resources (financial and human capital) per capita to city parks than the average of the 75 largest U.S. cities.[41, 42] However, there are two Texas state parks and one national park in the El Paso area. There are also five national parks, two national forests, and ten New Mexico state parks in El Paso's surrounding area. These parks can be enjoyed year-round, considering El Paso enjoys more than 300 days of sunshine per year.[43] El Paso also ranks in the top ten out of the one-hundred largest metropolitan areas for lowest per capita carbon emissions from transportation and energy use,[44] a potential quality of life benefit for public health and well being.

Cultural and recreational opportunities abound in El Paso and the surrounding areas, as indicated in Table 2.9-2 and Table 2.9-3, respectively. Additionally, El Paso has a robust public library system and is home to five amusement centers and multiple sporting events throughout the year. As it relates to funding the arts, and among the ten most populated cities in Texas, El Paso ranks

[39] Council for Community and Economic Research 2008. ACCRA Cost of Living Index Calculator. http://organizations.utep.edu/Default.aspx?tabid=51954.
[40] Interview with Nanette Smejkal, Director of Parks and Recreation Dept. for City of El Paso. December 1, 2008.
[41] "Park-Related Total Expenditures per Resident, by City, FY 2006." The Trust for Public Land. 2008. http://www.tpl.org/content_documents/citypark_facts/ccpe_TotalSpendingbyAgency_08.pdf.
[42] "Regular, Non-Seasonal Employees per 1,000 Residents, by Major City Agency, FY 2007." The Trust for Public Land. 2008 http://www.tpl.org/content_documents/citypark_facts/ccpe_EmployeesbyAgency08.pdf.
[43] El Paso, Texas Community Profile. Economic Development Department. 2007. https://www.elpasotexas.gov/econdev/_documents/Community%20Profile.pdf.
[44] Brown, M.A., et. al. "Shrinking the Carbon Footprint of Metropolitan America," Brookings Institution. Washington, DC. May 2008. http://www.brookings.edu/~/media/Files/rc/papers/2008/05_carbon_footprint_sarzynski/carbonfootprint_brief.pdf.

ninth in the number of grants awarded per 100,000 residents and fifth in grant monies awarded per 100,000 residents.[45]

Table 2.9-4 provides some budget figures for fiscal years 2006, 2007, and 2008. While the budget for Quality of Life Services has increased each year, its percent increase over the years has been smaller than the percent increase of the overall city budget. This indicates that the percent of the overall city budget that is allocated to Quality of Life Services is decreasing.

Regarding quality of life amenities at Fort Bliss, there is one 20-acre park on-post, five gyms or physical fitness centers, two golf courses, one library, one bowling alley, and a shopping center, respectively. In addition, there are six drinking establishments and five restaurants on Fort Bliss, and the post is home to four museums.[46] Continual upgrades and addition of amenities for soldiers and their families occur throughout the Main Post and newer East Biggs development area.

Based on two surveys conducted recently in El Paso, the majority of residents believe that El Paso is getting better as a place to live and most active duty survey respondents rated "entertainment off-post" more favorably than any other MWR-provided service.[47, 48] El Pasoans also felt that Quality of Life Services was an underfunded city department and considered climate and weather, border location, and the combination of culture, history and people as El Paso's biggest strengths. Primary weaknesses indicated by residents include low salaries and a lack of employment opportunities.

2.9.3 Challenges and Opportunities

The following quality of life challenges and growth issues were identified for this assessment:

- Like public safety and security, cooperation between and among the military installations and communities is essential to create and support quality of life initiatives.
- Funding Quality of Life Services is a key challenge for both the City of El Paso and Fort Bliss's Morale Welfare and Recreation (MWR). For example, the latter is engaged in multiple construction projects to provide MWR amenities for the additional troops arriving on-post. Currently, however, troops are arriving faster than new recreational facilities are being built.
- Quality of life funding is always vulnerable to budget pressures. In the current economic climate, maintaining and progressing resources for quality of life will require political,

[45] "Grant Information - Search Past Grant Awards - 2008 TCA Cities List." Texas Commission on the Arts 2008. http://www.arts.state.tx.us/cities/08/.
[46] Team Bliss Transformation Office.
[47] Carlos Olmedo, et al. "2008 City of El Paso Citizen Survey." Technical Report 2008-02. Institute for Policy and Economic Development, University of Texas at El Paso. El Paso, Texas.
[48] Joseph Villescas, "Fort Bliss 2008 On-line MWR Leisure Needs Survey." Villescas Research, Media, & Instruction. El Paso, Texas. 2008

institutional, and community support. Looking for ways to generate funds is a challenge facing the City of El Paso.

The following quality of life opportunities were identified:

- Current planning efforts stimulated by the changes at Fort Bliss are an opportunity for El Paso to define goals for quality of life and to invest in amenities and initiatives to support these priorities.
- Smart Growth is an opportunity for El Paso to embrace as it continues to grow. Smart Growth Principles are closely aligned with core quality of life concerns, such as cultural and recreational programs and facilities, efficiency and choices for transportation, clean air initiatives, waste reduction, and emphasis on green development.
- Increased population frequently generates the critical mass (audience size) needed to support top performing artists, attractions, and events. Investment in new performance space can be offset through increased revenue streams from these events.
- An aging baby-boom population and increases in military retirees in the area (drawn by Army medical facilities and good climate) will increase demands in selected industries, such as health care, accommodation, and entertainment. This provides an opportunity for defining and adopting city beautification goals and developing a regional identity as a thriving southwest city.

2.10 Fiscal Structure

This section considers the fiscal structure and condition of both El Paso and Doña Ana counties, focusing on the former.

2.10.1 Overview of Existing Fiscal Structure

Table 2.10-1 provides a budget summary of revenues for the two county area. **Table 2.10-2** provides information on property and sales tax rates.

Table 2.10-1. Budget Summary of Revenues for Fiscal Year 2009 ($millions)

	Approved Budget	Property Tax Levy (Percent of Budget)	Sales Tax (Percent of Budget)
City of El Paso	$689	$183 (27%)	$107 (16%)
County of El Paso	$275	$112 (41%)	$37 (13%)
El Paso ISD	$532	$177 (33%)	NA
Doña Ana County	$144	$32 (22%)	$24 (17%)
City of Las Cruces	$425	$11 (2%)	$72 (17%)

Source: El Paso County Commissioners 2008; City of El Paso 2008; El Paso ISD 2008; Board of County Commissioners of Doña Ana County 2008; City of Las Cruces 2008
NA – Not Applicable

Table 2.10-2. Property and Sales/Gross Receipts Tax Rates for Fiscal Years 2008 and 2009

	Property Tax Rate (in $/$100 taxable value)		Sales or Gross Receipts Tax Rates	
	Fiscal Year 2009	Fiscal Year 2008	Fiscal Year 2009	Fiscal Year 2008
City of El Paso	0.6330	0.6710	1.00	1.00
County of El Paso	0.3424	0.3600	0.50	0.50
El Paso ISD	1.2350	1.2035	NA	NA
Doña Ana County[1]	0.7812	0.8031	0.81	0.56
City of Las Cruces[2]	0.5879	0.5879	2.79	2.79

Source: El Paso County Commissioners 2008; City of El Paso 2008; El Paso ISD 2008; Board of County Commissioners of Doña Ana County 2008; City of Las Cruces 2008; State of New Mexico 2009
1. Residential property tax millages shown (converted to $/$100 taxable value); corresponding nonresidential rates are 1.185 (2009) and 1.2048 (2008)
2. Residential property tax millages shown (converted to $/$100 taxable value); corresponding nonresidential rates are 0.712 (2009) and 0.712 (2008)

NA – Not Applicable

2.10.2 Current Situation

Since the Existing Conditions Assessment was completed in mid-2008, two sets of events necessitate updates. First, the fiscal entities in the region have adopted new fiscal year budgets, predicated on regional growth. Table 2.10-1 provides revenue information updated to fiscal year 2009 (FY 2009) for the largest entities. The property tax rates and local sales tax rates (local gross receipts tax rates in New Mexico) for FY 2009 and FY 2008 in Table 2.10-2 indicate that these jurisdictions were able to lower various tax rates because of projected growth in their respective tax bases relative to budgetary needs.

Second, the national banking system crisis and subsequent economic contraction during late 2008 introduces additional fiscal challenges. Current economic conditions are expected to result

in revenue shortfalls. Property valuation and property tax rates for FY 2009 were established before the economic contraction in autumn 2008. Subsequent declines in property values may reduce actual collections and valuations for future fiscal years. Adverse economic conditions will affect tax collection rates. Reductions in consumer spending will reduce sales tax revenues and fee-based revenues. For example, taxable sales in the third quarter of 2008 were down by more than 4 percent in El Paso City and County.[49] This magnitude of revenue loss continued through mid-March of 2009 according to reports showing that sales tax receipts in El Paso were 4.8 percent below receipts for the same period in 2008.[50]

Governments in the two-region study area have a wide variety of revenue sources and expenditures. Table 2.10-1 provides a summary of budget information for FY 2008 for the jurisdictions with the largest budgets. Regional governments have implemented a variety of measures to address potential military-related growth issues as well as enhance regional economic development. These include creating a Tax Increment Reinvestment Zone in downtown El Paso in 2006, which has increased downtown property values by 40 percent over the first two years.[51] Recent voter-approved bonding capacity for the independent school districts includes a 2007 bond request of $230 million for El Paso ISD. As of December 2008, almost $144 million of the $230 million in bond capacity was unencumbered.[52]

Property taxes are an important source of revenue for the Texas jurisdictions because the state does not tax individual or corporate incomes. The 2007 property tax levy across 30 tax jurisdictions in El Paso County exceeded $704 million.

The City of El Paso reports seven revenue sources: taxes, franchises, service revenues, operating revenues, non-operating revenues, intergovernmental revenues, and transfers in. Taxes, including property and sales tax, account for more than 40 percent of total revenue and provide resources primarily for the general, debt service, and mass transit funds. Service and operating revenues account for another 30 percent of total revenues and while some revenues accrue to the general fund, these resources primarily finance solid waste, self-insurance, and other funds.

City of El Paso appropriations can be classified by fund and character, which comprises personal services, contractual services, materials and supplies, operating expenditures, non-operating expenditures, intergovernmental expenditures, other uses, and capital outlay. The personal services character accounts for nearly 50 percent of total appropriations. It includes employee compensation, funding for police and fire contractual agreements, funding for new libraries, and funding for temporary courts.

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[49] Texas Comptroller of Public Accounts 2009. Quarterly Sales Tax Historical Data. http://www.window.state.tx.us/taxinfo/sales/

[50] "Sales Tax Rebates for March Decline." El Paso Times Online edition March, 15, 2009.

[51] Tax-Increment Reinvestment Zone Advisory Board 2008. Downtown Property Values. http://www.elpasotexas.gov/econdev/tirz_funding.asp.

[52] El Paso Independent School District Bond Accountability Advisory Committee. Meeting Minutes for December 3, 2008. http://www.episd.org/_2007bond/

2.10.3 Challenges and Opportunities

- At all levels of government, there are baseline challenges of meeting expenditure increases driven by baseline growth in demand for services and as well as cost increases to provide those services (e.g., labor costs, health benefit costs, and fuel and energy costs).
- All local governments – municipal and county governments as well as school districts and special districts – will incur incremental revenue and expenditure impacts as a result of military-related growth. The challenge for each jurisdiction is to identify whether it will be able to fund incremental expenses with incremental revenue to avoid reductions in services. Primary revenue sources in Texas include property taxes, sales taxes, and service fees. In New Mexico, income taxes are an additional revenue source. For special districts, matching incremental service fees to incremental service demand is a potential strategy for synchronizing growth-induced needs with revenues.
- Municipal and county governments and school districts will need to quantify anticipated funding shortfalls, and then identify and pursue opportunities for intergovernmental support from state and federal sources as well as private sources to prevent loss in services for all citizens. Some school districts will likely experience greater growth than others. Proportioning disbursements to ISDs as population changes will be a challenge.

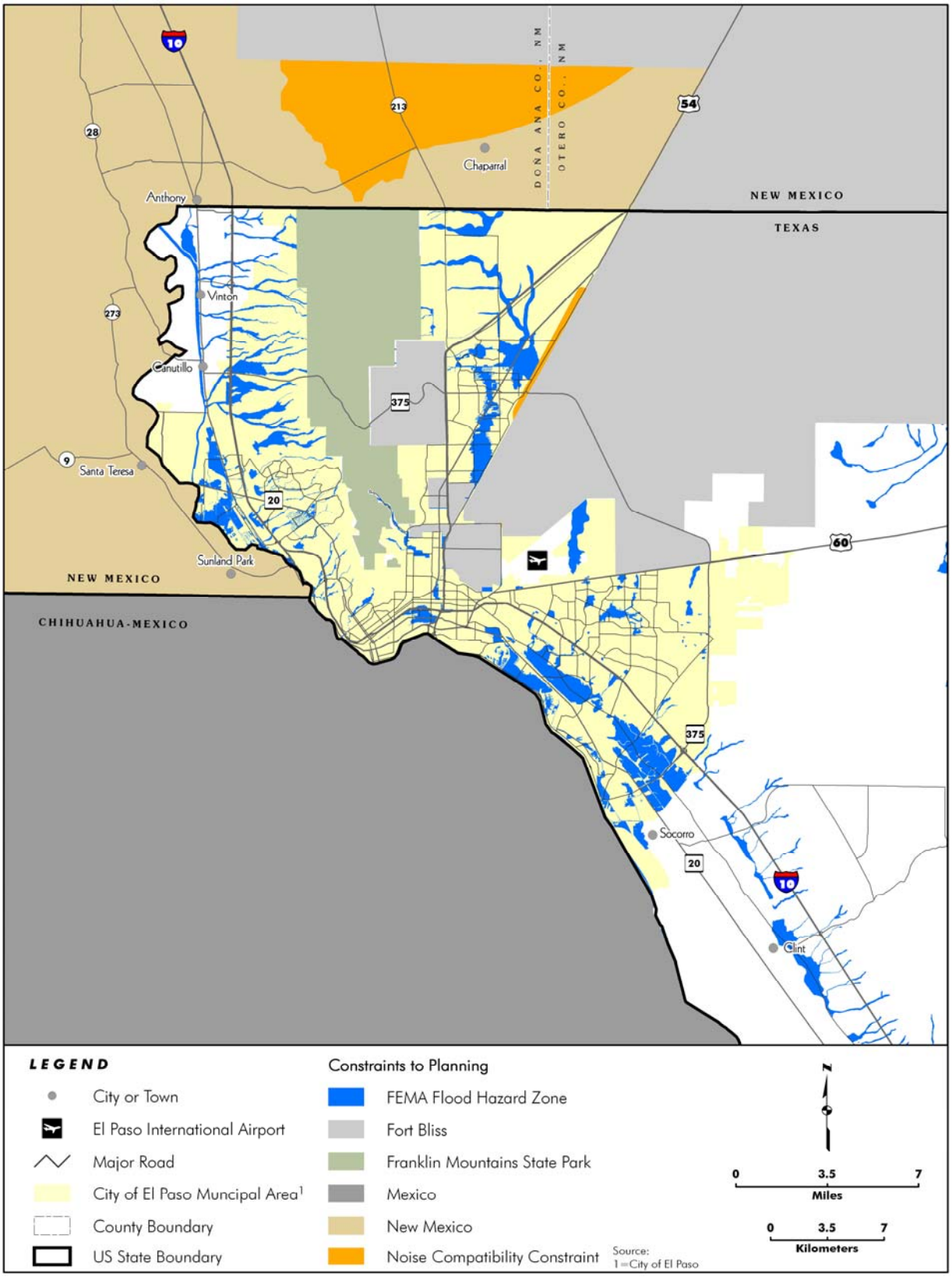
2.11 Other Planning Issues

This section briefly describes other challenges and opportunities identified during investigations and meetings for this RGMP. These mostly fall outside the customary planning topics or address larger or institutional concerns.

Physical and Geopolitical Constraints. **Figure 2.11-1** illustrates the geographic extent of some planning constraints in the El Paso area. Physical, geopolitical, and environmental constraints will influence future planning and growth in El Paso and surrounding region. Some of these include:

- Noise generated by activities on Fort Bliss such as underlying helicopter transit routes between Biggs Army Airfield and restricted airspace and training areas, and around the Biggs/El Paso International Airport (EPIA) complex. Aircraft noise can be incompatible with some types of land use and will influence suitability of some land for residential development.
- Noise from firing ranges in Doña Ana Range is already a concern in Chaparral and further south into El Paso County.
- El Paso has limited land. The Franklin Mountains State Park, Fort Bliss, and international and state boundaries limit the available land base with which the city can actively plan.
- Land development is limited in arroyos and floodplains, bosque and groundwater recharge areas, and by slope and soil stability. Cultural and historic resources may also limit or influence development options.
- Land development is also limited by ownership. Land owned by federal, state, and local government or quasi-government entities is not generally available for private sector development except through specific partnerships or negotiated contracts. There may be opportunities to leverage this situation as a means to jump-start investment and stimulate needed development.
- The region impacted by military-induced growth extends over county, state, and international boundaries. Successful growth management will require coordination and joint efforts among multiple jurisdictions and stakeholders to solve problems effectively. While non-governmental organizations and volunteerism can be used to advantage at some levels of implementation, a larger planning body that involves governmental units will be more effective at collecting and marshalling the resources needed for regional efforts.
- Air quality is a regional issue. Non-attainment for criteria pollutants may impede El Paso's ability to recruit new industries and businesses. Several planning opportunities can benefit and help El Paso reduce its carbon footprint, particularly through applying Smart Growth principles to future planning and development.

Figure 2.11-1. Planning Constraints in the El Paso Area



- Political boundaries (international, state, and county) can hinder cooperation and coordination efforts. There are several trans-border groups working on regional issues with Mexico, but there is no existing body for taking on planning efforts for interdependent concerns across the Texas-New Mexico border. A regional approach allows for the concentration of economic, political and social resources in support for existing and new residents.

Regional Issues. The region impacted by military-induced growth extends over county, state and national boundaries. Successful management will require coordination and joint efforts among many municipal jurisdictions and stakeholders to solve growth-driven problems effectively. While non-governmental organizations and local governmental units represent the only solution to some problems, a larger regional planning organization that involves all these stakeholders will be more effective in the collection and marshalling of facts and resources needed for regional solutions.

A regional approach in some instances allows for the concentration of economic, political, and social resources in support of existing and new residents to achieve results that local organizations cannot achieve. El Paso can learn from or combine with efforts by other communities affected by growth issues (such as those surrounding Fort Sam Houston, Fort Hood, and Fort Benning) to solve mutual problems such as teacher and medical personnel recruitment, and certification problems.

Workforce and Service Capacity Issues. Several other issues broadly related to workforce development, service capacity, and business opportunities are important aspects of growth management as they provide the foundation for economic activity and a strong regional revenue base. Several of these are identified below.

- The Future Combat System training brigade (or similar future unit) at Fort Bliss provides a special opportunity to attract high-tech businesses and for higher paying technical jobs. El Paso, Fort Bliss, and UTEP could together benefit from partnership with other Army locations with the same dynamic.
- Business owners need training in the process of government procurement bidding. A regional approach to assisting businesses and preparing a regional bidders list will also have significant benefits.

3.0 REGIONAL GROWTH IMPACT ASSESSMENT

3.1 Economic Development and Growth

Military expansion will impact the demographics and economics of the region significantly. To assess these impacts, three simulations (reflecting low, medium, and high growth) for the 2009-2025 timeframe were developed. These scenarios estimate population changes by applying different effects resulting from alternative assumptions regarding brigade movements to Fort Bliss and White Sands Missile Range. Assumptions also included different deployment possibilities of these brigades, relocation of family members, and other non-military growth factors (e.g., El Paso's new four-year medical school may attract new medical research firms to the area in varying degrees). Differences among the three simulations are intended to assist policy makers identify and prioritize strategic actions needed to accommodate various growth outcomes.

The following are projected key demographic and economic drivers in the region:

- Fort Bliss expects to receive 37,300 additional soldiers by 2012; the net troop increase starting in 2009 and ending in 2012 could reach 20,400, while the number of dependents accompanying the troops is projected to rise by 27,500.
- In El Paso County, by 2012, projections show population increases between 11 and 14 percent (i.e., an additional 80,900 to 104,400 persons); by 2025, population increases are forecasted between 26 and 32 percent (i.e., an additional 194,900 to 243,600 persons)
- Over $3.3 billion in housing and infrastructure spending is projected to accompany the troop increase at Fort Bliss between 2009 and 2013.
- Military expansion under the high-growth scenario would cause El Paso's economy to grow from 28 to 37 percent in terms of gross regional product and from 42 to 51 percent in terms of personal income increases between 2008 and 2013.

- In El Paso, between 2008 and 2012, conservative estimates project employment to increase by 56,800; the more likely scenario shows a job increase of between 63,800 and 87,300. By 2025, forecasts show a job base ranging between 480,700 and 516,900.
- In El Paso, between 2008 and 2015, industry sectors expected to experience the most growth include: Local Government, Administrative, Support, Waste, and Management of Companies; and Health Care; between 2008 and 2025 the Health Care industry sector is anticipated to be the lead in producing new jobs.
- Military realignment to El Paso is creating an urgent need to develop strategies to build and enhance the region's workforce through training programs. Many employers report an inadequate supply of skilled tradesmen and workers with technical and office skills.

3.1.1 Regional Forecasts

Section 2.1 describes how this study developed a 2008-Baseline based on military expansion in that timeframe. This is the starting point for the three growth scenarios. The assumptions for the 2008-Baseline apply to the low-, medium- and high-growth simulations.

Fort Bliss expects to accommodate approximately 37,300 troops by 2012 when the last of the brigades realigns to the area (**Table 3.1-1**). The net troop increase starting in 2009 and ending in 2012 will reach approximately 20,400, while the number of dependents accompanying the troops is projected to rise by approximately 27,500, with the largest year-to-year increase in 2010 (Table 3.1-1). In addition, WSMR could gain between 700 to 4,400 troops with up to 6,700 military family members by 2013 with the realignment of a brigade from Europe (**Table 3.1-2**). In total, the regional military-related population is forecast to grow by approximately 59,000 (24,800 troops and 34,200 dependents) from 2009 through 2013. Over $3.3 billion in housing and infrastructure spending and more than 2,700 new federal civilian jobs (Table 3.1-1) are also projected to accompany the troop increase at Fort Bliss during this time period.

Table 3.1-1. Projected Fort Bliss (El Paso County) Expansion

	2008	2009	2010	2011	2012	2013	Net
Military Troops	16,900	19,664	27,050	32,951	37,284	37,284	**20,384**
Military Dependents	25,534	29,260	39,217	47,171	53,012	53,012	**27,478**
Expenditures[1] ($ millions)	-[2]	1,561	801	266	395	341	**3,366**
Federal Civilian Employment	4,254	4,931	5,608	6,285	6,962	6,962	**2,708**
Military Full-Time Students	2,132	2,132	700	700	700	700	**–1,432**

Source: Fort Bliss Transformation Office – FMWRC/MCEC Model.

Notes:

1. Expenditures include military allocated infrastructure and on-post private housing estimates from Benham Constructors, LLC. Federal civilian employment includes garrison jobs and hospital jobs at William Beaumont Army Medical Center.
2. Expenditures for 2008 already allocated and thus not included in Net value.

Table 3.1-2. WSMR (Doña Ana County)

	2008	2009	2010	2011	2012	2013	Net
Military Troops	360	774	774	774	782	4,769	**4,409**
Military Dependents	547	1,176	1,176	1,176	1,189	7,249	**6,702**
Federal Civilian Employment	2,312	2,270	2,250	2,238	2,227	2,522	**210**

Source: WSMR Plans, Analysis and Integration Office – SAMAS/TAADS Model

Estimates for Fort Bliss and WSMR over the next five years are based on most current DoD information; however, DoD indicates uncertainty regarding brigade movements, timing, and funding. This uncertainty, as well as differences in non-military growth alternatives, is taken into account in the low, medium, and high-growth simulations:

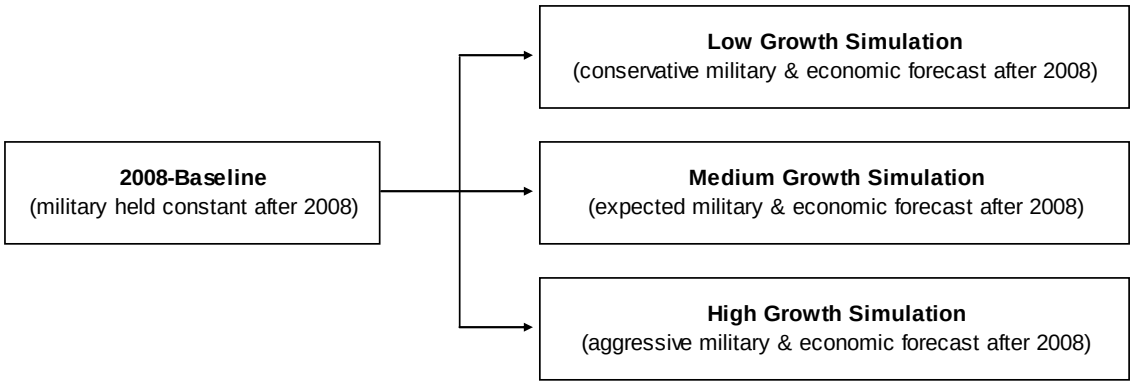
- **Low-Growth Simulation (LGS)** – The LGS assumes two Fort Bliss heavy brigade combat teams would be deployed (outside the El Paso area) beginning in 2009 and over the forecast interval. This simulation assumes spouses and children of deployed soldiers would not relocate to El Paso but instead would remain at their previous residence. For WSMR, no deployment is assumed for the brigade scheduled to arrive in 2013, so all family members would relocate to Doña Ana County. No external private employment or investment is introduced, thus the only impact to the regional economy is military-related expansion. Population growth, military employment and historical private sector employment trends would drive expansion of the economy. Historical employment trends take into account how regional demand for goods and services change with changes in population. The LGS should be considered the most conservative growth scenario.
- **Medium-Growth Simulation (MGS)** – The MGS assumes one Fort Bliss heavy brigade combat team would deploy from 2009 through 2014. In 2015, the brigade would return and integrate back into Fort Bliss, with no deployments after 2015. At WSMR, no deployment is assumed, and military dependents relocate to the region. Some external employment and investment is introduced in addition to historical growth patterns. External employment and investment (suggested by regional experts)[53] include private industry likely to begin operations in the near future. It also includes employment for capital improvement or expansion projects not yet started but approved for funding by universities, hospitals, and the State legislature. The MGS is considered the most likely future growth outcome.
- **High-Growth Simulation (HGS)** – The HGS assumes no brigade combat team would be deployed and all troop and family expansion would be fully absorbed by the region. Aggressive external private-sector employment and investment would be anticipated, which demonstrates how highly-successful industry development and recruitment efforts

[53] Regional Economic Development Corporation, Mesilla Valley Economic Development Alliance and Institute for Policy and Economic Development, University of Texas at El Paso. September/October 2008.

could significantly increase the region's population and employment base. Potential industries, suggested by regional experts, would include advanced manufacturing, defense, life sciences, alternative energy, and data management. The HGS is the most aggressive growth scenario and would represent the greatest strain on regional infrastructure.

The 2008-Baseline assumes the military presence remains constant after 2008, and it serves as the benchmark for evaluating the impacts of the LGS, MGS, and HGS (**Figure 3.1-1**). Starting in 2009, impacts of military expansion are quantified in terms of baseline growth and the three growth scenarios for population, employment, and income categories.

Figure 3.1-1. Summary of Simulations



3.1.1.1 Population

The increase in population for the LGS, MGS, and HGS is illustrated in **Figure 3.1-2**. The figure indicates a large increase in population is projected between 2009 and 2012 in the three simulations for El Paso County when compared to the 2008-Baseline. After 2012, the population grows at a rate on par with the 2008-Baseline. By 2012, when the last of the brigades relocates, the three growth simulations in **Table 3.1-3** show a population range between 831,400 and 855,000 (versus 784,100 in the 2008-Baseline); by 2025, the population range is 945,500 and 994,200 (versus 871,300 in the 2008-Baseline). If the MGS is the expected state of growth, then from 2008 to 2012 the population is projected to increase by more than 90,800 additional persons in El Paso (Table 3.1-3); from 2008 to 2025 the growth will be nearly 212,000 additional persons.

Figure 3.1-2. El Paso County Population Forecasts

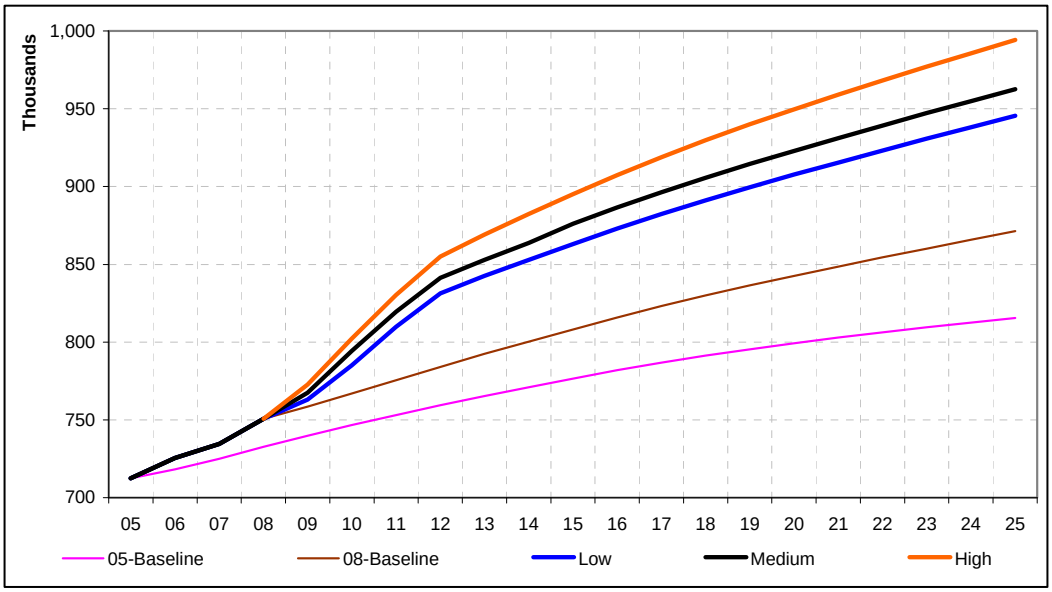


Table 3.1-3. El Paso County Population Forecasts

	2005-Baseline	2008-Baseline	Low	Medium	High
2008	732,757	750,585	750,585	750,585	750,585
2012	759,359	784,087	831,438	841,405	855,016
2015	776,512	808,210	863,101	876,085	895,159
2020	799,308	842,567	907,690	923,014	949,725
2025	815,561	871,331	945,532	962,548	994,178
Net 2008-2012	**26,602**	**33,502**	**80,853**	**90,820**	**104,431**
Net 2008-2025	**82,804**	**120,746**	**194,947**	**211,963**	**243,593**

Source: Institute for Policy and Economic Development, UTEP

Note: At the time of this study the U.S. Census Bureau released 2008 historical county population estimates. The Census Bureau downward adjusted the population from 2001 to 2008 for El Paso County. For this study, the REMI model included 2007 Census historical population data for El Paso, which it reported at 734,679. Census data now reports the population for El Paso in 2007 and 2008 at 729,969 and 742,062, respectively.

Doña Ana County is expected to experience some spillover from El Paso's growth over the next four years; however, the greatest impact would occur in 2013 with the anticipated addition of a brigade and family members to WSMR (**Figure 3.1-3**). By 2013, the LGS, MGS, and HGS show a population rise between 29,000 and 33,100 (**Table 3.1-4)**; by 2025, population increases would be between 66,000 and 74,800 over 2008 levels.

Figure 3.1-3. Doña Ana County Population Forecasts

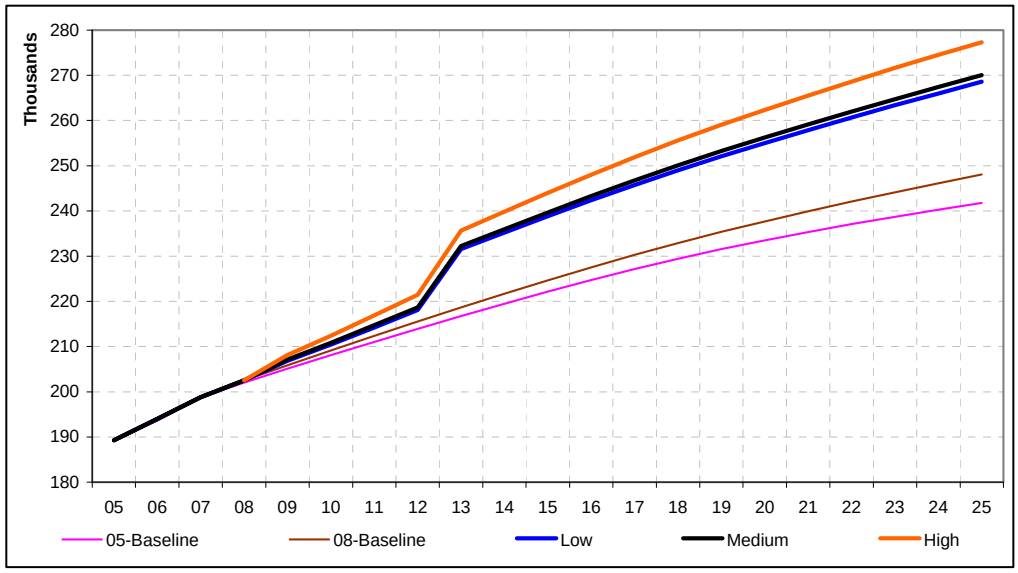


Table 3.1-4. Doña Ana County Population Forecasts

	2005-Baseline	2008-Baseline	LGS	MGS	HGS
2008	202,014	202,549	202,549	202,549	202,549
2013	216,760	218,683	231,588	232,265	235,605
2015	222,153	224,632	238,816	239,659	243,978
2020	233,484	237,691	255,042	256,273	262,367
2025	241,808	248,085	268,593	270,057	277,350
Net 2008-2013	**14,746**	**16,134**	**29,039**	**29,716**	**33,056**
Net 2008-2025	**39,794**	**45,536**	**66,044**	**67,508**	**74,801**

Source: Institute for Policy and Economic Development, UTEP
Note: At the time of this study Census downward adjusted the population from 2006 to 2008 for Doña Ana County. For this study, the REMI model included 2007 Census historical population data for Doña Ana, which it reported at 198,791. Census data now reports the population for Doña Ana in 2007 and 2008 at 198,048 and 201,603 respectively.

Table 3.1-5 shows how population age distributions are expected to change over time in El Paso County. The greatest increase is expected to be children under the age of 12 (due to higher birth rates that generally follow long deployments) and on the 18-to-24 year-old age groups (which coincide with the ages of younger enlisted men and women).[54] The population of El Paso is experiencing the aging of the baby boomers, not unlike the rest of the nation;[55] however, there is currently an "echo effect", creating a depression for some of the younger age categories. The

[54] Interview with Robert Weatherly, Management and Program Analyst, Team Bliss Base Transformation Office, Fort Bliss. February 27, 2009.
[55] "Population Projections of the United States by Age, Sex, Race, and Hispanic Origin: 1995 to 2050," P25-1130, U.S. Department of Commerce, Bureau of the Census, Economics and Statistics Administration. 1996.

echo effect is a result of fewer female births in the late 1960s/early 1970s. This reduced population of females entered their child-bearing years in the 1990s,[56] and their offspring are now reaching the ages of 14 through 17. Because fewer mothers generally translate to fewer children, it is anticipated that there will be a drop in the number of 14 through 17-year-olds presently and in coming years. This drop is expected to be temporary, however, as the proportion of females in the population returns to historical norms. This peak-trough-increase pattern will eventually affect all age categories in future years.

Table 3.1-5. El Paso County Age Distributions (in thousands)

	Total	0-3	4-11	12-14	15-17	18-24	25-34	35-44	45-64	65+
Estimate										
2008	750.6	59.8	102.4	37.0	38.1	90.8	90.5	92.9	160.5	78.6
2008-Baseline										
2010	766.9	61.5	107.4	35.0	37.6	95.7	91.2	89.9	166.3	82.4
2015	808.2	64.7	117.7	40.6	33.9	100.2	106.0	78.6	170.6	96.0
2020	842.6	65.7	123.4	42.7	40.7	97.3	117.2	76.8	166.2	112.5
2025	871.3	67.3	125.6	44.8	43.3	107.8	114.7	89.3	147.1	131.4
LGS										
2010	785.0	63.3	110.9	35.9	38.2	99.9	95.3	92.1	167.0	82.4
2015	863.1	73.2	127.2	43.1	35.7	111.0	118.0	85.3	173.4	96.2
2020	907.7	75.0	138.2	45.5	42.7	108.1	130.3	84.7	170.1	112.9
2025	945.5	76.8	143.8	49.9	45.5	119.0	127.7	98.5	152.2	132.1
MGS										
2010	794.4	64.5	112.2	36.3	38.5	101.7	97.6	93.5	167.7	82.4
2015	876.1	75.2	129.6	43.7	36.1	113.0	120.8	87.0	174.5	96.2
2020	923.0	76.9	141.9	46.2	43.3	110.3	133.1	86.8	171.5	113.1
2025	962.5	78.7	147.6	51.2	46.3	121.3	130.3	100.8	153.9	132.5
HGS										
2010	802.2	65.2	113.5	36.7	38.7	103.1	99.4	94.5	168.6	82.4
2015	895.2	77.2	132.3	44.4	36.7	115.0	125.7	90.0	177.4	96.5
2020	949.7	79.4	146.2	47.3	44.2	112.5	138.7	91.6	176.0	113.8
2025	994.2	81.2	152.8	52.9	47.7	123.8	134.9	107.1	160.0	133.8

Source: Institute for Policy and Economic Development, UTEP
Notes: LGS - Low Growth Simulation MGS - Medium Growth Simulation HGS - High Growth Simulation

3.1.1.2 Employment, Income, and Gross Regional Product

Military expansion is expected to have an immediate direct and indirect (multiplier) effect on the economy of the El Paso-Doña Ana region. The arrival of military troops will cause an increase in jobs and spending through the movement of federal support employees (and their families) to the region. A collateral impact is the anticipated investment in infrastructure required to meet the needs of a growing population. These expenditures are projected to have both short-term

[56] Interview with Karl Eschbach, Ph.D., State Demographer of Texas, Director, Texas State Data Center, University of Texas at San Antonio. November 1, 2008.

effects (i.e., new construction projects) and long-term impacts (i.e., day-to-day support of expanded military operations) on employment. In turn, population growth will significantly increase private and public-sector employment as regional demand for goods and services expands (**Table 3.1-6** and **Table 3.1-7**). Over time, the growth in population and personal income is anticipated to attract additional industry and investment into the region.

Between 2008 and 2012 when the last of the brigades is planned to relocate, the conservative LGS estimates employment in El Paso, excluding the federal government military troops, to increase by 36,400 (Table 3.1-7); the MGS and HGS show an increase of 43,400 and 66,900, respectively. By 2025, forecasts show a non-military jobs base ranging between 443,400 and 479,600 (versus total non-military employment of 415,500 for the 2008-Baseline).

Table 3.1-6. El Paso County Total Employment Forecasts

	2005-Baseline	2008-Baseline	Low	Medium	High
2008	365,270	385,026	385,026	385,026	385,026
2012	374,044	399,145	441,845	448,804	472,355
2015	379,220	407,794	450,914	461,341	483,860
2020	387,240	422,543	468,063	478,697	502,810
2025	388,519	432,405	480,674	491,555	516,930
Net 2008-2012	**8,774**	**14,119**	**56,819**	**63,778**	**87,329**
Net 2008-2025	**23,249**	**47,379**	**95,648**	**106,529**	**131,904**

Table 3.1-7. El Paso County Non-Military Employment Forecasts

	2005-Baseline	2008-Baseline	Low	Medium	High
2008	355,940	368,126	368,126	368,126	368,126
2012	364,714	382,245	404,561	411,520	435,071
2015	369,890	390,894	413,630	424,057	446,576
2020	377,910	405,643	430,779	441,413	465,526
2025	379,189	415,505	443,390	454,271	479,646
Net 2008-2012	**8,774**	**14,119**	**36,435**	**43,394**	**66,945**
Net 2008-2025	**23,249**	**47,379**	**75,264**	**86,145**	**111,520**

Source: Institute for Policy and Economic Development, UTEP

In Doña Ana County, the direct impact of the military is expected to emerge in 2013 when the community absorbs a new brigade and dollars from expenditures from military families and infrastructure projects. By 2013, the jobs base (excluding military troops), is projected to grow by between 12,000 (LGS) and 15,700 (HGS), depending on the success of industry recruitment into the county (**Table 3.1-8** and **Table 3.1-9**).

Table 3.1-8. Doña Ana County Employment Forecasts

	2005-Baseline	2008-Baseline	Low	Medium	High
2008	92,914	93,754	93,754	93,754	93,754
2013	98,765	99,919	110,120	110,467	113,825
2015	100,873	102,180	112,710	113,118	116,645
2020	105,035	107,689	118,758	119,222	123,219
2025	107,376	111,413	123,065	123,586	127,937
Net 2008-2013	**5,851**	**6,165**	**16,366**	**16,713**	**20,071**
Net 2008-2025	**14,462**	**17,659**	**29,311**	**29,832**	**34,183**

Table 3.1-9. Doña Ana County Non-Military Employment Forecasts

	2005-Baseline	2008-Baseline	Low	Medium	High
2008	92,637	93,394	93,394	93,394	93,394
2012	98,488	99,559	105,351	105,698	109,056
2015	100,596	101,820	107,941	108,349	111,876
2020	104,758	107,329	113,989	114,453	118,450
2025	107,099	111,053	118,296	118,817	123,168
Net 2008-2012	**5,851**	**6,165**	**11,957**	**12,304**	**15,662**
Net 2008-2025	**14,462**	**17,659**	**24,902**	**25,423**	**29,774**

Source: Institute for Policy and Economic Development, UTEP

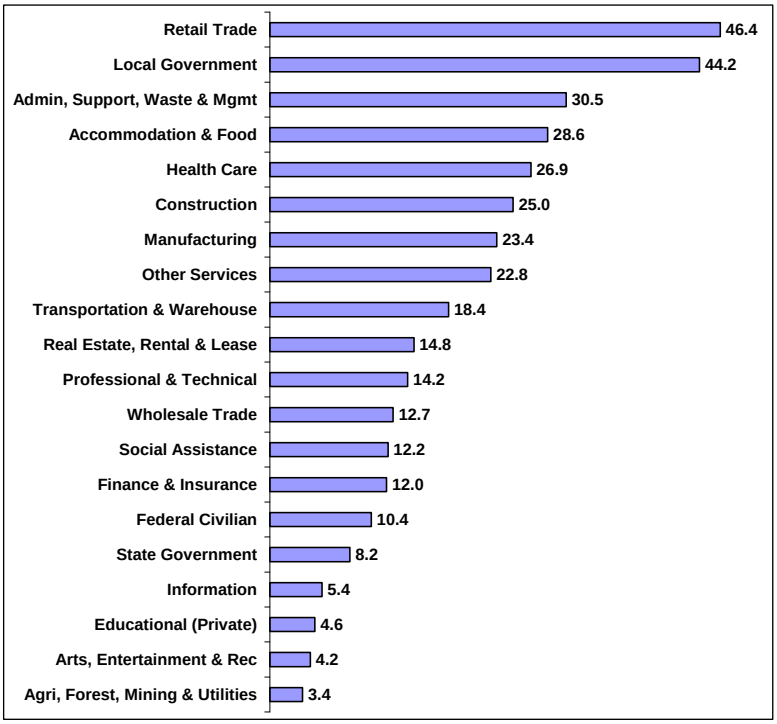
Figure 3.1-4 illustrates non-military employment by industry sector for El Paso County in 2008. The largest industry job sector is *Retail Trade* followed by *Local Government*. *Health Care* is the fifth largest sector, while *Manufacturing*, which has experienced significant contraction since the mid-1990s due to the progressive loss of apparel manufacturing,[57] ranks seventh. The subsequent four figures show the top 10 industry sectors projected to gain the most jobs through 2015 and 2025. **Figure 3.1-5** refers to the 2008-Baseline while **Figure 3.1-6, Figure 3.1-7** and **Figure 3.1-8** correspond to the LGS, MGS, and HGS, respectively. Comparing these growth alternatives for El Paso reveals the following:

- **Top 10 industry sectors** – The same industry sectors appear in each of the four forecasts with the exception of *Construction*, which does not appear on the top list for the 2008-Baseline, but replaces *Wholesale* in subsequent forecasts. This means that regardless of the extent of the military expansion, the industry sectors currently providing the most employment will continue to do so through 2015. The impact of military and civilian population growth will be evident in the magnitude of employment growth.

[57] Mathew McElroy et al. 2006. "Upper Rio Grande Workforce Development Board Industry Cluster Analysis," Institute for Policy and Economic Development, University of Texas at El Paso, Technical Report 2006-03.

- **Between 2008 and 2015** – Without further military growth (i.e., 2008-Baseline conditions) *Retail Trade* gains the most jobs. When military growth is introduced, 1) *Local Government*, 2) *Administrative, Support, Waste, and Management of Companies* and 3) *Health Care* experience the most employment growth. This is a consequence of an immediate need for public school teachers, public safety, support services, and health access.
- **Between 2008 and 2025** – Similar to national trends,[58] the *Health Care* sector will outpace other sectors in job increases over the longer-term. This sector is forecast to grow by 12,500 (LGS) to 15,200 (HGS).
- **Recruitment impact** – Many industry recruitment efforts in El Paso are aimed at high-tech manufacturing and services. These efforts are reflected as policy initiatives in the MGS and HGS. *Professional, Scientific and Technical* employment is forecast to grow by as much as 7,700 under aggressive, successful recruitment efforts (HGS). In contrast, *Manufacturing* in El Paso is a declining industry, a result of continued contractions in apparel, textiles, plastics, electric, and appliance production. This industry is expected to lose close to 3,000 jobs through 2015. Successful recruitment in other targeted industries may offset much of these losses and perhaps provide job opportunities with greater pay (i.e., technology-driven fields).

Figure 3.1-4. El Paso County 2008 Employment by Industry Sector (in thousands)



Source: Institute for Policy and Economic Development, UTEP

[58] "Career Guide to Industries – Health Care." U.S. Department of Labor, Bureau of Labor Statistics. March 2008 http://www.bls.gov/oco/cg/cgs035.htm.

Figure 3.1-5. 2008-Baseline Top Job Growth by Industry Sector (El Paso)

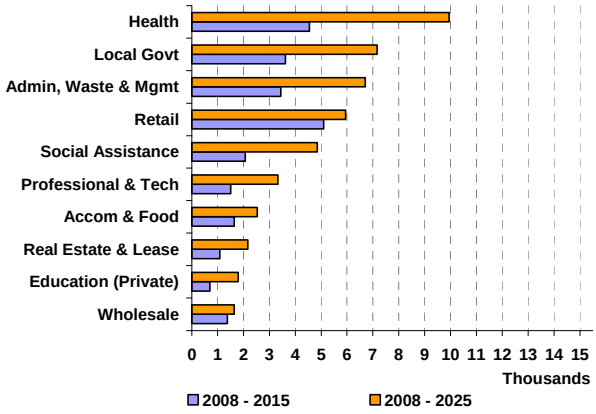


Figure 3.1-6. Low Simulation Top Job Growth by Industry Sector (El Paso)

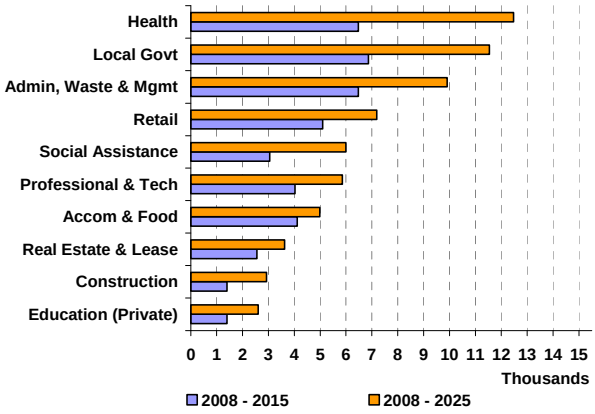


Figure 3.1-7. Medium Simulation Top Job Growth by Industry Sector (El Paso)

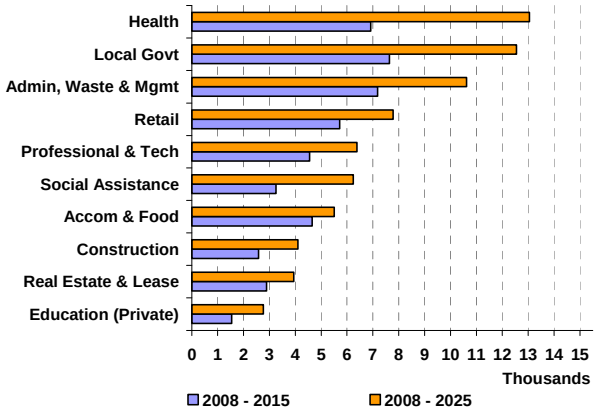


Figure 3.1-8. High Simulation Top Job Growth by Industry Sector (El Paso)

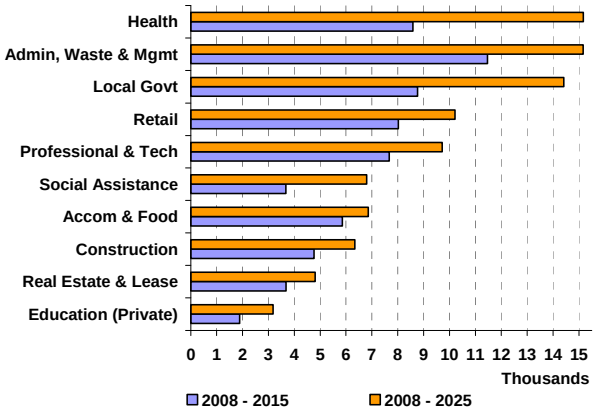
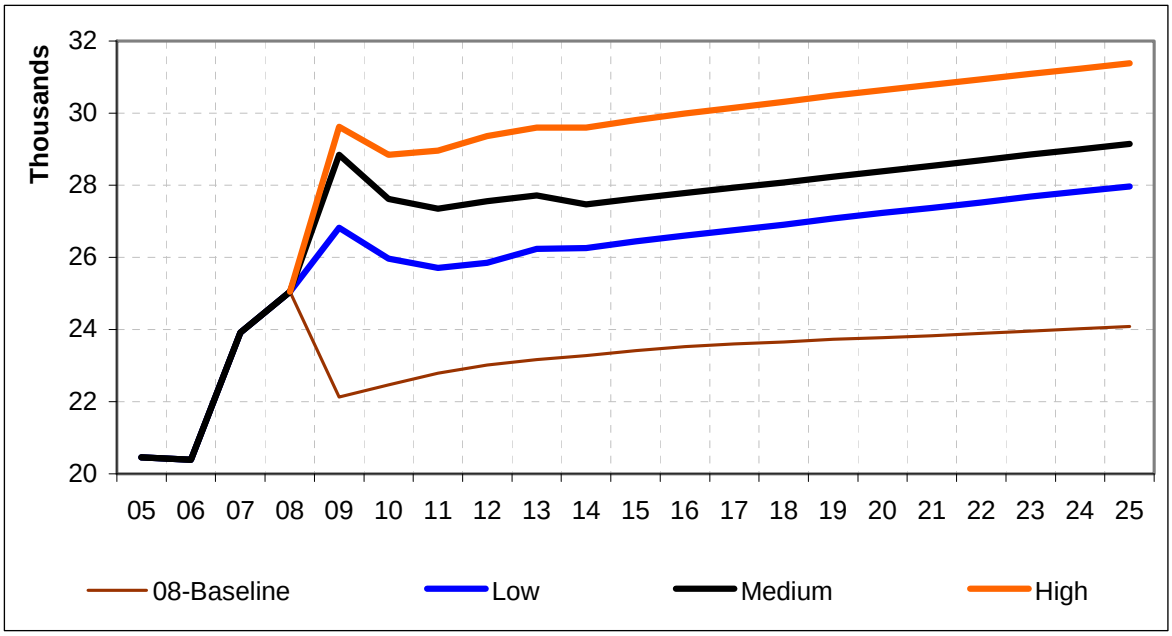


Figure 3.1-9 illustrates that military expenditures will continue to support and create new jobs in *Construction* in the El Paso area. As noted in Table 3.1-1, expenditures of over $3.3 billion in housing and infrastructure are projected to accompany the troop increase at Fort Bliss between 2009 and 2013, with almost half ($1.56 billion) to be allocated in 2009. The three growth simulations show the upward shift in construction work resulting from development at Fort Bliss, which involves more than 100 projects, more than 300 buildings and six brigade combat team complexes, each occupying over 250 acres. This represents a 300 percent growth in physical infrastructure on Fort Bliss.[59] The 2008-Baseline dips in 2009 since it accounts for military expenditures up to 2008, with no expectation of further military dollars after 2008. For the three scenarios, military-led expansion between 2008 and 2013 will help El Paso's economy grow from 42 to 51 percent in personal income (**Figure 3.1-10**) and from 28 to 37 percent in gross regional product (**Figure 3.1-11**).

[59] Major General Howard Bromberg, post commander, El Paso Times. September 27, 2008.

Figure 3.1-9. El Paso County Construction Employment



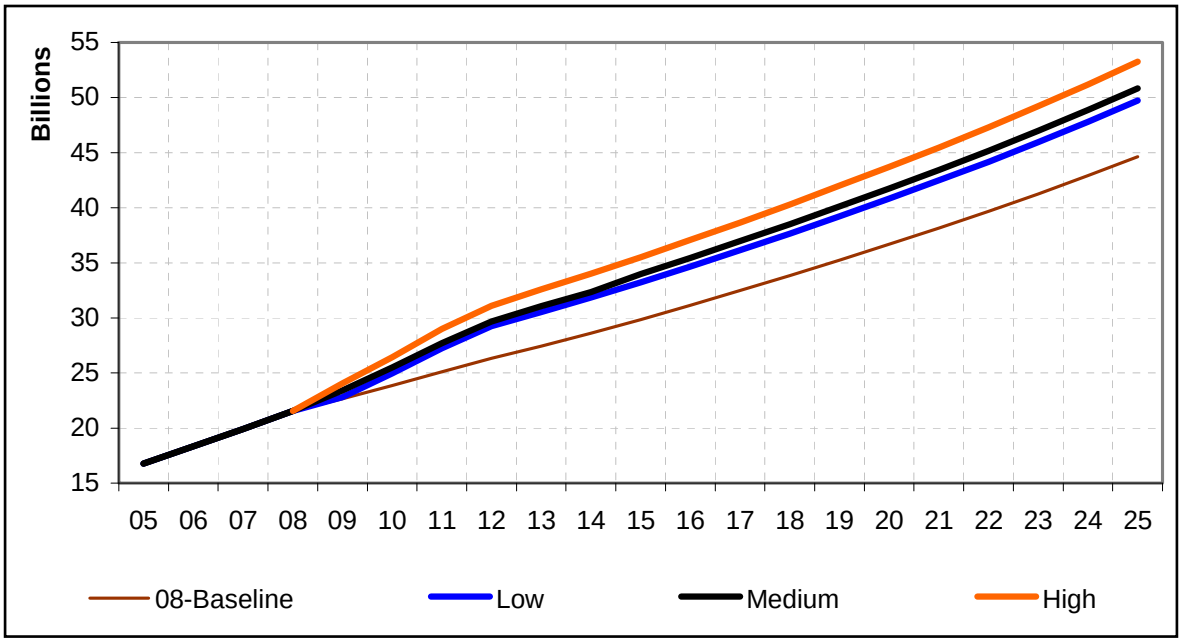
The anticipated growth of population and employment in El Paso (led by the military expansion) will translate to an increase in personal income. For the low, medium, and high scenarios, personal income is forecasted to increase more than 35 percent between 2008 and 2012 (**Table 3.1-10**). This implies more than $2.9 billion of additional personal income when compared to the 2008-Baseline. On average, personal income in El Paso is projected to increase nine percent per year for the first four years and five percent for the next 13 years by selecting the medium-growth simulation. By 2025, this results in a net gain of nearly $30 billion. As depicted by Figure 3.1-10, personal income differences between the 2008-Baseline and the three alternative scenarios are considerable.

Table 3.1-10. El Paso County Personal Income Forecasts

	2005-Baseline	2008-Baseline	Low	Medium	High
2008	20,595	21,560	21,560	21,560	21,560
2012	24,869	26,311	29,232	29,663	31,107
2015	28,038	29,855	33,224	33,973	35,516
2020	34,085	36,675	40,831	41,743	43,697
2025	40,947	44,633	49,724	50,821	53,253
Net 08-12	**4,274**	**4,751**	**7,672**	**8,103**	**9,547**
Net 08-25	**20,352**	**23,073**	**28,164**	**29,261**	**31,693**

Source: Institute for Policy and Economic Development
Note: All Personal Income values are in millions of nominal $

Figure 3.1-10. El Paso County Personal Income (nominal $)



Source: Institute for Policy and Economic Development, UTEP

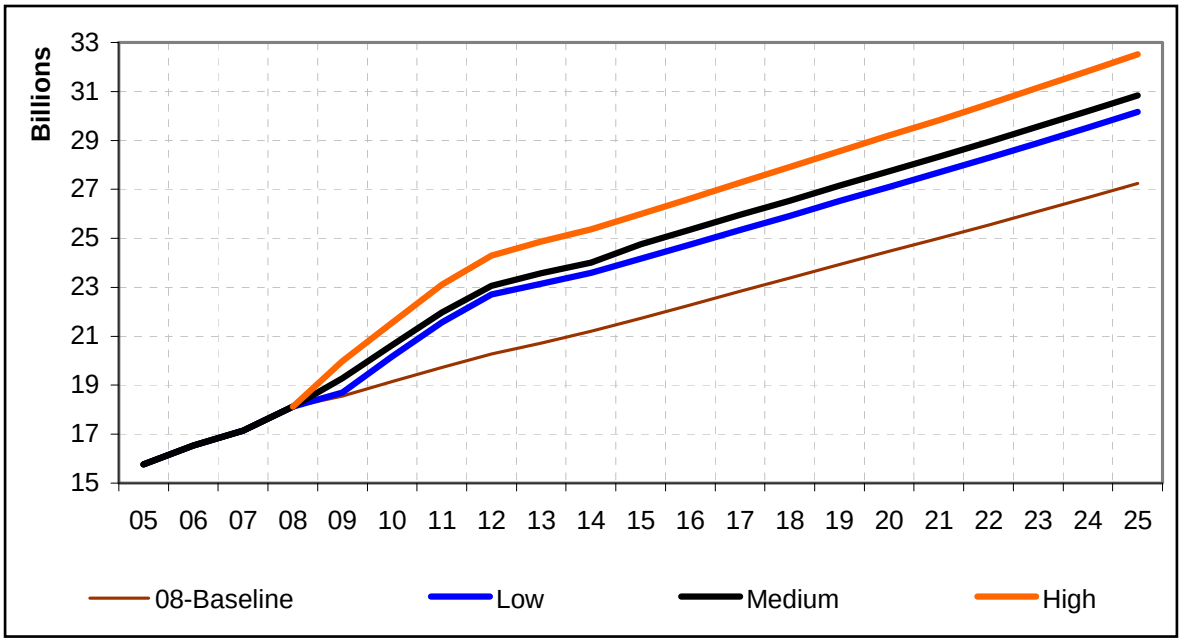
The expansion of the El Paso economy will be helped by the estimated increases in population, employment and personal income. For the three scenarios, between 2008 and 2012 gross regional product is expected to increase between $4.6 and $6.2 billion after adjusting for inflation (**Table 3.1-11**). This implies that the economy will grow between 25 to 34 percent, respectively. The low, medium and high simulations show a gross regional product range between $12 and 14.4 billion by 2025 which represents at least 32 percent more than the $9.1 billion simulated for the 2008-Baseline. Differences of gross regional product by scenario are illustrated in Figure 3.1-11.

Table 3.1-11. El Paso County Gross Regional Product Forecasts

	2005-Baseline	2008-Baseline	Low	Medium	High
2008	17,139	18,120	18,120	18,120	18,120
2012	18,749	20,274	22,708	23,058	24,302
2015	19,917	21,737	24,163	24,760	25,996
2020	22,004	24,465	27,102	27,742	29,197
2025	23,899	27,241	30,156	30,844	32,516
Net 08-12	**1,610**	**2,154**	**4,588**	**4,938**	**6,182**
Net 08-25	**6,760**	**9,121**	**12,036**	**12,724**	**14,396**

Source: Institute for Policy and Economic Development
Note: All Gross Regional Product values are in millions (chained 2000 $)

Figure 3.1-11. El Paso County Gross Regional Product (2000 $ adjusted for inflation)



Source: Institute for Policy and Economic Development, UTEP

3.1.2 Labor and Workforce

Military realignment to El Paso creates an urgent need to develop strategies to build and enhance the region's workforce. Several studies in El Paso have identified the staffing requirements of regional employers, including those resulting from Fort Bliss growth.[60, 61, 62] The top private industry sectors with identified staffing problems include: 1) *Administrative and Support*, 2) *Construction*, 3) *Manufacturing*, 4) *Professional*, 5) *Social Assistance*, and 6) *Health*. The most important skills shortages include technical backgrounds; basic skills shortages include customer service and competency in the work place.

Workforce Solutions Upper Rio Grande (WSURG), the region's primary funding source for workforce training, uses the results of these studies to target programs that train workers for occupations that provide higher wages, have high growth potential, and utilize skill sets transportable to other occupations. The top occupational categories serviced by WSURG in 2008 include: 1) *Office and Administrative*, 2) *Healthcare Support*, 3) *Healthcare Practitioners*

[60] Carlos Olmedo, et al. "City of El Paso Business Survey: Growth, Opportunities, and Obstacles," IPED, Technical Report 2008-09. December 2008

[61] Carlos Olmedo, et al. "Base Realignment and Closure Impact on Industry in El Paso, TX and Doña Ana, NM – Workforce Growth, Training Needs and Access to Federal Government Contracts," IPED, Technical Report 2008-01. December 2007.

[62] Mathew McElroy, et al. *Upper Rio Grande Workforce Development Board Industry Cluster Analysis*. IPED and the Center for Regional Economic Competitiveness, IPED Technical Report 2006-03. January 2006.

and Technical, 4) *Installation, Maintenance and Repair*, and 5) *Transportation and Material Moving*.[63]

WSURG developed a list of the top 50 occupations projected to deliver the highest subsistence wage levels, projected growth and transferable skills sets (i.e. WSURG-type criteria) (**Table 3.1-12**) Notable results follow:

- *Education and training* are forecast to have the greatest job gains with high demand for teachers and teacher assistants at all school levels (pre-, elementary, middle, and secondary).
- *Office and administrative support* rank second in future job growth. This occupational category includes customer service, "soft" marketing, and office clerical, which have been identified by private employers as skill shortages among the area's current workforce.[64]
- *Healthcare practitioner* and *healthcare support* occupations (the third and fourth largest jobs gainers, respectively) include key fields such as registered and licensed vocational nurses and various health aides and assistants.
- *Personal care and service* occupations also show high growth. WSURG provides training funds for these occupations.
- Three construction trades occupations – carpenters, electricians, and plumbers – are among the top 50 occupations. Shortages in these trades have been identified as a barrier in construction projects where qualified tradespersons are in high demand.[65]

[63] Interview with Cynthia M. Martinez, Interim Compliance Manager, Upper Rio Grande Workforce Solutions, Open Records Request. December 2008.
[64] Olmedo et al., Technical Reports 2008-01 and 2008-09
[65] Carlos Olmedo et al., TR 2008-01.

Table 3.1-12. Top 50 Occupations (El Paso County)

SOC Code	Occupation Title	Mean Annual Wage (2007 $)	2008 Employment	Employment Growth		
				2008-2013	2008-2018	% Change 2008-2018
11-9032	Education Admin., Elementary and Secondary School	74,838	668	112	176	26.3
11-9021	Construction Managers	52,261	482	64	80	16.6
11-9111	Medical and Health Service Managers	72,030	361	72	114	31.6
13-2011	Accountants and Auditors	50,794	1,366	266	364	26.6
15-1021	Computer Programmers	44,262	584	142	203	34.8
15-1041	Computer Support Specialists	40,373	999	232	336	33.6
15-1051	Computer Support Analysts	65,749	1,133	263	373	32.9
15-1071	Network and Computer Systems Administrators	50,398	374	85	120	32.1
15-1081	Networks Systems and Data Communications Analysts	61,630	540	123	173	32.0
21-1012	Educational, Vocational, and School Counselors	53,789	815	146	238	29.2
21-1021	Child, Family, and School Social Workers	33,259	329	57	92	28.0
21-1093	Social and Human Service Assistants	24,523	479	98	160	33.4
23-2011	Paralegals and Legal Assistants	41,787	333	84	109	32.7
25-1123	English Language and Literature Teachers, Postsecondary	53,530	333	79	127	38.1
25-1194	Vocational Education Teachers, Postsecondary	41,662	883	210	337	38.2
25-2011	Preschool Teachers, Excluding Special Education	26,790	603	129	211	35.0
25-2012	Kindergarten Teachers, Excluding Special Education	44,740	603	129	211	35.0
25-2021	Elementary School Teachers, Excluding Special Education	45,990	5,528	898	1,430	25.9
25-2022	Middle School Teachers, Excluding Special and Vocational Education	45,560	2,713	441	702	25.9
25-2031	Secondary School Teachers, Excluding Special and Vocational Education	47,300	3,458	557	889	25.7
25-2032	Vocational Education Teachers, Secondary School	48,290	440	71	113	25.7
25-2041	Special Education Teachers, Pre-K, Kindergarten, and Elementary	43,080	450	72	116	25.8
25-9041	Teacher Assistants	20,830	2,315	363	579	25.0
29-1051	Pharmacists	100,922	343	68	95	27.7
29-1111	Registered Nurses	53,310	3,981	779	1,226	30.8
29-1123	Physical Therapists	86,965	238	47	77	32.4
29-1127	Speech-Language Pathologists	70,990	341	71	118	34.6
29-2041	Emergency Medical Technicians and Paramedics	26,686	308	55	93	30.2

Table 3.1-12. Top 50 Occupations (El Paso County) *(Continued)*

SOC Code	Occupation Title	Mean Annual Wage (2007 $)	2008 Employment	Employment Growth		
				2008-2013	2008-2018	% Change 2008-2018
29-2052	Pharmacy Technicians	24,274	875	154	233	26.6
29-2061	Licensed Practical and Licensed Vocational Nurses	40,019	1,300	252	400	30.8
31-1011	Home Health Aides	16,307	1,623	429	739	45.5
31-1012	Nursing Aides, Orderlies, and Attendants	18,678	2,563	515	839	32.7
31-9091	Dental Assistants	26,229	385	92	153	39.7
31-9092	Medical Assistants	19,718	874	209	348	39.8
39-5012	Hairdressers, Hairstylists, and Cosmetologists	16,702	703	121	153	21.8
39-9011	Child Care Workers	14,976	943	125	216	22.9
39-9021	Personal and Home Care Aides	13,395	4,314	880	1,539	35.7
43-3031	Bookkeeping, Accounting, and Auditing Clerks	27,123	3,508	353	442	12.6
43-4051	Customer Service Representatives	23,941	3,959	437	586	14.8
43-6011	Executive Secretaries and Administrative Assistants	33,363	2,821	255	318	11.3
43-6014	Secretaries, Excluding Legal, Medical, and Executive	23,546	5,866	534	643	11.0
43-9061	Office Clerks, General	19,490	5,494	453	549	10.0
47-2031	Carpenters	25,792	1,067	129	157	14.7
47-2111	Electricians	33,654	677	74	90	13.3
47-2152	Plumbers, Pipefitters, and Steamfitters	31,429	731	84	101	13.8
49-3023	Automotive Service Technicians and Mechanics	29,058	1,512	204	286	18.9
49-9042	Maintenance and Repair Workers, General	22,818	2,880	421	552	19.2
53-3022	Bus Drivers, School	21,341	1,145	158	266	23.2
53-3032	Truck Drivers, Heavy and Tractor-Trailer	38,646	5,887	428	613	10.4
53-3033	Truck Drivers, Light or Delivery Services	24,378	1,945	141	202	10.4

Source: Medium Growth Simulations from IPED and employment/wages baseline from Labor Market Information, Texas Workforce Commission.
Note: SOC codes highlighted in grey denote occupations also in the Targeted Occupations List currently used by WSURG.

3.1.3 Supplier Opportunities from Fort Bliss Operations

A critical, and often unmet, component of economic development in military growth communities is step-by-step guidance to small and minority businesses on how to navigate the procurement process and take advantage of product and service opportunities. Large firms, not always local ones, often have the bid-and-proposal staff to research and bid on such

opportunities, and they are well-attuned to the procurement system and how it operates. The knowledge of opportunities and the contracting process are critical to success in procuring federal government work. The following subsections describe these components.

3.1.3.1 Purchasing Opportunity

The Federal Government purchases goods and services from hundreds of different physical locations across the nation. Purchases for goods and services can come from a local military base, a regionally based or subject matter oriented organization purchasing a specific item for a specific base, a commodity purchase service or government wide and delivered locally and/or a thing or service purchased elsewhere but provided/delivered locally. The specific type and quantity of a particular material or service determines from whom is it purchased.

3.1.3.2 Supplier Qualification Process

The Federal procurement system is extraordinarily complex. It is generally designed to provide a specifically defined material or service at the lowest price from the most qualified providers. However, the procurement process is also required, as a result of a very long list of statutes, to serve many and often conflicting social goals. Examples of these amendments to the procurement code run the gamut from restrictions on the geographic source of materials to requirements for purchases to be made from specific sized businesses located in specific geographic areas and/or owned by a specific type/variety of U.S. citizen. There are also other procurement statutes intended to make purchasing more rapid, which avoid many of these conflicting statues.

3.1.3.3 Contracting Process

The statutes and regulations covering the procurement process for the Federal government are regarded by many as quite complex. Some businesses have learned these processes, but they represent a significant barrier to those who do not understand them, thus precluding many qualified businesses (mostly small) who cannot afford the investment in this knowledge. Such barriers can have the overall effect of limiting competition.

One of the very successful ways to assist businesses located in a specific geographic area overcome this barrier to opportunity has been a “procurement fair.” Procurement fairs can be used as: a means of attracting local businesses to bid on Federal and state contracts; a teaching tool to assist local businesses in learning the very difficult, confusing and sometimes contradictory rules concerning Federal procurement, and a very good way for local businesses to meet the personnel at many levels involved in the purchase of goods and services of interest to specific businesses.

3.1.4 Ciudad Juárez Linkages

Similar to many U.S.-Mexico border regions, the economic interactions between El Paso and Ciudad Juárez are co-dependent, driving each other's business and employment opportunities.[66] The Juárez influence on El Paso's economy comes primarily from maquiladora production and retail sales. A maquiladora is a manufacturing or assembly plant that imports primarily U.S. components to produce final or intermediary goods for export to the U.S. market duty-free. Maquiladoras provide the North American market with goods such as transportation equipment, automotive parts, as well as computer, electronic and communications equipment.[67] In turn, several key industries in El Paso serve Juárez maquiladoras, such as manufacturing, transportation, warehousing, and professional services.[68] Maquiladora production is driven more by U.S. consumer demand than local economic dynamics. As such, improved national economic conditions are needed to keep this important segment of the regional economy healthy.

It is estimated that between 11 and 14 percent of El Paso's retail sales are attributable to Mexican nationals, primarily from Juárez and Chihuahua City, Mexico.[69] By 2025, the population of Ciudad Juárez is projected to grow between 1.73 [70] and 2.08 [71] million persons. The birth rate among the current population is anticipated to be the main factor influencing this growth. It is also anticipated that employment opportunities created by an expanding El Paso economic base will encourage migration into Juárez. El Paso's retail trade sector will grow to accommodate northern Mexico's increased demand for U.S. goods and services. By 2025, the West Texas, Southern New Mexico and Northern Mexico region could approach a population of 3.0 to 3.3 million persons.

The Juárez Association of Maquiladoras estimates two percent ($160 million out of $8 billion) of raw material or other inputs used in maquiladora production processes are purchased from local suppliers.[72] This represents a significant opportunity for El Paso to become a larger regional supplier.

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[66] Thomas M. Fullerton, Jr, 2001. "Specification of a Borderplex Econometric Forecasting Model," *International Regional Science Review*, Volume 24, Number 2, pp. 245-260.

[67] Carlos Olmedo, Mathew McElroy and Edward Feser 2007. "The Industry Cluster of Ciudad Juárez," Institute for Policy and Economic Development, University of Texas at El Paso, SR2007-2.

[68] Gordon H. Hanson 2001. "U.S.-Mexico Integration and Regional Economies: Evidence from Border-City Pairs," *Journal of Urban Economics*, Volume 50: pp. 259-287.

[69] Roberto A. Coronado and Keith R. Phillips, 2007. "Exported Retail Sales Along the Texas-Mexico Border," *Journal of Borderlands Studies*, Volume 22, Number 1: pp. 19-38.

[70] Consejo Nacional de Población, Mexico. Proyecciones de la población de México 2005-2050: Población total de los municipios a mitad de año, 2005-2030, www.conapo.gob.mx. Accessed April 22, 2009.

[71] Thomas M. Fullerton, Jr. and Angel L. Molina 2009. "Borderplex Long-Term Economic Trends to 2028," UTEP Border Region Modeling Project, Business Report SR09-1, March 2009.

[72] Carlos Olmedo et al. 2008. "Cd. Juárez Manufacturing and El Paso Industry Linkages," IPED, Technical Report 2008-04. May 2008.

3.1.5 Recommendations

- The City of El Paso and its business interests need to inform national media outlets about the coming business expansion in the region, promoting employment and business opportunities to come. Economic impact projections for employment, income, and business volume are significant even under a conservative (low-growth) scenario.
- Local government units must aggressively seek state/federal funding to foster and support workforce development in the region. Funds from the federal government stimulus program offer some significant opportunities.
- Local government and private sector organizations can develop a partnership to train the thousands of workers expected during the next few years. The goals of this partnership would be to identify training needed to qualify workers to fill expected employment opportunities; match needed skills development with the capabilities of local training organizations; and work with state legislators and federal government agencies to identify sources of training funds. The partnership should also seek exception allowing the regional Workforce Board to expend funds on training workers for jobs not yet created (often a challenge with federal funds).
- Local government must develop efficient licensing/permit/inspection procedures to facilitate the upcoming housing and commercial construction boom. The city should consider adding personnel to help speed the current system or engage an experienced firm to provide trained personnel on a temporary basis to assist in all phases of the process and to make recommendations to increase efficiency.
- With a large military and civilian construction activity projected in the near-term, a "Hire El Paso" policy is needed to retain within the region as much economic benefit as feasible. Local government and other public/private sector leaders need to promote contract awards to qualified general contractors and subcontractors in the region.
- Many construction firms, as well as local trade organizations (such as the El Paso Electricians Joint Apprenticeship Training Committee), cite a shortage of qualified labor in El Paso due to higher wages available elsewhere. This is a critical barrier in construction where qualified tradesmen are in high demand. Multiple recommendations from focus groups include:[73]
  - Support collaborations with businesses to expand internship programs for students. Establishing a strong employer-student relationship early and offering retention incentives when students graduate can help keep trained workers in the region.
  - Increase the pool of available tradesman by promoting trade occupations as viable career options. Work with area school districts to inform students of opportunities in the construction trades and incentives offered by apprenticeship programs.

[73] Carlos Olmedo et al. 2008. IPED Technical Report 2008-04.

Expand apprenticeship programs within the region. Limited funding is often a problem for area apprenticeship programs, and many candidates are wait-listed. Securing additional funding would help organizations expand the number of apprenticeship programs available regionally and graduate larger numbers into the workforce.

- Multiple recommendations from REDCO, the area's industry recruitment entity, anticipate opportunities arising from Fort Bliss expansion to include opportunities for high tech jobs. For example:[74]
  - Mechanics, avionics technicians will be important for the maintenance and reset of military vehicles accompanying brigades moving into El Paso. Programs are needed to train mechanics to work with military vehicles.
  - Technical needs for the Army's modernizing force and equipment will require highly skilled people (particularly software engineers, telecommunication experts) to integrate legacy systems and new systems.
  - Engineering technicians (i.e., construction testing technicians) are in great shortage. There are no training programs in El Paso for these types of occupations, but an engineering technician program would be feasible to create.
- To make contracting opportunities available to small and minority businesses will require special effort. This has been done with great success in other BRAC-impacted areas, communities and states. Procurement Fairs, well advertised with effective outreach, have been most effective. Experience with other communities shows that the level of knowledge of the contracting system is low, and that a "how to" manual approach is the best way to educate local businesses and improve successful access to work opportunities; an ongoing locally-driven, federally-supported training program (expanding on existing efforts) is needed to train and assist regional businesses in preparation for bidding, winning, and implementing federal contracts. This is an additional part of the El Paso "grow your own" approach.
- El Paso should also consider a long-term, locally-driven, federally-supported program to increase the technical content (and thereby increase the value) of the goods and services created and provided by El Paso and Ciudad Juárez businesses. Use of low- and no-cost federal technology, equipment and expertise through partnership intermediaries can result in long-term benefits. El Paso could establish a cooperative relationship with the newly created Maneuver Battle Laboratory at Fort Benning. Fort Bliss can give the El Paso region a key advantage competing with other regions nationally. Battle Laboratories have authority to enter into technology transfer agreements not otherwise available at Fort Bliss. This approach can lead to multiple benefits including increased sales and profits for local businesses and higher wages for El Paso technical workers.

[74] Interview with Bob Cook, President, REDCO. November 2007.

- The city, regional governments, and business interests should consider creating a regional recruiting engine. Considering the potential need to add over 100,000 to the workforce over the study period, a joint effort to recruit nationally for those jobs in most demand is critical. A regional recruiting engine might also provide information, applications, and assistance for potential employees who need financial assistance to train or retrain for a job in El Paso. Last, this engine should actively recruit in the most needed categories throughout the nation. In this way, local employers, some of whom are already facing critical shortages (e.g., health care and social services) could combine recruiting efforts, supplemented by local, state and federal assistance, to make recruiting more cost effective.
- El Paso is largely a bilingual city. Newly arriving military personnel and dependents, for the most part, will not speak Spanish. In order to qualify in the local job market, understanding basic Spanish may be a prerequisite for many jobs. El Paso should consider options, both government-funded or through volunteer programs, for implementing a large-scale bilingual language program (both Spanish to English and English to Spanish) for residents.

Table 3.1-13 lists recommended actions from the Action Plan (Appendix G) for Economic Growth and Development. The table names the action, lists the entity or entities responsible for implementation, the timing and rationale for action, estimated available resources, possible funding sources, and implementation indicators.

Table 3.1-13. Action Plan Recommendations for Economic Growth and Development

Recommended Action	Responsible Entity/ Regional Ops	Timing/ (Rationale)	Estimated Resources	Funding Source(s)/ Implementation Strategies	Implementation Indicator
1. Create a cooperative training and recruiting engine as a means to fill upcoming jobs • Indentify training needs for specific jobs coming to El Paso • Identify curricula that meets needs of create them • Identify schools that can train and share capabilities • Fund and use a central organization, perhaps REDCO, to act as a recruiting center • Include distance learning to allow incoming personnel to prepare for jobs before arriving • Create a city based web page that points to individual jobs, training funds, and training providers	- City of El Paso (Lead) - Regional Work Force Board -Texas and New Mexico Universities - El Paso Community Colleges - El Paso Regional High Schools - Fort Bliss	1 year (By 2025, El Paso will gain over 50,000 new jobs and another 50,000 jobs by 2025)	$750,000	http://www.doleta.gov/neg/disaster.cfm http://www.oea.gov http://caa.milspouse.org/ http://www.soc.aascu.org/socad/ http://www.aerhq.org/education_spouse_education_StateSide.asp http://www.gibill.va.gov/ http://www.tvc.state.tx.us/StateBenefits.html http://www.ed.gov/fund/grant/apply/grantapps/index.html https://www.goarmyed.com/public/public_tuition_assistance_policies.aspx Note: Military spouses now have priority in hiring for federal jobs	Application within 3 months Plan within 6 months thereafter
2. Create a public/private organization to assist in BRAC expansion coordination and promote awareness using this citywide organization • Provide city based staff support for coordinator	- City of El Paso Mayor (co-lead) - City Council (co-lead) - Regional Businesses - Regional Charitable and Civic Organizations - Fort Bliss County Governments	6 months (The task is large and requires many contributors)	$100,000 yearly in organizational and support costs	http://www.oea.gov	Receive OEA Grant
3. Create a new position of BRAC process	- City of El Paso	6 months	$450,000 per	http://www.oea.gov	City formally

Table 3.1-13. Action Plan Recommendations for Economic Growth and Development *(Continued)*

Recommended Action	Responsible Entity/ Regional Ops	Timing/ (Rationale)	Estimated Resources	Funding Source(s)/ Implementation Strategies	Implementation Indicator
coordinator and grant writers. This position supports the organization in Item 2 and provides support for a number of activities listed below.	(lead)	(Coordination, information flow and leadership are essential)	year (4 Full Time employees: 1 coordinator, 1 assistant, and 2 grant writers)		creates organization Receive OEA grant to establish these positions
4. Create automatic transferability state licensing for qualified out of state workers for barbers, etc., for short period	- City of El Paso (lead) - City of San Antonio - City of Killeen - The three El Paso Chambers of Commerce -Texas Military Preparedness Commission	6 months (Current process is cumbersome and time consuming)	Low	Internal city funds This will be a legislative effort where the City of El Paso should take the lead	Regulatory relief followed by legislation
5. Increase the technology content of the El Paso Workforce (15 USC 3715) • Utilize a partnership intermediary form	- City of El Paso (lead) - Universities with support from REDCO and the El Pas Chambers of Commerce	1 year (Long-term plan to create higher valued products that in turn create higher wage jobs)	$50,000 to start $500,000 for yearly operation	http://www.oea.gov http://www.techlinkcenter.org/cgi-bin/techlink/index.html http://www.hud.gov/offices/cpd/communitydevelopment/programs/steadmin/ http://www.eda.gov/AboutEDA/Programs.xml	Create organization May link Fort Bliss Maneuver Battle Lab with Columbus State University and UTEP
6. Provide small and minority businesses access to contracting opportunities	- City of El Paso (lead) - State Delegation Congressional	6 months for planning fair 1 year for holding fair	$35,000 Planning $30,000 Action	http://www.sba.gov/services/financialassistance/index.html http://www.nbia.org/, See plan outline in Appendix http://www.acq.osd.mil/osbp/doing_	Hold procurement fairs

Table 3.1-13. Action Plan Recommendations for Economic Growth and Development *(Continued)*

Recommended Action	Responsible Entity/ Regional Ops	Timing/ (Rationale)	Estimated Resources	Funding Source(s)/ Implementation Strategies	Implementation Indicator
	- Chambers of Commerce -REDCO - Fort Bliss - Paso del Norte	(Extending access to lower economic strata is vital to area's prosperity)	Yearly	business http://www.acq.osd.mil/osbp/doing_business/subdir-2005-11.pdf http://siadapp.dmdc.osd.mil/procurement/historical_reports/statistics/procstat.html http://sellingtoarmy.com/ http://www.aafes.com/pa/selling/ http://www.dla.mil/db/procurem.htm http://www.aca.army.mil/index.htm http://www.fedbizopps.gov http://www.sba.gov/contractingopportunities/owners/index.html, page 78 Congressional offices and agencies will provide travel and personnel costs and some operational and communication costs. Expense will consist of organizational advertising	
7. Develop a plan for day care and after school programs • Expect assistance from staff in Items 2 and 3 of 3.1	- YWCA share lead with - City of El Paso - Paso del Norte Group - Workforce Board may be the fiscal agent	6 months (By 2012, 10,00 new children age 4 and under; 100,000 by 2025 – major city wide problem)	$250,000	http://www.oea.gov http://www.childcare.gov/ http://www.childcare.gov/xhtml/links/g_43/t_4723.html http://www.childcare.gov/xhtml/links/g_4/t_47.html http://www.acf.hhs.gov/programs/ccb/providers/index.htm http://www.afterschool.gov/ http://nccic.acf.hhs.gov/ http://www.acf.hhs.gov/programs/ccb/law/allocations/current/state2009/2009_arra.htm	Plan created

3.2 Land Use

3.2.1 Introduction and Methodology

This section describes the current land use patterns established within the region and examines existing plans, policies and programs that act to shape future growth and development of the region. This section addresses the allocation of land resources based on projected supply and demand for various land uses. It considers how subdivision regulations and annexation (expansion) of the urban area are key aspects of managing growth in accord with El Paso's goals for its future. With the objective of fostering mutual long-term compatibility, the section also addresses the interaction between military functions on Fort Bliss and the surrounding areas.

The Land Use assessment is based on a review of land use plans, existing development regulations and anticipated changes, past and ongoing land use studies, and interviews with public officials and members of the development community. Newly platted subdivisions, subdivisions in progress and approved land studies were examined to determine development trends and infrastructure capacity.

Using population and employment projections derived from the REMI model, future land use patterns for the City of El Paso and its Extraterritorial Jurisdictions (ETJs) have been projected. Prepared in consultation with the El Paso Development Services Department staff, the 2020 Projected Growth Area Map, Plate 2, is based on their knowledge of local development trends within the region.

The following are key findings of this assessment:

- The City of El Paso and the region, with proper planning, is well positioned to accommodate the anticipated growth resulting from the troop buildup and expansion of Fort Bliss and other regional growth.
- Wherever possible, El Paso has programmed new development to occur within proximity to existing or planned utility and transportation systems to minimize requirements for new infrastructure.
- The loss of employment in traditional manufacturing may provide an opportunity to redevelop former industrial sites that become vacant.
- Fort Bliss expansion plans include the construction of several new gate access points from Loop 375, which will influence new growth in the east and northeast planning areas of El Paso.
- Land use changes along the Northeast Parkway corridor should take place in consideration of the military activities that take place on the Doña Ana Training Ranges of Fort Bliss.
- New development designed to accommodate the housing needs of the military soldier and families will necessarily be more compact with higher density development concentrated

near transportation corridors. This land use pattern will require less infrastructure for its support and result in more efficient, sustainable development.

3.2.2 Existing Conditions

The City of El Paso has a long history of planning, but the degree of land use planning within the region varies widely. The city's current comprehensive plan, *The Plan for El Paso* was adopted in 1999 and establishes long range general policies for guiding growth and development of the community through 2025. The general plan has been amended several times through incorporation of plans for specific areas. The city has also adopted a full complement of regulatory tools used to implement the plans objectives. The City of Socorro is presently in the process of updating its 1989 Comprehensive Master Plan and has adopted zoning and subdivision regulations. El Paso County established a Community Development Department in 1999 with the goal of improving the quality of life within the unincorporated areas of the county. The department administers a number of federal and state grant programs that fund housing and infrastructure improvements for low-income residents of the county. The county has adopted subdivision regulations but currently does not have a Comprehensive Plan or land use regulations.

In New Mexico, Doña Ana County is in the process of updating its 1994 Comprehensive Plan through a cooperative effort with the City of Las Cruces. The county has implemented both subdivision and zoning regulations covering the unincorporated portions of the county. Aside from El Paso, Sunland Park is the only incorporated community within a 20-mile radius of Fort Bliss. Sunland Park adopted a master plan for the community in 2004 and has since adopted both zoning and subdivision ordinances and a development code. Chaparral, a census-designated place located on the north side of the Texas-New Mexico border, is adjacent to the Doña Ana Range (and training areas) of Fort Bliss. Land development in Chaparral is subject to zoning and land development regulations for Doña Ana County. According to the 2000 Census, Chaparral had a population of 6,117. It has little employment and is primarily a bedroom community for El Paso, Fort Bliss, and White Sands Missile Range.

The Plan for El Paso serves as the city's Comprehensive Plan. The Plan identifies a series of citywide goals, policies and actions related to the development of its Residential, Office-Commercial, Industrial, and Open Space Land Uses. The Plan divides the city into five geographic planning areas: Northeast, West, Central, East, and Lower Valley (see Figure 2.2-5). More specific land use concepts and policies are identified for each of the five planning areas. Within the planning areas, detailed Neighborhood Study Areas are identified and policy recommendations specific to the needs of the neighborhood are proffered. Since its adoption, additional specific study area plans have been completed and these studies have been approved as amendments to the Plan. The City of El Paso is in the process of initiating a planning process to update the 1999 Comprehensive Plan.[75]

[75] *The Plan for El Paso.* Mayor and City Council of El Paso. El Paso, Texas. April 1999.

The city has recently adopted a major rewrite of its subdivision regulations and enacted amendments to its Municipal Code to enable Smart Growth principles into new developments. Such principles would permit increases in density while allowing alternative design standards for infrastructure improvements.

Land Use Trends

As of 2008, El Paso encompasses approximately 160,576 acres with an estimated population of 627,000. Much of the new growth is occurring in the Northwest planning area along the I-10 corridor and foothills of the Franklin Mountains. Homes in this area are generally more expensive, often featuring custom built homes on view lots. City records indicate that there are 43 new subdivisions in the West/Central area, with 1,938 lots under development. More recently, an increase in development activity has occurred in the Northeast planning area where 24 new subdivisions are under construction with a combined total of 2,744 lots. In the East planning area, 30 new subdivisions are being platted with 3,603 lots planned for development. In the Lower Valley Area, there are five new subdivisions planned with 48 new lots. Lots in the northeast and east tend to be more moderately priced, reflecting the lower cost of construction on the flat valley floor. Citywide, there are currently 8,333 lots under development. Since 2000, El Paso has issued an average of 3,115 single family building permits a year (**Table 3.2-1**).[76] There is no noticeable trend in single family permits.

Table 3.2-1. Building Permits for Single Family Dwellings 2000-2007

Year	Single Family Permits
2000	2,649
2001	3,051
2002	2,960
2003	3,451
2004	3,439
2005	3,279
2006	3,126
2007	2,966
Average	**3,115**

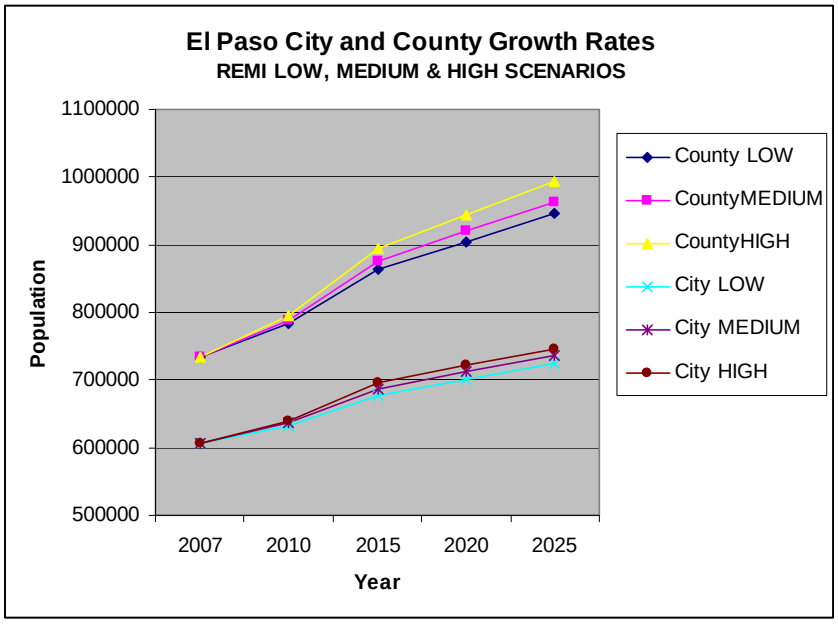
[76] El Paso Development Services Department Records. May 2008.

3.2.3 Future Land Use

Much of the growth impact from the current Fort Bliss expansion will occur between now and 2015. This section of the RGMP examines future land use development to the year 2020 within the City of El Paso and its Extraterritorial Jurisdiction. The *Plan for El Paso* projected that by the year 2025, the county population would exceed one million inhabitants with the City of El Paso accommodating over 919,000 residents.[77] The REMI population forecast model discussed in Section 3.1 projected a slightly lower rate of growth to 2025.

Figure 3.2-1 shows the projected growth for both the County and the City of El Paso. The chart indicates that the county population will continue to grow at a somewhat faster rate then the city. The City of El Paso is projected to grow at a rate of two percent per year through 2015 and then one percent per year thereafter. Under the MGS, the population of the city will increase by approximately 105,000 residents between 2007 and 2020, the horizon year for this RGMP.

Figure 3.2-1. Projected Growth Rates



To calculate the residential land area requirements for new growth, the RGMP used the same density assumptions contained in *The Plan for El Paso* and carried forward in the more recent *Annexation Assessment and Strategy*.[78] These density assumptions are reflected in **Table 3.2-2** below.

[77] *The Plan for El Paso*. April 1999.
[78] *City of El Paso Annexation Assessment and Strategy*. Halff Associates. September 29, 2008

Table 3.2-2. Residential Density Assumptions

Residential Land Use Type	Dwelling Units per Acre	Building Type	Development Characteristics	Projected % of Total Residential Land Uses
Low Density	2.0	Single Family	Detached Dwelling	34.5
Medium Density	4.5	Single Family	Attached single family dwellings, duplexes and townhouses	31.9
Medium/High Density	6.0	Single Family Multifamily	Duplexes and townhouses, condominiums, and small apartment complexes	18.0
High Density	9.0	Multifamily	Larger complexes of townhouses, condominiums, and apartments	15.6

Source: The Plan for El Paso 1999.

The Average Gross Residential Density (AGRD) for the city may be determined by calculating the number of dwelling units generated by each land use type proportioned over 100 acres. AGRD for El Paso is 4.61 dwelling units per acre (**Table 3.2-3)**. Gross density includes land area requirements for streets, parks, and other open space. Although the average household size varies significantly by Transportation Analysis Zone (TAZ) for the purpose of this land use analysis, an average household size of 3.01 persons is used, which is consistent with the *Annexation Assessment and Strategy*.

Table 3.2-3. Calculation of Number of Dwelling Units (DUs) over 100 Acres

Residential Land Use Type	Average DUs/Acre	Land Area Allocation	Total No. of DUs
Low Density	2.0	34.5 acres	69
Medium Density	4.5	314.9 acres	144
Medium High Density	6.0	18.0 acres	108
High Density	9.0	15.6 acres	140
Total Number of DUs per 100 acres of Residential Development			4.61

In **Table 3.2-4** the AGRD, 4.61 dwelling units per acre, and average household size of 3.01 persons per household are used to estimate future land area requirements based on the population forecasts for the LGS, MGS, and HGS.

Where residential development occurs is dependent on the availability of the infrastructure needed for its support. Recently approved subdivision plats and subdivisions in the process of approval were identified to accommodate much of the short-term growth. Plans for future transportation improvements and utility extensions were also examined. Wherever possible, new development was programmed to occur within proximity to existing or planned utility and transportation systems to minimize requirements for new infrastructure. On this basis the

population estimates for El Paso County were allocated to TAZs by the El Paso Development Services Department and used in this assessment to analyze future residential land use patterns.

Table 3.2-4. Future Residential Land Area Requirements

Forecast Population	2007	2010	2015	2020
Low	606,913	632,881	676,161	700,532
Medium	606,913	636,904	686,888	711,857
High	606,913	640,177	695,618	721,125
New Households	**2007-2010**	**2010-2015**	**2015-2020**	**2007-2020**
Low	8,627	14,379	8,097	31,103
Medium	9,964	16,606	8,295	34,865
High	11,051	18,419	8,474	37,944
Residential Land Area Requirements (Acres)	**2007-2010**	**2010-2015**	**2015-2020**	**2007-2020**
Low	1,871	3,119	1,756	6,747
Medium	2,161	3,602	1,799	7,563
High	2,397	3,995	1,838	8,231

Non-residential land use requirements can be anticipated based on employment projections from the REMI forecast model. **Table 3.2-5** calculates the additional land area requirements for employment-based land uses. The REMI employment forecast for 2007 and 2020 using the MGS[79] has been adjusted to only include employment identified by the TAZ database as occurring within the City of El Paso. Industry planning standards for gross building-area-per-employee and floor area ratios (FAR) to determine site requirements were used to calculate the gross acres required to support the increase in industrial, retail and office employment.

Based on the projected TAZ employment within the City of El Paso, an additional 927 acres of office development and 191 acres of retail commercial is projected by 2020 for the MGS. The REMI model predicted a decline in the manufacturing sector, which is reflected by a negative number for the land area requirement for industrial uses. The loss of employment in traditional manufacturing may provide an opportunity to redevelop former industrial sites that become vacant. These sites, often referred to as Brownfields, present opportunities for mixed-use development projects providing needed housing and retail markets near the urban core of the city.

Table 3.2-6 provides a comparison of the land use projections from *The Plan for El Paso* and the RGMP projections based upon the REMI population and employment forecast using the MGS. The assessment of future land use finds that by 2020, under the MGS, El Paso will use 7,500 acres for residential development, about 900 acres for offices, and about 190 acres for commercial use.

[79] Employment forecasts for the City of El Paso were not disaggregated from the REMI forecasts for the Low and High growth scenarios

Table 3.2-5. Employment Based Land Use Needs - Medium Growth Scenario

Employment/ Land Use Category	Employee Share (%)	FAR	Gross Sq. Ft. Per Employee	Gross Sq. Ft. Per Net Acre	Employees Per Net Acre	2007 Employment	Projected Employment 2020	In-Place Employee %	In-Place Employees 2020	Acres Needed 2020	Gross Acre Adjustment Factor (%)	Gross Acres Needed
Industrial												
Construction	31.75	0.1900	288	8,276	28.73	21,233	22,565	25.00	333	11.59	20.00	14.49
Manufacturing	23.33	0.2300	609	10,019	16.44	20,928	16,579	100.00	(4,348)	(264.51)	20.00	(330.63)
TCU[1]	29.78	0.1900	277	8,276	29.88	21,880	21,165	100.00	(715)	(23.93)	20.00	(29.91)
Wholesale Trade	15.14	0.2600	698	11,326	16.22	11,168	10,760	100.00	(408)	(25.13)	20.00	(31.41)
Subtotal Industrial	100.00	0.2099	422	9,145	21.66	75,209	71,069	-7.23	(5,138)	11.59	20.00	14.49
Retail Trade												
Neighborhood	40.00	0.2300	632	10,019	15.86	16,019	16,899	100.00	880	55.45	35.00	85.31
Community	30.00	0.2300	671	10,019	14.93	12,014	12,674	100.00	660	44.19	30.00	63.13
Regional	20.00	0.3400	716	14,810	20.69	8,010	8,449	100.00	440	21.26	25.00	28.34
Super Regional	10.00	0.3400	767	14,810	19.31	4,005	4,225	100.00	220	11.39	20.00	14.23
Subtotal Retail Trade	100.00	0.2630	671	11,201	319.36	40,048	42,247	5.21	2,200	132.29	30.75	191.01
Office[2]												
General Office	65.00	0.2500	350	10,890	31.08	130,831	153,078	80.00	17,798	572.73	20.00	715.92
Office Park	25.00	0.4200	350	18,295	52.21	50,320	58,876	80.00	6,845	131.12	25.00	174.83
Suburban Multilevel	10.00	0.8400	336	36,590	108.86	20,128	23,550	80.00	2,738	25.15	30.00	35.93
Subtotal Office	100.00	0.3515	349	13,109	323.05	201,279	235,504	11.63	27,381	729.00	21.33	926.68
Grand Total												1132.18

Source: Adapted from Nelson, Arthur C. 2004. *Planners Estimating Guide – Projecting Land-Use and Facility Needs*

Notes:

1. *Office* includes Finance, Insurance, Real Estate, Services, and Government other than military.
2. TCU = Transportation, Communications, and Utilities.

Table 3.2-6. Projected Acres by Land Use - City of El Paso

Land Use Activity	From *The Plan for El Paso*		2020 RGMP Medium Growth Scenario	
	1999	2025	2007	2020
Residential	28,560	43,874	35,644	43,152
Office/Commercial	6,168	13,344	7,024	8,417
Industrial	5,828	8,376	5,173	5,173
Other	39,158	42,197	33,747	38,309
Franklin Mountains State Park	23,744	23,944	26,149	26,149
Vacant	54,622	39,145	52,394	43,430
Total Acres	**158,080**	**170,880**	**160,131**	**164,630**
Developed (Platted) Acres	79,714	107,791	81,589	95,051

3.2.4 Development Issues Related to Military Growth

A symbiotic relationship exists between Fort Bliss and the community of El Paso. What one does affects the other, often (but not always) in a beneficial way. Military installations attract a variety of commercial, industrial, and residential land use activities that benefit from close access to the military operations. At the same time, military installations that include airfields, training ranges and testing grounds, by their nature, generate noise and present a potential for accidents to occur. When development, particularly residential development, occurs too close to the installation, it can be a cause for anxiety for the residents and impede the operation of the installation. Section 3.4 provides an in-depth discussion of military compatibility issues.

Fort Bliss expansion plans include the construction of several new gate access points from Loop 375, which will influence new growth in the East and Northeast planning areas of El Paso. Much of the new residential development will occur east of Loop 375 and south of Montana Avenue (US 62). Because of proximity to Fort Bliss these are the most convenient locations for military families residing off-post Housing in these areas is predominately single-family detached homes and represents some of the more affordable housing of its type in the El Paso market. Even so, the price of much of the housing being developed in this area is beyond the reach of the young soldiers and families who will be relocating to Fort Bliss. In addition, the length of the soldier's tour of duty at Fort Bliss will be relatively short, making the purchase of a home a less viable option.

Proposed improvements to Loop 375 between Dyer Street and US 54 and construction of Spur 601 from Fred Harvey to Loop 375 will also make access to Fort Bliss more convenient from the northeast area of El Paso and from Chaparral, New Mexico. Additionally, the Northeast Parkway is planned to link Loop 375 to I-10 around the north end of the Franklin Mountains. *The Plan for El Paso* projects the future land use along the Northeast Parkway corridor as industrial. However, the area north and east of the Parkway is projected for more residential development.[80] The City of El Paso has already approved the zoning for a residential development of over 2,000 single-family lots and nearly 700 apartment sites. As noted in Section 3.4, this area is of concern, as training missions at Fort Bliss expand and create noise beyond the boundary of the installation. Land use changes in this area should take place in consideration of the noise caused by military activities on the Doña Ana Training Ranges.

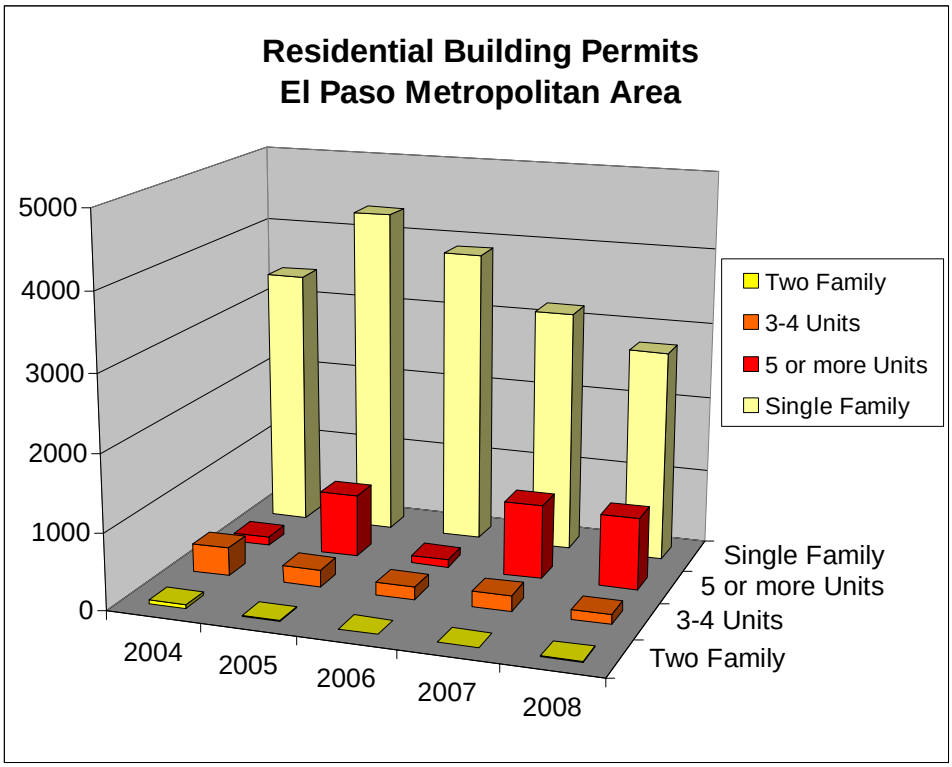
Another concern is the type and availability of housing for military soldiers and families living off the installation. The majority of soldiers and military families living off-post are most likely to rent. **Figure 3.2-2** shows the building permit history for the El Paso metropolitan area. Although permits for nearly 2,000 apartment units were issued in 2007 through 2008, the City of El Paso projects a need for the construction of 8,000 more apartment units by 2012. To meet this need, the city is exploring ways to stimulate apartment construction. However, residents of adjacent lower-density neighborhoods often oppose high-density housing, fearing that it will

[80] *The Plan for El Paso.* April 1999.

depreciate their own property values, increase traffic on local streets and increase crime in the neighborhood. Neighborhood opposition to applications for zoning map amendments that would permit construction of apartments has delayed or stopped potential projects.

This concern, combined with the current economic climate, in which access to credit for residential development becomes increasingly difficult, has led to a curtailing of multi-family residential development in the El Paso area. As of this writing, permits to construct less than 400 high-density units have been requested (versus the 8,000-unit projected need). These difficulties have stopped development of condominiums, townhouses, and single-family dwellings that will likely be necessary to house the influx of new residents to El Paso in the next few years.

Figure 3.2-2. Building Permit History for the El Paso Metropolitan Area



3.2.5 Recommendations

El Paso County

- There is an overall lack of comprehensive planning within the county to guide land use and growth. County governments in Texas have limited planning authority. El Paso County should join other Texas counties in lobbying the state legislature for the authority to adopt meaningful comprehensive plans and land use regulations that include strategies and goals for protecting the quality of life, public health and welfare, and economic assets of the county.

City of El Paso

It has been 10 years since adoption of *The Plan for El Paso*. Although the city periodically amends the comprehensive plan to incorporate specific area plans, a major update is needed to ensure that the plan is based on the most recent economic and demographic information available, addresses current growth management issues, and reflects policies needed to achieve the community's vision of the future El Paso.

- The City of El Paso should take immediate steps to update its Comprehensive Plan. The completion of the Plan will ensure that the growth created by expansion of Fort Bliss will be managed in a responsible way, reflective of public concerns and the wealth of new information available to the city from this effort and from the Fort Bliss Supplemental Programmatic Environmental Impact Statement. This approach will provide a great service to Fort Bliss as its growth concerns (including encroachment issues) would be incorporated as a part of the updated Comprehensive Plan. The update would provide the opportunity to reexamine the city's vision and goals that provide a baseline for public policy. In addition to the elements addressed in the current plan, the new or updated plan should specifically address the following key elements:
  - Fort Bliss Interface – the plan should identify the Army Compatible Use Buffer (ACUB) Plan provisions and land use strategies to protect critical interface areas with Fort Bliss (see Section 3.4).
  - Future Land Use – the future land use map should be based on realistic land use needs for the period chosen for the plan (generally 20 years). Unrealistic projections for land development lead to approval of untimely zoning applications.
  - Critical and Sensitive Areas – this element should address the protection of critical and sensitive areas such as the bosque, arroyos, areas with steep slopes, and groundwater recharge areas. Culturally or historically sensitive areas may be included as well. Identification of such critical and sensitive areas in the comprehensive plan enables the city to safeguard them through regulation, incentives, transfer of development rights, modification of development projects, or acquisition of land interests.
  - Smart Growth Element – the plan should include an element that incorporates Smart Growth principles and sustainable development practices. The plan should identify principles that will promote a sustainable future without compromising the ability of future generations to meet their needs.
  - Implementation – the plan should include an analysis of the city's implementation tool kit. The current zoning ordinance has become extraordinarily complex. It is a hybrid ordinance incorporating overlay zones, planned districts, special districts, and incentives as a means of achieving the comprehensive plan objectives.
- Subarea plans for high growth areas such as the East Side and Northeast Area Master Plan should be evaluated and possibly revised to accommodate more diverse housing

needs. Subarea plans can include design guidelines and standards for building form, landscaping, and buffering.

- Development of the Northeast Master Plan area has been delayed as no buyer has gone forward with the land purchase. Development of this area is critical to meeting the immediate housing needs related to Fort Bliss growth.
- Land use changes along the Northeast Parkway corridor should take place in consideration of the military activities that occur on the Doña Ana Training Ranges.
- The city and EPWU should explore innovative tools to establish public-private partnerships to put needed housing on the market. Such an approach might be the establishment of a Tax Increment Financing District to fund backbone infrastructure improvements necessary to development the site. With backbone infrastructure in place, EPWU could market the land in smaller parcels making it more attractive for local developers. The city might also adopt innovative ways to assist developers to reduce the size of financing by making city land available as an equity investment in the most needed types of housing and/or provide land under a long-term lease with rights to convert to a sale at a later time. These approaches will help developers to move forward with reduced financing needs while providing the city with the same or greater income while spurring housing development.
- The city has identified a need for 8,000 multi-family housing units by 2012; however, the city's zoning database does not include any parcels over five acres in size zoned for multi-family construction. Anyone desiring to construct a multi-family building needs to apply for a change in zoning. This process is time consuming, costly, and inhibits higher density development. The city should consider near-term changes to address this obstacle.
- The city should consider amending its zoning regulations that allow innovative design for apartment districts for buildings and townhouses similar to the 2015 Plan for Downtown El Paso. The district regulations should also include site design standards for landscaping and buffers.
- The city should initiate zoning map amendments to permit high-density residential and mixed-use development in appropriate locations along transportation corridors.

Doña Ana County

- The Fort Bliss expansion will exacerbate pressure for additional residential development in Chaparral on private property along War Road (NM 213) and adjacent to the Fort Bliss Training areas.
- It is recommended that the Draft Vision 2040 Plan for Doña Ana County incorporates ACUB Plan provisions and land use strategies to protect critical interface areas with Fort Bliss. In particular, the Plan should consider issues of noise compatibility and recommended land use, considering the needs of residents and Fort Bliss.

3.3 Subdivision Ordinance Analysis

3.3.1 Introduction

On May 6, 2008, the El Paso City Council approved Ordinance Number 016882, which amends Title 19 of the El Paso City Code and replaces in its entirety the city regulations governing the subdivision of land within the city and ETJ zone. The approval of this ordinance was the culmination of more than two years of effort by city staff, consultants, and technical and oversight committees.

This section includes a review of the new Subdivision Ordinance and public comments received on the draft rewrite released earlier this year. The RGMP team met with city planners and key stakeholders to gain insight into local land development issues and concerns.

The scope of the RGMP was written prior to adoption of the Title 19 amendment to include an analysis of the draft regulations. This analysis identifies changes in the park and open space regulations and their impact on the quality of life in the region. This section also addresses changes in regulations that affect the cost of development and subsequently the affordability of new housing for military families.

3.3.1.1 General Overview and Commentary

A subdivision ordinance controls the division of land for building and development purposes. It includes standards for the design and layout of lots, streets, utilities, and other public improvements. It also spells out the procedural requirements for subdividing land and the provisions necessary to ensure that needed public improvements are in place when it is time to build on the lots. The City of El Paso's subdivision ordinance is applicable to all land within its municipal jurisdiction as well as its ETJ zone.

The last major revision to Title 19 occurred in 1997. Despite being relatively new, the subdivision regulations had been amended numerous times and many of the rules and procedures contained in the regulations did not reflect actual practices.[81] Despite its length (247 pages), the revised ordinance is easier to follow with clearly defined application, review, and approval procedures. Tables have been used to supplement text; however, the ordinance could have benefited from a more extensive use of tables and graphic illustrations. If not already planned, a simple users' guide that explains basic procedures and answers frequently asked questions could be included as a supplement to the new code. The users' guide would contain flow diagrams illustrating the plat approval process for various types of plats, review time lines, meeting calendars. A well-designed users' guide would save both time and frustration for new code users by providing readily available answers and instructions. This users' guide should be added to the Development Services Department's web page along with application forms in a downloadable format.

[81] El Paso City Council Workshop Presentation, Sefko Planning Group of Freese & Nichols, Inc. April 2008.

The following is a review of the most significant changes to the subdivision regulations as identified by city staff and stakeholders.

1. **Section 19.8.1 – Subdivision Improvement Plans.** Following preliminary plat approval and prior to, or at the time of making application for final plat approval, the developer is required to submit subdivision improvement plans for approval. Under the former code, subdivision improvement plans were not required to be submitted until after final plat approval.

   Commentary: The change reflects the typical practice of approving the lot pattern and street, utility, and storm drainage layout based on preliminary engineering and then requiring construction plan approval prior to final plat approval. In fact, the Standard Planning Enabling Act would require the subdivider to install the improvements according to approved construction plans prior to recording the final plat unless the municipality agreed to accept a bond to guarantee the improvements. This change would not have a cost impact although it could affect the cash flow of a development as it was theoretically possible for a developer, under the previous ordinance,[82] to record a plat and transfer ownership of lots prior to incurring engineering costs for the design of the improvements.

2. **Section 19.8.1(c) –** Under certain circumstances the subdivider has the option of having his own engineer prepare the construction plans for water and wastewater improvements. Under the former regulations, EPWU designed all water and wastewater utility extensions and passed the cost on to the subdivider.

   Commentary: While this practice is somewhat uncommon for municipal water and wastewater systems, it is typical of private utility companies providing electricity and gas. The result of the change should reflect a development cost savings as the subdivider would be able to shop competitively for engineering work.

3. **Section 19.8.2 – Timing of Public Improvements, Permit Issuance**. This section requires that all public improvements required to serve a subdivision be constructed prior to recording the final plat. It then goes on to describe exceptions and circumstances in which building permits may be issued prior to completion of improvements and the requirements for surety guaranteeing completion of improvements. The former ordinance required a Subdivision Improvement Agreement that allowed the subdivider two years to complete the improvements after which the Planning Commission could, at its discretion, extend the length of time and require a financial guarantee for the remaining improvements.

   Commentary: Subdivision improvements should be financially guaranteed whenever the plat is recorded prior to completion and acceptance of the public improvements. Subdivision Improvement Agreements that allow the sale of lots and issuance of building permits prior to completion of the improvements necessary to obtain an occupancy

[82] Section 19.00.080.B required submission of subdivision improvement plans "upon final plat approval."

permit[83] is short sighted, potentially penalizes a home-buyer and puts the city at risk. While the amendment improves the city's position, it is decidedly in favor of the developer who can record the plat, secure construction financing, sell lots and/or obtain foundation and building permits for 50 percent of the lots in the development without the expense of posting a bond or letter of credit.

4. **Section 19.20.2 – Dedication Required.** This section was amended to require dedication of parkland within the ETJ of the city of El Paso as well as within its corporate limits.

   Commentary: Under the former regulations, large subdivisions were developed within the ETJ without parks. These developments may ultimately be annexed by the city without adequate parks infrastructure, in which case the city would be looked upon to provide adequate public facilities. This limitation created an uneven playing field for development costs inside and outside the city limits.

5. **Section 19.15 – Roadways.** The general requirements and standards related to street improvements are contained within this section. Specific changes to the street design standards are noted below.

   a. Section 19.15.5(a) Approach Roads and Access. All subdivisions with a single point of access must have no roadway that exceeds 300 feet or 60 dwelling units from the access point or an Average Daily Traffic of greater than 1,200. All other subdivisions must have at least two (2) points of vehicular access, and must be connected with improved roadways to the City's improved thoroughfare and street system by two or more approach roads of the dimensions and standards hereinafter set forth. An access road divided by 20 feet in each direction to the intersection of two streets shall be considered two means of access.

      Commentary: The standards within this provision are not clear. Section 19.15.9 limits the length of cul-de-sac streets to 600 feet and to no more than 25 dwelling units if in a single-family residential district. Further, counting a subdivision entrance with a 20 foot median strip as two points of access is contrary to Section 104.3 of the 2003 International Fire Code, which requires the spacing of the two points of access to be one half the diagonal distance of the area being protected. Section 107.3 of the 2003 International Fire Code, as adopted by the City Council, revised the number of single-family dwellings permitted within a single access development from 30 to 130. Section104.3 however, was not amended.

   b. Section 19.15.5(b) Roadway Network Connectivity. (1) All proposed developments must have a connectivity index of 1.4 or greater. The connectivity index shall be calculated by dividing the total number of links (streets including stub-out streets) by the total number of nodes (intersections, cul-de-sacs, no-outlets, dead-ends).

[83] The wording of Section 19.8.2(d) (3) suggests that an occupancy permit could be obtained for a dwelling prior to completion of the streets and utilities serving the lot.

Commentary: The Link-Node Ratio Connectivity Index is one of several methods of measuring the interconnectedness of a neighborhood or community.

Developers are likely to favor development patterns that are less connected. There is a perception that homebuyers prefer cul-de-sac lots because they have lower traffic volumes. While it is true that connected subdivisions have more through streets, many of the homes within conventional subdivisions front on collector streets, which have much higher volumes of traffic with motorists traveling through the neighborhood at higher speeds. Streets in neighborhoods designed with a high level of connectivity are generally shorter with more frequent intersections, which provide traffic-calming and much slower speeds. Another reason developers may favor less-connected development patterns is the belief that paving requirements are less, thereby reducing their construction costs. Studies such as by Khattak and Rogriguez (2005)[84] suggest that neo-traditions show that developments designed to provide a high level of connectivity result in more efficient lot patterns which increase density and lower infrastructure costs per lot. In addition, the new code allows a reduction in the pavement width of shorter streets. Because streets widths can be somewhat narrower, the differences in paving costs are marginal.

Street connectivity is considered by urban planners to be a key component to good neighborhood design. Neighborhoods with a high level of connectivity are characterized by shorter blocks and fewer cul-de-sacs while neighborhoods with low connectivity feature long blocks often in excess of 1,200 feet or feature cul-de-sac streets connecting to several major collector streets.

Highly connected neighborhoods offer a number of community benefits including:

- *Increased route options for drivers, bicyclists, and pedestrians, possibly decreasing local automobile use;*
- *Reduced trip length, thereby promoting walking, bicycling, and transit use;*
- *Neighborhoods connected to each other and to destinations such as schools, parks, shopping, libraries, and post offices;*
- *Opportunities for residents to increase their level of physical activity each day due to more walkable neighborhoods with adequate connections to destinations;*
- *Reduced vehicle miles traveled and travel time which improves air quality and mitigates the adverse effects of auto emissions on the health of residents;*
- *Reduced emergency response times;*[85]

[84] Asad J. Khattak and Daniel Rodriguez. "Travel Behaviors in Neo-Traditional Neighborhood Developments: A Case Study in U.S.A." *Transportation Research A.* Volume 39, Number 6, July 2005. pp. 481-500.

[85] A more connected street system allows a fire station to serve about three times as much area as in an area with unconnected streets. See: Victoria Transport Policy Institute, TDM Encyclopedia, www.vtpi.org

- *Increased effectiveness of municipal service delivery; and*
- *Increased arterial street capacity to more efficiently serve regional long-distance travel needs.*

It would be difficult to say the Connectivity Index results in higher costs to the developer. The potential density bonuses and narrow-street-width options available to the developer with the Smart Growth alternatives should be sufficient to offset any additional paving costs from a finer pattern of local streets and pathways. The Cost Comparison Study by Sefko Planning Group found the paving costs, including curb and gutter for a subdivision design under the 2008 ordinance to be nearly $40,000 less than a conventional design on the same site using the previous ordinance.[86] It should be noted, however, that the conventional design had a Connectivity Index Ratio of 1.1 while the subdivision under the 2008 regulations had a Connectivity Ratio of only 1.3.

c. Section 19.15.8 Street Length. This Section reduces the length of residential streets from the 1,500 feet used in the 1997 code to 1,200 feet. The length of cul-de-sac streets is reduced from 750 feet to 600 feet and limits the number of single family dwelling to twenty-five. The Planning Commission may approve exceptions due to topography or other unusual circumstances.

Commentary: As an alternative to the connectivity index, communities desiring to increase the walkability of their neighborhoods have adopted standards for even shorter block lengths. Few codes allow block lengths in excess of a ¼ mile and then generally require a mid-block pedestrian path. The amendment should not affect the cost of development.

d. Section 19.15.11 Street Width and Design. This section establishes standards for street pavement and right-of-way widths and design requirements. The narrative from Article 19.16.020 in the 1997 Code has been converted to easier to use tables. The changes include additional street classifications that allow the opportunity for reduced right-of-way and paving widths and lower design speeds.

Commentary: The changes to the street standards generally provide incentive for subdividers to incorporate Smart Growth principles into their development plan. Table 19.15.3 it includes too many design standards and regulatory provisions as footnotes. For instance, the width of a type 2 local street is dependent upon the width of the driveway.

6. **Section 19.16 – Street Lighting.** This section replaces Article 19.16.030. The only substantive change is the removal of language that exempted nonresidential development from the street lighting requirements along "collector arterials" within a subdivision.

[86] Cost Comparison Study: El Paso Subdivision Ordinance, Sefko Planning Group of Fresse and Nichols, Inc. April 2008. pp.15-16.

Commentary: The revision has no affect on residential development costs.

7. **Section 19.18 – Traffic Impact Analysis.** This section requires a Traffic Impact Analysis to be included with applications for rezoning and preliminary plats if not already submitted as part of a land study.

   Commentary: Under the previous ordinance, a Traffic Impact Analysis was required with the submission of a land study, or when the city plan commission determined that, based on generalized criteria, a Traffic Impact Analysis was necessary (Sec. 19.16.020 O). The amended code spells out in more detail the extent of the study and provides objective standards for determining the level of improvements required. The revised ordinance would seem to provide the subdivider added protection from arbitrary requirements by staff and plan commission. As a side note, the requirement for submitting a traffic study with a zoning application should be included in the zoning code since the applicability provisions of the subdivision regulations only apply to non-exempt land divisions and development.

8. **Section 19.19 – Stormwater Management Requirements.** This Section expands Section 19.16.050 of the previous code with the inclusion of a purpose and intent statement; designation of a Stormwater Administrator; more clearly outlines the requirements for a stormwater management plan; and adopts by reference a Drainage Design Manual.

   Commentary: A stormwater management plan is required as a prerequisite to commencing any land development activity unless specifically exempted by the ordinance. It is not entirely clear at what point in the subdivision platting process a Stormwater Management Plan is required. Section 19.2 - Land Studies, requires the inclusion of a "conceptual drainage plan" to accompany the land study. Submission and /or approval of a stormwater management plan are not a specific requirement or prerequisite for preliminary plat application.

   The stormwater design principles are based on development maintaining historic runoff characteristics with drainage facilities designed to convey a 100-year storm event. The design criteria are typical of most communities and American Public Works Association guidelines. An examination of the development cost implications of the drainage design manual was not within the scope of this analysis.

9. **Section 19.20 – Parks and Open Space.** This section contains the provisions relating to the dedication of land for parks previously contained in Chapter 19.12. A comparative summary of these requirements are identified in **Table 3.3-1**.

Table 3.3-1. Comparative Analysis of Parkland Dedication Ordinances

Ordinance Provision	1997 Ordinance Reference	2008 Ordinance Reference
Applicability Provision	**Sec. 19.12.020** Dedication Requirement applies to all subdivisions within the corporate limits.	**Sec. 19.20.2** Dedication requirement applies to all subdivision within the corporate limits and the ETJ.
Land Dedication Calculation	**Sec. 19.12.030**	**Sec. 19.20.3**
1 and 2 Family Residential	1 Ac/100 Dwelling Units (DUs)	1 Ac/100 DUs
Multi-Family	1 Ac/100 DUs	1 Ac/100 DUs
Nonresidential	Fee-in-lieu of land required.	Fee-in-lieu of land required.
Vertical Mixed Use	Not addressed	Fee required based on nonresidential use if more 20% or more of total square footage otherwise based on number of multifamily units.
Fee Calculation	**Sec. 19.12.100***	**Sec 19.20.11**
1 and 2 Family Residential	$1,635/DU	$1,370/DU
Multi-Family	$815/DU	$680/DU
Nonresidential	$1,000/Acre	$1,000/Acre
	* As amended by Ordinance #16291 - February 28, 2006	
Required Park Improvements	**Sec. 19.12.050** Paving with curb gutter and sidewalks along frontage; utility extensions to site; grading; automatic irrigation system and turf within parkland boundaries, unless approved to remain in natural state.	**Sec 19.20.5 (b) (3)** Paving with curb gutter and sidewalks along frontage; utility extensions to site; grading, automatic irrigation system and turf within parkland boundaries, unless approved to remain in natural state; one age appropriate play structure unit including safety surface; two accessible picnic tables on concrete pads; and perimeter lighting along adjacent public street rights-of-way.
Bonus Reductions	**Sec 19.12.090** 25% reduction in parkland dedication requirement for additional recreational improvements; 25% reduction in park improvements for additional land area; and up to 100% reduction in land and fees for improvements to existing parkland.	**Sec 19.20.10** No change

Table 3.3-1. Comparative Analysis of Parkland Dedication Ordinances *(Continued)*

Ordinance Provision	1997 Ordinance Reference	2008 Ordinance Reference
Credit for Dual Park Pond Areas	**Sec. 19.12.030 D.** Allows pond area to count toward meeting parkland dedication requirement upon recommendation of park director and development services director.	**Section 19.20.3 (b) (2)** Allows detention/retention areas and other ponds to count toward parkland dedication requirements based upon prescribed standards.
Credit for Trail Corridors	**Not offered**	**Section 19.20.3 (b) (3)** Development of trail corridors may serve as credit toward parkland dedication
Credit for Open Space Areas	**Not offered**	**Section 19.20.3 (b) (4)** Areas designated on the El Paso Open Space Master Plan such as arroyos may be dedicated for open space credit at a ratio of 2 acres of open space counts toward 1 acre of required park land. Development standards will not apply to open space lands.
Credit for Private Rec. Space	**Sec. 19.12.090** No bonus reduction for private parkland or improvements.	**Sec 19.20.9** The provision of private park areas and recreational facilities within a subdivision may count toward meeting the land or fee requirements at a 2 for 1 ratio.

Commentary: Dedication of land and fees-in-lieu of land for parks are basic elements of subdivision regulation. The cost impact of the new regulations applies principally to development within El Paso's ETJ, which heretofore have not been subject to parkland dedication requirements. The formula for calculating the amount of land to be dedicated for parkland and the fee-in-lieu of land formula are unchanged.[87] *The only identifiable change that would result in additional cost to the developer within the city of El Paso is the requirement for additional facility improvements to dedicated parkland. Under the new code, a developer is required to provide one play structure from a list of options provided by the Park Department and two picnic tables. City staff estimates the additional cost to the developer to average $270 per lot;* [88] *however, the cost per lot could vary widely as the requirement for facility improvements is fixed and unrelated to*

[87] It should be noted that the 2008 subdivision code reset the base fee-in-lieu of land to the 1997 ordinance provision rather than the adjusted amount stated in the 2006 ordinance amendment.

[88] Cost Comparison Study: El Paso Subdivision Ordinance, Sefko Planning Group of Freese and Nichols, Inc. pp15-16. April 2008.

the number of lots in the subdivision or size of the park. The developer is only responsible for one play structure and two picnic tables whether it is for a one-acre park serving a hundred families or a five-acre park serving five hundred families.

10. **Section 19.21 – Sidewalks.** This section replaces and expands Section 19.16.20.F. in the former code. The new code clearly identifies the responsibility of both the subdivider and the builder with regard to the installation of sidewalks. The most significant change with respect to development cost is the change in the minimum sidewalk width from four to five feet.

    Commentary: The minimum sidewalk width for residential streets is typically four feet with six-foot wide sidewalks required in nonresidential areas or along major streets. Four-foot wide sidewalks are inadequate for two people to walk comfortably side-by-side and the trend seems to be moving toward wider sidewalks and even wider multi-use trails. The cost impact of the wider sidewalk requirement was examined. The Cost Comparison Study prepared by Sefko Planning Group uses $34 per square yard for the construction cost of a four-inch thick sidewalk. This figure converts to $3.78 per square foot. The width of the parkway between the curb and property line is 7.5 feet for a standard local residential street. The subdivision regulations require sidewalks to be constructed at the property line leaving a 2.5-foot buffer between the curb and sidewalk edge. In the desert climate of El Paso this buffer strip is typically filled with landscape rock rather than turf. The cost of installing landscape rock with weed control fabric is estimated at $0.50 per square foot. The net difference in the cost between a four-foot wide sidewalk and a five-foot wide sidewalk is calculated to be $3.28 per linear foot. A typical 60-foot wide interior lot with an 18-foot wide driveway has 42 linear feet of sidewalk. Using this figure, the added development cost to the lot for a five-foot wide sidewalk is $137.76.

11. **Section 19.26 – Alternative Subdivision/Smart Code Designs**. This section allows consideration of alternative subdivision and improvement design standards which differ from the prescribed standards. The intent of the section is to permit the application of Smart Growth principles and form-based codes to new development, encourage infill development through development incentives and reduced fees, and to prescribe standards for roadway and lot reductions.

    Commentary: Throughout Chapter 19.16 of the 1997 Code there are references to "modifications" to the improvement standards that may be granted by the plan commission or city council. The new code includes specific criteria for when alternative designs may be employed. Prescriptive standards are also included for lot size and roadway reductions. Section 19.26.2 includes incentives for qualifying infill development, which could include reduced fees for water and wastewater, administrative approval of plats, public participation in public infrastructure costs, and waiver of requirements for stormwater controls. This section potentially has positive cost impact on housing costs for infill development and for new development proposing alternative design and improvement standard. It has no cost impact on conventional subdivision applications.

3.3.1.2 Conclusions

A variety of factors influence the cost of development, and, in turn, the affordability of housing. These factors include but are not limited to:

- Land costs
- Finance costs
- Infrastructure and public improvement costs
- Engineering costs
- Time

A municipality's land development regulations can influence all of these in various ways.

Extended review times and delays in processing subdivision plats can increase development financing costs as well as construction costs. To determine if the 2008 subdivision regulations increased the cost of affordable housing a critical question is: "does it add time to the development process." In this case the answer is "no." Neither the three step platting process nor the application review procedures have substantially changed. New to the procedures is a requirement that an application for plat approval is complete before it is accepted (Section 19.37.2). A determination of completion must be made and the applicant notified within five days. The state-mandated time periods for approval or denial of a plat begin upon acceptance of the complete application.

Engineering and design costs may represent from six to 10 percent of the cost of the infrastructure and improvements. Requirements for traffic studies and storm water analysis may add significantly to the development costs. When these specialized studies are required early in the approval process the developer is entitled to an expectation that his development plans will be approved based on conformity with objective criteria and prescriptive standards.

Construction costs for infrastructure and other public improvements are likely to have the biggest affect on housing costs. There are few changes in the amended subdivision regulations that will affect housing costs because of new infrastructure requirements.

It is a matter of debate if the street connectivity index will increase the cost of development. Certainly, the reduced street widths Smart Growth options for higher densities offer the developer the opportunity to plan subdivisions that are more efficient. It is not true that all homebuyers want to live on a *cul-de-sac* but it is true that they want to live on a *safe* street.

The requirements for wider sidewalk and additional park improvements are minimal. For example, on a 30-year loan at six percent interest, they would add less than $2.50 per month to the homebuyer's monthly housing costs. This assumes that the added development costs are in fact passed on to the homebuyer. A report by Freilich and Schultz indicates that impact fees and site development costs are not necessarily passed on to the home buyer but are passed back to the

owner of the land and serve to reduce the land cost component of the total housing cost equation.[89]

In stakeholder meetings with representatives of the development community it was suggested that the city should assume responsibility for the installation of public infrastructure. There are jurisdictions in which the local government permits a subdivider to establish an improvement district in which government issued bonds are used to finance public improvements serving the subdivision. The bonds are paid off through special tax assessments. The subdivider does not have to front end the development costs and the finance costs are reduced. The down side is that the local government assumes the risk and has its bonding capacity reduced. Moreover, the monthly housing costs for the homebuyer are significantly increased, as the special assessments usually must be paid off over a shorter period, typically six to ten years, than for a long-term mortgage. This alternative for providing and financing public improvements would more likely increase rather than lessen the exclusionary impact of development regulations on affordable housing.

[89] Freilich, Robert H. and Michael M. Schultz 1995. *Model Subdivision Regulations.* 2nd ed., Planners Press, Chicago, IL. p. 190

3.4 Land Use Compatibility and Buffer Zones

3.4.1 Relevance of Buffer Zones to the RGMP

The anticipated growth of the City of El Paso as a result of the expansion of Fort Bliss will intensify the need for buffer zones for the mutual benefit of both. As described in the Existing Conditions Assessment, compatibility of land uses is critical for the protection of the community and the sustainability of the installation's mission. It is essential for areas having compatibility issues or at risk of developing such issues to be identified at the earliest possible time to preclude inappropriate development. Advance knowledge of those areas and the characteristics of the projected issues (i.e. noise levels, air quality, traffic volumes) can allow mitigation steps by the installation, the city or relevant county to avoid future problems. Adequate buffer zones are one of the best types of mitigation, facilitating harmonious development.

From the past experiences of many military-impacted communities, encroachment can be a contentious issue. More importantly, action to raise the issue must be affirmative, as it is costly (and sometimes impossible) to reverse or mitigate such intrusion once established.

Buffer zones can offer many benefits to the City of El Paso, surrounding counties and to Fort Bliss. Some of these benefits include improving the visual image of areas, protecting environmentally sensitive sites, expanding parks and recreation areas, and defining neighborhoods or functional zones. As an integral part of the RGMP, buffer zones can accomplish the goals and policies set forth in *The Plan for El Paso* (1999 comprehensive plan update for the City of El Paso) and enhance the mission of Fort Bliss.

The terms "ADNL" and "LUPZ" refer to noise levels. "ADNL" stands for Day-Night Average Sound Level for A-weighted noise. A-weighted noise includes sounds within the range to which the human ear is most sensitive. The term "Land Use Planning Zone" (LUPZ) is a planning tool used to indicate the maximum acceptable range (60 to 65 dB ADNL) for what is considered compatible levels for all land uses. The abbreviation dB stands for decibel, the unit used to measure the intensity of a sound.

The term "CDNL" refers to noise levels of large amplitude impulsive sounds such as gunshots or explosions as generated from the firing ranges. These sounds are measured differently on what is called the "C-weighted" scale. "CDNL" stands for Day-Night Average Sound Level for C-weighted noise.

The analysis of buffer zones for the RGMP has identified areas of encroachment risk and suggested types of land uses appropriate for those areas. The targeted areas will serve as focal points for consideration in future zoning decisions and land use determinations. Key points resulting from this analysis include:

- Residential development in proximity to Fort Bliss needs to take into account the impacts from training operations on the installation.

- Development regulations are needed to mitigate any detrimental impacts through design criteria and planning features.
- Implementing the Army Compatible Use Buffer (ACUB) program should continue as a high priority in order to restrict allowable land uses in areas at risk of encroachment. This will require local and regional support.

3.4.2 Impact from Fort Bliss Operations

Training operations at Fort Bliss impact surrounding properties by generating noise, vibrations, dust, various types of emissions, and vehicle movement. Additional types of training and expanded quantities of training activities are changing the levels of impacts on the community.

Figure 3.4-1 shows City of El Paso zoning surrounding the boundaries with Fort Bliss. Portions of Fort Bliss share boundaries with El Paso County, Texas and Doña Ana and Otero counties, New Mexico. Doña Ana is the only county that currently has implemented zoning. The rural areas of Doña Ana County are designated as a Performance Zone District that allows flexibility for land uses, subject to compliance with standards established for each use and with approval by the county.

3.4.2.1 Operations at Biggs Army Airfield

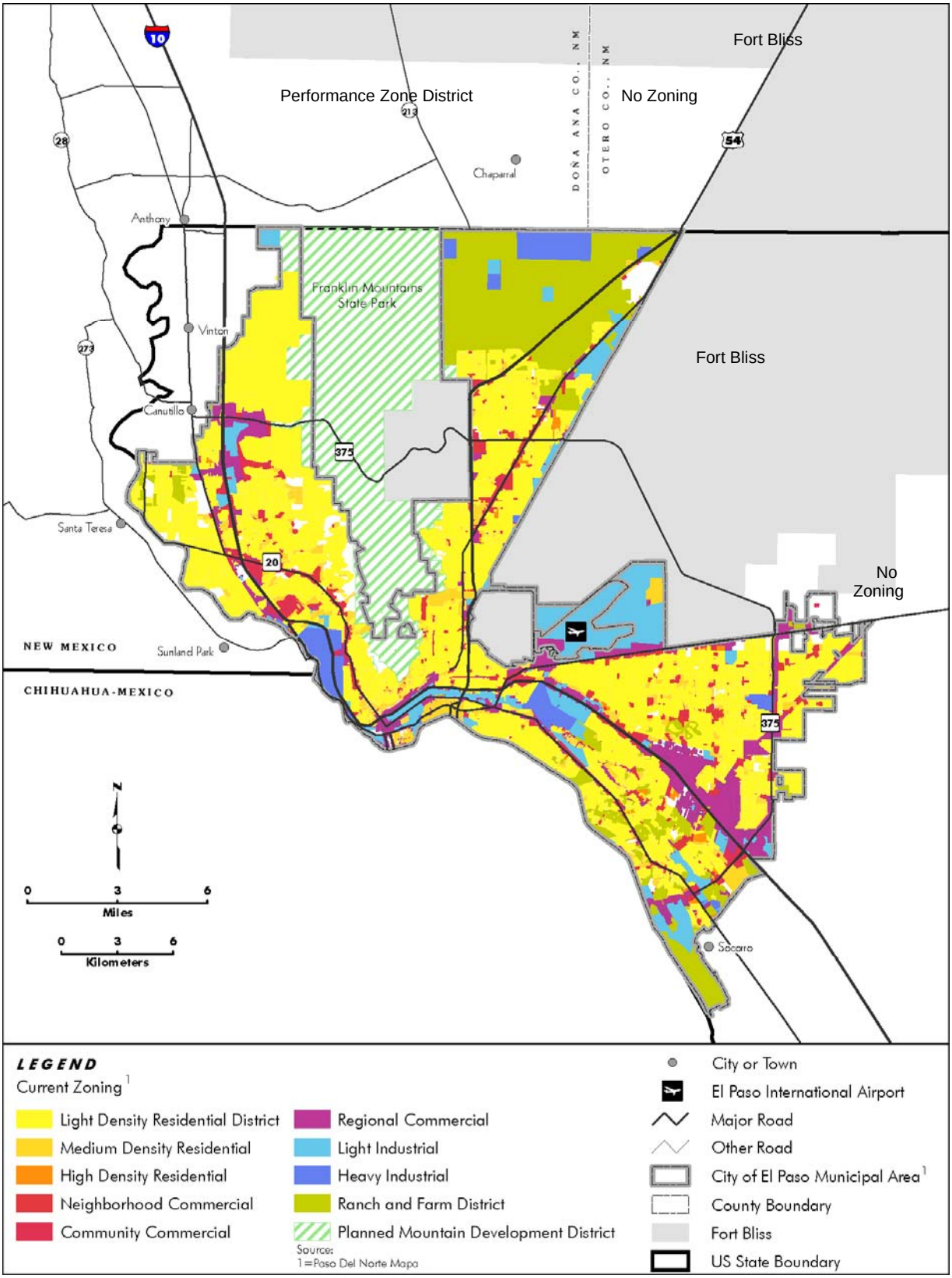
Biggs Army Airfield is a major asset for Fort Bliss and is utilized by other military services as a resource for training exercises and aviation support. Built with a heavy-duty and extra-long runway of 2.5 miles in length, the airfield can accommodate aircraft up to the size of C-5 and 747.[90]

Aerial view of Runway at Biggs Army Airfield

With large fuel storage and refueling capability, substantial parking aprons and ramps, the facility supports a major share of military air traffic in the southwestern United States. Even so, it has low traffic volume and does not pose a problem in terms of noise impact. Noise from operations at Biggs Army Airfield (shown in **Figure 3.4-2**) extend to the southwest of the airfield, but do not exceed 65 dB ADNL (a key threshold for residential compatibility off the installation). New training operations using helicopter routes along US 54 could cause elevated noise levels over this road corridor in the future.[91]

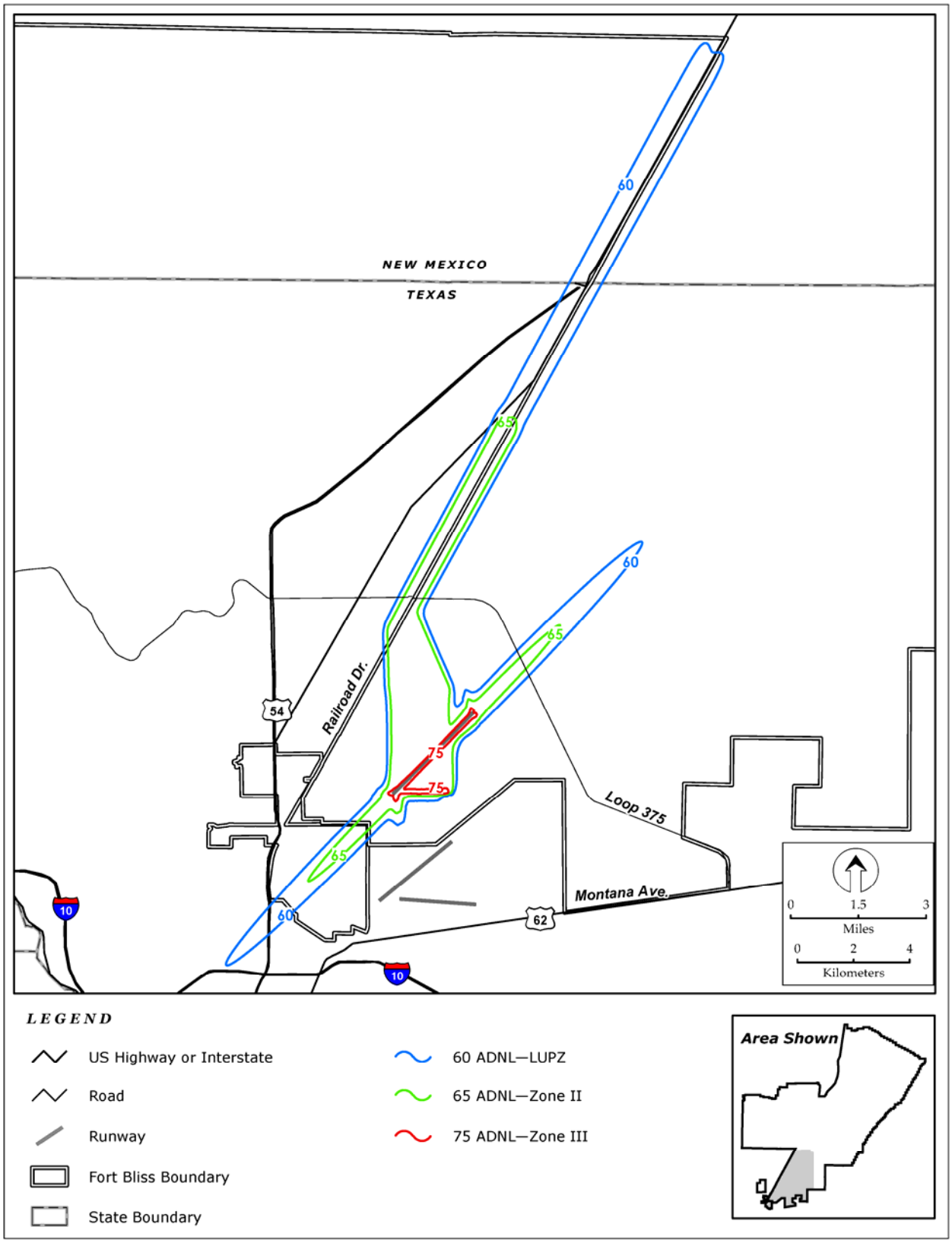
[90] Biggs Army Airfield website 2008. http://www.bliss.army.mil/Biggs/
[91] Interview with Eric Wolters, Fort Bliss Environmental Division. October 27, 2008

Figure 3.4-1. Types of Zoning Surrounding the City of El Paso and Fort Bliss



Source: Fort Bliss SPEIS 2007

Figure 3.4-2. Noise Contours for Biggs Army Airfield



Source: Fort Bliss SPEIS 2007

3.4.2.2 Training Operations

Main Cantonment Area

The highest density of physical development and infrastructure of Fort Bliss is on the Main Post, Biggs Army Airfield, and the new East Biggs expansion areas. For the most part, localized noise from daily activities within these areas does not cause any far reaching effects in surrounding areas. However, Fort Bliss activities do affect commuting and vehicular traffic on surrounding roads. These affects are addressed in the Transportation analysis in Section 3.5. During development, residential areas may experience some temporary effects such as increase truck traffic, noise from equipment, and dust from site grading.

Training Areas in El Paso County, Texas

The South Training Areas of Fort Bliss are located within El Paso County. This area supports a variety of training activities. Off-road vehicle operations have the greatest potential to generate direct impacts on Fort Bliss lands, with some potential for migration of noise and dust beyond the installation boundaries under certain conditions. While these areas do not support live fire operations, soldiers may practice some aspects of tactical and weapons training in these areas, either on foot or in wheeled or tracked vehicles. As a neighboring land use, residential uses may be less optimal land immediately adjacent to these kinds of operations. A more detailed description of Fort Bliss operations in this area can be found in the 2007 EIS titled *Fort Bliss, Texas and New Mexico, Mission and Master Plan Supplemental Programmatic Environmental Impact Statement* (or *2007 Fort Bliss SPEIS*).

Training Areas in Doña Ana and Otero Counties, New Mexico

The training lands in New Mexico support similar activities as the South Training Areas, but also have several specialized ranges for training with weapons, from small arms to missile firing. Brigade-level maneuver training (operating tracked vehicles off road) is very intensive both in the North Training Areas on the Doña Ana Range, and the training areas within the Tularosa Basin on McGregor Range. Some facilities support aviation combat training involving a variety of fixed and rotary wing aircraft.

Existing small arms training in the portion of Doña Ana North Training Area located in Doña Ana County generates noise contours fully contained within the boundaries of Fort Bliss. Additional small arms training in a portion of the Meyers Range near the state line in Otero County and closer to the Fort Bliss boundary with El Paso County generates noise contours that also are contained within Fort Bliss.

The Doña Ana Range has a series of firing ranges to the west of War Highway. Activities at these firing ranges are more critical, since large caliber weapons training have much larger impact zones. The *2007 Fort Bliss SPEIS* evaluated the noise impacts from projected levels of

training on existing firing ranges and new facilities.[92] **Figure 3.4-3** shows the projected noise contours for large caliber weapons. These contours show high noise exposure levels off the installation to the south of the Doña Ana Range. High noise levels also extend to the north over White Sands Missile Range and public lands managed by the Bureau of Land Management.

Fort Bliss is considering new operations and additional facilities to meet ever-evolving needs to support troop training, including more weapons firing and noise-generating activities. A new EIS is underway to describe and evaluate proposed changes. The results of this EIS should be available in late 2009 or early 2010.[93]

It is very important that Fort Bliss, the City of El Paso, El Paso County, Doña Ana County, and Otero County work together to implement land use controls and sound mitigation measures in building regulations to alleviate potential future problems related to housing and other development in the affected areas. Where possible, existing public lands and agricultural uses currently adjacent to Fort Bliss should be used and preserved as buffers. High priority needs should be maintained on the Army ACUB program to acquire property and easements for the protection of the community and sustainment of military operations at Fort Bliss.

3.4.3 Encroachment Surrounding Fort Bliss

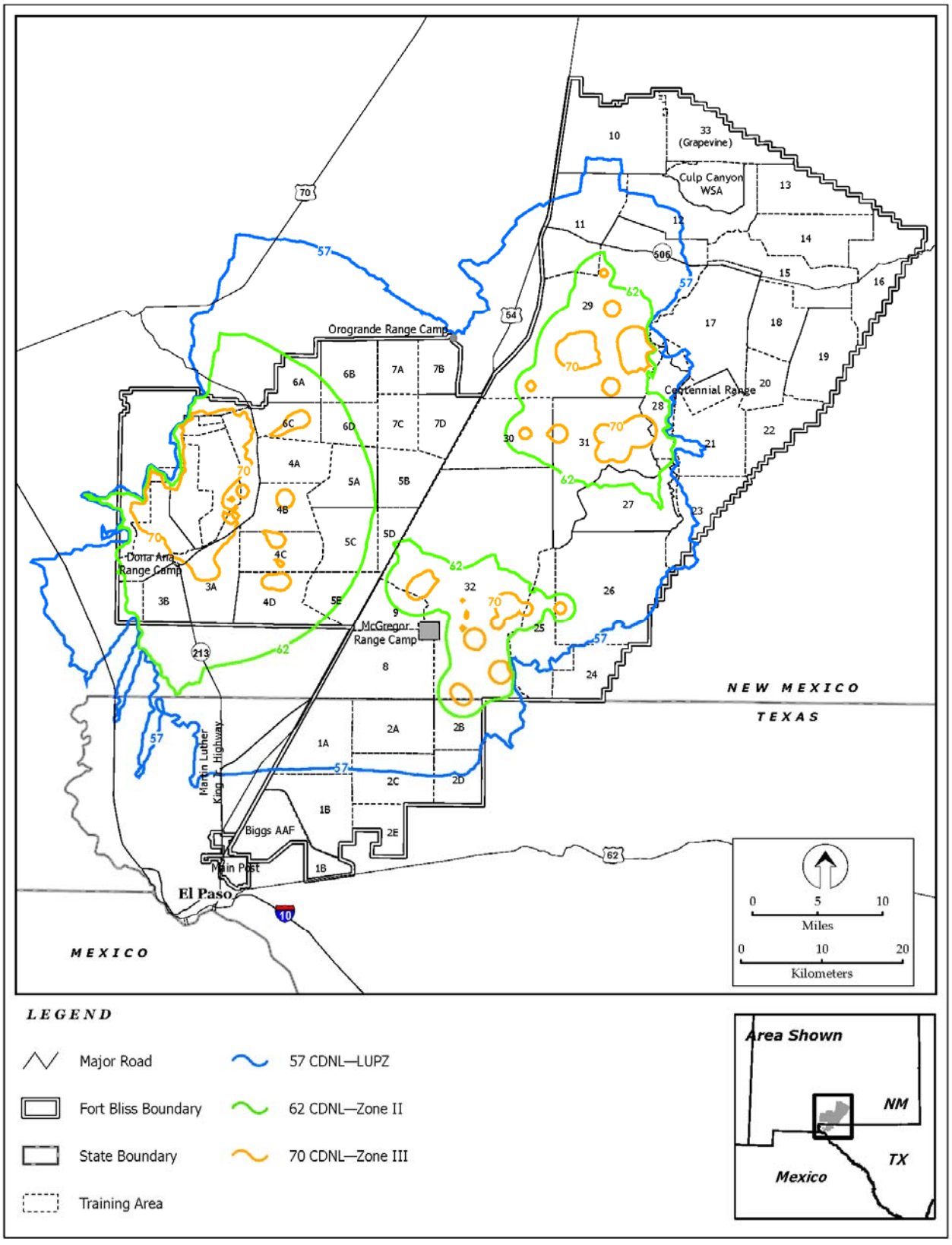
Encroachment issues surrounding Fort Bliss include the proximity of existing residential development, increasing traffic volumes on US 54, loss of open space to proposed new development, and noise from El Paso International Airport (EPIA) flight operations. These primary encroachment issues may have associated characteristics that impose resultant impacts on Fort Bliss from emissions, fugitive dust, erosion, light pollution, and wildlife migration. The ongoing EIS will provide more specific data on these issues. The range of issues and their potential for incompatible encroachment should weigh in strongly for future land use considerations and development decisions.

3.4.3.1 Operations at EPIA

EPIA is located due east of the Fort Bliss Main Cantonment and south of Biggs Army Airfield. The east boundary is contiguous with Fort Bliss, and the south boundary is defined by Montana Avenue (US 62 and 180). The latest available noise contours reflect that the areas impacted by incompatible levels of noise from air operations at EPIA do not extend beyond the airport boundaries. The projected growth at Fort Bliss is not anticipated to change that pattern of noise contours.[94]

[92] Wolters 2008.
[93] *Fort Bliss Supplemental Programmatic Environmental Impact Statement*. U.S. Army 2007.
[94] Interview with Monica Lombraña, Assistant Director of Aviation, El Paso International Airport. November 17, 2008

Figure 3.4-3. Existing Large Caliber Weapons Noise Contours



Source: Fort Bliss SPEIS 2007

3.4.3.2 Development Encroachment

Most of the encroachment surrounding Fort Bliss is from residential development. Demand for such development is increasing, driven by the significant growth in the number of troops assigned to the installation. Encroachment areas include the west side of US 54 from the main post north to where it crosses the Fort Bliss boundary, areas along the south boundary of the Doña Ana Range, areas along the south and east boundary extending east from the main post and north to the New Mexico state line, and the area in El Paso County just south of the boundary of McGregor Range. Areas with encroachment (also called Gap Areas) require careful consideration for special protective measures to preclude development that would have a high risk of incompatibility with the expanded training mission at Fort Bliss. Retaining public lands as conservation areas, and providing buffers of open space, recreational facilities and other compatible uses around development projects are recommended strategies. Close coordination with Fort Bliss will be essential for the City of El Paso and each of the counties prior to any approvals of rezoning and development proposals.

3.4.4 Buffer Zones

Existing buffer zones surrounding Fort Bliss are the result of current zoning for compatible uses, open space, public land and properties with restricted easements or acquired through the ACUB program. Existing corridors of concern are illustrated in **Figure 3.4-4.**

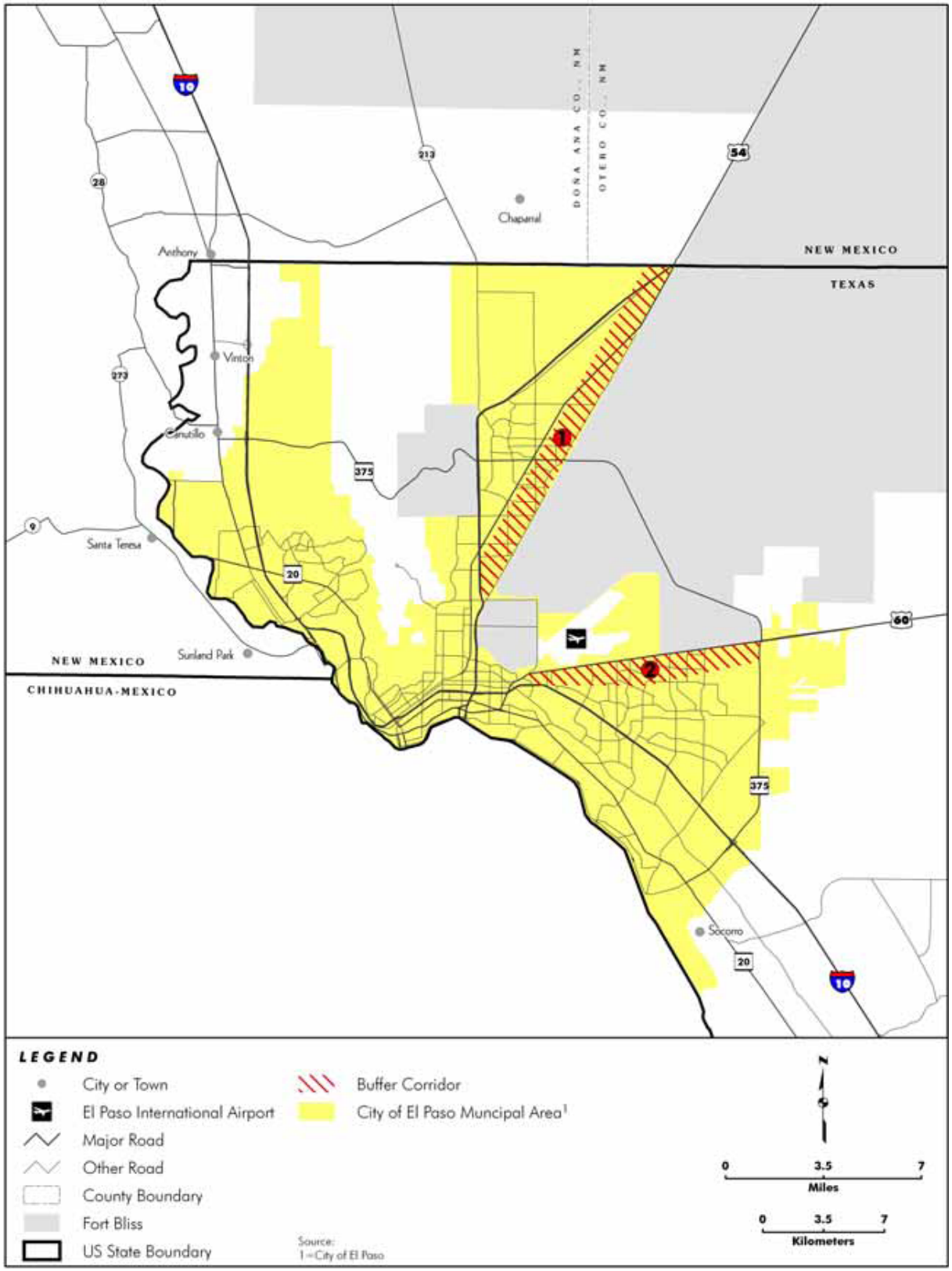
3.4.4.1 Types and Functions of Existing Buffer Zones

Industrial zoning and land uses provide buffer zones in several areas of the City of El Paso, creating sufficient separation between Fort Bliss and incompatible development such as residential. El Paso International Airport is the largest industrial parcel, and an extended industrial strip along Railroad Drive and including the railroad right-of-way comprise buffers. A combination of commercial, industrial, and mixed use parcels extending east from EPIA along Montana Avenue provide additional buffers between the installation and residential properties.

Significant amounts of publicly-owned land provide excellent buffer zones in several locations. These properties need to be retained to preclude encroachment by development. There are several blocks of land controlled by the Texas General Land Office along sections of the eastern boundaries of Fort Bliss (northeasterly from Montana Avenue to the New Mexico state line). In addition, there is a large block of land to the west of Business US 54 and north of Angora Loop Street South that is controlled by the Public Service Board.[95] East of the Public Service Board land there are undeveloped lands zoned for ranch and farm use.[96] It will be critical to retain a major band of open space or other compatible uses in these buffer areas.

[95] *The Plan for El Paso.* Mayor and City Council of El Paso. El Paso, Texas. April 1999.
[96] *Fort Bliss Texas and New Mexico Mission and Master Plan Final Supplemental Environmental Impact Statement*. U.S. Army Air Defense Artillery Center and Fort Bliss. Fort Bliss, Texas and New Mexico. March 2007.

Figure 3.4-4. Existing Compatibility Buffer Corridors



The ACUB program, described in the Existing Conditions Assessment has been utilized to establish restricted-use easements for large parcels of land near Chaparral, New Mexico and for land within a noise contour of incompatible level for designated uses. The 75-year easements preclude residential homes, retirement and nursing homes, intermediate care facilities, hospitals, and schools on those parcels.[97]

3.4.4.2 Future Effectiveness of Buffer Zones

The effectiveness of existing buffers is not impacted significantly by differences in the three growth scenarios. The essential element will be to maintain the buffer zones and expand them to provide more complete coverage at the critical locations where risks of incompatible noise levels and other operations are anticipated (see Section 3.4.4.3). As the amount of growth increases for each scenario, pressures for land development will also increase. This demands that land use controls and building restrictions be strictly enforced, and that increased communication and cooperation between Fort Bliss and the relevant jurisdictions be established and maintained.

3.4.4.3 New Buffer Zone Requirements

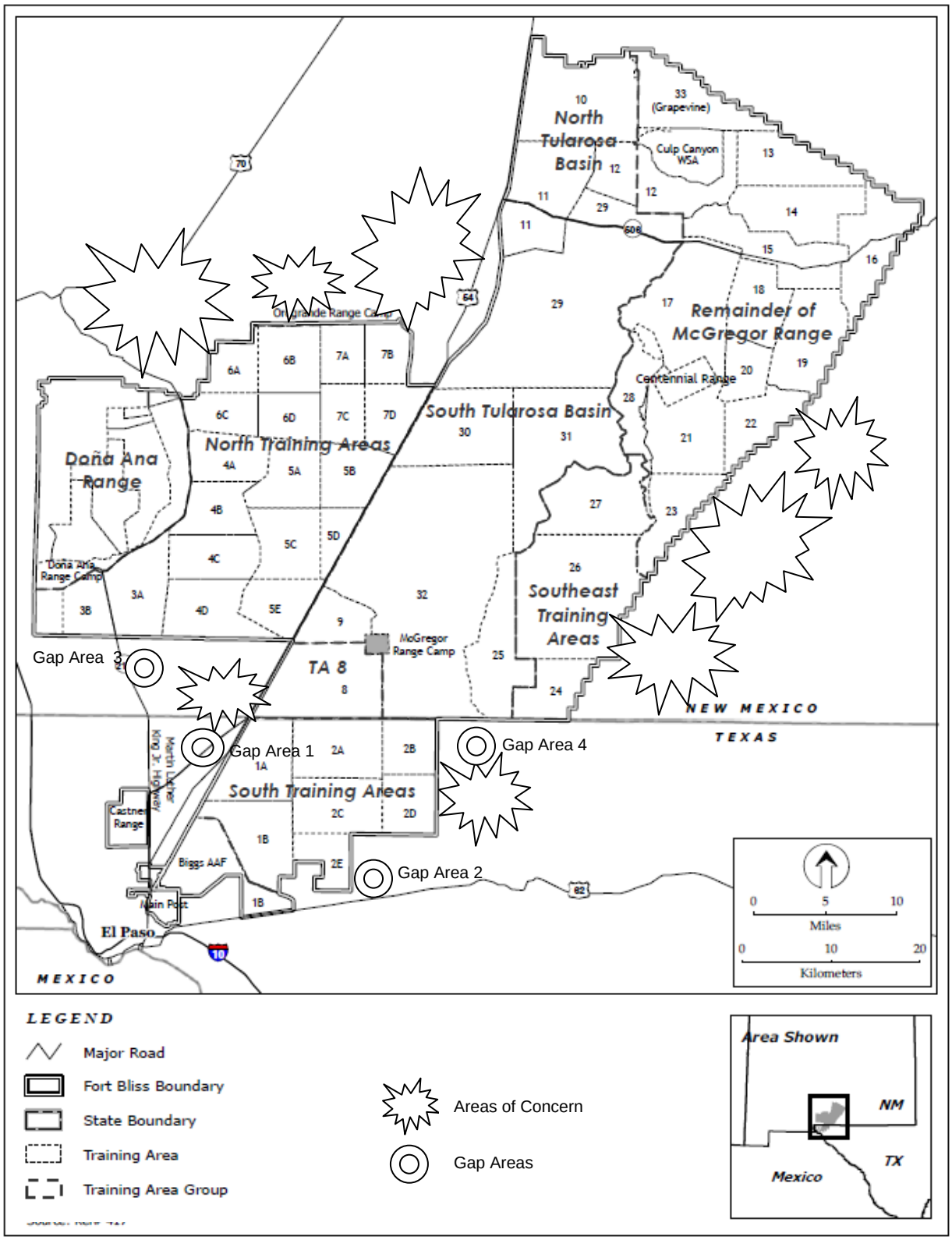
Gaps in existing buffer zones are comprised of properties not under control of public agencies and those not yet under easements through the ACUB program. The extent of the gaps can be determined more accurately once the noise contours and other characteristics for the proposed additional operations are defined in an EIS to be completed in December 2009. Major areas of concern are identified in **Figure 3.4-5** as land areas with high risk of being impacted adversely by the expanded operations on the training ranges of Fort Bliss.[98] These generalized areas may be refined after the new noise contours and other factors are delineated in the EIS.

The most critical gaps are the encroachment areas in the blocks of land east of the Public Service Board properties just south of the New Mexico state line and west of US 54 (labeled Gap Area 1); parcels of land privately owned between those controlled by the General Land Office along the boundaries of Fort Bliss extending east from EPIA and north of Montana Avenue (labeled Gap Area 2); those blocks of privately-owned land contiguous with the parcels placed under restrictions by easement through the ACUB program and lying within incompatible noise contours (labeled Gap Area 3); and privately-owned parcels located east of the South Training Areas and south of the McGregor Range in El Paso County, Texas (labeled Gap Area 4).

The areas of concern north of Doña Ana Range and the North Training Areas are primarily on WSMR, and partially on public land (under the Bureau of Land Management). Extremely low population densities in these areas make them a lower priority for buffer zone action. Also, areas east of McGregor Range are relatively stable (i.e., less prone to new residential development) and further from the loud noise sources on Fort Bliss.

[97] Wolters 2008.
[98] Wolters 2008.

Figure 3.4-5. Buffer Areas of Concern Surrounding Fort Bliss



3.4.5 Buffer Zone Recommendations

Primary improvements to buffer zones would involve increasing the size and extent of the areas. Additional improvements could be made through the implementation and enforcement of requirements included in building regulations to mitigate incompatible characteristics (such as noise-reducing construction). Various opportunities for improvements are described as follow.

Modifications to Size, Type and/or Location of Buffer Zones

Increased size of buffer zones is one of the most effective potential measures. This is true for most types of incompatible characteristics such as noise, vibration, dust, and light – both from and to the operational areas of Fort Bliss.

Some communities across the country have established minimum distances from the military installation boundary as a threshold for protection. For example, Burlington County, New Jersey established a two-mile radius buffer zone surrounding the boundary of the consolidated military complex made up of McGuire Air Force Base, Fort Dix, and Naval Air Engineering Station Lakehurst. Their initiative is to preserve farmland, and the Department of Defense is providing substantial grant funding to implement the preservation program.[99]

Cooperative Efforts with Fort Bliss

It is essential that cooperative efforts be maintained between Fort Bliss and the contiguous jurisdictions surrounding the installation. Regular and ongoing communications need to be maintained among planning staff members at the base and at the jurisdictions to stay aware of conditions, trends, and operational changes. The topic of compatibility issues should be a set item on every planning commission meeting, with follow-up action items that can be monitored. Through regular communications, all parties will be able to make informed decisions to achieve sustainability for the mission of Fort Bliss, as well as compatible community development.

Strategies with Regional Partners

- A wide range of federal, state, and local government agencies are available for potential partnerships with Fort Bliss to improve buffer zones. Through cooperative efforts and programs with mutual benefits for all parties, such partnerships can achieve the goals of Fort Bliss training sustainability and community quality of life.
- The optimum strategies with regional partners would match the funding mechanisms through the ACUB program with land ownership or other funding by the partner agencies to encumber incompatible development. In some cases, land may be acquired through the partnership, or restrictive easements may be negotiated with private owners. Completed negotiations for easements under the ACUB program

[99] *Burlington County Times*. Burlington County, New Jersey. August 13, 2008.

restrict specific land uses that include residential, retirement facilities, nursing homes, intermediate care facilities, hospitals, and schools.[100]

- Overlay restrictions can be applied that still allow low density uses, farming, and recreational open space as specific enhancements to the overall quality of life in El Paso. Other land use planning tools, such as transfer of development rights and various types of development incentives, may be considered as options to achieve the necessary control over development and create/retain buffer zones.

Improvements to Development Regulations and Zoning Ordinance

- As the City of El Paso and the surrounding region grow, it becomes more critical that development regulations, building codes, and zoning ordinances be enforced. In addition to the strategies for improving buffer zones, appropriate regulations can mitigate the impacts of noise, vibration, and some other incompatible elements. Building orientation, window and door types and locations, wall construction, and the use of sound-attenuating insulation are factors for consideration to be included in codes and regulations. *The Plan for El Paso* (1999) includes policies related to noise and vibration.[101] As part of the update of the El Paso Comprehensive plan, these requirements need to be reviewed and updated in light of the new uses of the El Paso training areas and the Fort Bliss EIS update. Those policies need to be implemented and used as a basis for zoning and land use decisions, where appropriate.

Disclosures to Real Estate Buyers

- The City of El Paso and the surrounding counties need to impose a disclosure requirement for all real estate transactions for properties in proximity to Fort Bliss that have the potential for incompatible impacts of any type. This will ensure that the buyers of those properties are aware of the potential impacts (generally noise) and reduce the potential for future litigation. There are a number of programs available to El Paso, working with the Army, to identify and acquire easements or title to critical parcels of real property to preserve the training value of this very unique military reservation.

Table 3.4-1 lists recommended actions from the Action Plan (Appendix G) for Land Use Compatibility and Buffer Zones. The table names the action, lists the entity or entities responsible for implementation, the timing and rationale for action, estimated available resources, possible funding sources, and implementation indicators.

[100] Wolters 2008.
[101] *The Plan for El Paso.* Mayor and City Council of El Paso. El Paso, Texas. April 1999.

Table 3.4-1. Action Plan Recommendations for Land Use Compatibility and Buffer Zones

Recommended Action	Responsible Entity/ Regional Ops	Timing/ (Rationale)	Estimated Resources	Funding Source(s)/ Implementation Strategies	Implementation Indicator
1. Rewrite the Comprehensive Plan to accurately reflect the impact of projected growth of Fort Bliss commercial and industrial sectors on all parts of the city and its citizens, specifically road, transit, and housing, especially multi-family	- City of El Paso (lead) - County - Fort Bliss	6 months Use RGMP information wherever possible	$3,500,000	http://www.oea.gov	Grant received Plan updated
2. Fort Bliss and the City of El Paso need to enter into a joint encroachment review to identify land use, development, light, sounds, electromagnetic pulse and environmental threats to full military use of Fort Bliss Amend zoning ordinances and Comprehensive Plan to create predestinated high density and mixed use areas to be reflected on future land • This activity ties directly to the Comprehensive Plan above	- City of El Paso (co-lead) - Fort Bliss (co-lead) - MPO - County (Consider a statewide request) City of El Paso (lead)	1 year (Fort Bliss must request first) 6 months (Will speed multi-family dwelling construction)	About $400,000 Funded as part of the Comprehensive Plan effort	http://www.oea.gov/OEAWeb.nsf/Encroachment?readform https://www.denix.osd.mil/portal/page/portal/content/range/Compatible/REPI/REPIFactSheet.PDF http://www.sustainability.army.mil/tools/programtools_acub.cfm http://www.afcee.af.mil/resources/aicuz/index.asp	Zoning change to preclude encroachment Multi-family dwelling areas approved

3.5 Transportation

3.5.1 Introduction and Methodology

The study area for this section of the RGMP focuses on the El Paso Metropolitan Planning Organization (MPO) boundary that includes the cities of El Paso and Socorro, towns of Anthony, Horizon City and Clint, Village of Vinton, El Paso County, and Fort Bliss Army Reservation in the State of Texas, and the City of Sunland Park and portions of Doña Ana and Otero counties in the State of New Mexico.

This section addresses the existing transportation elements within El Paso County study area, including the cities of El Paso, Socorro, and Clint by identifying available transportation facilities, modes of transportation, international ports of entry, and by assessing traffic operational conditions and critical problem areas that need improvement. The section reviews the future impact to the existing transportation system and traffic operations from the projected growth resulting from military expansion. The analysis identifies future transportation needs and other improvements needed to maintain and improve the overall quality of life and promote further growth. A summary of ongoing transportation planning efforts by various agencies within the El Paso County region proposed short and long-term transportation improvements (LRTP/TIP), a time period of proposed LRTP/TIP implementation, and their contribution towards improving future operations, is also addressed. In addition to conventional improvements to roadway networks, this evaluation focuses on smart growth techniques, intermodal transportation improvements, and truck corridors.

Existing traffic data, including the Average Annual Daily Traffic (AADT), heavy vehicle and directional distribution percentages, and peak hour factors were used to identify major roadway sections currently operating at unacceptable conditions. The analysis takes into account all the previous work accomplished as part of the 2035 Gateway Metropolitan Transportation Plan prepared by the MPO, and considers all planned/proposed transportation improvements within the region as implemented. Traffic projections for the most anticipated traffic growth scenario under the MGS were generated based on the projected population growth and other socio-economic factors. The projected traffic volumes were then distributed within the Transportation Analysis Zones (TAZ) using the MPO's revised Travel Demand Model, reflecting the future land use information, to accurately project future traffic volumes along the major roadway network in the El Paso region.

Available traffic data including AADT, heavy vehicle, directional distribution and design hour factor for the existing analysis year (2007) was obtained from the TxDOT traffic count database for major roadway sections, and compared with the El Paso MPO Travel Demand Model. Daily traffic volumes were converted to peak design hour traffic volumes to determine the existing operations and Level of Service (LOS) of the major highways and roadways within the El Paso County Area. Projected traffic volumes for the years 2015 and 2025 were obtained from the MPO. These were used for a future operational analysis (to determine future LOS). Based on the

results of the LOS analysis, short-term and long-term recommendations were identified at key locations to improve future traffic operations, safety and quality of life in the RGMP study region.

The transportation analysis for the RGMP concentrates only along the major roadway network that serves as primary interstates, expressways, and arterials within the region, and did not focus on minor arterials, collector streets, and local roads.

A description of data sources, assessment, and supplementary transportation data is provided in Appendix F.

Key findings from this analysis follow:

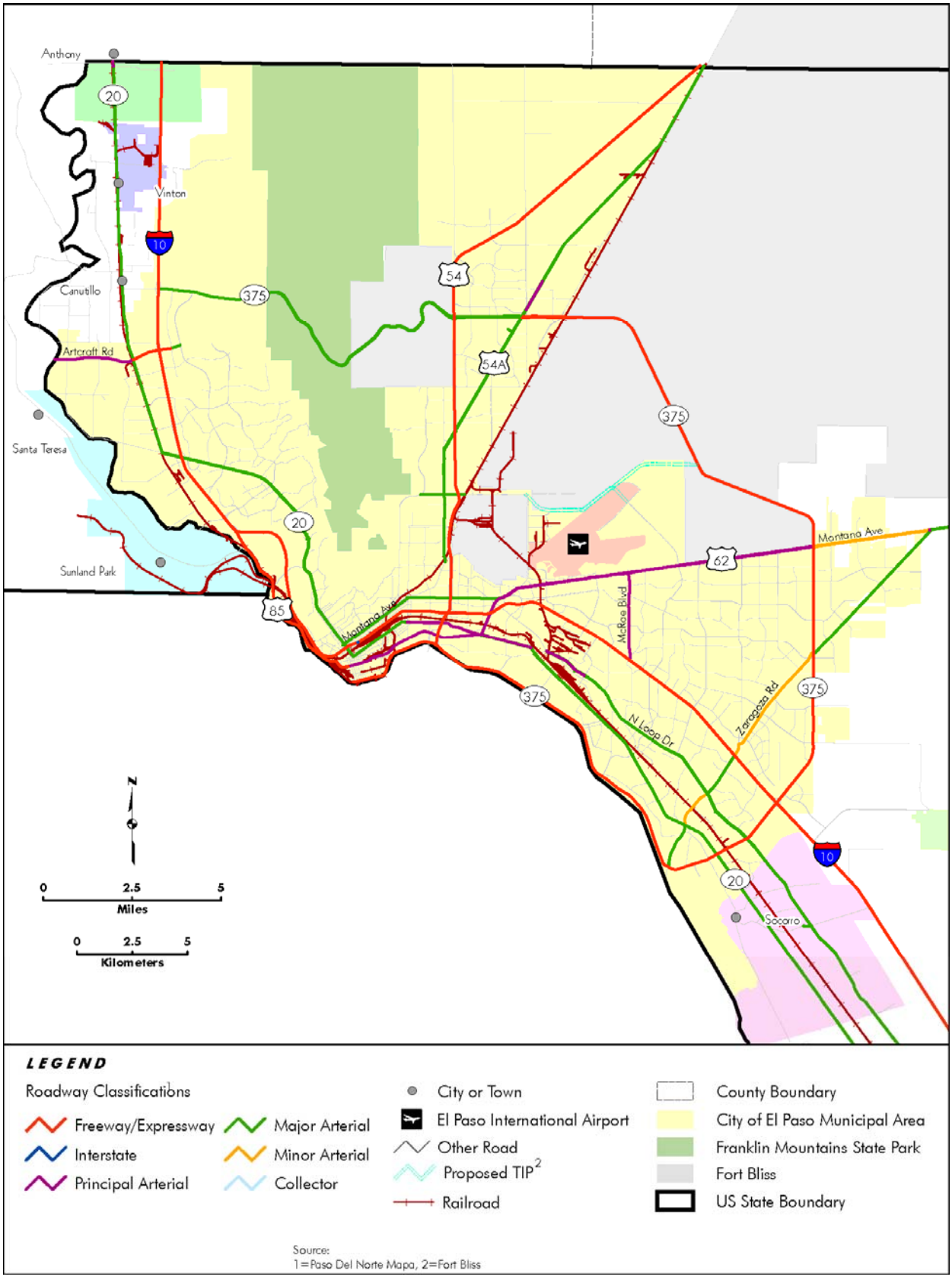
- El Paso ranks 47th among the 50 largest cities for congestion; estimates from previous studies show a congestion-related productivity loss of approximately $246 million for the year 2005.
- The City of El Paso is one of the major international border cities with Mexico experiencing robust growth in economic activity; however, the increasing number of heavy truck, passenger vehicles and pedestrian traffic at the border is causing congestion and severe delay along the existing major roadway networks in the study area region.
- A survey of existing Sun Metro Transit users revealed the necessity for a strong transit system in the region; the survey indicated most regular transit users commute to work.
- Long range transportation plans propose new bike routes to eliminate existing discontinuities within the downtown region and establish a bikeway system to provide access to major commercial, residential and retail destinations, and other activity centers.
- Efficient and cost effective rail service is important for the economic vitality of the city; however, existing rail lines through the central business district cause a safety hazard at highway crossings, a public safety threat due to transport of dangerous materials in downtown and residential areas, noise and air quality impacts, traffic congestion, and obstruct potential redevelopment opportunities.
- TxDOT, El Paso MPO, and the City of El Paso have identified short and long-term high priority transportation projects in the El Paso and Fort Bliss region to adequately serve the future developments and traffic demand from BRAC growth.

3.5.2 Existing Conditions

3.5.2.1 Street and Highways

Major urban freeways/expressways and principal arterials within El Paso County were identified and assessed for capacity, traffic operations, and safety. Each of the roads is described below and illustrated in **Figure 3.5-1**.

Figure 3.5-1. Major Roadways in the El Paso Area



- Interstate Highway 10 (I-10) is a fully access controlled north-south principal freeway through El Paso County providing access to the State of New Mexico to the north. The existing freeway transitions from a four-lane facility through the rural areas of the county to a ten-lane section through the urban areas with full auxiliary lanes or acceleration and deceleration lanes between interchanges. The interstate is paralleled by frontage roads through the urban area with full system interchanges along major highway crossings at US 54 and US 85, and full service interchanges with turnarounds at other cross streets.
- Loop 375, also designated as Cesar Chavez Memorial Highway/Border Highway/Americas Avenue/Joe Battle Boulevard/Purple Heart Memorial Highway/Transmountain Parkway, is a multi-lane divided highway that elevates to a fully access controlled facility serving the border areas, City of El Paso and Fort Bliss military installation and Biggs Army Airfield. The highway is of a multi-lane divided nature from its start at El Paso Community College to Park Street, and west of US 54A/Dyer Street to its finish at State Highway (SH) 20/Doniphan Drive. The other sections of the highway are fully access controlled, with frontage roads providing local access from Zaragoza Road to US 62/Montana Avenue.
- SH 20, also designated as Alameda Avenue/Doniphan Drive/Mesa Street, is a multi-lane divided major expressway through the rural and urban regions of El Paso County, directly serving the cities of Socorro and El Paso, and towns of Clint and Vinton.
- US 85/Paisano Drive is a multi-lane divided arterial serving the border regions of El Paso County west of US 54/I-110 connecting stretching from I-10 to SH 20. The highway provides direct access from the Stanton and Paso Del Norte POE, distributing the border crossing traffic to other major highways in the El Paso region. The highway is access controlled at the Bridge of the Americas (BOTA) POE with access ramps.
- US 62/Montana Avenue is a multi-lane divided highway bordering Fort Bliss to the south and serving the urban and rural areas of El Paso, east of US 54. The highway provides direct access to Fort Bliss at Airport Road and future Global Reach Road.
- US 54/Patriot Freeway is a fully access controlled north-south principal highway through El Paso County providing access to New Mexico to the north. The highway provides direct access to Fort Bliss at Pershing Drive, Cassidy Road, and Fred Wilson Road. The existing facility transitions from a four to an eight-lane section. Gateway Boulevard serves as the north-south frontage roads throughout the highway extents, stretching from north of I-10 to Sean Haggerty Drive. The highways transitions to a multi-lane divided highway at Sean Haggerty Drive allowing full access.
- US 54A/Dyer Street/Loop 478 is a multi-lane divided north-south major arterial highway serving Fort Bliss and parts of El Paso and serves as a reliever route to US 54/Patriot Freeway from the BOTA POE to the El Paso county line where it merges with US 54.

- Artcraft Road/Paso Del Norte is a major east-west highway directly connecting the Santa Teresa POE, New Mexico to SH 20/Doniphan Drive and I-10. The highway is a four-lane divided facility allowing full access, except for the sections between Stanton Road and I-10. The highway distributes the commercial and vehicular traffic from Santa Teresa POE via Peter Dominic highway to I-10.
- Farm-to-Market (FM) 76/North Loop Drive is a multi-lane divided arterial extending from Delta/Trowbridge Drive in the city of El Paso to Ranch Road 1110 in the town of Clint.
- FM 659/Zaragoza Road is a multi-lane major north-south arterial extending from the Zaragoza POE to US 62/Montana Avenue.
- Fred Wilson Road is a multi-lane east-west minor arterial providing direct access to Fort Bliss from Alabama Street to Airport Road/Sergeant Major Boulevard within the base.
- Airport Road is a multi-lane north-south minor arterial providing direct access to Fort Bliss from US 62/Montana Avenue to Fred Wilson Road.
- FM 2316/McRae Boulevard is a major north-south multi-lane divided arterial connecting I-10 to US 62/Montana Avenue.

In addition, the following highways are identified as major truck routes within the metropolitan El Paso region:

- I-10
- US 54/Patriot Freeway
- Loop 375/Transmountain Parkway
- US 62/Montana Avenue
- US 54A/Dyer Street
- US 85/Paisano Drive
- Stan Roberts Senior Drive
- FM 659/Zaragoza Road
- Mesa Street
- FM 76/N Loop Drive
- SH 20/Alameda Avenue

I-10 Corridor through El Paso

- Railroad Drive
- Fred Wilson Road
- Airway Boulevard
- Airport Road
- Lee Trevino/Montwood Drive
- Rojas Drive
- McCombs Street
- FM 2316/McRae Boulevard

Typically, more than 55,000 trucks cross the international bridges in and near the El Paso region into the U.S. each month, carrying a wide variety of manufactured goods and materials. Geographic constraints and urban development have created a transportation

bottleneck in the center of the city. With the increase in trade between the U.S. and Mexico, an increase in heavy vehicle traffic of 1,000 trucks per day is anticipated.

3.5.2.1.1 Roadway Capacity and Traffic Operations

A review of the existing traffic conditions indicates deteriorating traffic operations with increasing congestion levels. Estimates from previous studies show a congestion related productivity loss of approximately $246 million for the year 2005 in the El Paso region (exclusive of the congestion at the international POE). Detailed traffic operational analysis of the major roadways within the El Paso County region with the implementation of the proposed LRTP/TIP/Fort Bliss transportation improvements was conducted to identify sections that experienced capacity restraints and unacceptable operating conditions.

A threshold LOS of D is considered acceptable for urban areas (LOS A corresponds to the least congested condition, and LOS F the most congested). Results indicate that several sections of major roadways in the study area sections operate at unacceptable LOS E and F under the existing traffic demand conditions, including:

- Sections of I-10
- Sections of Loop 375 between North Loop Drive and I-10
- SH 20/Alameda Avenue between US 62/Montana Avenue and North Loop Drive
- Sections of US 85/Paisano Drive north of I-10
- Sections of US 54/Patriot Freeway between Fred Wilson Avenue and Loop 375.

A detailed review of the existing condition (2007) operational analysis results and LOS is included in Appendix F (Table F-3).

3.5.2.1.2 Roadway Safety

Existing traffic crash data statistics including property damage, injury and fatalities was obtained from the BTS database for all the cities and towns within the El Paso County region. To better define the crash patterns, crash data summaries for a five year period from 2003-2007 were prepared for the City of El Paso and other cities within the El Paso County region (including Socorro, Clint, Vinton, Fabens, Horizon City, and Anthony). **Table 3.5-1** shows the five-year period crash summary for the City of El Paso and other cities and towns within El Paso County. The crash data summary for the City of El Paso shows a decreasing trend in the fatal and injury crash occurrence with the largest reduction occurring between the years 2005-2006. The cumulative crash summary for the other cities within the El Paso County region also show a decreasing trend in the severe crash occurrence with a pronounced reduction occurring between

the years 2005-2006. Previous safety analyses and crash studies conducted by the MPO also indicate severe crash occurrences along congested roadways.[102]

3.5.2.2 International Border and Port of Entry

As a major international border city with Mexico, El Paso has experienced robust growth in manufacturing, trade, healthcare, and other transborder economic activity. The introduction of the North American Free Trade Agreement (NAFTA) has also generated great economic activity collectively imposing a challenge on the existing infrastructure and roadway network.

Crossing the border in Ciudad Juárez/El Paso

The POEs from Mexico into the United States have experienced increasingly heavy truck traffic. Commercial trucks must undergo inspection, thus increasing the waiting at border crossings for both trucks and other passenger vehicles.

Longer waiting times coupled with the mix of heavy truck, passenger vehicles, and pedestrian traffic at the POEs are causing congestion and severe delay along the existing major roadway networks affecting the study area region. Table 3.5-2 summarizes the existing international POEs, port schedule, and services. Figure 2.3-1 shows the regional roadway network and POEs.

Table 3.5-1. Crash Summary Data for the City of El Paso and Other Cities in El Paso County

Description	City of El Paso					Cumulative Crash Data for Other Cities (Socorro, Clint, Vinton, Fabens, Horizon City, and Anthony)				
	2003	2004	2005	2006	2007	2003	2004	2005	2006	2007
Fatalities	49	41	49	22	43	5	7	7	8	4
Serious Injuries	1,294	1,425	1,444	868	1,346	82	61	69	41	84
Non-Injury Crashes	7,181	7,301	6,826	3,924	5,607	377	377	435	298	291
Total	13,281	13,159	12,160	6,798	9,537	611	588	651	475	472

Source: Texas Motor Vehicle Crash Statistics (2003-2008). Texas Department of Transportation. http://www.txdot.gov/txdot_library/drivers_vehicles/publications/crash_statistics/default.htm

[102] *Trans-Border 2035 Metropolitan Transportation Plan.* El Paso Metropolitan Planning Organization. November 2007.

Table 3.5-2. El Paso Ports of Entry Services and Schedule

Port of Entry	Schedule	Services
Bridge of the Americas, El Paso[1]	Commercial: Open Mon-Fri 06:00 AM to 06:00 PM & Saturday 06:00 AM to 02:00 PM Non-Commercial/Pedestrian: Open 24 hours/ 7 days	Commercial and Non-Commercial Vehicle Inspection, Pedestrian Access, Customs & Border Protection, Immigration & Citizen, USDA and FDA services
Zaragoza Bridge/ Ysleta Port, El Paso[2]	Commercial: Open Mon-Fri 08:00 AM to 12:00 AM & Saturday 09:00 AM to 05:00 PM Non-Commercial/Pedestrian: Open 24 hours/ 7 days	Commercial and Non-Commercial Vehicle Inspection, Pedestrian Access, Customs & Border Protection and Immigration & Citizen services
Paso Del Norte Port, El Paso[2]	Non-Commercial/Pedestrian: Open 24 hours/ 7 days (northbound access only)	Non-Commercial Vehicle Inspection, Pedestrian Access, Customs & Border Protection and Immigration & Citizen services
Stanton Street Bridge, El Paso[2]	Non-Commercial/Dedicated Commuter Lane: Open Mon-Fri 06:00 AM to 10:00 PM & Sat-Sun 10:00 AM to 06:00 PM	Non-Commercial Vehicle Inspection, Customs & Border Protection services
Fabens, TX[3]	Non-Commercial/Pedestrian: Open 7 days 06:00 AM to 10:00 PM	
Santa Teresa, NM[4]	Commercial: Open Mon-Fri 08:00 AM to 08:00 PM & Saturday 09:00 AM to 02:00 PM Non-Commercial/Pedestrian: Open 7 days 06:00 AM to 12:00 AM	Commercial and Non-Commercial Vehicle Inspection, Pedestrian Access, Customs & Border Protection, Immigration & Citizen, Livestock and Temporary Vehicle Export Permits

Source: City of El Paso, El Paso County, New Mexico Border Authority
Notes:
1. Non-toll
2. Tolled, owned by the City of El Paso
3. Existing bridge cannot accommodate semi-trucks or trailers
4. Though just outside the MPO area, still affects the infrastructure

BOTA, Zaragoza Bridge, Paso Del Norte Bridge, and Stanton Street Bridge are the international border entry points owned and maintained by the City of El Paso. The BOTA POE is the only toll-free bridge crossing connecting El Paso and Ciudad Juárez. It consists of two four-lane bridges for passenger vehicles in either direction as well as two two-lane bridges for commercial vehicles in either direction. The crossing is located about 0.2 miles south of I-10/US 54 and US 62/Paisano Drive in El Paso, Texas. Zaragoza Bridge POE is a tolled facility for both southbound and northbound traffic. Paso Del Norte crossing is a tolled facility used solely for northbound non-commercial traffic access into El Paso. Southbound vehicular access is provided through Stanton Street Bridge crossing. This is the most heavily-traveled pedestrian crossing in the study region carrying an annual pedestrian traffic of about 7.4 million. Stanton Street POE is a tolled facility allowing southbound access for non-commercial traffic only. Northbound access is available for Dedicated Commuter Lane users only.

Fabens POE handles small amounts of vehicular and pedestrian traffic; however, the existing bridge cannot handle semi-trucks or trailers. A proposed new port of entry at Fabens is due for construction in 2010. A presidential permit has been obtained for the construction of the port, and $7 million has been allotted for construction of this new facility. The Santa Teresa POE, located in New Mexico, is about 20 minutes from downtown El Paso and provides direct access

to I-10 via Pete Domenici Highway, a four-lane divided high speed facility with left turn lanes providing access to unpaved rural or county roads.

Existing demand from the international POEs and their distribution along the existing roadway network within the El Paso County region were studied to observe the future impacts of BRAC growth on international travel. The BTS periodically collects and records nationwide and statewide transportation data and statistics to promote transportation safety and performance. A comparative analysis of the border-crossing data for a nine-year period (2000-2008) revealed varying growth trends for the transportation components, with an apparent increase in the use of the Santa Teresa POE. Details of the BTS border-crossing data summary for the relevant transportation components are shown in **Table 3.5-3**.

Table 3.5-3. Border Crossing Transportation Data

Transportation Components	Data Summary Year 2008			Historic Growth (2000-2008)		
	International Ports in the El Paso MPO Region					
	El Paso, TX	Fabens, TX	Santa Teresa, NM	El Paso, TX	Fabens, TX	Santa Teresa, NM
Personal Vehicles	13,716,434	557,124	373,905	-1%	-1%	8%
Bus Passengers	748,259	n/a	8,958	8%	n/a	11%
Buses	24,716	n/a	341	6%	n/a	11%
Pedestrians	8,029,106	35,259	21,537	2%	2%	9%
Trains	2,473	n/a	n/a	5%	n/a	n/a
Trucks	758,856	n/a	45,856	0%	n/a	2%
Vehicles	14,500,006	557,124	420,102	-1%	-1%	6%

Source: USDOT Research and Innovative Technology Administration (RITA) - Bureau of Transportation Statistics (BTS) http://www.bts.gov/site_map.html

An overview of the existing conditions, traffic demand, traffic composition and traffic flow patterns at all the POE was obtained from the Border Improvement Plan (BIP).[103] The BTS Intermodal Transportation Database, as shown in the table above, indicates about 750,000 trucks entering the U.S. through El Paso POEs.[104] Traffic delay and bottlenecks caused by commercial vehicles (freight traffic) hinder the operations of non-commercial passenger vehicles, increasing the overall vehicular delay and traffic congestion on the regional roadway network. This also leads to traffic safety concerns, and bridge/roadway degradation. This hindrance not only affects the retail potential, but also creates a burden on workers crossing daily, mostly from Mexico into the U.S. The freight traffic peak hours usually coincide with the evening peak hours of the adjacent street network, from 3:00 to 6:00 pm, leading to peak hour congestion. The busiest international ports at the BOTA, Stanton and Zaragoza Bridges, experience severe queues and

[103] *El Paso Border Improvement Plan Final Report*. El Paso MPO. June 2006

[104] Border Crossing Data. Research and Innovative Technology Administration, Bureau of Transportation Statistics. http://www.bts.gov/site_map.html

congestion from vehicles and pedestrians entering the United States. The extended waiting times result in air quality deterioration, wastage of fuel, and negative economic cost.

El Paso also attracts non-commercial trans-border traffic including pedestrian and privately owned vehicles (POV) for exported retail. The BTS database shown in the above table indicates about 13.7 million POV and 8.0 million pedestrians entering the U.S. through El Paso ports.[105] **Table 3.5-4** shows a breakdown of the available traffic data for commercial and non-commercial vehicles and pedestrians at the El Paso international entry points.

Table 3.5-4. Monthly Traffic Volume Data at El Paso Ports of Entry

Port of Entry	Monthly Counts (October 2004)		
	Trucks	Privately Owned Vehicles	Pedestrians
Bridge Of The Americas	31,080	555,699	60,730
Fabens	n/a	46,460	1,598
Zaragoza Bridge	25,500	277,264	62,952
Santa Teresa	n/a	18,811	920
Stanton Bridge	n/a	126,459	n/a
Paso Del Norte	n/a	322,876	590,678

Source: El Paso MPO 2006

Using the Quick Response Freight Manual[106] and El Paso socioeconomic data, the BIP study identifies that the generated truck trips for the El Paso area in the year 2005 will grow by about 40 percent over the next 25 years. **Table 3.5-5** shows the anticipated growth for three classes of commercial trucks.

Table 3.5-5. Truck Traffic Growth by Classification

Truck Type	Year 2005	Year 2030	Change	% Change	% Annual
Light Trucks	100,819	140,791	39,972	40	1.3
Medium Trucks	39,618	54,896	15,278	39	1.3
Heavy Trucks	11,739	16,267	4,528	39	1.3
Total Production	**152,176**	**211,954**	**59,778**	**39**	**1.3**

Source: El Paso MPO 2006

3.5.2.3 Transit Service

The Sun Metro system serves more than 13 million passengers a year and offers fixed route and paratransit mass transit services within the City of El Paso, with limited service to El Paso County and Sunland Park, New Mexico. Sun Metro operates 159 fixed route vehicles and 54

[105] Border Crossing Data. Research and Innovative Technology Administration, Bureau of Transportation Statistics. http://www.bts.gov/site_map.html

[106] *Quick Response Freight Manual II*. U.S. Department of Transportation, Federal Highway Administration. September 2007.

LIFT vehicles (vehicles for passengers who are unable to travel on regular routes due to disability) with services starting at 4:15am. The system serves an overall area of about 205 square miles and a population of over 560,000. The existing Sun Metro transit system serves Fort Bliss and WBAMC; the Fort Bliss route runs along the Fred Wilson and Airport Road connections to El Paso International Airport. Sun Metro's operation includes 121 transfer stations where various bus routes intersect.

Sun Metro Area Rapid Transit (SMART) service is provided along SMART Route 101 that offers express service by allowing fewer stops, dedicated lanes, traffic signal control synchronization and signal priority for transit buses. The SMART 101 route operates from 6:00 to 9:00 pm on weekdays with 10-minute service intervals during morning and evening peak hours (6:00 to 9:00 am and 3:00 to 6:00 pm), and 15-minute service intervals during off-peak hours. The weekend service operates from 8:00 am to 6:00 pm with 30-minute service intervals. Job Express is another service of Sun Metro, providing support to those individuals transitioning from welfare to work through transportation to job training, education, employment and childcare destinations.

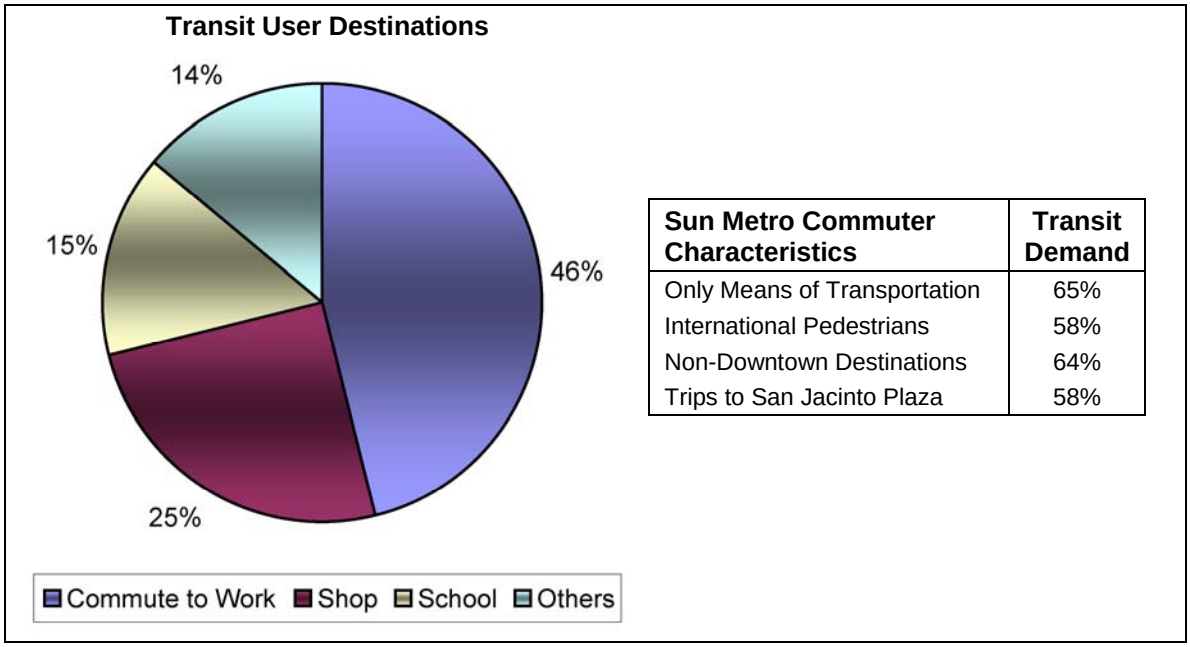
The main hub for Sun Metro's operation is located in downtown El Paso, a block north of San Jacinto Plaza/Park, with sub centers in Socorro and North Park Mall at the Eastside, Northgate, Five Points, and San Antonio terminals. The existing operations at San Jacinto Plaza offer 26 bus routes with 15 on-street bus and two on-street trolley positions. In addition, an International Transit Terminal is currently being built on Santa Fe Street between Third Street and Father Rahm Street. Future expansions and developments planned for this facility will improve communitywide transit use thus reducing auto dependence.

Rural area transit services are provided by El Paso County Rural Transit operational on all days except Sunday and holidays. The existing rural transit connects between Sun Metro transit stations and international Port of Entries. The rural transit service is offered along six routes servicing areas as follows:

- Route 10 (Anthony/Canutillo) - serving Anthony, Vinton, and Canutillo
- Route 20 (Montana Vista) - service line from Sun Metro's Eastside Terminal along Montana Avenue
- Route 30 (Horizon City) - service line along Horizon Boulevard east of Zaragoza Road/Alameda Avenue
- Route 40 (Fabens/Tornillo) - service line along Alameda Avenue east of Zaragoza Road serving Clint, Socorro, Fabens, and Tornillo
- Route 84 (EPCC Mission del Paso via Clint and Socorro)

A survey of the existing Sun Metro transit users revealed the necessity for a strong transit system in the region. The survey indicated that most of the regular transit users commuted to work. **Figure 3.5-2** shows the summarized results of the bus passenger survey.

Figure 3.5-2. Sun Metro Transit Characteristics for El Paso County



Sun Metro Commuter Characteristics	Transit Demand
Only Means of Transportation	65%
International Pedestrians	58%
Non-Downtown Destinations	64%
Trips to San Jacinto Plaza	58%

Source: Conceptual Planning Study Union Plaza Transit Terminal (UPTT) and Camino Real International Transportation Terminal (CRITT). City of El Paso 2008.

The 2006 National Transit Database recorded $6,933,222 in fare revenues and $40,640,177 in annual operating expenses. The standard/express fare is $1.25 with a discount service for students/active military at $0.75 and a reduced fare for seniors and disabled at $0.30. The 2006 National Transit Database showed that Sun Metro received 16 percent of its operating funds from fare revenues, 64 percent from local funds, 19 percent from the federal government and one percent from other sources in the form of grants, advertising, and other sources.[107] No funds were received from the State Government for operations. SMART starter line and international extensions are federally funded and have annual budgets of $4 million and $1 million, respectively. In addition, the SMART bus service UTEP extension has a proposed 2009 annual budget of $6,400,000.

Four new transit centers have been planned for mid year 2011 in the El Paso region (Eastside, Westside, Mission Valley, and Glory Road terminals). The proposed Glory Road terminal will be a five-story structure with a 500-space parking garage.

The City of El Paso conducted a conceptual planning study focused on improving transit in El Paso by reducing auto dependency and providing attractive options to make it easier for commuters to switch to use of mass transit systems. Key aspects of the study include providing reasonable transport times, coordination with local transit service (Sun Metro), improved downtown services, restoring the historic nature of the downtown plaza, forming a SMART bus-rapid transit corridor (from Artcraft Road at Paso Del Norte to BOTA), potential electrified

[107] 2006 National Transit Database data for El Paso and Sun Metro. http://www.ntdprogram.gov/ntdprogram/data.htm.

streetcar service, bi-national transportation service integration and multimodal system including bus, bus-rapid transit, rail and intercity/international buses. The preliminary cost estimate for proposed improvements is approximately $2.4 million.[108] It is, however, anticipated that the project would cost substantially more due to the costs associated with establishing Bus Rapid Transit, right-of-way, economic impacts, and construction.

Commercial bus service is provided by Greyhound Lines and the bus station is located on San Antonio Street in El Paso. Charter bus, taxi, and shuttle service is also offered by a number of commercial companies.

3.5.2.4 Pedestrians and Bikeways

Bicycles are an efficient form of relatively inexpensive transportation that improves the quality of living, health and environment by reducing traffic congestion and air pollution. The El Paso region has bike clubs and other riding clubs like El Paso Bicycle Club and Borderland Mountain Bike Association that promote the use of bicycles among local residents.

There are ten existing bikeways in the El Paso RGMP study region with an overall length of 45.0 miles providing connections to nearby parks, schools, downtown areas, and other commercial and retail destinations. The existing bike routes are along Campbell Street, Joe Battle Boulevard (Loop 375), McCombs Street, Missouri Avenue, North Loop Drive (FM 76), Railroad Drive, Roseway Drive, Trans Mountain Road (Loop 375), Wyoming Avenue, and Yandell Drive. Most of the routes are less than 2 miles in length, with the existing route along Joe Battle Boulevard between railroad and Montana being the longest with a route length of 11 miles. Upon review of the existing bikeways, it was observed that most had curb lanes but lacked appropriate signing and pavement markings. Some of the existing bikeways are located along high speed roadways making them less desirable for bicycle traffic.

Transportation improvement programs and long range transportation plans for the El Paso region propose new bike routes that would eliminate existing discontinuities within the downtown region and establish a bikeway system along the eastern, central, and northwestern regions to provide access to major commercial, residential, and retail destinations, and other activity centers. In addition, the proposed bike routes or paths will be along existing Sun Metro bus routes, facilitating intermodal travel.

3.5.2.5 Railroads

El Paso is currently served by two major rail lines, the Union Pacific Railroad (UPRR) and the Burlington Northern Santa Fe (BNSF) Railway. Located mid-way between the west coast and the eastern limits of the UPRR's southern tier mainline, El Paso is home to a major railroad service center and is a crew change location. Most of El Paso's existing rail lines are located close to the downtown Central Business District (CBD) and adjacent to residential and

[108] *Conceptual Planning Study – Union Plaza Transit Terminal (UPTT) and Camino Real International Transportation Terminal (CRITT)* Sun Metro Transit, City of El Paso 2008.

commercial neighborhoods. The UPRR rail line through El Paso serves as the main east-west route for intermodal containers from the major port complex in Southern California, serving both the mid-west (Chicago) and south-central (Houston/Dallas/New Orleans) market. The BNSF line through El Paso connects to its major east-west line at Belen Junction, approximately 30 miles south of Albuquerque, New Mexico. In addition to domestic travel, the UPRR and BNSF lines connect with Ferrocarriles Nationales de Mexico. Connections to the Mexican carrier use rail bridges across the Rio Grande and the international border in downtown El Paso.

The UPRR carries about 40 trains per day through El Paso, and interchanges about one train per day with Ferrocarriles Nationales de Mexico; the BNSF interchanges two trains per day. The rail cargo to and from Mexico is projected to grow about eight percent per year, requiring the need for alternate routes and other plans to eliminate the congestion and delay caused by the trains through the CBD. Based on the BTS data, approximately 13 percent of the total value of all goods transported by rail in the U.S. passed through El Paso. The El Paso railway system is primarily dominated by intermodal trains. Train traffic is anticipated to grow annually at approximately four to five percent in the next decade.[109]

Rail passenger service in El Paso is provided by Amtrak along the Sunset Limited route from New Orleans to Los Angeles. There is no existing passenger rail system in place within the El Paso region.

3.5.2.6 Aviation

El Paso International Airport (EPIA), owned by the City of El Paso, is the largest commercial airport in the region. The airport, located 5 miles east of downtown El Paso, is 6,800 acres in area with an airport parking capacity of about 5,700 public parking spaces. The airport holds the largest passenger terminal and air cargo complex in the border region with the cargo occupancy rate approaching 70 percent. Major airlines serving EPIA include American, Continental, Delta, Frontier, Southwest, United, and U.S. Airways. Major rental car companies serving the airport include Alamo, Avis, Budget, Dollar, Enterprise, Hertz, National, and Thrifty.[110]

EPIA served approximately 3.3 million passengers, recorded a total of over 99,700 aircraft operations, and was responsible for approximately 67,800 tons of cargo in 2008.[111] The airport is also served by commercial airport shuttle companies and taxi services providing transportation to local destinations. In addition, Sun Metro serves a scheduled route to the airport seven days a week. Many of the troops at Fort Bliss arrive and depart using the public air transportation system at EPIA. EPIA would appear to have the capacity to service an increase in traffic.

The Horizon Airport is a privately-owned, public-use airport located 11 miles southeast of the El Paso CBD. The airport has 90 aircraft and one runway and hosts many drag racing events throughout the year.

[109] *El Paso Regional Intermodal Rail Project – Feasibility and Development Report*. October 2003.
[110] El Paso International Airport website 2009. http://www.elpasointernationalairport.com/2009/index.html.
[111] El Paso International Airport website 2009.

BTS data indicates that even though air freight has increased compared to other modes of travel (truck, train, etc.), it still accounts for only 0.1 percent of the freight tonnage moved in the United States. More than two-thirds of the nation's freight tonnage is still transported by truck.

3.5.2.7 Transportation Improvement Projects

TxDOT, El Paso MPO, and the City of El Paso have identified short and long-term high priority transportation projects in the El Paso and Fort Bliss region to adequately serve the future developments and traffic demand from projected military expansion. Transportation Improvement Programs (TIP) have a three to five year planning horizon, whereas Long Range Transportation Plans (LRTP) have a planning horizon of at least 20 years. When implemented successfully, many projects have the potential to eliminate the demand for any future roadway improvements (e.g., roadway widening) and intermodal travel, thus improving transportation quality for the overall region. Table F-4 (Appendix F) lists the proposed transportation projects and other TIP/LRTP recommendations for the regions that are both BRAC and non-BRAC related.

3.5.3 Traffic Issues Related to Military Growth

3.5.3.1 Fort Bliss and Transportation Impacts

Fort Bliss is the largest source of employment and economic activity in the El Paso study area, thus playing a key role in the region's transportation network. The existing installation is bordered by US 62/Montana Avenue to the south, Loop 375 to the east and north and US 54/Patriot Freeway to the northwest. Fred Wilson serves as the minor east-west arterial from Alabama to Airport Road within the base. The existing access to the main post area is provided at eight different gate locations of which the Robert E. Lee Gate is scheduled for closure.[112] **Table 3.5-6** shows the access control points to Fort Bliss Main Post, WBAMC, and Biggs Army Airfield. Figure 2.3-3 shows the existing and proposed access gates to the Fort Bliss Main Post area.

[112] Interview with Robert Weatherly, Management and Program Analyst, Team Bliss Base Transformation Office, Fort Bliss. April 27, 2009.

Table 3.5-6. Fort Bliss Access Control Points and Gate Schedule

Fort Bliss Access Control Point (ACP)	Gate Schedule
Main Post Area – Existing	
Cassidy Gate	Open 24 hours/7 days
Sheridan North Gate	Open from 05:00 AM to 09:00 PM
Chaffee Gate	Open 24 hours
Robert E. Lee Gate	Closed
Jeb Stuart North Gate	Open from 05:00 AM to 09:00 PM
Marshal Gate (Outbound Traffic Only)	Open from 05:00 AM to 09:00 PM
Pershing Gate	Open from 05:00 AM to 09:00 PM
Remagen Gate	Open from 05:00 AM to 09:00 PM
William Beaumont Army Medical Center Area - Existing	
Fred Wilson Gate	Open 24 hours/7 days
Alabama Gate	Open 24 hours
Biggs Army Airfield - Existing	
Biggs Gate	Open 24 hours/7 days
Proposed Gates - Future Permanent	
Global Reach	Open 24 hours/7 days
Harmon Gate, west of Loop 375	Open 24 hours/7 days
East of Loop 375	Open 24 hours/7 days
Proposed Gates - Future Temporary	
East of Loop 375	Temporary During Construction Only
West of Loop 375	Temporary During Construction Only

Source: Fort Bliss Expansion – Team Bliss; Weatherly 2009

The Fort Bliss Traffic Management Division performs a regular inventory of traffic volume and crashes within the base along the roadways and at the access control points. 24-hour traffic volume counts were obtained to identify hourly traffic demand on an average weekday, the peak hours of traffic demand, and the access gate experiencing the highest demand. The highest demand occurs during the morning peak hours between 7:00 to 9:00 am and matched with that of conventional peak hours. Most of the existing access gates have two entering lanes and experience very little or no delay at the entry points.

The proposed expansions at Fort Bliss are expected to place additional traffic on the existing congested infrastructure. The impact on the local and regional road network was evaluated in the 2007 Fort Bliss Supplemental Programmatic EIS out to the year 2015, considering some proposed improvements. Analysis indicated further degradation in the level of service on some roadways.

I-10 provides the primary east-west regional access to El Paso and Fort Bliss. I-10 runs through downtown El Paso and passes just south of the Main Post of Fort Bliss. Montana Avenue (US 62/180), located immediately south of the Main Post, provides access to locations east of El

Paso. Loop 375 traverses the South Training Areas of Fort Bliss between Montana Avenue and US 54 and connects the northeastern and eastern portions of the city.

Some of the proposed transportation improvements within Fort Bliss as part of projected military expansion are listed below:

- Construction of Inner Loop/Spur 601, a 9.5 mile long route beginning at the junction of US 54 at Fred Wilson and extending Fred Wilson east to terminate at Loop 375 (Construction Start-Fiscal Year 2006).
- Construction of full service interchanges along Inner Loop/Spur 601 at Global Reach Drive and Loop 375 (Construction Start-Fiscal Year 2006).
- Construction of a full intersection at Inner Loop and Airport Road/Sergeant Major Boulevard (Construction Start-Fiscal Year 2006).
- Construction of three new ACPs, one at Global Reach, one gate (Harmon Gate) west of Loop 375 and another east of Loop 375 (Construction Start-Fiscal Year 2005).
- Construction of two temporary gates east and west of Loop 375 for construction purposes.
- Construction of Northeast Parkway, a 20-mile long four-lane limited access facility between I-10/NM 404 interchange and Loop 375 near the Railroad overpass, for trucks and other traffic to bypass I-10 and provide direct access to regional industrial parks (Future Construction).

The new gate at Global Reach is open for traffic; Harmon just west of Loop 375 opened in May 2009, and a third gate east of Loop 375 scheduled to open in April 2011, respectively. The temporary gates for construction will remain open until 2014. All other entry gates to the Main Cantonment Area are being upgraded to accommodate additional traffic and to meet new-anti terrorism and force protection standards. These improvements, in combination with the proposed projects planned for the region, and RGMP recommendations (shown in the following sections), would potentially alleviate the projected growth from military expansion.

3.5.3.2 Future Traffic Operations and Roadway Capacity

Future traffic volumes as obtained from the MPO's Travel Demand Model with the projected growth from BRAC were used to determine the interim operational conditions and roadway capacity. Projections for the years 2015 and 2025 were used to identify the design volumes. Detailed traffic operational analysis of the major roadways within the El Paso County region with the implementation of the proposed LRTP/TIP/Fort Bliss transportation improvements was conducted to identify sections that experienced capacity restraints and unacceptable operating conditions. **Figure 3.5-3** outlines proposed transportation projects, including suggested areas for mass transit (bus, rail), and infrastructure (bridges, overpasses) improvements.

Figure 3.5-4 highlights the projected LOS for 2025 and accounts for traffic volumes associated with projected military expansion growth along major RGMP study roadways. **Figure 3.5-5** illustrates El Paso AADT traffic volumes projected to 2025 (also accounting for projected military expansion) and provides projected daily traffic counts for the potentially most heavily traveled segments. Appendix F (Table F-5) shows the major and minor roadway study segment limits, future 2015 and 2025 traffic data, traffic characteristics, service measure and LOS in the El Paso County RGMP study area. **Table 3.5-7** shows a brief LOS comparison of major and minor roadway segments for the years 2015 and 2025 with BRAC Growth. **Table 3.5-8** lists proposed short (2007-2015) and long-term (2015-2025) improvements to area roadways, along with limits of widening, number of lanes, bridge replacements, preliminary project cost, and funding sources (federal, state, or local).

Plate 3 (at the back of the document) illustrates areas of road construction/upgrades and also highlights roadway segments where future upgrades are recommended in order to improve potentially degrading LOS conditions resulting from increased traffic volumes.

Figure 3.5-3. Proposed Road and Transit Projects

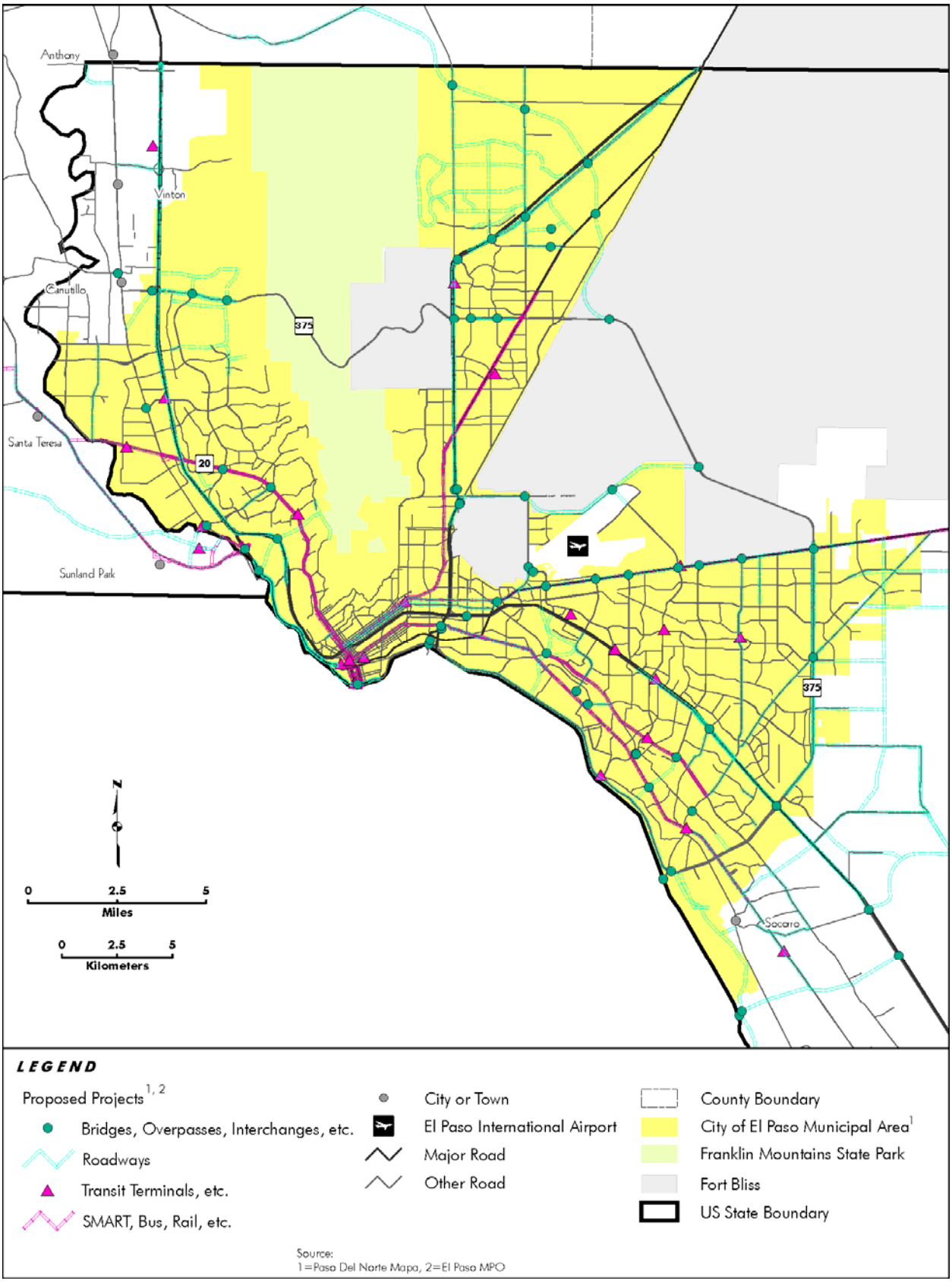


Figure 3.5-4. Projected El Paso Roadway LOS – 2025

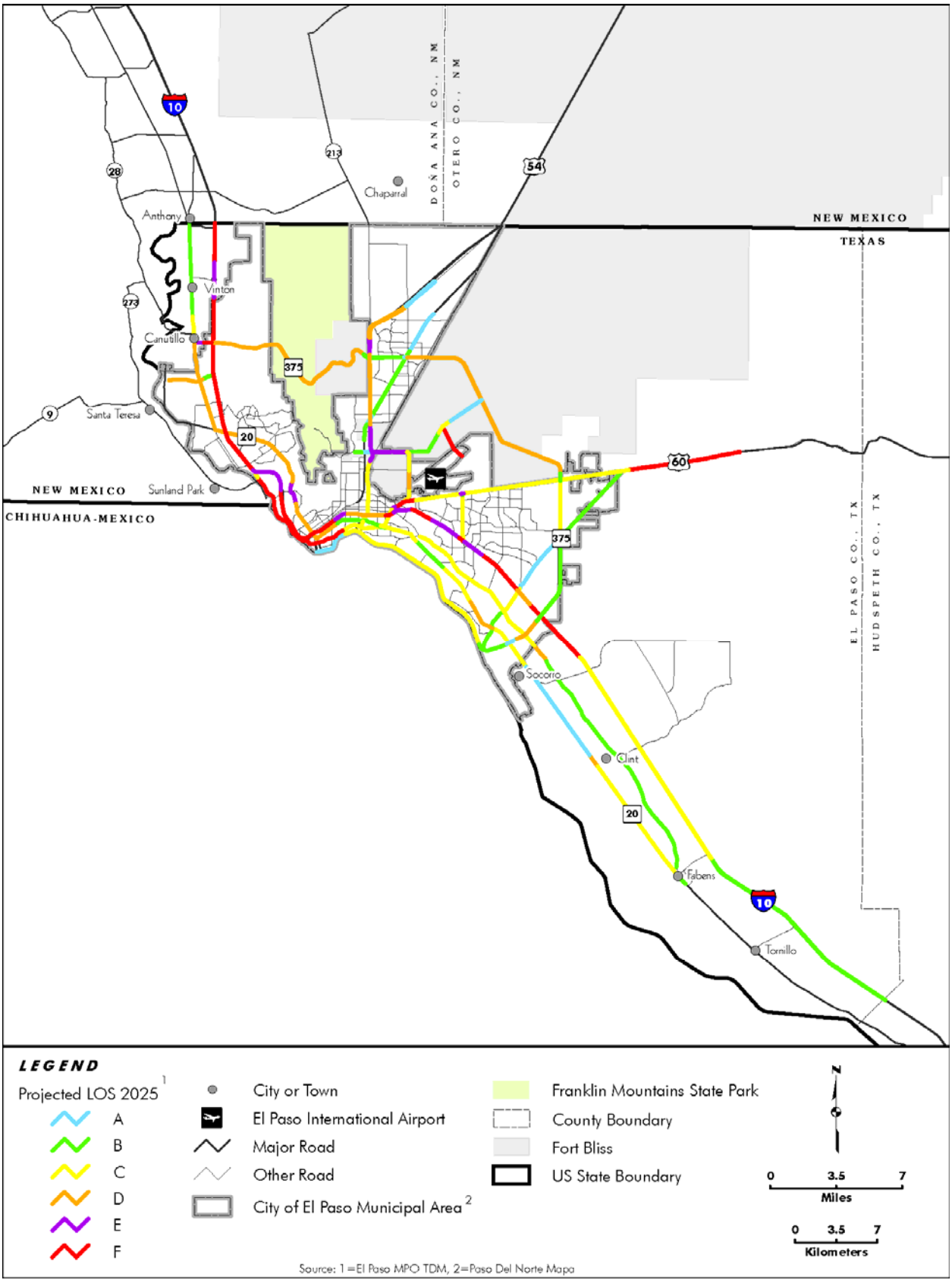


Figure 3.5-5. Projected El Paso AADT Traffic Volumes – 2025

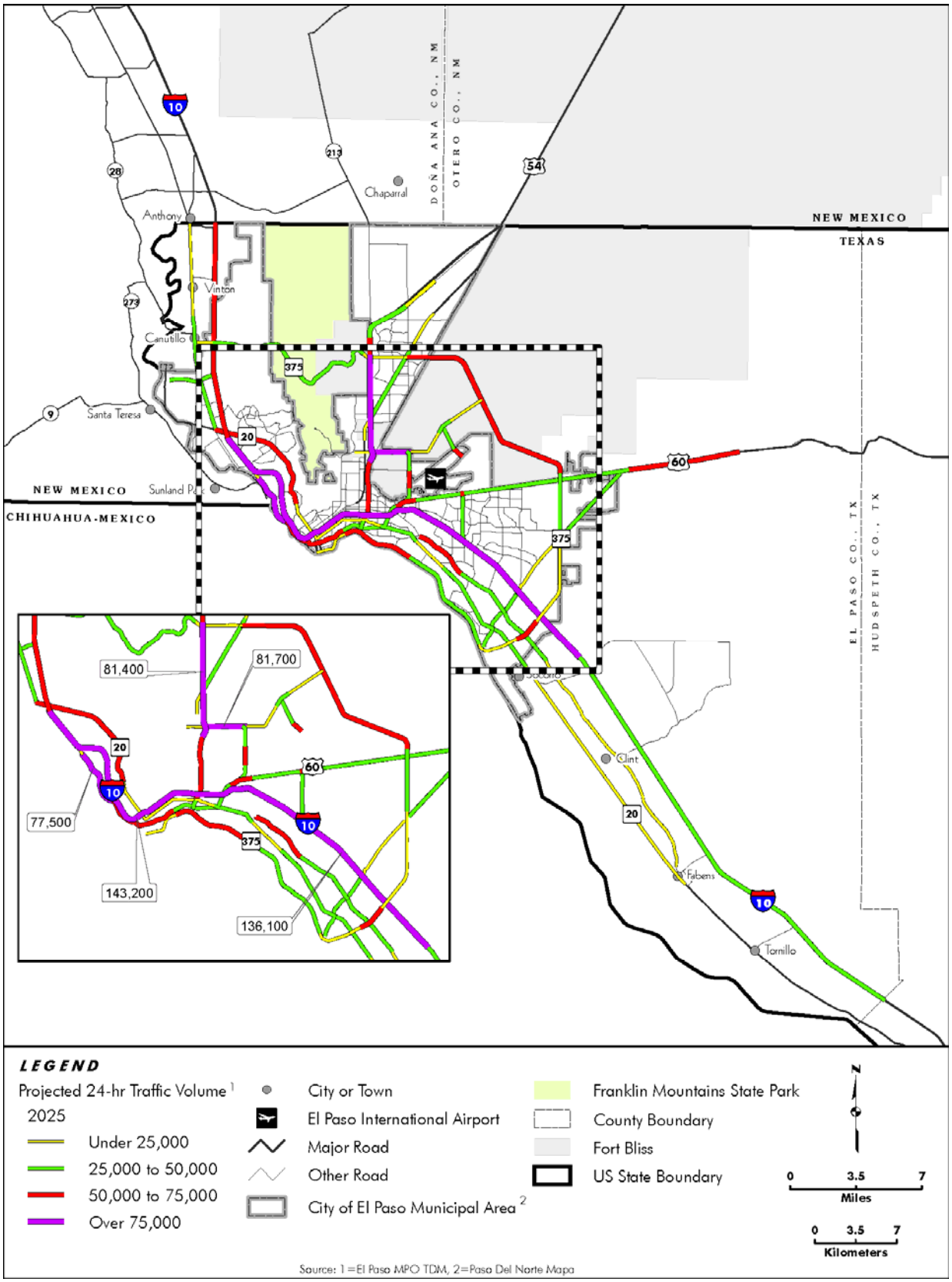


Table 3.5-7. Traffic Data and LOS Along RGMP Major Roadway Segments in El Paso County

Roadway	Description/Segment	2015 TRAFFIC WITH PROJECTED BRAC GROWTH			2025 TRAFFIC PROJECTED BRAC GROWTH		
		# of Lanes	Peak Hour	LOS	# of Lanes	Peak Hour	LOS
I-10	north of Antonio Street/Mountain Pass Boulevard	4	3,240	D	4	4,020	F
	south of Valley Chili Road	4	2,892	D	4	3,290	E
	south of Nashua Road	4	3,438	E	4	3,900	F
	north of Paso Del Norte	4	3,426	E	4	3,660	F
	north of Mesa/SH 20	4	3,930	E	4	4,310	F
	south of Mesa/SH 20	6	5,964	F	**8**	7,680	F
	at US 85 interchange	6	4,968	D	6	5,610	E
	north of Executive Center Boulevard	6	6,702	F	6	7,920	F
	south of Executive Center Boulevard	8	7,458	E	8	8,600	F
	b/w Cotton Street and Piedras Street	10	9,642	E	10	9,510	E
	east of Piedras Street	10	8,430	D	10	8,700	D
	west of Loop 478	10	7,488	C	10	8,700	D
	west of US 62/Paisano Drive	8	7,818	E	8	8,240	F
	west of Trowbridge Drive	8	7,716	E	8	8,240	E
	northwest of Robert E. Lee Road	8	8,514	E	8	9,110	F
	northwest of Hawkins Road	8	8,028	E	8	8,370	E
	west of FM 2316	**8**	7,554	D	**8**	8,480	F
	east of FM 2316/McRae	**8**	6,486	D	**8**	7,560	E
	east of Yarbrough Drive	6	6,270	E	6	8,170	F
	north of FM 659/Zaragoza Road	**6**	5,484	D	**6**	4,630	D
	north of Joe Battle Boulevard/Loop 375	4	4,386	F	4	4,740	F
	north of FM 1281/Horizon	4	2,508	C	4	2,660	C
	north of FM 1110	4	1,908	B	4	2,320	C
	south of FM 1110	4	2,256	C	4	2,610	C
	south of FM 793	4	1,596	B	4	1,900	B
	at El Paso County Line	4	1,566	B	4	1,860	B
Cesar Chavez Memorial Highway/Loop 375/Border	at El Paso Community College	4	828	A	4	690	A
	south of Chamizal National Park	**6**	2,028	B	**6**	3,200	C

Table 3.5-7. Traffic Data and LOS Along RGMP Major Roadway Segments in El Paso County *(Continued)*

Roadway	Description/Segment	2015 TRAFFIC WITH PROJECTED BRAC GROWTH			2025 TRAFFIC PROJECTED BRAC GROWTH		
		# of Lanes	Peak Hour	LOS	# of Lanes	Peak Hour	LOS
Highway/Joe Battle Boulevard	south of US 54	6	2,574	B	6	3,950	C
	at Asacarte Lake	4	2,556	C	4	2,700	C
	north of FM 659/Zaragoza Road	4	2,034	C	4	1,350	B
	south of FM 659/Zaragoza Road	4	2,526	C	4	1,350	B
	south of SH 20	4	1,770	B	4	1,210	A
	south of North Loop Drive	4	2,982	C	4	3,650	D
	west of I-10	4	2,280	C	4	1,390	B
	east of I-10	4	2,958	C	4	1,390	B
	north of Montwood	4	2,034	B	4	2,330	C
	south of US 62/Montana Avenue	4	1,644	B	4	1,800	B
	north of US 62/Montana Avenue	4	2,970	C	4	3,420	D
	east of McCombs Street	4	978	A	4	3,200	D
	west of McCombs Street	4	1,512	B	4	1,290	A
Loop 375/Transmountain Parkway	west of Loop 478	4	1,512	B	4	1,290	B
	west of US 54	4	1,806	B	4	2,810	D
	through Franklin Mountains State Park	4	1,800	B	4	2,810	D
	Talbot Street west of I-10	2	1,920	E	2	2,600	F
	Talbot Street west of Rey Place	2	1,140	D	2	1,680	E
SH 20/Alameda Avenue/ Doniphan Drive/Mesa Street	south of Valley Chili Road	4	984	B	4	1,440	B
	north of Las Malchis	4	786	A	4	1,270	B
	north of Canutillo	4	972	B	4	1,520	C
	south of Canutillo	4	1,590	C	4	2,040	C
	south of Artcraft Road	4	1,746	C	4	2,480	D
	north of Mesa Street	4	1,950	C	4	2,310	D
	west of I-10	6	3,450	D	6	4,190	D
	east of Desert Boulevard	6	2,928	C	6	3,260	C
	north of Executive Center Boulevard	6	3,066	C	6	3,590	D
	north of Sun Bowl Drive	6	3,630	D	6	4,400	E
	east of Cotton Street	2	1,104	D	2	1,380	D

Table 3.5-7. Traffic Data and LOS Along RGMP Major Roadway Segments in El Paso County *(Continued)*

Roadway	Description/Segment	2015 TRAFFIC WITH PROJECTED BRAC GROWTH			2025 TRAFFIC PROJECTED BRAC GROWTH		
		# of Lanes	Peak Hour	LOS	# of Lanes	Peak Hour	LOS
	west of US 62/Montana Avenue	4	1,398	B	4	1,480	B
	east of FM 1505/Clark Drive	2	3,420	F	4	1,890	C
	east of Delta Drive/N Loop Road	4	1,896	C	4	2,100	C
	west of Carolina Drive	4	1,254	B	4	1,460	B
	east of Yarbrough Drive	4	1,866	C	4	1,850	C
	east of Zargoza Road	4	1,908	C	4	2,180	D
	north of Loop 375	4	1,494	B	4	1,520	C
	south of Loop 376	4	1,710	C	4	1,980	C
	south of Moon Road	4	1,392	B	4	1,620	C
	south of Burbridge Street	4	666	A	4	800	A
	south of FM 1110	2	1,248	D	2	1,400	D
	north of FM 793/Fabens Street	2	960	D	2	710	C
	south of FM 793/Fabens Street	2	768	C	2	500	C
	north of Grace Street	2	612	C	2	360	B
US 85/Paisano Drive	north of IH 10	2	840	D	2	680	C
	south of IH 10	4	3,654	F	4	4,650	F
	north of Executive Center Boulevard	4	3,570	F	4	4,510	F
	north of Sun Bowl Drive	4	2,214	D	4	3,170	F
	west of Piedras Street	6	2,172	C	6	2,530	C
	west of US 62/Montana Avenue	6	1,296	B	6	1,620	B
US 62/Montana Avenue	north of SH 20	6	1,296	B	6	1,790	C
	north of Trowbridge Drive	4	2,400	E	4	2,630	E
	east of Montana Avenue	6	4,020	E	6	4,390	F
	west of Airway Boulevard	6	2,262	C	6	2,540	C
	west of McRae Boulevard	6	3,402	E	6	3,830	E
	east of McRae Boulevard	6	2,514	C	6	2,820	C
	west of Limerick Avenue	6	2,556	D	6	2,950	C
	west of George Dieter Drive	4	1,398	C	4	1,620	C
	west of FM 659/Zaragoza Road	4	1,194	C	4	1,590	C

Table 3.5-7. Traffic Data and LOS Along RGMP Major Roadway Segments in El Paso County *(Continued)*

Roadway	Description/Segment	2015 TRAFFIC WITH PROJECTED BRAC GROWTH			2025 TRAFFIC PROJECTED BRAC GROWTH		
		# of Lanes	Peak Hour	LOS	# of Lanes	Peak Hour	LOS
	east of FM 659/Zaragoza Road	4	2,196	D	4	3,330	F
US 54/Patriot Freeway	at BOTA POE	4	2,052	C	4	2,110	C
	south of US 20	6	2,562	B	6	3,120	C
	north of I-10	8	3,660	B	8	4,280	C
	south of Fred Wilson Avenue	6	5,190	E	6	5,340	E
	south of Loop 478	6	4,188	D	6	4,640	D
	north of Loop 478	6	4,404	D	6	4,890	D
	north of Honda Pass Drive	4	3,642	E	6	4,620	D
	south of Loop 375	4	3,030	D	6	4,710	D
	north of Loop 375	4	2,904	D	4	3,390	E
	south of Martin Luther King	4	2,436	C	4	2,810	D
	south of FM 2529 / McCombs Street	4	600	A	4	660	A
Loop 478/US 54A	north of Kemp Avenue	4	696	A	4	1,190	B
	north of Julian Avenue	6	744	A	6	1,220	A
	north of US 54/Patriot Freeway	6	1,188	A	6	1,630	B
	south of Loop 375	6	1,146	A	6	1,550	B
	north of Loop 375	6	1,050	A	6	1,550	B
	north of FM 2529 / McCombs Street	6	936	A	6	1,290	A
Artcraft Road/Paso Del Norte	at State Line	4	900	B	4	1,960	D
	east of SH 20	6	1,170	A	6	2,550	B
FM 76/N Loop Drive	south of Trowbridge	6	2,688	C	6	3,200	C
	south of Tampico	6	2,760	C	6	3,110	C
	north of Yarbrough	4	1,854	C	4	1,880	C
	north of FM 659/Zargoza Road	4	1,608	C	4	1,670	C
	south of FM 659/Zargoza Road	4	1,386	B	4	1,670	C
	north of Loop 375	4	1,284	B	4	1,620	C
	south of Loop 375	4	1,806	C	4	2,190	D
	south of Moon Road	4	1,422	B	4	1,300	B
FM 659/Zaragoza Road	north of FM 76/N Loop Drive	4	1,392	C	6	1,810	B

Table 3.5-7. Traffic Data and LOS Along RGMP Major Roadway Segments in El Paso County *(Continued)*

Roadway	Description/Segment	2015 TRAFFIC WITH PROJECTED BRAC GROWTH			2025 TRAFFIC PROJECTED BRAC GROWTH		
		# of Lanes	Peak Hour	LOS	# of Lanes	Peak Hour	LOS
	west of I-10	4	2,100	D	**6**	2,720	C
	east of I-10	6	2,448	C	6	2,780	C
	north of Loop 375	4	660	A	**6**	1,120	A
	south of US 62/Montana Avenue	4	1,008	B	**6**	1,760	B
Fred Wilson Avenue/Spur 601	west of US 54A/Dyer Street	**4**	888	A	**4**	1,050	B
	east of US 54A/Dyer Street	**6**	900	A	**6**	810	A
	west of US 54	**6**	900	A	**6**	830	A
	east of US 54	**6**	4,602	E	**6**	4,910	E
	east of Airport Road	**6**	1,110	A	**6**	1,350	B
	west of Global Reach	**4**	1,548	C	**4**	1,530	C
	east of Global Reach	**6**	1,422	B	**6**	810	A
	west of Loop 375	**6**	1,620	B	**6**	1,020	A
	Global Reach east of Loop 375 and north of Walter Jones Boulevard	**2**	7,608	F	**2**	6,460	F
	Global Reach east of Loop 375 and north of Walter Jones Boulevard	**2**	4,500	F	**2**	4,400	F
Airport Road	south of Butterfield Trail	**6**	2,556	C	**6**	2,660	C
	north of Rickers	**6**	3,834	D	**6**	4,140	D
	north of Montana Avenue	**4**	1,230	B	**4**	1,620	C
FM 2316/McRae	north of I-10	6	2,088	B	6	2,610	C
	south of US 62/Montana Avenue	4	1,686	B	4	1,600	B

Sources: *Traffic Data Source: Texas Department of Transportation Traffic Count Database, Year 2007; El Paso MPO TDM - 2015 w/BRAC, 2025 w/BRAC*

Notes: LOS for Freeways / Expressways and other Multi-lane Urban Principal Arterials measured in terms of Density in passenger car per mile per lane (pcpmpl)

LOS for Two-lane Urban Principal / Minor Arterial Streets measured in terms of Percent Time Spent Following (PTSF%)

LEGEND:

Bold Blue Text	Short or Long-Term LRTP/TIP Improvements
Highlighted	Segments operating at unacceptable LOS
Highlighted	RGMP Proposed Roadway Widening Improvements
Highlighted	RGMP Proposed Roadway Functional Classification Improvements (Requires upgrade to a Freeway/Expressway Facility)

Table 3.5-8. El Paso County Proposed Short- and Long-Term Improvement Projects

Proposed Project	No.	From	To	Type	Existing / LRTP Lanes	Proposed Lanes	Implementation Period	Need and Purpose	Approximate Project Cost	Funding Sources (PE/CONST)
Proposed Short-Term Projects (2007-2015):										
Interstate Highway 10 (I-10)	1	north of Mesa Street/SH 20	south of Valley Chili Road	Interstate Widening (3.70 miles)/ Bridge Replacements (5 overpass & 2 bridge)	4	6	2007-2015	Capacity	$108,500,000	Fed/State
	2	at Franklin Avenue	-	Interstate Widening (0.80 miles)/ Bridge Replacements (10 bridge)	6	8	2007-2015	Capacity	$204,000,000	Fed/State
	3	east of Franklin Avenue	-	Interstate Widening (0.20 miles)	8	10	2007-2015	Capacity	$1,000,000	Fed/State
	4	west of Cotton Street	-	Interstate Widening (0.34 miles)	10	12	2007-2015	Capacity	$1,700,000	Fed/State
	5	US 62/ Paisano Drive	Trowbridge Drive	Interstate Widening (0.35 miles)/ Bridge Replacements (2 overpass)	8	10	2007-2015	Capacity	$21,750,000	Fed/State
	6	Trowbridge Drive	Robert E. Lee Road	Interstate Widening (1.20 miles)/ Bridge Replacements (2 overpass)	8	10	2007-2015	Capacity	$26,000,000	Fed/State
	7	Robert E. Lee Road	Hawkins Road	Interstate Widening (1.37 miles)/ Bridge Replacements (2 overpass)	8	10	2007-2015	Capacity	$26,850,000	Fed/State
	8	Hawkins Road	FM 2316/ McRae	Interstate Widening (1.50 miles)/ Bridge Replacements (2 overpass)	8	10	2007-2015	Capacity	$27,500,000	Fed/State
	9	FM 2316/ McRae	Yarbrough Drive	Interstate Widening (1.45 miles)/ Bridge Replacements (2 overpass)	8	10	2007-2015	Capacity	$27,250,000	Fed/State

Table 3.5-8. El Paso County Proposed Short- and Long-Term Improvement Projects *(Continued)*

Proposed Project	No.	From	To	Type	Existing / LRTP Lanes	Proposed Lanes	Implementation Period	Need and Purpose	Approximate Project Cost	Funding Sources (PE/CONST)
	10	Yarbrough Drive	FM 659/ Zaragoza Road	Interstate Widening (1.75 miles)/ Bridge Replacements (1 overpass & 1 bridge)	6	8	2007-2025	Capacity	$38,750,000	Fed/State
	11	FM 659/ Zaragoza Road	Joe Battle Boulevard/ Loop 375	Interstate Widening (0.87 miles)	4	6	2007-2025	Capacity	$4,350,000	Fed/State
Loop 375/ Talbot Street	12	west of I-10	Rey Place	Widening (0.40 miles)	2	4	2007-2015	Capacity	$1,200,000	
US 85/ Paisano Drive	13	south of I-10	north of Executive Center Boulevard	Widening (1.05 miles)	4	8	2007-2015	Capacity	$6,300,000	Fed/State/ Local
Paisano Drive	14	north of Trowbridge Drive	south of Montana Avenue	Widening (0.18 miles)	4	6	2007-2015	Capacity	$540,000	State/Local
Paisano Drive	15	at US 62/ Montana Avenue	-	Proposed interchange	6	6	2007-2015	Traffic Operations and Capacity	$0	Fed/State/ Local
US 62/ Montana Avenue	16	Hawkins Road	McRae Boulevard	Widening (0.92 miles)	6	8	2007-2015	Capacity	$2,760,000	Fed/State /Local
US 54/ Patriot Freeway	17	Cassidy Road	Fred Wilson Avenue	Interstate Widening (0.30 miles)/ Bridge Replacements (2 flyover bridges)	6	8	2007-2015	Capacity	$21,500,000	Fed/State
Fred Wilson Avenue/ Spur 601	18	US 54/Patriot Freeway	Airport Road	Widening (0.47 miles)	6	8	2007-2015	Capacity	$1,410,000	Fed/State/ Local

Table 3.5-8. El Paso County Proposed Short- and Long-Term Improvement Projects *(Continued)*

Proposed Project	No.	From	To	Type	Existing / LRTP Lanes	Proposed Lanes	Implementation Period	Need and Purpose	Approximate Project Cost	Funding Sources (PE/CONST)
Global Reach E of Loop 375 & N of Walter Jones Boulevard	18	Fred Wilson Avenue/Spur 601	Purple Heart Memorial/ Loop 375	Widening (2.50 miles)	2	4	2007-2015	Capacity	$7,500,000	Fed
Global Reach E of Loop 375 & N of Walter Jones Boulevard	20	Fred Wilson Avenue/Spur 601	-	Widening (1.30 miles)	2	6	2007-2015	Capacity	$7,800,000	Fed
TOTAL APPROXIMATE (SHORT-TERM + LONG-TERM) COST ESTIMATE - EL PASO COUNTY									**$536,660,000**	
Proposed Long-Term Projects (2015-2025):										
Interstate Highway 10 (I-10)	21	south of Nashua Road	north of Antonio Street	Interstate Widening (7.91 miles)/ Bridge Replacements (5 overpass & 3 bridge)	4	6	2015-2025	Capacity	$149,550,000	Fed/State
	22	south of Mesa Street	south of Sunland Park	Interstate Widening (0.53 miles)/ Bridge Replacements (1 overpass)	8	10	2015-2025	Capacity	$12,650,000	Fed/State
	23	at US 85 Interchange	-	Interstate Widening (1.67 miles)/ Bridge Replacements (2 cross-street & 2 flyover bridge)	6	8	2015-2025	Capacity	$68,350,000	Fed/State
	24	south of US 85 Interchange	north of Executive Center Boulevard	Interstate Widening (1.52 miles)/ Bridge Replacements (2 overpass)	6	10	2015-2025	Capacity	$35,200,000	Fed/State
	25	at Executive Center Boulevard	-	Interstate Widening (0.42 miles)/ Bridge Replacements (1 bridge)	6	8	2015-2025	Capacity	$22,100,000	Fed/State

Table 3.5-8. El Paso County Proposed Short- and Long-Term Improvement Projects *(Continued)*

Proposed Project	No.	From	To	Type	Existing / LRTP Lanes	Proposed Lanes	Implementation Period	Need and Purpose	Approximate Project Cost	Funding Sources (PE/CONST)
	26	south of Executive Center Boulevard	Franklin Avenue	Interstate Widening (2.37 miles)/ Bridge Replacements (2 overpass & 3 bridge)	8	10	2015-2025	Capacity	$91,850,000	Fed/State
	27	Cotton Street	Piedras Street	Interstate Widening (0.84 miles)/ Bridge Replacements (2 overpass)	10	12	2015-2025	Capacity	$24,200,000	Fed/State
Loop 375/ Talbot Street	28	Rey Place	Doniphan Drive/SH 20	Widening (0.52 miles)	2	4	2015-2025	Capacity	$1,560,000	State/Local
SH 20/ Mesa Street	29	north of Sun Bowl Drive	south of Executive Center Boulevard	Widening (0.75 miles)	6	8	2015-2025	Capacity	$2,250,000	State/Local
US 85/ Paisano Drive	30	south of Executive Center Boulevard	north of Yandell Drive	Widening (2.03 miles)	4	6	2015-2025	Capacity	$6,090,000	Fed/State/ Local
US 62/ Montana Avenue	31	east of FM 659/Zaragoza Road	Oshea Street	Widening (3.25 miles)	4	6	2015-2025	Capacity	$9,750,000	Fed/State/ Local
US 54/ Patriot Freeway	32	Loop 375	-	Interstate Widening (1.89 miles)/ Bridge Replacements (2 overpass)	4	6	2015-2025	Capacity	$29,450,000	Fed/State/ Local
TOTAL APPROXIMATE (SHORT-TERM + LONG-TERM) COST ESTIMATE - EL PASO COUNTY									**$453,000,000**	

3.5.4 Recommendations

3.5.4.1 General Recommendations

Understanding future land development patterns and anticipated changes in population density and commuting patterns will influence future locations where thoroughfare system improvements should be made. Growth can be directed to areas through proactively providing access and mobility in the thoroughfare system. Coordination between MPO and regional planners will be essential for making key decisions and integrating mutually supportive planning actions.

Communities can implement new approaches to transportation planning, such as better integration of land use and transportation planning efforts; increasing the availability of high quality transit service, creating redundancy, resiliency and connectivity within their road networks; and ensuring connectivity between pedestrian, bike, transit, and road facilities. In short, coupling a multi-modal approach to transportation with supportive development patterns creates a variety of transportation options.

An effective and affordable transportation system must include an efficient public transit system that enhances multi modal commuting to the various destinations. Detailed design of proposed improvements is beyond the scope of this report; however, Travel Demand Management recommendations should be studied for benefit and implementation in areas throughout El Paso County to mitigate the impacts of future traffic demand and congestion. Appendix F provides detailed transportation recommendations. What follows is a synopsis of proposed recommended strategies:

- Employ Smart Growth principles with the aim of achieving an efficient transportation system with improved multi-modal mobility in the region and accessibility within existing built-up areas.
- Disperse traffic over a well-connected grid of roadways instead of concentrating on a few major streets. Place emphasis on the use of public transportation, bicycle and walking, thus minimizing the dependence on automobiles through increased compactness of development.
- Improve intersections by adding exclusive turn lanes, improved turning radii, sight distance and signalization improvements, etc.
- Provide medians, channelization, or other design features to improve capacity.
- Modify design speeds along major arterials to improve capacity.
- Modify signal phasing and timing to prioritize through-movement along major arterials.
- Develop High Occupancy Vehicle lanes along urban freeway and expressway corridors to improve traffic flow and air quality.
- Employ time of day turn restrictions to driveways and other local roads to improve flow.

- Implement corridor-wide signal coordination and interconnection to minimize delay.
- Implement traffic signal priority for high priority vehicles.
- Develop queue-jump lanes and other geometric features to provide transit priority.
- Locate transit bus-stops and shelters off the line of sight of the traveling public to avoid any sight distance obstructions to the vehicular traffic.
- Employ access management techniques to preserve maximum capacity by preventing driveway accesses at major intersections.
- Employ Travel Demand Management tools (employer partnerships, carpools/shuttle service, alternate or staggered work hours, zoning regulations promoting walking and biking, etc.) to maximize capacity.

3.5.4.2 Streets and Highways

Roadway Capacity

- Implement roadway widening and bridge improvements to the existing roadway network (as outlined in Table 3.5-8).
- Encourage and develop a public friendly mass transit system that would reduce the presence of Single Occupant Vehicles on the major roadway and arterials.
- Continually monitor Fort Bliss gate capacity, operations and use to avoid severe congestion on roads adjacent to them.

Roadway Safety

- Initiate roadway improvements including additional capacity, geometry changes and traffic control devices to improve traffic safety.
- Rank roadways and intersections based on the crash and severity ratings to identify sections with the topmost priority for safety improvements.
- Study crash data and compare for year, month, date, and time of crash occurrence, type of crash, location of crash occurrence, jurisdiction and the degree of injury suffered in the crash.
- Calculate intersection crash rates per million entering vehicles and segment crash rates per million vehicle miles traveled to standardize the raw crash data and develop a ranking of high crash locations throughout the county.
- Determine crash severity ranking based on the number of fatal and injury (Type A, B or C) crashes.

Ports of Entry

- Operate all POEs at full capacity by keeping all the inspection booths open so that more number of vehicles can be inspected.

- Implement advanced ITS technology that focuses on expedited processing, compliance monitoring and traffic management at all the POEs to reduce average inspection time per vehicle.

Truck Corridors

- Establish intermodal operations between the truck and railroads to minimize the number of trucks traveling through the El Paso commercial district.
- Designate outer city corridors as major truck corridors with wider lane widths and shoulders, truck climbing and bypass-lanes, with less desirability over inner city corridors for truck use.

Transit Service

Bus Transit

- Provide transit, pedestrian, and bikeway accommodations for traffic volumes on local roadways to and around key facilities such as Medical Centers, Fort Bliss Access Control Points (entry gates), large shopping centers, downtown, and campuses.
- Develop dedicated bus lanes along interstates and highways through downtown El Paso to allow expedited travel.
- Develop a rapid transit service system to offer clean buses, affordable rates, improved ticketing system or monthly passes, courteous staff etc., to encourage transit use.
- Build pedestrian-friendly bikeways and walkways, bike racks, parking garages, etc., adjacent to the proposed SMART route lines, bus stops and transfer station to encourage multi modal travel.
- Ensure adequate transit stops, pedestrian facilities and safety at Paso Del Norte (the highest pedestrian crossing bridge) to improve international travel and operations.

Commuter Rail

- Introduce intermodal transportation measures including transit, pedestrian walkways, and bike paths.
- Assess current use of the rail system - consider opportunities to use alternative rail infrastructure to free up existing lines for new commuter rail service.
- Establish intergovernmental coordination committees to study the benefits of a possible commuter rail line to the region. Recommendations for the study follow:
  - Identify future travel and public demand for the proposed commuter rail.
  - Examine cost benefits from eliminating auto-trips along the commuter rail route, eliminating future road construction and maintenance, and eliminating exposure to property damage, injury and fatality crash exposures of riders.
  - Identify and propose phased operational lines and minimum train station locations until demand is met.

- Examine potential air quality improvements, energy savings, time and cost savings, and effect on quality of life.
- Commercial development opportunities and land use.
- Address local organizations and agencies as potential alternate funding sources in collaboration with federal and state funding.

Pedestrians and Bikeways

- Improve connectivity/continuity by completing the existing gaps in the downtown and other commercial area pedestrian sidewalk/bikeway network.
- Extend existing short discontinuous routes to provide long continuous routes with connections to activity centers to promote bicycle travel.
- Provide safe and convenient linkages between schools, neighborhoods and residential communities.
- Implement pedestrian and bike paths for all proposed roadway projects and subdivision or other planned unit developments to encourage pedestrian friendly environment.
- Provide contraflow or reversible bike lanes to encourage bicycle traffic.
- Restrict speeds in local residential streets to enhance pedestrian and bicycle safety.
- Provide open sight lines, pedestrian scale lighting, vertical curbs between roadway, sidewalk and on-street parking and planting strips to promote pedestrian safety.
- Regular maintenance of existing pedestrian walkways and bike paths to promote the quality of travel.
- Include pedestrian refuge islands, medians and intersection curb extensions to minimize pedestrian crossing distance.
- Share the road and on-road bike lanes should be given careful consideration in the future planning process to enhance multimodal and environmental friendly way of transportation.
- Survey existing routes for suitability of being shared bicycle routes without compromising traffic operations and bicyclist safety. Proper enforcement is required to prevent any bicyclist or motorist violation or abuse of the facilities.
- Use adequate signing, pavement markings and barrier separations to promote safety advisory and efficient travel.
- Design facilities to achieve safe co-existence of bicyclists with other motorized modes of transportation to attain full integration of bicycles with other transportation modes.
- Replace drainage grate with curb inlets where possible, or locate grates perpendicular to the direction of travel to enhance safety of bicycle travel.
- Rehabilitate pavement surfaces to improve travel.
- Bike routes at rail road crossings should be at right angles to the biker direction of travel.

- Design traffic control signals for pedestrians and bicyclists with adequate timing for street crossings.
- Integrate bicycle travel with public transit through the following recommendations:
  - Provide bike lanes or safe bike facilities along the roads leading to the transit station and at transfer stations.
  - Provide safe bike raking racks by transit stops.
  - Provide bike-carriers or racks in transit buses to enable users to take the bike on the bus for use at the end of their transit trip.
  - Establish connections between residential areas and transit stops with adequate bicycle parking to promote intermodal travel among residents.
  - Study existing demand for bike parking at traffic generators.

3.5.4.3 Railroads

- Locate new sites for intermodal operation that would minimize impacts to the CBD, residential and commercial regions, including an EPIA site.
- Relocate some existing rail lines within downtown El Paso to allow land acquisition and promote development of prime sites.
- Redirect the existing and proposed truck corridors through the El Paso CBD to use the intermodal facility located at the UPRR and BNSF rail yards to reduce congestion caused by heavy vehicle traffic during the peak hours in the business district.
- Create intermodal transportation hubs for transfer of freight carriers from truck to rail lines and airplanes to promote faster transport of goods and to reduce bottlenecks caused by heavy truck traffic on major highways and interstate.
- Study the creation of a new international rail crossing and interchange at Santa Teresa, New Mexico (requires the development of companion facilities in Mexico).
- Commission a planning study to limit freight rail to outer city limits and consider conversion of inner city rail lines to commuter rail.
- Consider the existing yard developments and expansion for increased capacity.

3.5.4.4 Aviation

- Construct separate runways, cargo areas and facilities should be constructed at EPIA to increase the capability for an expected increase in outbound air freight volume from El Paso International Airport.
- Construct the EPIA intermodal facility to promote mode share of freight tonnage with rail, waterway, and trucks.

Table 3.5-9 lists recommended actions from the Action Plan (Appendix G) for Transportation. The table names the action, lists the entity or entities responsible for implementation, the timing and rationale for action, estimated available resources, possible funding sources, and implementation indicators.

Table 3.5-9. Action Plan Recommendations for Transportation

Recommended Action	Responsible Entity/ Regional Ops	Timing/ (Rationale)	Estimated Resources	Funding Source(s)/ Implementation Strategies	Implementation Indicator
1. Implement planned road improvements (See RGMP Section 3.5 and Appendix F for listing)	- City of El Paso (lead) - El Paso County - State of Texas - Federal DOT - U.S. Congress	There is currently a plan in place with timing milestones	$ Billions	Internal City Funds County State DOT Federal DOT http://www.txplanning.org http://www.txdot.gov/about_us/administration/divisions/tpp.htm http://www.txdot.gov/txdot_library/publications/stimulus.htm http://www.fhwa.dot.gov/aap/PRIMER09.PDF http://www.fhwa.dot.gov/legsregs/legislat.html http://flh.fhwa.dot.gov/defense.htm Consider Congressional assistance Note the five year federal DOT authorization is in discussion now and is expected out next year	Track Plan Periodically
2. Develop a plan for council approval to utilize Smart Growth concepts to improve known transportation problem areas. • Transportation Dem and Management Tools • Corridor wide signal coordination and interconnection • This approach is a critical part of comprehensive planning and is	- City of El Paso (lead) - El Paso Municipal Planning Organization	See Comprehensive Plan, Item 1, Section 3.4	$300,000	http://www.smartgrowth.org/about/bytype.asp?typ=16 http://www.smartgrowth.org/search/default.asp http://www.smartgrowth.org/ http://www.realtor.org/smart_growth.nsf/pages/grants http://www.txplanning.org http://www.txdot.gov/about_us/administration/divisions/tpp.htm	Plan developed

Table 3.5-9. Action Plan Recommendations for Transportation *(Continued)*

Recommended Action	Responsible Entity/ Regional Ops	Timing/ (Rationale)	Estimated Resources	Funding Source(s)/ Implementation Strategies	Implementation Indicator
required for amending the major thoroughfare plan				http://www.txdot.gov/txdot_library/publications/stimulus.htm http://www.fhwa.dot.gov/aap/PRIMER98.PDF http://flh.fhwa.dot.gov/defense.htm	
3. Create public-private partnerships for transportation system improvements • Use information and presentations by a national public-private partnership association to identify strategies for use of private sector funding for public purpose, including enhanced used leasing	- City of El Paso (lead) - El Paso Developers - Fort Bliss	6 months (Utilize experience of others in use of alternate fund sources)	About $10,000	Internal City Funds Chambers of Commerce Paso del Norte Business Interests http://www.ncppp.org/ http://www.ncppp.org/councilinstitutes/index.shtml http://www.fhwa.dot.gov/PPP/ http://www.treas.gov/press/releases/tg65.htm http://eul.army.mil	Conference held
4. Develop a plan to extend public transit connections from residential areas to work sites, including specific station area plans • Work in this area will be supplement to the transit component of the Comprehensive Plan	- City of El Paso (lead) - El Paso Transit Authority - MPO - El Paso County - See Item 1, Section 3.4	6 months	$375,000	City County State Federal DOT Congress http://www.fta.dot.gov/funding/grants/grants_financing_3623.html Do not forget new transportation reauthorization now under consideration in the House of Representatives Consider Congressional assistance	Plan developed

Table 3.5-9. Action Plan Recommendations for Transportation *(Continued)*

Recommended Action	Responsible Entity/ Regional Ops	Timing/ (Rationale)	Estimated Resources	Funding Source(s)/ Implementation Strategies	Implementation Indicator
5. Plan for expanded industrial transportation resulting from the inevitable growth of El Paso's manufacturing and distribution businesses. • This activity will be a supplement to the Comprehensive Plan	- City of El Paso (lead) - MPO - Federal and State DOT - Airport Authority - Fort Bliss - Railroads servicing El Paso	1 year (Plan for long range expansion of commerce and industry generated traffic)	$1,000,000	Look to the upcoming five year DOT reauthorization http://www.hud.gov/offices/cpd/communitydevelopment/programs/ http://www.faa.gov/airports_airtraffic/airports/aip/ http://www.txplanning.org http://www.txdot.gov/about_us/administration/divisions/tpp.htm Consider Congressional assistance	Plan developed

3.6 Public Utilities and Infrastructure

3.6.1 Introduction and Methodology

A community or a region's capacity for sustaining new growth and development is largely dependent on its ability to provide for basic services such as water supply and distribution, wastewater collection and treatment, storm water management, solid waste management, gas, electricity, and communications. The providers of utilities and infrastructure have traditionally been a combination of public and private sector entities. This section identifies agencies that provide public utility services to the region. Using projected population increases established from the REMI modeling effort and the land use scenarios developed in Section 3.2, this section also determines if adequate capacity exists to accommodate new growth and, if not, what additional infrastructure is required to meet future needs.

For the purposes of this section, the term "infrastructure" refers to several distinct areas of basic services, each planned for and funded differently and not categorized as one all-inclusive entity. For instance, utilities such as water, sewer, gas, and electricity are user-fee based (often including both operations and capital needs in the rates); transportation is largely a state component; schools are controlled by elected boards and funded separately; and community services are contained in local city and county budgets.

As used in this report, infrastructure refers to those utility systems that serve developed areas. The major utility service providers for the El Paso Region include:

- Water – El Paso Water Utilities (EPWU)
- Wastewater – El Paso Water Utilities (EPWU)
- Electric – El Paso Electric
- Gas – Texas Gas Service, a Division of ONEOK
- Communications – Time Warner, AT&T
- Solid Waste Management – City of El Paso, private contractors

Information contained in this section is derived from a review of the most recent plans and studies of regional infrastructure components, including the *Fort Bliss Mission and Master Plan Final Supplemental Programmatic Environmental Impact Statement*, the *Far West Texas Water Plan* (FWTWP), the *El Paso County Regional Water and Wastewater Service Plan*, the *City of El Paso Annexation Assessment and Strategy*, and the *Draft Vision 2020 Regional Plan for Doña Ana County*. El Paso Water Utilities cooperated in this assessment by providing base maps of existing and proposed water and wastewater system improvements.

Key points from this analysis include:

- EPWU has the treatment capacity to serve a net population increase of approximately 684,200, which is more than adequate to serve the projected growth in El Paso through the year 2020.
- While total treatment capacity is adequate, new development will require capital improvements to EPWU's water supply, storage, transmission, and distribution system. The strategy to meet future demand for water through the year 2020 is to increase conservation efforts, increase reclaimed water use, and increase use from the Rio Grande; longer term needs will be met by importation of groundwater from outside El Paso County.
- EPWU has a total wastewater treatment capacity of 94.2 MGD. This is sufficient water treatment system capacity to serve 966,000 residents, which is adequate to serve projected growth in El Paso.
- Under its current permit, the Clint Landfill has a service expectancy of 20 years, based on its present usage rate. The Clint Landfill receives solid waste from residents and commercial business within the City of El Paso.
- EPEC's System Expansion Plan for 2006-2015 identifies improvements needed to maintain system reliability through 2015; EPEC is confident the current facility planning is sufficient to serve the anticipated Fort Bliss load.

3.6.2 Existing Conditions

The County of El Paso

Water. Infrastructure for domestic water services includes the water supply, treatment facilities, and storage and distribution systems. Water supply, demand, and capacity is measured using a variety of units: gallons (gal), acre-feet (ac-ft), gallons per day or more often million gallons of water per day (MGD), gallons per person per day (gppd) and acre-feet per year (AF/yr).[113] The availability of a dependable water supply is a major concern of growing communities in the desert southwest. El Paso is no exception. With both retail and wholesale customers, El Paso Water Utilities (EPWU) supplies about 90 percent of all municipal water in El Paso County. EPWU provides water directly to residents of the City of El Paso and Fort Bliss. EPWU's wholesale customers include the Homestead Municipal Utility District (MUD), Lower Valley Water District, and the Village of Vinton. Other wholesale water providers include the El Paso County Water Improvement District Number 1, the Lower Valley Water District, the El Paso County Water Conservation and Improvement District Number 4, and the Horizon MUD.

The State of Texas is divided into regional water planning districts. The Far West Texas Water Planning Group is comprised of water users within a seven county area comprised of El Paso, Brewster, Culbertson, Hudspeth, Jeff Davis, Presidio, and Terrell. The planning group is charged

[113] Conversions: 1 ac-ft = 325,851 gal, 1,000,000 gal = 3.068 ac-ft, 1 MGD = 1,120 AF/yr, 1AF/yr = 0.0009 MGD

with developing a 30-year plan for managing a sustainable water supply. The Far West Texas Water Plan (FWTWP) is to be updated every six years and is part of the official Statewide Water Plan. The latest plan, adopted in 2006, estimates demand for water in El Paso County will increase from its 2000 level of 417,000 acre-feet per year to over 438,000 acre-feet per year by 2020.[114]

The City of El Paso

Water. The El Paso Water Utilities (EPWU) (established by city ordinance in 1952) is maintained by the Public Service Board and manages/operates the water and waste water system for the City of El Paso. Its five-member board of trustees is comprised of the mayor of the City of El Paso and four residents of El Paso County.

EPWU operates two treatment plants with a combined treatment capacity of 100 MGD (approximately 112,000 AF/yr) that treat water drawn from the Rio Grande. Generally speaking, water quality is poor and requires a high level of treatment. Currently, EPWU owns or leases water rights of about 65,000 AF/yr.

Total demand for water has been declining since the late 1990s. Current total demand is about 110,000 AF/yr (approximately 98 MGD). Per capita demand has been reduced from about 225 gppd in the 1970s to about 134 gppd in 2008. EPWU attributes this decline to conservation practices and pricing strategies.

As a conservation measure, the EPWU currently supplies over 4.6 MGD of reclaimed water for use on golf courses, city parks, school grounds, apartment landscapes, and industrial uses. Another 5 MGD of reclaimed water is used in the operation of the treatment plant or injected back into the Hueco-Bolson aquifer for recharge.

In searching for new sources of water supply, EPWU and Fort Bliss entered into a partnership to construct the world's largest inland desalination plant, the Kay Bailey Hutchinson Desalination Plant, which produces 27.5 MGD of fresh water daily. The plant draws previously unusable brackish groundwater from the Hueco-Bolson, treating it with a reverse osmosis process. The treated water is then blended with water from other wells and sent to the distribution system.

New growth will put demands on the city to provide additional infrastructure. In planning for anticipated growth, the city commissioned a study to evaluate potential annexation of areas within the ETJ and to explore the use of impact fees to fund infrastructure improvements needed to serve new development. The resulting report by Halff Associates, *Annexation Assessment and Strategy*, provides a framework for an evaluation of the impact of Fort Bliss BRAC initiative on El Paso's water treatment and distribution system.

For the impact fee analysis, EPWU's design calculations were based on a usage rate of 115 gallons per person per day and 3.5 persons per household.

[114] *Far West Texas Water Plan 2006.* Texas Water Development Board (TWBD). Austin, Texas. January 2006. Table 2.2, pp. 2-9.

Since the water treatment plants are designed for peak demand, EPWU multiplies the average usage rate by 1.71 to determine the maximum day demand (MDD). The MMD demand multiplied by 3.5 persons results in the number of gallons of water per day consumed by a single family household or dwelling. The water usage rate per service unit is 688 gallons per day (see **Table 3.6-1**).

Table 3.6-1. Single Family Service Unit Flows Assumptions

Single Family Water Usage	
Current Usage per Capita (gpd)	115
Ratio MDD/ADD	1.71
Adjusted Usage per Capita	197
Persons per Service Unit (gpd)	3.5
Flows per Service Unit (gpd)	688

Source: Annexation Assessment and Strategy 2008
gpd – gallons per day

As shown by **Table 3.6-2**, EPWU has a total water treatment capacity of 288.5 MGD. This is sufficient water treatment system capacity to serve 419,331 service units. The MDD is reported to be 223,670 service units in 2007, resulting in an available capacity of 195,494 service units.[115] In other words, EPWU has the treatment capacity to serve a population of 1.13 million indicating that REMI projected growth can be served with existing capacity.

While its total treatment capacity is more than adequate to serve the projected growth through the year 2020, new development will require capital improvements to EPWU's water supply, storage, and distribution system.

Table 3.6-2. Water Treatment Plant Capacity

Treatment Plant	Water Capacity (MGD)
Robertson/Umbenhauer	40.0
Jonathon W. Rogers	60.0
Wells	161.0
Desalination Plant	27.5
Total Capacity (MGD)	**288.5**
Total Capacity in Service Units	**419,331**

Source: Annexation Assessment and Strategy 2008

[115] *Annexation Assessment and Strategy*. Halff Associates 2008. p. 146.

Wastewater. EPWU operates four wastewater treatment plants that treat wastewater generated by El Paso residents and Fort Bliss. The four plants have a combined treatment capacity of 94.2 MGD.[116]

The Northwest Wastewater Treatment Plant can treat approximately 17.5 MGD of wastewater from residential and industrial sources in the west and northwest parts of the city.[117]

The original Haskell Street Wastewater Treatment Plant serves the central part of the city and currently has a treatment capacity of 27.7 MGD. The plant can discharge effluent to either the Rio Grande River or the American Canal where it provides irrigation water to farmers in the Lower Valley. In exchange for this irrigation water, the EPWU obtains water credits for surface water that is treated to provide drinking water, thus reducing El Paso's dependence on groundwater supplies. The plant has also added sand filtration capabilities and a one million gallon elevated storage tank to provide reclaimed water to local parks, schools, industries, and a local golf course.[118]

The Roberto Bustamante Wastewater Treatment Plant, constructed in 1991, serves the east, southeast, and Lower Valley parts of the city and has a treatment capacity of 39 MGD.[119]

The Fred Hervey Water Reclamation Plant is located in northeast El Paso. It uses treatment to produce reclaimed water to an acceptable drinking quality level. The reclaimed water is returned to the Hueco-Bolson through a series of injection wells in northeast El Paso for aquifer replenishment, sold to the El Paso Electric Company for their cooling towers, and sold to golf courses and other customers for irrigation.[120]

For the annexation assessment and impact fee analysis the waster water capacity analysis was based on a usage rate of 70 gppd and multiplied by a factor of 1.39 to estimate peak demand that results in a maximum day demand of 97.3 gppd or 341 gallons per Service Unit, the equivalent of a single family residence (see **Table 3.6-3**).

As shown by **Table 3.6-4**, EPWU has a total wastewater treatment capacity of 94.2 MGD. This is sufficient water treatment system capacity to serve 276,611 service units, the equivalent of 966,000 residents.

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[116] *Fort Bliss Texas and New Mexico Mission and Master Plan Final Supplemental Environmental Impact Statement*. U.S. Army Air Defense Artillery Center and Fort Bliss. Fort Bliss, Texas and New Mexico. March 2007.

[117] "Wastewater Treatment – Northwest Wastewater Treatment Plant." El Paso Public Utilities Board 2007. http://www.epwu.org/wastewater/wastewater_northwest.html.

[118] "Wastewater Treatment – Haskell Street Wastewater Treatment Plant." El Paso Public Utilities Board 2007. http://www.epwu.org/wastewater/wastewater_haskell.html.

[119] "Wastewater Treatment – Roberto Bustamante Wastewater Treatment Plant." El Paso Public Utilities Board 2007. http://www.epwu.org/wastewater/wastewater_bustamante.html.

[120] "Wastewater Treatment – Northeast - Fred Hervey Plant." El Paso Public Utilities Board 2007. http://www.epwu.org/wastewater/fred_hervey_reclaimation.html.

Table 3.6-3. Wastewater Service Unit Flow Assumptions

Single Family Wastewater Discharge	
Current Usage per Capita (gpd)	70
Ratio MDD/ADD	1.39
Adjusted Usage per Capita	97
Persons per Service Unit	3.5
Flows per Service Unit (gpd)	**341**

Source: Annexation Assessment and Strategy.2008

Table 3.6-4. EPWU Wastewater Treatment Plant Capacity

Treatment Plant	Plant Capacity (MGD)
Northeast WWTP	17.5
Haskell R. Street/Delta WWTP	27.7
Bustamante WWTP	39.0
Fred Harvey Water Reclamation Plant	10.0
Total Capacity (MGD)	**94.2**
Total Capacity (Service Units)	**276,611**

Source: Annexation Assessment and Strategy 2008
Note: WWTP – Wastewater Treatment Plant

Stormwater Management. In the summer of 2006, a series of torrential rains caused major flooding and property damage in the El Paso area. The city estimated damage to both public and private property exceeding $250 million. El Paso County was declared a federal disaster area and the Federal Emergency Management Agency (FEMA) approved approximately $6.6 million in public assistance funding. In response to this extreme weather event, the City of El Paso adopted a stormwater utility fee to provide an ongoing source of revenue to maintain its existing stormwater system and to help fund needed improvements on an ongoing basis. The City Council transferred responsibility for stormwater management from the Public Works Department to EPWU. Additional measures by the city to safeguard against future flooding because of stormwater runoff included the adoption of new drainage design standards in the Drainage Design Manual for property development and in the adoption of a Stormwater Master Plan.

Solid Waste. The El Paso Environmental Services Department provides solid waste collection for residents and commercial business within the City of El Paso. All residential waste is collected by the city is transported to the Clint Landfill, owned and operated by the City of El Paso. The Clint Landfill also accepts waste from private haulers that collect waste from neighboring communities and county residents. The city also owns a second landfill located in the far northwest part of El Paso, the McCombs Landfill. The McCombs Landfill is presently inactive and the city has allocated funding for its closing. Commercial waste haulers may collect

non-residential waste the majority of which is transported to the Camino Real Landfill in Sunland Park, New Mexico.

Under its current permit, the Clint Landfill has the capacity for an additional 25 million cubic yards of waste. It is estimated that the Clint Landfill accepts on average 1,100 tons of waste per day and has a life expectancy of 20 years based on its present usage.[121] The City of El Paso CIP includes a total of $8 million programmed for fiscal years 2009 and 2010 to add additional cells and other improvements to the landfill.

Under contract with the Texas Commission on Environmental Quality, the Rio Grande Council of Governments is designated as the state's designated regional solid waste planning entity. The Rio Grande Council of Governments receives about $350,000 from the Texas Commission on Environmental Quality each year. Approximately two-thirds of the available funding is used for pass through grants to local governments for programs or projects that implement the Regional Solid Waste Plan.

Energy. El Paso Electric Company (EPEC) generates and distributes electricity through an interconnected system to approximately 359,000 customers in west Texas and southern New Mexico.[122] EPEC has a total generating capacity of 840 megawatts (MW) and can purchase an additional 110 MW from the Four Corners Plant near Farmington, New Mexico.[123] The EPEC System Expansion Plan for 2006-2015 identifies system improvements needed to maintain system reliability through 2015. The plan anticipated a large but unknown amount of load from the Army's BRAC expansion. Data used for the analyses was current at the time of the plan, but EPEC continues to conduct additional studies as updated data becomes available and is confident facility planning to date is sufficient to serve the anticipated Fort Bliss load.[124]

El Paso Natural Gas provides gas to the region. Texas Gas Services, a Division of ONEOK, owns and maintains the distribution lines. Texas Gas Service provides gas to approximately 600,000 residential, commercial, and industrial customers in Texas. The company's largest service areas are Austin, El Paso, and the Rio Grande Valley.

Communications. AT&T (formerly Southwestern Bell) provides basic phone service to El Paso and the county. Time Warner holds the cable service franchise with the City of El Paso. Most major national service providers offer wireless telephone services. Broadband wireless internet services, is available to El Paso, and the communities of Anthony, Canutillo, Winston, Horizon, Socorro, San Elizario, Clint, and Fabens in Texas as well as Santa Teresa, Sunland Park, and Anthony in New Mexico.

[121] Interview with John Garza, Deputy Director, Environmental Services Division, City of El Paso. June 23, 2008.
[122] El Paso Electric Company website. http://www.epelectric.com/
[123] *Fort Bliss Texas and New Mexico Mission and Master Plan Final Supplemental Environmental Impact Statement*. U.S. Army Air Defense Artillery Center and Fort Bliss. Fort Bliss, Texas and New Mexico. March 2007.
[124] Interview with Dennis H. Malone, El Paso Electric Company System Planning.

Doña Ana County

Water and Wastewater. Domestic water supply throughout Doña Ana County is limited to groundwater. Within Las Cruces, the city's Utilities Department provides water and wastewater services. Outside Las Cruces, numerous water districts and associations supply water. In addition to Las Cruces, the communities of Anthony, Hatch, Sunland Park, West Mesa, and Santa Teresa have sewer treatment plants.

The Doña Ana County Utilities Department, which became operational in 1999, is gradually assuming management and operation of individual water and wastewater systems. The Doña Ana County CIP proposes to construct a $40 million wastewater treatment plant and collection system for the growing community of Chaparral between 2008 and 2012.[125] A 2005 draft water study for Chaparral recommended that water supply system, which is solely reliant on ground water from the Hueco-Bolson, be augmented or replaced. The study favored construction of a local desalination plant.[126]

Because of its proximity to Fort Bliss, Chaparral has the potential for significant residential and commercial growth if it had the water and sewer capacity to support new development. However, that same proximity raises the concern that new residential development around Chaparral would be incompatible with the Fort Bliss training mission and should not be further encouraged.

Solid Waste. The Camino Real Landfill, a privately operated facility, is located on a 480-acre tract in Sunland Park, New Mexico. Classified as a regional landfill, it accepts municipal and commercial waste, construction and demolition waste, and special wastes such as industrial solid waste, petroleum contaminated waste, and wastewater treatment plant sludge. In 2006, Camino Real Environmental, Inc., the landfill operator, applied to the State of New Mexico for a ten-year renewal its solid waste facility permit. There was considerable opposition to the permit extension from the Sunland Park residents[127] and the request for the ten-year renewal of the permit was denied. Alternately a one-year renewal was granted, leaving the future of the El Camino Real land fill in doubt.

In 1990, Doña Ana County and the City of Las Cruces entered into a cooperative agreement to seek regional solutions for solid waste management. They formed the South Central Solid Waste Authority, which owns and operates a landfill near the Las Cruces Airport. The landfill is planned to eventually cover an area of one square mile. County transfer stations are located at Anthony, Butterfield, Hatch, Hill, La Mesa, Mesquite, Garfield, and La Union. County residents may either take their trash directly to these transfer stations free of charge or, if they prefer, use

[125] *Vision 2040, A Regional Plan for Doña Ana County and the City of Las Cruces – Chapter 4, Infrastructure and Utilities.* Doña Ana County and the City of Las Cruces, New Mexico. May 2008.
[126] *Draft Report, Chaparral Water Supply Study*. Lower Rio Grande Water Users Organization (WUO). February 2005.
[127] "Sunland Park Landfill Hearings Test New Mexico." December 16, 2007. El Paso Media Group. http://www.newspapertree.com/features/print/1922-sunland-park-landfill-hearings-test-new-mexico.

one of the private companies that offer curbside pickup of trash for a fee. There are no recycling drop-offs at the transfer stations; however, the recycling facilities in Las Cruces are open to county residents.[128]

3.6.3 Infrastructure Issues Related to Military Growth

The total non-agricultural demand for water in El Paso County is projected to reach 193,820 AF/yr by 2020. Current sources of water come from the Rio Grande River, local groundwater and water reclamation or reuse. These sources currently produce 150,000 AF/yr for non-agricultural use.[129] As outlined in the FWTWP, the El Paso County Integrated Strategy to meet the future demand for water through the year 2020 is to increase conservation efforts, increase reclaimed water use and increase use from Rio Grande River to be developed conjunctively with local ground water. Longer term needs will be met by importation of groundwater from outside El Paso County.[130]

Predicting future municipal water use demand is dependent upon accurate population forecasts and water-demand data. Population forecasts (**Table 3.6-5**) and water demand data used for the FWTWP are based on statewide population forecasts approved by the Texas Water Development Board with approved modifications to account for local conditions. Starting with 2000 Census data and any approved revisions, individual county populations are projected in 10-year intervals to 2060. The projected county population is then allocated to each city or water user group with a population of 500 or more based on each city's historic share of the county population.

The REMI population forecast presented in Section 3.1 projects the El Paso County population to range from a low of 907,690 residents to a high of 949,725 residents by 2020. These population forecasts are lower than those used in the Far West Texas Water Plan.

The FWTWP projects the demand for municipal water in El Paso County to increase from 134,065 AF/yr in 2000 to 176,736 AF/yr by 2020. **Table 3.6-6** shows the projected water demand for each of the water suppliers within El Paso County. The projected water demand is based on per capita usage rates approved by the Texas Water Development Board. The usage rate for the 2000 base year is 176 gppd. The EPWU reports that in 2008 the actual daily water use by residents of the City of El Paso averaged 133 gppd.[131] Water conservation practices put in place since the 1990s have reduced per capita water usage from 200 gallons per person per day to its current level. The El Paso County Integrated Strategy sets as a goal for a water demand rate of 140 gppd for the entire county.

[128] *Vision 2040, A Regional Plan for Doña Ana County and the City of Las Cruces – Chapter 4, Infrastructure and Utilities.* Doña Ana County and the City of Las Cruces, New Mexico. May 2008.
[129] *Far West Texas Water Plan*. January 2006. See Figure 2-2, p. 2-9.
[130] *Far West Texas Water Plan*. January 2006. See Figure 4-2, p. 4-18.
[131] "El Pasoans Reduce Water Use in 2008." El Paso Water Utilities – Public Service Board News Release, December 31, 2008. http://www.epwu.org/public_info/news_releases/nr_090105-01.html.

Table 3.6-5. Population Projections by Water User - El Paso County

Water User	2000	2010	2020
Anthony	3,850	4,586	5,422
Clint	980	980	980
City of El Paso (EPWU)	566,858	637,481	717,651
El Paso County WCID #4	8,343	12,507	17,234
Fort Bliss	8,264	13,422	13,422
Homestead MUD	3,202	4,898	6,823
Horizon Regional MUD	11,866	23,177	36,018
Lower Valley Water District	5,144	12,505	19,752
San Elizario	11,046	20,444	31,112
Socorro	27,152	33,017	39,675
El Paso County Tornillo WID	2,767	5,542	8,692
Vinton	1,892	3,708	5,769
County-Other	28,258	53,795	83,893
Population Total	**679,622**	**826,062**	**986,443**

Source: FWTWP 2006

Table 3.6-6. Municipal Water Demand Projections - El Paso County

Water Use Category	Acre-Feet/Year		
	2000	2010	2020
Anthony	621	719	826
Clint	276	270	268
City of El Paso (EPWU)	116,775	127,996	140,698
El Paso County WCID #4	1,121	1,583	2,124
Fort Bliss	5,214	8,419	8,419
Homestead MUD	420	614	841
Horizon Regional MUD	1,900	3,593	5,527
Lower Valley Water District	490	1,121	1,726
San Elizario	1,101	1,924	2,858
Socorro	2,585	2,959	3,466
El Paso County Tornillo WID	282	534	818
Vinton	210	399	614
County-Other	3,070	5,664	8,551
Total Demand	**134,065**	**155,795**	**176,736**

Source: FWTWP 2006

Table 3.6-7 uses the TWDB population forecasts and recalculates the projected water demand based on a water demand rate of 140 gppd established as countywide goal. The shaded cells indicate where the expected demand exceeds the existing infrastructure capacity. Homestead MUD, the Lower Valley Water District, San Elizario, Socorro, and Vinton all have deficient infrastructure capacity in 2012 and the El Paso County Tornillo WID has deficient infrastructure capacity in 2020.

Table 3.6-7. Water Users Capacity and Projected Demand – El Paso County

Water User Group	Total Infrastructure Capacity (AC-FT/YR)	2010		2020	
		Pop.	Water Demand (AC-FT/YR)	Pop.	Water Demand (AC-FT/YR)
Anthony	3,065	4,586	719	5,422	850
Clint	276	980	154	980	154
City Of El Paso (EPWU)	116,775	637,481	99,970	717,651	112,542
El Paso WCID #4	4,445	12,507	1,961	17,234	2,703
Fort Bliss	21,694	13,422	2,105	13,422	2,105
Homestead Mud	420	4898	768	6,823	1,070
Horizon Regional MUD	9,500	23,177	3,635	36,018	5,648
Lower Valley Water District	490	12,505	1,961	19,752	3,098
San Elizario	1,101	20,444	3,206	31,112	4,879
Socorro	2,585	33,017	5,178	39,675	6,222
El Paso County Tornillo WID	1,225	5,542	869	8,692	1,363
Vinton	210	3708	581	5,769	905
County - Other	3,070	53,795	8,436	83,893	13,156

Note: Shaded figures indicate capacity deficits.

Chapter 4 of the FWTWP provides a discussion of the strategies proposed by water user groups to meet anticipated demands. Horizon MUD anticipates adding two additional wells and El Paso County Tornillo District anticipates adding one additional well. San Elizario and Socorro plan to purchase additional water from the Lower Valley Water District, which in turn plans to meet its additional water requirements by purchasing it from EPWU. Vinton and Homestead MUD also plan to purchase more water from EPWU. The strategy proposed by EPWU to meet the water supply demands of the City of El Paso residents as well as its wholesale customers through 2010 involves continuing conservation efforts and increased reclamation capabilities. By 2020, the city plans to increase its surface water resources by an additional 10,000 acre-feet.[132] The capital costs and infrastructure financing are discussed in Chapter 9 of the FWTWP.

New growth will put demands on the City of El Paso to provide additional infrastructure. In planning for anticipated growth, the city commissioned a study to evaluate potential annexation of areas within the city's ETJ and to explore the use of impact fees to fund infrastructure improvements needed to serve new development. The resulting report by Halff Associates,

[132] *Far West Texas Water Plan*. 2006. pp. 4-10.

Annexation Assessment and Strategy, provides a framework for an evaluation of the impact of Fort Bliss BRAC initiative on El Paso's water treatment and distribution system.

EPWU utilizes a ten-year Capital Improvement Program (CIP) to plan for future capital needs. The CIP identifies water facility improvements, necessary to serve new development between 2008 and 2018. **Table 3.6-8** outlines development areas outlines in the CIP developed by EPWU.

Table 3.6-8. EPWU Development Areas

Development Area	Water Service Units
Northeast Master Plan	28,808
Westside Master Plan	31,688
Northwest Artcraft	36,010
Eastside Master Plan	11,523
South Fort Bliss and South Montana	7,202
Total Service Units	115,231

The total capital investment required to provide water services for anticipated new development is reflected in **Table 3.6-9.**

Table 3.6-9. Water System Capital Improvements (FY 2008-09 to FY 2017-18)

Project	Treatment System	Distribution System
Water Supply Facilities	$14,760,000	
Reservoirs		$54,230,000
Distribution Pumping Equipment		$39,000,000
Distribution Lines		$84,100,000
Total Incremental Investment	$14,760,000	$177,330,000

Source: Annexation Assessment and Strategy 2008

The study points out that the service units associated with the ten-year capital plan may not occur within that period and the timing in which additional capacity is needed will depend on the actual rate of development.[133] Under HGS, the population increase between 2008 and 2020 for El Paso County is about 200,000, the land use equivalent of 57,143 service units. In 2007, the actual usage reported was 168,918 service units, leaving an available capacity of 107,126 service units.[134] In other words, EPWU has the treatment capacity to serve a net population increase of 374,948.

While its total treatment capacity is adequate to serve the projected growth through the planning period EPWU's ten-year CIP for wastewater improvements does contemplate expansion of its Bustamante Wastewater Treatment Plant from 39 to 54 MGD in addition to needed pump stations, force mains and collection lines.

[133] *Annexation Assessment and Strategy*. Halff Associates 2008. p. 149.
[134] *Annexation Assessment and Strategy*. Halff Associates 2008. p. 146.

The total capital investment required for anticipated new development of wastewater services and some existing development in the Northwest Artcraft area is reflected in **Table 3.6-10**.

Table 3.6-10. Wastewater System Capital Improvements (FY 2008-09 to FY 2017-18)

Project	Treatment System	Collection System
Treatment Plant Expansions (new wells)	$33,000,000	
Collection System		$78,610,000
Pumping and Force Mains		$12,831,000
Wastewater Reuse Distribution System		$39,310,852
Total Incremental CIP	$33,000,000	$130,751,852

Source: Annexation Assessment and Strategy.2008

Again, the study points out that the service units associated with the ten-year capital plan for wastewater improvements may not occur within that period and the timing in which additional capacity is needed will depend on the actual rate of development.[135] **Table 3.6-11** compares the Service Units projected by area with the number of households projected under the 2020 MGS.

Table 3.6-11. Comparison of EPWU Projected Development from 10-Year CIP and 2020 Medium Growth Scenario

Development Area	EPWU Projected Water Service Units for 10-Year CIP	EPWU Projected Wastewater Service Units for 10-Year CIP	Projected Households 2020 Medium Growth Scenario
Northeast	28,808	28,808	5,671
Westside	31,688	31,688	6,096
Northwest Artcraft	36,010	42,923	1,930
Eastside	11,523	11,523	9,269
South Fort Bliss/South Montana	7,202	7,202	1,194
Total	115,231	122,144	24,161

The 2020 Projected Growth Map (**Plate 2** at the end of the document) identifies residential growth areas based upon the projected TAZ population provided by the Development Services Department. Residential growth areas within each TAZ were identified in the following order:

1. Existing subdivisions that were platted but not built out
2. Subdivision plats in progress
3. Land subdivisions
4. Vacant land zoned residential but not platted
5. Vacant land adjacent to existing or planned residential land uses.

Infill development sites, vacant lots within new subdivisions, and tracts of land for which a subdivision plat has been submitted for approval but not recorded will accommodate

[135] *Annexation Assessment and Strategy*. Halff Associates 2008. p. 149.

approximately two-thirds of the 34,865 new households projected for 2020. In these cases, utility services are either already available or are planned.

Land Use Implications. The City of El Paso has the available water supply and treatment capacity necessary to meet the projected growth from the military expansion. As discussed in Section 3.2, much of the anticipated residential development can be accommodated within areas for which future subdivision plans and land studies have already been identified. The infrastructure improvements necessary to serve these areas have already been identified and planned.

Residential development directly related to military expansion will most likely occur within 20 miles of the main cantonment area. This is primarily the east and northeast areas of El Paso. Growth on the west side and lower valley areas will reflect more normal development patterns. **Plates 4** and **5** (at the end of the document) identify future growth areas with EPWU's master water and sewer facility improvements shown as an overlay.

New development designed to accommodate the housing needs of the military soldier and families will necessarily be more compact with higher density development concentrated near transportation corridors. This land use pattern will require less infrastructure for its support and result in more efficient, sustainable development.

3.6.4 Recommendations

City and County of El Paso Water and Sewer Utilities

Appendix D of the El Paso Water Utilities Impact Fee Study identified future (ten-year) capital improvement projects for water and sewer improvements needed to accommodate new growth totaling $312,372,000. Financing infrastructure improvements for new development with revenue bonds places the burden on the entire community and is contrary to the populist belief the growth should pay for itself. The following recommendations are put forward:

- Infrastructure improvements should be prioritized by growth area with improvements focused in those areas where off post military housing is most likely to be concentrated; the Eastside and Northeast planning areas.
- The City and County of El Paso should explore entering into a cooperative agreement similar to Doña Ana County and Las Cruces to address solid waste management issues regionally. Small citizen collection stations or strategically located transfer stations could be set up rural areas unserved by commercial haulers. RGCOG pass through grants could be used to help offset the expense.

Doña Ana County

A 2005 draft water study for Chaparral recommended that water supply system, which is solely reliant on ground water from the Hueco-Bolson, be augmented or replaced. The study favored construction of a local desalination plant.[136]

- It is recommended that, if constructed, the plant be designed to accommodate water needs for existing development with limited growth as projected in the Draft Vision 2040 Plan.

Table 3.6-12 lists recommended actions from the Action Plan (Appendix G) for Public Utilities and Infrastructure. The table names the action, lists the entity or entities responsible for implementation, the timing and rationale for action, estimated available resources, possible funding sources, and implementation indicators.

[136] *Draft Report, Chaparral Water Supply Study*. Lower Rio Grande Water Users Organization. February 2005.

Table 3.6-12. Action Plan Recommendations for Public Utilities and Infrastructure

Recommended Action	Responsible Entity/ Regional Ops	Timing/ (Rationale)	Estimated Resources	Funding Source(s)/ Implementation Strategies	Implementation Indicator
1. Prioritize utility expansion to coincide with Comprehensive Plan identification of housing, school, and commercial expansion	- City of El Paso (lead) - El Paso Water Utility	6 months	Low Assumes the completion of the Comprehensive Plan rewrite	http://www.oea.gov http://www.hud.gov/offices/cpd/communitydevelopment/programs/stateadmin/	Priority plan created Update annually
2. El Paso and Fort Bliss should cooperate in the development of a new landfill and renewable energy projects. Consider the combination of refuse streams to justify waste-to-energy facility within a new joint landfill. Applicability of the Fort Bliss/El Paso waste streams, must be studied as well as opportunities for geothermal, solar, and wind generation	- City of El Paso (co-lead) - Fort Bliss (co-lead)	1 year (Takes advantage of the Army requirement to reach 25% of energy used to be derived from renewable sources)	$200,000 of which $70 to 100,000 required for waste streams	http://www.oea.gov http://army-energy.hqda.pentagon.mil/ http://www.msnbc.msn.com/id/7745709/ http://www.army.mil/-news/2008/01/17/7041-armys-largest-solar-array-generates-more-than-power/ http://www.wired.com/dangerroom/2009/06/army-wants-portable-wind-power-for-grunts/ http://army-energy.hqda.pentagon.mil/programs/procurement.asp http://www.desc.dla.mil/DCM/DCMPage.asp?pageid=246 http://www.fhwa.dot.gov/PPP/	Cooperative activity undertaken

3.7 Housing and Market Conditions

This planning element evaluates military housing needs and affordable housing needs for the El Paso area. It evaluates housing supply, estimated civilian and military demand, and the effects on housing affordability and availability in response to projected growth in the military population at Fort Bliss. Military demand for off-post housing combined with the additional civilian demand resulting from the military growth will increase overall housing market demand above that anticipated for organic growth over the next decade.

The summary of findings for the Housing Market element is as follows:

- The military looks to community sector housing before considering military- sponsored housing initiatives: either military construction programs or housing privatization.
- In addition to the affordable, suitable community housing units, the military will need to provide between 7,100 and 7,800 housing units to meet the requirements of military families by 2013 as determined by the Housing Market Analysis (HMA) for Fort Bliss.
- Unaccompanied military personnel will require between 14,400 and 15,500 on-post housing units in addition to the affordable, suitable community housing in order to meet this housing requirement by 2013.
- The increased demand for community housing by the military households, plus additional civilian demand resulting from the growth, and the "organic" growth in El Paso's population will result in a shortfall of community housing ranging from 9,700 units to nearly 13,000 units.
- Fort Bliss is currently planning on providing additional housing for soldiers with families through privatization programs. An estimated 7,000 housing units are needed to meet Fort Bliss projected housing requirements as determined by the HMA (Appendix B). The specific number of units to be added is not certain at this time. The military requirements could place an additional burden on the El Paso community housing market projected as high as 33,000 units by 2013. Considering the low number of housing starts in El Paso currently, action to stimulate new construction may become a critical need.

3.7.1 Introduction and Methodology

The analysis in this section focuses on the demand for housing for the military personnel at Fort Bliss and the additional civilian demand generated by this growth. The Army conducts HMA studies to determine the number of housing units the U.S. Government must provide to ensure that all military personnel at the have access to affordable, acceptable housing within a 20-mile housing market area. Following the prescribed DoD methodology for conducting HMAs, the analysis for the RGMP addresses the housing requirement for military personnel based on the Draft HMA for Fort Bliss, Texas.[137] The RGMP analysis covers the period 2008 to 2013 and incorporates the LGS, MGS, and HGS conditions estimated by UTEP. The scenarios apply

[137] *Housing Market Analysis – Fort Bliss, Texas*. Prepared by Robert D. Niehaus, Inc. May 31, 2008.

different assumptions regarding the level of military transition to El Paso County and the resultant impact on population and job growth. Each scenario is based on the housing market area defined by U.S. government criteria and Army policies. The Housing Market Area for Fort Bliss is shown in **Figure 3.7-1**. The full analysis for the three scenarios is provided in an updated HMA provided in Appendix B.

The HMA determines if there is sufficient housing in the private sector to meet the needs of the military personnel under each scenario. The analysis incorporates competing civilian demand as well as the military demand in making its determination. It addresses housing affordability as defined by the Basic Allowance for Housing (BAH) that the military member receives for off-post housing in addition to their regular pay. Housing more costly than the BAH is not considered affordable for military households. BAH rates are adjusted annually to reflect changes in local rental housing cost, which helps to keep the housing affordable to the military members. Generally, subsidized housing is not considered available to the military member as in addition to qualifying, there is often a long waiting period relative to the typical tour of duty at the post.

3.7.1.1 Housing Growth Assumptions

Housing growth will be driven by the increasing demand. Population will increase more rapidly in the near term as a result of the economic stimulus from the expansion of Fort Bliss and the labor requirement for construction of facilities at Fort Bliss. Population growth will slow as the demand for construction workers decline with the completion of the facilities at Fort Bliss (**Table 3.7-1**).

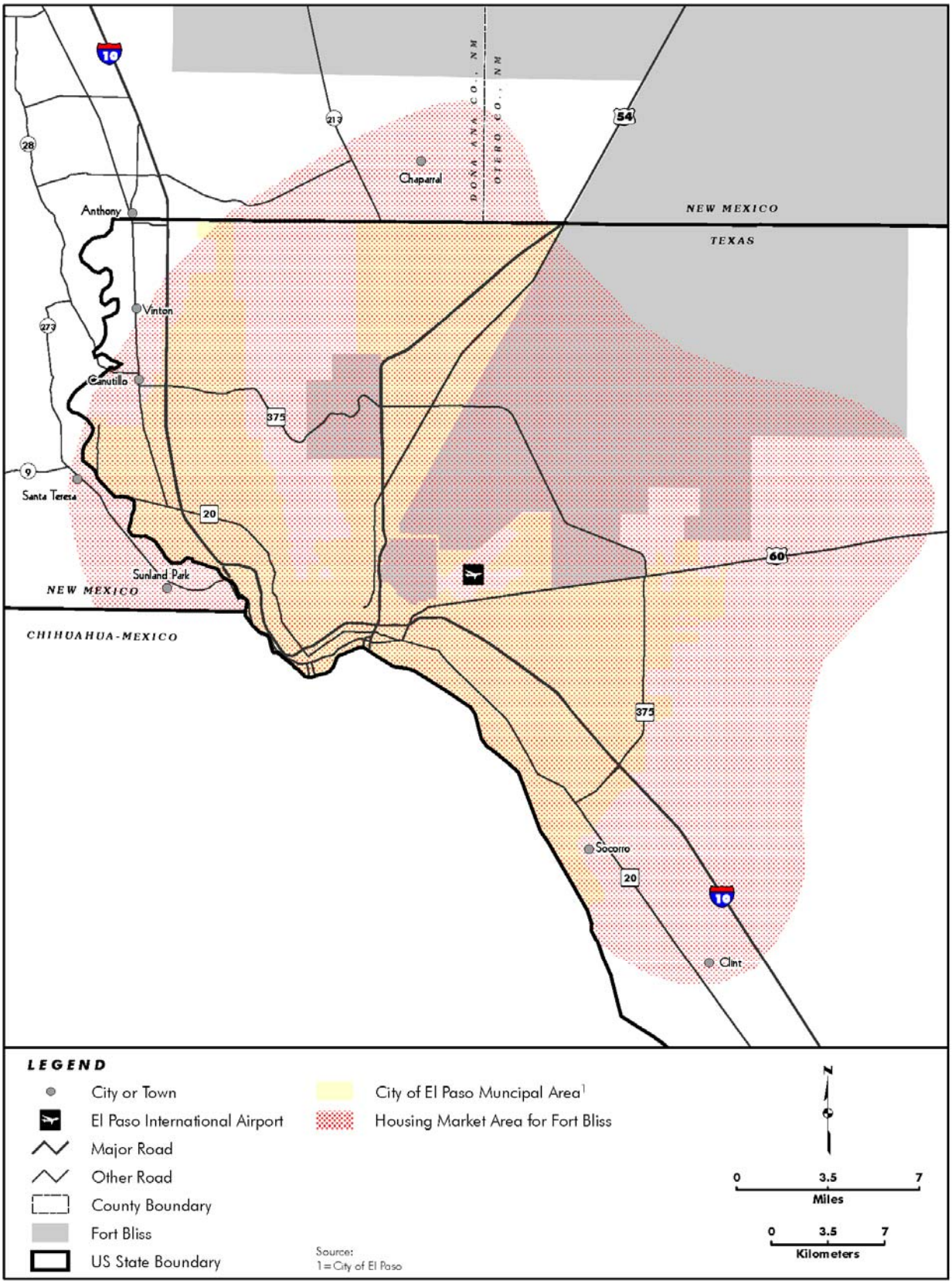
Table 3.7-1. Projected Population for El Paso County, 2008 - 2025

Growth Scenario	2008	2010	2015	2020	2025
Low	754,728	805,262	893,039	937,506	968,488
Medium	754,728	808,212	897,886	942,958	974,355
High	754,728	811,132	902,634	948,270	980,048

Source: Estimates prepared by UTEP using the REMI model, 2008

Rental housing is expected to grow at a faster rate than homeowner housing in response to increased housing demand for rental units from new households as estimated by the REMI model. Military households are often less inclined to become homeowners due to the length of their tour of duty. In times of slow growing or declining values, there may be insufficient appreciation of housing values to recover the cost of ownership and resale. As a consequence, with the lower growth rate of homeowners compared to renters, it is expected that average home ownership rate is expected to decline slightly, particularly over the initial period of development as the military households move into the area (**Table 3.7-2**).

Figure 3.7-1. Housing Market Area for Fort Bliss



Source: U.S. Army 2008

Table 3.7-2. Projected Population and Homeowner Annual Growth Rates for El Paso County, 2008 - 2013

	Growth Scenario %		
	Low	Medium	High
Population	3.1	3.2	3.3
Households	3.1	3.2	3.3
Homeowners	2.9	3.0	3.1
Renters	3.1	3.2	3.3

Source: Estimates prepared by SAIC for this study, 2008

With the changing mix between homeowners and renters in the initial years of development in El Paso, the mix of housing supply is expected to respond to the changing demand. The growth in rental housing will likely be over one percent higher than that of owner occupied housing during this period (**Table 3.7-3**).

Table 3.7-3. Projected Homeowner and Rental Housing Supply Annual Growth Rates for El Paso County, 2008 - 2013

	Growth Scenario %		
	Low	Medium	High
Homeowner Housing	2.3	2.3	2.3
Rental Housing Supply	3.9	4.0	4.1

Estimates prepared by SAIC for this study, 2008

Under these growth assumptions, the housing supply is estimated to grow to 126,133 units by 2025 under the MGS (**Table 3.7-4**).

Table 3.7-4. Projected Rental Housing for El Paso County, 2008 - 2025

Growth Scenario	2008	2010	2015	2020	2025
Low	95,797	104,244	115,607	121,363	125,374
Medium	95,797	104,626	116,234	122,069	126,133
High	95,797	105,004	116,849	122,757	126,870

Source: Estimates prepared by SAIC for this study, 2008

3.7.1.2 Housing Affordability

Housing affordability is a concern from the military perspective as well as the civilian. Rental housing is considered unaffordable by military standards if it costs more that the member's BAH. The BAH rates are adjusted annually in response to changes in rental housing costs. For civilians, affordability is based on income levels generally assuming that the households should not be spending more than 30 percent of the household income on housing according to the Department of Housing and Urban Development (HUD).

The Housing Affordability Index (HAI) is a tool used to estimate housing affordability for home ownership by comparing the local median housing cost to local median family income. The index is based on the following assumptions:

- **Down Payment:** A 20 percent down payment is made, so the principle value is considered to be 80 percent of the median home value.
- **Mortgage Terms:** The mortgage is a standard 30 year mortgage with 12 monthly payments per year for a total of 360 payments to maturation.
- **Financing Limit:** The payments each month cannot exceed one fourth the yearly salary of the purchaser.

A HAI value of 100 or more indicates that a family with the median income has sufficient income to qualify for a mortgage on a median-priced home, assuming a 20 percent down payment.

A first-time buyer index applying the same approach but with different assumptions:

- **Sale Price:** The house sales price house that is 85 percent of the median sales price.
- **Family Income:** Median family income is 85 percent of the median family income.
- **Down Payment:** A 10 percent down payment is made, so the principle value is considered to be 90 percent of the median home value.
- **Mortgage Terms:** The mortgage is a standard 30 year mortgage with 12 monthly payments per year for a total of 360 payments to maturation.
- **Mortgage Insurance:** Private mortgage insurance increases the mortgage rate 0.5 percent over the standard 30 year mortgage rate.
- **Financing Limit:** The amount financed per month cannot exceed one fourth the yearly salary of the purchaser.

3.7.2 Existing Housing Market

3.7.2.1 Existing Housing Supply and Demand

About 65 percent of El Paso housing is owner occupied with some 149,345 owner occupied units in 2007 and about 80,310 occupied rental units in addition to 19,168 vacant units.[138] Rental vacancy rates averaged 5.8 percent in the first quarter of 2008. The current military family housing inventory at Fort Bliss is 3,064 units.[139] The Army may meet its additional housing needs through privatization programs or military construction programs if it has sufficient resources.

[138] U.S. Census, American Fact Finder http://factfinder.census.gov/home/saff/main.html?_lang=en
[139] *Draft Housing Market Analysis – Fort Bliss, Texas*. May 2008

3.7.2.2 Housing Affordability

Median home prices have risen slightly in 2008 reaching $134,600 up from $131,900 in 2007 (see Section 2.5). Home sales declined in 2007 compared to sales in 2006, with lower sales still in 2008 (see Section 2.5.1). Housing is still relatively affordable in El Paso with a housing affordability index of 1.15 (**Table 3.7-5**). The housing affordability index for first time home buyers is 0.70 indicating a continued need for additional affordable housing.[140]

Table 3.7-5. Housing Affordability Index El Paso County, 2008

Year	Median Price Existing Single-Family Home	Composite Affordability Index	First Time Buyer Index
2008	134,600	1.15	0.70

Source: Real Estate Center Texas A&M , Texas A&M 2008

3.7.3 Housing Issues related to Military Growth

The HMA estimates the Total Military Housing Requirement for military families and unaccompanied personnel assuming that all military personnel will seek housing off-post with the exception of unaccompanied personnel required to reside on-base (as per Office of the Secretary of Defense policy). The Total Military Housing Requirement includes the number of housing units needed in addition to the affordable, acceptable units available to the military in the community plus a floor or minimum housing requirement of housing necessary to meet certain criteria. The floor housing requirement is comprised of four components and is added to the Total Military Family Housing Requirement if any of those components are greater than the private sector shortfall by pay grade. The military housing requirements are based on civilian and military household estimates and projected housing market conditions five years in the future.

The HMA process addresses the availability and accessibility of housing for military personnel from two perspectives. First, the cost of the housing must be no greater than the housing allowance for the military member. Also, the housing must be no more than a 20 mile commute from the main cantonment areas to minimize travel time and costs (see Figure 3.7-1).

3.7.3.1 Housing Supply and Demand

As a result of the military transition at Fort Bliss, the demand for housing will increase and prices will likely adjust upwards as the supply of both rental and homeowner housing lags behind the demand. The additional demand depends upon the number of military personnel moving to El Paso County and the resultant number of new jobs that are filled by new arrivals to the area. Within the Housing Market Area, developable land is available to accommodate additional housing demand and the Army is expected to build additional units for military families and unaccompanied personnel although the number of housing units that may be built depends on circumstances not well defined at this time.

[140] Real Estate Center Texas A&M. Texas A&M 2008.

The household projections for the Fort Bliss Housing Market Area for the year 2013 are presented in **Table 3.7.6**. Rather than just considering the housing within El Paso County, the military HMA (Appendix B) considers housing within a 20 mile commute from the base. For Fort Bliss, this includes area out side of El Paso County. The projected total number of military personnel and the number of military households, both family and unaccompanied, that will require homeowner occupied housing and rental housing are displayed in **Table 3.7-7**.

Table 3.7-6. Projected Private Sector Housing Supply and Demand in the Ft Bliss Housing Market Area, 2008 and 2013

		2013		
	2008	Low	Medium	High
Population	744,896	867,585	872,459	877,267
Households	237,986	277,184	278,741	280,277
Homeowners	154,215	177,675	178,673	179,658
Renters	79,077	92,102	92,618	93,131
Housing Supply				
Homeowner Housing	156,882	175,438	175,639	175,837
Rental Housing Supply	89,251	108,107	108,729	109,341

Source: Estimates by SAIC, 2008

Table 3.7-7. Projected Military Housing Demand, 2008 and 2013

		2013		
	2008	Low	Medium	High
Total Military Personnel	17,183	39,468	41,009	42,550
Military Homeowners	3,484	6,747	7,033	7,319
Military Renters	4,715	15,755	16,370	16,984

Source: Estimates by SAIC, 2008

3.7.3.2 Military Housing Requirements

The DoD HMA model is applied to determine the housing requirements for the military personnel at Fort Bliss. The estimates for the total number of military personnel requiring housing in the community ranges from 30,599 for the low scenario to 33,525 for the high scenario (**Table 3.7-8**). The estimate assumes that only the Floor Housing Requirement of 542 will be available for military families as well as the current housing capacity for 6,318 unaccompanied personnel. The Total Military Housing Requirement as determined by the HMA is the number of housing units that Fort Bliss would need to provide to ensure that all military members, both military families as well as unaccompanied personnel have access to affordable, suitable housing units. If the military is unable to provide the necessary housing to fulfill the Total Military Housing Requirement, the result may be that some military families and unaccompanied personnel may live in community housing unsuitable by military standards.

Table 3.7-8. Projected Total Military Housing Requirement for Fort Bliss, 2008 and 2013

	2013		
	Low	Medium	High
Military Families	**20,993**	**21,813**	**22,633**
Military Family Required to be On-Base	542	542	542
Military Families Requiring Housing In the Community	20,451	21,271	22,091
Unaccompanied Personnel	**16,466**	**17,108**	**17,752**
Unaccompanied On-base	6,318	6,318	6,318
Unaccompanied Requiring Community Housing	10,148	10,790	11,434
Total Military Off-Post Housing Requirement	30,599	32,061	33,525

Source: Estimates by SAIC, 2008

3.7.3.3 Community Housing Impacts

Table 3.7-9 shows the military demand for off-post housing combined with the civilian demand for housing results in a community shortfall of housing ranging from 24,238 to 28,624 owner or renter occupied units depending on the growth scenario. The shortfall would be reduced by the number of housing units that the military develops for both military families and unaccompanied personnel. The HMA suggests that some 7,168 to 7,803 family housing units may need to be developed through privatization programs or military construction programs. Funding limitations may limit the number of family housing units constructed under current privatization programs. The HMA further suggests that a housing capacity of 14,415 to 15,540 for unaccompanied personnel is also needed.

Table 3.7-9. Projected Community Housing Supply and Shortfall

	2013		
	Low	Medium	High
Military Community Demand			
Military Family	20,451	21,271	22,091
Unaccompanied	10,148	10,790	11,434
Total Military Community Demand	**30,599**	**32,061**	**33,525**
Civilian Demand	**277,184**	**278,741**	**280,277**
Total Community Housing Demand	**307,783**	**310,802**	**313,802**
Total Community Housing Supply	**283,545**	**284,368**	**285,178**
Community Housing Shortfall	**24,238**	**26,434**	**28,624**

Source: Estimates by SAIC, 2008

3.7.3.4 Housing Affordability

Applying the projected employment growth by industry, a new estimate of median income was derived based on the median salary for each of the employment categories as estimated by the Census Bureau American Community Survey. As the proportion of employment with relatively higher pay increases, the median family income also increases. All calculations are performed in 2006 dollars as this forms the baseline of UTEP estimates and ACS data. Although the HMA only covers a period out to 2013, the HAI is extended further to coincide with the planning period covered throughout the RGMP. The index suggests that in 2025, El Paso County family median income will be 24.9 to 33.7 percent above what is considered to be the minimum salary requirements necessary to afford housing (i.e. HAI 1.249 to 1.337). For first time buyers, affordability index ranges between 104.2 and 113.0 (**Table 3.7-10**).

Table 3.7-10. Housing Affordability Index El Paso County

Year	Scenario	Median Price Existing Single-Family Home	Mortgage Rate (%)	Monthly P&I Payment	Payment as a % of Income	Median Family Income	Qualifying Income	Composite Affordability Index	First Time Buyer Index
2006	Baseline	127,500	6.84	668	20.3	39,500	32,049	123.2	104.2
2025	Low	127,500	6.84	668	20.0	40,023	32,049	124.9	105.6
2025	Medium	127,500	6.84	668	18.7	42,835	32,049	133.7	113.0
2025	High	127,500	6.84	668	19.6	40,823	32,049	127.4	107.7

Source: Estimates prepared by SAIC for this study, 2008

Based on the estimated median salaries of the new jobs created as a result of the growth at Fort Bliss, the households migrating into El Paso as a direct result of the manpower increase are assumed to earn more than El Paso's current median income. The existing workforce should also see better salaries over time. As a result, a segment of El Paso residents will find housing more affordable in the future than at the present time.

3.7.3.5 Market Dynamics

The other part of the housing equation is the availability (and constraints) of financing, land and developers. Given the projected demand (and shortfall) for housing, especially affordable housing, due to the growth of Fort Bliss, it is essential to define these elements of the housing equation.

The basic issues were addressed in two major public forums: one held on August 19, 2008 and the other held on April 8 and 9, 2009. Both forums included a wide range of stakeholders – realtors, city housing officials, experts in planning and development, as well as those associated with various landowners and financial personnel. Both groups had access to data on existing

conditions as well as pertinent projections of the growth centered on personnel destined for Fort Bliss.

It is important to note that in the nine months between these two forums, the dynamics of the housing, finance and property value components were radically altered due to the severe recession, the lending crisis, mortgage default rates, the defaults in the multi-family sector, and the profound decrease in values – nationally just below 20 percent, and the housing market itself. Resources available for necessary infrastructure (water, sewer, utilities etc.) also eroded to unanticipated levels. In addition, the expected ratio of homeowners to renters also experienced a major shift with many more expected renters. The negative impact of these shifts became evident in meetings with landowners and developers in that intervening nine month period. What was possible and attractive in 2008 became a non-starter in 2009. The list of housing and affordability concerns was extensive:

- Affordable housing to meet demand seemed more elusive.
- Fewer available rentals and more single family homes were for sale.
- Increased nervousness in regard to the cost of Smart Growth principles.
- Concerns increased about safe city status as more police were shifted to border patrol.
- Viability of local small businesses when faced with the failure of the lending markets.
- The impact of prevailing wage regulations tied to federal assistance for families and material costs went down.
- The lack of up-front builders' loans even while the mortgage market eased.
- The cost of needed infrastructure in areas currently unserved.
- The high number of available old buildings in need of rehabilitation.
- The lack of zoning reviewers, building plan approvers, and qualified city building inspectors needed for the impending expansion of housing construction.
- The need to extend affordable transportation into remote areas.
- Time constraints given the deadline of 2011 and the extensive procedures for site plan approvals hindering development efforts.
- The need to update or improve the level of military housing allowance.
- The history of difficulties in meeting housing and growth challenges for other BRAC-related communities in the nation

Thus, the effort to successfully provide for needed housing within the timeframe requires some accelerated action in terms of identifying not only viable developers, willing landowners, but also regional financing resources. This effort requires much closer integration with the areas of land use, public utilities, and transportation to adapt to new growth projections and impacts.

3.7.4 Recommendations

El Paso is projected to face a shortfall of community housing ranging from about 10,000 units to 13,000 housing units assuming current growth trends continue over the military transition. In addition to a shortfall of housing, it is expected that housing will become slightly more affordable for some segments of homeowners. Plans to provide affordable housing must consider the availability of developable land and capacity of existing infrastructure. El Paso should work closely with the U.S. Department of Housing and Urban Development (HUD) and Texas Department of Housing and Community Affairs (TDHCA) to identify financing options to provide affordable housing to qualifying residents. Some TDHCA programs include:

- Mortgage Credit Certificate.
- Single Family Housing Trust Fund – funds available to nonprofits, units of local government, public housing authorities' community housing development organizations, for profits, and income eligible individuals and families.
- Multifamily Home Program – Rental Housing Development - funds to build, acquire and/or rehabilitate rental property.
- The Neighborhood Stabilization Program – acquire and redevelop foreclosed properties that might otherwise become sources of abandonment and blight.
- The Section 8 Housing Choice Voucher Program – rental assistance payments on behalf of low income individuals and families, including the elderly and persons with disabilities.

Table 3.7-11 lists recommended actions from the Action Plan (Appendix G) for Housing. The table names the action, lists the entity or entities responsible for implementation, the timing and rationale for action, estimated available resources, possible funding sources, and implementation indicators.

Table 3.7-11. Action Plan Recommendations for Housing

Recommended Action	Responsible Entity/ Regional Ops	Timing/ (Rationale)	Estimated Resources	Funding Source(s)/ Implementation Strategies	Implementation Indicator
1. Confirmation of Fort Bliss expansion from Army and Congressional Leadership (see Item 2 of Section 3.1)	- City of El Paso (lead) - Fort Bliss (lead)	6 months (Reassurance to developers, investors, and builders of Army intent)	No funds needed		Confirmation given
2. Enable developers to qualify for construction financing • El Paso Water Utility might lease instead of sell land • EPWU might itself act as a developer • City might act as a developer • EPWU might make land an equity contribution in a project • City might use some of its pension funding to assist in developer financing	- City of El Paso (lead) - El Paso Water Utility - Texas Pension and other state funds	6 months (Enabling multi-family dwelling construction)	Legal fees to develop new lease and equity sharing agreements	City internal funds	Financing for new projects secures
3. Create a task force to concentrate joint resources on the housing construction finance issues	- City of El Paso Economic Development Department (lead) - County - Developers - Builders - Paso del Norte - State	6 months (Get all parties together to explore options)	$200,000	http://www.oea.gov Consider Congressional assistance	Task force created

Table 3.7-11. Action Plan Recommendations for Housing *(Continued)*

Recommended Action	Responsible Entity/ Regional Ops	Timing/ (Rationale)	Estimated Resources	Funding Source(s)/ Implementation Strategies	Implementation Indicator
4. Create a center of excellence to integrate and provide information concerning all available federal and state housing assistance programs and provide the information at convenient places throughout the city	- City of El Paso Economic Development Department - El Paso Realtors - Fort Bliss	6 months (Centralizes expertise, saving time)	$100,000	http://www.hud.gov/offices/hsg/omhar http://www.tdhca.state.tx.us/homeownership/fthb/mort_cred_certificate.htm http://www.tdhca.state.tx.us/htf/single-family/ http://www.tdhca.state.tx.us/home-division/mf-home/ http://www.hud.gov/offices/cpd/ http://www.hud.gov/offices/cpd/communitydevelopment/programs/neighborhoodspg/ http://www.hud.gov/offices/pih/programs/hcv/ http://www.tvc.state.tx.us/StateBenefits.html http://eul.army.mil/ http://www.acq.osd.mil/housing/ http://www.phma.com/pds/presentations/Thur-22-January/Navy/Navy_BH_Planning.pdf http://www.army.com/news/item/5367 http://www.nao.usace.army.mil/hap/ http://www.rurdev.usda.gov/ http://www.careeronestop.org/ http://www.nab.usace.army.mil/dnrp/ http://www.hud.gov/offices/cpd/communitydevelopment/programs/	Organization created
5. Plan expansion of existing 3rd party program to expedite increased zoning change requests, plan approvals, and construction inspection requirements	- City of El Paso (lead) - County	6 months (Current level of staffing not prepared for anticipated	Could be as many as 10 FTEs	Based upon current projections	Expand current 3rd party contacts

Table 3.7-11. Action Plan Recommendations for Housing *(Continued)*

Recommended Action	Responsible Entity/ Regional Ops	Timing/ (Rationale)	Estimated Resources	Funding Source(s)/ Implementation Strategies	Implementation Indicator
		building expansion)			
6. Request inclusion of Fort Bliss in the Army program to add bachelor enlisted and officer housing to privatized housing projects	- Mayor of El Paso - Fort Bliss	6 months	Low	See Navy Approach http://phma.com/pds/presentations/Thurs-22-january/nNavy_BH_Okabbubg.pdf Army had added BOQ and senior enlisted bachelor quarters at Forts Bragg, Steward, Drum, and Irwin http://www.army.com/news/item/5367 If accepted, additions will be paid from military construction appropriation and private sector sources as an addition to exiting residential construction initiative (RCI) contracts	RCI contracts at Fort Bliss Amended

3.8 Education

3.8.1 Introduction and Methodology

Educational attainment is a key determinant to the future economic well-being and quality of life for individual households and of communities as a whole. Public comment on the current capacity of schools, as well as the impact of growth (both military and civilian) puts the issue at the top of BRAC planning concerns. High school and higher education facilities are especially important in providing the knowledge and technical skills that are required to foster a proficient labor force in a competitive environment. Thus, access to educational opportunities for the citizens of El Paso County is a key factor to prosperity and success. Given its importance for economic development and the projected population increases in the coming years, one objective of this study is to estimate changes in supply and demand for Pre-K through 12th grade as well as higher education in the region. Accordingly, projections on student demand and workforce supply needs/gaps for elementary, middle, and high schools are performed and econometric enrollment models are constructed for the higher learning institutions that serve this region. The following are key education findings:

- Of El Paso's nine ISDs, El Paso ISD is impacted to the greatest extent by children of military personnel, enrolling roughly 70 percent of the military student population.
- Currently, an estimated 17 percent of schools in the PIDs are operating over their planned student capacity level.
- The current student/teacher ratio for all nine ISDs and for all grade levels is 14.8. Student/teacher ratios are typically lower for elementary and higher for high schools. They also vary by school district/campus with lower ratios more instructionally optimal and higher ratios more functionally optimal.
- By 2010, 30 percent of the District's high schools will face capacity issues. The percentage rises to 40 percent and 50 percent by 2015 and 2025, respectively. The shortages are expected to be significant by 2025.
- By 2015 the total teacher need (all grade levels) ranges between a minimum of 11,922 and a maximum of 15,070; by 2025 the range is 13,826 to 17,867. The range in these estimates is influenced significantly by the variation in "optimal" student/teacher ratios.
- Higher education facilities in the region have the faculty and staff capacity to absorb anticipated increases in military-related student enrollment.
- Regional higher education facilities awarded 4,740 undergraduate/graduate degrees or certificates in education fields between 2005 and 2008.
- The "baby boom" echo effect will create unexpected changes in the age distribution of the El Paso population.
- Future growth could generate a shortfall in child care workers
- Assuming medium (i.e., expected) growth in El Paso's population, an additional 1,212 teachers at all levels will be required to meet additional demand resulting from military-

related growth. By 2025, an additional 2,230 teachers will be needed relative to the current supply of instructors.

- Expected or most likely enrollment levels at higher education institutions in the region (UTEP, EPCC, and NMSU) are projected to increase by almost 12,100 as of 2015 relative to the 2008 level; by 22,600 as of 2025. Total enrollment is projected to be roughly 27,250 at UTEP, 34,550 at EPCC, and 23,450 at NMSU by 2025.

3.8.2 Current Education Assessment

This part of the education assessment provides an inventory of El Paso County's existing elementary, middle, and high school student enrollment and workforce supply. It also compares current student-teacher ratio estimates to alternative ratios by grade level in order to provide some measure of teacher supply needs and gaps. In addition, the inventory of child care capacity/workers is discussed. Finally, data is presented for higher education and workforce training opportunities that lead to careers in public education.

3.8.2.1 Student Enrollment and Workforce Supply

***Child Care*:** Day care for infants and toddlers is a quality of life concern for both military and non-military families. The Texas Department of Family and Protective Services reports that, as of April 2009, El Paso County has 433 licensed child care homes and centers with a capacity for 27,345 children. In addition, there are 438 listed family/registered child care homes each with a capacity of up to 12 children, or 5,626 total.[141] The present usage of these facilities is unavailable, hence, the current number of children in day care is unknown. The Bureau of Labor Statistics and Texas Workforce Commission estimates there are 943 child care workers in El Paso County, along with 82 education administrators of preschool and child care.[142, 143] For an estimated child population of 10 years and younger for El Paso of 150,600, this translates to roughly one child care worker per 160 children (10 years and younger). This ratio (1 to 160) is a reference point that is used to project future child worker demand.

***Pre-K through 12th*:** **Table 3.8-1**, **Table 3.8-2** and **Table 3.8-3** focus on Pre-K through 12th grade education for the nine school districts in El Paso County. A discussion on data limitations and key assumptions used to generate the tables is provided below:

- The Texas Education Agency (TEA) provides the number of 1) Pre-K through 5th, 2) 6th through 8th, and 3) 9th through 12th grade students by ISD. These grade levels serve as proxies for elementary, middle and high school. In addition, the respective age groups 4-10 years, 11-13 years, and 14-17 years are assumed to represent elementary, middle, and

[141] "Search for Child Care Center or Home." Texas Department of Family and Protective Services 2009. http://www.dfps.state.tx.us/Child_Care/Search_Texas_Child_Care/ppFacilitySearchDayCare.asp.
[142] Occupational Employment Statistics, Bureau of Labor Statistics. May 2007. http://www.bls.gov/OES/.
[143] Texas Workforce Commission, Labor Market and Career Information Department, Occupational Employment Statistics Program 2007. http://www.tracer2.com/.

high school students. The student population is adjusted to reflect a roughly 97 percent attend public school attendance rate.[144]

- The TEA provides the total number of teachers by ISD; however, most available data do not disaggregate the number of teachers by grade level (elementary, middle, and high school). Thus, the only ratios that can be measured are the number of students (all grade levels) per teacher per ISD and the student/teacher ratio for all nine ISDs combined; for the 2007-2008 academic year, the latter ratio was 14.8 students per teacher for Pre-K through 12th grade.
- Student-teacher ratios are typically higher for elementary and lower for high schools.[145] Since teacher counts for each grade were not available, a set of student-teacher ratios were interpolated from available data to estimate the current number of teachers by grade level: 13.8 elementary students per teacher; 15.2 middle school students per teacher; and 16.6 high school students per teacher. These three ratios serve as reference points for current (academic year 2008-2009) teacher demand/gaps by grade level.

Student to School Profession Ratios: **Table 3.8-1** provides the number of students per teacher and students per staff for the nine ISDs individually and as a whole. Student to teacher ratios range from 13.9 at Anthony ISD to 16.7 at Clint ISD with the remaining ISDs falling in between.

Table 3.8-1. El Paso County Independent School Districts: Students per Teacher/Staff Ratios, 2007-2008

	Total	Anthony	Canutillo	Clint	El Paso	Fabens	San Elizario	Socorro	Tornillo	Ysleta
Students per Teacher	**14.8**	13.9	14.1	16.7	14.0	14.2	14.2	15.8	14.9	15.0
Professional Support	**68.5**	77.6	74.0	86.6	54.5	85.5	80.2	70.3	208.0	89.1
Campus Admin	**294.3**	246.3	298.6	304.6	281.1	236.1	179.1	337.6	198.2	302.9
Aides	**100.7**	71.4	76.9	88.8	108.3	48.2	97.0	160.0	69.3	79.7
Auxiliary	**24.8**	22.5	21.3	23.7	26.1	18.5	16.1	28.5	23.8	23.0

Source: Pre-K through 12th grade from the Texas Education Agency (elementary, middle, and high school students are not distinguished).

Students by Grade Level: **Table 3.8-2** provides the number of students and teachers by grade level (elementary, middle, and high school) as well as the total number of school support personnel throughout El Paso. For the 2008-2009 academic school year, there are approximately 83,200 students at the elementary level, 36,950 students in middle school, and 50,940 students at the high school level.

Teachers by Grade Level: Using the ratios noted above (13.8, 15.2, and 16.6), Table 3.8-2 indicates that there are an estimated 11,518 Pre-K through 12th grade teachers across the nine

[144] IPED calculations based on TEA data and IPED demographics projections.
[145] Interview with Dr. William J. Wachtel, Senior Resource Analyst, Business Services, El Paso Independent School District. April 21, 2009.

area ISDs in the academic year 2008-2009: 52 percent are elementary, 21 percent are middle, and 27 percent are high school teachers. When combined, the total students and teachers produce the overall 14.8 student to teacher ratio in Table 3.8-1.

Table 3.8-2. El Paso County Counts for the Nine ISDs

Students / Profession	2007-2008[1]	2008-2009[2]
Elementary School Students (Pre-K to 5th Grade)	80,877	83,200
Middle School Students (6th to 8th Grade)	37,680	36,947
High School Students (9th to 12th Grade)	50,743	50,940
Total Students	**169,300**	**171,088**
Elementary School Teachers	5,861	6,029
Middle School Teachers	2,476	2,428
High School Teachers	3,050	3,061
Total Teachers	**11,386**	**11,518**
Professional Support	2,471	2,497
Campus Administrators	575	581
Aides	1,681	1,699
Auxiliary	6,816	6,888

Notes:
1. Student numbers are actual counts from the TEA; teacher numbers are IPED estimates.
2. IPED estimates

Student Capacity and Students of Military Families: **Figure 3.8-1**, **Figure 3.8-2** and **Figure 3.8-3** illustrate the current number of students of military families and schools operating at over/under capacity for the five PIDs in El Paso County. In general, children of military personnel have the biggest impact on El Paso ISD (Figure 3.8-1) and about 17 percent of schools in the PIDs are operating their facilities above planned student capacity (Figure 3.8-2). Appendix D provides a detailed inventory of PID schools by grade levels and is summarized below.

El Paso ISD currently enrolls roughly 70 percent of the total military student population across the county. Children of military personnel make up more than 78 percent of the student body at Milan, Bliss, and Logan Elementary Schools, all located on Fort Bliss property. At Richardson, Bassett, and Ross Middle Schools as well as at Chapin High, military children account for more than 22 percent of the student body. Several El Paso ISD schools are now operating beyond planned capacity; these include Mitzi Bond, Polk, Nixon, Kohlberg, Guerrero, Tippin, Collins, and Stanton Elementary Schools; Canyon Middle School; and Franklin and Chapin High Schools.

Figure 3.8-1. Students of Military Families at Primarily Impacted District Schools

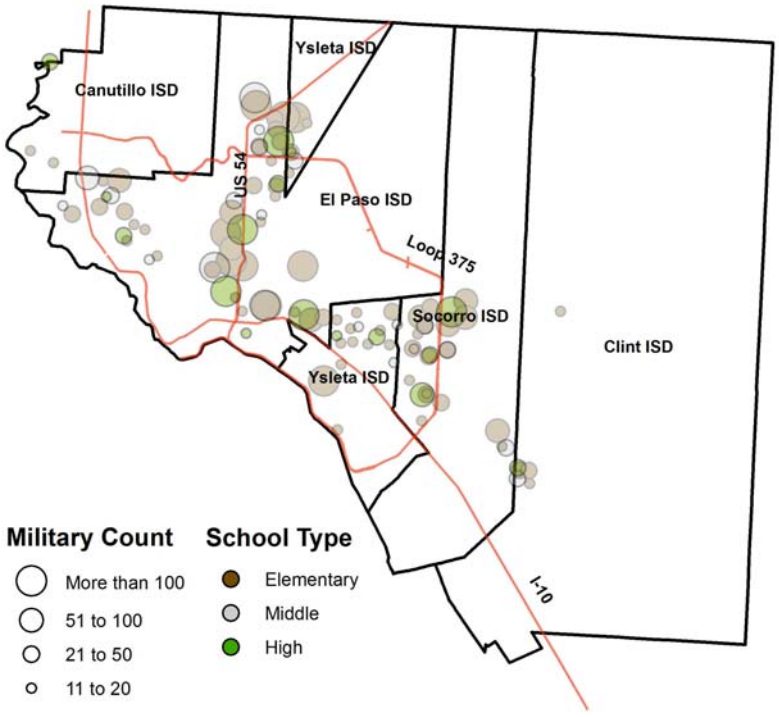


Figure 3.8-2. Students Over Capacity at Primarily Impacted District Schools

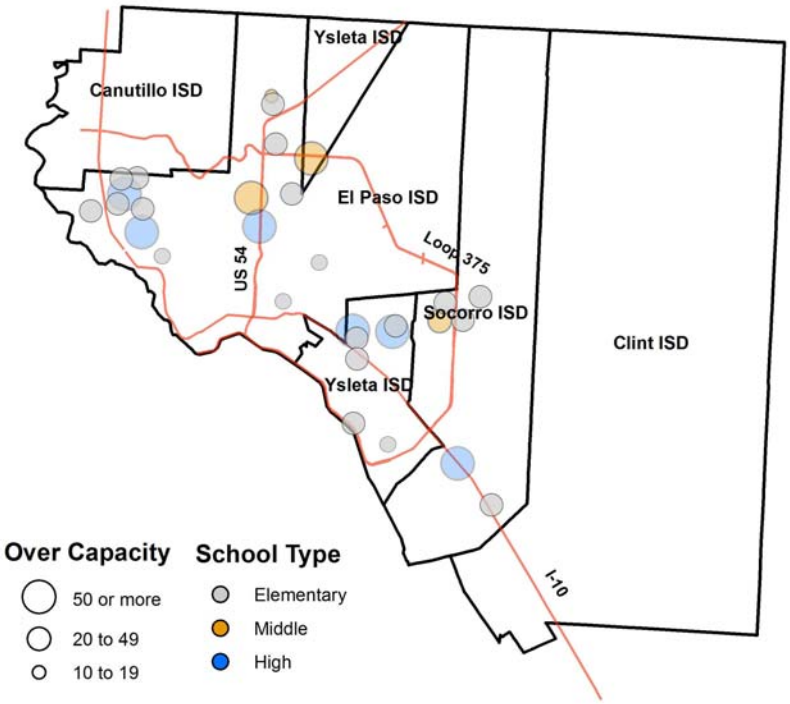
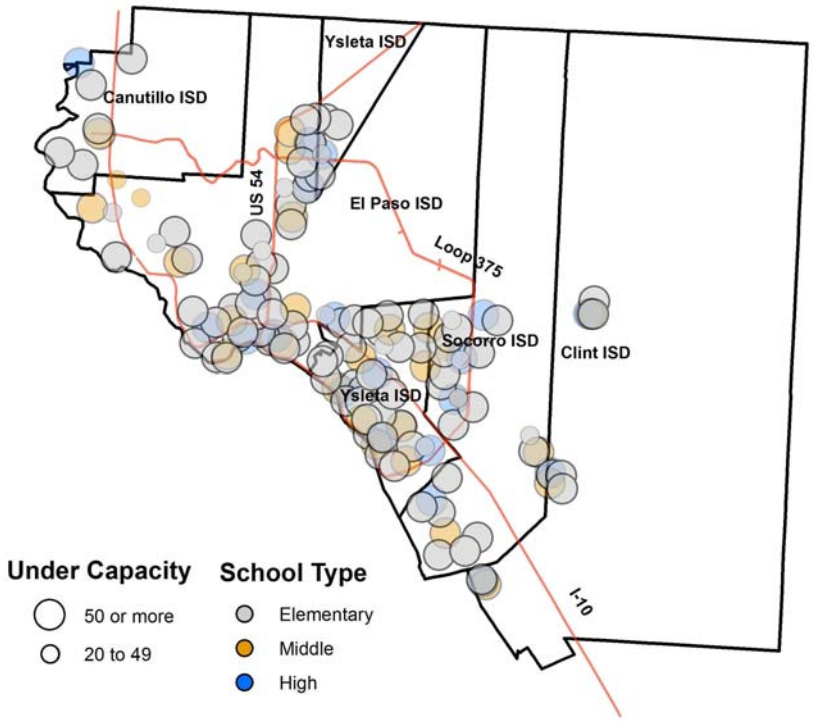


Figure 3.8-3. Students Under Capacity at Primarily Impacted District Schools



Socorro ISD has the second largest population of students of military families. Currently, Hurshel Antwine, Paso Del Norte, and Jane A. Hambric Elementary Schools have a sizeable number of military students and are operating above planned capacity; Desert Wind Elementary and Mission Early College High School also face capacity issues.

In Ysleta ISD, only three schools (of 73) have notable enrollments of military personnel. This district has significant over capacity issues in the following school campuses: Ysleta Pre-K, Glen Cove Elementary, Alicia Chacon (K-8), Eastwood Knolls (K-8), Parkland Middle, Hanks High, and Eastwood High.

Clint ISD, located in far east El Paso County, currently has only one school, William D. Surratt Elementary, operating above planned capacity (14 over) and class space available to accommodate student growth among its remaining schools.

Canutillo ISD is the smallest of the five PIDs. At the moment it has no campuses operating over capacity and similar to Clint, the existing schools have room for student growth. There are no substantial counts of military students in this western part of the county.

Teacher Workforce Need and Gap: "Optimal" student/teacher ratios vary by school district and by purpose. Lower ratios are more effective for class instruction, while higher ratios are more efficient with personnel and facilities.[146] As a result, optimal teacher supply and demand numbers are computations based on multiple unknown variables. **Table 3.8-3** measures teacher

[146] Wachtel 2009.

need by grade level given the objective of lowering the student/teacher ratios to enhance instruction. In this instance, the overall shortage would be 196 teachers.

Table 3.8-3. El Paso County ISD Teacher Need and Gap, 2008-2009

Students per Teacher	Current Supply	Potential Need	Gap
From 13.8 to 13.5 Elementary Students/Teacher	6,029	6,163	134
From 15.22 to 15 Middle Students/Teacher	2,428	2,463	36
From 16.64 to 16.5 High Students/Teacher	3,061	3,087	26

Source: Institute for Policy and Economic Development, UTEP

***Higher Education*:** Current higher education data for the region (including Doña Ana County) is provided in **Table 3.8-4**. At the four-year university level, there were a total of 37,658 students enrolled at UTEP and NMSU (fall 2008); at the community college level, there were 33,604 students enrolled at EPCC and DACC. The current student per faculty ratio ranges between 14.5 and 18.0 for the key higher education institutions in the region.

Table 3.8-4. Fall 2008 Counts for Regional Higher Education

	UTEP	NMSU	EPCC	DACC
Students	20,458	17,200	25,011	8,593
Faculty	1,177	1,187	1,389	549
Staff (full- & part-time)	1,620	2,770	1,411	358
Student to Faculty Ratio	17.4	14.5	18.0	15.7
Student to Staff Ratio	12.6	6.2	17.7	24

Sources: UTEP Center for Institutional Evaluation, Research, and Planning; NMSU Institutional Research, Planning and Outcomes Assessment; EPCC Office of Institutional Research; DACC Institutional Effectiveness Planning Office

Higher education faculty and staff in the region have the capacity to manage anticipated growth in enrollment over the near term. For example, a 10 percent increase in enrollment at UTEP implies an increase in the student/faculty ratio of less than 2.0 (1.7). The student/staff ratio would increase by less than 1.5 (1.3). A 30 percent increase in enrollment implies an increase of 5 (5.2) and 4 (3.8) in the student/faculty and student/staff ratios respectively. Similar results emerge for NMSU and DACC. A 30 percent increase in enrollment at these institutions is consistent with projected enrollment growth to 2020 as discussed in Section 3.8.2.4. As noted, the increase in the ratios assumes static values for faculty and staff over time.

3.8.2.2 Workforce Education and Training

The following tables provide information on degrees awarded in fields that prepare students for education-related occupations. **Table 3.8-5** lists regional higher education institutions that offer teaching-related degrees. Programs range from general education to library technology, early

childhood education, and counseling psychology. UTEP is registered with WSURG, and its students qualify to receive WSURG training funds.[147]

Table 3.8-5. Regional Higher Education for Education Occupations

School	Location	Degrees	Programs
UTEP College of Education	El Paso, TX	Bachelor, Master, Doctorate	Education, Educational Diagnostician, Interdisciplinary Studies, Educational Admin., Educational Leadership and Admin., Special Education, Guidance and Counseling, Teacher Education
El Paso Community College	El Paso, TX	Associate	Teaching (Early Childhood)
NMSU College of Education	Las Cruces, NM	Bachelor, Master, Doctorate	Athletic Training Ed., Communication Disorders, Counseling and Guidance, Counseling Psychology, Curriculum and Instruction, Early Childhood Education, Elementary Education
Doña Ana Community College	Las Cruces, NM	Associate	Early Childhood Education, Education Associate, Education Paraprofessional, Library Technology

Sources: UTEP, NMSU, EPCC, and DACC

Table 3.8-6 and **Table 3.8-7** list education-related degrees conferred at UTEP and NMSU respectively by major and level. At UTEP, all education-related undergraduate degrees (1,166 in total) between the 2005-2006 and 2007-2008 academic years were awarded in Interdisciplinary Studies. The Bachelor of Interdisciplinary Studies is offered in two options for Early Childhood through Grade Four (i.e., Generalist or Bilingual Generalist). It is also offered in seven options for Middle Level, Grades 4 through 8 certification (i.e., Generalist, Bilingual Generalist, English/Language, Arts/Reading/Social Studies Composites, and Math and Math/Science).

[147] Interview with David Coronado, Labor Market Analyst, Workforce Solutions Upper Rio Grande. April, 20 2009.

Table 3.8-6. UTEP College of Education Degrees Conferred by Major and Level

Study Major	2005-2006	2006-2007	2007-2008	2005-2008 Totals
Undergraduate				
Interdisciplinary Studies	308	427	431	**1,166**
Graduate				
Special Education	6	26	10	**42**
Reading Education	19	11	14	**44**
Instructional Specialist	100	99	95	**294**
Guidance and Counseling	39	39	45	**123**
Educational Diagnostician	26	10	10	**46**
Educational Administration	76	71	87	**234**
Education	3	1	2	**6**
Doctorate				
Education Leadership/Admin.	6	7	4	**17**

Source: UTEP Interactive Fact Book 2009.

Table 3.8-7. NMSU College of Education Degrees Conferred by Major and Level

Study Major	2005-2006	2006-2007	2007-2008	2005-2008 Totals
Undergraduate				
Athletic Training Education	8	5	7	**20**
Communication Disorders	17	18	13	**48**
Early Childhood Education	23	16	20	**59**
Elementary Education	145	139	149	**433**
Physical Education	17	18	13	**48**
Secondary Education	38	43	37	**118**
Special Education	9	4	9	**22**
Graduate				
Counseling and Guidance	9	15	12	**36**
Education	213	166	194	**573**
Educational Administration	69	31	21	**121**
Doctorate				
Counseling Psychology	-	6	3	**9**
Curriculum and Instruction	17	18	9	**44**
Educational Administration	8	10	13	**31**
Other Graduate				
Curriculum and Instruction[1]	-	-	3	**3**
School Psychology[1]	3	6	11	**20**
Educational Administration[1]	1	-	-	**1**
Teacher Education and Professional Development[2]	-	-	13	**13**

Sources: NMSU Fact Book – 2006, 2007, and 2008, Institutional Research, Planning and Outcomes Assessment, NMSU.
Notes:
1. Specialist in Education Degree
2. Graduate Certificate Program

Both EPCC and DACC offer programs in teaching-related disciplines. **Table 3.8-8** and **Table 3.8-9** show educated degrees awarded during the 2005-2006 and 2007-2008 academic years.

Table 3.8-8. EPCC Education Associate Degrees and Certificates Awarded

Program Description	2005-2006		2006-2007		2007-2008		Total	
	Assoc.	Cert.	Assoc.	Cert.	Assoc.	Cert.	Assoc.	Cert.
CDEC - Child Development Aide	0	9	0	4	0	3	**0**	**16**
Child Development - Associate Credential	0	21	0	15	0	21	**0**	**57**
Child Development - Administration	10	0	22	0	17	0	**49**	**0**
Child Development - Teaching	32	0	35	0	36	0	**103**	**0**
Teacher Prep: Early Child Education	153	0	57	0	28	0	**238**	**0**
Teacher Prep: Middle School	55	0	31	0	11	0	**97**	**0**
Teaching - All-Level Certificates, 8-12	0	-	1	0	1	0	**2**	**0**
Teaching - Early Childhood	49	0	149	0	206	0	**404**	**0**
Teaching - General Certificate Option	0	-	11	0	25	0	**36**	**0**
Total	299	30	306	19	324	24	**929**	**73**

Source: Office of Institutional Research, EPCC.

Table 3.8-9. DACC Education Associate Degrees Awarded

Degree	2005-2006	2006-2007	2007-2008	2005-2008 Totals
Early Childhood Education AECED	1	9	12	**22**
Education Associate AEDUC	21	19	31	**71**
Education Paraprofessional AEPAR	12	8	6	**26**
Library Technology OELT	12	8	8	**28**

Source: Doña Ana Community College 2008 Fact Book, Office of Institutional Effectiveness and Planning Office, NMSU.

3.8.3 Education Issues Related to Military Growth

The future workforce assessment focuses on 1) El Paso County forecasts of school age cohorts (0 to 17 years old) with military demographics incorporated, 2) projected needs/gaps in education fields, 3) analysis of student enrollment growth on school capacity and location, and 4) enrollment forecasts for higher education institutions.

3.8.3.1 Student Forecasts

As the county grows, a large share of the increased population will be children. As a result, the relatively young population base for El Paso will continue to get younger. For example, by

2025 persons under the age of 25 will comprise 46.2 percent of El Paso's population, up from 43.7 percent in 2008. This is illustrated by comparing age pyramids in **Figure 3.8-4** and **Figure 3.8-5.**

Figure 3.8-4. El Paso County 2008 Population

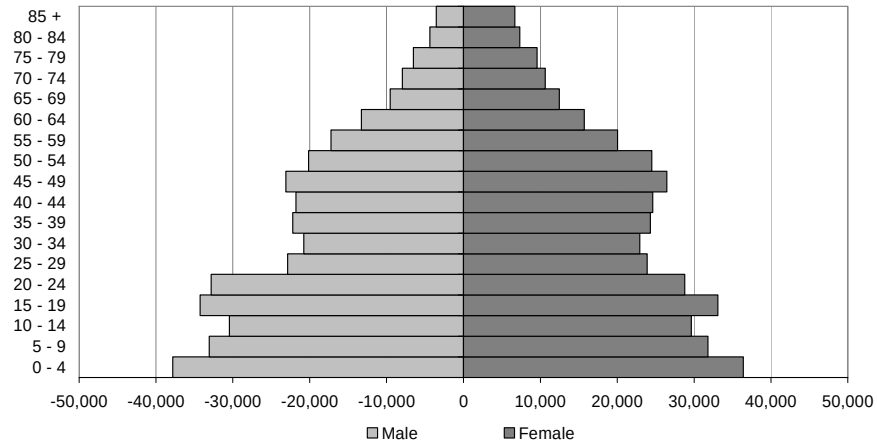
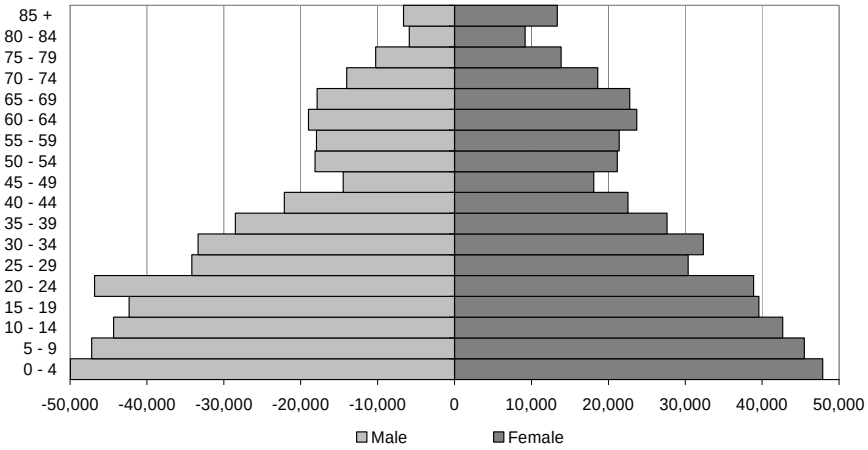


Figure 3.8-5. El Paso County 2025 Population, Medium Growth Simulation



Sources: U.S. Census Bureau and Institute for Policy and Economic Development, UTEP

To understand impacts on education, it is important to study how age groups change over time. **Figure 3.8-6** and **Figure 3.8-7** illustrate the significant near-term growth infants 3 years and younger and small children between the ages 4-10 years, respectively. This translates to an expected increase in demand for child care services and elementary classroom space.

Figure 3.8-6. El Paso County 0 to 3 Year Old Population

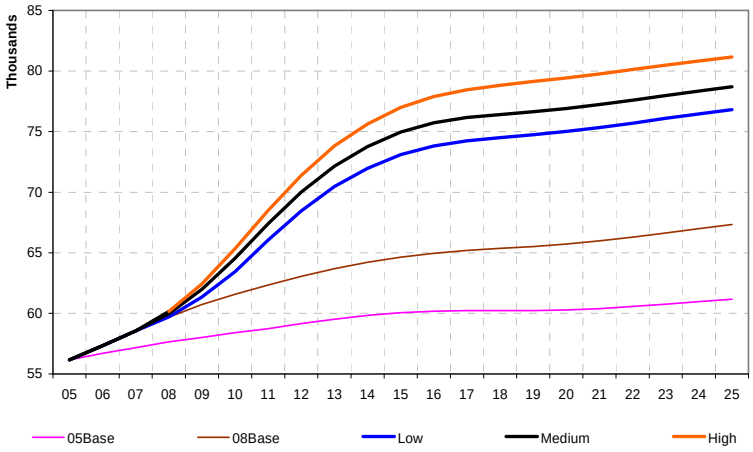


Figure 3.8-7. El Paso County 4 to 10 Year Old Population

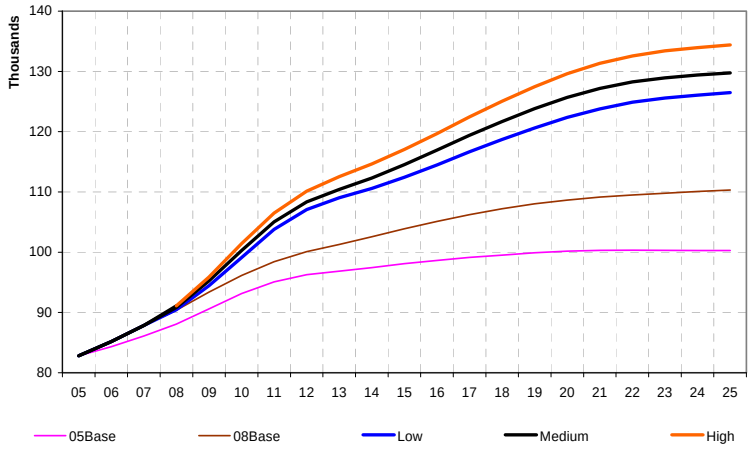


Figure 3.8-7**, Figure 3.8-8** and **Figure 3.8-9** illustrate the growth patterns of the age groups that are representative of future elementary, middle and high school students.

Figures 3.8-8 and 3.8-9, representing the 11-13 and 14-17 year age groups, show a trend featuring a decline in these student populations. The decline is a result of the baby boom "echo effect" discussed in section 3.1.1.1 and is expected to be temporary as the "slump" progresses through successive age groups This peak-trough-growth trend is present nationwide, even in regions like El Paso, which experience higher birth rates due to international migration patterns.[148]

[148] Interview with Karl Eschbach, Ph.D. State Demographer of Texas, Director, Texas State Data Center, University of Texas at San Antonio. November 1, 2008.

Figure 3.8-8. El Paso County 11 to 13 Year Old Population

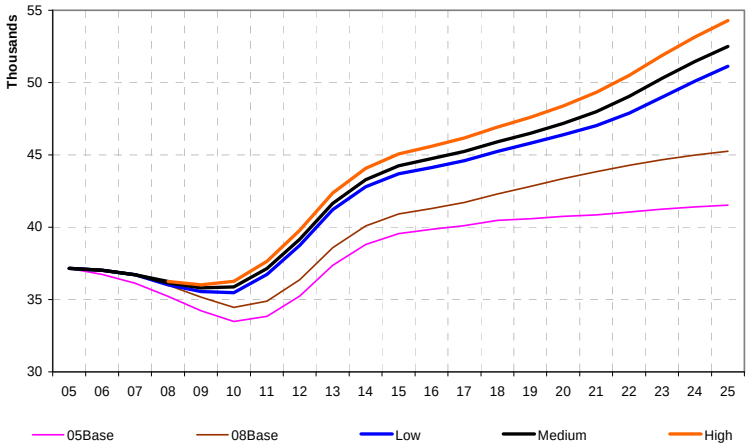
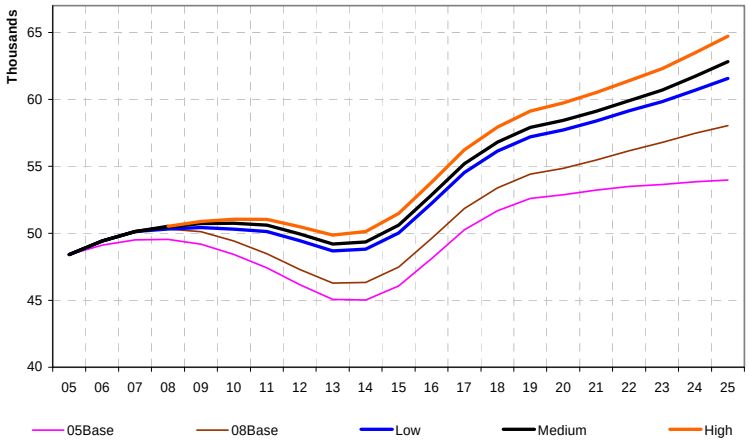


Figure 3.8-9. El Paso County 14 to 17 Year Old Population



Sources: U.S. Census Bureau and Institute for Policy and Economic Development, UTEP

3.8.3.2 Workforce Needs and Gaps

***Child Care*:** The reference point noted above of one child care worker per 160 children 10 years and younger, (developed earlier this section) is used here to estimate child care workers. In 2008 there were 150,600 children 10 years and younger; by 2015 there will be between 185,500 and 194,000; by 2025 there will be between 203,300 and 215,600 (**Table 3.8-10**). Thus, by 2015 it can be estimated that an additional 218 to 272 child care workers will be needed; by 2025 the additional need will be from 330 to 407.

Table 3.8-10. El Paso County Child Care Workforce Needs and Gaps

Children Ages 0-10 Years	Low Growth Scenario				Medium Growth Scenario				High Growth Scenario			
	Need		Gap		Need		Gap		Need		Gap	
	2015	2025	2015	2025	2015	2025	2015	2025	2015	2025	2015	2025
Total	185,466	203,292			189,635	208,471			194,011	215,564		
Per Child Care												
160	1,161	1,273	**218**	**330**	1,187	1,305	**244**	**362**	1,215	1,350	**272**	**407**

Source: Institute for Policy and Economic Development, UTEP.

***Pre-K through 12th*:** This section concentrates on student enrollment forecasts and projected needs/gaps of El Paso's Pre-K through 12th grade education for the LGS, MGS, and HGS and for two points in time (2015 and 2025). **Table 3.8-11** projects future education workforce needs. Key assumptions made in the analysis include:

1. *Student to Teacher Ratios*: In order to project teacher supply and demand (need), current and future student to teacher ratios were determined. Four sets of student to teacher ratios were used to capture varying public educational needs and realities.

   Set 1) 13 elementary, 14 middle, and 15 high school students per respective teacher; this scenario is more optimal for instructional purposes;

   Set 2) 14 elementary, 15 middle, and 16 high school students per respective teacher;

   Set 3) 15 elementary, 16 middle, and 17 high school students per respective teacher;

   Set 4) 16 elementary, 17 middle, and 18 high school students per respective teacher; this scenario is more optimal for operational purposes experienced at larger campuses.

2. *Student Population*: For the 2008-Baseline and the LGS, MGS, and HGS, the respective age groups 4-10 years, 11-13 years, and 14-17 years were assumed to represent Pre-K through 5th grade elementary school students, 6th through 8th grade middle school students, and 9th through 12th grade high school students. Student population forecasts are also adjusted to reflect the percentage of students in these age groups that attend public school (a smaller percentage attend private schools, are home schooled or have dropped out of school).

3. *Workforce Baseline Supply*: The projected number of teachers by grade level for 2015 and 2025 were calculated by multiplying the four sets of respective student/teacher ratios (step 1) with El Paso's 2008-Baseline (step 2) adjusted population projections by student age group for 2015 and 2025. By using the 2008-Baseline, which assumed no military growth after 2008, projected student population increases exclude any military influence.

4. *Workforce Need*: El Paso's projected educator needs for 2015 and 2025 were calculated by multiplying the (step 1) student to teacher ratios by grade level with (step 2) adjusted student population projections for each growth scenario (LGS, MGS, and HGS). These

estimates represent a range of potential workforce needs with smaller ratios (greater teacher need) more optimal for instructional purposes and larger ratios (lesser teacher need) more optimal for functional purposes.

5. *Workforce Gaps*: Projected gaps were estimated as the difference between future workforce need (step 4) and future workforce baseline supply (step 3). These gaps measure the direct impact of Fort Bliss expansion on the Pre-K through 12th grade.

Table 3.8-11 reports future workforce needs and gaps for El Paso County. Estimates from Table 3.8-2 should be used as a reference to interpret Table 3.8-11. The "gap" columns in Table 3.8-11 provide information as to how many more teachers are needed as a direct result from Fort Bliss growth. The following is a summary of results for the county ISDs given the assumed students per teacher ratios noted above.

- *Elementary School Teacher Need*: By 2015 there will be a teacher need throughout El Paso of 6,470 (16 students per teacher in low growth) to 8,291 (13 students per teacher in high growth); in 2025 the need will grow to a range of 7,277 to 9,518.
- *Middle School Teacher Need:* By 2015 there is a projected teacher need at the low end of 2,638 (17 students per teacher in low growth) and 3,304 at the high end (14 students per teacher in high growth); by 2025 the need will range between 3,087 and 3,981.
- *High School Teacher Need:* By 2015 the teacher need is estimated at between 2,814 (18 students per teacher in low growth) and 3,474 (15 students per teacher in high growth); in 2025 the teacher need is forecast at between 3,462 and 4,368.
- *Total Teacher Need:* By 2015 the total teacher need (all grade levels) ranges between a minimum of 11,922 and a maximum of 15,070; by 2025 the range is 13,826 to 17,867. The range in these estimates is influenced significantly by the variation in "optimal" student/teacher ratios.
- *Teacher Gaps:* The largest demand gaps resulting from military growth/demographics are projected for lower student/teacher ratios. This is provided in the row in Table 3.8-11 showing a student to teacher ratio of 13, 14, and 15 for elementary, middle, and high schools, respectively. Ratios for the expected growth scenario show an additional teacher demand of 1,212 and 2,230 for the years 2015 and 2025, respectively. These are teacher requirements resulting directly from military expansion.
- *Other Campus Staff Gaps:* Using the MGS, education jobs created by the military expansion in 2015/2025 include 240/440 professional support personnel, 56/103 additional campus administrators, 163/300 teacher aides, and 661/1,214 auxiliary staff.

Table 3.8-11. El Paso County Future Workforce Needs and Gaps

Students[1]	Low Growth Scenario				Medium Growth Scenario				High Growth Scenario			
	Need		Gap		Need		Gap		Need		Gap	
	2015	2025	2015	2025	2015	2025	2015	2025	2015	2025	2015	2025
Elementary (ages 4-10)	103,523	116,429			105,460	119,467			107,788	123,731		
Middle (ages 11-13)	44,844	52,482			45,421	53,883			46,259	55,733		
High (ages 14-17)	50,644	62,320			51,239	63,605			52,112	65,519		
Total (ages 4-17)	**199,011**	**231,231**			**202,119**	**236,955**			**206,159**	**244,982**		
Elementary Students/Teacher												
13	7,963	8,956	606	1,143	8,112	9,190	755	1,377	8,291	9,518	934	1,705
14	7,394	8,316	563	1,061	7,533	8,533	701	1,278	7,699	8,838	868	1,583
15	6,902	7,762	526	991	7,031	7,964	655	1,193	7,186	8,249	810	1,477
16	6,470	7,277	493	929	6,591	7,467	614	1,119	6,737	7,733	759	1,385
Middle Students/Teacher												
14	3,203	3,749	203	430	3,244	3,849	245	530	3,304	3,981	305	663
15	2,990	3,499	190	402	3,028	3,592	228	495	3,084	3,716	284	618
16	2,803	3,280	178	377	2,839	3,368	214	464	2,891	3,483	266	580
17	2,638	3,087	168	354	2,672	3,170	201	437	2,721	3,278	251	546
High Students/Teacher												
15	3,376	4,155	172	237	3,416	4,240	212	323	3,474	4,368	270	451
16	3,165	3,895	161	223	3,202	3,975	198	303	3,257	4,095	253	422
17	2,979	3,666	152	209	3,014	3,741	187	285	3,065	3,854	238	398
18	2,814	3,462	143	198	2,847	3,534	176	269	2,895	3,640	225	376
Total Students/Teacher												
13 E, 14 M, 15 H	14,543	16,859	982	1,811	14,773	17,279	1,212	2,230	15,070	17,867	1,509	2,818
14 E, 15 M, 16 H	13,549	15,710	914	1,685	13,763	16,101	1,128	2,076	14,040	16,648	1,405	2,624
15 E, 16 M, 17 H	12,683	14,708	855	1,576	12,883	15,074	1,056	1,942	13,142	15,586	1,315	2,455
16 E, 17 M, 18 H	11,922	13,826	804	1,481	12,110	14,170	992	1,824	12,353	14,652	1,235	2,306
Students/Campus Staff												
Professional Support	2,905	3,375	194	357	2,950	3,459	240	440	3,009	299	558	3,576
Administration	676	786	45	83	687	805	56	103	701	70	130	833
Aides	1,976	2,296	132	243	2,007	2,353	163	300	2,047	203	379	2,433
Auxiliary	8,012	9,309	536	984	8,137	9,540	661	1,214	8,300	824	1,538	9,863

Source: Institute for Policy and Economic Development, UTEP.

Notes:

1. Students ages 4-17 years are adjusted to reflect the percent of these students that attend public school (IPED calculation based on TEA student data and IPED demographics estimates).

3.8.3.3 Enrollment Impact on Capacity and Location

The purpose of this analysis is to evaluate school-age enrollment in El Paso County's nine ISDs. Students who live in one of these ISDs attend a designated elementary, middle, or high school based on the physical boundaries known as school attendance zones (SAZ), which are defined by each district. A SAZ is specified with the intention that the number of students living within its boundaries does not exceed the capacity of the corresponding school. Because each school has limited capacity to serve students, it is important to understand how military-related growth will affect enrollment in El Paso area schools.

The analysis was performed using Community Viz/GIS incorporating city-provided TAZ population/household forecasts. It is comprehensive, and the results are presented in Appendix D, including all assumptions, a description of the calculation methods, and information outputs in graphic and tabular formats.

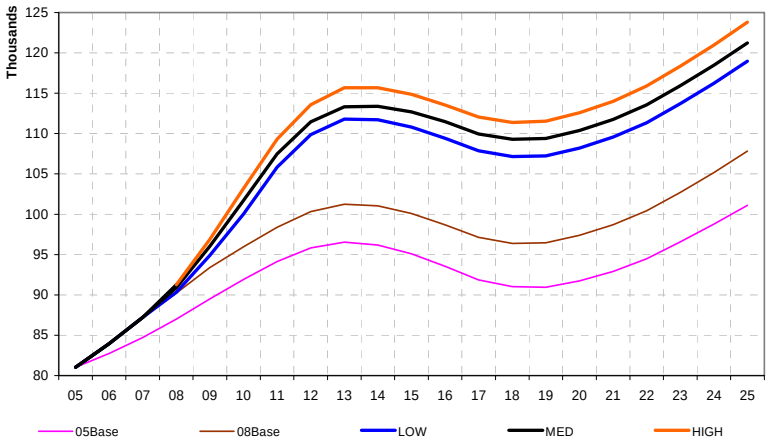
Key results from the analysis follow:

- El Paso ISD is the county's largest school district with over 50 elementary schools and 10 high schools.
- For the 2007-2008 school year, 18 schools in the El Paso ISD operated beyond capacity. The district faces significant increases in enrollment in its North West and North East regions.
- Elementary school capacity concerns will persist in 2015 and 2025 for approximately 50 percent of the school sites.
- While schools operating under capacity should ideally absorb students from neighboring schools operating above capacity, this option is not realistic since many are not suitably located.
- A similar pattern emerges for El Paso ISD middle schools. While only one school is projected to be over capacity in 2010, 57 percent will face this situation by 2015.
- By 2010, 30 percent of the District's high schools will face capacity issues. The percentage rises to 40 percent and 50 percent by 2015 and 2025, respectively. The shortages are expected to be significant by 2025.
- Existing bonds passed by El Paso County School Districts between 2004 and 2007 are addressing current capacity concerns. Particular growth areas targeted by existing bonds include the Northwest (El Paso and Canutillo ISDs), Northeast (El Paso and Ysleta ISDs) and Far East (Clint, Socorro, and Ysleta ISDs) areas of the City. El Paso area school districts need to consider current growth trends and BRAC related growth issues to align and/or re-align existing bond goals with future growth introduced by military expansion. In addition, future bond issues need to factor in projected BRAC impacts in order to strategically plan future schools in heavily impacted areas of their respective districts.

3.8.3.4 Regional Higher Learning

The growth dynamics of persons 18 to 24 years old are illustrated in **Figure 3.8-10**. This group exhibits a slight decline during the next decade before increasing as a result of the baby boom "echo effect." The impact of the military on this demographic is quite significant and can be seen by comparing the growth scenarios (low, medium, and high) against the 2008-Baseline. This age group will impact enrollment at higher education institutions as it is the traditional age group entering college. To quantify their potential impact, econometric models were developed to forecast enrollment. The 25 through 34-year-old age group will also place substantial demand on higher education in this region and is considered in these models. To facilitate reporting, this analysis only reports two scenarios: the 2008-Baseline forecast that is used as reference and the MGS (i.e., most likely growth scenario).

Figure 3.8-10. El Paso County 18 to 24 Year Old Population



This analysis assumes that the demand for enrollment at higher education institutions is determined by the institution's tuition price, income level of residents, tuition price at other institutions (as substitutes and/or complements), and a demographic component. The latter is particularly important due to the expected population increase driven by Fort Bliss expansion. Given that enrollments usually increase in times of increasing unemployment, the unemployment rate is also incorporated as a variable. Since it is common for Mexican nationals to enroll in higher education institutions in the region, the exchange rate (pesos/dollar) is also included as a variable. Several additional socioeconomic variables were initially included in the sample (e.g. employment and per capita personal income), but are excluded from the results discussed due to statistical non-significance. In most cases, the annual data employed for modeling purposes are taken from the years 1975 to 2007 and then forecast to 2025.

Aligned with population forecasts, a significant increase in higher education enrollment can be witnessed in UTEP between 2009 and 2012 (**Figure 3.8-11**), the same years in which Fort Bliss expects to accommodate an additional 20,384 troops and 27,478 dependents. A similar trend can be observed in the fall 2009 enrollment for EPCC (**Figure 3.8-12**). The enrollment impact at

NMSU also follows the expected population growth in Doña Ana County driven by the addition of a military brigade (and family members) at WSMR in 2013[149] (**Figure 3.8-13**).

Figure 3.8-11. UTEP Fall Enrollment

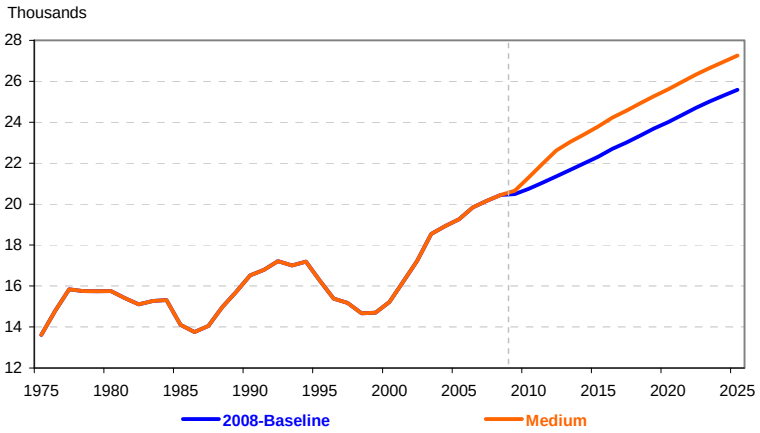


Figure 3.8-12. EPCC Fall Enrollment

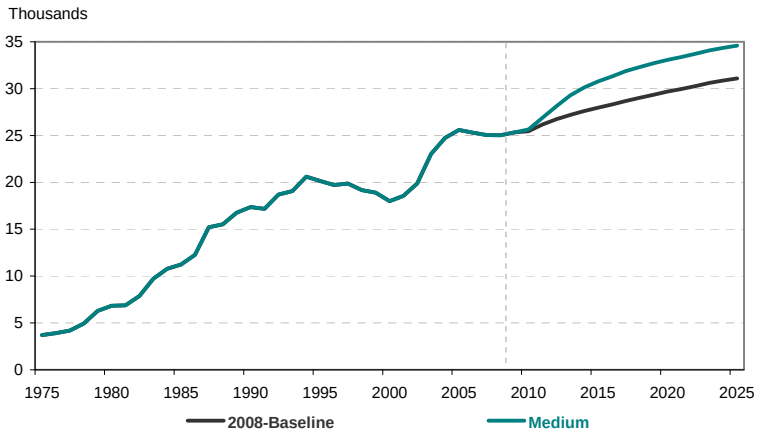
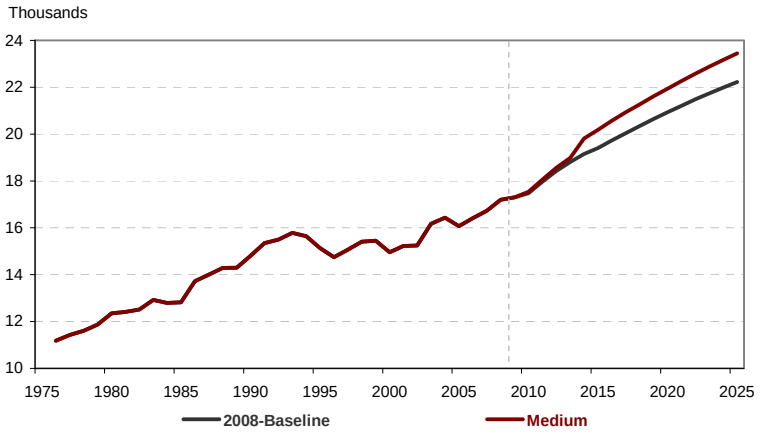


Figure 3.8-13. NMSU Fall Enrollment



[149] Relevant data for DACC was not available.

Table 3.8-12. Current and Forecast Fall Enrollment

Year	UTEP		EPCC		NMSU	
	2008-Baseline	MGS	2008-Baseline	MGS	2008-Baseline	MGS
2008	20,458	20,458	25,011	25,011	17,200	17,200
2012	21,364	22,619	26,731	28,129	18,434	18,560
2015	22,314	23,800	27,978	30,761	19,407	20,187
2020	23,998	25,601	29,693	33,080	20,929	21,941
2025	25,589	27,258	31,100	34,586	22,226	23,448
Net 2008-2012	**906**	**2,161**	**1,699**	**3,097**	**1,234**	**1,360**
Net 2008-2015	**1,856**	**3,342**	**2.967**	**5,729**	**2,207**	**2,987**
Net 2008-2025	**5,131**	**6,800**	**6,068**	**9,554**	**5,026**	**6,248**

Sources: IPED econometric models using fall enrollment data from: UTEP Center for Institutional Evaluation, Research, and Planning; EPCC Office of Institutional Research; NMSU Institutional Research, Planning and Outcomes Assessment

As indicated in **Table 3.8-12** EPCC is projected to observe the greatest initial enrollment growth followed by UTEP and NMSU. More specifically:

- **Between 2008 and 2012**: Including the population growth captured by the MGS, fall enrollment at UTEP is projected to increase by 2,161, at EPCC by 3,097, and at NMSU by 1,360; this is a total student increase at these three schools of 6,618 over the next four years. By comparison, the total student growth using the 2008-Baseline, which holds the military constant at 2008 levels, is 3,839. This translates to an impact of 2,779 (6,618 less 3,839) additional students resulting from military-led expansion over the next four years.
- **Between 2008 and 2025**: By 2025, fall enrollment across the region at UTEP, EPCC and NMSU is forecast to grow by 22,602 (6,800 at UTEP, 9,554 at EPCC, and 6,248 at NMSU) taking into account the military influx at Fort Bliss and WSMR (MGS). Assuming the military remained constant at 2008 levels (2008-Baseline), the fall student increase would only be 16,225, meaning that military-led expansion will result in 6,377 additional students entering these higher learning institutions over the next 17 years.

3.8.4 Recommendations

- In order to meet future teacher needs, it is important to facilitate teacher certification for interested individuals. At the City level, a central point of contact should be designated who: 1) collects teacher certification requirement information and 2) makes this information available via the City website. The information should include UTEP and Region 19 certification requirements and contact information. At the county level,

recruitment of teachers should be an organized/collaborative effort. All county ISDs should coordinate recruitment efforts with Region 19.

- ISDs should seek to attract teachers, certified via the DoD Education Activity agency. These individuals are highly qualified, and may be relocating from Europe. In this effort the ISDs should find ways to ease their transition to Texas certification beyond the one-year permits.
- Teacher attraction and retention are significant issues. Educator and professional staff recruitment from outside Texas will be a very serious issue for El Paso and other parts of Texas. Partnering with Fort Hood and Fort Sam Houston communities to work immediately with the Texas State accreditation organization to streamline the accreditation of out-of-state teachers will yield more timely results. New legislation could ease certification, the movement of pensions and pension buy-in for certified professionals.
- Alternative certification is a double-edged sword – increasing the supply of teachers on one hand while raising quality control concerns on the other. On this issue, education experts indicate that alternative certification providers may have a more difficult time passing the new requirements set by the Texas State Board of Educator Certification.
- ISD administrators predict a great need for high school teachers. Recruiting military family members with teacher credentials should be pursued.
- ISDs should tap into the Science, Technology, Engineering, and Mathematics Education Coalition, which funds programs for teachers and students such as teacher training, funding assistance for textbooks, and specialized teachers coming to the respective ISDs for presentations to assist teachers and students in these areas.
- The Army funds/assists men and women before they leave the service in obtaining credits towards teacher certification. Fort Bliss in collaboration with ISDs and El Paso institutions of higher education should promote this option available to soldiers.
- El Paso County ISDs need to join the National Educational Compact so that children coming to El Paso from other states (and vice versa) can receive full credit for courses they took at other out-of-state schools. This is an issue that will affect some spouses of military soldiers as well who have not yet finished high school and are relocating to Fort Bliss.
- There needs to be better flow of critical information between developers and ISD administrators so that they can plan facility construction in a more timely fashion. Likewise, administrators need to monitor zoning and building permit requests to better understand the location(s) of growth.
- Quality instruction and quality of life are key concerns of military parents for their children. The Plan for Excellence program at El Paso ISD is a model that should be supported with regards to promoting fine arts in elementary schools and athletics in-school and after-school activities, improved technology, etc.

- Administrators must prepare for the potentially tremendous influx of students in the next few years. Projections for military growth in El Paso last year fell short of expectations by 800 students, due in part to deployments that kept families from moving into the region. Districts that made more conservative estimates for the current school year are now reporting larger numbers than anticipated. With the major influx occurring in 2010, educators must prepare accordingly.
- Some of the strategic challenges for districts to accommodate children better is bilingual/dual-language education and providing economically disadvantaged and military students with adequate education resources to overcome specific challenges they face.
- Districts must understand and accommodate special circumstances for military children. Cultural differences that these incoming students are going to encounter must also be taken into account; this culture shock will affect parents as well, as they adapt to a new lifestyle and deal with their children's acculturation. Carefully planning, anticipation of needs, and staffing for those likely needs will be very important to El Paso and its new military residents.
- ISDs should expand training programs for guidance counselors and teachers to spot/recognize troubled children of military families, in particular children with one or two parents deployed. Military liaisons who work with and provide ISDs training on predictable stressors in military life is an underutilized resource. These efforts, as well as the student ambassador program, which partners local children with military children relocating to El Paso, should be particularly extended and expanded in schools with a significant military student population. In addition, ISDs should work with the city and nonprofit organizations to refer troubled children and/or parents so that they can receive immediate and professional assistance.
- Teachers that teach in dual credit classes are in demand. These classes allow high school students to obtain college credit while in high school and are particularly liked by military parents as they provide their children higher education options. More so, it provides military and non-military parents huge cost savings when their children forego semesters in college and children that obtain these credits have the flexibility to transfer them to other colleges/universities. Teachers teaching this program are required to have a Masters Degree with 18 hours in their respective field. Due to this requirement, there is more need than supply. Flexible course offerings at UTEP and NMSU such as online courses and more evening classes in the respective graduate courses would increase dual credit opportunities.
- In El Paso, Head Start is currently divided into several programs run by different groups. A unified program would make it much more effective.
- With bond elections becoming more unpopular, due, in part, to stress on household budgets, more effort to identify need is required as well as developing alternative finance mechanisms other than bonds to provide funding for upcoming construction plans.

Public Private Partnerships, used elsewhere to fund school construction is an effective alternative.

- ISD bond issues appear to have accounted for current shortfalls and needs through 2008, but may need review in order to capture all the facility needs driven by the influx of new students of military families. In some ISDs there is already a significant need for new facilities. Municipal leadership is needed to estimate needs and costs.
- Municipal leadership is also needed to ensure that all students whose parents are employees of Federal organizations are identified and documented. This is the critical element in Federal reimbursement to ISDs and tax payers in the various ISDs deserve that reimbursement.
- Currently, ISD funding is capped by the state. As a result, any increase in revenue for ISDs through gains in property valuations is taken away by the state through their state funding allotment. Stakeholders need to support one another to promote a better funding formula that allows districts to retain local tax gains, which are necessary to keep pace with salary adjustments and increases in operating costs.
- It is not known whether charter schools market to military personnel and their families or whether military families or El Paso families in general have any interest in charter schools. Charter schools could provide relief to local school districts if capacity becomes a problem.
- The location of the proposed EPCC campus at Fort Bliss will serve the east, northeast, and far east areas of town and provide higher education access to the Fort Bliss population. The traffic study will likely show the need to expand Montana Avenue to alleviate traffic congestion along this corridor. This project, if supported by the community and implemented, would benefit a future EPCC campus on Fort Bliss.

Table 3.8-13 lists recommended actions from the Action Plan (Appendix G) for Education. The table names the action, lists the entity or entities responsible for implementation, the timing and rationale for action, estimated available resources, possible funding sources, and implementation indicators.

Table 3.8-13. Action Plan Recommendations for Education

Recommended Action	Responsible Entity/ Regional Ops	Timing/ (Rationale)	Estimated Resources	Funding Source(s)/ Implementation Strategies	Implementation Indicator
1. Make recruitment of teachers and support personnel a collaborative effort	- City of El Paso (lead) - Texas and New Mexico Universities - Community Colleges - Independent School Districts - REDCO	6 months (Joint action will save costs and speed results)	$900,000 for three years	http://www.doleta.gov/neg/disaster.cfm http://caa.milspouse.org/ http://www.soc.aascu.org/socad/, http://www.aerhq.org/education_spouseeducation_StateSide.asp http://www.tvc.state.tx.us/StateBenefits.html http://www.ed.gov/fund/grant/apply/grantapps/index.html https://www.goarmyed.com/public/public_tuition_assistance_policies.aspx http://ritter.tea.state.tx.us/research/pdfs/prr4.pdf http://www.spousestoteachers.com http://www.texastroopstoteachers.org http://www.defenselink.mil/prhome/mcfpreports.html http://www.dodea.edu/pressroom/releasesDisplaycfm?prId=20070412 http://www.militaryimpactedschoolsassociation.org/ http://rutter,tea,state,tx,ys/reserach/pdfs/prr4.pdf http://www.ed.gov/admins/tchrqual/recruit/altroutes/report.pdf. http://www.ed.gov/programs/heatqp/tqpsum.html http://www.ed.gov/about/offices/list/ope/pol/tsa.pdf	Plan developed
2. Seek legislation to streamline accreditation and pension transfers for out-of-state	- City of El Paso	6 months	Low	Internal city funds	Regulatory relief and

Table 3.8-13. Action Plan Recommendations for Education *(Continued)*

Recommended Action	Responsible Entity/ Regional Ops	Timing/ (Rationale)	Estimated Resources	Funding Source(s)/ Implementation Strategies	Implementation Indicator
teachers • Expect support from the staff described in items 2 and 3, Section 3.1	(lead) - City of Killeen - City of San Antonio - Workforce Board - Texas Military Preparedness Commission (nominate an El Paso delegate to the Commission)	(Military spouses and teacher recruits from other states will be needed to fill open positions at each city)		http://www.oea.gov Consider interstate compact on educational opportunity for military children http://www.csg.org/contact/default.aspx http://www.spousestoteachers.com http://www.texastroopstoteachers.org	legislation
3. Affirm data for federal and defense impact fees pain to school districts	- Each Independent School District	6 months	Low	Internal city funds Description of the Program http://www.hud.gov/offices/hsg/omhar http://www.ed.gov/programs/8003/eligibility.html http://www.ed.gov/about/offices/list/ose/impactaid/index.html http://www.ed.gov/programs/8003/eligibility.html	Increased federal reimbursement Yearly audit of process and results
4. Utilize science and technology and education and math (STEM) education programs to strengthen technology in education	- Independent School Districts	2 years (Technology additions to curriculum will increase workforce	Low	http://www.stemedcoalition.org/ http://ritter.tea.state.tx.us/ed_init/thsp/tstem/index.html http://aggie-stem.tamu.edu/	STEM programs in all ISDs

Table 3.8-13. Action Plan Recommendations for Education *(Continued)*

Recommended Action	Responsible Entity/ Regional Ops	Timing/ (Rationale)	Estimated Resources	Funding Source(s)/ Implementation Strategies	Implementation Indicator
		productivity and add value to products)			
5. Plan for increasing bilingual education for all ages • Expect support from organization and coordinator described in items 2 and 3 of Section 3.1	- City of El Paso (lead) Note: see economic development item #2	6 months (Critical need to adapt to El Paso's bilingual region)	Low – Training to be accomplished largely through charitable organizations, churches, etc.	Internal city funds http://www.languageplus.com/ http://www.childcare.gov/xhtml/links/g_4/t_47.html http://www.ncela.gwu.edu/ http://www.languageplus.com http://www.studyspanish.com/destinations/spanish_in_el_paso_texas.htm	Plan created
6. Plan for coordination of Head Start Program, day care, pre-school, and after school programs	- City of El Paso (lead) - YWCA (Day care and Head Start) - Independent School Districts	6 months (Encourage greater use of these programs	Low	Internal city funds http://www.oea.gov http://www.childrenslearninginstitute.org/our-programs/program-overview/TX-head-start/default.html http://childcare.gov http://www.childcare.gov/xhtml/links/g_4/t_47.html http://www.acf.hhs.gov/programs/ccb/providers/index.htm http://www.afterschool.gov http://nccic.acf.hhs.gov Consider Congressional assistance	Plan created
7. The comprehensive planning effort described in Item 1, Section 3.4 should utilize public facilities citing data, the ISDs should also consider Comprehensive Plan and RGMP growth location data as part of their sitting decision	- Independent School Districts (lead) - City of El Paso MPO	1 year (RGMP data represents the latest projections for school facility	Low	Internal city funds	Feedback memoranda from ISDs

Table 3.8-13. Action Plan Recommendations for Education *(Continued)*

Recommended Action	Responsible Entity/ Regional Ops	Timing/ (Rationale)	Estimated Resources	Funding Source(s)/ Implementation Strategies	Implementation Indicator
		needs)			
8. Rapidly expanding school age population will require long term funding for new classroom and school construction	- Independent School Districts	6 months		Bonding Authority	Bond referendum proposed and passed

3.9 Health and Social Services

3.9.1 Introduction and Methodology

Healthcare and social services have a direct impact on quality of life for all El Pasoans, on military readiness, and on the economic health of the community. Ensuring a strong healthcare provider workforce and providing infrastructure is critical to the delivery of services. El Paso, however, faces a shortage of professionals in nearly all health and social service occupations from physicians, dentists, and nurses to social workers and counselors. For both military and local families in the region, health service is a major concern. Current shortfalls in both segments would likely be exacerbated by the prospect of significant growth at Fort Bliss.

To address El Paso's medical and social services workforce concerns, this section identifies occupational gaps in the areas of healthcare, allied health, and social services. The population impacts of military realignment and growth initiatives on the region's medical and social services workforce supply are considered.

Projected workforce gaps are identified by comparing El Paso's workforce supply ratios to supply ratios of seven major Texas counties – Bexar, Dallas, Harris, Lubbock, Nueces, Tarrant, and Travis. The seven reference counties were used for comparative purposes because they are equal to or larger in population than El Paso and each county has a university in their major cities. These counties and major cities also represent El Paso's competition for the pool of physicians being recruited. Future workforce demand is estimated using two points in time, 2012 (when the last of the brigades are expected to relocated into Fort Bliss) and 2025 (the last forecast year for this study); and for each year, population growth based on the LGS, MGS, and HGS is considered. The identified gaps provide estimates of health related occupational shortages El Paso will face as a result of military induced growth.

The shortages described represent the number of medical and social services personnel needed in El Paso to maintain medical and social services parity with other major Texas counties. This analysis assesses the output and demand for professional education providers that provide training in health and social services. If current trends in workforce growth continue, locally based health and social services professionals will meet some, but not all, of projected demand. Understanding shortages, El Paso will have a starting point from which to improve critical infrastructure that will improve the delivery of critical services for area residents. These services will also provide a secondary source of healthcare for military personnel and their families. The following are key health care findings:

- El Paso is currently experiencing significant medical and social service provider shortfalls. As compared with other Texas counties of large size, El Paso has a shortfall of approximately 1,000 physicians, 200 dentists, and 1,000 registered nurses. This shortfall is also reflected in the psychological and social services area where the shortfall exceeds 550.

- In 2012, under the MGS, there is a projected shortage of over 1,000 physicians in family/general/internal medicine, 77 psychiatrists, and 104 pediatricians beyond current shortfalls.
- In 2012, under the MGS, a projected shortage of 1,600 registered nurses above current shortfalls will likely occur.
- El Paso is currently unable to recruit a sufficient supply of family/general/internal medicine physicians, pediatricians, cardiologists, anesthesiologists, and psychiatrists. Physician gains for El Paso lag behind the seven major Texas counties.
- Current nursing and physician trends will not meet anticipated gaps by 2015.
- Increases in demand for health and social services induced by military related growth will add strain to a system that is already experiencing shortages in most critical professions.

3.9.2 Current Workforce Assessment

This section analyzes El Paso County's current workforce supply and supply needs/gaps based on differences between El Paso and the seven-county average for each selected health and social services occupation. In addition, health and social services workforce growth rates/trends as well as educational and training opportunities are provided.

3.9.2.1 Workforce Supply, Needs, and Gaps

Table 3.9-1 and **Table 3.9-2** show 2008 health and social services occupational supplies, needs, and gaps for El Paso County.[150, 151, 152, 153] The first table provides data on physician specialties by category.[154] The second table provides data on dental, healthcare, allied health, social services, and nursing professions.[155]

[150] "Demographics." Texas Medical Board 2008. http://www.tmb.state.tx.us/agency/statistics/demo/demo.php.
[151] "Health Professions – Supply and Distribution Tables for State-Licensed Health Professions in Texas." Texas Department of State Health Services 2008. http://www.dshs.state.tx.us/chs/hprc/health.shtm.
[152] "Texas Nursing Statistics." Texas Board of Nursing 2008. http://www.bon.state.tx.us/about/statistical.html/.
[153] The data do not include other direct patient care occupations such as medical assistants, home health care aides, etc. or other non-direct patient care professions such as health educators, medical records, health information technicians, etc.
[154] The Texas Medical Board defines 259+ physician specialties and these specialties have been grouped by IPED into general categories (interview with Irene Chavez 2009). For example, the category "cardiology" includes the following specialties: cardiology, cardiac electrophysiology, cardiovascular diseases, interventional cardiology, and pediatric cardiology. The full list is available at http://www.tmb.state.tx.us/agency/statistics/demo/docs/d2008/0908/spec.php.
[155] Allied health professions are clinical healthcare professions distinct from medicine, dentistry, and nursing. They work in a healthcare team to make the healthcare system function.

Table 3.9-1. 2008 El Paso County Physician Supply, Need and Gap

Physician Specialty[1]	El Paso County			Seven-County Average			El Paso Need & Gap	
	Supply[2]	Service[3]	Physicians /100K[4]	Supply	Service[2]	Physicians /100K[4]	Need[5]	Gap[6]
Allergy/Immunology	8	93,823	1.1	25	63,256	1.6	12	**4**
Anesthesiology	64	11,728	8.5	332	4,851	20.6	155	**91**
Cardiology	35	21,445	4.7	141	11,408	8.8	66	**31**
Dermatology	13	57,737	1.7	64	25,246	4.0	30	**17**
Emergency	61	12,305	8.1	167	9,607	10.4	78	**17**
Endocrinology	9	83,398	1.2	38	41,857	2.4	18	**9**
Family/General/Internal	278	2,700	37.0	1,090	1,476	67.8	509	**231**
Gastroenterology	15	50,039	2.0	63	25,648	3.9	29	**14**
Hematology/Oncology	25	30,023	3.3	114	14,128	7.1	53	**28**
Neonatology	6	125,098	0.8	28	57,447	1.7	13	**7**
Nephrology	13	57,737	1.7	45	35,519	2.8	21	**8**
Neurology	14	53,613	1.9	88	18,190	5.5	41	**27**
Obstetrics/Gynecology	71	10,572	9.5	224	7,176	13.9	105	**34**
Ophthalmology	26	28,869	3.5	106	15,134	6.6	50	**24**
Otolaryngology	18	41,699	2.4	57	28,433	3.5	26	**8**
Pain Mgmt. and Rehab.	14	53,613	1.9	72	22,474	4.4	33	**19**
Pathology	27	27,799	3.6	127	12,708	7.9	59	**32**
Pediatrics (General)[7]	94	2,525	39.6	343	1,316	76.0	180	**86**
Plastic Surgery	11	68,235	1.5	58	27,597	3.6	27	**16**
Psychiatry	34	22,076	4.5	215	7,496	13.3	100	**66**
Pulmonology	11	68,235	1.5	45	35,745	2.8	21	**10**
Radiology	49	15,318	6.5	237	6,791	14.7	111	**62**
Rheumatology	4	187,646	0.5	25	65,463	1.5	11	**7**
Surgery (Cardio/Vascular)	6	125,098	0.8	33	48,533	2.1	15	**9**
Surgery (General)	48	15,637	6.4	154	10,455	9.6	72	**24**
Surgery (Neurology)	11	68,235	1.5	33	48,955	2.0	15	**4**
Surgery (Orthopedic)	49	15,318	6.5	141	11,443	8.7	66	**17**
Surgery (Thoracic)	2	375,293	0.3	13	123,732	0.8	6	**4**
Urology	12	62,549	1.6	57	28,220	3.5	27	**15**
All Other Specialties	7	107,226	0.9	41	38,961	2.6	19	**12**
Total	1,035	725	137.9	4,175	385	259.5	1,948	**934**

Sources: Texas Medical Board Physician Demographics 2008 and Chavez 2009.
Notes:
1. The Texas Medical Board defines 259 physician specialties which are grouped here into the given categories.
2. "Supply" is the number of currently practicing physicians in specialty.
3. "Service" is the number of residents per physician.
4. "Prac/100K" is the number (supply) of physicians per 100,000 residents.
5. "Need" is the number of practitioners needed in order for the El Paso region's *supply* ratios to match seven-county *supply* ratios.
6. "Gap" is El Paso's shortage of practitioners per occupation.
7. Pediatric ratios are based on the 17 and under year old population; All other physician ratios use the total population.

Table 3.9-2. 2008 El Paso County Dental, Health, Social, and Nursing Supply, Need and Gap

Practitioner	El Paso County			Seven-County Average			El Paso Need & Gap	
	Supply[1]	Service[2]	Prac/ 100K[3]	Supply	Service	Prac/ 100K	Need[4]	Gap[5]
Dental[6]								
All Dentists	174	4,314	23.2	867	1,855	53.9	405	**231**
General Dentist	135	5,560	18.0	731	2,199	45.5	341	**206**
Dental Hygienist	209	3,591	27.8	650	2,474	40.4	303	**94**
Health, Allied Health (AH) & Social Services (SS)								
Certified Nurse Aide	3,060	245	407.7	6,143	262	381.9	2,867	**-193**
Chemical Dependency Counselor	246	3,051	32.8	471	3,417	29.3	220	**-26**
Chiropractor	63	11,914	8.4	329	4,891	20.4	153	**90**
Occupational Therapist	173	4,339	23.0	461	3,487	28.7	215	**42**
Occupational Therapist Assistant	32	23,456	4.3	141	11,373	8.8	66	**34**
Pharmacist	343	2,188	45.7	1,484	1,084	92.3	693	**350**
Pharmacy Technician	875	858	116.6	2,278	706	141.6	1,063	**188**
Physical Therapist	238	3,154	31.7	734	2,191	45.6	343	**105**
Physical Therapy Assist.	143	5,249	19.1	282	5,713	17.5	131	**-12**
Physician Assistant	81	9,266	10.8	320	5,029	19.9	149	**68**
Licensed Professional Counselor	263	2,854	35.0	1,127	1,427	70.1	526	**263**
Promotor(a)	62	12,106	8.3	44	36,439	2.7	21	**-41**
Psychologist	36	20,850	4.8	333	4,826	20.7	156	**120**
Social Worker	404	1,858	53.8	1,360	1,182	84.6	635	**231**
Nursing[7]								
RN Full-time	3,633	207	484.0	9,113	177	566.5	4,252	**619**
RN Part-time	348	2,157	46.4	1,417	1,135	88.1	661	**313**
Nurse Practitioner	175	4,289	23.3	567	2,839	35.2	264	**89**
Clinical Nurse Specialist	36	20,850	4.8	131	12,306	8.1	61	**25**
Nurse Anesthetist	64	11,728	8.5	172	9,360	10.7	80	**16**
Nurse Midwife	11	68,235	1.5	23	69,078	1.4	11	**0**
LVN Full-time	982	764	130.8	2,869	561	178.4	1,339	**357**
LVN Part-time	112	6,702	14.9	387	4,159	24.0	180	**68**
Totals								
Dental	518	1,449	69.0	2,249	715	139.8	1,049	**301**
Health, AH, and SS	6,045	124	805.4	15,663	103	973.8	7,309	**1,491**
Nursing	5,075	148	676.1	13,785	117	857.0	6,433	**1,358**

Sources: Texas Medical Board Physician Demographics 2008; Texas Department of State Health Services 2008; and Texas Board of Nursing - Nursing Statistics 2008.

Notes:

1. "Supply" is the number of currently practicing physicians in specialty.
2. "Service" is the number of residents per physician.
3. "Prac/100K" is the number (supply) of physicians per 100,000 residents.
4. "Need" is the number of practitioners needed in order for the El Paso region's *supply* ratios to match seven-county *supply* ratios.
5. "Gap" is El Paso's shortage of practitioners per occupation.
6. "General Dentists" include primary care, pediatric and public health dentists. "All Dentists" include general dentists, specialists, residents and fellows, teachers, administrators, researchers, federal, military, retired and not-in-practice dentists.
7. Both RN full-time and part-time include Nurse Practitioners and Nurse Anesthetists.

LVN = Licensed Vocational Nurse

RN= Registered Nurse

Workforce Supply. Tables 3.9-1 and 3.9-2 report El Paso's workforce supply, that is, the existing number of physicians/practitioners per occupation. The following health and social services occupations have the largest supply of workers: registered nurses (3,981), licensed vocational nurses (1,094), certified nurse aides (3,060), pharmacists (343), pharmacy technicians (875), family/general/internal medicine physicians (278), physical therapists (238), social workers (404), and licensed professional counselors (263). Note that these supply numbers indicate a serious shortage of medical and social services personnel in El Paso. That shortage is carried forward in the projections.

Workforce Need. In Table 3.9-2, workforce "needs" describe number of workers per occupation required to match the region's supply ratios with the seven-county supply ratios. El Paso's largest needs are for registered nurses (4,913), licensed vocational nurses (1,519), certified nurse aides (2,867), pharmacists (693), pharmacy technicians (1,063), family, general, and internal medicine physicians (509), physical therapists (343), social workers (635), and licensed professional counselors (526).

Workforce Gaps. In Table 3.9-2, workforce "gaps" give us an indication of shortages in El Paso's health, allied health, and social services occupations by occupations under existing conditions. Shortages for El Paso are calculated in the following manner:

1. The seven-county supply ratios (number of physicians/practitioners per 100,000 residents) represent the benchmark for El Paso in order to reach health/social services access parity with other major Texas counties, they are provided in Tables 3.9-1 and 3.9-2 under columns labeled "Prac/100K."

2. Workforce needs for El Paso are the product between the seven-county supply ratios (step 1) and El Paso's per 100,000 population (for example, 7.5 (El Paso's per 100,000 population) times 20.6 anesthesiologists (seven-county average) produces a need of 155 anesthesiologist for El Paso), need is given in the second to last column in each table.

3. Workforce gaps are calculated as the difference between the estimated El Paso workforce need (step 2) and El Paso's current (actual) workforce supply; gaps are given in the last column of each table.

There are shortages in nearly all occupations with the largest gaps occurring in the following areas: registered nurses (932), licensed vocational nurses (425), pharmacists (350), family/general/internal medicine physicians (231), general dentists (206), licensed professional counselors (263), and social workers (231). Although the following occupations show smaller gaps, the shortages are also identified as critical with respect to the occupation: anesthesiologists (91), psychiatrists (66), general pediatrics (86), general/diagnostic radiologists (62), pharmacy technicians (188), physical therapists (105), chiropractors (90), and psychologists (120).

As a whole, there is a combined healthcare and social services shortage of 4,082 health and social services professionals relative to the averages of seven major Texas counties. On the other

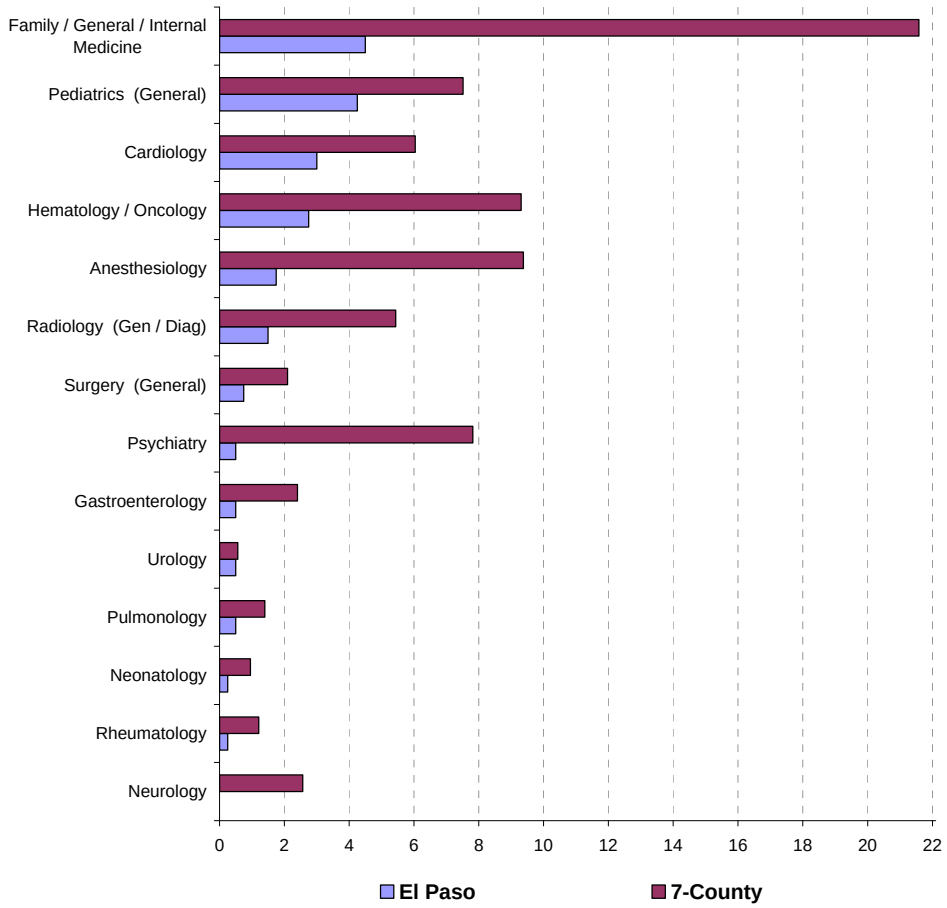
hand, El Paso appears to have an adequate supply of certified nurse's aides, promator(a)s, physical therapy assistants, and chemical dependency counselors.

3.9.2.2 Physician Supply Trends

Physicians have a lead role in providing healthcare. In particular, physicians interact with patients, diagnose illness, provide critical care, make referrals, prescribe drugs, and perform surgeries.

Figure 3.9-1 compares average annual physician gains between 2004 and 2008 in El Paso with the seven-county reference. El Paso is lagging compared to major counties in Texas. For instance, while El Paso has added approximately 4.5 family/general/internal medicine physicians per year between 2004 and 2008, the seven-county reference has added 21.5 annually. The gap for pediatricians is not as extreme: El Paso added approximately 4.3 pediatricians versus 7.5 for the seven-county reference during the same time period. There are several physician occupations in El Paso that have experienced little or no growth in the last four years including psychiatry, rheumatology, neonatology, and neurology.

Figure 3.9-1. Average Annual Physician Gain in El Paso and the Seven-Counties, 2004 to 2008



Sources: Texas Medical Board Physician Demographics, 09/2004, 09/2005, 09/2006, 09/2007, and 09/2008.
Note: Physician gains for the seven-counties are adjusted to reflect El Paso's population size.

While El Paso physician supply (Figure 3.9-1) shows gains, the rate of these gains may not be sufficient to fill gaps by 2012 when the last of the brigades are expected to transfer to Fort Bliss. There are four factors that contribute to these lower supply growth rates in the region: 1) availability of the type of specialist within the country, 2) lower appeal of El Paso as a place to live, 3) the financial concerns such as high Medicaid/Medicare volume of patients currently in El Paso and low reimbursement by Medicaid/Medicare HMOs, and 4) Texas licensing processes.[156]

3.9.2.3 Workforce Education and Training

The region's educational and vocational training institutions contribute to the regional workforce supply. This subsection provides information on degrees and certificates awarded by regional higher education institutions and vocational training providers. The primary sources of healthcare and social services-related degrees and certificates are listed in **Table 3.9-3**.[157]

Higher Education. **Table 3.9-4** and **Table 3.9-5** show the number of health and social services-related undergraduate and graduate degrees awarded at UTEP and NMSU for the 2005-2006, 2006-2007, and 2007-2008 academic years. A total of 1,895 degrees were awarded (averaging 630 each year). The majority of graduates earned undergraduate nursing degrees. Graduates in disciplines such as nursing, physical therapy, and social work are not immediately qualified to work as licensed professionals. In these cases, earning a degree is the critical first step that qualifies graduates to take licensure examinations in their respective fields of study.

[156] State Legislative Discussion Regarding Healthcare, organized by Senator Eliot Shapleigh and the Greater El Paso Chamber of Commerce. November 17, 2008.

[157] Degrees in many fields do not immediately qualify graduates to work as licensed professionals, for instance, a Bachelor of Science in Nursing qualifies a prospect to take the licensure examination (NCLEX-RN) required to practice as a professional registered nurse in the State of Texas. Occupations for which a degree qualifies a candidate to take a licensure exam include elementary and secondary teachers, registered nurses, social workers, and professional counselors.

Table 3.9-3. Regional Higher Education and Vocational Training for Healthcare Occupations

School	Location	Degrees	Programs
UTEP School of Nursing	El Paso, TX	Bachelor, Master, Doctorate	Nursing
UTEP College of Health Science	El Paso, TX	Bachelor, Master, Doctorate	Pharmacy Tech, Medical Lab Assistant, Social Worker, Speech Therapist, Physical Therapist, Pharmacist
El Paso Community College	El Paso, TX	Associate Certificate	Nursing, LVN, Respiratory Care Tech, Medical Lab Tech, Dental Hygiene, Radiologic Tech, Physical Therapist Assistant, Dental Assistant, Medical Assistant
NMSU College of Health and Social Services	Las Cruces, NM	Bachelor, Master	Nursing, Community Health, Public Health, Social Work
Doña Ana Community College	Las Cruces, NM	Associate Certificate	Nursing, Public Health, Dental Hygiene, Diagnostic Medical Sonography, Health Info Technology, Radiologic Tech
Academy School of Careers	El Paso, TX	Certificate	Medical Assistant
Anamarc Educational Institute	El Paso, TX & Santa Teresa, NM	Associate Certificate	Nursing, Nursing Assistant, Medical Assistant, Medical Billing/Coding
Axis Business Academy	El Paso, TX	Certificate	Pharmacy Tech
Career Centers of Texas	El Paso, TX	Certificate	Dental Assistant, Medical Assistant, Pharmacy Tech
Computer Career Centers	El Paso, TX & Las Cruces, NM	Associate	Nurse Assistant, Medical Info, Nurse Assistant/Home Health Aide, Medical Assistant
Southwest Career Institute	El Paso, TX	Associate Certificate	Ultra Sound, Medical Assistant, Medical Records/Health Info Specialist, MRI
Vernin Learning Center	El Paso, TX	Certificate	Medical Assistant
Western Technical Institute	El Paso, TX	Certificate	Medical/Clinical Assistant

Sources: UTEP, NMSU, EPCC, DACC, respective training providers, and WSURG.

Table 3.9-4. UTEP Degrees Conferred by Major and Level

Undergraduate	2005 - 2006	2006 - 2007	2007 - 2008	2005 - 2008 Totals
School of Nursing				
Nursing, R.N.	21	22	37	**80**
Nursing, Generic	107	137	173	**417**
College of Health Sciences				
Health Promotion	46	44	56	**146**
Clinical Laboratory Science	15	15	19	**49**
Social Work	44	34	34	**112**
Occupational Therapy	20	11	-	**31**
Graduate	**2005 - 2006**	**2006 - 2007**	**2007 - 2008**	**2005 - 2008 Totals**
School of Nursing				
Nursing-Practitioner	-	-	15	**15**
Nursing System Management	-	6	3	**9**
Nurse Clinician Educator	5	8	-	**13**
Nurse-Clinical Specialist	-	-	8	**8**
Family Nurse Practitioner	8	11	-	**19**
Women's Health & Nurse Admin.	4	-	-	**4**
College of Health Sciences				
Health Promotion	2	2	5	**9**
Speech-Language Pathology	10	10	14	**34**
Physical Therapy	21	20	17	**58**
Occupational Therapy	0	6	6	**12**

Source: UTEP 2008-2009 Interactive Fact Book

Table 3.9-5. NMSU Degrees Conferred by Major and Level

Undergraduate	2005 - 2006	2006 - 2007	2007 - 2008	2005 - 2008 Totals
College of Health and Social Services				
Community Health	22	34	53	**109**
Environmental & Occupational Health	6	1	1	**8**
Human & Community Services	20	19	42	**81**
Nursing	103	127	193	**423**
Social Work	41	49	44	**134**
Graduate	**2005 - 2006**	**2006 - 2007**	**2007 - 2008**	**2005 - 2008 Totals**
College of Health and Social Services				
Public Health	19	11	14	**44**
Nursing	14	7	21	**42**
Social Work	66	75	78	**219**

Sources: NMSU 2006, 2007, and 2008 Fact Books, Institutional Research, Planning and Outcomes Assessment, NMSU

***Community Colleges*: Table 3.9-6** and **Table 3.9-7** list degrees and/or certificates awarded by EPCC and DACC, respectively. For EPCC, the disciplines with the highest numbers of

Associate degrees awarded include nursing, respiratory care technology, dental hygiene, physical therapy assistant, and radiologic technology. Alternatively, the certificate programs with the highest numbers of awards include Community Health Worker (CHLT)-promotores basic and pharmacy technology.

Table 3.9-6. EPCC Health Related Associate Degrees and Certificates Awarded

Program Description	2006-2007		2007-2008		2008-2009		Total Assoc.	Total Certificates
	Assoc.	Cert.	Assoc.	Cert.	Assoc.	Cert.		
CHLT-Pediatric Specialty	-	3	-	2	-	-	0	5
CHLT-Promotores Basic	-	16	-	8	-	25	0	49
Dental Assisting	4	4	4	-	6	5	14	9
Dental Hygiene	12	-	13	-	13	-	38	0
Diagnostic Medical Sonography	5	3	5	-	8	1	18	4
Health Information Technology	10	-	3	-	6	-	19	0
MDCA-Medical Assisting	-	-	-	6	-	11	0	17
Medical Assisting Technology	7	-	10	-	9	-	26	0
Medical Laboratory Technology	6	-	8	-	9	-	23	0
Nursing	*	*						73[1]
Pharmacy Technology	-	17	2	5	4	17	6	39
Physical Therapist Assistant	6	-	8	-	15	-	29	0
Radiation Therapy Technology	7	-	10	-	6	-	23	0
Radiologic Technology	-	-	10	-	16	-	26	0
Respiratory Care Technology	17	-	11	-	20	-	48	0
Surgical Technology	8	10	3	4	4	6	15	20
All Other Health Careers	4	25	2	18	8	20	14	63
Total	**57**	**43**	**73**	**21**	**92**	**59**	**299**	**206**

Sources: EPCC, Institutional Research, Open Records Request (04-24-2009) and 2006 Annual Data Profile (ADP5), Texas Higher Education Coordinating Board.
Notes: For Nursing related programs, the only available data was for the 2005-2006 school year but was nonetheless included to show that it is a high demand profession. The Nursing count did not specify between Associate Degrees and certificates.

As indicated in Table 3.9-7, DACC has primarily awarded Associate degrees in nursing, radiologic technology, public health, and respiratory care.

Vocational Training Providers. There are several training providers funded by WSURG[158] that contribute to the supply of healthcare and social service occupations. Students attending NMSU and DACC are not eligible for WSURG funds since these institutions are outside of Texas. Most

[158] WSURG is the Texas Workforce Commission's regional funding source for workforce training and funnels funds to providers per student training in pre-selected fields.

of these providers award Associate degrees and/or certificates, with UTEP awarding Bachelor and Master of Science degrees as well as certificates.[159]

Table 3.9-7. DACC Associate Degrees Awarded

Degrees	2005 - 2006	2006 - 2007	2007 - 2008	Total
Diagnostic Medical Sonography	8	9	5	22
Emergency Medical Technology	1	2	3	6
Health Information Technology	-	-	1	1
Nursing	49	60	68	177
Public Health	12	15	18	45
Radiologic Technology	18	18	20	56
Respiratory Care	13	8	10	31
Respiratory Therapy Program	-	-	5	5
Total	**101**	**112**	**130**	**343**

Source: DACC 2008 Fact Book, Office of Institutional Effectiveness and Planning Office, NMSU

Table 3.9-8 lists health and social services occupations targeted for training and funded by WSURG from 2005 to 2008. The table lists the aggregate number of participants served (residents trained), active and inactive participants, participants who completed training within the reporting period, and completion rates. The "Gain" column shows by how much a particular training program has grown or decreased in terms of residents served between 2005 and 2008.

Recommendations for healthcare and social services are provided for three general areas – local supply and training (human and physical), recruitment, and access. The three general areas are followed by specific suggestions.

The following conclusions can be drawn from these data provided by WSURG (complete tables per year are provided in Appendix C):

- Training for the following three occupations has decreased significantly in the last four years: registered nurses (-70), medical assistants (-158), and medical records and health information technicians (-84).
- Training in the following occupations has increased between 2005 and 2008: nursing assistants and aides (+84), licensed practical/vocational nurses (+14), and pharmacy technicians (+17).

[159] WSURG only provides students attending UTEP up to two years of funding or a maximum of $8,500.

Table 3.9-8. Health and Social Services Participants Served by WSURG from 2005 to 2008

SOC	Occupation Title	Served	Active	Inactive[1]	Completed	Completion Rate	Gain 05 to 08
17-2031	Biomedical Engineers	3	1	2	0	0%	+2
29-1111	Registered Nurses	289	141	148	101	68%	-70
29-1123	Physical Therapists	3	0	3	0	0%	+1
29-1126	Respiratory Therapists	11	6	5	1	20%	-3
29-2011	Med & Clinical Lab Technologist	4	1	3	1	33%	0
29-2012	Med & Clinical Lab Technicians	23	4	19	10	53%	-4
29-2021	Dental Hygienists	4	1	3	0	0%	-1
29-2034	Radiologic Technicians	23	14	9	1	11%	-2
29-2041	Emergency Med Techs & Paramedics	1	0	1	1	100%	0
29-2052	Pharmacy Technicians	31	10	21	11	52%	+17
29-2061	LPNs & LVNs	90	26	64	44	69%	+14
29-2071	Medical Records & Info Techs	596	254	342	282	82%	-84
31-1012	Nurse Assistants & Aides	161	34	127	113	89%	+84
31-2021	Physical Therapist Assistants	8	4	4	1	25%	-2
31-9091	Dental Assistants	9	3	6	0	0%	-2
31-9092	Medical Assistants	928	397	531	345	65%	-158
31-9095	Medical Transcriptionists	26	11	15	8	53%	-7
43-6013	Medical Secretaries	41	9	32	22	69%	-20
	Other Health & Social Services	32	8	24	12	50%	-3
	Health & Social Services Occupations	2,283	924	1,359	953	70%	-238
	All Occupations	8,132	3,301	4,831	3,670	76%	-1,151

Source: Workforce Solutions Open Records, WSURG 2009.
Note:
1. "Inactive" are those participants served that did not complete the respective program.

- Although the total number of participants who receive funding for training has decreased by 1,151 participants, the decrease in the number of participants receiving healthcare training has fallen at a slower rate (down 238).
- The occupations with the largest number of completions and corresponding completion rates (in parenthesis) are in the following occupations: nurse aides (89 percent), medical records and health information technicians (82 percent), licensed practical and vocational nurses (69 percent), registered nurses (68 percent), and medical assistants (65 percent).

- Healthcare training completion rates are lower than overall completions rates (70 percent for health related training compared to 76 percent for all training).

The number of residents served is largely driven by funding provided and mandated by state and federal agencies. Some of these decreases are due to termination of program funding. Nonetheless, these trends directly impact the supply of health and social services occupations and are therefore included.

3.9.3 Health and Social Services Issues Related to Military Growth

This subsection examines projected needs for health and social service occupations. It shows El Paso faces significant demand for the foreseeable future and will face significant shortages if health and social service training, education, and recruitment are not increased.

3.9.3.1 Workforce Needs and Gaps

Table 3.9-9 reports projected needs and gaps of El Paso's health and social services-related critical occupations[160] for three growth scenarios (LGS, MGS, and HGS) and two points in time (2012 and 2025). The following calculations are used to estimate future workforce gaps and to isolate the impact of Fort Bliss expansion on El Paso health and social services:

- *Workforce Baseline Supply*: Projected baseline supply for 2012 and 2025 is calculated for El Paso by multiplying most recent (2008) El Paso supply ratios (number of physicians/practitioners per 100,000 residents in Table 3.9-1) with El Paso's 2008-Baseline population projections for 2012 and 2025, which assume no military growth after 2008. In this manner, the projected population increase excludes any military influence after 2008 and El Paso's current supply ratios are assumed to neither improve nor worsen when estimating workforce supply in 2012 and 2025. It should be noted that the impact of doctors, nurses, and other medical and social services staff at WBAMC is unknown, as information was unavailable at the time of this report.
- *Workforce Need*: El Paso's projected workforce needs for 2012 and 2025 are next calculated by multiplying the most recent (2008) seven-county supply ratios (shown in Table 3.9-1) with El Paso's 2012 and 2025 per 100,000 total population for each growth scenario. These estimates represent the future benchmark for El Paso in order to reach health/social services access parity with other major Texas counties.
- *Workforce Gaps*: Projected gaps are estimated as the difference between future workforce need (step 2) and future workforce baseline supply (step 1). These gaps measure the direct impact of the military on health and social services in El Paso.

Analysis of Table 3.9-9 shows El Paso's greatest occupational needs are likely to be for pediatricians, registered nurses, pharmacists, pharmacy technicians, physical therapists, family/general/internal medicine physicians, dentists, and social workers.

[160] Interview with Irene Chavez, CEO, Providence Memorial Hospital 2009.

Table 3.9-9. El Paso Future Workforce Needs and Gaps

Physician/ Practitioner	Low Growth Scenario				Medium Growth Scenario				High Growth Scenario			
	Need		Gap		Need		Gap		Need		Gap	
	2012	2025	2012	2025	2012	2025	2012	2025	2012	2025	2012	2025
Population	831,438	945,532			841,405	962,548			855,016	994,178		
Physician Specialty												
Anesthesiology	171	195	**105**	**121**	173	198	**107**	**124**	176	205	**109**	**131**
Cardiology	73	83	**36**	**42**	74	84	**37**	**44**	75	87	**38**	**47**
Family/General/IM	563	641	**273**	**318**	570	652	**280**	**330**	579	674	**289**	**351**
Gastroenterology	32	37	**17**	**19**	33	38	**17**	**20**	33	39	**18**	**21**
Hema/Oncology	59	67	**33**	**38**	60	68	**33**	**39**	61	70	**34**	**41**
Neonatology	14	16	**8**	**9**	15	17	**8**	**10**	15	17	**9**	**10**
Neurology	46	52	**31**	**36**	46	53	**32**	**37**	47	55	**32**	**38**
Pediatrics (General)	200	227	**102**	**118**	202	231	**104**	**122**	205	239	**107**	**130**
Psychiatry	111	126	**75**	**87**	112	128	**77**	**89**	114	133	**79**	**93**
Pulmonology	23	26	**12**	**14**	24	27	**12**	**14**	24	28	**12**	**15**
Radiology	122	139	**71**	**82**	124	142	**73**	**85**	126	146	**75**	**90**
Rheumatology	13	14	**9**	**10**	13	15	**9**	**10**	13	15	**9**	**11**
Surgery (General)	80	90	**29**	**35**	80	92	**30**	**36**	82	95	**32**	**39**
Urology	29	34	**17**	**20**	30	34	**17**	**20**	30	35	**18**	**21**
Dental												
General Dentists	378	430	**237**	**273**	383	438	**242**	**281**	389	452	**248**	**295**
Health, Allied Health and Social Services												
Occupat. Therapist	238	271	**58**	**70**	241	276	**61**	**75**	245	285	**64**	**84**
Pharmacist	767	873	**409**	**474**	776	888	**418**	**490**	789	917	**431**	**519**
Pharmacy Tech.	1,178	1,339	**264**	**323**	1,192	1,363	**278**	**348**	1,211	1,408	**297**	**392**
Physical Therapist	379	431	**131**	**155**	384	439	**135**	**163**	390	454	**142**	**177**
Physician Assist.	165	188	**81**	**94**	167	191	**83**	**97**	170	198	**85**	**104**
Psychiatrist	80	91	**53**	**61**	81	93	**54**	**62**	82	96	**55**	**65**
Social Worker	703	800	**281**	**331**	712	814	**290**	**345**	723	841	**301**	**372**
Nursing[1]												
RN Full-time	4,710	5,357	**915**	**1,139**	4,767	5,453	**972**	**1,236**	4,844	5,632	**1,049**	**1,415**
RN Part-time	732	833	**369**	**429**	741	848	**378**	**444**	753	876	**390**	**472**
Nurse Practitioner	293	333	**110**	**130**	296	339	**114**	**136**	301	350	**118**	**147**
Nurse Anesthetist	89	101	**22**	**27**	90	103	**23**	**29**	91	106	**24**	**32**

Sources: Texas Medical Board Physician Demographics 2008; Texas Department of State Health Services 2008; and Texas Board of Nursing - Nursing Statistics 2008.
Note:
1. Both RN full-time and part-time include Nurse Practitioners and Nurse Anesthetist.

El Paso's largest projected gaps occur in areas with the highest needs. For instance, by 2012 there will be a shortage of 1,284 registered nurses for the LGS and 1,439 for the HGS. As it pertains to family/general/internal medicine physicians, anticipated shortages for 2012 will approximate 273 and 289 for the LGS and HGS, respectively. Corresponding shortages for

pediatricians will range between 102 and 107 while pharmacist shortages will range between 409 and 431. Under the MGS, other future critical occupational shortage areas include general dentists (242), pharmacy technicians (278), physical therapists (135), and social workers (290).

The gains reported in Figure 3.9-1 and El Paso's anticipated gaps for 2012 (Table 3.9-9) show that the current trend in physician gains is not sufficient to reach supply ratio parity with the seven-counties. For example, to reach family/general/internal medicine practitioner parity for the 2012 medium scenario, El Paso will need to add an average 70 physicians per year starting in 2009; however, El Paso's current trend shows the region is only gaining 4.5 physicians per year.

3.9.3.2 Health and Occupational Needs

Service needs of military personnel and their families. In addition to standard medical and social service requirements, two critical issues faced by war veterans include combat related injuries, such as traumatic brain injury and post-traumatic stress disorder. With El Paso facing shortages in all areas of healthcare, any increase in demand by service members is certain to add strain to the future regional supply. Occupations that will be primarily impacted as it relates to military personnel returning from deployment include neurology, orthopedics, anesthesiology, physical therapy, psychiatry, chemical dependency, psychology, and licensed counseling.

Service needs of a young population. Due to the changing demographics of Fort Bliss, there will be an increase in infants up to children 12 years of age. Because women and children often require specialized care, any increase in demand will add strain to the following professions: pediatricians, family/general/internal medicine, obstetrics, licensed professional counseling, and psychologists.

Service needs of an aging population. As is the trend in the nation as a whole, El Paso is experiencing an increase in the number of people ages 65 and older. This is expected to impact areas of healthcare and social services that provide care for the retired and elderly. Occupations that will experience greater demand include: family/general/internal medicine, cardiology, oncology, neurology, gastroenterology, and orthopedics (the category family/general/internal medicine includes several specialties that provide services to the elderly including geriatrics and osteo-manipulation medicine).

3.9.4 Recommendations

- To find the expansion of healthcare training and education facilities needed in the region, local stakeholders including city and county government, education and training institutions, and medical and social service providers will need to work together to develop and support strategies. Facility requirements include human capital as well as physical capital needs. Potential actions include:
  - Develop and implement a policy to provide information to state and national elected officials concerning the economic growth dynamics of the region and the implications for health and social services needs.

- Develop a unified approach, advocating infrastructure needs at the Texas Tech School of Medicine, the UTEP, EPCC, as well as other public/private organizations involved in providing training.
- Create accelerated bachelor and master degree programs for all health professional careers in addition to nursing.
- Create a dual credit high school/EPCC program for Community College degrees awarded in healthcare fields.
- Explore possible joint grant proposals to help finance education and training needs.
- Workforce development organizations must target critical occupational categories and provide financial support to the extent possible. Explore possible joint grant proposals to help finance education and training needs in areas of critical need (such as Registered Nurses).
- Change the WSURG limitation of two years of funding or a maximum of $8,500 to four years of funding or a maximum of $20,000 for critical healthcare professional students.

♦ Concentrated and coordinated efforts must be made to recruit healthcare and social services' personnel into the El Paso region as well as retain locally produced medical providers. Several actions would help this effort, as follows:

- The Texas medical licensing process could be modified such that qualified physicians can enter Texas markets in a timely fashion. More specifically, secure legislative support to reduce the time involved for a physician to secure a Texas license from the Texas Board of Medical Examiners from a current average of six months to three months.
- Promote the re-evaluation and improvement of reimbursement levels from Medicaid, Children with Special Healthcare Needs, Texas Vocational Rehabilitation, Texas Workers Compensation, CHIP, TRICARE, Medicare for El Paso and other border cities.
- Continue to develop competitive compensation packages for prospective healthcare and social services "recruits."
- Agree upon a centralized approach to physician recruitment for El Paso with the participation of each hospital system and physician group practice.
- Secure funding sources to grow the number of positions for Texas Tech medical students that will remain within the El Paso community.
- Support legislation to eliminate the use of the time frame to pass each part of the examination for a applicant who is licensed in another state for at least five years, in good standing, has never had restrictions, disciplinary orders or been placed on a probationary status if the physician applicant will work in a health professional shortage area or medically underserved area.

- To inhibit outmigration of doctors and to lure recruits to El Paso, the state should consider creating a Health Service Corps similar to the program now operating in New Orleans. In 2007, Louisiana developed the Greater New Orleans Health Service Corps, a program that offers incentives of up to $110,000, including student loan repayment and income guarantees, to doctors, dentists, and other medical professionals willing to work in post-Katrina conditions. It could be argued that the large influx of military personnel and support contractors and their families over a relatively short time period is creating comparable shortages in El Paso, requiring the creation of a similar program to ensure the availability of medical services at an acceptable level to citizens in the region.

- Expand efforts to promote improved general public access to healthcare and social services:
  - Develop public service campaigns improving awareness of available services and facilities. Electronically link health and social services resources available from the military, city and state and civic and religious organizations.
  - Support legislation to expand funding for the CHIP program.
  - Promote increased awareness amongst local providers concerning issues faced by military personnel and their families.
  - Infrastructure development should consider improving public transit systems servicing healthcare and social services facilities.
  - As regional growth takes place, identify the optimal locations for new branch or satellite health and social services facilities.
  - Evaluate opportunities to develop preventative healthcare facilities.
  - Promote further development of emergency public health infrastructure.
- The following, while not a recommendation, provides discussion regarding how the Medical Center of the Americas can support the regional healthcare system:
  - The Medical Center of the Americas' mission is to improve access to quality healthcare in the Paso del Norte Region by building a better healthcare infrastructure, providing superior healthcare educational opportunities, and attracting/retaining researchers and healthcare providers to the region. The anchor tenants for the Medical Center of the America's are: University Medical Center at Thomason, Texas Tech University Health Science Center, Paul L. Foster School of Medicine, Maxine L. Silva Magnet High School for Health Care Professions, and the El Paso Psychiatric Center. Future tenants will include: El Paso Community College and City of El Paso Public Health. The health professions expected to graduate from the Medical Center of the Americas campus to help mitigate the predicted shortfalls are:
    - Family Practice Physicians, Obstetrician/Gynecology Physicians, Anesthesia Physicians, Internal Medicine Physicians, Pediatric Physicians, General Surgery Physicians, Orthopedic Surgery Physicians, Emergency Medicine Physicians,

Registered Nurses – Bachelor level – Texas Tech School of Nursing, Licensed Vocational Nurses – Associate degree level specifically by El Paso Community College, and Associate Degree Registered Nurse – El Paso Community College.

Table 3.9-10 lists recommended actions from the Action Plan (Appendix G) for Health and Social Services. The table names the action, lists the entity or entities responsible for implementation, the timing and rationale for action, estimated available resources, possible funding sources, and implementation indicators.

Table 3.9-10. Action Plan Recommendations for Health and Social Services

Recommended Action	Responsible Entity/ Regional Ops	Timing/ (Rationale)	Estimated Resources	Funding Source(s)/ Implementation Strategies	Implementation Indicator
1. El Paso's medical and social services community must develop a plan for joint effort to identify needs, jointly recruit, and cooperate in the provision of services • Expect support from the organizations and staff created in items 1, 2, and 3 of Section 3.1	- City of El Paso Health Department (Fiscal Agent) - Partners - REDCO - Three El Paso Chambers of Commerce - Hospitals - Paso del Norte Group and Health Foundation - Fort Bliss - Medical and other professional societies - Regional Universities and training organizations - City of El Paso - Work Force Board	6 months (The region faces severe trained personnel shortages)	$1,500,000	Funding: http://www.oea.gov http://www.hud.gov/offices/cpd/communitydevelopment/programs/stateadmin/ http://www.hrsa.gov/bcrs/ http://www.bhpr.hrsa.gov/shortage/ http:/granteefind.hrsa.gov/searchbystate.aspx?select=TX=&indes=51&year= http://www.earmarkwatch.org/earmark/41490/ Advice: http://www.fdrhpo.org http://www.alaskaphysicianjobs.net/ http://www.alaskanp.org/jobs/jobs.asp http://www.akapa.org/akapa_jobs.html https://www.hnfs.net/bene/home/charity/fort_drum.htm Consider Congressional assistance	Plan implemented and developed
2. Cooperative effort with other Texas	- Greater Chamber of Commerce (lead) - City of El Paso - Medical professional societies	6 months		Internal city funds	Regulatory relief and legislation

Table 3.9-10. Action Plan Recommendations for Health and Social Services *(Continued)*

Recommended Action	Responsible Entity/ Regional Ops	Timing/ (Rationale)	Estimated Resources	Funding Source(s)/ Implementation Strategies	Implementation Indicator
medically underserved areas to modify the Texas medical licensing process for expedited certification	- Other underserved Texas communities - Texas Military Preparedness Commission - Texas legislative and congressional delegations	(Ongoing activity to meet severe shortages in trained personnel	Low	http://www.oea.gov	
3. Create/expand accelerated associate, bachelors, and masters degree programs for all health and social services professional careers	- El Paso and New Mexico Universities (co-lead) - Community Colleges (co-lead)	6 months (Faster graduation will help fill severe shortages in trained personnel)	Low	http://www.ahrq.gov/fund/training/infragrt.htm	Accelerated programs created
4. Provide funded chairs, stipends, and other incentives to encourage nurses to become teaching professionals	- El Paso and New Mexico Universities (co-lead) - Community Colleges (co-lead) - El Paso Regional Hospitals	6 months (Nurse-teachers required to expand nursing supply)	About $25,000 per lecturer per year	http://www.ahrq.gov/fund/training/trainix.htm http://www.twc.state.tx.us/svcs/funds/sdfintro.html http://www.hrsa.gov/grants/default.htm http://www.hrsa.gov/diversity/hcop/default.htm http://;//www.ahrq.gov/trainint/reshtng.htm#IT May be funded through an endowed	Expanded nursing faculty

Table 3.9-10. Action Plan Recommendations for Health and Social Services *(Continued)*

Recommended Action	Responsible Entity/ Regional Ops	Timing/ (Rationale)	Estimated Resources	Funding Source(s)/ Implementation Strategies	Implementation Indicator
				chair, grants, gifts, and combinations of all three Consider Congressional assistance	
5. Develop a plan to expand the scholarship program for the most needed health and social service positions	- El Paso and New Mexico Universities (co-lead) - Community Colleges (co-lead) - El Paso Hospitals (co-lead)	6 months (Expanded enrollment will help fill severe shortages in trained personnel)	Various, based upon curriculum and finding source	http://www.ahrq.gov/fund/training/infragrt.htm http://www.ahrq.gov/fund/training/rsrchtng.htm#ITA http://www.rwjf.org/grants/ http://www.hrsa.gov/grants/default/htm http://www.gene.com/gene/imed/ http://www.nationalahec.org/ http://rwif.org/grants/ http://www.nationalahec.org/Publications/PublishedDocuments.asp Consider Congressional assistance	Plan developed and implemented
6. Develop plan to train community, civic, and religious organizations to recognize signs of family stress and local resources to help families in need	- City of El Paso (co-lead) - Fort Bliss (co-lead)	6 months (With 70% of military families living off post, community training in stress identification and possible solutions)	$250,000	http://www.behavioralhealth.army.mil/families/index.html http://archive.sesameworkshop.org/tlc/ http://www.militarychild.org/publications http://www.aap.org/sections/uniformedservices/deployment/videos.html http://www.lfcc.on.ca/children_exposed_to_domestic_violence.html Consider Congressional assistance	Plan created
7. Strengthen ties between El Paso and Fort Bliss Medical and social services providers (this effort is tied to Item 1 of this Section)	- City of El Paso (co-lead) - Fort Bliss	6 months (Information	Low	Internal city/Army/hospital	Sharing of information occurring

Table 3.9-10. Action Plan Recommendations for Health and Social Services *(Continued)*

Recommended Action	Responsible Entity/ Regional Ops	Timing/ (Rationale)	Estimated Resources	Funding Source(s)/ Implementation Strategies	Implementation Indicator
• Expect staff assistance from items 2 and 3 of Section 3.1. See San Antonio 411 system	(co-lead) - Hospitals (co-lead)	exchange is absolutely required for coordinated medical care)		http://www.ojp.usdoj.gov/odp/grants_programs.htm#fy2006empg Consider Congressional Assistance	

3.10 Public Safety and Emergency Services

3.10.1 Introduction and Methodology

This section discusses the impact anticipated growth will have on agencies that provide public safety services to the region. The section also examines current levels of service in relationship to established performance measures and estimates growth-related costs and deficiencies resulting from increased demand for services under the LGS, MGS, and HGS. The examination concludes with a series of issues and recommendations that will guide actions by the City and County of El Paso and other public safety agencies in addressing the growth of Fort Bliss.

Defining the study area for this topic in the El Paso RGMP is challenging because it includes three counties and two states and incorporates an international border. The study area faces further challenges and opportunities in that it contains the nations' largest Army training installation, Fort Bliss. The number of soldiers assigned to Fort Bliss will increase from 16,823 in 2008 to 37,800 by 2015. As described in Section 3.2, the influx of military personnel will have a tremendous impact on the population, economy of the region, and provision of services.

Key findings from this analysis include:

- A Comprehensive Staff Allocation and Needs Plan prepared for the El Paso Police Department in 2007 found an immediate staffing need for an additional 355 officers for a total authorized strength of 1,446 positions. This level of staffing was determined to be necessary in order to maintain or achieve established objectives for response times and service levels.
- The Comprehensive Needs Plan found existing police facilities in the El Paso Police Department to be "less than adequate." In anticipation of future growth as well as to relieve pressure on other regional commands, the report anticipates that a new regional command center will be needed on the far east side of the community.
- The anticipated surge in growth through 2015 will challenge The El Paso Fire Department's ability to maintain existing levels of service. This is particularly true if growth patterns continue to sprawl, requiring capital investment in new facilities and apparatus at an even faster pace.
- Growth outside the corporate limits of the City of El Paso is dependent on services provided by small volunteer fire departments and limited law enforcement agencies for protection. At some point, volunteerism may prove untenable for the demands of an area transitioning from rural to urban in density.
- El Paso's Police and Fire Departments have done a remarkable job with very limited resources. The El Paso Police Department, with staffing well below its authorized strength, has reduced crime rates to well below national averages. Likewise, the El Paso Fire Department has maintained a Class 1 ISO rating in the face of increasing demands for service at a per capita cost well below that of comparable cities.

3.10.2 Existing Conditions

3.10.2.1 Fort Bliss

The 76th Military Police Battalion and Provost Marshal's Office conducts law enforcement and Force Protection support for Fort Bliss. The unit serves a population of 117,000 soldiers, civilians and families over an area of 1.1 million acres. All military housing areas and the William Beaumont Army Medical Center are patrolled by Military Police. Both the Military Police and the El Paso Police Department patrol the leased military housing area, which is located within an El Paso residential neighborhood.

The Fort Bliss Fire Department is responsible for fire protection on the Main Cantonment Area and nearby training areas. The Department maintains four fire stations. Station 1 is located on the main post near the intersection of Chaffee and Slater Road. Station 2 is located at the McGregor Range Camp, 40 miles north of El Paso. Station 3 is located near the William Beaumont Army Medical Center. This station provides protection for the hospital and maintains a fully equipped aerial apparatus and a pumper truck. Station 4 is located on Biggs Army Airfield and provides fire protection for the airfield as well as nearby family quarters and administration buildings. Construction of a fifth station located in the northeast BCT community facilities area is programmed for FY 2010.

MedEvac services for Fort Bliss are provided by a detachment of the 1256th Medical Company (Air Ambulance) stationed at Biggs Army Airfield. A Military Assistance to Safety and Traffic agreement with the City of El Paso and surrounding local authorities allows the unit to provide air ambulance services to civil authorities within 110 nautical miles of Biggs Army Airfield (excluding Mexico).

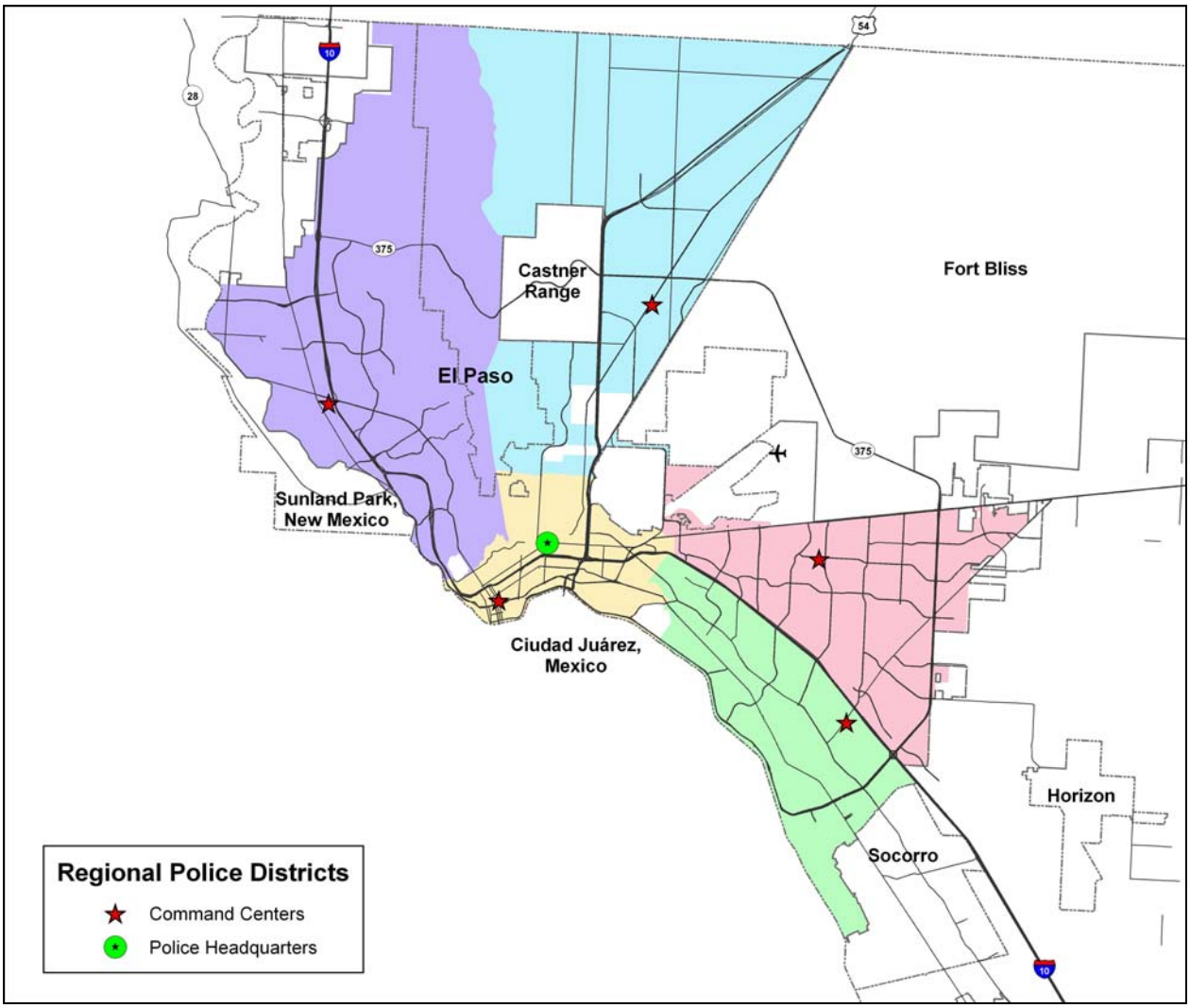
3.10.2.2 City of El Paso

Providing police and fire protection for citizens is a core function of local government. The El Paso Police and Fire Departments are an integral part of municipal public safety services. Police and fire personnel are the "first responders" to local emergencies ranging from minor traffic accidents to natural disasters and terrorist actions.

The City of El Paso maintains separate police and fire departments. The fire department also provides emergency medical services. The city enjoys a Class 1 rating by the Insurance Services Office (ISO). The ISO is a national insurance engineering service organization that assigns a public protection classification to jurisdictions based on fire department services. The ISO uses a grading system of 1 to 10 with one being the best possible score. In 2006, the Morgan Quitno Press ranked El Paso as the 2nd Safest City in the United States with a population of 500,000 or more. In a recent Quality of Life survey, 95 percent of the respondents indicated that they were satisfied or very satisfied with level of spending for fire protection. Eighty-five percent were satisfied or very satisfied with level of spending for police protection.

El Paso Police Department. The City of El Paso Police Department has jurisdiction within its city limits and covers an area of 250.9 square miles (about 160,600 acres) with an estimated 2008 population of 618,782.[161] The El Paso Police Department has 1,100 officers and 340 civilian employees[162] who work out of six primary facilities, the Police Headquarters building at 911 North Raynor Street and five Regional Command Centers geographically distributed throughout the city as illustrated by **Figure 3.10.1**. **Table 3.10-1** identifies the staffing levels and area covered by the Regional Commands.

Figure 3.10-1. El Paso Police Department Regional Commands



[161] Derived from REMI 2008-Baseline Projection for El Paso County
[162] El Paso Police Department website. 2008. http://www.ci.el-paso.tx.us/police.

Table 3.10-1. El Paso Police Department Regional Command Centers

Regional Command Centers	Area (Square Miles)	2007 Population (Estimated)	Number of Officers (Actual)	Number of Officers (Authorized)
Central	17.6	90,454	190	226
Mission Valley	79.6	104,866	127	140
Pebble Hills	37.9	170,606	140	151
Northeast	74.3	108,181	205	229
Westside	29.7	112,388	124	146

Sources: Staff Allocation and Needs Plan 2006; area and population derived from City of El Paso GIS data.

El Paso Fire Protection and Emergency Services. The El Paso Fire Department is a full-service fire department responding to all calls involving fires, medical emergencies, and hazardous materials events in the City of El Paso. The city is divided geographically into seven Fire Districts (**Figure 3.10-2**) with a total of 35 fire stations serving an estimated population of 623,000 residents within a 250.9 square mile area. The department provides mutual aid to the Fort Bliss Military Base, nearby volunteer fire departments serving the region, and the County of El Paso under the terms of Mutual Aid Agreements. The El Paso Fire Department has achieved a Public Protection Classification rating of Class 1 by the ISO. Class 1 represents exemplary public protection, and only about 1 percent of all municipal fire departments receive a Class 1 rating.[163]

In 2000, the city's Emergency Medical Services and Fire Department merged. A Medical Director oversees the operation of the EMS division within the Fire Department. The city sets a fee for ambulance service based on the cost of transportation and stabilization services. In 2008, the fire department responded to 70,498 calls for service.

Table 3.10-2 summarizes the existing staffing levels, facilities, and apparatus reported by the El Paso Fire Department Planning Division as of November 2008. **Table 3.10-3** identifies key service indicators as reported in the City of El Paso annual budget documents.

The fire department currently operates 35 fire stations. To maintain its level of service, the fire department has recently constructed two new stations with plans for new stations in projected growth areas of the city. The City of El Paso's FY 2009-2013 CIP includes funding for construction of Fire Station No. 36 at Northern Pass and Resler in 2009 and construction of Fire Station No. 37 on Edgemere Drive east of Loop 375 in 2011.

[163] Interview with Luis Flores, Planner II, El Paso Fire Department. April 14, 2008.

Figure 3.10-2. City of El Paso Fire Brigades

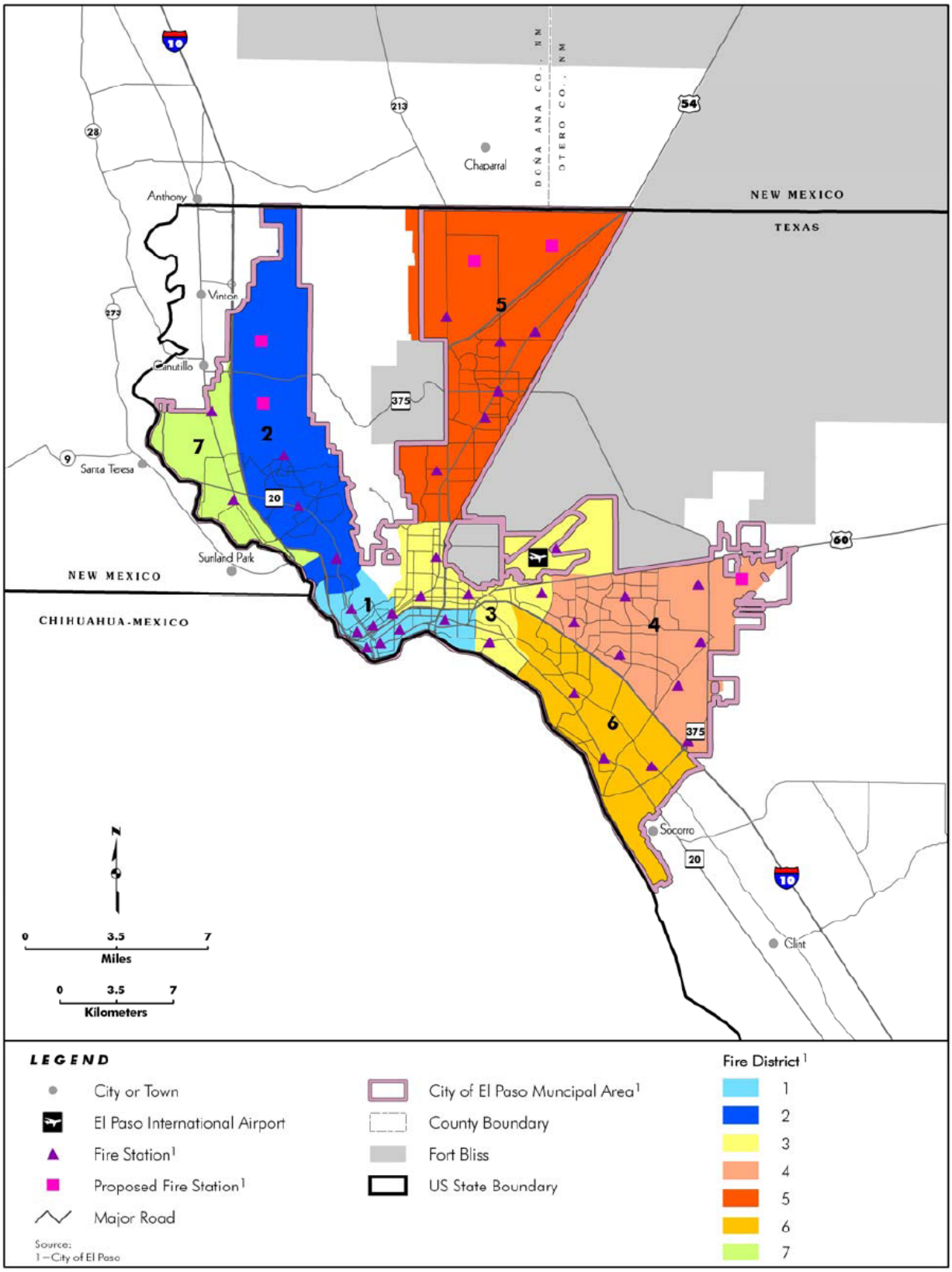


Table 3.10-2. EPFD Staffing, Facilities, and Apparatus – Nov 2008

	Approved	Actual
Personnel		
Fire/Medical	875	867
Civilian	80	78
Facilities		
Fire Stations[1]	35	
Apparatus[1]		
Pumpers	32	
Quints	8	
Battalions	6	
Ladders	5	
HazMat	1	
Ambulances	21	

Note: 1. Does not include Aircraft Rescue and Firefighting Facilities

Table 3.10-3. EPFD Key Service Indicators

Factor	2007	2008
Uniformed Fire Personnel	804	815
Fire Stations	34	35
Fire Responses	3,376	2,081
Medical Responses	41,216	49,716
Average Emergency Response Time	4:37	4:17
Per Capita Cost for Fire Services	$107.68	$115.80

Sources: City of El Paso 2008 and 2009 Annual Budgets

3.10.2.3 El Paso County

El Paso County encompasses an area of 1,013 square miles with an estimated population of 736,310. By comparison, the City of El Paso encompasses approximately 25 percent of the land area within the county and has about 80 percent of the population.[164] The only other cities in El Paso County are Horizon City, population 5,233, and Socorro, population 27,152. The balance of the county residents live in smaller towns and census designated places such as San Elizario, Vinton, Fabens, Clint, Sparks, Agua Dulce, and others. These residents rely on the county for public safety and emergency services.

El Paso County Law Enforcement. The El Paso County Sheriff's Office is responsible for first-line response to crime and public safety concerns within the unincorporated areas of El Paso County. The Sheriff's Office also provides assistance to other police agencies within El Paso County. The patrol division is divided into three commands: Central, Vinton, and Montana stations. In 2007, the County of El Paso employed 251 sworn officers for a ratio of 2.9 officers

[164] Population estimates from US Census Bureau 2006 Population Estimates, State & County QuickFacts. http://quickfacts.census.gov.

per 1,000 residents.[165] This compares favorably with the national average of 2.7 sworn officers for county law enforcement agencies.

The Sheriff's Office also provides detention services for the area's law enforcement agencies. It operates two maximum-security detention facilities: the Downtown Detention Facility, which has a housing capacity for 1,000 inmates, and the Jail Annex, capable of housing 1,440 inmates. Individuals placed under arrest by the area's law enforcement agencies are processed at the Downtown Detention Facility.[166] El Paso County also maintains a Juvenile Detention Center with a capacity of 64 inmates. In 2006, the county detention facility operated at 86 percent of its capacity with an average daily jail population of 2,101 inmates. The El Paso County Operating Budget topped $105 million in FY 2007 for public safety services. With an annual cost of $145 per resident, public safety services accounts for over one-third of the county's operating budget.[167]

Table 3.10-4 identifies the Sheriff's Office performance measures presented in the Department's 2006 Annual Report.

Table 3.10-4. Facts at a Glance (FY 2006)

Factor	Measure
Sworn Deputies	253
Sworn Detention Officers	613
Non-Sworn Civilian Staff	210
Calls for Service (Non-administrative - SO Patrol Units Responded)	76,490
Average Daily Jail Population (All Facilities)	2,101
Total Inmates Booked	37,497

Source: El Paso County Sheriff's Office - 2006 Annual Report

El Paso County Fire Protection. Small communities and rural areas in El Paso County rely on volunteer fire departments for fire protection and emergency services. There are two El Paso County Emergency Services Districts (EPCESDs) within El Paso County, which provide fire protection to residents within their respective jurisdictions. Each District is a taxing entity. EPCESD #1 serves the community of Socorro. EPCESD #2 includes the West Valley Fire Department serving the northwest communities of Vinton, Canutillo, Anthony and La Tuna; the Montana Vista Fire Department, serving the Homestead Meadows communities and far northeastern part of the county; and the volunteer fire departments of Clint, Fabens, and Horizon City.[168, 169] **Table 3.10-5** identifies the number of stations and firefighters supporting the

[165] Crime in the United States, "Crime in the United States, 2007, Table 71 – Texas Full-time Law Enforcement Employees by State by Metropolitan and Nonmetropolitan Counties." U.S. Department of Justice, Federal Bureau of Investigation. 2008. http://www.fbi.gov/ucr/cius2007/data/table_80_tx.html

[166] El Paso County Sheriff's Office. 2006 Annual Report. http://www.co.el-paso.tx.us/sheriff/news/CrimeStatistics/CrimeStats.htm

[167] County of El Paso, Texas 2008 Budget Summary, p. 25. http://www.co.el-paso.tx.us/auditor/publications/budget_books/budget2008/brief/summary.pdf.

[168] Fire Departments Net website. 2008. http://www.firedepartments.net/.

[169] Interview with Thelma Marron, GIS Manager, El Paso County 911 District. November 2008.

volunteer departments in El Paso County. **Figure 3.10-3** shows the geographic boundaries of their service areas.

Table 3.10-5. El Paso County Volunteer Fire Departments

Volunteer Department	No of Stations	No of Volunteer Firefighters	ISO Class
El Paso County Emergency District #1			
Horizon City	1	50	5/9
El Paso County Emergency District #2			
West Valley Fire Department	3	36	4
Montana Vista Fire Rescue, Inc.	2	46	6/9
Clint Fire Department	3	17	6
Socorro Volunteer Fire Department	1	30	6/9
Fabens Volunteer Fire Department, Inc.	2	19	6
San Elizario	1	25	4/10

Source: Terrazas 2008

Property tax levies support the volunteer fire districts within the Emergency Service Districts. The 2008 tax rate for EPCESD #1 is set at $0.116 per $100 of value and is expected to generate $954,000.[170] Likewise, the tax rate for EPCESD #2 is set at $0.100 per $100 of value and is expected to generate nearly $2.5 million in revenue. In addition, EPCED #2 has established ½-cent sales and use tax to help fund fire protection services. This fund is expected to add approximately $1,642,000 to the EPCESD #2 budget.

El Paso County Emergency Services. El Paso County contracts with Life Ambulance Services (LAS) to provide emergency pre-hospital care and transport within unincorporated El Paso County. LAS maintains 5 stations and 20 ambulances providing Advanced Life Support and paramedic support at a cost to the county of $353,280 per year since 2005. Performance measures for the ambulance service are shown in **Table 3.10-6,** which has been extracted from page 275 of the County of El Paso FY 2008 Operating Budget.

[170] 2008 Property Tax Rates in El Paso County Emergency Services District No 1, El Paso County Tax Office Documents. http://www.co.el-paso.tx.us/TaxOffice/documents/08ESD1-Notice%20of%20Effective%20Tax%20Rate%20for%20publication%20081108.pdf.

Figure 3.10-3. El Paso County Volunteer Fire Districts

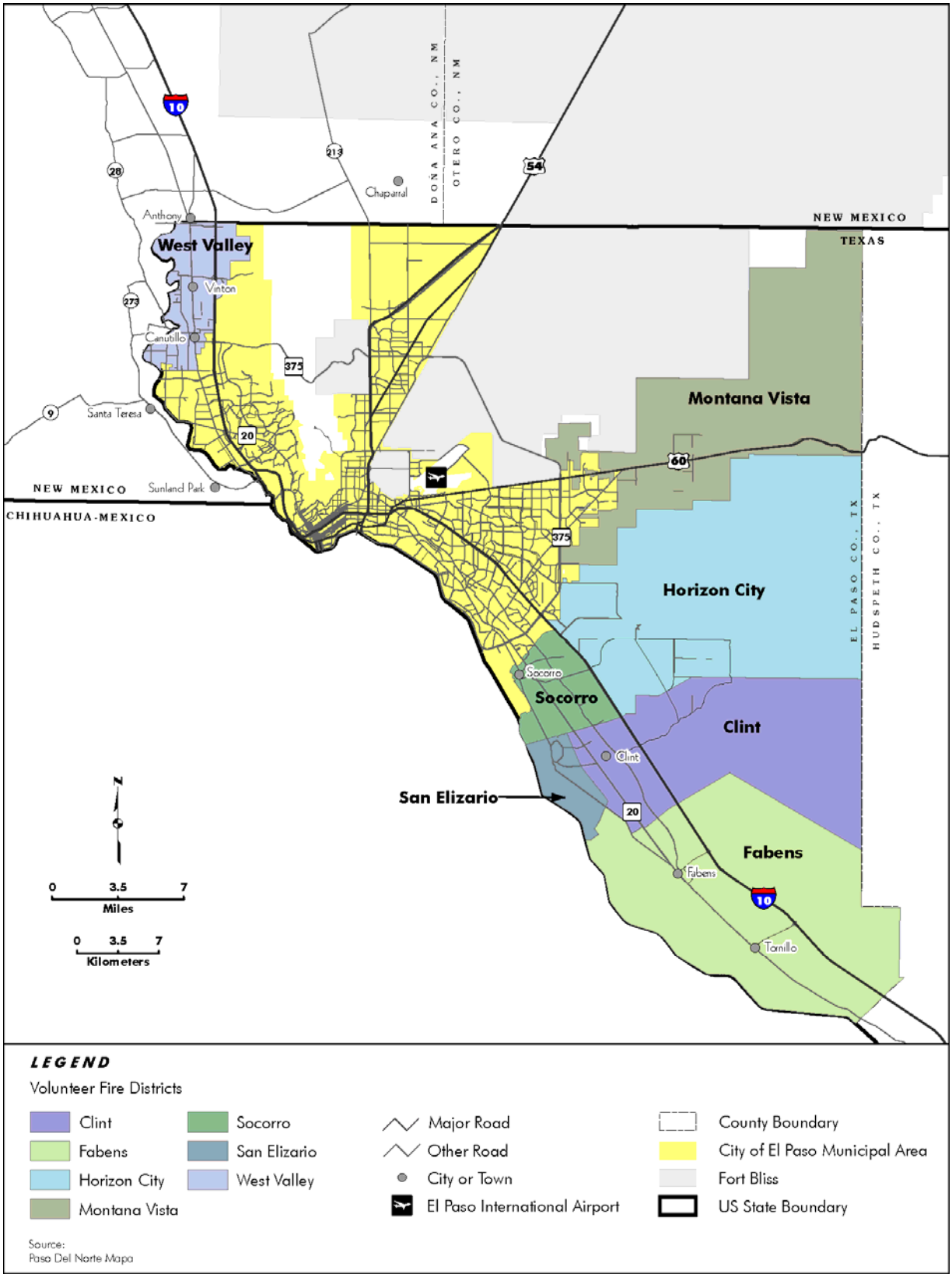


Table 3.10-6. Ambulance Services - Fiscal Year 2007

Department Activity	2005 Actual	2006 Target	2006 Actual	2007 Target	2007 Actual	2008 Target[1]
Outputs:						
Number of calls	7,917	7,959	8,053	8,110	8,035	8,100
Number of stations	5	5	5	5	5	5
Calls per station						
Northeast/City	628	631	1,436	3,268	1,193	436
Lower Valley	5,501	5,530	5,374	5,222	5,561	5,922
Upper Valley	1,156	1,162	1,246	1,336	1,281	1,228
Outcomes						
Average Response Times:[2]						
Upper Valley	5.39 min	9.59 min	5.82 min	9.59 min	6.06 min	10.25 min
Lower Valley	8.68 min	9.59 min	9.33 min	9.59 min	9.55 min	10.25 min
Cost per call	$44.62	$47.00	$43.78	$47.00	$43.92	$45.00
Cost per capita	$0.47	$0.48	$0.47	$0.48	$0.48	$0.47

Source: County of El Paso, Texas Fiscal Year 2008 Budget Summary, Operating Budget, p 275.
Notes:
1. Targets were changed for average response times and cost per call for fiscal year
2. Average response times are tracked only for Upper and Lower Valley, based on highest demand

El Paso County Courts. The Administration of Justice accounts for 16.4 percent of the FY 2008 El Paso County operating budget. This includes the various County Courts, the District Attorney, the County Attorney, and the Public Defenders Office. The Council of Judges Administration oversees the operation of all the Courts, which include:

- 17 District Courts
- Seven County Courts at Law
- Two County Criminal Courts at Law
- Two Probate Courts
- Eight Associate courts, which consist of (four) Family Courts Masters, a Jail Magistrate, a Children's court and (two) Juvenile Court Referee
- One Tax Court
- One Jury Duty Court

Several courts have been added in recent years and a county space study identified the need for a third County Criminal Court and two more Family Courts by 2010. El Paso County projects that its space needs will increase by an additional 80,000 square feet within the next five years. To meet present and future facility needs the County Commissioners issued $72.9 million in bonds for 2008 and 2009 and plan to consider further debt issuances on a biannual basis.[171]

[171] County of El Paso, Texas. 2008 Budget Summary, pp 31-32.

3.10.2.4 Doña Ana and Otero Counties, New Mexico

Fort Bliss extends into Doña Ana and Otero counties of New Mexico, where many of its training ranges are located. Otero County is sparsely populated with more than half of its 62,300 residents living in Alamogordo. Doña Ana County, with a 2006 estimated population of 174,682, includes four incorporated communities: Las Cruces, Sunland Park, Hatch, and Mesilla. Only Sunland Park is within 20 miles of the Fort Bliss Cantonment Area. Unincorporated census designated places within 20 miles of the Fort Bliss Cantonment Area include Chaparral, Anthony, and Santa Teresa. Only those public safety service providers directly impacted by the Fort Bliss expansion are discussed in this section.

Law Enforcement. The Sheriff's Department provides law enforcement services for the unincorporated areas of Doña Ana County covering an area of 3,880 square miles. The main Sheriff's Department is located in Las Cruces, with substations in Hatch, Anthony, and Chaparral. In 2007, the Sheriff's Department had 209 employees (131 sworn officers and 78 civilians)[172] and responded to 94,819 calls for service.[173] The ratio of sworn officers per 1,000 residents in 2007 is about 1.4 compared to the national average for county law enforcement agencies of 2.7 officers per thousand inhabitants.[174]

In FY 2008, the operating budget for Sheriff's department was $10,592,941 or $54 per county resident. Projected growth in Anthony and Chaparral will put additional burden on the Sheriff's department to provide law enforcement services. The Sunland Park police department consists of twenty-two sworn personnel and three civilian code enforcement officers and two non-sworn staff support as of 2007. The department responds to an average of 10,734 calls per year.[175]

3.10.2.5 Fire and Emergency Services

Doña Ana County and four municipalities within its territory provide fire protection and emergency services. The City of Sunland Park maintains two fire stations with a combination of full time professional firefighters and volunteers. Doña Ana County is divided into 16 volunteer fire districts. The County Fire Marshall's office oversees and directs the county's 16 fire districts, which provide fire protection outside the four municipalities. Fire Districts serving the southeastern portion of Doña Ana County include District 2 (Anthony), District 9 (Chaparral), and District 14 (Santa Teresa). Santa Teresa and Anthony Fire Districts have an ISO rating of 6 and Chaparral has a rating of 5.[176]

[172] "Crime in the United States, 2007, Table 80 – Texas Full-time Law Enforcement Employees by State by Metropolitan and Nonmetropolitan Counties." Federal Bureau of Investigation 2008. http://www.fbi.gov/ucr/cius2007/data/table_80_tx.html.
[173] Vision 2040 Regional Planning Project, Community Facilities and Services, Draft 8-27-08, p. 8-3, http://vision2040.nmsu.edu/documents/draft_inventories/8_Public_Facilities_8-27-08.pdf.
[174] Crime in the United States, Table 71
[175] City of Sunland Park website. http://sunlandpark-nm.org/sppd.aspx.
[176] Vision 2040 Regional Planning Project, Community Facilities and Services, Draft. August 27, 2008. p. 8-5

3.10.3 Public Safety Issues Related to Military Growth

A Comprehensive Staff Allocation and Needs Plan prepared for the El Paso Police Department in 2007 found an immediate staffing need for an additional 355 officers for a total authorized strength of 1,446 positions. This level of staffing was determined to be necessary in order to maintain or achieve established objectives for response times and service levels. The report's staffing recommendations are based on providing a ratio of 2.2 sworn police officers per 1,000 residents. **Table 3.10-7** reflects the police department staffing needs based on the LGS, MGS, and HGS described in Section 3.1 and reflects the recommended staffing level of 2.2 officers per thousand residents.

Table 3.10-7. Projected Cost of City of El Paso Police Services Based on Growth Scenarios

	LOW GROWTH SCENARIO			MEDIUM GROWTH SCENARIO			HIGH GROWTH SCENARIO		
Year	City of El Paso Population	Sworn Police Officers Required [1]	Projected Budget Needs for Police Services	City of El Paso Population	Sworn Police Officers Required	Projected Budget Needs for Police Services	City of El Paso Population	Sworn Police Officers Required	Projected Budget Needs for Police Services
2007[2]	606,913	1,335	$109,244,340	606,913	1,335	$109,244,340	606,913	1,335	$109,244,340
2010	632,028	1,390	$113,765,040	635,520	1,398	$114,393,600	638,879	1,406	$114,998,220
2015	675,256	1,486	$121,546,080	684,564	1,506	$123,221,520	693,520	1,526	$124,833,600
2020	698,254	1,536	$125,685,720	708,676	1,559	$127,561,680	718,052	1,580	$129,249,360

Notes:
1. 2.2 Sworn Police Officers per 1,000 Residents
2. Projections based on 2007 Census estimate for City of El Paso population and 2007 Budget of $108,967,636 results in a per capita cost of $180 per resident for Police Services.

The Comprehensive Needs Plan found existing police facilities in the El Paso Police Department to be "less than adequate." In anticipation of future growth as well as to relieve pressure on other regional commands, the report anticipates that a new regional command center will be needed on the far east side of the community. The plan also recommends splitting the Central Regional Command into two separate commands and constructing a new joint use public safety facility to house one of the command centers and maintain a smaller workforce in the existing Central Regional Command facility thereby relieving overcrowded conditions. The plan went on to recommend a number of major improvements to existing facilities. Funding for these improvements is not included in the city's CIP.

Figure 3.10-4, **Figure 3.10-5,** and **Figure 3.10-6** illustrate the projected population increase in the five Regional Commands. Pebble Hills is largest with more than twice the population of the Central Command. The Westside and Northeast Commands are projected to have the most significant growth rate through the planning period.

Figure 3.10-4. Projected Growth by Regional Command – Low

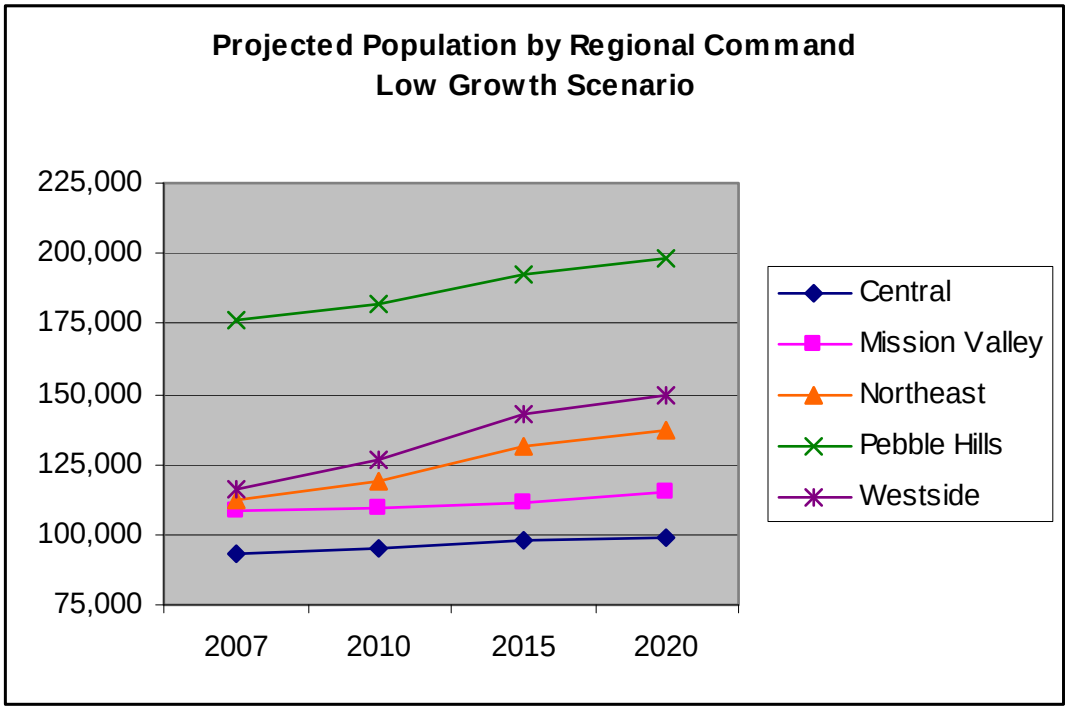


Figure 3.10-5. Projected Population by Regional Command – Medium

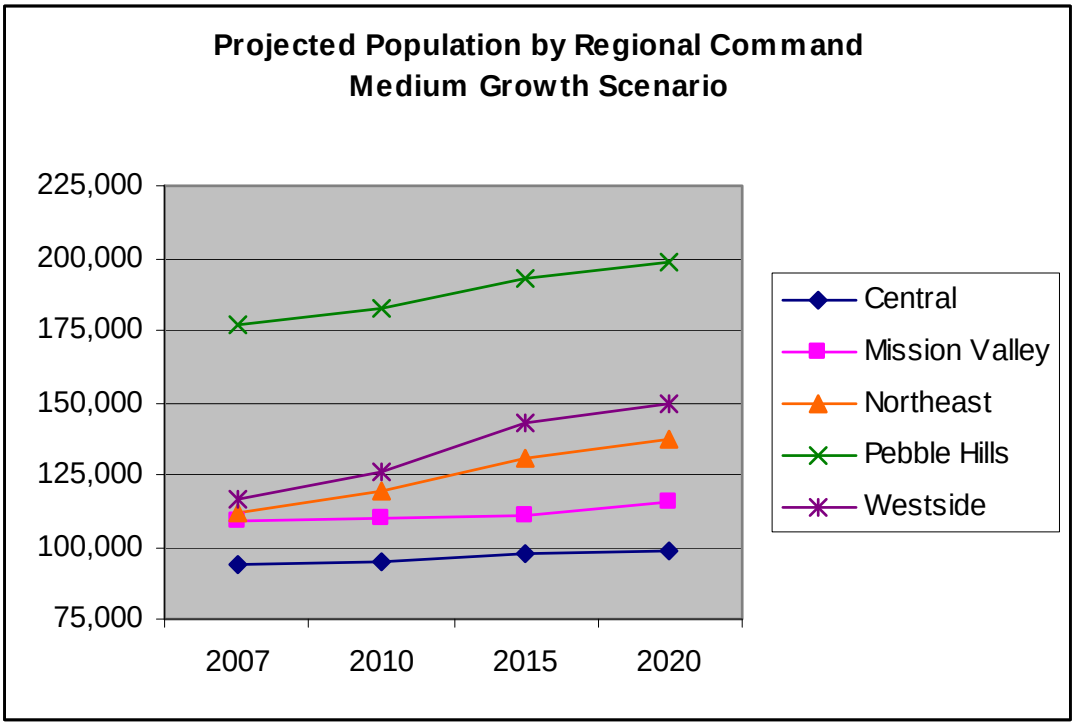
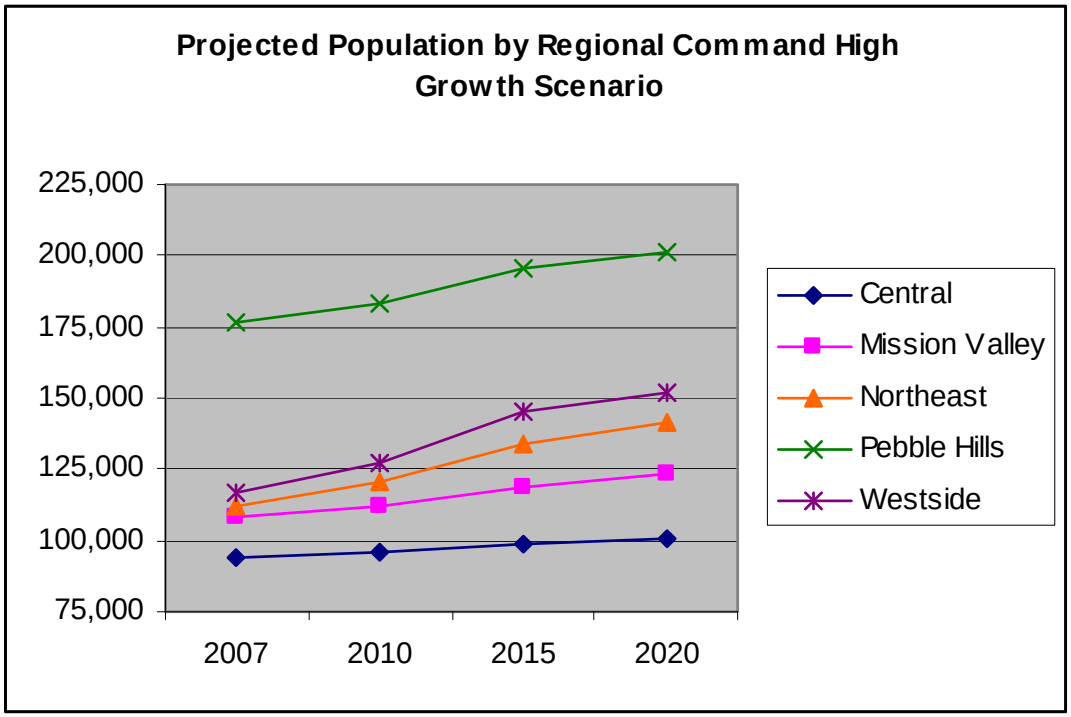


Figure 3.10-6. Projected Growth by Regional Command – High



The anticipated surge in growth through 2015 will challenge The El Paso Fire Department's ability to maintain existing levels of service. This is particularly true if growth patterns continue to sprawl, requiring capital investment in new facilities and apparatus at an even faster pace. **Table 3.10-8** shows the per capita operating costs for fire and emergency services over the past seven years. The current year's budget of $78,223,416 reflects a cost per resident of $124.35.

Table 3.10-8. Per Capita Cost for Fire Protection Services FY 2003 - FY 2009

Fiscal Year	Population	Operating Budget	FTEs	Total Responses	Per Capita Cost
2003	563,662	$57,510,009	990	62,100	$102.03
2004	594,054	$60,237,577	985	63,780	$101.40
2005	614,261	$64,509,719	1,002	64,436	$105.02
2006	615,553	$66,280,678	1,012	69,737	$107.68
2007	616,029	$71,338,244	988	70,498	$115.80
2008	618,782	$75,166,441	976	70,117	$121.47
2009	629,049	$78,223,416	962	70,117	$124.35

Table 3.10-9 projects the staffing needs and operating costs for fire protection and emergency services to 2020 based on the projected low medium and high population estimates. The El Paso Fire Department's authorized staffing is presently approximately 14 uniformed firefighters per 10,000 residents. The projected budget needs are based on a cost of $125.00 per capita and not adjusted for inflation.

Table 3.10-9. Projected Staffing and Operating Budget

Year	City of El Paso Population	Projected Number of Firefighters 14.0 per 10,000 Population	Projected Budget Needs for Fire and Emergency Services
LOW GROWTH SCENARIO			
2010	632,881	886	$79,110,125
2015	676,161	947	$84,520,125
2020	700,532	981	$87,566,500
MEDIUM GROWTH SCENARIO			
2010	636,904	892	$79,613,000
2015	686,888	962	$85,861,000
2020	711,857	997	$88,982,125
HIGH GROWTH SCENARIO			
2010	640,177	896	$80,022,125
2015	695,618	974	$86,952,250
2020	721,125	1,010	$90,140,625

The above costs reflect only the projected operating costs for fire protection and emergency services and do not account for the capital investment required to construct and equip new facilities necessary to accommodate the anticipated surge in growth. According to the 2009-2013 CIP, Fire Station #36 on the Westside at Northern Pass and Resler is expected to be operational in FY 2009. The City of El Paso has programmed $3,687,000 to construct Fire Station #37 on the east side of Loop 375 on Edgemere in 2011.

In planning for growth, the Fire Department's Planning Division recommends that new development is within 1.5-miles of a fire station in order to maintain a four-minute response time in accordance with National Fire Protection Association Standards. **Figure 3.10-7** identifies the existing and planned fire station location and graphically depicts the four- and eight-minute coverage area for the existing fire stations. Figure 3.10-7, shows that existing development has already extended well beyond the four-minute response area for Fire Station #37 and development is expected to expand even further.

New construction for off-post military housing will likely occur within 20 miles of the main post,[177] mostly within the El Paso city limits and will be served by the El Paso Fire Department. However, new development occurring outside the City of El Paso would affect the staffing and equipment needs of the volunteer fire districts serving these areas. **Figure 3.10-8**, **Figure 3.10-9,** and **Figure 3.10-10** illustrate the projected population of the service areas of the seven volunteer fire departments within El Paso County for the respective growth scenarios. Horizon City and Montana Vista fire departments will experience the greatest impact from the Fort Bliss expansion, although the City of El Paso is likely to absorb some of the growth trough annexation. Growth in the other fire districts reflects normal development trend within the region.

[177] *Draft Housing Market Analysis – Fort Bliss, Texas*. Prepared by Robert D. Niehaus, Inc. May 31, 2008.

Figure 3.10-7. Fire Station Four- and Eight-Minute Travel Times

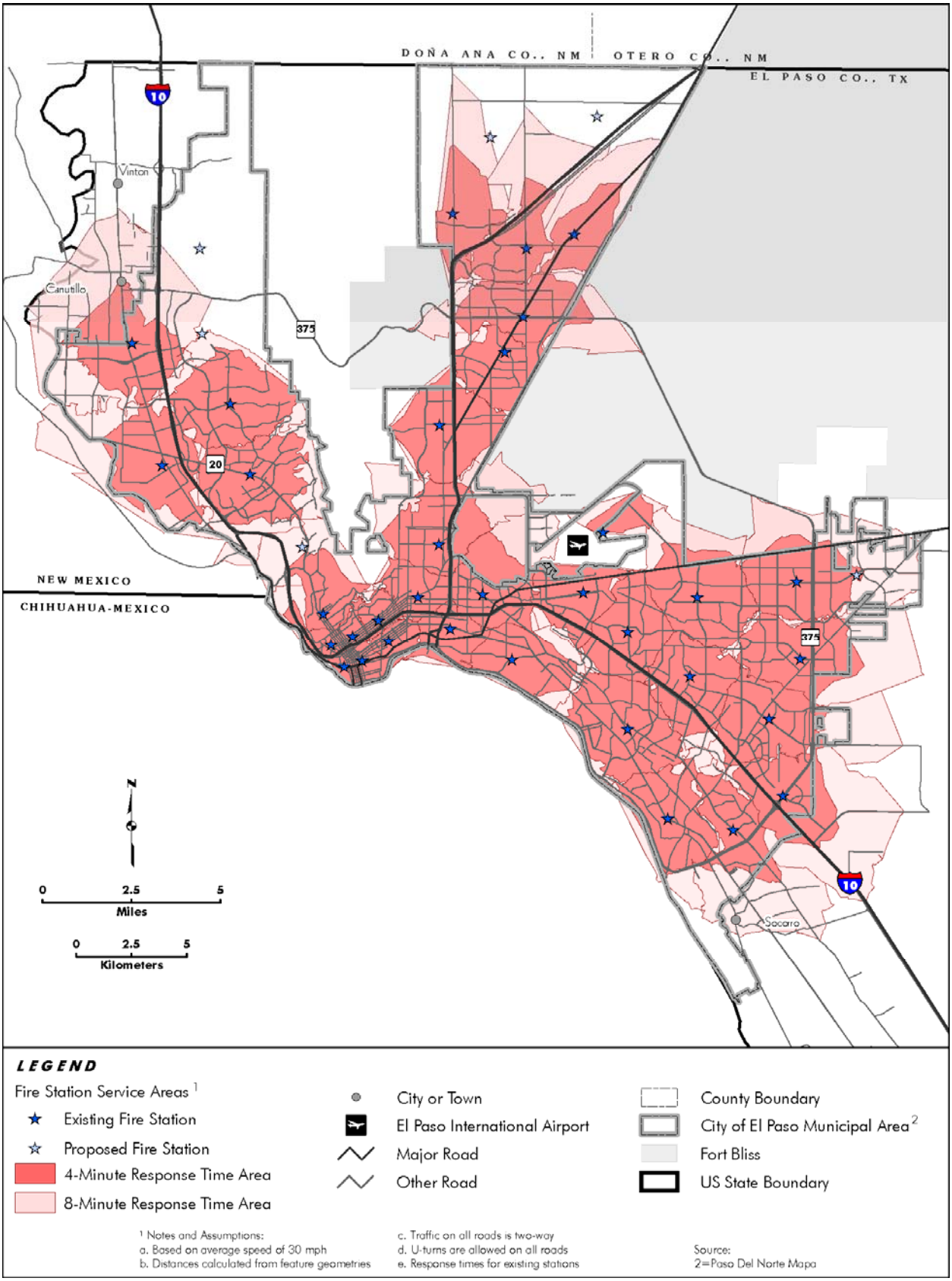


Figure 3.10-8. Projected Population by Volunteer Fire District – Low

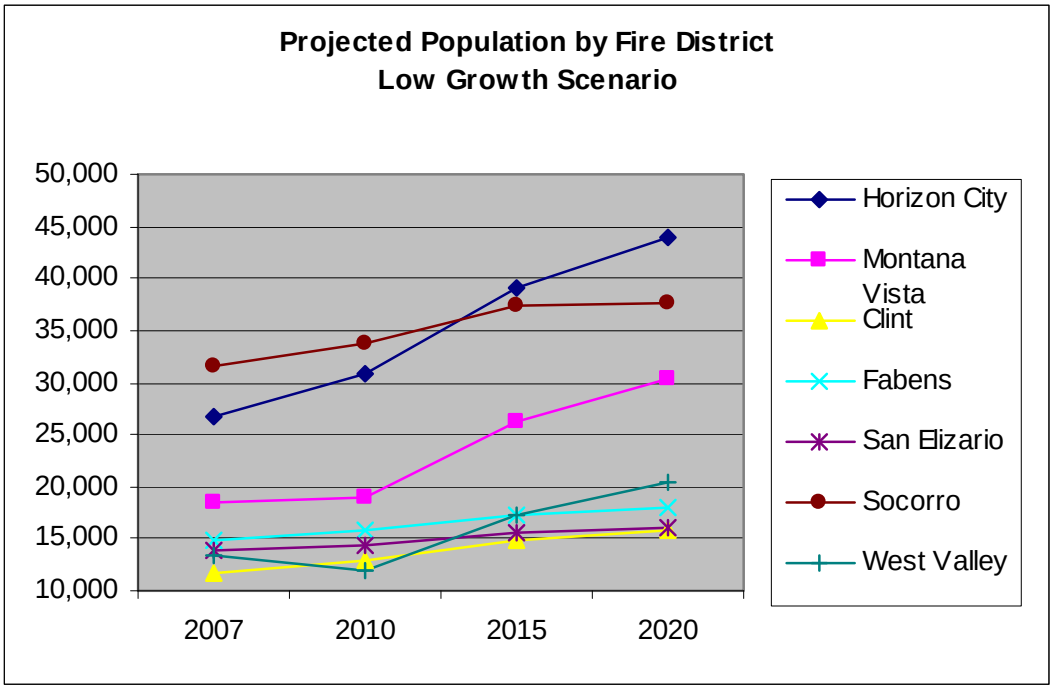


Figure 3.10-9. Projected Population by Volunteer Fire District – Medium

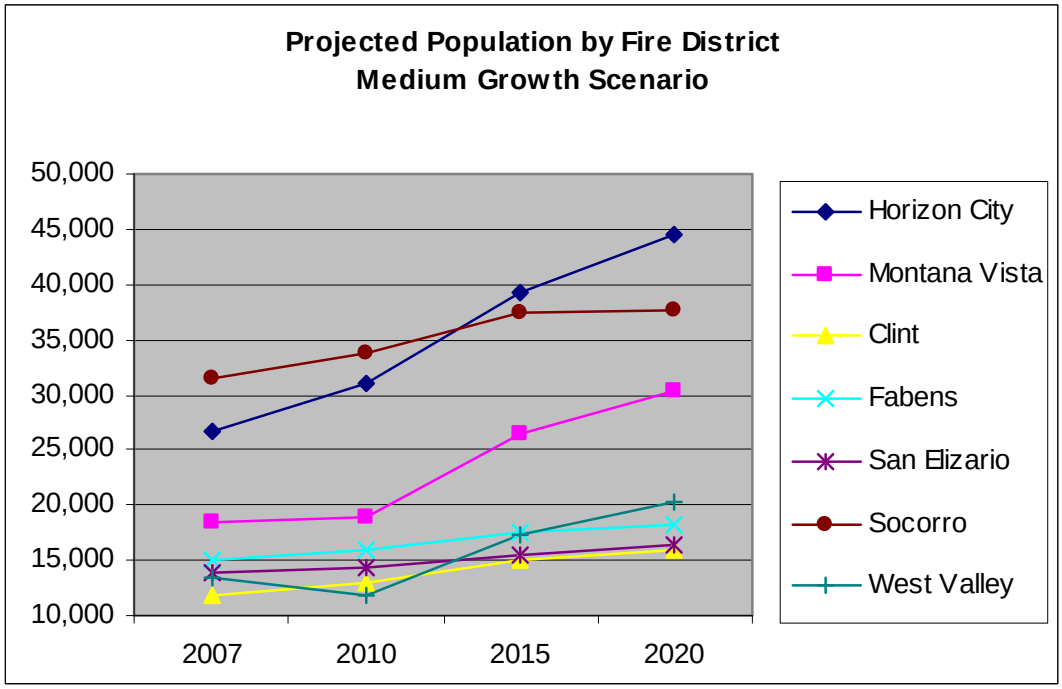
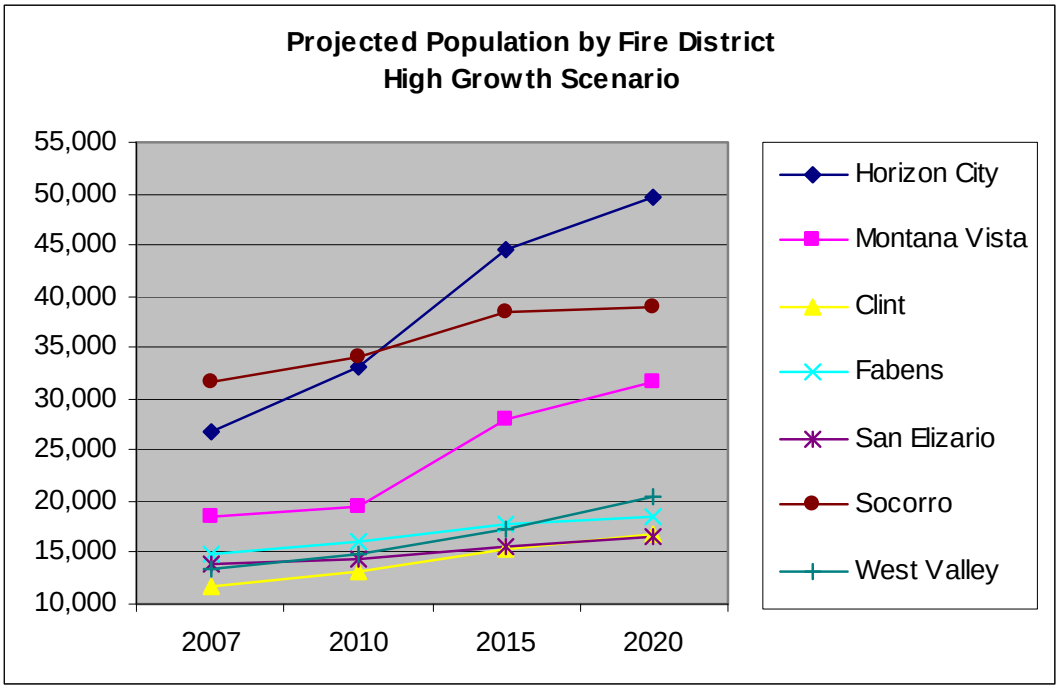


Figure 3.10-10. Projected Population by Volunteer Fire District – High



Conclusions. El Paso has maintained a steady growth rate of approximately one percent per year between 1990 and 2007. While not considered a rapid rate of growth, keeping pace provided a challenge to the agencies providing public safety services. These agencies in fact have done a remarkable job with very limited resources. The El Paso Police Department, with staffing well below its authorized strength, has reduced crime rates to well below national averages. Likewise, the El Paso Fire Department has maintained a Class 1 ISO rating in the face of increasing demands for service at a per capita cost well below comparable cities.[178]

The anticipated surge in population resulting from the BRAC initiative will contribute to a 19.0 percent increase in population between 2007 and 2015 for an annual rate change of 2.2 percent.

Projected future growth levels will strain the resources of the community to maintain its public safety services at its current performance levels. Growth outside the corporate limits of the City of El Paso is dependent on services provided by small volunteer fire departments and limited law enforcement agencies for protection. At some point, volunteerism may prove untenable for the demands of and area transitioning from rural to urban in density.

[178] *Fire Station Location Study. Oklahoma City Fire Department*. TriData, a Division of System Planning Corporation. September 2006. p. 66.

3.10.4 Recommendations

City of El Paso Police Department

- Police Department staffing has been below authorized levels. The Comprehensive Plan indicated an immediate need for an additional 355 sworn officers totaling 1,446 positions.[179] The recommended staffing levels are based on performance standards recommended by the Police Department administration as appropriate for the community and not on national averages. To maintain a ratio of 2.2 officers per 1,000 residents, staffing levels will need to increase by about three percent per year between 2009 and 2013 and about one percent per year after that.
- The city should increase staffing to levels identified in Comprehensive Staff Allocation and Needs Plan and then continue to benchmark performance measures as a means to evaluate staffing needs.
- Establishing a sixth Regional Command to serve new growth on the far east side of the community is among the recommendations of the Facility Study Report and Strategic Plan. The projected population within the Pebble Hills Regional Command will grow to 200,000 residents and cover and area of over 40 square miles. It is recommended that the City of El Paso begin capital improvement planning for this new regional command center, estimated to cost between $5.2 and $7.8 million.
- Increased coordination and communication between various federal, state, and local law enforcement agencies is needed to most effectively utilize available resources in addressing law enforcement issues unique to communities bordering military installations.

  The city, through cooperation with Fort Bliss, can establish a working committee comprised of representatives from the various law enforcement agencies within the region including the military. The purpose of the committee would be to develop a strategic plan to identify and address law enforcement issues.

City of El Paso Fire Department

- As growth increases at a projected rate of two percent per year through 2015, the El Paso Fire Department will be challenged to maintain its current level of service without additional staffing and facilities. The Department has taken a first step by preparing a strategic plan to address its staffing and facility needs. To address this issue, the following steps are recommended:
  - The Department should begin reporting response times using fractile data rather than average times and set as its objective to have the first responder to a call at the scene within four minutes of receiving an emergency call 90 percent of the time.

[179] *Facilities Study Report and Strategic Plan*. Magellan Research Corporation. May 2007.

- Staffing levels of trained firefighters should be increased to allow at least four firefighters on every engine company.
- The city should immediately program construction funding for Fire Station #37. New development east of Zaragoza is outside the four-minute response time for Fire Station #33. The anticipated cost would be between $4 and 5 million, based on budget estimates by the city for similar facilities.

- As growth occurs in the those areas served by volunteer fire districts the number of calls for mutual aid is likely to increase placing an additional burden on the City of El Paso. To address this issue, the city should:
  - Develop a method for maintaining records and analyzing the costs of providing fire protection services outside their service jurisdiction and identify ways in which such costs could be recovered by service recipients.
  - Identify potential fire station locations within its ETJ in future land use plans.
  - Maintain an aggressive annexation policy for new development within its ETJ and negotiate pre-annexation agreements that provide for the reservation/dedication of land for future fire station sites as identified in its land use plan.

Volunteer Fire Departments

- The volunteer fire districts should add paid fire fighters to staff fire departments serving high growth areas.

County of El Paso

- The Downtown Detention Facility has capacity for 1,000 inmates and the Jail Annex, which became operational in 1998, has a housing capacity of 1,440 inmates. In 2006, the Sheriff's Department reported the daily average inmate population at 810 for the Downtown Facility and 1,291 for the Jail Annex, representing 86 percent of the total capacity of the county detention facilities. The Texas Commission on Jail Standards reports that El Paso County is in the planning stage for a new county jail facility. With the projected surge in population growth, the current capacity of the detention facilities will be exceeded by 2012 under the HGS and by 2013 under the MGS.[180] Capital planning for the design and construction of new or expanded detention facilities should begin immediately in order to meet projected capacity requirements by 2012.
- Current staffing levels for the Sheriff's Department are consistent with the national levels; however, population growth spurts characteristically result in increased demand for services well in advance of any corresponding revenues coming to the county through increased property taxes. As a result, funding for additional staff and equipment is likely to lag behind increased demand for services.

[180] Estimate is based on a calculated incarceration rate of 0.29 percent of the total county population.

The Sheriff's Department and County Judges should continue to monitor established performance measures and be ready to supplement staffing levels to meet projected population levels.

City and County Civil Courts

- The expected population growth of over 200,000 will require more staffing to handle the recording of wills, deeds, mortgages, and other legal paperwork and will also increase the need for courtroom space and the judges and staff to operate the expanded facilities. The city and county bar and bench should form a task force now to identify and price funding sources to meet these needs.

Table 3.10-10 lists recommended actions from the Action Plan (Appendix G) for Public Safety and Emergency Services. The table names the action, lists the entity or entities responsible for implementation, the timing and rationale for action, estimated available resources, possible funding sources, and implementation indicators.

Table 3.10-10. Action Plan Recommendations for Public Safety and Emergency Services

Recommended Action	Responsible Entity/ Regional Ops	Timing/ (Rationale)	Estimated Resources	Funding Source(s)/ Implementation Strategies	Implementation Indicator
1. Maintain a ratio of 2.2 police officers per 1,000 residents in the city	- City of El Paso (lead) - County	1 year (Recognize and stem continual outmigration of trained El Paso Police and first responders to federal jobs)	See RGMP Section 3.10	http://www.ojp.usdoj.gov/BJA/funding/index.html http://www.atf.gov/recovery/project-gunrunner.htm http://www.cops.usdoj.gov/pdf/chrp_report.pdf	Ratio maintained
2. Establish a 6th Fire and Regional EMS Command Center to serve growth area	- City of El Paso (lead) - County	1 year (Maintain same high levels of service)	See RGMP Section 3.10	http://www.ojp.usdoj.gov/odp/grants_programs.htm#fy2006empg http://www.firehouse.com/funding/grants.html http://www.firegrantsupport.com/, http://www.usfa.dhs.gov/fireservice/grants/ http://www.usfa.dhs.gov/fireservice/grants/	Current service metrics maintained
3. Strengthen urban area security initiative committee to increase coordination, communication, and facility sharing among all El Paso federal, state, and local public safety agencies • Utilizing non-far agreements, communities and bases are increasing capability sharing. Examples stretch from libraries to water purification plants	- City of El Paso (co-lead) - Fort Bliss (co-lead) - FBI (co-lead) - Border Patrol (co-lead) - Customs Service (co-lead) - U.S. Marshals Office (co-lead) - DEA (co-lead)	1 year (Increase service to the community and reduce costs)	Low	Internal funds of each co-lead organization http://www.ci.el-paso.tx.us/fire/emergency_management_UASI.asp; http://www.dhs.gov/xlibrary/assets/grant-program-overview-fy2009.pdf PAGE 16, 18, 20 http://www.citizencorps.gov/index.shtm; http://www.texascitizencorps.org/ http://www.fema.gov/pdf/government/grant/hsgp/fy09_hsgp_overview.pdf	Increased cooperative activity

Table 3.10-13. Action Plan Recommendations for Education *(Continued)*

Recommended Action	Responsible Entity/ Regional Ops	Timing/ (Rationale)	Estimated Resources	Funding Source(s)/ Implementation Strategies	Implementation Indicator
				PAGE 10 FOR TEXAS	
4. Identify the need and funding necessary to upgrade volunteer fire districts with paid staff based on percentage of growth	- County (lead)	1 year (Improve local fire protection)	See RGMP Section 3.10	http://www.firegrantsupport.com/ http://www.usfa.dhs.gov/fireservice/grants/	Upgrades Implemented
5. Bench and Bar Associations to develop plan to upgrade staffing needed to handle expected legal paperwork increase in costs	- City of El Paso (co-lead) - County (co-lead) - State and federal Bench and Bar (co-lead)	1 year (Significant increases in population will require increases in resources to meet legal needs)	Low	Internal funds of each co-lead organization	Plan created
6. Develop plan that identifies physical requirements and costs for a new detention center	- City of El Paso (co-lead) - County (co-lead)	1 year (Significant increases in population will require increases in facility capacity)	See RGMP Section 3.10	Funding usually provided by directed appropriations Consider private partnership with organization like Corrections Corporation of America, or Balfour Beatty http://www.balfourbeatty.com/bby/media/inthenews/2003-11-27/2003-11-27.pdf http://www.correctionscorp.com/	Plan created

3.11 Quality of Life

3.11.1 Introduction and Methodology

As military personnel and their families relocate to Fort Bliss, the City of El Paso's Quality of Life Portfolio, as with other departmental divisions, will be tasked with providing municipal services to a sizable population in a relatively short timeframe. By 2013, the military population of Fort Bliss will exceed 90,000 men, women, and children.

The DoD has noted that one benefit from BRAC is an improved quality of life for military forces made available by the reallocation of savings resulting from the divestiture of unnecessary installation infrastructure.[181] The Morale Welfare and Recreation (MWR) division at Fort Bliss is tasked with improving the quality of life for its military forces while concurrently accommodating expansion related to increased populations at Fort Bliss. To some degree, the installation affects the military service member, but the local community is also a factor. Thus, quality of life for El Paso residents is interconnected with the quality of life for Fort Bliss residents as well.

This section evaluates how military-related growth will affect El Paso's quality of life. This section provides a brief review of El Paso's current state and gaps, including an account of previous quality of life bonds. The analysis also compares El Paso to other equivalent cities against various quality of life indices. Using information on current amenities and per capita ratios, the assessment identifies what El Paso will need in these areas to keep pace with expected growth. The following are key findings:

- El Paso currently enjoys a cost of living below the national average.
- There is an immediate need for more urban parkland acres, arts businesses, and library circulation improvements.
- El Paso scores better than average when compared to other U.S. cities in the Residence Index, which includes variables such as violent crimes and property crimes per 1,000 residents, percent of days with sunshine, and parkland acres per 1,000 residents.
- Concerning the Quality of Life Index, El Paso scores low in the Business Index, which includes variables such as median family income, percent of the population 25 years and older that has a four-year college degree, and amount of Small Business Administration loans per capita.

3.11.2 Existing Conditions

Based on two surveys conducted earlier this year, the majority of resident survey respondents believe that El Paso is improving as a place to live. According to survey respondents, El Paso's biggest weakness is lack of employment opportunities and competitive salaries. This weakness is exacerbated by the situation of military spouses whose unemployment rate is three times that

[181] "Base Realignment and Closure 2005 - Frequently Asked Questions." Department of Defense 2005. http://www.defenselink.mil/brac/faqs001.html.

of their civilian counterparts. Further, almost 77 percent of military spouses report a need to work to maintain the family budget.[182] Additionally, quality of life funding has been vulnerable to budget pressures.

The current state of El Paso's cost of living and leisure-related amenities are noted below. For this assessment of El Paso's quality of life, data at the city level is included because it is the level of data provided by the national and Texas databases used for comparison purposes.

3.11.2.1 Cost of Living

The ACCRA Cost of Living Index measures relative prices of consumer goods and services. The index consists of six major categories: grocery items, housing, utilities, transportation, health care, and miscellaneous goods and services. Overall, El Paso's cost of living is below the national average. El Paso's overall lower cost of living is driven by the fact that El Paso's cost of living is below the national average for five of the six major categories. Only the grocery items (109.4) category has a higher cost of living than the national average (100).

3.11.2.2 Leisure

Parks and Open Space. There are five national parks and two national forests in El Paso's surrounding areas. As reported by The Trust for Public Land,[183] there are approximately 4.7 acres of City of El Paso parkland for every 1,000 residents.[184] This ratio does not account for Franklin Mountains State Park, the second largest urban park in the nation,[185] nor does this ratio account for El Paso County's Ascarate Park, which spans approximately 460 acres.[186] In comparison, city or municipal parkland acres for every 1,000 residents averages 13.8 for the seventy five largest cities, 15.6 for those cities in Texas, and 22.3 for those cities with a similar population density to El Paso.[187]

El Paso fares better when total parkland acres are included in the ratios. Total parkland acres include "city, county, metro, state and federal acres within the city limits."[188] El Paso has 45.1 total parkland acres for every 1,000 residents. This ratio of total parkland acres for every 1,000 residents is 40.9 for the seventy five largest cities, 22.6 for those cities in Texas, and 102.1 for

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[182] "Military Spouse Career Program Expands." Military.com. Today in the Military. April 18, 2008. http://www.military.com/news/article/military-spouse-career-program-expands.html.

[183] Parkland figures from the Trust for Public Land were used to allow for consistent comparisons across different geographic locations.

[184] Updated: City Park Facts. The Trust for Public Land. Center for City Park Excellence. http://www.tpl.org/tier3_cd.cfm?content_item_id=20531&folder_id=3208.

[185] "The 150 Largest City Parks." The Trust for Public Land. Center for City Park Excellence, UPDATED: City Park Facts. http://www.tpl.org/content_documents/citypark_facts/ccpe_150_LargestParks_08.pdf.

[186] "Acres of Parkland by City and Agency." The Trust for Public Land. Center for City Park Excellence, Updated: City Park Facts. http://www.tpl.org/content_documents/citypark_facts/ccpe_TotalAcresCityandAgency2008.pdf.

[187] The Trust for Public Land. Center for City Park Excellence, Updated: City Park Facts. http://www.tpl.org/tier3_cd.cfm?content_item_id=20531&folder_id=3208. Ratios were computed using data from "Acres of Parkland per 1,000 Residents by City" and "Acres of Parkland by City and Agency."

[188] "Total Parkland per 1,000 Residents, by City." The Trust for Public Land. Center for City Park Excellence, Updated: City Park Facts. http://www.tpl.org/content_documents/citypark_facts/ccpe_TotalAcresperResident_08.pdf.

those cities with a similar population density to El Paso.[189] The latter includes the City of Anchorage, with an unusually high ratio of 1,800.2 acres per 1,000 residents.

Culture and Arts. One way to measure the robustness of culture and arts in a city is to look at that city's "creative industries." These include arts-centric businesses that residents participate in for enjoyment (attending a concert or seeing a movie) and investment in the facilities that enrich the community (museums or performing arts centers).[190] There are 1.21 arts businesses per 1,000 residents in El Paso, which places El Paso 49th out of the 50 most populated cities. This ratio of arts businesses per 1,000 residents averages 2.74 for the 50 most populated cities and 2.44 for those cities in Texas.[191] **Table 3.11-1** shows that El Paso needs between 750 and 933 additional arts businesses to align with other cities. As provided in the table, El Paso needs to more than double the number of arts businesses to achieve the same average ratio (2.44) as other cities in Texas. It should be noted that arts businesses are driven by higher income consumers. El Paso has a low median family income, which accounts for some of El Paso's gap in arts-centric businesses.

Table 3.11-1. Arts Businesses Needed to Close the Gap on Arts Businesses/Residents Ratios

Arts Businesses (2008)	City of El Paso	50 Largest U.S. Cities	Texas Cities
Arts Businesses	737	2,676	2,512
Arts Businesses/1,000 Residents	1.21	2.74	2.44
Arts Businesses Needed by El Paso	n/a	933	750

Source: Figures derived from calculations using data from Americans for the Arts, "Creative Industries 2008: The 50 City Report." For its population figures, Americans for the Arts uses the 2006 population estimates from the U.S. Census Bureau.

Libraries. El Paso County has three public libraries: El Paso Public Library (EPPL), Clint ISD Public Library, and Fabens ISD Community Library.[192] As the EPPL accounts for over 97 percent of the total library circulation in the county,[193] only EPPL statistics are used below. Total library circulation is defined as "all materials in all formats that are charged out for use outside the library."[194] Several factors may affect circulation, including staff resources, library hours, accessibility, quality of collections, and alignment with residents' preferences. The EPPL circulation per capita is 2.53, which is the lowest ratio of the thirteen public libraries in Texas

[189] "Total Parkland per 1,000 Residents, by City." The Trust for Public Land. Center for City Park Excellence, Updated: City Park Facts. http://www.tpl.org/content_documents/citypark_facts/ccpe_TotalAcresperResident_08.pdf.
[190] Americans for the Arts. Creative Industries 2008: The 50 City Report. March 2008.
[191] Americans for the Arts 2008.
[192] Texas State Library and Archives Commission. Public Library Directory and Statistics. http://www.tsl.state.tx.us/ld/pubs/pls/#stats.
[193] Texas State Library and Archives Commission. Public Library Directory and Statistics. Texas Public Library Statistics for 2007. http://www.tsl.state.tx.us/ld/pubs/pls/2007/index.html.
[194] Texas State Library and Archives Commission. Texas Public Library Annual Report Information. Annual Report Instructions and Sample. http://www.tsl.state.tx.us/ld/pubs/arsma/.

that serve populations over 250,000.[195] This ratio of library circulation per 1,000 residents averages 5.33 and 5.51 for libraries that serve populations over 250,000 and for all libraries in the state of Texas, respectively. **Table 3.11-2** provides the additional circulation needed in El Paso to close the gap on these two average ratios. As indicated in the table, El Paso needs to increase its total library circulation by over 1.7 million to reach the average circulation per capita level (5.33) for those libraries that serve populations over 250,000.

Table 3.11-2. Library Circulation Needed to Close the Gap on Circulation Per Capita Ratios

Library Circulation (2007)	El Paso	Texas Cities w/250K+ Pop	Texas
Library Circulation (avg. reported for 250K+ pop. libraries)	1,540,689	4,073,845	n/a
Library Circulation per Capita	2.53	5.33	5.51
Library Circulation Needed to Close Gaps	n/a	1,707,493	1,817,188

Source: Figures derived from calculations using data from Texas Public Library Statistics. For its population figures, Texas Public Library Statistics uses the 2006 population estimates from the U.S. Census Bureau.

3.11.2.3 El Paso's Quality of Life Bonds

Residents have made enhancing El Paso's quality of life a priority. In May of 2000, residents authorized over $141 million to improve the city's parks ($75 million), libraries (nearly $26.1 million), zoo (nearly $33.4 million), and history museum ($6.65 million).[196] In February of 2004, residents authorized another bond for $115 million to improve parks, streets and drainage, libraries, and municipal facilities and equipment, among other projects.[197, 198]

As of January 2006, the City of El Paso's Capital Improvement Program (CIP) included 216 projects under the current bonds.[199] Several projects have delays or budget overruns.[200, 201, 202] Despite these issues and setbacks, the 2000 and 2004 quality of life bonds have been effective. Examples of bond-funded projects are noted below:

[195] Texas State Library and Archives Commission. Public Library Directory and Statistics. Texas Public Library Summary for 2007. http://www.tsl.state.tx.us/ld/pubs/tpls07/analytical.html#t08.
[196] The City of El Paso FY 2004 Budget. Fiscal Overview. Debt Administration. https://www.elpasotexas.gov/omb/2004_budget.asp.
[197] The City of El Paso FY 2005 Budget. City of El Paso Capital Improvement Plan. https://www.elpasotexas.gov/omb/2005_budget.asp.
[198] City of El Paso Capital Improvement Program FY 2004 Bond Election. https://www.elpasotexas.gov/projects/default.asp.
[199] The City of El Paso. Issue Brief: Capital Improvement Program. http://www.ci.el-paso.tx.us/_documents/fact%20sheets/FACTSHEET%20-%20Issue%20Brief.pdf.
[200] The City of El Paso FY 2005 Budget. Preface. Letter of Transmittal. https://www.elpasotexas.gov/omb/2005_budget.asp.
[201] The City of El Paso FY 2006 Budget. Preface. Letter of Transmittal. https://www.elpasotexas.gov/omb/2006_budget.asp.
[202] The City of El Paso FY 2009 Budget. Preface. Letter of Transmittal. https://www.elpasotexas.gov/omb/2009_budget.asp.

- The Pavo Real Indoor Pool and West Side Sports Complex, completed in FY 2008.[203]
- A new two-story, 44,000 sq. ft. Museum of History in downtown El Paso's cultural district, opened in June 2007.[204]
- The new Esperanza Acosta Moreno Regional Branch Library, opened in December 2006.[205]
- Renovation of the El Paso Public Library system's Main (Downtown) Library, opened in October 2006.[206]
- The new Judge Edward S. Marquez Mission Valley Branch Library, opened in February 2006.[207]
- Construction of three new fire stations and the renovation of one other fire station, completed in FY 2006.[208]
- The new Dorris Van Doren Regional Branch Library, opened in March 2005.[209]
- The Marty Robbins Recreation and Aquatics Center and the Eastwood Recreation Center, completed in FY 2005.[210]
- The El Paso Zoo Sea Lion Exhibit, opened in February 2004.[211]
- Improvements to over 50 percent of city parks.[212]

3.11.3 Quality of Life Issues Related to Military Growth

BRAC and other military growth create an environment of opportunities and challenges. It bolsters the local economy and provides an impetus for improving the status quo, but BRAC-impacted communities face challenges as well. Many of these challenges are common among communities experiencing similar growth. For example, the BRAC-impacted region around Fort Bragg and Pope Air Force Base has made it a priority to ensure the region has well-planned

[203] The City of El Paso FY 2009 Budget. Preface. Letter of Transmittal. https://www.elpasotexas.gov/omb/2009_budget.asp.
[204] The El Paso Museum of History. Rediscover a Cultural Crossroads. http://www.elpasotexas.gov/history/_documents/Entire%20Press%20Kit%20in%20Times%20New%20Roman.pdf.
[205] The El Paso Public Library. Esperanza Acosta Moreno Regional Branch Library. Grand Opening of the Esperanza Acosta Moreno Library. http://www.elpasotexas.gov/library/ourlibraries/branches/esperanza_acosta_moreno.asp.
[206] The El Paso Public Library. Archives of Past Library Events. http://www.elpasotexas.gov/library/archive/archives.asp.
[207] The El Paso Public Library. Judge Edward S. Marquez Mission Valley Branch Library. Grand Opening of the Judge Marquez Library. http://www.elpasotexas.gov/library/ourlibraries/branches/judge_marquez.asp.
[208] The City of El Paso FY 2007 Budget. City of El Paso Capital Improvement Plan (CIP). https://www.elpasotexas.gov/omb/2007_budget.asp.
[209] The El Paso Public Library. Dorris Van Doren Regional Branch Library. Grand Opening Ceremony. http://www.elpasotexas.gov/library/ourlibraries/branches/dorris_van_doren.asp.
[210] The City of El Paso FY 2006 Budget. City of El Paso Capital Improvement Plan (CIP). https://www.elpasotexas.gov/omb/2006_budget.asp.
[211] The El Paso Zoo. World of the Sea Lion. http://www.elpasotexas.gov/elpasozoo/sea_lion.htm.
[212] "Towards a Bright Future: The Parks and Recreation Master Plan for El Paso, Texas." The City of El Paso, Parks & Recreation 2006. https://www.elpasotexas.gov/parks/master.asp.

communities, recreational facilities, and natural open space.[213] Similarly, the region around Fort Meade and the Aberdeen Proving Ground is focused on the environment, schools, infrastructure, and housing.[214] The City of El Paso faces similar challenges with military growth at Fort Bliss.

Two specific challenges identified by Fort Bliss are meeting toddler and infant day care needs and multi-family housing demands. As a broader challenge, residents have asked that El Paso maintain its culture and heritage as it evolves into a community with a greater military presence. Residents have also voiced a desire to preserve Castner Range. The City of El Paso can strive to meet these and other concerns noted during stakeholder and public meetings as it plans for BRAC-related growth.

The purpose of this subsection is to relate the growth scenarios to quality of life factors. The following assessment of future quality of life amenities uses city-level population and data.

3.11.3.1 Cost of Living

As indicated in subsection 3.11.2.1, the ACCRA Cost of Living Index consists of six major categories: grocery items, housing, utilities, transportation, health care, and miscellaneous goods and services. Most, if not all, of these categories are affected by growth. Housing, utilities, transportation, and health care are specifically addressed in other sections of this report. El Paso's cost of living will almost immediately be affected by demand and supply gaps in those four areas. For example, the projected housing shortage will cause housing prices to increase, which may increase El Paso's cost of living depending on the changes of the other five major categories. In short, El Paso's cost of living will fluctuate if there are changes in any of the six major index categories.

3.11.3.2 Leisure

Parks and Open Space. As mentioned in section 3.11.2.2, when including Franklin Mountain and Ascarate Park, there are approximately 45 acres of parkland for every 1,000 residents. Concerning BRAC-related growth, **Table 3.11-3** provides the number of additional parkland acres needed in order to maintain ratios of 5.4, 13.8, 15.6, and 22.3 for the City of El Paso, the 75 largest U.S. cities, the largest cities in Texas, and the largest cities with a population density similar to El Paso, respectively. Considering the accessibility of other open lands for recreation, such as the Franklin Mountains State Park (not reflected in the city ratio), El Paso's parkland need may warrant special consideration to identify particular types of parks (i.e., neighborhood level) that are needed.

As it relates to parks and open spaces, the City of El Paso amended one title in its municipal code last year. Title 19 requires subdivisions to deed parkland to the city based on certain calculations

[213] "Regional Planning." Fort Bragg and Pope Air Force Base BRAC Regional Task Force 2008. Statement by Donald R. Belk, Regional Planner. http://www.bracrtf.com/regional_planning.php.

[214] "2005 BRAC, State of Maryland Impact Analysis: 2006-2020, Executive Summary." Maryland Department of Business and Economic Development. Office of Military and Federal Affairs. 2007. http://www.choosemaryland.org/businessinmd/militaryaffairs/BRACStudy.html.

to help the city provide for the parkland needs of future residents.[215] Title 21 sets forth Smart Code zoning regulations for "the purpose of promoting health, safety, morals and the general welfare of the city" and also requires parkland dedication. [216] These are important steps in the right direction to help meet future demand.

Table 3.11-3. Parkland Acres Needed With BRAC-Related Growth

Reference Area	2008	Low		Medium		High	
	Parkland Acres Ratio	2012 Need	2025 Need	2012 Need	2025 Need	2012 Need	2025 Need
City of El Paso	5.4	412	923	456	999	517	1,141
75 Largest U.S. Cities	13.8	6,208	7,515	6,322	7,710	6,478	8,072
Largest Cities in Texas	15.6	7,450	8,928	7,580	9,148	7,756	9,558
Cities with Similar Population Densities	22.3	12,074	14,186	12,259	14,501	12,510	15,086

Source: IPED Growth Scenarios

Culture and Arts. As mentioned in section 3.11.1.2, El Paso has 1.21 arts business for every 1,000 residents. Concerning BRAC-related growth, **Table 3.11-4** provides the number of additional arts businesses needed in order to maintain ratios of 1.21, 2.74, and 2.44 for the City of El Paso, the 50 largest U.S. cities, and the largest cities in Texas, respectively.

Table 3.11-4. Arts Businesses Needed With BRAC-Related Growth

Reference Area	2008	Low		Medium		High	
	Arts Business Ratios	2012 Need	2025 Need	2012 Need	2025 Need	2012 Need	2025 Need
City of El Paso	1.21	98	213	108	230	122	261
50 Largest U.S. Cities	2.74	1,154	1,413	1,177	1,452	1,207	1,524
Largest Cities in Texas	2.44	947	1,178	967	1,212	995	1,276

Source: IPED Growth Scenarios

Libraries. As mentioned in section 3.11.1.2, the El Paso Public Library circulation per capita is 2.53. Concerning BRAC-related growth, **Table 3.11-5** provides the recommended additional library circulation needed in order to maintain circulation per capita figures of 2.53, 5.33, and 5.51 for the El Paso Public Library, the thirteen libraries serving populations over 250,000, and all libraries in the state of Texas, respectively. Achieving higher circulation (e.g., more items available, more use of libraries, more facilities or staff), may involve addressing several of these delivery methods.

[215] El Paso Municipal Code 2008. Title 19 Subdivisions. Chapter 19.20: Parks and Open Space. http://municipalcodes.lexisnexis.com/codes/elpaso/.

[216] El Paso Municipal Code 2008. Title 21 Smart Code. Chapter 21.10: General to All Plans. http://municipalcodes.lexisnexis.com/codes/elpaso/.

Table 3.11-5. Library Circulation Needed With BRAC-Related Growth

Reference Area	2008	Low		Medium		High	
	Library Circulation Ratios	2012 Need	2025 Need	2012 Need	2025 Need	2012 Need	2025 Need
City of El Paso (EPPL)	2.53	205,249	444,835	226,177	480,566	254,758	546,986
250,000+ Pop. Libraries	5.33	2.14 M	2.64 M	2.18 M	2.72 M	2.24 M	2.86 M
All Libraries in Texas	5.51	2.26 M	2.78 M	2.31 M	2.86 M	2.37 M	3.01 M

Source: IPED Growth Scenarios
Note: M = million

3.11.3.3 Fort Bliss

Fort Bliss will face additional quality of life demands as troops relocate to the post under BRAC. In an effort to meet that demand, there are quality of life projects already underway on post. There is over $150 million in construction costs for quality of life facilities, including $138 million in community facilities and roughly another $39 million in child and youth facilities.[217] Among other things, this construction will result in nine to twelve new child care centers, a nearly 100,000 sq. ft. fitness center that will be one of the largest in the Army, and a new aquatics center. There will also be an additional 400 employees in the Fort Bliss Morale, Welfare and Recreation Command.[218] Fort Bliss may need to implement additional projects (such as parks, movie theaters, mall-type shops) beyond 2013 to keep pace with increasing soldier and dependent numbers.

3.11.4 Quality of Life Index

Quality of life involves many aspects of a community and encompasses a variety of local amenities. Measuring a community's quality of life and comparing that to another community is difficult. Using a quality of life index is a useful method for comparing because the measurements and comparisons can occur as a snapshot or over time. It is with the twin objectives of measuring and comparing quality of life that a quality of life index has been created for the City of El Paso.

Developing indices combines both quantitative information and more subjective measurements. For example, indices reflect uncontrollable factors such as a community's unique history and geography. This can create inherent comparative advantages and disadvantages among communities. Thus, this quality of life index should be used as one tool of many to help local decision makers with public policies designed to improve this area's quality of life. In short, this index provides one way to approach the difficult decisions public policy makers face.

[217] Interview with Melinda Sorrell, Community Recreation Officer, Fort Bliss Morale, Welfare and Recreation Command. December 1, 2008.
[218] Sorrell 2008.

The quality of life index is not a single index; instead, it is four separate indices targeting four areas – business, residence, tourism, and governance. A single index was not created because these four areas have different purposes. For example, a business index focuses on factors that help attract businesses to the region and assist businesses already in the region. In contrast, a residence index includes factors that affect the day-to-day living in the region. Of course, some factors are included in more than one index because they affect more than one area. An example would be crime-related factors, which affect both residents living in, and the governments of, the region.

Each of the indices were developed for thirty-five cities from western, mountain, and southwestern states (AZ, CA, CO, NM, NV, OK, TX, and UT).[219] For this study, the cities geographically closest to El Paso – Albuquerque, Austin, Las Cruces, Midland, Phoenix, San Antonio, Santa Fe, and Tucson [220] – were compared with El Paso in graphic presentation in Appendix E. **Table 3.11-6** lists these cities and their respective distances to/from El Paso. These cities and the overall regional average were then ranked against each other in the various factors that comprise the four indices.[221] The results are provided in Appendix E.

Table 3.11-6. Comparison Cities and Distance to/from El Paso

City	Distance to/from El Paso (miles)
Albuquerque, NM	265
Austin, TX	576
Las Cruces, NM	45
Midland, TX	304
Phoenix, AZ	429
San Antonio, TX	551
Santa Fe, NM	327
Tucson, AZ	316

Note: Mesa, AZ – another city included in the regional index – was purposefully left out of the comparison cities because it is a sister city to Phoenix, AZ.

Overall, El Paso performs poorly for the Business index compared to regional cities mostly due to low median family income. For the residential index, El Paso is average, performing well on cost of living (including housing) and crime, but below average on academic achievement levels. El Paso also rates average as a tourist destination and in the Governance Index (defined mostly by community services).

[219] The Quality of Life Index cities include the twenty-two most populated cities from the western, mountain and southwestern states, five additional California cities that fall within both the fifty most populated cities and the fifty cities with the highest percent of Hispanics, four other border cities in Texas, and four other cities chosen for their frequent comparison to El Paso.

[220] Mesa, AZ – another city included in the regional index – was purposefully left out of the comparison cities because it is a sister city to Phoenix, AZ.

[221] Thirty variables comprise the Quality of Life Index. The most recent data available is reported for each variable. For eighty percent of the variables, the most recent data is for 2007.

3.11.5 Recommendations for Quality of Life

The surge of BRAC-related growth brings a series of challenges and opportunities for El Paso and the surrounding area. El Paso must make major investments to maintain and improve the quality of life for existing and new El Paso residents. This begins with sustained and increased funding for Quality of Life Services. The Quality of Life Services budget has increased at a smaller rate than the overall city budget over the past few years (as described in the Existing Conditions Assessment for the RGMP). This indicates that the share of the overall city budget that is allocated to Quality of Life Services is decreasing. Departments that comprise Quality of Life Services are asked to do more with less as the El Paso population increases.

In addition to securing sustained and increased funding for Quality of Life Services through protection from budget pressures, partnerships with the private sector, and increased user fees for recreational activities, the following strategies and recommendations were identified:

- Aggressively advocate for new project monies under the planned 2010 Quality of Life Bond, which is currently focusing on monies for improvements to existing facilities.
- Collaborate with Fort Bliss to develop future shared parklands and to extend available library services on post.
- Enhance services provided by the Mickelsen Community Library.
- Coordinate with El Paso area public schools to open recreational facilities on school properties for casual use (i.e., weekends, after hours) by residents.
- Immediately complete partial parks and fund the operation of the zoo expansion.
- Continue and enhance the cultural initiatives aimed at making El Paso a true Creative Economy, including the El Paso Expatriate Initiative and T^3 (T-Cubed) Mentoring.
- Collaborate with other municipalities to lobby the state for increased arts funding.[222]
- Improve spousal employment opportunities for military personnel stationed at Fort Bliss.
- Increase technological services available at El Paso's public libraries to keep up with high demand for computer usage.
- Develop a marketing strategy to inform residents of the website and array of services provided by the El Paso Public Library.[223]
- Invest in on-post musical concerts.
- Present incoming soldiers and their families with the quality of life amenities available in El Paso and the surrounding areas, perhaps through an information kiosk.

[222] For fiscal year 2008, Texas ranks 49 out of 50 in state arts agency total legislative appropriations per capita. See National Assembly of State Arts Agencies "2008 State Arts Agency Funding and Grant Making." http://www.nasaa-arts.org/publications/2008-Funding-and-Grantmaking-Report.pdf.

[223] A recent project found that over 90 percent of library users surveyed visited the library website less than five times in the past year and that many survey respondents were unaware of the array of services provided by the library. See "El Paso Public Libraries Citizen Opinion Survey: Perceptions and Perspectives" conducted by eleven UTEP students for their MPA Capstone. Fall 2008. p. 47-48.

- Retain and incorporate the Paso del Norte's truly unique heritage as El Paso continues to grow and move into the 21st century.

Table 3.11-7 lists recommended actions from the Action Plan (Appendix G) for Quality of Life. The table names the action, lists the entity or entities responsible for implementation, the timing and rationale for action, estimated available resources, possible funding sources, and implementation indicators.

Table 3.11-7. Action Plan Recommendations for Quality of Life

Recommended Action	Responsible Entity/ Regional Ops	Timing/ (Rationale)	Estimated Resources	Funding Source(s)/ Implementation Strategies	Implementation Indicator
1. Concentrate funds authorized by future quality of life bonds for improvements to existing facilities	- City of El Paso (lead)	1 year (Improve quality of life for current and future residents)	2010 Bond Issue effort has not yet been undertaken		To be determined
2. Develop a plan to expand park financing	- City of El Paso (lead)	Expand this quality of life requirement in the future	$50,00 to identify location and develop plan	http://www.ncrc.nps.gov/uparr/ Directed Appropriations are often the source of park recreation financing http://appropriations.house.gov/witness_testimony/INT/Daniel_Wenk_05_14_09.pdf. OUTLINES SOURCES http://www.nps.gov/ncrc/programs/lwcf/history.html, http://www.nps.gov/uprr// Authorization: http://www.tpwd.state.tx.us/business/grants/ http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111_cong_reports&docid=f:hr180.111.pdf	
3. Develop a plan to open recreation facilities on school properties for after school/casual use • Recognize and assist schools with liability issues involving playground injuries and equipment damage • School design and siting consideration will substantially reduce costs	- City of El Paso (co-lead) - Independent School Districts (co-lead)	6 months (Increased use of more accessible facilities)	$400,000	http://www.oea.gov http://smartgrowthschools.org/	Plan created

Table 3.11-13. Action Plan Recommendations for Education *(Continued)*

Recommended Action	Responsible Entity/ Regional Ops	Timing/ (Rationale)	Estimated Resources	Funding Source(s)/ Implementation Strategies	Implementation Indicator
• Consider the issues in the development of the comprehensive planning effort					
4. Develop plan to ensure that day care and after school program are available for spouses (including military spouses) needing employment • Expect assistance from items 2 and 3 of Section 3.1	- Workforce Board (Fiscal Agent) - YWCA and City of El Paso (lead) - United Way - Fort Bliss	6 months (Plan needed to absorb more than 10,000 children or less by 2012)	To be determined in plan	http://www.oea.gov/ http://www.childcare.gov/ http://www.acf.hhs.gov/programs/ccb/providers/index.htm http://www.afterschool.gov/ http://nccic.acf.hhs.gov/	Plan created
5. Develop plan to expand library services and increase technological services at public libraries	- City of El Paso (co-lead) - Fort Bliss (co-lead)	1 year (Intent for city and Fort Bliss to share resources and capability)	To be determined in plan	http://www.tsl.state.tx.us/ld/funding/#gates http://www.neh.gov/grants/ http://www.tsl.state.tx.us/ld/funding/eratereport.pdf http://www.gatesfoundation.org/topics/Pages/libraries.aspx http://www.texasbookfestival.org/Library_Grants.php http://www.tsl.state.tx.us/agency/txreads.html	Plan created

3.12 Fiscal Impact

3.12.1 Introduction and Methodology

The fiscal impacts of BRAC-related growth are changes in local government revenues and expenditures beyond the baseline forecast. For example, incremental revenues may accrue from property taxes on incremental growth in property values and sales taxes on additional purchases of retail goods and services. Incremental expenditures may be needed to meet additional demand for public services such as fire protection and education. This analysis combines public sector forecast estimates from REMI with other fiscal information to evaluate the impact of growth on government revenues and expenditures in the two regions (i.e., El Paso and Doña Ana counties). Because the bulk of the population impact is projected in El Paso County, the assessment of fiscal impacts focuses on that county. It also provides a review of the method and findings of a study that the City of El Paso commissioned to estimate impact fees for transportation and water and wastewater infrastructure.[224]

Key findings of the fiscal impact analysis are:

- Despite incremental public sector employment growth compared to baseline employment conditions, REMI projections for government expenditures on a per capita basis are nearly constant or grow slowly through 2025 and overall government expenditures are expected to decline as a share of gross regional product in both regions.
- The projected growth in taxes is slightly higher than baseline conditions (0.1 to 0.3 percent) when average per capita taxes are compared to per capita income.
- A fiscal impact analysis based on REMI fiscal projections may not reflect potential incremental public financing impacts associated with public service and infrastructure gaps identified in previous chapters such as increased public safety staffing or accelerated capital improvement plan schedules. These gaps may increase the revenue requirements for construction and operating budgets.

3.12.2 Existing Fiscal Conditions

Governments in the two study regions have a wide variety of revenue sources and expenditures. Property taxes are an important source of revenue for the Texas jurisdictions because the state does not tax individual or corporate incomes. The 2009 property tax levy across 31 tax jurisdictions in El Paso County exceeded $777 million. **Figure 3.12-1** shows that the nine ISDs receive the largest share of property taxes, followed by the six municipalities and the county government. **Figure 3.12-2** shows that El Paso ISD receives the largest allocation of property taxes among the ISDs serving El Paso students.

[224] *City of El Paso Annexation Assessment and Strategy*. Halff Associates. September 29, 2008.

Figure 3.12-1. Distribution of Projected FY 2009 Property Tax Revenues Among Taxing Districts within El Paso County

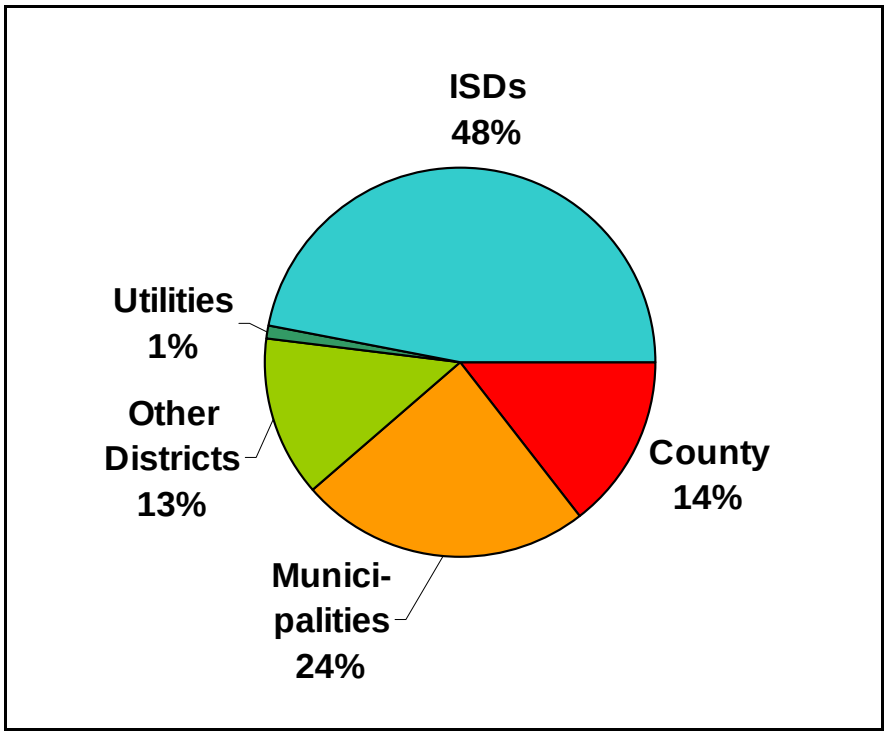
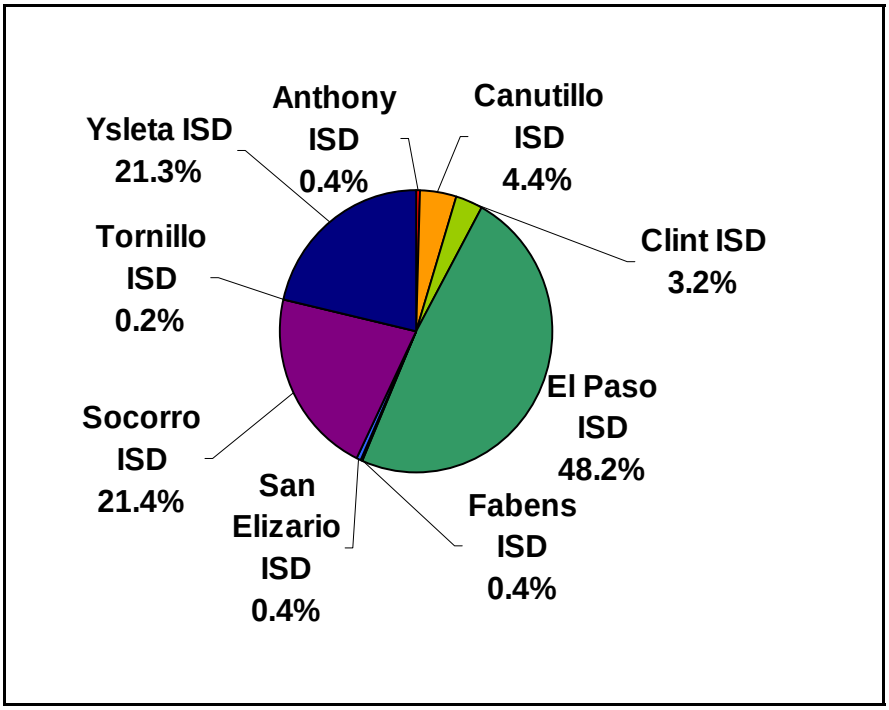


Figure 3.12-2. Distribution of Property Tax Revenue Between School Districts in El Paso County



3.12.3 Fiscal Issues Related to Military Growth

3.12.3.1 Employment

REMI forecasts for state and local government expenditures and employment indicate substantial growth under all three scenarios compared to growth in the 2008-Baseline forecast. **Table 3.12-1** shows percent employment growth by scenario, region, and year for selected years in the forecast period. For example, state and local government employment will be 8.4 percent higher in 2015 under the mid-growth scenario than the corresponding baseline employment estimate for 2015. In El Paso County, growth in local government employment accounts for almost 85 percent of total growth; in Doña Ana County, state and local agencies account for nearly equivalent shares of employment growth. All of the forecasts indicate rapid incremental employment growth between 2010 and 2015, followed by slower incremental growth through 2025.

Table 3.12-1. Incremental State and Local Government Employment Growth by Region for Selected Years (Percent Increase from 2008-Baseline Forecast)

Scenario	Year			
	2010	2015	2020	2025
El Paso County				
Baseline Employment Forecast (thousands)	53.3	56.8	59.4	61.0
Low	2.4	6.8	7.7	8.5
Mid	3.6	8.4	9.5	10.5
High	4.6	10.8	12.7	14.1
Doña Ana County				
Baseline Employment Forecast (thousands)	18.5	20.1	21.3	22.1
Low	0.6	6.3	7.3	8.3
Mid	0.8	6.7	7.8	8.9
High	1.6	8.6	10.4	11.8

Source: REMI forecasts

Note: Percent increase in annual state and local government employment above the 2008-Baseline forecast employment levels in each year. For example, baseline employment in El Paso grows from 52,469 government jobs in 2008 to 56,760 in 2015. Under the MGS, employment in 2015 is 61,526, which is 8.4% higher than baseline employment.

Incremental growth in state and local government employment lags behind overall incremental employment growth in both regions throughout the impact forecast period. In El Paso County, total employment is 4 to 11 percent higher in 2010 across the three scenarios (compared to 2008-Baseline employment projections) and incremental total employment rapidly increases to 11 to 19 percent across the scenarios as early as 2012, where it remains for the remainder of the analysis period. In Doña Ana County, total employment is one percent to five percent higher in 2010 across the scenarios (compared to 2008-Baseline employment) and rapidly increases to 10 to 14 percent higher across the scenarios by 2010, where it remains.

3.12.3.2 Expenditures

In the REMI forecasts, total government sector spending in El Paso County grows by one percent annually in the 2008-Baseline. Under the three growth scenarios, government spending grows by

two to three percent annually during the initial years (e.g., 2012 to 2015) and returns to a one percent growth rate thereafter. In Doña Ana County, total government spending increases by two percent per year through 2020 and one percent thereafter in the baseline and growth scenarios. One notable difference, however, is a one-year five percent growth rate in 2013 under the growth scenarios.

Nevertheless, government sector spending declines as a share of gross regional product (GRP) over the analysis period because GRP grows at a higher overall rate than government spending. **Table 3.12-2** shows both the total government share and state and local government share of GRP by region and year. There is little variation in these shares across the scenarios, so the results are shown for the MGS; shares for the other two scenarios are within one percentage point. Under the 2008-Baseline forecast, government sector spending accounts for slightly larger shares of GRP in El Paso County. In Doña Ana County, spending shares in the 2008-Baseline forecast are similar to the MGS.

The relatively high total government spending share in El Paso County reflects the federal government presence. State and local government accounts for a smaller share of local GRP in El Paso County compared to Doña Ana County.

Table 3.12-2. Government Spending as a Share of Gross Regional Product by Region for Selected Years (Medium Growth Scenario)

Scenario	Year			
	2010	2015	2020	2025
El Paso County				
Total Government	48%	44%	41%	38%
State and Local Government	18%	17%	16%	16%
Doña Ana County				
Total Government	35%	32%	30%	29%
State and Local Government	24%	23%	23%	22%

Source: REMI forecasts
Note: Ratio of government spending (total or state and local) to GRP.

Total per capita government spending (in fixed 2000 dollars) remains relatively stable throughout the analysis periods. **Table 3.12-3** shows slight growth in per capita spending for total government and somewhat higher growth for state and local government spending. These spending levels are comparable to expenditures across the three growth scenarios. In El Paso County, the per capita expenditures under the growth scenarios are $200 to $600 lower than per capita expenditures under the 2008-Baseline. For example, the projected baseline per capita expenditure for total government in El Paso County in 2015 is $10,100, which is $300 higher than the $9,800 estimate shown below. The growth scenario and 2008-Baseline expenditures are the same in Doña Ana County.

Table 3.12-3. Government Spending Per Capita by Region for Selected Years (Fixed 2000 dollars, Medium Growth Scenario)

Scenario	Year			
	2010	2015	2020	2025
El Paso County				
Total Government	$9,900	$9,800	$9,900	$10,000
State and Local Government	$5,100	$5,400	$5,600	$5,800
Doña Ana County				
Total Government	$7,700	$7,800	$8,000	$8,100
State and Local Government	$5,400	$5,700	$6,000	$6,200

Source: REMI forecasts
Note: Government spending (total or state and local) divided by population.

3.12.3.3 Revenues

Per capita taxes (in fixed 2000 dollars) also rise over time, but because per capita income rises by the same rate, taxes remain a constant share of personal income. In El Paso County, the ratio of per capita taxes to personal income ranges from 10.0 to 10.3 percent across the growth scenarios. These estimates are slightly higher than the baseline ratios of 9.9 to 10.0 percent over time.[225] This slight increase in the ratio of per capita taxes to personal income relative to baseline conditions (e.g., 0.1 to 0.3 percent) could indicate the need for slight increases in sales tax and/or property tax rates as well as increases in other revenue sources such as fees, service revenues, or intergovernmental transfers. Alternatively, changes in consumption patterns that increase the marginal public revenue paid per dollar of expenditure can also account for the increase.

Changes in property tax rates will depend primarily on the relative growth rates of taxable property compared to local government expenditures. REMI outputs indicate that residential capital stock (i.e., housing value net of depreciation) grows at a faster rate than local government expenditures in both regions for all growth scenarios as well as the 2008-Baseline. **Table 3.12-4** shows that the ratio of annual local government expenditures to total residential capital stock declines from 14.9 percent in 2010 to 12.2 percent in 2025 in El Paso County. This result indicates the possibility that overall property tax mill rates may decline, if the value of all taxable property grows at a rate comparable to that of residential property. Actual mill rate adjustments will also be affected if incremental growth in expenditures and property values are disproportionately exempt from local taxation (e.g., on-base expenditures and military property that is not subject to local taxation).

[225] These estimates do not refer to taxes on personal income because there is no income tax in Texas. Instead, personal taxes comprise aggregate taxes paid through property taxes and sales taxes.

Table 3.12-4. Ratio of Local Government Expenditures to Residential Capital by Region for Selected Years (Medium Growth Scenario)

Region	Year			
	2010	2015	2020	2025
El Paso County	14.9%	14.0%	13.0%	12.2%
Doña Ana County	9.9%	9.8%	9.2%	8.7%

Source: REMI forecasts.
Note: Local government spending divided by residential actual capital, all estimates in fixed 2000 dollars.

Property tax mill rates vary substantially by taxing entity. For example, the 2008 mill rates per $100 taxable value are $0.633 for the City of El Paso, $0.342 for El Paso County, and $1.235 for El Paso ISD. **Table 3.12-5** illustrates the potential for incremental property tax revenue growth (i.e., incremental revenue above baseline revenue growth potential) based on the following assumptions: constant mill rates over time based on current rates; current taxable property value estimates for the City of El Paso, El Paso County, and El Paso ISD; and annual taxable property growth rates equal to the REMI projections for annual growth in aggregate residential and non-residential capital stock for the MGS and the baseline scenario. The estimates by year indicate the annual amount by which the revenue potential for the mid-growth scenario exceeds the baseline revenue potential. Aggregate estimates for 2010 through 2025 show the cumulative incremental revenue potential under the MGS because of higher residential and non-residential capital stock growth.

Table 3.12-5. Simulation of Potential Incremental Property Tax Revenue ($ millions)

Region	Year				Cumulative (2010-2025)
	2010	2015	2020	2025	
El Paso County	$0.8	$6.7	$12.3	$16.4	$146.7
City of El Paso	$1.4	$11.0	$20.1	$26.8	$240.0
El Paso ISD	$1.4	$11.4	$20.8	$27.7	$248.1

Source: REMI forecasts

Note: Local government mill rates and taxable property values. For example, the 2008 tax levy for the City of El Paso of $186.2 million is based on taxable value of $28.8 billion and a mill rate of $0.633/$100. Under the REMI baseline growth scenario, the aggregate residential and non-residential capital stock growth rate from 2008 to 2010 is 7.3%; under the mid-growth scenario it is 8.0%. This slight difference in capital stock growth rates would generate an additional $1.4 million in revenue at the current mill rate, assuming that taxable value grew at the rate implied by REMI projections. Higher actual growth rates in taxable values increases the revenue potential at a constant mill rate.

Changes in tax rates will vary across the entities because the relative growth in expenditures the revenue base including the tax base will differ. Municipal and county governments have the greatest flexibility in structuring revenue sources to match expenditure increases because they collect taxes to pay for general operating costs and debt retirement and fees to pay for services. For example, total revenues of almost $690 million in the FY 2009 budget for the City of El Paso include approximately $300 million in taxes ($183 million in property taxes, $107 million in

sales taxes, and $13 million in other taxes) and $213 in service and operating revenues.[226] Incremental expenditures that can be offset by service and operating revenues will not affect tax rates. Other entities such as school districts have less flexibility. If school district expenditures grow more rapidly than their property tax base, mill rates will rise.

School district revenues rely heavily on property taxes. BRAC-related growth is expected to increase the property tax base, which will help offset incremental education costs. Districts also receive federal Impact Aid payments per-pupil to help offset property tax revenue losses on federal property. The per-student payment for the 2009-2010 school year could be as much as $3,000.

3.12.4 Recommendations

The REMI forecast results do not indicate substantial shocks to the public sector. Anticipated infrastructure and operations funding shortfalls for selected subsectors (e.g., education) can be addressed using the following fiscal instruments:

General Operations Funding

- Taxes – property tax rates (e.g., $0.633 per $100 in assessed value for the City of El Paso) are below the ad valorem (according to value) rate limitation of $1.85 per $100 in assessed property value.
- Fees – new or incremental fees can supplement operating revenues for public services.
- Capture/count all federally-sourced students. Not only are military-sourced children counted for an impact fee, but all federal workers' children should be counted. Thus, Veterans Administration, U.S. Customs and Border Protection, Federal Bureau of Investigations, Drug Enforcement Administration, U.S. Marshalls Service, and similar organizations must be carefully counted to ensure that school districts are fairly reimbursed for the cost of education.

Infrastructure Investments

- Grants – grants from a variety of federal and state agencies are available to fund infrastructure investments.
- Bond financing – the City of El Paso had $0.63 billion in outstanding bonds at the start of the current fiscal year, which is less than one-fourth of the city's bonding capacity, estimated at $2.86 billion based on a limitation to 10 percent of taxable property valuation.[227]
- Impact fees – the City of El Paso has estimates of growth-related impact fees on selected utilities that can ensure new developments bear the incremental costs of growth.

[226] Fiscal Year 2009 Budget. City of El Paso. August 19, 2008.
[227] Halff Associates 2008.

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FINAL
EL PASO REGIONAL GROWTH MANAGEMENT PLAN

Appendix A

Communication and Outreach

FINAL
EL PASO REGIONAL GROWTH MANAGEMENT PLAN

Appendix A1

List of Stakeholders and Meeting Attendees

Stakeholders

City of El Paso

John Cook, Mayor
Joyce Wilson, City Manager
Kathyrn Dodson, Director of Economic Development
David Almonte, Director of Budget and Analysis
Otto Drozd, Fire Chief
Gregory Allen, Chief of Police
Victor Torres, Director of Development Services
Nanette Smejkal, Director of Parks and Recreation
Michael Hill, Director of Public Health
Carol Brey-Casiano, Library Director
Steve Marshall, Director, El Paso Zoo
Sean McGlynn, Director, Museums and Cultural Affairs
William Lilly, Director, Community and Human Development

City Representatives

Ann Morgan Lilly (District 1)
Susie Byrd (District 2)
Emma Acosta (District 3)
Carl L. Robinson (District 4)
Rachel Quintana (District 5)
Eddie Holguin Jr. (District 6)
Steve Ortega (District 7)
Beto O'Rourke (District 8)

County of El Paso

Anthony Cobos, County Judge
Anna Perez, Commissioner, Precinct 1
Veronica Escobar, Commissioner, Precinct 2
Willie Gandara, Jr., Commissioner, Precinct 3
Dan Haggerty, Commissioner, Precinct 4
Richard Wiles, County Sherriff

State of Texas

Senator Elliot Shapleigh
Inocente Quintanilla, Representative, District 75
Norma Chavez, Representative, District 76
Marisa Marquez, Representative, District 77
Joseph E. Moody, Representative, District 78
Joe Pickett, Representative, District 79

School Superintendents

Primarily impacted school districts
Dr. Lorenzo Garcia, El Paso ISD
Roger Parks, Cantullo ISD
Dr. Edward Gabaldon, Clint ISD
Dr. Xavier De La Torre, Socorro ISD
Dr. Michael Zolkoski, Ysleta ISD

Other school districts

Ronald Haugen, Anthony ISD
Poncho Garcia, Jr., Fabens ISD
Mike Quatrini, San Elizario ISD
Paul Vranish, Tornillo ISD

Other Educational

Margie Huerta, President, Doña Ana Community College
Diana Natalicio, President, University of Texas El Paso
Manuel Pacheco, Interim President, New Mexico State University
Richard M. Rhodes, President, El Paso Community College
Dr. Denis Soden, Executive Director, IPED, University of Texas El Paso

Fort Bliss

Maj. General Howard B. Bromberg, Post Commander, Fort Bliss
Bob Weatherly, Management and Program Analyst, Team Bliss, Base Transformation Office

Media

El Paso Times
El Paso, Inc.

El Diario de El Paso
Newspaper Tree
KDBC
KFOX
KINT
KTFN
KTSM
KVIA

Real Estate/Housing

Gerald Cichon, President/CEO, Housing Authority, City of El Paso
Dan Olivas, President, Greater El Paso Realtors Association
Mark Dyer, President, El Paso Association of Builders

Hunt Communities (Land)
MIMCO (Commercial)
River Oaks (Commercial)
RJL (Commercial Brokers)
Saratoga Homes (Residential Builder)
Southwest Land Development (Land)
Tropicana Homes (Residential Builder)
Verde (Land)

Economic Development/Quality of Life

Richard E. Dayoub, President, Greater El Paso Chamber of Commerce
Cindy Ramos-Davidson, CEO, El Paso Hispanic Chamber of Commerce
Bob Snead, President, El Paso Black Chamber of Commerce
Lorenzo Reyes, Jr., CEO, Workforce Solutions Upper Rio Grande

Health and Social Services

Salvador Balcorta, MSSW, LMSW, Executive Director, La Fe Clinic
Col. James M. Baunchalk, Commander, William Beaumont Army Medical Center
Jacob Cintron, CEO, Del Sol Medical Center
Bill Collins, CEO, Highlands Regional Rehabilitation Hospital
Richard E. Dayoub, President, Greater El Paso Chamber of Commerce
Myrna J. Deckert, President and CEO, Paso Del Norte Health Foundation
John Harris, Sierra Providence Health Network

Hank Hernandez, Las Palmas Medical Center
Gary Larcenaire, CEO, El Paso MHMR
David O. Taber, M.D., President, El Paso County Medical Society
James N. Valenti, CEO, University (Thomason) Hospital

Transportation and Utilities

Edmund G. Archuleta, President/CEO, El Paso Water Utilities
J. Frank Bates, El Paso Electric
Douglas L. Foshee, El Paso Natural Gas
Charles H. Berry, P.E., Texas Department of Transportation District Engineer
Roy Gilyard, El Paso Metropolitan Planning Organization

Meeting Attendees – 2008

Tuesday, August 19, 2008: Focus Group Meeting (Land Use, Transportation and Utilities; Subdivision Ordinance and Housing)

Ray Adauto, El Paso Association of Builders
Joe Barras, El Paso Housing Authority
Mark Dyer, President, El Paso Association of Builders
Ana Gonzales, El Paso Hispanic Chamber of Commerce
Melissa Kellum, El Paso Planning Department
Chuck Kooshian, El Paso Planning Department
Dan Olivas, Greater El Paso Realtors Association
Bill Lilly, El Paso Planning Department
Rhoda W. Tillman, El Paso Community Development

Wednesday, August 20, 2008: Focus Group Meeting (Education)

Ernesto Arriola, El Paso Development Services
Rick Bentley, Ysleta ISD
Ed Gabaldon, El Paso ISD
Lorenzo Garcia, El Paso ISD
Tim Nugent, El Paso Community College
Pat O'Neill, Socorro ISD
Pam Padilla, Canutillo ISD
Dave Schavier, UTEP Institute for Policy and Economic Development
William Wachtel, El Paso ISD

Thursday, August 21, 2008: Focus Group Meeting (Economic Development and Quality of Life)

David Coronado, Workforce Solutions Upper Rio Grande
Kathy Dodson, Economic Development
Ben Fyffe, Museums and Cultural Affairs
Jack Galindo, El Paso Library
Sandra Hamstra, Workforce Solutions Upper Rio Grande
Melissa Kellum, El Paso Planning Department
Tom Kuntz, Science Applications International Corporation
Ivonne R. Jimenez, Museums and Cultural Affairs
Brent McCune, UTEP Institute for Policy and Economic Development
Rebecca Rodriguez, El Paso Hispanic Chamber of Commerce
Nanette Smejkal, Parks and Recreation
Tim Wittig, Science Applications International Corporation

Meeting Attendees – 2009

Monday, July 20, 2009: Focus Group Meeting (Housing)

Ray Adauto, El Paso Association of Builders
Joe Gomez, VEMAC
Suzy Shewmaker Hicks, Greater El Paso Association of Realtors
Al Jurado, Jr., Any Casa Realty
Tom Kuntz, Benham/Science Applications International Corporation (SAIC)
Walter Lujan, Dawco Builders
Dan Olivas, Dan Olivas & Associates
Joann Wardy, Cardel Realty

Monday, July 20, 2009: Focus Group Meeting (Land Use, Transportation, and Utilities)

Ray Adauto, El Paso Association of Builders
Al Jurado, Jr., Any Casa Realty
Tom Kuntz, Benham/SAIC
Dan Olivas, Dan Olivas & Associates
Stacy Smith, Two Ton Creativity
Rudy Valdez, El Paso Water Utilities
Tim Wittig, SAIC
Pat Woods, SDC

Tuesday, July 21, 2009: Focus Group Meeting (Economic Development and Quality of Life)

Bobby Ayoub, Mimco, Inc.
Carol Brey Casiano, El Paso Public Library
Ben Fyffe, El Paso Museums and Cultural Affairs
Beatriz Lucen, Workforce Solutions
Sean McGynn, El Paso Museums and Cultural Affairs Department
Paul Oskvarek, Department of Defense, Office of Economic Adjustment
Stacy Smith, Two Ton Creativity
Tim Wittig, SAIC

Tuesday, July 21, 2009: Focus Group Meeting (Health and Social Services)

Bertha Amaya, City of El Paso Department of Public Health

Irene Chavez, SAIC
Myrna Deckert, Paso del Norte Health Foundation
Bertha Gallardo, Las Palmas Del Sol Healthcare
Rene Hertado, El Paso Mental Health and Retardation Solutions
Dawn Ibasco, Highlands Regional Rehabilitation Hospital
Michael Kelly, Paso del Norte Health Foundation
Les Rankin, University Medical Center of El Paso

Wednesday, July 22, 2009: Focus Group Meeting (Education)

Bessie Leroy, Clint Independent School District
Jorge McPherson, SAIC
Lisa Colquitt Munoz, Paso del Norte Group
Margie Nelson, University of Texas El Paso
Sandra Odenborg, Clint Independent School District
Fred Rodriguez, New Mexico State University
Aggie O. Saltman, New Mexico State University
Stacy Smith, Two Ton Creativity

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FINAL
EL PASO REGIONAL GROWTH MANAGEMENT PLAN

Appendix A2

Meeting Summaries

Communication Plan

A Communication Plan was prepared by Two Ton Creativity (TTC) and submitted to the city, identified the key stakeholders, detailed the various methods for reaching, briefing and engaging them in the planning process, and initiated the process for developing appropriate materials (such as advertisements, the design of the web site, brochures, etc.).

Public and Group Meetings

Two sets of formal public meetings were held to gather public input and to inform the public of the study's progress. The first set of public meetings was held in August 2008. TTC defined the types of public meetings best suited to gathering inputs and communicating impacts and strategies to the general public. These meetings included an overview of the growth management planning process and a review of Fort Bliss's expansion plans and the range of potential growth impacts.

Two types of meetings occurred in August 2008: (1) full team meetings with the entire RGMP (or plans for its development) was presented in depth in a large public forum with key principal investigators and subcontractors present to answer questions, and (2) informational meetings in which elements of the RGMP (or the plan in its entirety) was informally discussed with a small audience (Focus Group Meetings). TTC worked together with SAIC and the City of El Paso's Military Growth Expansion Coordinator to determine what types of meeting formats are suitable and when and where they should be held.

Two Ton Creativity identified the types and numbers (minimum and maximum) of meetings likely to be necessary to engage the key stakeholders on RGMP development, recommend which stakeholders should be invited to participate, and outlined the needs for each: length, location, meeting space, equipment, and refreshments. TTC used literature, materials, and signage for each meeting, as well as the number and type of personnel needed to make the meeting run (tracking attendance, taking notes, providing translation capability, badges, video recording etc.).

Summary of General Meetings

Dates and locations of meetings:

- Tuesday, August 19, 6-8 p.m. Trans-mountain El Paso Community College
- Wednesday, August 20, 6-8 p.m. Marty Robbins Recreation Center
- Thursday, August 21, 6-8 p.m. City Hall – City Council Chambers, 2nd Floor

Several local organizations, under the coordination of the Greater El Paso Chamber of Commerce, have been proactively working to meet the aforementioned objectives through a two-track strategy. The first component of the strategy targets soldiers and their families. The second track is designed to provide local businesses with support and information, to successfully capture potential business opportunities at Fort Bliss with the arrival of these new units. The City of El Paso, Fort Bliss, SAIC, The University of Texas at El Paso, and Two Ton Creativity moderated three public outreach sessions (August 19th, 20th, and 21st 2008). During these sessions, attendees were presented with a PowerPoint presentation (provided in Appendix B) that provided basic understanding of the BRAC process, the recommendations and their potential impact on the El Paso community. Also, a broad insight into El Paso's present and future economic development opportunities as they relate to the military was provided by The University of Texas at El Paso's Economic Research team. During each session, a speaker provided information regarding their specific area of expertise, and then the floor opened for questions and comments from the audience. Note cards were provided to write anonymous questions. The presentation provided attendees a basic overview of the Fort Bliss vision and mission, strategic initiatives, growth reports, and the installation master plan. In addition to the three community presentation evenings, a series of focus groups were designed to gather feedback from El Paso stakeholders. Land Use and Transportation, Education, Subdivision Ordinance and Housing, and Health and Social Services were the titles of the four groups the stakeholders were divided into.

Over the course of three days, for two hours each, those that attended were presented with the PowerPoint presentation, and given the opportunity to voice their individual concerns and opinions. Several issues raised by attendees resonated through the sessions.

These concerns included:

The resounding concern throughout the community concerned school overpopulation and housing. The medical industry is concerned about the rising cost of healthcare and not being able to keep doctors in the El Paso area. The health forum addressed the issue of Tri-Care and its necessity for manpower. They said that there were problems with outside providers, and coverage. There were long delays, and this would only escalate with the influx of soldiers. According to the forum, the mental health system is operating above capacity, and there is a waiting list. They addressed the need for mental health counseling for separated families and returning soldiers, and the need for health care providers and medical facilities. According to statistics, approximately 2,000 nurses and 600 doctors are needed. Developers and builders are concerned about affordable housing and want to make sure single family dwellings are affordable for soldiers, but do not want them to be poorly constructed. They were also concerned whether or not military income (including the Basic Allowance for Housing) will increase enough to make homes more affordable in the area. Affordability is the main question. In the North East community meeting: the question was raised about having enough shops on Fort Bliss. The residents in the area do not want strip malls and Wal-Marts. Another North East

community resident asked if the schools would be ready. El Paso residents are also concerned about the over capacity in the school districts. The education forum raised the concern that there will be a number of young soldiers with young children coming to Fort Bliss. There are not enough pre-kindergarten and kindergarten schools to accommodate them.

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Appendix B

Fort Bliss Housing Market Analysis

Housing Market Analysis

Fort Bliss

2008 – 2013

Prepared by:

Science Applications International Corporation (SAIC)

Published:

February 19, 2009

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FORT BLISS HOUSING MARKET ANALYSIS

EXECUTIVE SUMMARY

A Draft Housing Market Analysis (2008 HMA) was completed on May 31, 2008, for Fort Bliss, Texas, covering the period 2008 to 2013. This HMA incorporates the increases in civilian demand resulting from projected growth in military personnel at Fort Bliss as provided by the University of Texas the growth scenarios are based on a regional growth model with the high growth scenario corresponding to civilian demand in the 2008 HMA.

The estimates for the Total Military Family Housing Requirement range from 7,168 for the low scenario to 7,803 for the high scenario (Table 1). The Unaccompanied Personnel Housing Requirement ranges from 14,877 to 16,054 (Table 2).

Table 1. Total Military Family Housing Requirement, 2013

Component	Low Scenario 2013	Medium Scenario 2013	High Scenario 2013
Authorized Permanent Party	**39,468**	**41,008**	**42,550**
Accompanied Personnel	23,002	23,900	24,798
Unaccompanied Personnel	16,466	17,108	17,752
Accompanied Personnel	**23,002**	**23,900**	**24,798**
Military Couples and Voluntary Separations	2,009	2,087	2,165
Military Families	20,993	21,813	22,633
In Military Housing (Floor Requirement)	542	542	542
In Private Sector Housing	20,451	21,271	22,091
Homeowners	6,269	6,535	6,802
Renters	14,182	14,736	15,289
Suitable Rental Market Share	7,588	7,826	8,063
Not Allocated Suitable Housing	6,594	6,910	7,226
Military Family Floor Housing Requirement	**542**	**542**	**542**
Private Sector Shortfall	**6,594**	**6,910**	**7,226**
Total Military Family Housing Requirement	**7,168**	**7,484**	**7,803**

Table 2. Total Unaccompanied Personnel Housing Requirement, 2013

Component	Low Scenario 2013	Medium Scenario 2013	High Scenario 2013
Unaccompanied Personnel	**16,466**	**17,108**	**17,752**
In Military Housing[1]	14,415	14,976	15,540
In Private Sector Housing	2,051	2,132	2,212
Homeowners	478	498	517
Renters	1,573	1,634	1,695
Suitable Rental Market Share	1,111	1,146	1,181
Not Allocated Suitable Housing	462	488	514
Unaccompanied Personnel Floor Housing Requirement	**14,415**	**14,976**	**15,540**
Private Sector Shortfall	**462**	**488**	**514**
Total Unaccompanied Personnel Housing Requirement	**14,877**	**15,464**	**16,054**

INTRODUCTION

SUBJECT

This study evaluates changes to Fort Bliss's housing requirements that may result from changes in military and civilian personnel as a consequence of programmatic actions and housing market changes.

PURPOSE

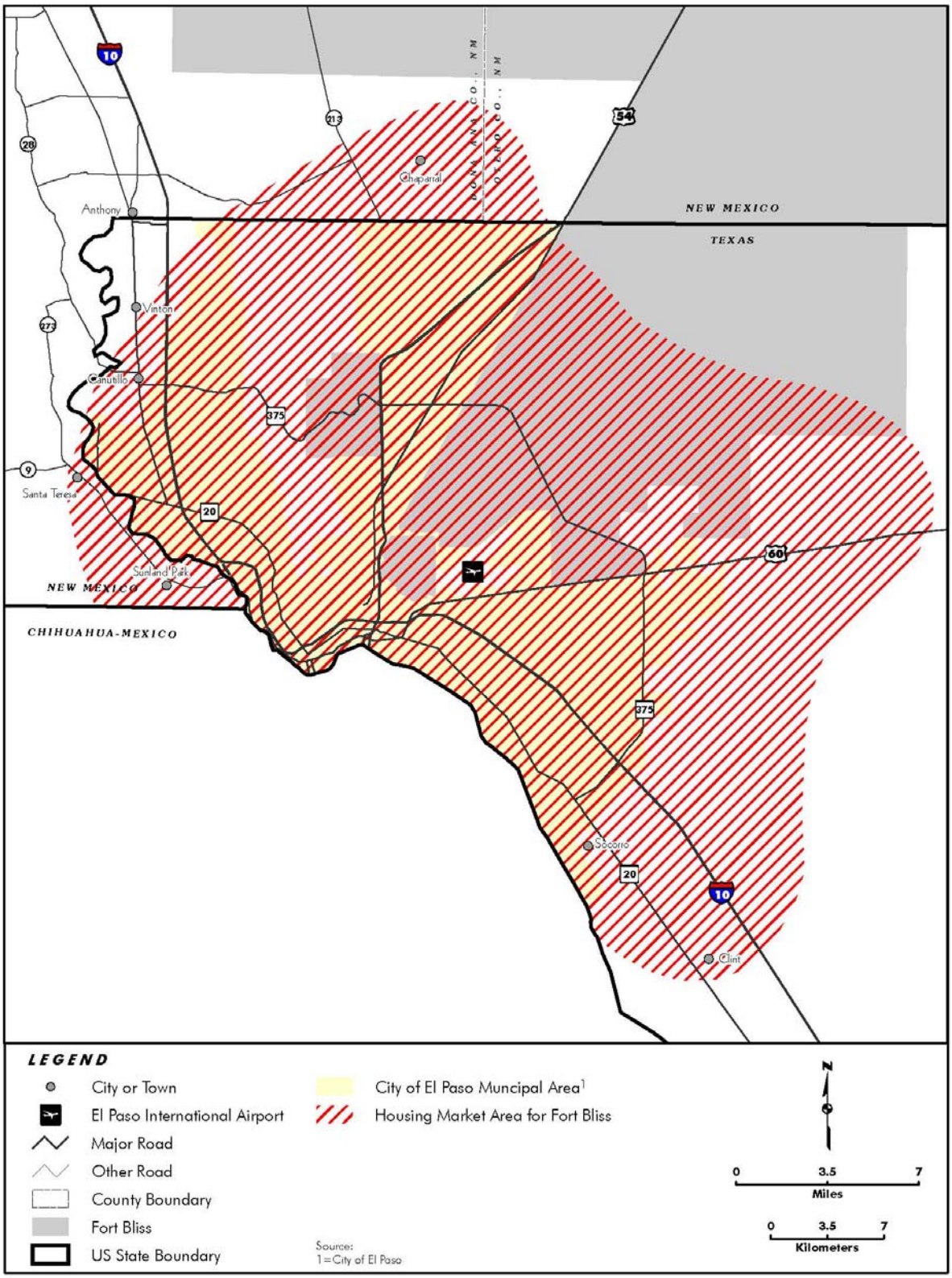
This study updates the assesses the impact to Fort Bliss's Total Military Family Housing Requirement due to changes in housing demand as a result of alternative community growth scenarios.

SCENARIOS AND DATA

Personnel demographics and other data on the military households that Fort Bliss has the responsibility to house were taken from the *Fort Bliss* 2008 *Housing Market Analysis.* The Housing Market Area remains the same as the market area applied in the 2008 HMA (Figure 1). The high scenario estimated by the University of Texas corresponds with the assumptions applied in the 2008 HMA and is considered as the baseline for this analysis. The low and medium scenarios assume lower job growth would result along with a slower growth in civilian demand as a consequence of a longer military transition to Fort Bliss.

1 Unaccompanied personnel in pay grades E1 to E5 are required to live in government quarters.

Figure 1. Fort Bliss, Texas, Housing Market Area



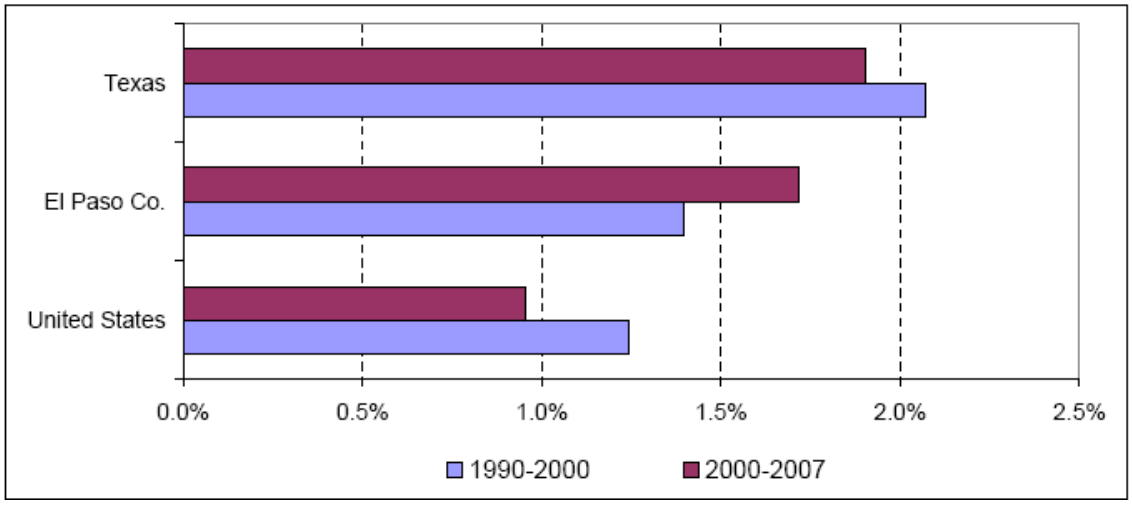
Source:Ft Bliss Housing Market Analysis Draft Report, May, 2008

ANALYSIS

POPULATION

Between 1990 and 2007, population growth rates in El Paso County have been higher than U.S. average growth rates, but lower than the growth rates for the State of Texas (Figure 2). Population in El Paso County increased at a rate of 1.4 percent annually from 1990 to 2000 (U.S. Bureau of the Census, 1992, 2002), and at an estimated 1.7 percent per year between 2000 and 2007 (El Paso Regional Economic Development Corporation, 2007).

Figure 2. Population Growth, El Paso County, State of Texas, and United States, 1990-2007



Sources: Ft Bliss Housing Market Analysis Draft Report, May, 2008; El Paso Regional Economic Development Corporation, 2007 and U.S. Bureau of the Census, 2008

ECONOMIC CONDITIONS

In 2006, there are 358,334 total jobs in El Paso County (Table 3). Between 2000 and 2006 job growth in El Paso County averaged 1.6 percent per year, which is lower than the state average over this period of 1.7 percent annual growth. In 2006, per capita income for El Paso County is estimated at $26,228, which is lower than in the state of Texas and the U.S. overall. However, per capita income in El Paso County increased at an average annual rate of 2.7 percent between 2000 to 2006, while per capita income increased 1.3 percent per year in Texas and 1.2 percent per year in the U.S. as a whole.

Table 3. Economic Indicators, El Paso County, State of Texas, and the United States, 1990, 1995, 2000, and 2006

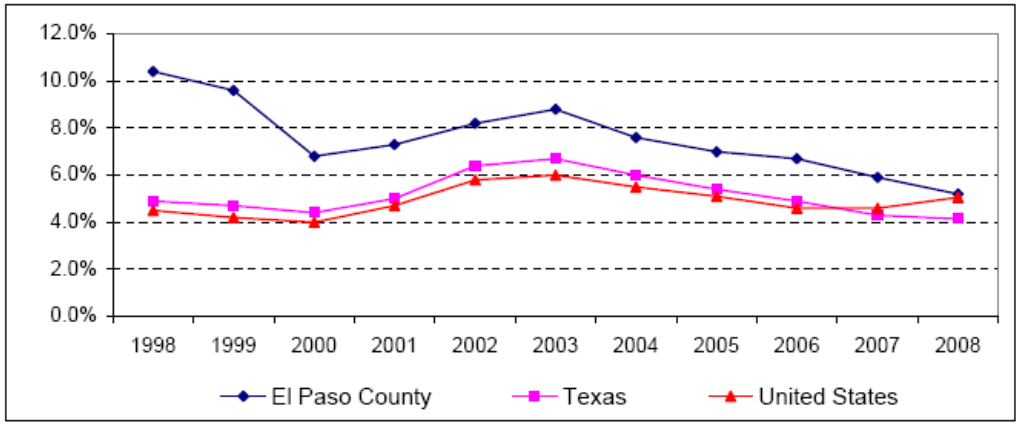
Jurisdiction/Indicator	1990	1995	2000	2006
El Paso County				
Total Jobs[1]	269,744	300,045	326,272	358,334
Average Annual Change (%)[2]		2.2%	1.7%	1.6%
Earnings per Job[3]	$32,147	$33,918	$36,870	$42,736
Average Annual Change (%)		1.1%	1.7%	2.5%
Per Capita Income[3]	$18,375	$19,451	$22,364	$26,228
Average Annual Change (%)		1.1%	2.8%	2.7%
Texas				
Total Jobs	9,304,146	10,507,238	12,244,699	13,514,130
Average Annual Change (%)		2.5%	3.1%	1.7%
Earnings per Job	$37,923	$39,747	$48,148	$52,317
Average Annual Change (%)		0.9%	3.9%	1.4%
Per Capita Income	$26,060	$27,617	$34,094	$36,927
Average Annual Change (%)		1.2%	4.3%	1.3%
United States				
Total Jobs	139,380,900	148,982,800	166,758,800	178,332,900
Average Annual Change (%)		1.3%	2.3%	1.1%
Earnings per Job	$39,733	$41,150	$46,970	$49,653
Average Annual Change (%)		0.7%	2.7%	0.9%
Per Capita Income	$29,136	$30,344	$35,938	$38,551
Average Annual Change (%)		0.8%	3.4%	1.2%

Notes: [1] Total Jobs are average annual full- and part-time jobs, by place of work.
[2] Average Annual Change in the 1995 column is for 1990-1995; in the 2000 column, for 1995-2000; and in the 2006 column, for 2000-2006.
[3] Average Earnings per Job and Per Capita Income were converted to constant 2008 dollars using the implicit price deflator for personal consumption expenditures.

Sources: Ft Bliss Housing Market Analysis Draft Report, May, 2008; U.S. Bureau of Economic Analysis, 2008; Congressional Budget Office, 2008

Between 1998 and 2008, El Paso County experienced higher unemployment rates than the state of Texas and the United States on average (Figure 3). As of the end of 2008, the unemployment rate in El Paso County is 5.2 percent.

Figure 3. Unemployment Rates, El Paso County, State of Texas, and the United States, 1998-2008

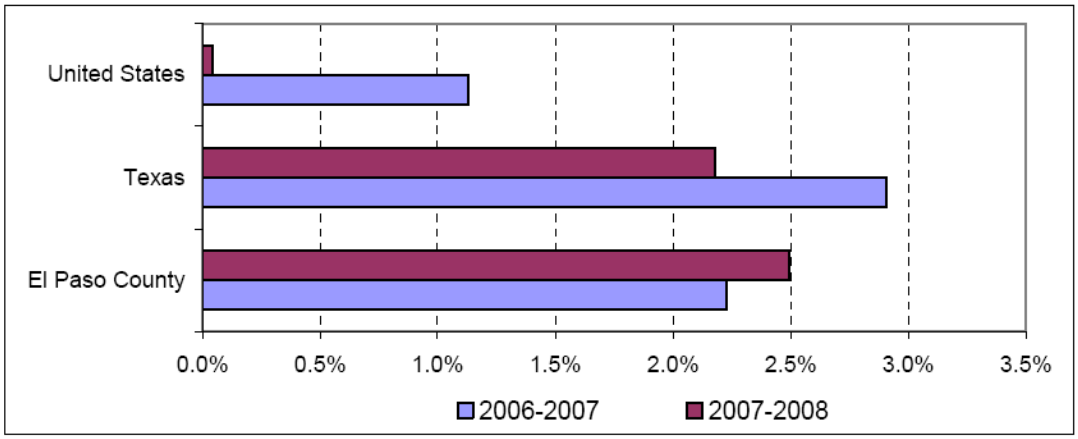


Note: 2008 estimates based on data through March 2008 relative to data through March 2007.

Sources: Ft Bliss Housing Market Analysis Draft Report, May, 2008; U.S. Bureau of Labor Statistics, 2008

Between 2007 and 2008, total non-farm jobs in El Paso County increased at faster pace than between 20062007 increased by 2.5 percent in contrast to a deceleration in job growth experienced in the state of Texas and the U.S. as a whole during this same period (Figure 4).

Figure 4. Unemployment Rates, El Paso County, State of Texas, and the United States, 1998-2008



Note: Non-farm jobs for 2008 based on data through April.

Sources: Ft Bliss Housing Market Analysis Draft Report, May, 2008; U.S. Bureau of Labor Statistics, 2008

The largest share of the employment base in El Paso County is concentrated in government and government related organizations comprising 21.0 percent of total employment in 2006 (Table 4). The next largest employment sectors in El Paso County are retail trade, with 12.0 percent of jobs and health care and social assistance with 9.9 percent of jobs.

Table 4. Employment by Major Economic Sector, El Paso County, State of Texas, and U.S., 2006

Sector	El Paso County	Texas	United States
Government and government enterprises	21.0%	13.8%	13.5%
Federal, civilian	2.7%	1.4%	1.6%
Military	4.1%	1.3%	1.1%
State and local	14.2%	11.2%	10.8%
Retail Trade	12.0%	10.7%	10.8%
Health care and social assistance	9.9%	8.9%	9.9%
Administrative and waste services	7.6%	6.4%	6.0%
Accommodation and food services	7.3%	6.7%	6.7%
Manufacturing	6.6%	7.2%	8.3%
Other services, except public administration	5.9%	5.9%	5.7%
Construction	5.7%	6.9%	6.5%
Transportation and warehousing	5.0%	3.7%	3.2%
Real estate and rental and leasing	3.8%	4.2%	4.3%
Professional and technical services	3.6%	6.3%	6.6%
All other sectors	11.6%	19.3%	18.6%

Sources: Ft Bliss Housing Market Analysis Draft Report, May, 2008; U.S. Bureau of Labor Statistics, 2008

HOUSING MARKET

About 65 percent of the housing is owner occupied with some 147,000 owner occupied units in 2006 and about 82,000 rental units. In 2006, Fort Bliss had an inventory of 2,577 military family housing units, with housing available for 2,926 unaccompanied personnel (U.S. Army, 2007). The 2008 Housing Market Analysis for Ft. Bliss estimated that 2,664 military families and 340 unaccompanied personnel were homeowners out of the 6,642 families and 896 unaccompanied personnel who require community housing. The report indicated that there was a need for 1,801 housing units in addition to those available in the community to meet the military needs for family housing at the time of the study.

Median home prices have risen slightly in 2008 reaching $134,600 up from $131,900 in 2007. Home sales declined in 2007 compared to sales in 2006, with lower sales still in 2008. Housing is still relatively affordable in El Paso with a housing affordability index of 1.13. The housing affordability index for first time home buyers is 0.70 indicating a continued need for additional affordable housing (Texas A&M 2008).

The Housing Market Area is the same as in the 2008 HMA (Figure 1).

HOUSING SUPPLY

This HMA focuses on rental housing within the Housing Market Area. Homeowners are considered suitably housed. Rental housing within the Housing Market Area is estimated at 89,251 units in 2008 and is projected to increase to 103,905 units by 2013 (Table 5). The number of households, housing suitability, and the distribution of housing by market segment are based on the 2008 *Housing Market Analysis, Fort Bliss*.

Table 5. Housing Units in the Market Area, 2008 & 2013

Housing Ownership	2008	2013
Homeowner Housing	156,882	174,052
Rental Housing	89,251	103,905
Total	**246,133**	**277,957**

Housing Growth

In all three scenarios, rental housing is expected to grow at faster rate than homeowner housing as much of the new housing demand will be for rental units. As a consequence, it is expected that home ownership rates will decline slightly. (Table 6).

Table 6. Projected Annual Growth Rates for El Paso County, 2008 - 2013

	Low	Medium	High
Population	3.1%	3.2%	3.3%
Households	3.1%	3.2%	3.3%
Homeowners	2.9%	3.0%	3.1%
Renters	3.1%	3.2%	3.3%
Homeowner Housing	2.3%	2.3%	2.3%
Rental Housing Supply	3.9%	4.0%	4.1%

Housing Suitability

Approximately 69.0 percent of all rental housing (61,599 units) is considered suitable for military personnel in terms of physical conditions and health and safety concerns (Table 7). In 2013, approximately 69.2 percent of rental housing is considered suitable. Rental mobile homes are not considered suitable for military personnel. Suitability is based on the 2008 HMA.

Table 7. Suitable and Unsuitable Rental Housing, 2008 & 2013

Rental Housing	2008	2013
Total Rental Housing	89,251	103,905
Unsuitable Rental Housing	27,652	32,001
Suitable Rental Housing	61,599	71,904

Table 8. Total Rental Housing Supply, 2008

	Number of Bedrooms					
Rental Cost[1]	**None**	**One**	**Two**	**Three**	**Four+**	**Total**
$1,700 & Above	-	-	11	495	855	1,361
$1,600 - $1,699	-	-	4	142	290	436
$1,500 - $1,599	-	-	7	184	275	466
$1,400 - $1,499	-	-	7	593	320	920
$1,300 - $1,399	-	-	5	975	549	1,529
$1,200 - $1,299	-	-	7	1,158	624	1,789
$1,100 - $1,199	-	-	671	2,698	488	3,857
$1,000 - $1,099	-	-	823	6,614	397	7,834
$900 - $999	49	200	6,793	4,496	107	11,645
$800 - $899	133	542	11,406	2,672	107	14,860
$700 - $799	2,503	10,163	6,612	71	-	19,349
Below $700	4,272	17,503	3,430	-	-	25,205
Total	**6,957**	**28,408**	**29,776**	**20,098**	**4,012**	**89,251**

1 Includes rent, utility costs, and renter's insurance.

Table 9. Suitable Rental Housing, 2008

Rental Cost[1]	Number of Bedrooms None	One	Two	Three	Four+	Total
$1,700 & Above	-	-	11	493	831	1,335
$1,600 - $1,699	-	-	4	137	261	402
$1,500 - $1,599	-	-	7	169	240	416
$1,400 - $1,499	-	-	7	534	272	813
$1,300 - $1,399	-	-	5	848	379	1,232
$1,200 - $1,299	-	-	7	985	386	1,378
$1,100 - $1,199	-	-	617	2,213	264	3,094
$1,000 - $1,099	-	-	724	4,872	168	5,764
$900 - $999	-	190	5,774	3,148	36	9,148
$800 - $899	-	482	8,953	1,644	32	11,111
$700 - $799	-	8,354	4,628	39	-	13,021
Below $700	-	12,973	912	-	-	13,885
Total	**-**	**21,999**	**21,649**	**15,082**	**2,869**	**61,599**

Table 10. Total Rental Housing Supply, 2013

Rental Cost[1]	Number of Bedrooms None	One	Two	Three	Four+	Total
$1,700 & Above	-	-	13	578	1,001	1,592
$1,600 - $1,699	-	-	5	165	340	510
$1,500 - $1,599	-	-	8	215	322	545
$1,400 - $1,499	-	-	8	694	375	1,077
$1,300 - $1,399	-	-	6	1,140	640	1,786
$1,200 - $1,299	-	-	8	1,354	696	2,058
$1,100 - $1,199	-	-	785	3,155	570	4,510
$1,000 - $1,099	-	-	963	7,680	464	9,107
$900 - $999	58	234	7,940	5,235	125	13,592
$800 - $899	156	633	13,333	3,106	125	17,353
$700 - $799	2,922	11,874	7,729	83	-	22,608
Below $700	4,985	20,423	3,759	-	-	29,167
Total	**8,121**	**33,164**	**34,557**	**23,405**	**4,658**	**103,905**

Table 11. Suitable Rental Housing, 2013

Rental Cost[1]	Number of Bedrooms None	One	Two	Three	Four+	Total
$1,700 & Above	-	-	13	574	973	1,560
$1,600 - $1,699	-	-	5	159	306	470
$1,500 - $1,599	-	-	8	198	280	486
$1,400 - $1,499	-	-	8	625	319	952
$1,300 - $1,399	-	-	6	992	444	1,442
$1,200 - $1,299	-	-	8	1,151	451	1,610
$1,100 - $1,199	-	-	722	2,587	309	3,618
$1,000 - $1,099	-	-	847	5,695	196	6,738
$900 - $999	-	222	6,749	3,679	43	10,693
$800 - $899	-	563	10,399	1,922	37	12,921
$700 - $799	-	9,736	5,410	45	-	15,191
Below $700	-	15,156	1,067	-	-	16,223
Total	**-**	**25,677**	**25,242**	**17,627**	**3,358**	**71,904**

1 Includes rent, utility costs and renter's insurance.

Rental Cost and Affordability

BAH rates set the maximum affordability of the housing, the Maximum Allowable Housing Cost (MAHC). As BAH rates adjust annually to changes in rental costs, military members are assumed to retain their relative affordability of rental housing. For analytical purposes, both BAH and rental costs are assumed to stay constant maintaining the military households relative purchasing power over the study period. The 2008 MAHC for accompanied and unaccompanied military personnel are displayed in Table 12.

Table 12. Maximum Allowable Housing Costs, 2008

	MAHC	
Pay Grade	With Dependents	Without Dependents
O7+	$1,339	$1,129
O6	$1,324	$1,107
O5	$1,313	$1,088
O4	$1,227	$1,075
O3	$1,106	$990
O2	$1,050	$851
O1	$896	$732
E9	$1,140	$966
E8	$1,094	$911
E7	$1,073	$809
E6	$1,054	$791
E5	$876	$701
E4	$804	$636
E3	$804	$636
E2	$804	$636
E1	$804	$636

MILITARY PERSONNEL

Projected Manpower

The number of military personnel Fort Bliss has the responsibility to house in 2008 is 17,183 and is projected to increase in 2013 depending on the scenario (Table 13).

Table 13. Military Authorizations

Pay Grade	2008	2013 Low	2013 Medium	2013 High
O7+	4	6	7	7
O6	60	100	104	107
O5	178	312	324	336
O4	343	677	704	730
O3	628	1,333	1,385	1,437
O2	547	1,068	1,109	1,151
O1	424	1,068	1,109	1,151
Officers	2,184	4,564	4,742	4,919
E9	399	709	736	764
E8	698	1,190	1,236	1,282
E7	1,030	2,020	2,099	2,178
E6	2,053	4,419	4,592	4,765
E5	2,860	6,524	6,779	7,034
E4	4,364	10,360	10,764	11,169
E3	2,177	5,809	6,036	6,263
E2	1,159	3,163	3,287	3,411
E1	259	710	737	765
Enlisted	14,999	34,904	36,266	37,631
Total	**17,183**	**39,468**	**41,008**	**42,550**

Floor Requirement

The On-Post Military Community Housing Requirement establishes the initial housing requirement. The Floor Housing Requirement for Fort Bliss is the largest of the Key and Essential, and Historic Housing, and Quality of Life requirements on the basis of pay grade. The Floor Requirement in this analysis is 542 units (Tables 14 and 15).

Table 14. Floor Housing Requirement, Fort Bliss, 2013

Floor Housing Requirement	Low	Medium	High
Military Family Housing Requirements	20,993	21,813	22,633
On-Post Military Community	2,099	2,181	2,263
Key and Essential Personnel	402	402	402
Historic Housing	206	206	206
Quality of Life Requirement	-	-	-
Floor Housing Requirement[1]	**542**	**542**	**542**

Table 15. Floor Housing Requirement, Fort Bliss, 2013

	Number of Bedrooms			
Pay Grade	**Two**	**Three**	**Four+**	**Total**
O7+	-	-	6	6
O6	-	-	47	47
O5	-	14	34	48
O4	-	16	16	32
O3	5	-	1	6
O2	-	4	1	5
O1	-	-	-	-
Officers	5	34	105	144
E9	-	48	24	72
E8	-	171	57	228
E7	-	-	-	-
E6	-	-	-	-
E5	-	-	-	-
E4	-	-	-	-
E3	98	-	-	98
E2	-	-	-	-
E1	-	-	-	-
Enlisted	98	219	81	398
Total	**103**	**253**	**186**	**542**

[1] The Floor Housing Requirement is determined by the criteria with the greatest requirement of the three criteria for each pay grade.

RENTAL HOUSING DEMAND

Fort Bliss Rental Housing Demand

The military families estimated to require rental housing are presented in Tables 16 through 18. Military families with a rental housing requirement are allocated to market segments based on their With Dependents MAHC (Table 12).

Table 16. Fort Bliss Military Family Rental Requirement by Price Category, 2013 - Low

	Number of Bedrooms			
Rental Cost[1]	Two	Three	Four+	Total
$1,700 & Above	-	-	-	-
$1,600 - $1,699	-	-	-	-
$1,500 - $1,599	-	-	-	-
$1,400 - $1,499	-	-	-	-
$1,300 - $1,399	-	3	1	4
$1,200 - $1,299	-	39	9	48
$1,100 - $1,199	6	139	46	191
$1,000 - $1,099	395	840	542	1,777
$900 - $999	616	909	682	2,207
$800 - $899	1,324	687	482	2,493
$700 - $799	4,104	1,569	952	6,625
Below $700	544	187	106	837
Total	**6,989**	**4,373**	**2,820**	**14,182**

Table 17. Fort Bliss Military Family Rental Requirement by Price Category, 2013 - Medium

	Number of Bedrooms			
Rental Cost[1]	Two	Three	Four+	Total
$1,700 & Above	-	-	-	-
$1,600 - $1,699	-	-	-	-
$1,500 - $1,599	-	-	-	-
$1,400 - $1,499	-	-	-	-
$1,300 - $1,399	-	3	1	4
$1,200 - $1,299	-	41	10	51
$1,100 - $1,199	6	145	47	198
$1,000 - $1,099	410	873	563	1,846
$900 - $999	640	944	709	2,293
$800 - $899	1,376	713	501	2,590
$700 - $799	4,264	1,630	990	6,884
Below $700	566	194	110	870
Total	**7,262**	**4,543**	**2,931**	**14,736**

1 Includes rent, utility costs, and renter's insurance.

Table 18. Fort Bliss Military Family
Rental Requirement by Price Category, 2013 - High

	Number of Bedrooms			
Rental Cost[1]	**Two**	**Three**	**Four+**	**Total**
$1,700 & Above	-	-	-	-
$1,600 - $1,699	-	-	-	-
$1,500 - $1,599	-	-	-	-
$1,400 - $1,499	-	-	-	-
$1,300 - $1,399	-	3	1	4
$1,200 - $1,299	-	43	10	53
$1,100 - $1,199	7	150	49	206
$1,000 - $1,099	426	906	585	1,917
$900 - $999	664	980	736	2,380
$800 - $899	1,428	740	520	2,688
$700 - $799	4,422	1,690	1,026	7,138
Below $700	587	202	114	903
Total	**7,534**	**4,714**	**3,041**	**15,289**

Unaccompanied personnel estimated to require rental housing are presented in Tables 19 through 21. Unaccompanied personnel with a rental housing requirement are allocated to market segments based on their Without Dependents MAHC (Table 12).

Table 19. Fort Bliss Unaccompanied Personnel
Rental Requirement by Price Category, 2013 - Low

	Number of Bedrooms			
Rental Cost[1]	**One**	**Two**	**Three**	**Total**
$1,700 & Above	-	-	-	-
$1,600 - $1,699	-	-	-	-
$1,500 - $1,599	-	-	-	-
$1,400 - $1,499	-	-	-	-
$1,300 - $1,399	-	-	-	-
$1,200 - $1,299	-	-	-	-
$1,100 - $1,199	-	-	-	-
$1,000 - $1,099	-	-	31	31
$900 - $999	-	176	35	211
$800 - $899	-	299	-	299
$700 - $799	-	678	-	678
Below $700	-	354	-	354
Total	**-**	**1,507**	**66**	**1,573**

1 Includes rent, utility costs, and renter's insurance

Table 20. Fort Bliss Unaccompanied Personnel Rental Requirement by Price Category, 2013 - Medium

	Number of Bedrooms			
Rental Cost[1]	**One**	**Two**	**Three**	**Total**
$1,700 & Above	-	-	-	-
$1,600 - $1,699	-	-	-	-
$1,500 - $1,599	-	-	-	-
$1,400 - $1,499	-	-	-	-
$1,300 - $1,399	-	-	-	-
$1,200 - $1,299	-	-	-	-
$1,100 - $1,199	-	-	-	-
$1,000 - $1,099	-	-	32	32
$900 - $999	-	182	37	219
$800 - $899	-	311	-	311
$700 - $799	-	704	-	704
Below $700	-	368	-	368
Total	**-**	**1,565**	**69**	**1,634**

Table 21. Fort Bliss Unaccompanied Personnel Rental Requirement by Price Category, 2013 - High

	Number of Bedrooms			
Rental Cost[1]	**One**	**Two**	**Three**	**Total**
$1,700 & Above	-	-	-	-
$1,600 - $1,699	-	-	-	-
$1,500 - $1,599	-	-	-	-
$1,400 - $1,499	-	-	-	-
$1,300 - $1,399	-	-	-	-
$1,200 - $1,299	-	-	-	-
$1,100 - $1,199	-	-	-	-
$1,000 - $1,099	-	-	30	30
$900 - $999	-	169	34	203
$800 - $899	-	288	-	288
$700 - $799	-	652	-	652
Below $700	-	341	-	341
Total	**-**	**1,450**	**64**	**1,514**

1 Includes rent, utility costs, and renter's insurance

Civilian Rental Housing Demand

Civilian rental housing demand is comprised of the rental housing demand by civilian households residing within the market area. Civilian demand for all three of the growth scenario is displayed in Tables 22 through 24.

Table 22. Civilian Demand, 2013 – Low Scenario

	Number of Bedrooms					
Rental Cost[1]	None	One	Two	Three	Four+	Total
$1,700 & Above	-	-	13	521	918	1,452
$1,600 - $1,699	-	-	5	149	311	465
$1,500 - $1,599	-	-	8	194	295	497
$1,400 - $1,499	-	-	8	624	344	976
$1,300 - $1,399	-	-	6	1,025	576	1,607
$1,200 - $1,299	-	-	8	1,207	647	1,862
$1,100 - $1,199	-	-	735	2,786	487	4,008
$1,000 - $1,099	-	-	776	6,606	232	7,614
$900 - $999	54	219	7,168	4,387	-	11,828
$800 - $899	144	593	11,925	2,582	-	15,244
$700 - $799	2,711	11,111	5,642	-	-	19,464
Below $700	4,620	19,129	3,336	-	-	27,085
Total	**7,529**	**31,052**	**29,630**	**20,081**	**3,810**	**92,102**

Table 23. Civilian Demand, 2013 – Medium Scenario

	Number of Bedrooms					
Rental Cost[1]	None	One	Two	Three	Four+	Total
$1,700 & Above	-	-	13	524	923	1,460
$1,600 - $1,699	-	-	5	150	313	468
$1,500 - $1,599	-	-	8	195	296	499
$1,400 - $1,499	-	-	8	628	346	982
$1,300 - $1,399	-	-	6	1,030	579	1,615
$1,200 - $1,299	-	-	8	1,214	651	1,873
$1,100 - $1,199	-	-	739	2,801	490	4,030
$1,000 - $1,099	-	-	780	6,643	234	7,657
$900 - $999	54	220	7,208	4,411	-	11,893
$800 - $899	145	596	11,992	2,596	-	15,329
$700 - $799	2,727	11,174	5,674	-	-	19,575
Below $700	4,646	19,237	3,354	-	-	27,237
Total	**7,572**	**31,227**	**29,795**	**20,192**	**3,832**	**92,618**

1 Includes rent, utility costs and renter's insurance.

Table 24. Civilian Demand, 2013 – High Scenario

Rental Cost[1]	Number of Bedrooms					Total
	None	One	Two	Three	Four+	
$1,700 & Above	-	-	13	526	928	1,467
$1,600 - $1,699	-	-	5	151	315	471
$1,500 - $1,599	-	-	8	196	298	502
$1,400 - $1,499	-	-	8	631	348	987
$1,300 - $1,399	-	-	6	1,036	583	1,625
$1,200 - $1,299	-	-	8	1,220	655	1,883
$1,100 - $1,199	-	-	743	2,817	493	4,053
$1,000 - $1,099	-	-	784	6,680	235	7,699
$900 - $999	54	221	7,248	4,436	-	11,959
$800 - $899	146	599	12,059	2,611	-	15,415
$700 - $799	2,742	11,235	5,705	-	-	19,682
Below $700	4,672	19,343	3,373	-	-	27,388
Total	**7,614**	**31,398**	**29,960**	**20,304**	**3,855**	**93,131**

1 Includes rent, utility costs, and renter's insurance.

PRIVATE SECTOR RENTAL HOUSING ANALYSIS

The share of suitable rental housing to Fort Bliss military requirements is displayed in Table 25.

Table 25. Fort Bliss Market Share of Suitable Rental Housing, 2013

	Low Scenario	Medium Scenario	High Scenario
Market Share			
Civilians	92,102	92,618	93,131
Suitably Housed	63,506	63,825	64,140
Unsuitably Housed	28,596	28,793	28,991
Military Families	13,654	13,654	13,654
Suitably Housed	7,060	6,744	6,428
Unsuitably Housed	6,594	6,910	7,226
Unaccompanied Personnel	1,976	1,976	1,976
Suitably Housed	1,514	1,488	1,462
Unsuitably Housed	462	488	514

The Private Sector Shortfall for military families as determined by the dynamic process through 2013, is presented in Tables 26 through 28.

Table 26. Private Sector Housing Shortfall for Military Families, 2013 - Low

	Number of Bedrooms			
Rental Cost[1]	**Two**	**Three**	**Four+**	**Total**
$1,700 & Above	-	-	-	-
$1,600 - $1,699	-	-	-	-
$1,500 - $1,599	-	-	-	-
$1,400 - $1,499	-	-	-	-
$1,300 - $1,399	-	-	-	-
$1,200 - $1,299	-	1	-	1
$1,100 - $1,199	-	4	4	8
$1,000 - $1,099	73	58	340	471
$900 - $999	47	95	634	776
$800 - $899	161	110	440	711
$700 - $799	1,538	1,523	952	4,013
Below $700	321	187	106	614
Total	**2,140**	**1,978**	**2,476**	**6,594**

1 Includes rent, utility costs, and renter's insurance.

Table 27. Private Sector Housing Shortfall for Military Families, 2013 - Medium

Rental Cost[1]	Number of Bedrooms Two	Three	Four+	Total
$1,700 & Above	-	-	-	-
$1,600 - $1,699	-	-	-	-
$1,500 - $1,599	-	-	-	-
$1,400 - $1,499	-	-	-	-
$1,300 - $1,399	-	-	-	-
$1,200 - $1,299	-	1	-	1
$1,100 - $1,199	-	5	4	9
$1,000 - $1,099	78	61	358	497
$900 - $999	50	101	660	811
$800 - $899	170	117	458	745
$700 - $799	1,635	1,584	990	4,209
Below $700	334	194	110	638
Total	**2,267**	**2,063**	**2,580**	**6,910**

Table 28. Private Sector Housing Shortfall for Military Families, 2013 - High

Rental Cost[1]	Number of Bedrooms Two	Three	Four+	Total
$1,700 & Above	-	-	-	-
$1,600 - $1,699	-	-	-	-
$1,500 - $1,599	-	-	-	-
$1,400 - $1,499	-	-	-	-
$1,300 - $1,399	-	-	-	-
$1,200 - $1,299	-	1	-	1
$1,100 - $1,199	-	5	4	9
$1,000 - $1,099	84	65	378	527
$900 - $999	52	107	686	845
$800 - $899	179	124	476	779
$700 - $799	1,733	1,644	1,026	4,403
Below $700	346	202	114	662
Total	**2,394**	**2,148**	**2,684**	**7,226**

The Private Sector Shortfall for unaccompanied personnel as determined by the dynamic process through 2013, is presented in Tables 29 through 31.

1 Includes rent, utility costs, and renter's insurance.

Table 29. Private Sector Housing Shortfall for Unaccompanied Personnel, 2013 - Low

Rental Cost[1]	Number of Bedrooms One	Two	Three	Total
$1,700 & Above	-	-	-	-
$1,600 - $1,699	-	-	-	-
$1,500 - $1,599	-	-	-	-
$1,400 - $1,499	-	-	-	-
$1,300 - $1,399	-	-	-	-
$1,200 - $1,299	-	-	-	-
$1,100 - $1,199	-	-	-	-
$1,000 - $1,099	-	-	3	3
$900 - $999	-	11	5	16
$800 - $899	-	30	-	30
$700 - $799	-	219	-	219
Below $700	-	194	-	194
Total	**-**	**454**	**8**	**462**

Table 30. Private Sector Housing Shortfall for Unaccompanied Personnel, 2013 - Medium

Rental Cost[1]	Number of Bedrooms One	Two	Three	Total
$1,700 & Above	-	-	-	-
$1,600 - $1,699	-	-	-	-
$1,500 - $1,599	-	-	-	-
$1,400 - $1,499	-	-	-	-
$1,300 - $1,399	-	-	-	-
$1,200 - $1,299	-	-	-	-
$1,100 - $1,199	-	-	-	-
$1,000 - $1,099	-	-	3	3
$900 - $999	-	12	5	17
$800 - $899	-	32	-	32
$700 - $799	-	234	-	234
Below $700	-	202	-	202
Total	**-**	**480**	**8**	**488**

Table 31. Private Sector Housing Shortfall for Unaccompanied Personnel, 2013 - High

Rental Cost[1]	Number of Bedrooms One	Two	Three	Total
$1,700 & Above	-	-	-	-
$1,600 - $1,699	-	-	-	-
$1,500 - $1,599	-	-	-	-
$1,400 - $1,499	-	-	-	-
$1,300 - $1,399	-	-	-	-
$1,200 - $1,299	-	-	-	-
$1,100 - $1,199	-	-	-	-
$1,000 - $1,099	-	-	3	3
$900 - $999	-	13	5	18
$800 - $899	-	34	-	34
$700 - $799	-	249	-	249
Below $700	-	210	-	210
Total	**-**	**506**	**8**	**514**

1 Includes rent, utility costs, and renter's insurance.

TOTAL MILITARY FAMILY HOUSING REQUIREMENT

The Total Military Family Housing Requirement for Fort Bliss is the sum of the Floor Requirement and the Private Sector Housing Shortfall. The Total MFH Requirement is shown in total and by pay grade in Tables 32 through 35.

Table 32. Summary of the Total Military Family Housing Requirement, 2013

Military Family Housing Requirement	Low Scenario	Medium Scenario	High Scenario
Military Families	20,993	21,813	22,633
Military Family Floor Housing Requirement	542	542	542
10-Percent Military Community Adjustment	32	32	35
Private Sector Shortfall	6,594	6,910	7,226
Total Military Family Housing Requirement	**7,168**	**7,484**	**7,803**

Table 33. Total Military Family Housing Requirement by Pay Grade, 2013 – Low Scenario

	Number of Bedrooms			
Pay Grade	Two	Three	Four+	Total
O7+	-	-	6	6
O6	-	-	47	47
O5	-	15	34	49
O4	-	41	18	59
O3	47	25	12	84
O2	13	11	35	59
O1	26	26	66	118
Officers	86	118	218	422
E9	-	69	66	135
E8	-	202	162	364
E7	-	55	215	270
E6	95	85	511	691
E5	436	555	709	1,700
E4	987	817	551	2,355
E3	474	274	146	894
E2	151	88	47	286
E1	35	4	12	51
Enlisted	2,178	2,149	2,419	6,746
Total	**2264**	**2267**	**2637**	**7,168**

Table 34. Total Military Family Housing Requirement by Pay Grade, 2013 – Medium Scenario

	Number of Bedrooms			
Pay Grade	**Two**	**Three**	**Four+**	**Total**
O7+	-	-	6	6
O6	-	-	47	47
O5	-	15	34	49
O4	-	42	19	61
O3	49	26	12	87
O2	14	12	37	63
O1	27	27	69	123
Officers	90	122	224	436
E9	-	70	68	138
E8	-	204	167	371
E7	-	57	224	281
E6	100	89	533	722
E5	462	578	738	1,778
E4	1,047	850	572	2,469
E3	497	286	152	935
E2	159	92	49	300
E1	37	4	13	54
Enlisted	2,302	2,230	2,516	7,048
Total	**2392**	**2352**	**2740**	**7,484**

Table 35. Total Military Family Housing Requirement by Pay Grade, 2013 – High Scenario

	Number of Bedrooms			
Pay Grade	**Two**	**Three**	**Four+**	**Total**
O7+	-	-	6	6
O6	-	-	47	47
O5	-	15	34	49
O4	-	44	20	64
O3	51	27	12	90
O2	15	12	38	65
O1	29	28	72	129
Officers	95	126	229	450
E9	-	71	70	141
E8	-	205	171	376
E7	-	60	233	293
E6	106	93	554	753
E5	488	602	767	1,857
E4	1,105	885	597	2,587
E3	519	298	158	975
E2	168	96	51	315
E1	39	5	13	57
Enlisted	2,425	2,315	2,614	7,354
Total	**2520**	**2441**	**2843**	**7,804**

TOTAL UNACCOMPANIED PERSONNEL HOUSING REQUIREMENT

The Total Unaccompanied Personnel Housing Requirement is the sum of the On-Base Requirement and the Private Sector Shortfall. The results for each scenario are presented in Tables 36 through 38.

Table 36. Total Unaccompanied Personnel Housing Requirement, 2013 - Low Scenario

	Number of Bedrooms			
Pay Grade	**One**	**Two**	**Three**	**Total**
O7+	-	-	-	-
O6	-	-	-	-
O5	-	-	-	-
O4	-	-	8	8
O3	-	23	-	23
O2	-	89	-	89
O1	-	167	-	167
Officers	-	279	8	287
E9	-	2	-	2
E8	-	6	-	6
E7	-	23	-	23
E6	-	144	-	144
E5	1,591	-	-	1,591
E4	5,502	-	-	5,502
E3	4,138	-	-	4,138
E2	2,591	-	-	2,591
E1	593	-	-	593
Enlisted	14,415	175	-	14,590
Total	**14,415**	**454**	**8**	**14,877**

Table 37. Total Unaccompanied Personnel Housing Requirement, 2013 - Medium Scenario

	Number of Bedrooms			
Pay Grade	**One**	**Two**	**Three**	**Total**
O7+	-	-	-	-
O6	-	-	-	-
O5	-	-	-	-
O4	-	-	8	8
O3	-	24	-	24
O2	-	94	-	94
O1	-	177	-	177
Officers	-	295	8	303
E9	-	2	-	2
E8	-	7	-	7
E7	-	24	-	24
E6	-	152	-	152
E5	1,652	-	-	1,652
E4	5,716	-	-	5,716
E3	4,299	-	-	4,299
E2	2,693	-	-	2,693
E1	616	-	-	616
Enlisted	14,976	185	-	15,161
Total	**14,976**	**480**	**8**	**15,464**

Table 38. Total Unaccompanied Personnel Housing Requirement, 2013 - High Scenario

	Number of Bedrooms			
Pay Grade	**One**	**Two**	**Three**	**Total**
O7+	-	-	-	-
O6	-	-	-	-
O5	-	-	-	-
O4	-	-	8	8
O3	-	25	-	25
O2	-	100	-	100
O1	-	187	-	187
Officers	-	312	8	320
E9	-	2	-	2
E8	-	7	-	7
E7	-	25	-	25
E6	-	160	-	160
E5	1,714	-	-	1,714
E4	5,931	-	-	5,931
E3	4,462	-	-	4,462
E2	2,794	-	-	2,794
E1	639	-	-	639
Enlisted	15,540	194	-	15,734
Total	**15,540**	**506**	**8**	**16,054**

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APPENDIX A: HOUSING AFFORDABILITY

The Housing Affordability Index (HAI) is a tool used to estimate the affordability of housing of housing by comparing the local median income to local median family income. A value of 100 means that a family with the median income has exactly enough income to qualify for a mortgage on a median-priced home. An index above 100 signifies that family earning the median income has more than enough income to qualify for a mortgage loan on a median-priced home, assuming a 20 percent down payment. For example, a composite HAI of 120.0 means a family earning the median family income has 120 percent of the income necessary to qualify for a conventional loan covering 80 percent of a median-priced existing single-family home.

The assumptions used within this model are as follows:

- **Down Payment:** A 20 percent down payment is made, so the principle value is considered to be 80 percent of the median home value
- **Mortgage Terms:** The mortgage is a standard 30 year mortgage with 12 monthly payments per year for a total of 360 payments to maturation.
- **Financing Limit:** The amount financed per month cannot exceed one fourth the yearly salary of the purchaser.

A first time buyer index was also calculated using the same methodology, but with different assumptions:

- **Sale Price:** The house sales price house that is 85 percent of the median sales price.
- **Family Income:** Median family income is 85 percent of the median family income.
- **Down Payment:** A 10 percent down payment is made, so the principle value is considered to be 90 percent of the median home value
- **Mortgage Terms:** The mortgage is a standard 30 year mortgage with 12 monthly payments per year for a total of 360 payments to maturation.
- **Mortgage Insurance:** Private mortgage insurance (PMI) increases the mortgage rate 0.5 percent over the standard 30 year mortgage rate.
- **Financing Limit :** The amount financed per month cannot exceed one fourth the yearly salary of the purchaser.

Applying the projected employment growth by industry, a new estimate of median income was derived based on the median salary for each of the employment categories as estimated by the Census Bureau American Community Survey (ACS). As the proportion of employment with relatively higher pay increases, the median family income also increases. All calculations are performed in 2006 dollars as this forms the baseline of the University of Texas estimates and ACS data. The index suggests that in 2025, El Paso County families' median income is 24.9 to 33.7 percent above what is considered to be

the minimum salary requirements necessary to afford housing. For first time buyers, affordability index ranges between 104.2 and 113.0 (Table 4).

Table A-1. Housing Affordability Index El Paso County

Year	Scenario	Median Price Existing Single-Family Home	Mortgage Rate	Monthly P&I Payment	Payment as a % of Income	Median Family Income	Qualifying Income	Composite Affordability Index	First Time Buyer Index
2006	Baseline	127,500	6.84%	668	20.3%	39,500	32,049	123.2	104.2
2025	Low	127,500	6.84%	668	20.0%	40,023	32,049	124.9	105.6
2025	Medium	127,500	6.84%	668	18.7%	42,835	32,049	133.7	113.0
2025	High	127,500	6.84%	668	19.6%	40,823	32,049	127.4	107.7

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FINAL
EL PASO REGIONAL GROWTH MANAGEMENT PLAN

Appendix C

Healthcare Information

Table C-1. Participants Served by WSURG by Occupational Category, 2005

Occupation Title	Served	Active	Inactive	Completed	Completion Rate
Accountants & Auditors	4	3	1	1	100%
Administrative Services Managers	2	2	0		
Advertising & Promotions Managers	1	0	1	1	100%
Architectural & Civil Drafters	1	0	1	1	100%
Automotive Body & Related Repairers	1	1	0		
Automotive Master Mechanics	4	3	1	0	0%
Automotive Service Technicians & Mechanics	46	33	13	11	85%
Automotive Specialty Technicians	1	0	1	1	100%
Billing, Cost & Rate Clerks	1	1	0		
Billing, Posting & Calculating Machine Operators	1	1	0		
Bookkeeping, Accounting & Auditing Clerks	47	36	11	4	36%
Brokerage Clerks	1	0	1	0	0%
Bus & Truck Mechanics & Diesel Engine Specialists	54	52	2	0	0%
Business Operations Specialists, All Other	15	6	9	5	56%
Computer & Information Systems Managers	10	8	2	1	50%
Computer Operators	42	16	26	14	54%
Computer Programmers	3	1	2	1	50%
Computer Security Specialists	1	1	0		
Computer Software Engineers, Applications	2	0	2	2	100%
Computer Specialists, All Other	13	8	5	3	60%
Computer Support Specialists	67	56	11	7	64%
Computer Systems Analysts	1	0	1	0	0%
Computer, Automated Teller & Office Machine Repairers	4	2	2	2	100%
Construction & Related Workers, All Other	4	2	2	1	50%
Construction Laborers	9	9	0		
Construction Managers	50	35	15	6	40%
Criminal Justice & Law Enforcement Teachers, Postsec.	1	0	1	1	100%
Customer Service Representatives	3	2	1	0	0%
Dental Assistants	4	1	3	0	0%
Dental Hygienists	1	1	0		
Ed. Administrators, Preschool & Child Care Center/Pro	2	0	2	2	100%
Education Teachers, Postsecondary	1	1	0		
Education, Training & Library Workers, All Other	1	0	1	1	100%
Electric Motor, Power Tool & Related Repairers	1	1	0		
Electrical & Electronic Engineering Technicians	1	0	1	0	0%
Electrical & Electronics Drafters	1	1	0		

Table C-1. Participants Served by WSURG by Occupational Category, 2005 (*Continued*)

Occupation Title	Served	Active	Inactive	Completed	Completion Rate
Electrical & Electronics Installers & Repairers, Transport.	4	2	2	1	50%
Electrical & Electronics Repairers, Comm. & Industrial	12	10	2	2	100%
Electrical & Electronics Repairers, Powerhouse, Substatin	1	1	0		
Electrical Engineering Technicians	1	1	0		
Electrical Engineers	1	0	1	0	0%
Electrical Power-Line Installers & Repairers	1	1	0		
Electricians	96	71	25	21	84%
Electro-Mechanical Technicians	1	0	1	0	0%
Electronics Engineering Technicians	1	0	1	1	100%
Elementary School Teachers, Except Special Education	1	0	1	1	100%
Executive Secretaries & Administrative Assistants	104	83	21	14	67%
Food Preparation Workers	1	0	1	1	100%
Graphic Designers	5	4	1	1	100%
Hairdressers, Hairstylists & Cosmetologists	14	3	11	6	55%
Health Educators	1	1	0		
Health Technologists & Technicians, All Other	1	0	1	1	100%
Healthcare Support Workers, All Other	1	1	0		
Heating & Air Conditioning Mechanics	3	2	1	1	100%
Heating, Air Conditioning & Refrigeration Mechancs & Inst	32	23	9	7	78%
Helpers, Construction Trades, All Other	1	1	0		
Helpers--Electricians	29	16	13	7	54%
Helpers--Installation, Maintenance & Repair Workers	2	2	0		
Industrial Machinery Mechanics	5	5	0		
Industrial Truck & Tractor Operators	1	0	1	1	100%
Information & Record Clerks, All Other	2	0	2	0	0%
Insurance Claims & Policy Processing Clerks	11	1	10	9	90%
Insurance Claims Clerks	4	3	1	1	100%
Insurance Policy Processing Clerks	8	1	7	5	71%
JOB SPECIFIC SKILLS	1	0	1	0	0%
Legal Secretaries	3	0	3	0	0%
Licensed Practical & Licensed Vocational Nurses	16	3	13	10	77%
Life, Physical & Social Science Technicians, All Other	1	0	1	0	0%
Machinists	1	1	0		
Maintenance & Repair Workers, General	12	11	1	0	0%
Maintenance Workers, Machinery	2	2	0		
Management Analysts	1	0	1	1	100%

Table C-1. Participants Served by WSURG by Occupational Category, 2005 (*Continued*)

Occupation Title	Served	Active	Inactive	Completed	Completion Rate
Media & Communication Workers, All Other	1	0	1	1	100%
Medical & Clinical Laboratory Technicians	10	0	10	9	90%
Medical & Clinical Laboratory Technologists	1	1	0		
Medical & Health Services Managers	1	1	0		
Medical Assistants	295	193	102	67	66%
Medical Records & Health Information Technicians	184	114	70	58	83%
Medical Secretaries	22	6	16	11	69%
Medical Transcriptionists	11	8	3	2	67%
Network & Computer Systems Administrators	25	17	8	7	88%
Network Systems & Data Communications Analysts	3	0	3	1	33%
Nursing Aides, Orderlies & Attendants	20	2	18	16	89%
Nursing Instructors & Teachers, Postsecondary	1	1	0		
Occupational Health & Safety Technicians	1	0	1	0	0%
Office & Administrative Support Workers, All Other	40	22	18	13	72%
Office Clerks, General	394	315	79	52	66%
Paralegals & Legal Assistants	2	1	1	1	100%
Pharmacy Aides	1	0	1	1	100%
Pharmacy Technicians	2	0	2	1	50%
Physical Therapist Assistants	3	3	0		
Police & Sheriff's Patrol Officers	7	6	1	1	100%
Pre-Employment Skills Training	1	0	1	1	100%
Radiologic Technologists & Technicians	5	5	0		
Receptionists & Information Clerks	2	0	2	0	0%
Registered Nurses	104	64	40	36	90%
Respiratory Therapists	4	4	0		
Sec. School Teachers, Except Special & Vocational Ed.	1	1	0		
Secretaries, Except Legal, Medical & Executive	1	0	1	0	0%
Security Guards	2	1	1	0	0%
Shipping, Receiving & Traffic Clerks	42	32	10	7	70%
Social Workers, All Other	2	1	1	1	100%
Stock Clerks- Stockroom, Warehouse or Storage Yard	9	3	6	4	67%
Surgical Technologists	1	0	1	1	100%
Telecomm. Equipment Installers & Repairers	1	0	1	0	0%
Truck Drivers, Heavy & Tractor-Trailer	454	69	385	357	93%
Truck Drivers, Light or Delivery Services	4	0	4	3	75%
Welders, Cutters, Solderers & Brazers	2	2	0		

Table C-1. Participants Served by WSURG by Occupational Category, 2005 (*Continued*)

Occupation Title	Served	Active	Inactive	Completed	Completion Rate
Welding, Soldering & Brazing Machine Setters, Operators	6	1	5	3	60%

Source: Workforce Solutions Open Records, Workforce Solutions Upper Rio Grande, 2009.
Note: The difference between "Inactive" and "Completed" is the number of persons that did not complete the respective program.

Table C-2. Participants Served by WSURG by Occupational Category, 2006

Occupation Title	Served	Active	Inactive	Completed	Completion Rate
Accountants & Auditors	5	0	5	3	60%
Administrative Services Managers	2	0	2	2	100%
Automotive Body & Related Repairers	1	0	1	1	100%
Automotive Master Mechanics	3	0	3	3	100%
Automotive Service Technicians & Mechanics	61	38	23	14	61%
Billing, Cost & Rate Clerks	2	0	2	1	50%
Billing, Posting & Calculating Machine Operators	1	0	1	1	100%
Bookkeeping, Accounting & Auditing Clerks	58	20	38	26	68%
Bus & Truck Mechanics & Diesel Engine Specialists	116	64	52	43	83%
Business Operations Specialists, All Other	6	0	6	4	67%
Computer & Information Scientists, Research	1	0	1	0	0%
Computer & Information Systems Managers	12	4	8	5	63%
Computer Operators	18	1	17	8	47%
Computer Programmers	1	0	1	1	100%
Computer Security Specialists	1	0	1	0	0%
Computer Software Engineers, Applications	1	0	1	1	100%
Computer Specialists, All Other	15	3	12	4	33%
Computer Support Specialists	82	31	51	32	63%
Computer Systems Analysts	1	1	0		
Computer, Automated Teller & Office Machine Repairers	2	0	2	0	0%
Construction & Related Workers, All Other	2	0	2	1	50%
Construction Laborers	12	0	12	12	100%
Construction Managers	55	24	31	31	100%
Customer Service Representatives	3	1	2	2	100%
Dental Assistants	1	0	1	0	0%
Dental Hygienists	2	0	2	0	0%
Education Teachers, Postsecondary	2	1	1	1	100%
Electric Motor, Power Tool & Related Repairers	1	0	1	0	0%
Electrical & Electronics Drafters	1	0	1	1	100%
Electrical & Electronics Installers & Repairers, Transport.	2	0	2	1	50%

Table C-2. Participants Served by WSURG by Occupational Category, 2006 (*Continued*)

Occupation Title	Served	Active	Inactive	Completed	Completion Rate
Electrical & Electronics Repairers Comm. & Industrial	12	1	11	10	91%
Electrical & Electronics Repairers, Powerhouse, Substatin	1	0	1	1	100%
Electrical Engineering Technicians	1	0	1	1	100%
Electrical Power Line Installers & Repairers	1	0	1	1	100%
Electricians	123	56	67	63	94%
Elementary School Teachers, Except Special Ed.	1	1	0		
Executive Secretaries & Administrative Assistants	127	41	86	52	60%
First Line Supervisors, Administrative Support	1	1	0		
Graphic Designers	4	0	4	4	100%
Hairdressers, Hairstylists & Cosmetologists	12	1	11	5	45%
Health Educators	1	0	1	1	100%
Health Technologists & Technicians, All Other	1	0	1	0	0%
Healthcare Support Workers, All Other	2	0	2	1	50%
Heating & Air Conditioning Mechanics	2	0	2	1	50%
Heating, Air Conditioning & Refrigeration Mech. & Inst.	61	38	23	18	78%
Helpers, Construction Trades, All Other	1	0	1	0	0%
Helpers Electricians	18	0	18	14	78%
Helpers Installation, Maintenance & Repair Workers	2	0	2	2	100%
Industrial Machinery Mechanics	5	0	5	5	100%
Insurance Claims & Policy Processing Clerks	1	0	1	1	100%
Insurance Claims Clerks	3	0	3	3	100%
Insurance Policy Processing Clerks	2	0	2	0	0%
Legal Secretaries	1	0	1	1	100%
Legal Support Workers, All Other	1	0	1	1	100%
Library Assistants, Clerical	1	0	1	0	0%
Licensed Practical & Licensed Vocational Nurses	10	0	10	6	60%
Machinists	2	2	0		
Maintenance & Repair Workers, General	11	0	11	8	73%
Maintenance Workers, Machinery	2	0	2	2	100%
Medical & Clinical Laboratory Technicians	3	2	1	0	0%
Medical & Clinical Laboratory Technologists	1	0	1	0	0%
Medical & Health Services Managers	1	0	1	0	0%
Medical Assistants	293	100	193	139	72%
Medical Records & Health Information Technicians	178	52	126	101	80%
Medical Secretaries	13	2	11	8	73%
Medical Transcriptionists	8	0	8	6	75%

Table C-2. Participants Served by WSURG by Occupational Category, 2006 (*Continued*)

Occupation Title	Served	Active	Inactive	Completed	Completion Rate
Middle School Teachers, Except Special & Vocational Ed.	4	4	0		
Network & Computer Systems Administrators	23	3	20	15	75%
Nursing Aides, Orderlies & Attendants	10	3	7	3	43%
Nursing Instructors & Teachers, Postsecondary	1	0	1	0	0%
Office & Administrative Support Workers, All Other	34	4	30	19	63%
Office Clerks, General	503	230	273	215	79%
Paralegals & Legal Assistants	4	2	2	2	100%
Pharmacy Technicians	1	1	0		
Physical Therapist Assistants	3	0	3	1	33%
Physical Therapists	1	0	1	0	0%
Police & Sheriff's Patrol Officers	16	14	2	1	50%
Radiologic Technologists & Technicians	9	6	3	0	0%
Registered Nurses	100	41	59	31	53%
Respiratory Therapists	4	1	3	0	0%
Sec. School Teachers, Except Special & Vocational Ed	6	5	1	0	0%
Secretaries, Except Legal, Medical & Executive	1	0	1	1	100%
Security Guards	1	0	1	1	100%
Shipping, Receiving & Traffic Clerks	36	4	32	21	66%
Social Workers, All Other	1	0	1	0	0%
Special Ed. Teachers, Preschool, Kindergarten & Elem	4	4	0		
Stock Clerks Stockroom, Warehouse or Storage Yard	3	0	3	2	67%
Surgical Technologists	2	0	2	1	50%
Truck Drivers, Heavy & Tractor Trailer	334	29	305	284	93%
Welders & Cutters	1	0	1	1	100%
Welders, Cutters, Solderers & Brazers	8	2	6	5	83%
Welding, Soldering & Brazing Machine Setters, Operators	2	0	2	0	0%

Source: Workforce Solutions Open Records, Workforce Solutions Upper Rio Grande, 2009.
Note: The difference between "Inactive" and "Completed" is the number of persons that did not complete the respective program.

Table C-3. Participants Served by WSURG by Occupational Category, 2007

Occupation Title	Served	Active	Inactive	Completed	Completion Rate
Administrative Services Managers	1	1	0		
Advertising & Promotions Managers	1	1	0		
Appraisers, Real Estate	1	0	1	0	0%
Automotive Service Technicians & Mechanics	54	20	34	27	79%
Billing, Cost & Rate Clerks	1	0	1	1	100%

Table C-3. Participants Served by WSURG by Occupational Category, 2007 (*Continued*)

Occupation Title	Served	Active	Inactive	Completed	Completion Rate
Biological Science Teachers, Postsecondary	1	0	1	0	0%
Biological Technicians	1	0	1	0	0%
Biomedical Engineers	1	1	0		
Bookkeeping, Accounting & Auditing Clerks	36	12	24	18	75%
Bus & Truck Mechanics & Diesel Engine Specialists	81	9	72	67	93%
Business Operations Specialists, All Other	3	0	3	1	33%
Computer & Information Systems Managers	4	0	4	4	100%
Computer Operators	2	1	1	0	0%
Computer Programmers	1	0	1	0	0%
Computer Specialists, All Other	4	0	4	3	75%
Computer Support Specialists	71	38	33	23	70%
Computer Systems Analysts	1	0	1	1	100%
Construction Managers	34	9	25	16	64%
Criminal Justice & Law Enforcement Teachers, Postsec.	1	0	1	1	100%
Customer Service Representatives	33	9	24	18	75%
Data Entry Keyers	1	1	0		
Dental Assistants	2	0	2	0	0%
Dental Hygienists	1	0	1	0	0%
Door-To-Door Sales Workers, News & Street Vendors	1	0	1	1	100%
Ed. Administrators, Preschool & Child Care Center/Pro	1	0	1	0	0%
Education Teachers, Postsecondary	1	0	1	0	0%
Electrical & Electronics Repairers, Comm. & Industrial	1	0	1	1	100%
Electricians	118	57	61	41	67%
Elementary School Teachers, Except Special Education	2	1	1	1	100%
Emergency Medical Technicians & Paramedics	1	0	1	1	100%
Environmental Science & Protection Technicians	1	0	1	1	100%
Executive Secretaries & Administrative Assistants	72	28	44	35	80%
First-Line Supervisors, Administrative Support	1	0	1	1	100%
GED/ABE	1	0	1	0	0%
Graphic Designers	1	0	1	1	100%
Hairdressers, Hairstylists & Cosmetologists	24	19	5	1	20%
Heating & Air Conditioning Mechanics	1	1	0		
Heating, Air Conditioning & Refrigeration Mechancs & Inst	53	21	32	28	88%
Helpers, Construction Trades, All Other	9	0	9	9	100%
Insurance Claims & Policy Processing Clerks	1	1	0		
Insurance Policy Processing Clerks	1	0	1	0	0%

Table C-3. Participants Served by WSURG by Occupational Category, 2007 (*Continued*)

Occupation Title	Served	Active	Inactive	Completed	Completion Rate
Legal Support Workers, All Other	1	0	1	0	0%
Library Assistants, Clerical	1	0	1	1	100%
Licensed Practical & Licensed Vocational Nurses	34	3	31	24	77%
Machinists	2	0	2	2	100%
Maintenance & Repair Workers, General	1	1	0		
Massage Therapists	1	0	1	1	100%
Medical & Clinical Laboratory Technicians	4	1	3	1	33%
Medical & Clinical Laboratory Technologists	1	0	1	0	0%
Medical & Health Services Managers	1	0	1	1	100%
Medical Assistants	203	57	146	92	63%
Medical Records & Health Information Technicians	134	54	80	70	88%
Medical Secretaries	4	0	4	3	75%
Medical Transcriptionists	3	3	0		
Middle School Teachers, Except Special & Vocational Ed.	6	6	0		
Network & Computer Systems Administrators	5	3	2	2	100%
Nursing Aides, Orderlies & Attendants	27	14	13	13	100%
Office & Administrative Support Workers, All Other	14	2	12	8	67%
Office Clerks, General	346	124	222	161	73%
Paralegals & Legal Assistants	2	0	2	1	50%
Pharmacy Technicians	9	3	6	1	17%
Physical Therapist Assistants	1	1	0		
Physical Therapists	1	0	1	0	0%
Police & Sheriff's Patrol Officers	19	7	12	7	58%
Preschool Teachers, Except Special Education	1	0	1	0	0%
Radiologic Technologists & Technicians	6	3	3	1	33%
Real Estate Sales Agents	1	0	1	1	100%
Refrigeration Mechanics	1	0	1	1	100%
Registered Nurses	51	23	28	19	68%
Rehabilitation Counselors	1	0	1	1	100%
Respiratory Therapists	2	0	2	1	50%
Retail Salespersons	1	0	1	0	0%
Sec. School Teachers, Except Special & Vocational Ed	5	1	4	1	25%
Sheet Metal Workers	3	3	0		
Shipping, Receiving & Traffic Clerks	5	0	5	5	100%
Social Workers, All Other	1	1	0		
Special Ed. Teachers, Preschool, Kindergarten & Elem	5	3	2	1	50%

Table C-3. Participants Served by WSURG by Occupational Category, 2007 (*Continued*)

Occupation Title	Served	Active	Inactive	Completed	Completion Rate
Teacher Assistants	12	11	1	0	0%
Teachers & Instructors, All Other	2	0	2	1	50%
Telemarketers	1	0	1	1	100%
Truck Drivers, Heavy & Tractor-Trailer	346	7	339	295	87%
Truck Drivers, Light or Delivery Services	1	0	1	1	100%
Welders, Cutters, Solderers & Brazers	8	4	4	3	75%
Wholesale & Retail Buyers, Except Farm Products	1	0	1	1	100%

Source: Workforce Solutions Open Records, Workforce Solutions Upper Rio Grande, 2009.
Note: The difference between "Inactive" and "Completed" is the number of persons that did not complete the respective program.

Table C-4. Participants Served by WSURG by Occupational Category, 2008

Occupation Title	Served	Active	Inactive	Completed	Completion Rate
Administrative Services Managers	1	0	1	0	0%
Advertising & Promotions Managers	1	0	1	1	100%
Agents & Business Mngrs. of Artists, Performers & Athlet	1	1	0		
Automotive Service Technicians & Mechanics	26	7	19	17	89%
Biological Technicians	1	0	1	0	0%
Biomedical Engineers	2	0	2	0	0%
Bookkeeping, Accounting, & Auditing Clerks	21	15	6	5	83%
Brickmasons & Blockmasons	6	6	0		
Bus & Truck Mechanics & Diesel Engine Specialists	30	13	17	15	88%
Clinical, Counseling & School Psychologists	1	0	1	0	0%
Computer & Information Systems Managers	1	1	0		
Computer Operators	1	0	1	1	100%
Computer Programmers	2	1	1	0	0%
Computer Specialists, All Other	6	3	3	1	33%
Computer Support Specialists	71	38	33	22	67%
Construction Managers	14	4	10	9	90%
Cooks, All Other	1	0	1	0	0%
Criminal Justice & Law Enforcement Teachers, Postsec.	2	1	1	0	0%
Customer Service Representatives	33	0	33	25	76%
Data Entry Keyers	1	0	1	1	100%
Dental Assistants	2	2	0		
Ed. Administrators, Elementary & Secondary School	1	0	1	0	0%
Ed. Administrators, Preschool & Child Care Center/Pro	1	0	1	0	0%
Education Teachers, Postsecondary	1	0	1	0	0%

Table C-4. Participants Served by WSURG by Occupational Category, 2008 (*Continued*)

Occupation Title	Served	Active	Inactive	Completed	Completion Rate
Electricians	82	50	32	25	78%
Elementary School Teachers, Except Special Education	3	2	1	1	100%
Environmental Science & Protection Technicians	1	0	1	0	0%
Executive Secretaries & Administrative Assistants	44	13	31	27	87%
Financial Managers	1	1	0		
Graphic Designers	2	1	1	0	0%
Hairdressers, Hairstylists & Cosmetologists	28	9	19	12	63%
Healthcare Support Workers, All Other	1	0	1	1	100%
Heating & Air Conditioning Mechanics	1	0	1	1	100%
Heating, Air Conditioning & Refrigeration Mechans. & Inst	50	28	22	20	91%
Insurance Claims & Policy Processing Clerks	2	1	1	1	100%
Insurance Claims Clerks	1	1	0		
Insurance Policy Processing Clerks	1	0	1	1	100%
Legal Support Workers, All Other	1	0	1	0	0%
Licensed Practical & Licensed Vocational Nurses	30	20	10	4	40%
Maintenance & Repair Workers, General	8	7	1	1	100%
Massage Therapists	2	1	1	0	0%
Medical & Clinical Laboratory Technicians	6	1	5	0	0%
Medical & Clinical Laboratory Technologists	1	0	1	1	100%
Medical & Health Services Managers	1	1	0		
Medical Assistants	137	47	90	47	52%
Medical Records & Health Information Technicians	100	34	66	53	80%
Medical Secretaries	2	1	1	0	0%
Medical Transcriptionists	4	0	4	0	0%
Middle School Teachers, Except Special & Vocational Ed.	9	6	3	1	33%
Network & Computer Systems Administrators	6	2	4	2	50%
Nursery Workers	1	1	0		
Nursing Aides, Orderlies & Attendants	104	15	89	81	91%
Occupational Health & Safety Technicians	1	0	1	0	0%
Office & Administrative Support Workers, All Other	5	2	3	1	33%
Office Clerks, General	208	86	122	90	74%
Pharmacy Technicians	19	6	13	9	69%
Physical Therapist Assistants	1	0	1	0	0%
Physical Therapists	1	0	1	0	0%
Police & Sheriff's Patrol Officers	10	5	5	3	60%
Radiologic Technologists & Technicians	3	0	3	0	0%

Table C-4. Participants Served by WSURG by Occupational Category, 2008 (*Continued*)

Occupation Title	Served	Active	Inactive	Completed	Completion Rate
Real Estate Sales Agents	2	0	2	0	0%
Registered Nurses	34	13	21	15	71%
Respiratory Therapists	1	1	0		
Respiratory Therapy Technicians	1	0	1	0	0%
Sec. School Teachers, Except Special & Vocational Ed	4	3	1	0	0%
Sheet Metal Workers	4	1	3	0	0%
Social Workers, All Other	1	0	1	1	100%
Special Ed. Teachers, Preschool, Kindergarten & Elem	5	4	1	1	100%
Tax Preparers	1	1	0		
Teacher Assistants	19	15	4	2	50%
Truck Drivers, Heavy & Tractor-Trailer	110	20	90	77	86%
Truck Drivers, Light or Delivery Services	4	1	3	3	100%
Welders, Cutters, Solderers & Brazers	6	1	5	4	80%

Source: Workforce Solutions Open Records, Workforce Solutions Upper Rio Grande, 2009.
Note: The difference between "Inactive" and "Completed" is the number of persons that did not complete the respective program.

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Appendix D

Education Data

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Appendix D1

Primarily Impacted District Schools Data

Table D1-1. Primarily Impacted District (PID) Schools, 2008-09 Academic Year

Schools	Military Students	Total Students	% Military	Capacity	Occupancy
Canutillo Independent School District					
Elementary Schools					
Canutillo	5	678	0.7%	750	-72
Jose Damian	12	502	2.0%	675	-173
Bill Childress	2	504	0.0%	675	-171
Deanna Davenport	1	446	0.2%	675	-229
Garcia	18	621	2.9%	700	-79
Middle Schools					
Canutillo	9	684	1.0%	1,100	-416
Jose Aldrete	6	595	1.0%	800	-205
High Schools					
Canutillo	24	1,598	2.0%	1,800	-202
Total	**38**	**2,751**	**1.4%**		
Clint Independent School District					
Elementary Schools					
William D Surratt	2	864	0.2%	1,102	-238
Montana Vista	8	765	1.0%	1,264	-499
Red Sands	20	867	2.3%	1,254	-387
Frank Macias	18	1,147	1.6%	1,496	-349
Desert Hills	48	937	5.1%	1,518	-581
Carroll T Welch	25	793	3.2%	1,272	-479
Middle Schools					
Clint	4	410	1.0%	575	-165
East Montana	6	731	0.8%	1,500	-769
Horizon	29	1,108	2.6%	1,428	-320
High Schools					
Clint	6	540	1.1%	1,154	-614
Mountain View	9	956	0.9%	1,367	-411
Horizon	21	1,258	1.7%	1,650	-392
Total	**196**	**10,376**	**1.9%**		
El Paso Independent School District					
Elementary Schools					
Alta Vista	2	409	0.5%	578	-169
Aoy	5	573	0.9%	901	-328
Barron	187	686	27.3%	833	-147
Beall	6	463	1.3%	629	-166
Bliss	433	552	78.4%	816	-264
Bonham	18	335	5.4%	357	-22

Table D1-1. Primarily Impacted District (PID) Schools, 2008-09 Academic Year *(Continued)*

Schools	Military Students	Total Students	% Military	Capacity	Occupancy
El Paso Independent School District (*Continued*)					
Elementary Schools *(Continued)*					
Bradley	48	409	11.7%	459	-50
Burleson	1	411	0.2%	833	-422
Burnet	81	419	19.3%	442	-23
Cielo Vista	23	300	7.7%	374	-74
Clardy	3	649	0.5%	782	-133
Clendenin	26	486	5.3%	510	-24
Coldwell	12	408	2.9%	612	-204
Collins	43	658	6.5%	595	+63
Cooley	8	543	1.5%	952	-409
Crockett	9	629	1.4%	782	-153
Crosby	32	598	5.4%	765	-167
Douglass	0	471	0.0%	748	-277
Dowell	11	423	2.6%	561	-138
Fannin	34	668	5.1%	680	-12
Green	19	457	4.2%	646	-189
Guerrero	22	829	2.7%	731	+98
Hart	1	558	0.2%	612	-54
Hawkins	3	267	1.1%	459	-192
Hillside	13	640	2.0%	697	-57
Hughey	185	681	27.2%	646	+35
Johnson	5	722	0.7%	697	+25
Kohlberg	14	851	1.6%	714	+137
Lamar	8	617	1.3%	833	-216
Lee	12	675	1.8%	816	-141
Logan	404	507	79.7%	646	-139
MacArthur (Elem-Intermediate)	53	739	7.2%	1054	-315
Mesita	7	708	1.0%	799	-91
Mitzi Bond	25	807	3.1%	493	+314
Milam	434	506	85.8%	459	+47
Moreno	4	358	1.1%	629	-271
Moye	-	597	-	799	-202
Newman	24	489	4.9%	697	-208
Nixon	305	739	41.3%	578	+161
Park	67	513	13.1%	510	+3
Polk	39	713	5.5%	442	+271
Putnam	20	546	3.7%	595	-49

Table D1-1. Primarily Impacted District (PID) Schools, 2008-09 Academic Year *(Continued)*

Schools	Military Students	Total Students	% Military	Capacity	Occupancy
El Paso Independent School District (*Continued*)					
Elementary Schools *(Continued)*					
Rivera	17	492	3.5%	510	-18
Roberts	7	753	0.9%	799	-46
Rusk	10	496	2.0%	612	-116
Schuster	8	217	3.7%	374	-157
Stanton	16	572	2.8%	510	+62
Tippin	71	862	8.2%	782	+80
Travis	144	461	31.2%	612	-151
Vilas	0	275	0.0%	612	-337
Wainwright	-	-	-	425	-425
Western Hills	14	491	2.9%	714	-223
Whitaker	49	593	8.3%	629	-36
Zach White	9	596	1.5%	748	-152
Zavala	0	309	0.0%	510	-201
Middle Schools					
Bassett	171	736	23.2%	990	-254
Brown	58	1,290	4.5%	1,314	-24
Canyon Hills	27	930	2.9%	810	+120
Charles	16	574	2.8%	684	-110
Armendariz	7	822	0.9%	954	-132
Guillen	3	917	0.3%	1,134	-217
Henderson	2	949	0.2%	1,206	-257
Hornedo	28	628	4.5%	648	-20
Lincoln	17	1,099	1.5%	1,152	-53
Magoffin	12	896	1.3%	1,116	-220
Morehead	13	996	1.3%	1,098	-102
Richardson	226	823	27.5%	810	+13
Ross	203	905	22.4%	990	-85
Terrace Hills	38	663	5.7%	954	-291
Wiggs	7	831	0.8%	846	-15
High Schools					
Andress	161	1,730	9.3%	1,900	-170
Austin	171	1,471	11.6%	1,824	-353
Bowie	-	1,163	-	1,691	-528
Burges	110	1,497	7.3%	1,634	-137
Chapin	389	1,763	22.1%	1,653	+110
Coronado	44	2,272	1.9%	2,223	+49

Table D1-1. Primarily Impacted District (PID) Schools, 2008-09 Academic Year *(Continued)*

Schools	Military Students	Total Students	% Military	Capacity	Occupancy
El Paso Independent School District (*Continued*)					
High Schools *(Continued)*					
El Paso	10	1,216	0.8%	1,330	-114
Franklin	19	3,000	0.6%	2,787	+213
Irvin	26	1,609	1.6%	2,128	-519
Jefferson	2	1,111	0.2%	1,767	-656
Total	**4,777**	**60,928**	**7.8%**		
Socorro Independent School District					
Elementary Schools					
John Drugan	36	799	4.5%	900	-101
Dr. Sue Shook	58	627	9.3%	660	-33
Horizon Heights	14	790	1.8%	968	-178
Loma Verde	16	881	1.8%	1,088	-207
Myrtle Cooper	12	658	1.8%	1,012	-354
Sierra Vista	24	991	2.4%	1,012	-21
Vista Del Sol	4	616	0.6%	880	-264
Bill Sybert	55	1,277	4.3%	1,300	-23
Hurshel Antwine	68	1,002	6.8%	900	+102
Jane A. Hambric	49	1,531	3.2%	1,269	+262
Paso Del Norte	79	1,320	6.0%	1,250	+70
Chester E. Jordan	47	568	8.3%	600	-32
Lujan-Chavez	50	1,125	4.4%	1,300	-175
Sgt. Roberto Ituarte	58	777	7.5%	900	-123
Benito Martinez	16	671	2.4%	792	-121
Elfida P. Chavez	41	1,098	3.7%	1,162	-64
Helen Ball	40	949	4.2%	990	-41
O'Shea Keleher	29	804	3.6%	990	-186
Desert Wind	4	975	0.4%	916	+59
Ernesto Serna	2	631	0.3%	894	-263
Escontrias	3	950	0.3%	1,760	-810
H.D. Hilley	8	778	1.0%	776	+2
Hueco	7	620	1.1%	836	-216
Robert R. Rojas	1	560	0.2%	880	-320
Middle Schools					
Col. John O. Ensor	34	712	4.8%	775	-63
Capt. Walter E. Clarke	15	877	1.7%	900	-23
Montwood	23	868	2.6%	825	+43
William D. Slider	20	952	2.1%	975	-23

Table D1-1. Primarily Impacted District (PID) Schools, 2008-09 Academic Year *(Continued)*

Schools	Military Students	Total Students	% Military	Capacity	Occupancy
Socorro Independent School District (*Continued*)					
Middle Schools *(Continued)*					
Salvador H. Sanchez	4	845	0.5%	850	-5
Socorro	1	635	0.2%	850	-215
Sun Ridge	45	891	5.1%	900	-9
High Schools					
Americas	72	2,913	2.5%	3,375	-462
El Dorado	177	3,066	5.8%	3,150	-84
Montwood	37	2,612	1.4%	3,025	-413
Mission Early College	4	367	1.1%	250	+117
Options	3	180	1.7%	200	-20
Socorro	9	2,820	0.3%	3,050	-230
Total	**1,169**	**39,499**	**3.0%**		
Ysleta Independent School District					
Elementary Schools					
Alicia R. Chacon (K-8)	14	738	1.9%	600	+138
Eastwood Knolls (K-8)	15	725	2.1%	620	+105
Ascarate	2	482	0.4%	600	-118
Cadawallader	3	345	0.9%	600	-255
Capistrano	2	710	0.3%	840	-130
Cedar Grove (PK-6)	8	651	1.2%	792	-141
Constance Hulbert	3	404	0.7%	638	-234
Del Norte	7	548	1.3%	836	-288
Desertaire (EE, PK-6)	12	586	2.0%	880	-294
Dolphin Terrace (EE, K-6)	16	721	2.2%	875	-154
East Point	18	808	2.2%	990	-182
	13	719	1.8%	748	-29
Edgemere (PK-6)	19	785	2.4%	960	-175
Glen Cove (EE, PK-6)	18	1,077	1.7%	980	+97
Hacienda Hts.	2	596	0.3%	600	-4
Lancaster	2	659	0.3%	850	-191
LeBarron	3	1,055	0.3%	1,080	-25
Loma Terrace (EE, PK-6)	6	857	0.7%	1,000	-143
Marian Manor	4	559	0.7%	814	-255
Mesa Vista	3	492	0.6%	680	-188
Mission Valley	6	570	1.1%	940	-370
North Loop (EE, K-6)	0	452	0.0%	860	-408
North Star	37	604	6.1%	814	-210

Table D1-1. Primarily Impacted District (PID) Schools, 2008-09 Academic Year *(Continued)*

Schools	Military Students	Total Students	% Military	Capacity	Occupancy
Ysleta Independent School District (*Continued*)					
Elementary Schools *(Continued)*					
Parkland (EE, PK-6)	29	682	4.3%	720	-38
Pasodale (PK-5)	5	794	0.6%	898	-104
Pebble Hills (EE, K-6)	35	943	3.7%	1,232	-289
Presa (K-5)	4	498	0.8%	450	+48
Ramona (PK-6)	3	375	0.8%	500	-125
Sageland (EE, K-6)	6	513	1.2%	580	-67
Scotsdale (EE, PK-6)	13	814	1.6%	880	-66
South Loop (K-5)	1	443	0.2%	520	-77
Thomas Manor	1	496	0.2%	900	-404
Tierra Del Sol (EE, K-6)	18	671	2.7%	796	-125
Vista Hills	15	718	2.1%	836	-118
Ysleta	3	599	0.5%	660	-61
R.E.L. Washington	4	542	0.7%	640	-98
R.F.K. Pre-K	7	576	1.2%	900	-324
Ysleta Pre-K	15	715	2.1%	300	_+415
Middle Schools					
Camino Real	1	680	0.1%	1,078	-398
Desert View	16	619	2.6%	924	-305
Eastwood	14	832	1.7%	850	-18
Hillcrest	2	621	0.3%	1,056	-435
Indian Ridge	12	538	2.2%	1,034	-496
Parkland	35	702	5.0%	528	+174
Ranchland	2	410	0.5%	638	-228
Rio Bravo	2	381	0.5%	800	-419
Riverside	0	657	0.0%	968	-311
Valley View	6	655	0.9%	900	-245
Ysleta	0	399	0.0%	968	-569
High Schools					
Bel Air	6	2,101	0.3%	2,675	-574
Del Valle	6	1,902	0.3%	2,275	-373
Eastwood	16	2,173	0.7%	2,090	+83
Hanks	27	2,258	1.2%	2,150	+108
Parkland	17	1,242	1.4%	1,525	-283
Riverside	2	1,431	0.1%	1,975	-544
Ysleta	0	1,740	0.0%	1,717	+23
Total	**536**	**44,676**	**1.2%**		

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Appendix D2

Enrollment Impact on Capacity and Location

Enrollment Impact on Capacity and Location

The purpose of this appendix is to evaluate school-age enrollment in the nine independent school districts (ISDs) located in El Paso County. Five districts, Canutillo, Clint, El Paso, Socorro, and Ysleta, are designated Primarily Impacted Districts (PIDs). The four remaining school districts, Anthony, Fabens, San Elizario, and Tornillo, are designated non-PIDs. Because each school has limited capacity to serve students, it is important to evaluate how military realignment and growth initiatives will affect enrollment in El Paso area schools.

Methodology and Independent School District Enrollment Forecasts

Students who live in one of El Paso County's ISDs attend a designated elementary, middle or high school based on the physical boundaries or school attendance zones (SAZs) defined by each district[1] and the following criteria: student age, academic standing, physical address, and SAZ in which the student's home address is located. A SAZ is specified such that the number of students living within its boundaries does not exceed the capacity of the corresponding school. Because SAZs determine a school's enrollment, they are used in this analysis to determine whether a school population is expected to increase or decrease in size in the coming years.

To provide enrollment projections at the elementary, middle, and high school levels for SAZs, the following data are used and described in detail below: 1) the latest school enrollment data; 2) school district and attendance zone population estimates; and 3) El Paso County population and school enrollment forecasts.

School Enrollment Data: School enrollment data were obtained for each school in El Paso County's PIDs for the 2007-2008 academic year. Corresponding data for non-PIDs were unavailable.

School District and SAZ Population Estimates: These estimates are based on Traffic Analysis Zones (TAZs); geographical units used in transportation planning. The El Paso Metropolitan Planning Organization (MPO) assigns a unique number to each TAZ in its planning area with El Paso County TAZs assigned values from 1 to 640. Associated with each TAZ are population estimates determined by the El Paso MPO for the years 2007, 2015, and 2025. These estimates have been calibrated by the City of El Paso's Planning Development Services Department to account for BRAC and Grow the Army Initiative-induced growth and population estimates for 2010, 2015, and 2025.[2]

To estimate the population contained within ISD and SAZ boundaries, a GIS-based population mapping from TAZs to ISD and SAZ boundaries was performed under the critical assumption

[1] Note that special schools such as disciplinary schools, academies, etc., serve students in the entire district. Enrollment projections are not provided for these schools.

[2] Interview with Mathew McElroy, El Paso City Planning Department, May 2009.

that population is evenly distributed throughout a TAZ.[3] The mapping applied in this analysis is illustrated in **Figure D.2-1**. The first image in the figure shows a set of TAZs on the west side of El Paso with TAZ code in black font and the 2007 estimated population in brown. Figure D.2-1 **(image 2)** shows several corresponding SAZs determined by El Paso ISD. Figure D.2-1 **(image 3)** shows how the SAZ boundaries overlap with TAZ Boundaries. Because TAZ and SAZ boundaries are defined using ArcGIS shapefiles, areas where boundaries overlap can be determined using ArcGIS or CommunityViz functionality. These areas, in turn, determine how much of a particular TAZ is encompassed within a SAZ. For instance, Figure D.2-1 **(image 4)** shows how TAZ areas overlap with Guerrero Elementary's SAZ. Note that the SAZ contains a portion of the following TAZs: 429, 430, 502, 546, 548, and 549. The ratio of the amount of a TAZ's area encompassed by a SAZ relative to the total area of a TAZ defines the percentage of

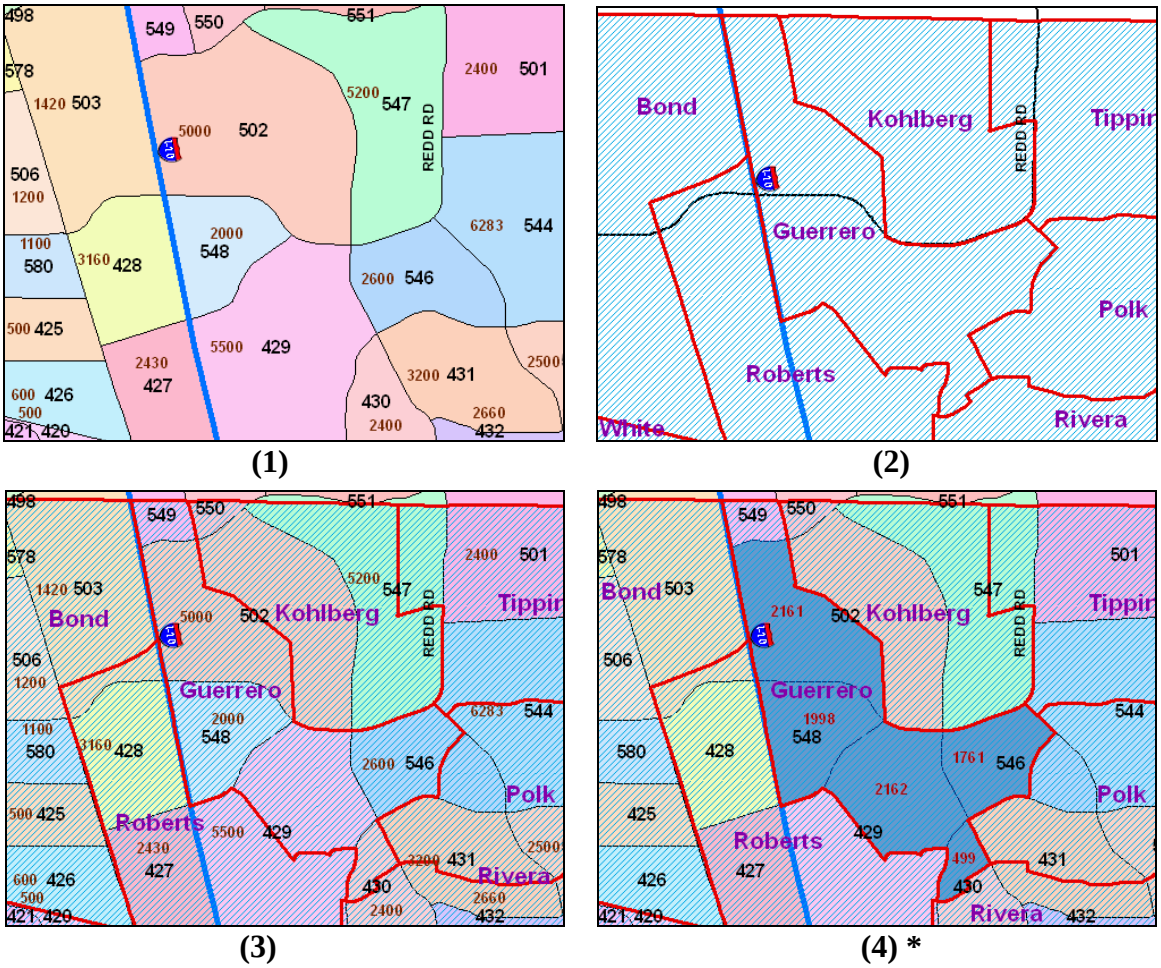


Figure D2-1 – Mapping of TAZ population to SAZ boundaries.

* TAZ 549 population is 0 so it does not contribute population to Guerrero Elementary's SAZ

[3] Most TAZs defined for El Paso County satisfy this assumption based on the number of residential parcels contained within a TAZ. For cases where the assumption fails, for instance TAZs with more land than built out parcels, the TAZs are redrawn to encompass residential parcels.

a population of a TAZ assigned to a SAZ. Thus, as shown in the last image of the figure, the estimated population (in brown font) contained within Guerrero's SAZ includes 2,162 people from TAZ 429, 2,161 people from TAZ 502, 1,761 people from TAZ 546, 1,998 people from TAZ 548, etc., resulting in an estimated 8,579 people in 2007.[4] Applying this methodology gives us population estimates for each school district boundary and each school attendance zone boundary for El Paso County.

El Paso County total population and school enrollment forecasts: Total population is based on REMI population projections as described in section 3.1 of the RGMP. School enrollment forecasts for the age groups 4-10, 11-13, and 14-17 represent proxies for Pre-K through 5th grade (elementary school), 6th through 8th grade (middle school) and 9th through 12th grade (high school) and are described earlier in this education report. These age groups provide the best alternative for projecting elementary, middle, and high school enrollment. To determine ISD enrollment by school type (elementary, middle, and high) for three future points in time – 2010, 2015, and 2025, – the following sequence of calculations were undertaken:

1. Total population for each of the nine ISDs was calculated based on the TAZ mapping of total county population for 2007 and forecasts for 2010, 2015, and 2025 using the REMI-based Medium Growth Simulation, as discussed above.

2. Total population growth by ISD was consequently determined using step (1) for the time periods 2007-2010, 2010-2015, and 2015-2025.

3. Relative to the total county population growth, a percentage or share of the growth accounted for by each of the ISDs was calculated from step (2) for 2010, 2015, and 2025.

4. Multiplying the population projections for the age groups 4-10, 11-13, and 14-17 (obtained from the Medium Growth Simulation) by the shares in step (3) provided a proxy for ISD total enrollment growth for these three age groups for 2010, 2015, and 2025. Adding this enrollment growth per ISD to the Texas Education Agency (TEA) 2007-08 ISD enrollment estimates provides individual ISD total enrollment for 2010-11, 2015-16, and 2025-26.

5. To disaggregate the total enrollments per ISD in step (4) into one of three respective grade levels (elementary, middle and high school), the assumption was made that an ISD's share of (a) PreK through 5th, (b) 6th through 8th, and (c) 9th through 12th grade students will remain constant through time. For example, in the 2007-08 academic year, the student body of El Paso ISD was made up of 48 percent PreK through 5th graders, 22 percent 6th through 8th graders, and 30 percent 9th through 12th graders. The assumption was that these ratios will remain unchanged in the 2010-11, 2015-16, and 2025-26 school years.

[4] Note that TAZ 549 does not contribute to the total because its boundary only contains commercial properties and thus has a population of zero.

6. Multiplying step (4) total enrollment per ISD by the respective ISD grade level ratios in step (5) provided enrollment forecasts for the nine ISDs, shown in **Table D.2-1,** per ISD for the age groups 4-10, 11-13, and 14-17 for the academic years 2010-11, 2015-16, and 2025-26.

To obtain SAZ enrollment by school type (elementary, middle, and high) for the respective ISDs, a similar sequence of calculations as described above were employed:

1. Total population for each SAZ by respective ISD was calculated based on the TAZ mapping of total county population for 2007 and forecasts for 2010, 2015, and 2025. Three sets of SAZ mappings by ISD were generated, one for elementary, one for middle and one for high schools.

2. Total population growth for each SAZ was calculated using step (1) for the time periods 2007-2010, 2010-2015, and 2015-2025.

3. Relative to the total population growth of each respective ISD, the share of the growth accounted for by an SAZ was calculated from step (2) for 2010, 2015, and 2025. Again, three sets of SAZ shares were generated, one for elementary, one for middle and one for high schools.

4. Multiplying the population projections for the age groups 4-10, 11-13, and 14-17 per ISD (provided in Table D.2-1) by the elementary, middle and high school shares in step (3) provided a proxy for SAZ enrollment growth by grade level for 2010, 2015, and 2025. Adding this enrollment growth per SAZ to 2007-08 ISD school enrollment estimates provided individual SAZ total enrollment for 2010-11, 2015-16, and 2025-26.

In general, the greatest student impact is projected for the northwest, northeast and far east areas of the City of El Paso and proximate areas outside the city limits. Large projected increases in enrollment result in a decrease in available instructional space and will force PIDs to tackle capacity and financing issues. More detailed results on projected SAZ enrollment growth and their impact on individual school capacity as well as future capacity needs are provided in the following discussion.

School Attendance Zone Enrollment Forecasts: Primarily Impacted Districts

Tables **D.2-2** through **D.2-7** show school capacity, 2007-2008 enrollment, and enrollment forecasts for the 2010-11, 2015-16, and 2025-26 school years, and each table corresponds to one of El Paso County's PIDs. The tables also indicate whether a school is projected to be under capacity or over capacity for the forecast years. If a school is under capacity, then it has an excess of total instructional space. Note that negative values show that a school is projected to have enrollment greater than capacity for that year (see columns labeled Under/Over Capacity).

Table D.2-1. El Paso County Independent School Districts: School Enrollment Forecasts

ISD and School Level	2007- 2008 Enrollment*	ISD and School Level	Enrollment Projections by Age Group**		
			2010 – 2011	2015 – 2016	2025 – 2026
Anthony		**Anthony**			
PreK – 5th	391	Ages 4-10	497	601	1,067
6th – 8th	160	Ages 11-13	175	229	425
9th – 12th	226	Ages 14-17	257	271	528
Canutillo		**Canutillo**			
PreK – 5th	2,728	Ages 4-10	3,891	4,894	7,193
6th – 8th	1,247	Ages 11-13	1,526	2,077	3,197
9th – 12th	1,634	Ages 14-17	2,074	2,283	3,682
Clint		**Clint**			
PreK – 5th	5,347	Ages 4-10	6,141	7,031	8,980
6th – 8th	2,263	Ages 11-13	2,243	2,788	3,715
9th – 12th	2,861	Ages 14-17	2,941	2,956	4,128
El Paso		**El Paso**			
PreK – 5th	29,471	Ages 4-10	33,574	39,692	42,223
6th – 8th	13,634	Ages 11-13	13,302	16,973	18,930
9th – 12th	18,649	Ages 14-17	18,869	19,473	22,759
Fabens		**Fabens**			
PreK – 5th	1,205	Ages 4-10	1,374	1,504	1,692
6th – 8th	573	Ages 11-13	560	664	782
9th – 12th	726	Ages 14-17	735	706	871
San Elizario		**San Elizario**			
PreK – 5th	1,932	Ages 4-10	2,135	2,303	2,619
6th – 8th	825	Ages 11-13	787	923	1,095
9th – 12th	1,005	Ages 14-17	994	944	1,172
Socorro		**Socorro**			
PreK – 5th	18,329	Ages 4-10	21,335	24,442	28,490
6th – 8th	8,815	Ages 11-13	8,777	10,875	13,290
9th – 12th	11,503	Ages 14-17	11,878	11,904	15,244
Tornillo		**Tornillo**			
PreK – 5th	674	Ages 4-10	766	829	844
6th – 8th	276	Ages 11-13	272	322	341
9th – 12th	298	Ages 14-17	305	292	323
Ysleta		**Ysleta**			
PreK – 5th	20,800	Ages 4-10	22,608	24,163	26,358
6th – 8th	9,887	Ages 11-13	9,180	10,569	12,107
9th – 12th	13,841	Ages 14-17	13,328	12,411	14,897

Sources: 2007 – 2008 Enrollment from Texas Education Agency; Enrollment projections by age group from IPED, UTEP.

Also note that these values do not take into account classroom additions and/or new schools planned or under construction.

Based on the data presented in the tables below, three districts are anticipated to face capacity issues beyond 2010, particularly at the elementary school level: Canutillo, El Paso, and Socorro ISDs. In the following discussion each PID table is presented and major issues are summarized below each table. **Figures D.2-2** through **D.2-7** are provided to highlight key issues identified in Tables E.2-2 through E.2-7. Numbers in purple font indicate the anticipated remaining capacity for the respective school for the 2010-11 school year and numbers in maroon indicate corresponding values for the 2015-16 school year. Where appropriate, a green circle indicates the location of a planned school and its capacity (in black).

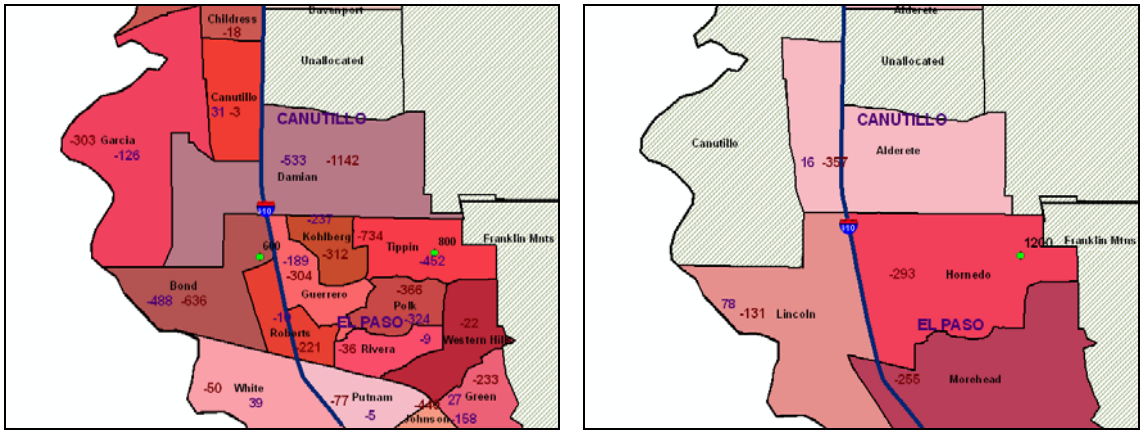
Table D.2-2. Canutillo Independent School District: School Capacity and Enrollment Forecasts

Schools by Level	Total Capacity	2007-2008 Enrollment	Enrollment Projections			Under / Over Capacity		
			2010 - 2011	2015 - 2016	2025 - 2026	2010	2015	2025
Elementary School Totals		**2,751**	**3,914**	**4,916**	**7,215**			
Damian	675	502	1,208	1,817	2,294	-533	-1,142	-1,619
Garcia	700	621	826	1,003	1,709	-126	-303	-1,009
Canutillo	750	678	719	753	895	31	-3	-145
Childress	675	504	606	693	1,122	69	-18	-447
Davenport	675	446	555	649	953	120	26	-278
Unallocated	650	-	0	0	242	-	-	-
Middle School Totals		**1,279**	**1,558**	**2,109**	**3,228**			
Alderete	800	595	784	1,157	1,519	16	-357	-719
Canutillo	1,100	684	774	952	1,591	326	148	-491
Unallocated	-	-	0	0	118	-	-	-
High School Totals		**1,598**	**2,038**	**2,247**	**3,645**			
Canutillo	1,800	1,598	2,038	2,247	3,498	-238	-447	-1,698
Unallocated	-	-	0	0	147	-	-	-

Sources: Total Capacity and 2007-2008 Enrollment from Canutillo ISD; Enrollment Projections from IPED, UTEP.
Notes: Over Capacity is denoted with negative values; " - " indicates unavailable data.

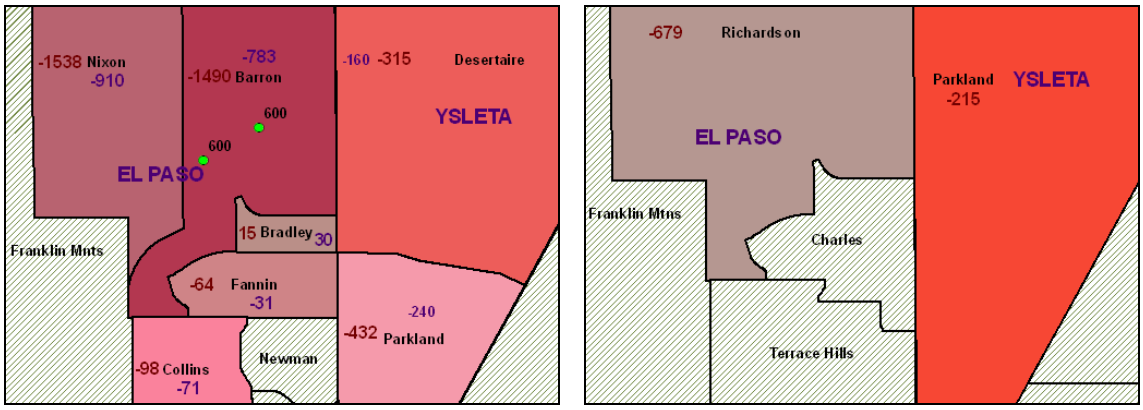
- Canutillo ISD is the smallest of the five PIDs. Most of the growth in Canutillo ISD is expected to occur at the elementary level. As shown in **Figure D.2-2**, two elementary schools are projected to face capacity issues for all forecast years: Damian and Garcia. While Canutillo ISD has plans to build a new elementary school east of I-10, the exact location and expected completion date remain unclear.
- Alderete Middle School is currently operating under capacity; however, by 2015-16, the school is anticipated to increase in enrollment surpassing its current capacity by more that 300.
- Canutillo High School faces similar capacity issues as Damian and Garcia for each forecast year. The remaining capacities for 2010-11 and 2015-16 are shown in Figure D.2-7.

- There is an area between Damian and Davenport Elementary Schools and east of I-10 in Canutillo that shows no population growth in the area until after 2015. This area, identified by the title "Unallocated" in Table D.2-2 and Figure D.2-2, is anticipated to increase by 242, 118, and 147 elementary, middle, and high school students, respectively, between 2015 and 2025. While current Canutillo boundary maps do not indicate which elementary and middle schools students in this area will attend, these numbers will most likely increase the need for additional instructional capacity at all levels.



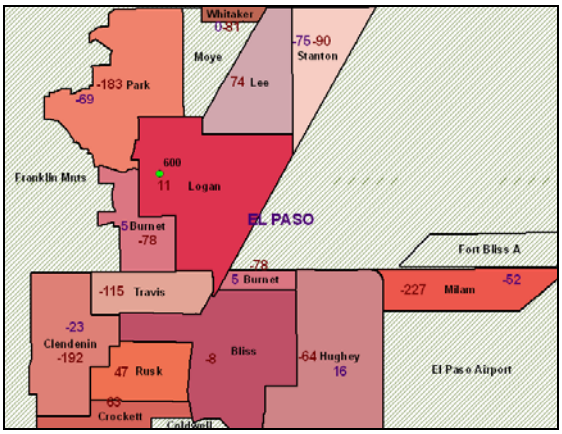
Elementary Schools Middle Schools

Figure D.2-2 – Forecasted remaining capacity: Canutillo ISD and NW El Paso ISD

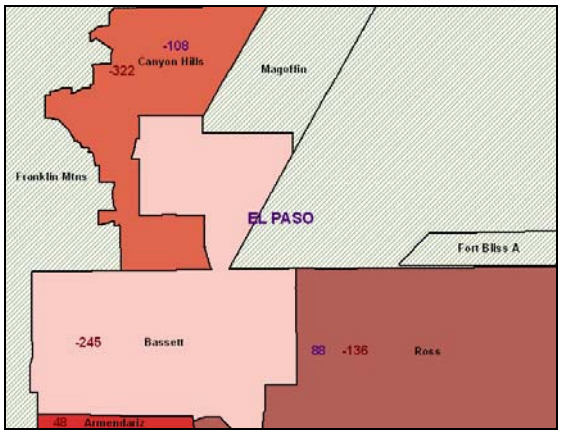


Elementary Schools Middle Schools

Figure D.2-3 – Forecasted remaining capacity: NE El Paso ISD and N Ysleta ISD

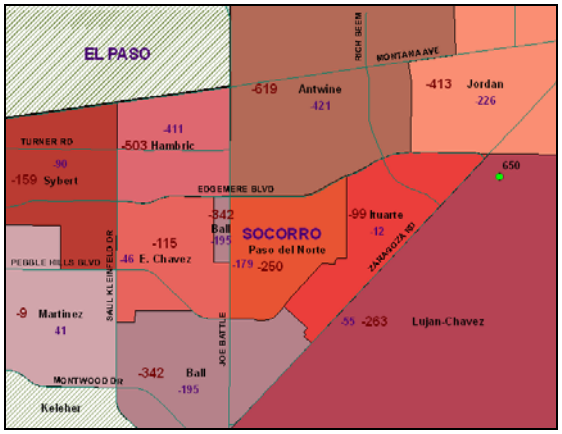


Elementary Schools

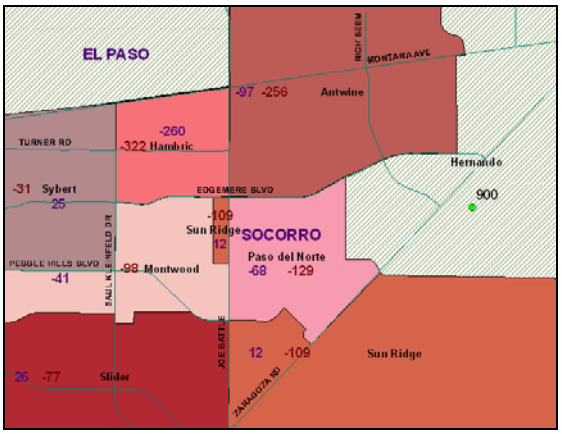


Middle Schools

Figure D.2-4 – Forecasted remaining capacity: NC El Paso ISD

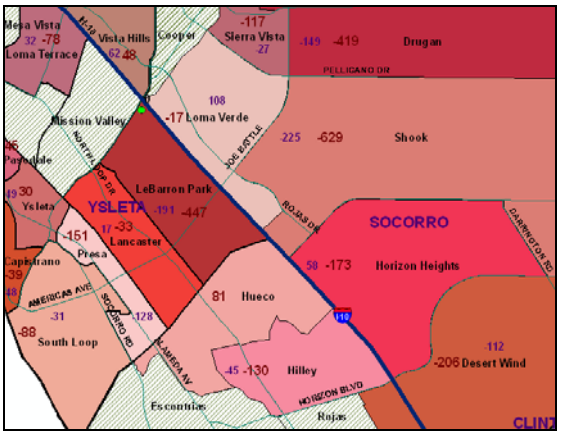


Elementary Schools

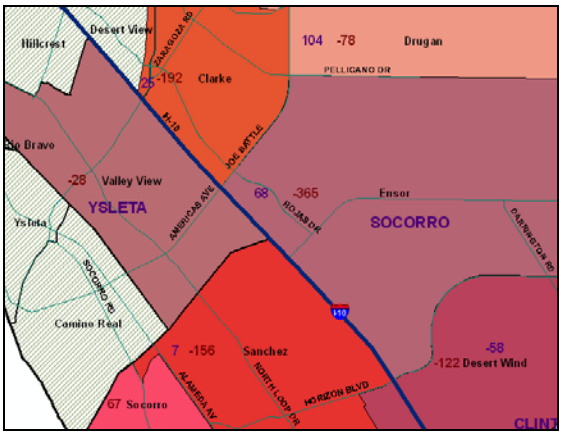


Middle Schools

Figure D.2-5 – Forecasted remaining capacity: N Socorro ISD

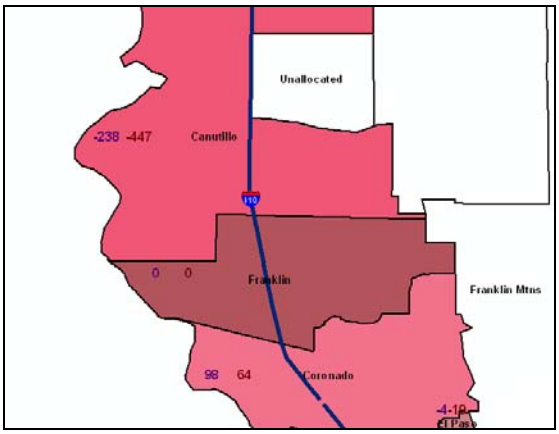


Elementary Schools

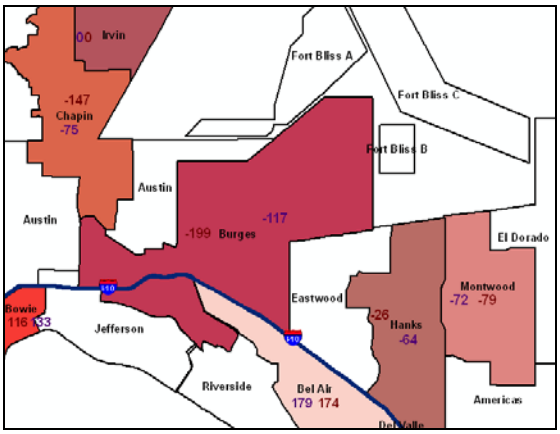


Middle Schools

Figure D.2-6 – Forecasted remaining capacity: E Ysleta ISD and S Socorro ISD



High Schools – NW El Paso



High Schools – Central El Paso

Figure D.2-7 – Forecasted remaining capacity: Canutillo ISD and NW El Paso ISD

Table D.2-3. El Paso Independent School District – School Capacity and Enrollment Forecasts

Schools by Level	Total Capacity	2007-2008 Enrollment	Enrollment Projections			Under / Over Capacity		
			2010 - 2011	2015 - 2016	2025 - 2026	2010	2015	2025
Elementary School Totals		**30,085**	**34,188**	**40,304**	**42,836**			
Nixon	578	739	1,488	2,116	2,818	-910	-1,538	-2,240
Barron	833	686	1,616	2,323	2,649	-783	-1,490	-1,816
Bond	493	807	981	1,129	1,263	-488	-636	-770
Tippin	782	862	1,234	1,516	1,615	-452	-734	-833
Polk	442	713	766	808	852	-324	-366	-410
Kohlberg	714	851	951	1,026	1,060	-237	-312	-346
Guerrero	731	829	920	1,035	1,084	-189	-304	-353
Johnson	697	722	855	1,137	1,230	-158	-440	-533
Stanton	510	572	585	600	601	-75	-90	-91
Collins	595	658	666	693	698	-71	-98	-103
Park	510	513	579	693	741	-69	-183	-231
Milam	459	506	511	686	686	-52	-227	-227
Fannin	680	668	711	744	746	-31	-64	-66
Clendenin	510	486	533	702	702	-23	-192	-192
Roberts	799	753	809	1,020	1,108	-10	-221	-309
Rivera	510	492	519	546	549	-9	-36	-39
Mesita	799	708	806	904	931	-7	-105	-132
Putnam	595	546	600	672	687	-5	-77	-92
Whitaker	629	593	629	710	708	0	-81	-79
Burnet	442	419	437	520	603	5	-78	-161
Hillside	697	640	690	764	765	7	-67	-68

Table D.2-3. El Paso Independent School District – School Capacity and Enrollment Forecasts *(Continued)*

Schools by Level	Total Capacity	2007-2008 Enrollment	Enrollment Projections			Under / Over Capacity		
			2010 - 2011	2015 - 2016	2025 - 2026	2010	2015	2025
Hughey	646	681	630	710	820	16	-64	-174
Bonham	357	335	335	338	339	22	19	18
Hart	612	558	588	635	641	24	-23	-29
Green	646	457	619	879	971	27	-233	-325
Bradley	459	409	429	444	444	30	15	15
White	748	596	709	798	846	39	-50	-98
Cielo Vista	374	300	305	332	346	69	42	28
Rusk	612	496	512	566	566	100	47	47
Lee	816	675	695	742	762	121	74	54
Clardy	782	649	660	684	697	122	98	85
Logan	646	507	522	635	637	124	11	9
Crockett	782	629	654	719	721	128	63	61
Dowell	561	423	433	468	469	128	94	92
Western Hills	714	491	583	736	816	131	-22	-102
Travis	612	461	478	727	727	134	-115	-115
Beall	629	463	484	516	516	145	113	113
Alta Vista	578	409	431	466	469	147	113	109
Schuster	374	217	225	252	253	149	122	121
Lamar	833	617	674	734	770	159	99	64
Crosby	765	598	603	619	620	162	146	145
Coldwell	612	408	441	484	486	171	128	126
Moye	799	597	626	690	713	174	109	86
Zavala	510	309	333	385	385	177	125	125
Hawkins	459	267	277	292	293	183	167	166
Newman	697	489	505	516	516	192	181	181
Moreno	629	358	386	425	433	243	204	196
Bliss	816	552	564	824	1,060	252	-8	-244
Douglass	748	471	482	510	510	266	238	238
Vilas	612	275	327	361	388	285	251	224
Aoy	901	573	588	607	626	313	295	275
Mac Arthur	1,054	739	739	745	747	315	309	307
Cooley	952	543	555	575	591	397	377	361
Burleson	833	411	424	454	459	409	379	374
Houston	901	359	384	414	420	517	487	481
Alamo	612	0	18	51	53	-	-	-
El Paso Airport	-	-	8	15	17	-	-	-
Fort Bliss A	-	-	73	220	220	-	-	-
Fort Bliss B	-	-	6	397	397	-	-	-
Fort Bliss C	-	-	0	0	0	-	-	-

Table D.2-3. El Paso Independent School District – School Capacity and Enrollment Forecasts *(Continued)*

Schools by Level	Total Capacity	2007-2008 Enrollment	Enrollment Projections			Under / Over Capacity		
			2010 - 2011	2015 - 2016	2025 - 2026	2010	2015	2025
Franklin Mnts	-	-	0	0	0	-	-	-
Middle School Totals		**11,769**	**11,443**	**15,273**	**17,229**			
Canyon Hills	810	930	918	1,132	1,249	-108	-322	-439
Wiggs	846	831	806	1,018	1,128	40	-172	-282
Hornedo	648	628	575	941	1,132	73	-293	-484
Lincoln	1,152	1,099	1,074	1,283	1,473	78	-131	-321
Ross	990	905	902	1,126	1,215	88	-136	-225
Charles	684	574	568	602	604	116	82	81
Richardson	810	823	687	1,489	2,283	123	-679	-1,473
Morehead	1,098	996	965	1,353	1,532	133	-255	-434
Armendariz	954	822	814	906	916	140	48	38
Magoffin	1,116	896	892	954	972	224	162	144
Guillen	1,134	917	909	1,005	1,030	225	129	104
Bassett	990	736	727	1,235	1,419	263	-245	-429
Henderson	1,206	949	943	1,028	1,057	263	178	149
Terrace Hills	954	663	661	700	705	293	255	249
Fort Bliss A	-	-	0	247	247	-	-	-
Fort Bliss B	-	-	0	234	234	-	-	-
Fort Bliss C	-	-	0	0	0	-	-	-
Franklin Mtns	-	-	0	0	0	-	-	-
Mac Arthur	-	-	0	21	35	-	-	-
High School Totals		**16,832**	**17,050**	**17,837**	**21,124**			
Franklin	2,787	3,000	3,045	3,132	3,719	-258	-345	-932
Chapin	1,653	1,763	1,770	1,852	2,330	-117	-199	-677
Coronado	2,223	2,272	2,298	2,551	2,908	-75	-328	-685
Andress	1,900	1,730	1,825	1,966	3,309	75	-66	-1,409
El Paso	1,330	1,216	1,232	1,266	1,451	98	64	-121
Burges	1,634	1,497	1,501	1,518	1,574	133	116	60
Austin	1,824	1,471	1,478	1,539	1,675	347	285	150
Irvin	2,128	1,609	1,616	1,644	1,703	513	484	425
Bowie	1,691	1,163	1,168	1,184	1,224	523	507	468
Jefferson	1,767	1,111	1,115	1,128	1,175	653	639	593
Fort Bliss A	-	-	4	19	19	-	-	-
Fort Bliss B	-	-	0	39	39	-	-	-
Fort Bliss C	-	-	0	0	0	-	-	-
Franklin Mtns	-	-	0	0	0	-	-	-

Sources: Total Capacity and 2007-2008 Enrollment from El Paso ISD ; Enrollment Projections from IPED, UTEP.
Notes: Over Capacity is denoted with negative values ; " - " indicates unavailable data.

- El Paso ISD is the county's largest school district with over 50 elementary schools and 10 high schools.
- For the 2007-08 school year, 18 schools operated beyond capacity. The district faces significant increases in enrollment in its North West and North East regions.
- Based on TAZ population estimates, the following schools are expected to have the largest increases in enrollment and subsequently face capacity issues: Nixon, Barron, Bond, and Tippin (see Figure D.2-2 and Figure D.2-3). While these schools are projected to face increased enrollments, four new elementary schools are currently under construction with three scheduled to open in August 2009 and one (Lundy) scheduled to open August 2010. These schools are represented by the green circles in Figure D.2-2 and Figure D.2-3 and their planned capacity is labeled in black. In the northwest two elementary schools, Herrera and Lundy, will increase elementary school capacity in the area by 1,400 instructional spaces. In the northeast, Tom Lea will add 600 and in central El Paso (Fort Bliss) Powell elementary will add 600.
- There are two areas in Fort Bliss that are expected to contribute to school enrollments. These areas are identified as "Fort Bliss A" (Aero Vista Neighborhood) and "Fort Bliss B" (future RCI Housing Development) in Table D.2-3. Note that these areas are expected to contribute more elementary and middle school children than high school students. El Paso ISD plans to build an additional elementary school with an anticipated capacity of 600 students. It will be located either in northeast El Paso or in Fort Bliss' planned residential development (Fort Bliss B).
- Elementary school capacity concerns will persist in 2015 and 2025 for approximately 50 percent of the sites. The remaining schools are projected to have excess capacity with 16 having surplus seats of 100 or more. **Figure D.2-8** summarizes this trend for El Paso ISD. While schools operating beyond capacity tend to be in high growth areas of El Paso County, central locations tend to contain schools that are operating under capacity. Figure D.2-8 also points out that while some schools that are operating under capacity may help to absorb students from neighboring schools operating beyond capacity, many schools are not suitably located to absorb capacity.
- A similar pattern emerges for middle schools in El Paso ISD. While only one school is projected to be over capacity in 2010, 57 percent will face this situation by 2015 and beyond. The remaining schools, on the other hand, will have surplus seats. Note that the District plans to open a new facility for Hornedo middle school that will increase its current capacity by 550 seats. This school is represented by the green circle in the right image of Figure D.2-2.
- By 2010, 30 percent of the District's high schools will face capacity issues. This situation worsens to 40 percent and 50 percent by 2015 and 2025 respectively. The shortages are expected to be significant by 2025. Figure D.2-7 shows three schools that are expected to face capacity issues by 2010: Chapin and Burges in central El Paso and Franklin in

northwest region of the city. The remaining schools, however, are projected to have large surpluses. The District is also planning a new school in northeast El Paso with a capacity for 1,200 students. The additional capacity should help to alleviate capacity concerns that Andress (the northernmost high school in the District) will face beyond 2015.

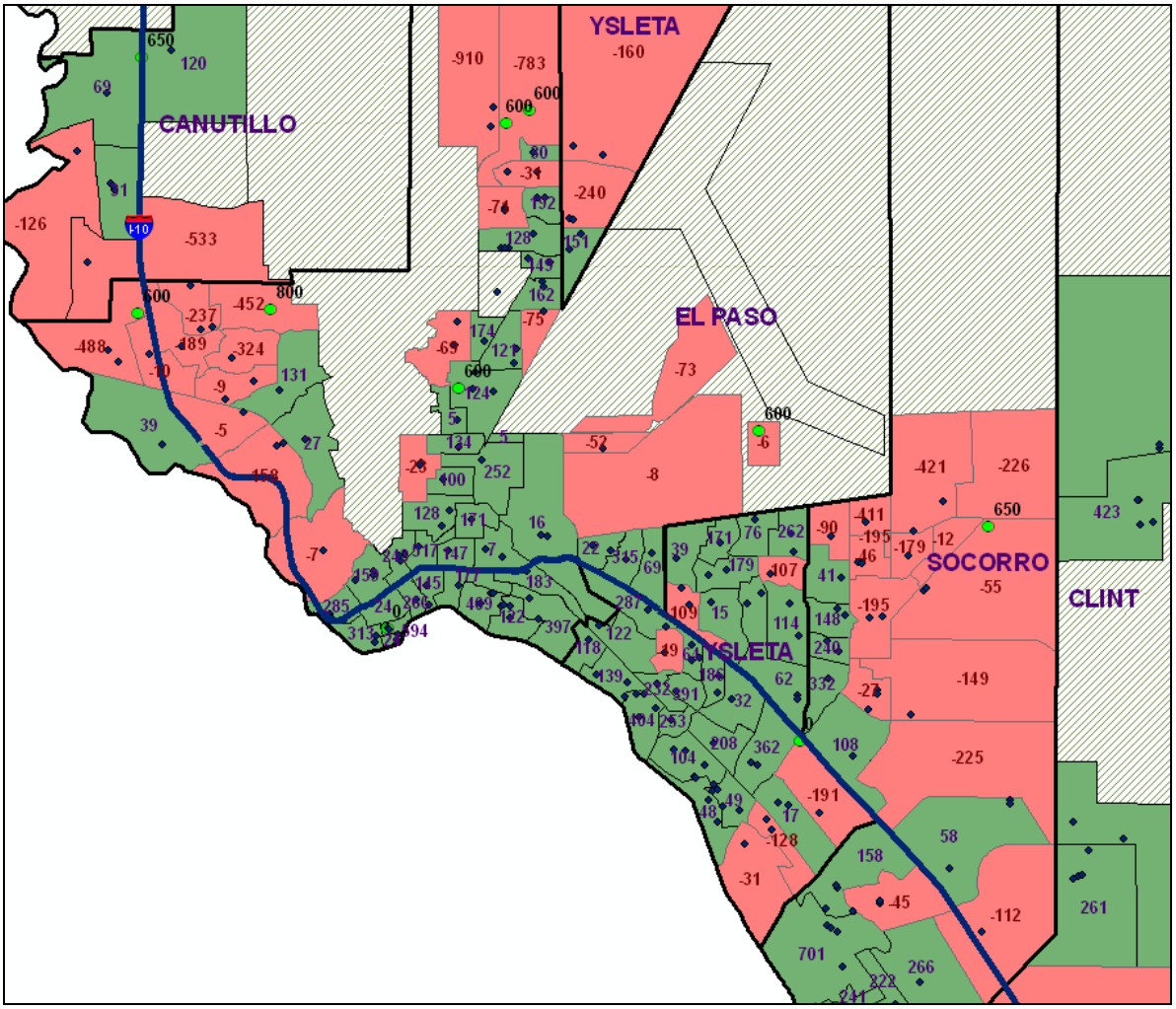


Figure D.2-8 – El Paso County PID elementary school operating capacities, 2007-08

Table D.2-4. Ysleta Independent School District: School Capacity and Enrollment Forecasts

Schools by Level	Total Capacity	2007-2008 Enrollment	Enrollment Projections			Under / Over Capacity		
			2010 - 2011	2015 - 2016	2025 - 2026	2010	2015	2025
Elementary School Totals		**21,889**	**23,697**	**25,250**	**27,445**			
Parkland	720	682	960	1,152	1,228	-240	-432	-508
LeBarron Park	1,080	1,055	1,271	1,527	1,998	-191	-447	-918

Table D.2-4. Ysleta Independent School District:
School Capacity and Enrollment Forecasts *(Continued)*

Schools by Level	Total Capacity	2007-2008 Enrollment	Enrollment Projections			Under / Over Capacity		
			2010 - 2011	2015 - 2016	2025 - 2026	2010	2015	2025
Desertaire	880	586	1,040	1,195	1,441	-160	-315	-561
Presa	450	498	578	601	654	-128	-151	-204
Eastwood Knolls	620	725	729	745	766	-109	-125	-146
Glen Cove	980	1,077	1,087	1,107	1,109	-107	-127	-129
South Loop	520	443	551	608	851	-31	-88	-331
Hacienda Heights	600	596	619	624	639	-19	-24	-39
Eastwood Heights	748	719	733	740	749	15	8	-1
Lancaster	850	659	834	883	1,067	17	-33	-217
Loma Terrace	1,000	857	968	1,078	1,237	32	-78	-237
Scotsdale	880	814	841	857	877	39	23	3
Capistrano	840	710	793	879	950	48	-39	-110
Ysleta	660	599	611	630	659	49	30	1
Vista Hills	836	718	774	789	802	62	48	34
Sageland	580	513	516	518	519	64	63	61
Washington	640	542	564	603	610	76	37	31
Pasodale	898	794	794	853	895	104	45	3
Tierra Del Sol	796	671	682	708	721	114	88	75
Ascarate	600	482	482	483	496	118	118	104
Ramona	500	375	378	380	382	122	120	118
Cedar Grove	792	651	653	654	657	139	138	135
Dolphin Terrace	875	721	724	743	752	151	132	123
Edgemere	960	785	789	792	802	171	168	159
Eastpoint	990	808	811	815	827	179	175	163
Mesa Vista	680	492	494	523	609	186	157	71
Marian Manor	814	559	606	700	832	208	114	-18
Hulbert	638	404	406	421	436	232	217	202
Cadwallader	600	345	347	369	387	253	231	213
Pebble Hills	1,232	943	971	1,015	1,022	262	217	210
Del Norte Heights	836	548	549	550	556	287	286	280
Mission Valley	940	570	578	680	778	362	260	162
North Loop	860	452	469	477	507	391	383	353
Thomas Manor	900	496	496	554	634	404	346	266
Middle School Totals		**6,494**	**5,787**	**7,176**	**8,715**			
Eastwood	850	832	805	864	919	45	-14	-69
Parkland	528	702	415	743	974	113	-215	-446
Ranchland Hills	638	410	400	407	422	238	232	216
Riverside	968	657	654	741	830	314	227	138
Desert View	924	619	593	629	647	331	295	277
Rio Bravo	800	381	381	439	466	419	361	334

Table D.2-4. Ysleta Independent School District: School Capacity and Enrollment Forecasts *(Continued)*

Schools by Level	Total Capacity	2007-2008 Enrollment	Enrollment Projections			Under / Over Capacity		
			2010 - 2011	2015 - 2016	2025 - 2026	2010	2015	2025
Valley View	900	655	481	928	1,549	419	-28	-649
Camino Real	1,078	680	607	678	884	471	400	194
Hillcrest	1,056	621	570	703	899	486	353	157
Indian Ridge	1,034	538	520	594	601	514	440	433
Ysleta	968	399	361	451	524	607	517	444
High School Totals		**12,847**	**12,334**	**11,417**	**13,903**			
Hanks	2,150	2,258	2,225	2,153	2,198	-75	-3	-48
Eastwood	2,090	2,173	2,154	2,116	2,202	-64	-26	-112
Ysleta	1,717	1,740	1,659	1,515	2,008	58	202	-291
Parkland	1,525	1,242	1,034	818	1,192	491	708	333
Del Valle	2,275	1,902	1,774	1,478	2,484	501	797	-209
Riverside	1,975	1,431	1,429	1,372	1,515	546	603	460
Bel Air	2,675	2,101	2,058	1,966	2,305	617	709	370

Sources: Total Capacity and 2007-2008 Enrollment from Ysleta ISD; Enrollment Projections from IPED, UTEP.
Note: Over Capacity is denoted with negative values.

- Ysleta ISD is the second largest district in El Paso County.
- More than 75 percent of the Ysleta ISD elementary schools are forecasted to be below capacity in 2010. Although enrollment is expected to increase, over 60 percent of the schools are projected to remain under capacity by 2025. On the other hand, Parkland, LeBarron, and Desertaire elementary schools are predicted to have critical capacity problems during the years presented. The District has plans to add a new elementary school in the northwest corner of the LeBarron Park SAZ. While the District has approved the name of the school, Del Valle Elementary, neither the capacity nor projected opening date have been specified.
- All middle schools in the district are reported to be below capacity in 2010. By 2025, approximately 30 percent of these schools are projected to face capacity issues. The remaining 70 percent will continue to have a surplus of seats.
- Only Hanks and Eastwood high schools are anticipated to be overcapacity by 2010; however, the expected enrollment increases will cause capacity problems in nearly 60 percent of the high schools in the district by 2025.

Table D.2-5. Socorro Independent School District: School Capacity and Enrollment Forecasts

Schools by Level	Total Capacity	2007-2008 Enrollment	Enrollment Projections			Under / Over Capacity		
			2010 - 2011	2015 - 2016	2025 - 2026	2010	2015	2025
Elementary School Totals		**14,097**	**16,069**	**18,331**	**21,247**			
Jordan	600	568	826	1,013	1,424	-226	-413	-824
Shook	660	627	885	1,289	1,753	-225	-629	-1,093
Ball	990	949	1,185	1,332	1,472	-195	-342	-482
Lujan-Chavez	1,300	1,125	1,355	1,563	2,058	-55	-263	-758
E. Chavez	1,162	1,098	1,208	1,277	1,315	-46	-115	-153
Hilley	776	778	821	906	1,004	-45	-130	-228
Sierra Vista	1,012	991	1,039	1,129	1,218	-27	-117	-206
Ituarte	900	777	912	999	1,140	-12	-99	-240
Martinez	792	671	751	801	879	41	-9	-87
Horizon Heights	968	790	910	1,141	1,452	58	-173	-484
Loma Verde	1,088	881	980	1,105	1,136	108	-17	-48
Keleher	990	804	842	865	928	148	125	62
Hueco	836	620	678	755	923	158	81	-87
Vista Del Sol	880	616	640	655	677	240	225	203
Campestre	924	634	683	762	803	241	162	121
Rojas	880	560	614	711	765	266	169	115
Cooper	1,012	658	681	780	834	332	232	178
Escontrias	1,760	950	1,059	1,249	1,466	701	511	294
Middle School Totals		**5,780**	**5,761**	**7,193**	**8,838**			
Montwood	825	868	866	923	959	-41	-98	-134
Sanchez	850	845	843	1,006	1,199	7	-156	-349
Sun Ridge	900	891	888	1,009	1,210	12	-109	-310
Clarke	900	877	875	1,092	1,209	25	-192	-309
Slider	975	952	949	1,052	1,170	26	-77	-195
Ensor	775	712	707	1,140	1,602	68	-365	-827
Socorro	850	635	633	783	919	217	67	-69
Hernando	900	0	0	188	569	900	712	331
PK-8 School Totals		**7,535**	**8,554**	**10,060**	**11,963**			
Antwine	900	1,002	1,317	1,673	2,384	-417	-773	-1,484
Hambric	1,269	1,531	1,678	1,833	1,984	-409	-564	-715
Paso del Norte	1,250	1,320	1,428	1,559	1,692	-178	-309	-442
Drugan	900	799	1,046	1,499	2,018	-146	-599	-1,118
Desert Wind	916	975	1,027	1,184	1,196	-111	-268	-280
Sybert	1,300	1,277	1,388	1,513	1,812	-88	-213	-512
Serna	894	631	671	800	878	223	94	16

Table D.2-5. Socorro Independent School District: School Capacity and Enrollment Forecasts *(Continued)*

Schools by Level	Total Capacity	2007-2008 Enrollment	Enrollment Projections			Under / Over Capacity		
			2010 - 2011	2015 - 2016	2025 - 2026	2010	2015	2025
High School Totals		**11,411**	**11,786**	**11,812**	**15,152**			
El Dorado	3,150	3,066	3,222	3,229	4,600	-72	-79	-1,450
Socorro	3,050	2,820	2,871	2,877	3,391	179	174	-341
Montwood	3,025	2,612	2,677	2,680	3,065	348	345	-40
Americas	3,375	2,913	3,016	3,026	4,096	360	349	-721

Sources: Total Capacity and 2007-2008 Enrollment from Socorro ISD; Enrollment Projections from IPED, UTEP.
Note: Over Capacity is denoted with negative values.

- Socorro ISD is the third largest district in the county. For the projected years, the district is facing capacity issues at all levels.
- Six out of the seven PK-8 schools are forecast to experience significant student capacity problems in 2010, 2015, and 2025. This excess in capacity is estimated to be mainly attributable to elementary student enrollments in the north side of the district. However, Vista del Sol and Escontrias elementary schools are projected to have a remaining capacity of more than 200 students by 2025. A new elementary school, Jordan Elementary school, opened in July 2009, however, this school will simply shift students from a temporary site and will not add capacity beyond current capacity.
- By 2010 most middle schools are projected to have excess capacity although one-half of them will be close to capacity. By 2015 and 2025, 75 percent and 87 percent, respectively, will face capacity problems. A new middle school, Hernando, opened to middle school students in July 2009 and added 900 seats to help alleviate capacity issues in the El Dorado Cluster of the District.
- With the exception of El Dorado High, all high schools in the Socorro district are estimated to be below capacity for the next 6 years. On the other hand, this trend is reversed by 2025. Two new high schools are planned: one is scheduled to open as a 9th grade campus, Pebble Hills, with a capacity of 1,200. The district plans to transition the school to a full fledged high school as part of their up coming bond proposal. A second high school (Eastlake) is planned west of Horizon City with an anticipated capacity of 1,200. This high school puts the District in a good position to handle high school enrollment increases through the planning period in the District's central region.

Table D.2-6. Clint Independent School District: School Capacity and Enrollment Forecasts

Schools by Level	Total Capacity	2007-2008 Enrollment	Enrollment Projections			Under / Over Capacity		
			2010 - 2011	2015 - 2016	2025 - 2026	2010	2015	2025
Elementary School Totals		**4,580**	**5,374**	**6,264**	**8,213**			
Surratt	1,102	864	1,114	1,360	1,746	-12	-258	-644
Red Sands	1,254	867	1,045	1,298	1,987	209	-44	-733
Macias	1,496	1,147	1,235	1,315	1,360	261	181	137
Desert Hills	1,518	937	1,139	1,309	1,668	379	209	-150
Montana Vista	1,264	765	841	984	1,453	423	280	-189
Middle School Totals		**2,249**	**2,229**	**2,774**	**3,701**			
Clint Junior High	575	410	404	554	738	171	21	-163
Horizon	1,428	1,108	1,101	1,253	1,445	328	175	-17
East Montana	1,500	731	725	967	1,518	775	533	-18
High School Totals		**2,754**	**2,833**	**2,849**	**4,021**			
Horizon	1,650	1,258	1,287	1,291	1,535	363	359	116
Mountain View	1,367	956	981	988	1,685	386	379	-318
Clint	1,154	540	565	569	801	589	585	353

Sources: Total Capacity and 2007-2008 Enrollment from Clint ISD; Enrollment Projections from IPED, UTEP.
Note: Over Capacity is denoted with negative values.

- Clint is one of the smallest PIDs in El Paso County; however, Clint is well positioned to handle increased enrollments at all levels for the foreseeable future.
- The projected enrollment growth in the Clint ISD indicates that no severe capacity problems are expected to occur by 2010. With the exception of Surratt Elementary, all schools in the district are estimated to have a remaining capacity of 170 or more students.
- As school enrollment continues to increase, most of the elementary schools and all of the middle schools are forecasted to be overcapacity in the district by 2025. This trend is also forecast to take place in Mountain View High School.
- Currently, there are two planned schools for the district. One is a high school that will replace Clint High School and the other is a middle school. At present, the new high school's impact on capacity and the completion date of both schools are unknown.

School Attendance Zone Enrollment Forecasts: Non-Primarily Impacted Districts

- The four smallest ISDs in El Paso County are Anthony, Fabens, San Elizario and Tornillo. Enrollment information for each was unavailable for this analysis. While this information was not available, based on TAZ projections, we can determine projected increases in enrollment, as shown in Table D.2-7 for each district.

- Anthony ISD is predicted to increase at a higher rate than other non-Primary PIDs at all education levels (elementary, middle and high) and for practically all years presented.
- In general, elementary enrollments in the non-PIDs are shown to increase the most. San Elizario is the leading district with an estimated increase in elementary students of more than 200 in 2010.

Table D.2-7. Anthony, Fabens, San Elizario, and Tornillo Independent School Districts: School Capacity and Enrollment Forecasts

Schools by Level	Total Capacity	2007-2008 Enrollment	Enrollment Projections			Under / Over Capacity		
			2010 - 2011	2015 - 2016	2025 - 2026	2010	2015	2025
Elementary School Totals		**4,202**	**4,772**	**5,237**	**6,222**			
Anthony	-	391	497	601	1,067	-	-	-
Fabens	-	1,205	1,373	1,504	1,692	-	-	-
San Elizario	-	1,932	2,135	2,303	2,619	-	-	-
Tornillo	-	674	767	829	844	-	-	-
Middle School Totals		**1,834**	**1,784**	**2,182**	**2,786**			
Anthony	-	160	175	229	425	-	-	-
Fabens	-	573	560	664	782	-	-	-
San Elizario	-	825	787	924	1,095	-	-	-
Tornillo	-	276	262	366	484	-	-	-
High School Totals		**2,255**	**2,291**	**2,212**	**2,895**			
Anthony	-	226	257	271	528	-	-	-
Fabens	-	726	735	706	871	-	-	-
San Elizario	-	1,005	994	944	1,173	-	-	-
Tornillo	-	298	305	292	323	-	-	-

Sources: 2007-2008 Enrollment from the Texas Education Agency; Enrollment Projections from IPED, UTEP.
Note: " – " indicates unavailable data.

- The middle schools in most of these districts are anticipated to decrease slightly by 2010 affecting to some extent high school enrollment estimates five years later.

School Attendance Zone Enrollment Forecasts: Recommendations

There are three ways to solve overcrowding issues related to population growth: shift students from one SAZ to another, add classroom capacity at a school, or build a new school. The cost to implement each method increases as the level increases. The following recommendations are based on these three levels.

- At present, one additional classroom costs $130,000 on average.[5]

[5] Interview with William Wachtel, Senior Resource Analyst, El Paso ISD.

- Pursuing the possibility of joint facilities between UTEP/El Paso ISD and EPCC/El Paso ISD in the northeast part of El Paso will promote both instructional and operational efficiencies.
- The areas to target for capital improvements and new staff are indicated in Figure D.2-8. The targeted districts include Canutillo, El Paso, Ysleta, and Socorro ISD. The areas to focus on are high growth areas of each district that are at the frontiers of El Paso's city limits, specifically, northwest, far northeast, and far east El Paso. Should the Army proceed with plans for the RCI housing development, capital investment in this area may also be needed.
- Where appropriate shift redefine school zones to take advantage of schools with surplus capacity to help alleviate neighboring schools that are experiencing capacity issues. The most likely candidates for this solution are identified in Figure D.2-8 for schools in green (surplus capacity) that are adjacent to schools in the same district that are shown in red (exceeding capacity).

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Appendix D3

Econometric Models of Higher Education

Table D3-1. UTEP Fall Enrollment Model

Variable	Coefficient	t-Statistic	Probability
Constant term	0.006	1.130	0.271
UTEP Fall Enrollment (-1))	0.251	1.987	0.060
UTEP Fall Tuition	-0.071	-2.721	0.013
NMSU Fall Tuition (-1)	0.456	4.059	0.001
Exchange Rate	-0.061	-3.846	0.001
El Paso Unemployment Rate (-1)	0.071	2.697	0.014
El Paso County Population	0.417	1.439	0.165
MA(5)	-0.950	-21.33	0.000
R-squared	0.837	**F-statistic**	15.410
Adjusted R-squared	0.783	**Prob. of F-stat.**	0.000
Durbin-Watson stat.	2.203		

Source: Institute for Policy and Economic Development
Notes: Sample period is from 1975 to 2008.
MA(*X*) refers to a moving average term and variables' lagged periods are in parentheses.

Table D3-2. EPCC Fall Enrollment Model

Variable	Coefficient	t-Statistic	Probability
Constant term	0.001	0.065	0.949
EPCC Fall Enrollment (-1)	0.573	3.311	0.004
EPCC Fall Tuition (-3)	-0.296	-3.725	0.002
UTEP Spring Tuition (-2)	0.101	1.784	0.093
NNMS Fall Tuition (-1)	0.530	2.201	0.043
Exchange Rate (-2)	-0.036	-1.115	0.281
El Paso County Population (-1)	0.398	0.279	0.784
El Paso Unemployment Rate	0.390	3.637	0.002
AR(5)	0.470	3.534	0.003
R-squared	0.672	**F-statistic**	4.103
Adjusted R-squared	0.508	**Prob. of F-stat.**	0.008
Durbin-Watson stat.	2.479		

Source: Institute for Policy and Economic Development
Notes: Sample period is from 1975 to 2007.
AR(*X*) refers to an autoregressive term and variables' lagged periods are in parentheses.

Table D3-3. NMSU Fall Enrollment Model

Variable	Coefficient	t-Statistic	Probability
Constant term	0.000	-0.025	0.980
NMSU Fall Enrollment (-1)	0.163	0.827	0.419
NNMS Fall Tuition	-0.175	-1.841	0.081
UTEP Spring Tuition (-1)	0.058	2.081	0.051
Exchange Rate (-6)	-0.024	-1.745	0.097
UTEP Fall Enrollment	0.440	3.452	0.003
Dona Ana County Population (-1)	0.542	1.030	0.316
MA(5)	0.852	7.495	0.000
R-squared	0.692	**F-statistic**	6.108
Adjusted R-squared	0.579	**Prob. of F-stat.**	0.001
Durbin-Watson stat.	2.019		

Source: Institute for Policy and Economic Development
Notes: Sample period is from 1975 to 2008.
MA(*X*) refers to a moving average term and variables' lagged periods are in parentheses.

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EL PASO REGIONAL GROWTH MANAGEMENT PLAN

Appendix E

Quality of Life Data

Use of the Index

The quality of life index is not a single index; instead, it is four separate indices targeting four areas – business, residence, tourism, and governance. A single index was not created because these four areas have different purposes. For example, a business index focuses on factors that help attract businesses to the region and assist businesses already in the region. In contrast, a residence index includes factors that affect the day-to-day living in the region. Of course, some factors are included in more than one index because they affect more than one area. An example would be crime-related factors, which affect both residents living in and the governments of the region.

Each of the indices were developed for thirty five cities from western, mountain, and southwestern states. For this study, the cities geographically closest to El Paso – Albuquerque, Austin, Las Cruces, Midland, Phoenix, San Antonio, Santa Fe, and Tucson[1] – were compared with El Paso. These cities and the overall regional average were then ranked against each other in the various factors that comprise the four indices.

Overall, El Paso performs poorly for the Business index compared to regional cities mostly due to low median family income. For the residential index, El Paso is average, performs well on cost of living (including housing) and crime, but below average on academic achievement levels. El Paso also rates average as a tourist destination and governance (defined mostly by community services).

The four indices that comprise the quality of life index can be a useful tool to help decision makers improve the El Paso area's quality of life. In an area frequently constrained by limited resources, it can be difficult to decide where those resources should be allocated. The quality of life index can help identify variables that, if improved, can go a long way to improving overall quality of life for a given city.

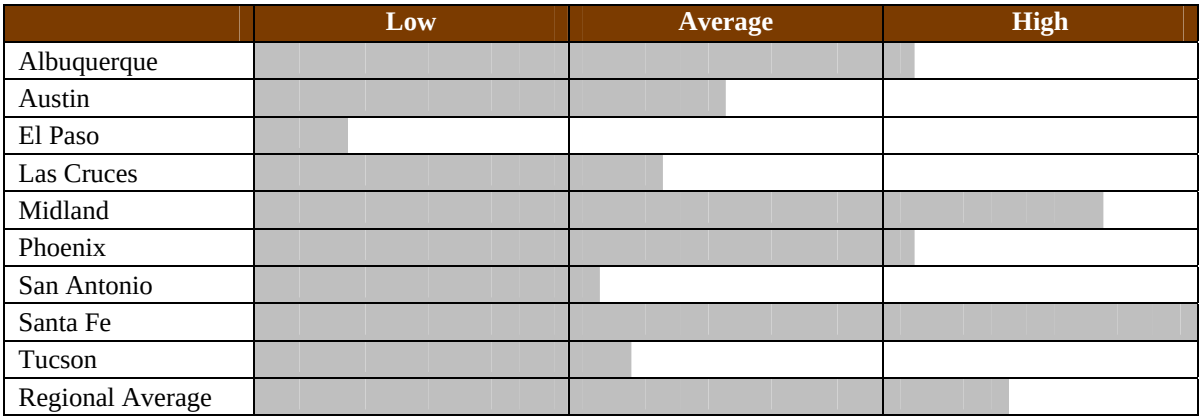
To illustrate, the index identifies a few variables that can better El Paso's quality of life. Median family income and the percent of the population 25 years and over that has a four-year college degree are two of the variables included in the Business Index. If these two variables are raised to the regional average, El Paso will improve its Business Index ranking from tenth (out of ten) to seventh. Similarly, two education-related variables – average SAT score and average ACT score – if raised can considerably improve El Paso's ranking in both the Residence Index and the Governance Index.

[1] Mesa, AZ – another city included in the regional index – was purposefully left out of the comparison cities because it is a sister city to Phoenix, AZ.

Business Index

The Business Index is composed of seven variables: median family income, average total federal tax burden by household, percent of the college-aged and older population that is a college graduate, percent growth of persons employed against the 18 to 64 year-old population from 2000-2007, amount of Small Business Administration (SBA) loans per capita, taxable retail sales per capita, and enrollment at institutions of higher education. As seen in **Table E-1 - Table E-3**, El Paso ranks last in the Business Index when compared to cities of similar size in the region. This is largely due to El Paso having the lowest median family income and the smallest percent of the college-aged population that is a college graduate.

Table E-1. Business Index Composite Score



Sources: U.S. Census Bureau, The Tax Foundation, Bureau of Labor Statistics, Federal Financial Institutions Examination Council, State Revenue Agencies, U.S. Dept. of Education.

Table E-2. Quality of Life Business Index

Variables	Albuquerque	Austin	El Paso	Las Cruces	Midland	Phoenix	San Antonio	Santa Fe	Tucson	Regional Average
Median Family Income ($)	56,062	63,116	40,558	45,558	59,976	54,164	50,285	60,796	46,269	54,804
Average Total Federal Tax Burden by Household ($)	13,994	19,319	10,813	9,417	16,217	17,341	15,235	18,356	12,365	17,782
College Graduates (25 and over) (%)	31.6	42.5	21.1	28.4	28.8	23.5	23.2	42.0	24.9	27.5
Growth of Persons Employed, 2000-07 (%)	-3.1	-9.4	-0.4	-4.0	9.7	6.9	-0.6	20.4	2.7	0.1
Amount of SBA Loans (per capita) ($)	1,191	1,131	733	603	1,306	1,204	883	1,566	860	1,154

Table E-2. Quality of Life Business Index *(Continued)*

Variables	Albuquerque	Austin	El Paso	Las Cruces	Midland	Phoenix	San Antonio	Santa Fe	Tucson	Regional Average
Taxable Retail Sales (per capita) ($)	8,638	8,256	5,525	9,030	9,193	6,094	6,376	16,069	2,787	12,009
College Enrollment (#)	58,391	124,439	71,514	70,627	17,326	458,369	126,262	19,019	75,041	264,160

Sources: U.S. Census Bureau, The Tax Foundation, Bureau of Labor Statistics, Federal Financial Institutions Examination Council, State Revenue Agencies, U.S. Department of Education

Table E-3. Quality of Life Business Index City Rankings

Variables	Albuquerque	Austin	El Paso	Las Cruces	Midland	Phoenix	San Antonio	Santa Fe	Tucson	Regional Average
Median Family Income	4	1	10	9	3	6	7	2	8	5
Average Total Federal Tax Burden	4	10	2	1	6	7	5	9	3	8
College Graduates (25 and over)	3	1	10	5	4	8	9	2	7	6
Growth of Persons Employed, 2000-07	8	10	6	9	2	3	7	1	4	5
Amount of SBA Loans (per capita)	4	6	9	10	2	3	7	1	4	5
Taxable Retail Sales (per capita)	5	6	9	4	3	8	7	1	10	2
College Enrollment (#)	8	6	9	4	3	8	7	1	10	2
Composite	36	40	55	42	23	43	49	17	46	33
Rank	**4**	**5**	**10**	**6**	**2**	**7**	**9**	**1**	**8**	**3**

Sources: U.S. Census Bureau, The Tax Foundation, Bureau of Labor Statistics, Federal Financial Institutions Examination Council, State Revenue Agencies, U.S. Department of Education.

Note: Composite scores are the sum of rankings for each index variable, with 10 being the least favorable condition and 1 being the most favorable condition. The lowest composite score earns an overall ranking of 1 (or first place) and the highest composite score the lowest overall ranking of 10 (or tenth place).

Residence Index

The Residence Index is composed of eleven variables: ACCRA Cost of Living Index (COLI), median monthly housing costs of occupied housing units, percent of "good" days in the Air Quality Index, violent crimes per 1,000 residents, property crimes per 1,000 residents, mean travel time to work, percent of days with sunshine, average SAT score, average ACT score, percent of the population 25 years and older that has a four-year college degree, and park acres per 1,000 residents. As indicated in **Table E-4 - Table E-6,** El Paso ranks average in the Residence Index. El Paso ranks well in the COLI, housing costs, and violent and property crimes per 1,000 residents. Conversely, El Paso ranks poorly in the Air Quality Index, average SAT and ACT scores, and the population 25 years and older that has a four-year college degree.

Table E-4. Residence Index Composite Score

	Low	Average	High
Albuquerque			
Austin			
El Paso			
Las Cruces			
Midland			
Phoenix			
San Antonio			
Santa Fe			
Tucson			
Regional Average			

Sources: C2ER, U.S. Census Bureau, Environmental Protection Agency, Federal Bureau of Investigation, National Climatic Data Center, State Education Agencies, The Trust for Public Land.

Table E-5. Quality of Life Residence Index

Variables	Albuquerque	Austin	El Paso	Las Cruces	Midland	Phoenix	San Antonio	Santa Fe	Tucson	Regional Average
ACCRA COLI (#)	96.8	95.6	92.6	102.9	93.3	101.2	95.6	112.2	99.7	110.8
Median Monthly Housing Costs ($)	830	954	666	696	806	1,059	780	999	474	996
Air Quality Index (% of "Good" days)	49.7	86.2	41.4	49.3	94.8	17.5	77.5	95.3	65.8	59.5
Violent Crimes (per 1,000) (#)	9.9	5.4	4.2	5.0	3.3	7.2	5.6	5.9	7.8	6.9
Property Crimes (per 1,000) (#)	57.1	63.4	32.0	48.6	35.6	58.3	63.9	59.4	62.8	48.9
Mean Travel Time to Work (minutes)	21.2	23.1	21.9	17.3	16.5	25.7	23.8	17.8	21.4	23.2

Table E-5. Quality of Life Residence Index *(Continued)*

Variables	Albuquerque	Austin	El Paso	Las Cruces	Midland	Phoenix	San Antonio	Santa Fe	Tucson	Regional Average
Percent of Daytime with Sunshine (%)	76.0	60.0	84.0	84.0	74.0	85.0	60.0	76.0	85.0	70.6
Average SAT Score (#)	1,105	1,073	870	1,074	1,047	1,044	954	1,019	1,044	994
Average ACT Score (#)	21.0	22.6	18.0	20.3	21.9	21.9	19.5	19.9	22.9	20.1
College Graduates (25 and over)	31.6	42.5	21.1	28.4	28.8	23.5	23.2	42.0	24.9	27.5
Park Acres (per 1,000) (#)	67.7	37.5	45.1	28.3	28.3	25.2	16.0	28.3	6.2	20.2

Sources: U.S. Census Bureau, U.S. Environmental Protection Agency, Federal Bureau of Investigation, National Climatic Data Center, State Education Agencies, The Trust for Public Land

Table E-6. Quality of Life Residence Index City Rankings

Variables	Albuquerque	Austin	El Paso	Las Cruces	Midland	Phoenix	San Antonio	Santa Fe	Tucson	Regional Average
ACCRA COLI	5	3	1	8	2	7	3	10	6	9
Median Monthly Housing Costs	6	7	1	2	5	10	4	9	3	8
Air Quality Index (% of "Good" days)	7	3	9	8	2	10	4	1	5	6
Violent Crimes (per 1,000)	10	4	2	3	1	8	5	6	9	7
Property Crimes (per 1,000)	5	9	1	3	2	6	10	7	8	4
Mean Travel Time to Work (minutes)	4	7	6	2	1	10	9	3	5	8
Percent of Daytime with Sunshine	5	9	3	3	7	1	9	5	1	8
Average SAT Score	1	3	10	2	4	5	9	7	5	8
Average ACT Score	5	2	10	6	3	3	9	8	1	7
College Graduates (25 and over)	3	1	10	5	4	8	9	2	7	6
Park Acres (per 1,000)	1	3	2	4	4	7	9	4	10	8
Composite	52	51	55	46	35	75	80	62	60	79
Rank	**4**	**3**	**5**	**2**	**1**	**8**	**10**	**7**	**6**	**9**

Note: Composite scores are the sum of rankings for each index variable, with 10 being the least favorable condition and 1 being the most favorable condition. The lowest composite score earns an overall ranking of 1 (or first place) and the highest composite score the lowest overall ranking of 10 (or tenth place).

Tourism Index

The Tourism Index is composed of eight variables: American Association of Museums accredited museums within the city, Association of Zoos and Aquariums accredited zoos within forty miles, public golf courses within thirty miles, ski resorts within 150 miles, national parks within 200 miles, state parks within 200 miles, average July high temperature, and average January low temperature.[2] As shown in **Table E-7 - Table E-9**, El Paso ranks low-average in the Tourism Index. El Paso ranks toward the low end for American Association of Museums-accredited museums, public golf courses, and state parks. In contrast, El Paso ranks toward the high end for average July high temperature.

Table E-7. Tourism Index Composite Score

	Low	Average	High
Albuquerque			
Austin			
El Paso			
Las Cruces			
Midland			
Phoenix			
San Antonio			
Santa Fe			
Tucson			
Regional Average			

Sources: American Association of Museums, Association of Zoos and Aquariums, golflink.com, skiresortguide.com, U.S. Dept. of the Interior, UTEP's Regional Geospatial Modeling Center, National Climatic Data Center.

Table E-8. Quality of Life Tourism Index

Variables	Albuquerque	Austin	El Paso	Las Cruces	Midland	Phoenix	San Antonio	Santa Fe	Tucson	Regional Average
AAM Museums (within city) (#)	3	1	1	0	2	4	3	3	4	2
AZA Zoos (within 40 miles) (#)	1	0	1	0	0	2	2	0	2	2
Public Golf Courses (within 30 miles) (#)	21	31	8	4	8	150	36	9	34	48
Ski Resorts (within 150 miles) (#)	4	0	1	1	0	2	0	7	1	3
National Parks	21	4	9	10	6	18	4	17	13	9

[2] It is recommended that the City of El Paso include variables relating to hotel data. This data can be accessed by the city, which has a subscription to the relevant fee-based database.

Table E-8. Quality of Life Tourism Index *(Continued)*

Variables	Albuquerque	Austin	El Paso	Las Cruces	Midland	Phoenix	San Antonio	Santa Fe	Tucson	Regional Average
(within 200 miles) (#)										
State Parks (within 200 miles) (#)	27	64	15	17	16	13	50	29	10	54
Average Minimum Temperature January 2008 (degrees)	22.7	34.2	34.0	31.9	28.0	45.0	40.5	13.8	39.8	37.3
Average Minimum Temperature July 2008 (degrees)	87.7	97.2	90.7	90.2	92.7	105.7	94.3	84.2	96.9	90.8

Sources: American Association of Museums, Association of Zoos and Aquariums, Golflink.com, skiresortguide.com, U.S. Department of the Interior, UTEP's Regional Geospatial Modeling Center, National Climatic Data Center

Table E-9. Quality of Life Tourism Index City Rankings

Variables	Albuquerque	Austin	El Paso	Las Cruces	Midland	Phoenix	San Antonio	Santa Fe	Tucson	Regional Average
AAM Museums (within city)	3	8	8	10	7	1	3	3	1	6
AZA Zoos (within 40 miles)	5	7	5	7	7	1	1	7	1	4
Public Golf Courses (within 30 miles)	6	5	8	10	8	1	3	7	4	2
Ski Resorts (within 150 miles)	2	8	5	5	8	4	8	1	5	3
National Parks (within 200 miles)	1	9	7	5	8	2	9	3	4	6
State Parks (within 200 miles)	5	1	8	6	7	8	3	4	10	2
Average Minimum Temperature January 2008 (degrees)	9	5	6	7	8	1	2	10	3	4
Average Minimum Temperature July 2008 (degrees)	2	9	4	3	6	10	7	1	8	5
Composite	33	52	51	53	59	28	36	36	36	32
Rank	**3**	**8**	**7**	**9**	**10**	**1**	**4**	**4**	**4**	**2**

Note: Composite scores are the sum of rankings for each index variable, with 10 being the least favorable condition and 1 being the most favorable condition. The lowest composite score earns an overall ranking of 1 (or first place) and the highest composite score the lowest overall ranking of 10 (or tenth place).

Governance Index

The Governance Index is composed of nine variables: hospital beds per 1,000 residents, average SAT score, average ACT score, violent crimes per 1,000 residents, property crimes per 1,000 residents, public library systems per 100,000 residents, Energy Star buildings per 100,000 residents, carbon footprint, and public transit vehicle revenue hours. As provided for in **Table E-10 - Table E-12**, El Paso ranks average in the Governance Index. El Paso ranks well in violent and property crimes per 1,000 residents and in its carbon footprint. El Paso ranks poorly in average SAT and ACT scores, public library systems per 100,000 residents, and Energy Star building per 100,000 residents.

Table E-10. Governance Index Composite Score

	Low	Average	High
Albuquerque			
Austin			
El Paso			
Las Cruces			
Midland			
Phoenix			
San Antonio			
Santa Fe			
Tucson			
Regional Average			

Source: American Hospital Directory, Federal Bureau of Investigation, State Education Agencies, U.S. Dept. of Education, Environmental Protection Agency, The Brookings Institution, Federal Transit Administration.

Table E-11. Quality of Life Governance Index

Variables	Albuquerque	Austin	El Paso	Las Cruces	Midland	Phoenix	San Antonio	Santa Fe	Tucson	Regional Average
Hospital Beds (per 1,000) (#)	4.69	3.73	4.27	6.65	3.24	3.19	6.08	3.61	5.42	4.51
Violent Crimes (per 1,000) (#)	9.9	5.4	4.2	5.0	3.3	7.2	5.6	5.9	7.8	6.9
Property Crimes (per 1,000) (#)	57.1	63.4	32.0	48.6	35.6	58.3	63.9	59.4	62.8	48.9
Average SAT Score (#)	1,105	1,073	870	1,074	1,047	1,044	954	1,019	1,044	994
Average ACT Score (#)	21.0	22.6	18.0	20.3	21.9	21.9	19.5	19.9	22.9	20.1
Public Libraries (per 100,000) (#)	3.32	3.87	2.15	3.25	2.84	1.12	1.79	14.07	3.66	3.00
Energy Star Buildings (per 100,000) (#)	1.56	7.20	0.33	0.00	1.89	3.04	4.13	0.00	2.31	4.10

Table E-11. Quality of Life Governance Index *(Continued)*

Variables	Albuquerque	Austin	El Paso	Las Cruces	Midland	Phoenix	San Antonio	Santa Fe	Tucson	Regional Average
Carbon Footprint (metric tons) (#)	2.355	2.567	1.613	2.079	2.079	2.072	2.270	2.079	2.000	2.079
Public Vehicle Transit Hours (per capita) (#)	0.57	1.35	0.91	0.46	0.25	0.87	1.30	1.09	1.03	0.96

Sources: American Hospital Directory, Federal Bureau of Investigation, State Education Agencies, U.S. Department of Education, U.S. Environmental Protection Agency, The Brookings Institution, Federal Transit Administration

Table E-12. Quality of Life Governance Index City Rankings

Variables	Albuquerque	Austin	El Paso	Las Cruces	Midland	Phoenix	San Antonio	Santa Fe	Tucson	Regional Average
Hospital Beds (per 1,000)	4	7	6	1	9	10	2	8	3	5
Violent Crimes (per 1,000)	10	4	2	3	1	8	5	6	9	7
Property Crimes (per 1,000)	5	9	1	3	2	6	10	7	8	4
Average SAT Score	1	3	10	2	4	5	9	7	5	8
Average ACT Score	5	2	10	6	3	3	9	8	1	7
Public Libraries (per 100,000)	4	2	8	5	7	10	9	1	3	6
Energy Star Buildings (per 100,000)	7	1	8	9	6	4	2	9	5	3
Carbon Footprint (metric tons)	9	10	1	4	4	3	8	4	2	4
Public Vehicle Transit Hours (per capita)	8	1	6	9	10	7	2	3	4	5
Composite	53	39	52	42	46	56	56	53	40	49
Rank	**7**	**1**	**6**	**3**	**4**	**9**	**9**	**7**	**2**	**5**

Note: Composite scores are the sum of rankings for each index variable, with 10 being the least favorable condition and 1 being the most favorable condition. The lowest composite score earns an overall ranking of 1 (or first place) and the highest composite score the lowest overall ranking of 10 (or tenth place).

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FINAL
EL PASO REGIONAL GROWTH MANAGEMENT PLAN

Appendix F

Transportation Data

Data Sources and Assessment

Below is a list and brief synopsis of documents referenced and consulted for the Transportation components of the El Paso RGMP. These documents also serve as a comprehensive overview of the plans, policies, and structure of the transportation network in the greater El Paso area.

Trans-Border 2035 Metropolitan Transportation Plan (2007) - The Trans-Border Metropolitan Transportation Plan (MTP), also known as the City's Major Thoroughfare Plan is a long-range, 30-year plan that addresses transportation system modal evaluation, congestion management and air quality. The plan identifies existing conditions and projected growth in population, retail development, and trans-border economic activity. Based on the analysis, the MTP makes recommendations for improved access to Ports of Entry (POEs), regional infrastructure, commercial centers, intermodal connections, and multi land use developments for the years 2015, 2025, and 2035. This plan updates the Gateway 2030 MTP by considering the growth generated by additional troops arriving at Fort Bliss through the year 2011 due to BRAC and other Army actions.

Gateway 2030 Metropolitan Transportation Plan - This long-range plan with a planning horizon of 20 years is a blueprint of the future transportation with 1997 as the base year. It has been superseded by the Trans-Border 2035 MTP.

Camino Real Corridor/El Paso Border Improvement Plan (2006) - The Border Improvement Plan, initiated in the year 2004, analyzes the existing POEs, border traffic demand, security treatment, impacts on the existing regional infrastructure and the future challenges.

Texas Metropolitan Mobility Plan (2006) - The Texas Metropolitan Mobility Plan (TMMP) is a statewide initiative to identify long-range transportation needs within the eight largest metropolitan areas in the state, including El Paso. The plan identifies and measures the growing traffic congestion problem, the capacity of the regional transportation network and the future mobility and safety challenges. The TMMP complements the Gateway 2030 MTP.

Final Fort Bliss, Texas and New Mexico, Mission and Master Plan Supplemental Programmatic Environmental Impact Statement (2007) - The Final Supplemental Programmatic Environmental Impact Statement analyzed the impacts of the proposed BRAC expansion on the existing economy, transportation, land use, utilities, energy, environment, and other resources including earth, water, biological and cultural, both within the installation and in the surrounding area. Various alternatives were developed to modify existing land use to continue supporting evolving missions. The alternatives were analyzed and compared for optimum benefits under the increased population and traffic conditions from the BRAC expansion.

Bureau of Transportation Statistics, Intermodal Transportation Database (2004/2008) - The Bureau of Transportation Statistics (BTS), as part of U.S. Department of Transportation Research and Innovative Technology Administration, collects, compiles, analyzes and provides

accessible information on the nation's transportation systems, intermodal transportation and others. The Bureau is also involved in research, development of guidelines and improvements to data acquisition. TransStats is BTS's Intermodal Transportation Database and includes databases and statistics for aviation, highway, maritime, rail, pipeline, pedestrians, and more. Data include financial, safety, usage, and environmental information.

Border Crossing and Travel Time Study, Texas Department of Transportation, El Paso District (2008) - The Border Crossing and Travel Time Study conducted for the Texas Department of Transportation-Transportation Planning and Program Division, assessed the existing traffic operational deficiencies and identified short term improvements for improving passenger and freight flow on roadways in the vicinity of international border crossing in the El Paso region. The study included development of conceptual drawings, environmental data collection, environmental impact evaluation, traffic model development and preparation of construction, right-of-way, and mitigation cost estimates.

El Paso Intermodal Rail Project Report (2003) - A feasibility study for the development of an intermodal rail facility in the El Paso region was performed by Moffatt & Nichol Engineers for the City of El Paso. The report identifies existing conditions including rail lines serving the region, rail crossings, rail operations, rail yards, and intermodal rail facilities. The demand and need for a proposed intermodal facility, facility location, economic benefits to the region, and other combined rail and roadway improvements that would benefit the region overall were also identified.

Regional Bikeways Plan Study (1997) - This study identifying existing and required bike routes and other bike facilities was conducted by CSA Consulting Engineers for the City of El Paso and the El Paso Metropolitan Planning Organization (MPO). The study inventories existing bike paths, biker facilities, signing and striping, gaps in the existing route or path system, etc., and proposes recommendations.

Definitions and Methodology

The capacity of a roadway facility is defined as the maximum hourly rate at which persons or vehicles can be reasonably expected to traverse a point or section of a roadway during a given time period, under prevailing roadway traffic demand and traffic control conditions, assuming there is no influence from the downstream traffic operations like traffic queues and backup.

Brief descriptions (derived from the Transportation Research Board's "Highway Capacity Manual") of some abbreviations and measurement parameters used this section follow.

Average Annual Daily Traffic (AADT)

Volume forecasts for long range planning studies are usually expressed in vehicles per day. AADT data is extracted from permanent traffic count stations and is measured as the total volume of bi-directional traffic passing a point or a segment of a roadway facility for a whole year divide by the number of days in that year.

Heavy Vehicle/Truck (HV%)

Heavy vehicles are defined as vehicles with more than four wheels touching the pavement during normal operation. The Federal Highway Administration classifies vehicles into fifteen classes of which nine classes are attributed to single unit/medium trucks and tractor-trailer/heavy trucks. Heavy vehicles usually operate slower than passenger cars in rolling and mountainous terrains and are usually converted to passenger car equivalents for capacity analysis purposes under specific roadway, traffic and control conditions. Default values of two percent were used along highway segments with unavailable truck data.

Design Hour Factor (K-Factor %)

Design hour is defined as the hour in a typical week that experiences the highest hourly traffic demand. The design hour traffic volume represents a reasonable value for designing the geometric and control elements of a roadway facility and does not include non-typical hourly traffic demands that arise during special events. The Texas Transportation Institute analysis of average weekday volumes in the El Paso region revealed the highest peak hour demand occurring during the morning, representing 12 percent of the total daily traffic.

Directional Distribution (DD%)

Directional Distribution indicates the traffic characteristic where the traffic is higher in one direction than in the other. Default percentage values of 50/50 split were used along highway segments with unavailable directional distribution data.

Capacity analysis for the urban freeway and expressways, major multi-lane principal arterials and minor two-lane principal arterials were performed using the latest version of the Highway

Capacity Software based on the guidelines and methodology recommended by the Highway Capacity Manual. The Highway Capacity Manual published by the Transportation Research Board, Washington DC is a product of a multi-agency effort including the Transportation Research Board, American Association of State Highway and Transportation Officials (AASHTO) and Federal Highway Administration. The manual contains concepts, guidelines, and computational procedures for determining the capacity and LOS of the various functional classes of highway facilities and the effect of transit, pedestrian and bicycles on the performance of these systems. The information is approved and distributed by the U.S. Department of Transportation, Federal Highway Administration.

The quality of service is usually characterized by a LOS for that functional class of roadway typically measured in terms of average speed (in miles per hour), travel time (in minutes), control delay (in seconds), density (in vehicles per mile per lane), traffic interruptions, freedom to maneuver, driver comfort and convenience. Operability defined by LOS ranges from A to F and is summarized in **Table F-1**.

Table F-1. Level of Service Summary

Level of Service	Flow Characteristics	Description
A	Free flow	Individual drivers are free to select desired speeds, a high degree of maneuverability is present within the traffic stream, and drivers are generally unaffected by the presence of other vehicles. The general level of comfort and convenience is excellent.
B	Low-density stable flow	Drivers remain free to select desired speeds but a slight decline in maneuverability occurs compared with LOS A and the presence of other vehicles becomes noticeable. The level of comfort and convenience is somewhat less than at LOS A.
C	Medium-density stable flow	Selection of speed is affected by the presence of other vehicles, maneuvering within the traffic stream requires substantial driver vigilance, and driver operations are affected significantly by others in the traffic stream. The general level of comfort and convenience is noticeably less at this level than at LOS A or B.
D	High-density stable flow	Selection of speed and freedom to maneuver are severely restricted and small increases in traffic flow will generally cause operational problems. The level of comfort and convenience is generally poor.
E	Unstable flow	Speed is reduced to a low, relatively uniform value and freedom to maneuver is extremely difficult. Operating conditions are at or near the capacity level. Comfort and convenience levels are extremely poor, and driver frustration is generally high.
F	Forced/Breakdown Flow	Operations are extremely unstable. The amount of traffic approaching a point exceeds the amount that can traverse the point and arrival flow exceeds discharge flow. Queues form behind such locations and operations within the queue are characterized by stop-and-go waves.

A nationwide roadway functional classification system was mandated by the Congress in the 1968 Federal Highway Act for achieving standardization and uniformity to better assist in establishing federal aid policies and programs. As a result roadways were functionally classified according to the character of the service they intended to provide, the services primarily being access and mobility. The roadway geometric design criteria, traffic volumes and level of service criteria vary depending on the functional classification of the roadways.

Functional class definitions, as defined by the AASHTO "A Policy on Geometric Design of Highways and Street," are as follows:

Major Arterial Streets and Highways

Major arterial streets and highways contain the greatest proportion of through or long-distance travel. Such facilities serve the high-volume travel corridors that connect the major generators of traffic. The selected routes should provide an integrated system for complete circulation of traffic, including ties to the major rural highways entering the urban area. Experience has shown that this class normally accommodates 30-40 percent of a region's travel on 5-10 percent of the street and highway network. Generally, major arterials include all the higher traffic volume streets, except those serving short trips or those serving as alternatives to more direct facilities (i.e., interstate, freeways and expressways, and other principal arterials).

Interstate Principal Arterials

Interstate principal arterials are the primary through travel route and serve the longest trip lengths. They connect the region with other areas in the state and other states. They serve the longest trip desires; they carry the major portion of trips entering and leaving the urban area as well as the majority of through movements to bypass the central city. In addition, significant intra-area travel, between central business districts and outlying residential areas, is served by this system.

Urban Freeways and Expressways

Freeways are designed solely for rapid, uninterrupted travel over long distances. Design features include two or more one-way directional lanes divided by a median and access and egress with selected arterial streets, by means of one-way ramps, joining the through lanes. There are grade separations and no provisions for private access. Expressways are highways with two or more lanes in each direction, no access to abutting property, and no on-street parking possessing median barriers, wide spacing between intersections, and high operating speeds.

Urban Principal Arterials

Urban principal arterials serve the major centers of activity of a metropolitan area, the highest traffic volume corridors, and the longest trip desires; and should carry a high proportion of the

total urban area travel on a minimum of mileage. Urban principal arterials carry the major portion of trips entering and leaving the urban area, as well as the majority of through movements desiring to bypass the central city. Frequently, the urban principal arterial system will carry important intra-urban, as well as, inter-city bus routes.

Minor Arterial Streets

Minor arterial streets and highways interconnect urban principal arterials and serve to link cities and larger towns. Minor arterial streets and highways serve less concentrated traffic-generating areas such as neighborhood shopping centers and schools. This class distributes medium traffic volumes. Minor arterial streets serve as boundaries to neighborhoods and collect traffic from collector streets. Although the predominant function of minor arterial streets is the movement of through traffic, they also provide for considerable local traffic that originates or is destined to points along the corridor.

Collector Streets

Collector streets collect traffic from local streets in residential neighborhoods and channel it onto the arterial system. Conversely, collector streets provide direct service to residential areas, local parks, churches, etc. To preserve the amenities of neighborhoods, collectors are usually spaced at about half-mile intervals to collect traffic from local streets and convey it to arterial streets and highways. Collector streets serve as local bus routes. Direct access to abutting land is a major function; parking and traffic controls are usually necessary to insure safe and efficient through movement of moderate to low traffic volumes.

Local Streets

Local streets serve primarily to provide direct land access and access to the higher roadway systems. Local streets provide service to travelers over relatively short distances as compared to collectors or other higher systems. They allow access to individual homes, shops, and similar traffic destinations. Local streets serve short trips at low speeds, and service to through traffic movement usually is deliberately discouraged.

Recommendations for the El Paso Area

General Recommendations

Understanding future land development patterns and anticipated changes in population density and commuting patterns will influence future locations where thoroughfare system improvements should be made. Growth can be directed to areas through proactively providing access and mobility in the thoroughfare system. Coordination between the El Paso MPO and regional planners will be essential for making key decisions and integrating mutually supportive planning actions.

Communities can implement new approaches to transportation planning, such as better coordinating land use and transportation, increasing the availability of high quality transit service, creating redundancy, resiliency and connectivity within their road networks, and ensuring connectivity between pedestrian, bike, transit, and road facilities. In short, coupling a multi-modal approach to transportation with supportive development patterns creates a variety of transportation options.

An effective and affordable transportation system must include an efficient public transit system that enhances multi modal commuting to the various destinations. Detailed design of proposed improvements is beyond the scope of this report; however, Travel Demand Management recommendations should be studied for benefit and implementation in areas throughout the El Paso County to mitigate the impacts of future traffic demand and congestion. Proposed strategies that need further study and application follow:

- Employ Smart Growth principles with the aim of achieving an efficient transportation system with improved multi-modal mobility in the region and accessibility within existing built-up areas.
- Disperse traffic over a well-connected grid of roadways instead of concentrating on a few major streets. Place emphasis on the use of public transportation, bicycle and walking, thus minimizing the dependence on automobiles through increased compactness of development.
- Improve intersections by adding exclusive turn lanes, improved turning radii, sight distance and signalization improvements, etc.
- Provide medians, channelization, or other design features to improve capacity
- Modify design speeds along major arterials to improve capacity
- Modify signal phasing and timing to prioritize through-movement along major arterials
- Develop High Occupancy Vehicle lanes along urban freeway and expressway corridors to improve traffic flow and air quality
- Employ time of day turn restrictions to driveways and other local roads to improve flow

- Implement corridor-wide signal coordination and interconnection to minimize delay
- Implement traffic signal priority for high priority vehicles
- Develop queue-jump lanes and other geometric features to provide transit priority
- Locate transit bus-stops and shelters off the line of sight of the traveling public to avoid any sight distance obstructions to the vehicular traffic
- Employ access management techniques to preserve maximum capacity by preventing driveway accesses at major intersections
- Employ Travel Demand Management tools to maximize capacity such as:
  - Employer partnerships
  - Alternate or staggered work hours
  - Zoning regulations for mixed land uses promoting walking and biking
  - Telecommuting
  - Advanced traveler information
  - Transit tax incentives
  - Reimbursement for carpools/vanpools
  - Parking cash-out
  - Express and shuttle bus service
  - Transit-van integration

Streets and Highways

Roadway Capacity

The future traffic demand can be adequately handled by implementing roadway widening and bridge improvements to the existing roadway network. In addition, the roadway operations and traffic handling capacity could be greatly increased by encouraging and developing a public friendly mass transit system that would reduce the presence of Single Occupant Vehicle on the major roadway and arterials. Fort Bliss gate capacity, operations and use should be continually monitored to avoid severe congestion on roads adjacent to them.

In addition, the proposed construction of Inner Loop will provide a direct route for the trucks and other commercial vehicles in the area to access US 54 and Loop 375. Soldiers and civilians who work and live on East Fort Bliss will also have easier access to the installation. This in turn would relieve any existing/future traffic congestion along Airport Road, Airway Boulevard, US 82/180, and Paisano Drive. The above improvements in combination with the proposed Texas Department of Transportation and other agency projects planned for the region would alleviate adverse impacts from the projected growth from BRAC.

Roadway Safety

Existing El Paso Metropolitan Planning Organization studies compare and analyze crashes by their total number and time of occurrence. However, since the traffic volumes on a roadway segment or entering volumes in an intersection differ by the hour and display significant increases during the morning, mid-day and evening peak hours, it is recommended that crash and severity rates be calculated for the critical roadways in the entire region. Roadways and intersections should be ranked based on the crash and severity ratings to identify sections with the topmost priority for safety improvements. Crash data should be studied and compared for year, month, date and time of occurrence, type of crash, location of crash occurrence, jurisdiction and the degree of injury suffered in the crash. Intersection crash rates per Million Entering Vehicles and segment crash rates per million vehicle miles traveled should be calculated to standardize the raw crash data and develop a ranking of high crash locations throughout the County. In addition, crash severity ranking should also be determined based on the number of fatal and injury (Type A, B, or C) crashes.

The safety focus areas along major roadways in El Paso that experienced high crash and/or severity rates should be identified and improvements made. Roadway improvements including additional capacity, geometry changes and traffic control devices should be initiated to improve traffic safety.

Ports of Entry

Waiting times at the POE, primarily due to commercial vehicles, cause congestion and delay that adversely affects the existing roadway network within the El Paso metropolitan area. The quality of peak hour traffic operations can be improved at the POEs by operating all the POEs at full capacity and by keeping all the inspection booths open so that more number of vehicles can be inspected. This is estimated to reduce queuing as much as 70 percent. To lower wait times and queue lengths, it is recommended that advanced ITS technology focusing on expedited processing, compliance monitoring and traffic management be employed at all the POE to reduce average inspection time per vehicle. This is considered to be a more effective countermeasure than constructing new booths or creating a new facility.

In addition, the proposed Fabens POE will be able to handle truck traffic thus alleviating some of the truck traffic demand through the El Paso business district.

Truck Corridors

The proposed increase in the freight tonnage flow requires major design upgrades to the proposed truck corridors in the El Paso County region to handle higher truck traffic without increasing travel times due to congestion or bottlenecks. Detailed identification of proposed improvements is beyond the scope of this report; however recommendations for areas of future study to mitigate the impacts of the growth are identified below. It is recommended that the

existing and proposed intercity truck corridors be carefully studied for the occurrence of any of the below mentioned conditions and mitigation measures employed.

- Increase interchange capacity between freeway-to-freeway and freeway-to-arterial locations to avoid interchange bottlenecks for trucks
- Eliminate steep grades on arterial roadways serving as intercity freight corridors to avoid bottlenecks for trucks
- Eliminate signalized intersection bottlenecks on arterials serving as intercity freight corridors
- Eliminate lane drop and restricted capacity locations on arterials and freeways to avoid bottlenecks for trucks

In addition, intermodal operations between the truck and railroads should be established to minimize the number of trucks traveling through the Central Business District (CBD). Outer city corridors should be designed as major truck corridors with wider lane widths and shoulders, truck climbing and bypass-lanes, with less desirability over inner city corridors for truck use.

Transit Service

Bus Transit

Implementing future mass transit projects will require major financial investment and major commitment of land resources to establish or expand corridors. This will require local and regional cooperation and initiative. Transit, pedestrian and bikeway accommodations for traffic volumes on local roadways to and around key facilities such as Medical Centers, Fort Bliss Access Control Points (entry gates), large shopping centers, downtown, and campuses should be provided. Four new transit centers have been planned for mid year 2011 in the El Paso region (Eastside, Westside, Mission Valley, and Glory Road terminals). The proposed Glory Road terminal will be a five-story structure with a 500-space parking garage.

Proposed SMART routes along Dyer Street, Montana Avenue, Alameda Avenue, and Mesa Street will encourage Fort Bliss and other downtown commuters to use transit system thus limiting congestion and improving air quality in the region. Dedicated bus lanes should be developed along interstates and highways through downtown El Paso to allow expedited travel. Rapid transit service system should be developed to offer clean buses, affordable rates, improved ticketing system or monthly passes, courteous staff etc., to encourage transit use. Pedestrian friendly bikeways and walkways, bike racks, parking garages, etc., should be built adjacent to the proposed SMART route lines, bus stops and transfer station to encourage multi modal travel. Paso Del Norte is the highest pedestrian crossing bridge; adequate transit stops, pedestrian facilities and safety should be ensured to improve international travel and operations.

Future ITT plans include an international fixed-guideway system, connecting El Paso and Juarez downtown, along with the SMART bus rapid transit and light rail transit. The location of centralized terminal will encourage mass transit use by providing convenient transfer stations between El Paso's Sun Metro and international and intercity carriers. An intercept parking program that includes a parking garage at the downtown and city streets also reduces the number of vehicles going into city and downtown streets by providing convenient access to downtown and city streets and serving employment, shopping and other destinations. Indirect benefits of reduced auto use include reduced fuel consumption, reduced emissions and improved air quality. The ITT will provide a centralized terminal for pick-up and drop off operations to travel to the final destination in the U.S. or Mexico. Consolidation of all the existing transit services to one central service terminal will improve efficiency, quality of life and reduce congestion.

The development of the Union Plaza Transit Terminal (UPTT) will improve transit services for existing Sun Metro passengers by enabling future transit service expansion; expand economic activity in downtown as the UPTT will be located near the entertainment district of the downtown area. The proposed central terminal location should account for site suitability of the proposed facility, potential generation of heavy pedestrian volumes, traffic and circulation within and around the UPTT, driveway locations, passenger loading and unloading points, bus bay locations and impact on adjacent properties, economic impact of relocating main hub from San Jacinto Plaza to UPTT, provision of new sidewalks and crosswalks to serve pedestrians, cost savings of developing the facility elsewhere, etc.

Commuter Rail

Intermodal transportation measures including transit, pedestrian walkways and bike paths should be introduced. Freight train traffic is increasing, while the need for commuter rail is heightening. The city needs an assessment of the current use of the rail system. There may be opportunities to use alternative rail infrastructure to free up existing lines for new commuter rail service. Intergovernmental coordination committees should be setup and planning studies should be conducted to study the benefits of a possible commuter rail line to the region. The study should focus on:

- Identifying the future travel and public demand for the proposed commuter rail
- Cost benefits from eliminating auto-trips along the commuter rail route
- Cost benefits from eliminating future road construction and maintenance
- Annual benefits in time savings for commuters and/or remaining road users
- Cost benefits from eliminating exposure to property damage, injury and fatality crash exposures of riders
- Identifying and proposing a phased operational lines and minimum train station locations until demand is met

- Air quality improvements, energy savings and quality of life
- Commercial development opportunities and land use
- Local organizations and agencies as potential funding agencies in collaboration with federal and state funding

Pedestrians and Bikeways

Improvements should be made to increase the desirability for bicycle travel along the deficient paths with proper pavement marking, signing, lighting, speed control, and dedicated bikeways. Efforts should be made to provide route continuity to popular destinations. Activity centers like downtown areas, shopping malls, commercial and retail areas, parks, schools and college campuses are conducive to bike and can be treated as potential bicycle trip generators. Bike routes from residential neighborhoods to these activity centers will generate future use. In addition, the existing short discontinuous routes must be extended to provide long continuous routes with connections to activity centers to promote bicycle travel. Some major traffic corridors providing access to downtown El Paso from the west, northeast, east and Lower Valley regions were identified as potential bike corridors consisting viable bike routes in the El Paso MPO Regional Bikeways Plan Study. The potential corridors include Mesa Street, Alabama Avenue, I-10, Montana Avenue, and Alameda Avenue. In addition, the central, east, lower and upper valleys, northeast and west regions of the El Paso County will have interregional corridors providing local access to activity centers. The regional corridors include Sunland Park, Doniphan, Dyer, McCombs, Rushing, Viscount, Montwood, Yarbrough, Lee Trevino, and Zaragoza.

Some of the proposed bike and pedestrian friendly recommendations include:

- Improving connectivity by completing the existing gaps in the downtown and other commercial area pedestrian sidewalk/bikeway network
- Providing safe and convenient linkages between schools, neighborhoods and residential communities
- Implement pedestrian and bike paths for all proposed roadway projects and subdivision or other planned unit developments to encourage pedestrian friendly environment
- Provide contraflow or reversible bike lanes to encourage bicycle traffic
- Restrict speeds in local residential streets to enhance pedestrian and bicycle safety
- Provide open sight lines, pedestrian scale lighting, vertical curbs between roadway, sidewalk and on-street parking and planting strips to promote pedestrian safety
- Regular maintenance of existing pedestrian walkways and bike paths to promote the quality of travel

- Include pedestrian refuge islands, medians and intersection curb extensions to minimize pedestrian crossing distance
- Share the road and on-road bike lanes should be given careful consideration in the future planning process to enhance multimodal and environmental friendly way of transportation.
- Survey existing routes for suitability of being shared bicycle routes without compromising traffic operations and bicyclist safety. Proper enforcement is required to prevent any bicyclist or motorist violation or abuse of the facilities.
- Use adequate signing, pavement markings and barrier separations to promote safety advisory and efficient travel
- Design facilities to achieve safe co-existence of bicyclists with other motorized modes of transportation to attain full integration of bicycles with other transportation modes
- Replace drainage grate with curb inlets where possible, or locate grates perpendicular to the direction of travel to enhance safety of bicycle travel
- Rehabilitate pavement surfaces to improve travel
- Bike routes at rail road crossings should be at right angles to the biker direction of travel
- Design traffic control signals for pedestrians and bicyclists with adequate timing for street crossings

Bicyclists are a great potential market for transit services. People will generally bicycle three to four times as far as they will walk, and this could extend the service of a bus stop or transit station from a half mile to two miles. Successful integration of bicycling and transit executed with careful planning, good design, and a commitment to making the combination work will enhance intermodal travel.

Integration can be incorporated by:

- Providing bike lanes or safe bike facilities along the roads leading to the transit station and at transfer stations
- Providing safe bike raking racks by transit stops
- Providing bike-carriers or racks in transit buses to enable users to take the bike on the bus for use at the end of their transit trip
- Establish connections between residential areas and transit stops with adequate bicycle parking to promote intermodal travel among residents.
- Existing demand for bike parking at traffic generators should be studied and provided as required

Railroads

Existing intermodal operation takes place at Union Pacific Railroad's (UPRR's) Alfalfa Yard and Burlington Northern Santa Fe's (BNSF's) Santa Fe Yard located in the business district of the El Paso region. These existing sites have limited potential for future development. The relocation and redevelopment of some of the existing rail facilities is also not feasible or cost-effective. With the increase in projected truck traffic in the future, it is recommended that new sites be located for intermodal operation that would minimize impacts to the CBD, residential and commercial regions. When successfully implemented, these facilities will minimize cost and provide an efficient means of coordinating various modes of freight transport. Some existing rail lines within downtown El Paso should be relocated to allow land acquisition and promote development of prime sites. The existing and proposed truck corridors through the El Paso CBD should be redirected to use the intermodal facility located at the UPRR and BNSF rail yards to reduce congestion caused by heavy vehicle traffic during the peak hours in the business district. Intermodal transportation hubs should be created for transfer of freight carriers from truck to rail lines and airplanes to promote faster transport of goods and to reduce bottlenecks caused by heavy truck traffic on major highways and interstate.

The proposed regional rail intermodal plan identifies five general projects that when completed in its entirety will create an outer loop for rail and truck traffic to bypass downtown El Paso, thus greatly improving the traffic flow and operations throughout the region. However, most of the proposed projects are not viable due to the high cost and service degradation. The railroads currently offer a frequent number of services to local customers in the El Paso region and any relocation of the operations to outside the city will degrade the existing services. Analysis of railroad operations establishes the fact that the current operations are reasonably efficient and rational.

Based on the review of previous studies, roadway operations, proposed regional transportation improvements, truck demand and truck service corridors, the following rail recommendations are considered viable and proposed for further consideration.

- New international rail crossing and interchange at Santa Teresa, New Mexico
- Intermodal facility at El Paso International Airport for increased freight travel
- Existing rail yard developments and expansion for increased capacity
- Planning study to limit freight rail to outer city limits and consider conversion of inner city rail lines to commuter rail

The proposed border crossing at Santa Teresa will only work if the companion facilities in Mexico are developed. The development of this rail crossing could alleviate the existing rail traffic through El Paso CBD and truck traffic causing bottlenecks within the El Paso region by providing alternate relief route.

These proposed projects when implemented as a group is projected to advance international trade, promote economic development, improve national security, create jobs, and enhance quality of life. The proposed projects could be financed through development partners, who would benefit from the developments.

Aviation

BTS data indicates that even though air freight has increased in mode share travel, it still accounts for only 0.1 percent of the freight tonnage move. More than two-thirds of the freight tonnage is still being transported by trucks that use the nation's transportation system affecting passenger vehicle operations, air quality and quality of life.

- Separate runways, cargo areas and facilities should be constructed at El Paso International Airport to increase the capability for an expected increase in outbound air freight volume from El Paso International Airport. The El Paso International Airport intermodal facility should be constructed and operated to promote mode share of freight tonnage with rail, waterway and trucks.

Supplementary Tables

Conditions at Fort Bliss

Table F-2 shows the average weekday traffic data from the Fort Bliss Access control points with the morning, mid-day and evening peak hour demands highlighted.

Table F-2. Average Weekday Entering Traffic at Fort Bliss Access Control Points

Hour	Traffic Volumes at Fort Bliss Access Control Points									
	Cassidy	Sheridan	Chaffee	Lee	Remagen	Pershing	Jeb Stuart	Biggs	Wilson	Alabama
0001-0100	68	n/a	n/a	46	n/a	n/a	n/a	30	13	n/a
0101-0200	36	n/a	n/a	33	n/a	n/a	n/a	18	6	n/a
0201-0300	39	n/a	n/a	40	n/a	n/a	n/a	19	6	n/a
0301-0400	74	n/a	n/a	70	n/a	n/a	n/a	12	6	n/a
0401-0500	168	n/a	n/a	105	n/a	n/a	n/a	58	20	n/a
0501-0600	485	327	95	354	401	189	110	611	210	30
0601-0700	400	317	85	321	331	179	139	596	384	152
0701-0800	*637*	*547*	*137*	*386*	*308*	*367*	*193*	*550*	*740*	*434*
0801-0900	*617*	*595*	*119*	*386*	*418*	*261*	*165*	*722*	*461*	*299*
0901-1000	353	507	78	247	268	134	69	251	338	256
1001-1100	365	430	65	245	208	83	80	170	282	215
1101-1200	432	507	77	281	227	100	109	244	274	159
1201-1300	489	562	71	387	317	173	235	460	317	206
1301-1400	475	460	88	356	268	106	122	237	247	197
1401-1500	390	424	63	272	179	73	83	198	285	151
1501-1600	429	422	68	262	178	73	79	194	228	99
1601-1700	*381*	*396*	*50*	*220*	*165*	*68*	*72*	*154*	*157*	*53*
1701-1800	*351*	*373*	*37*	*252*	*157*	*66*	*61*	*168*	*107*	*32*
1801-1900	263	211	26	161	106	38	41	172	105	22
1901-2000	192	122	14	157	71	29	32	98	62	9
2001-2100	162	82	6	129	36	23	23	69	53	6
2101-2200	155	n/a	n/a	161	n/a	n/a	n/a	60	41	n/a
2201-2300	112	n/a	n/a	98	n/a	n/a	n/a	44	59	n/a
2301-2400	87	n/a	n/a	65	n/a	n/a	n/a	47	35	n/a
TOTAL	**7,160**	**6,282**	**1,079**	**5,034**	**3,638**	**1,962**	**1,613**	**5,182**	**4,436**	**2,320**

Source: U.S. Army June 2006 ACP Survey Counts, Fort Bliss, Texas
Notes: n/a – not applicable; gate closed during these hours
Highlighted items show entering traffic during morning and evening peak hours of adjacent street traffic

Roadway Capacity and Traffic Operations

Table F-3 lists the major and minor roadway study segment limits, existing 2007 traffic data, traffic characteristics, service measures (DD%, HV%, and K-Factor% [each is defined at the beginning of this appendix]), and LOS in the El Paso County RGMP study area. The roadway sections operating at unacceptable LOS E and F are highlighted in green.

Table F-4 shows a list of the proposed transportation projects, and other Transportation Improvement Program/Long Range Transportation Plan (TIP/LRTP) recommended projects for the region that are both BRAC and non-BRAC related. The list includes the project description along with the project location, limits and type of improvements, need and purpose, estimated project cost and the potential funding sources, respectively. The estimated projects costs include preliminary engineering, right-of-way, construction and utility relocations. The highlighted roadway projects in blue indicate only the major highway widening improvements that were considered as implemented in the traffic operational analysis. Intelligent Transportation Systems, Travel Demand Management and Transportation Systems Management strategies along with Transit and other modal improvements proposed as part of the TIP/LRTP improvements are highlighted in red under the other project categories.

Table F-5 shows the major and minor roadway study segment limits, projected 2015 and 2025 traffic data, traffic characteristics, service measures, and LOS in the El Paso County RGMP study area, along with proposed roadway widening recommendations to achieve desired LOS and traffic flow in order to accommodate potential growth and subsequent additions to regional traffic volumes. The roadway sections operating at unacceptable LOS E and F are highlighted in green. The text in bold blue indicates the improvements implemented as part of the MPO's proposed LRTP/TIP. The roadway sections highlighted in yellow indicate the roadway sections that require improvements along with the proposed number of lanes and the resulting LOS, when implemented.

Table F-3. Traffic Data and LOS Along RGMP Major Roadways in El Paso County

Roadway	Description	DD %	Truck %	K-Factor %	2007 TRAFFIC UNDER EXISTING CONDITION				
					# of Lanes	AADT (TxDOT)	Peak Hour	Service Measure	LOS
I-10	north of Antonio Street / Mountain Pass Boulevard	50%	20%	12%	4	34,000	2,040	18.9 pcpmpl	C
	south of Valley Chili Road	50%	20%	12%	4	44,000	2,640	25.0 pcpmpl	C
	south of Nashua Road	50%	20%	12%	4	49,000	2,940	28.8 pcpmpl	D
	north of Paso Del Norte	50%	20%	12%	4	76,000	4,560	54.9 pcpmpl	F
	north of Mesa / SH 20	50%	9%	12%	4	75,000	4,500	47.3 pcpmpl	F
	south of Mesa / SH 20	50%	17%	12%	6	102,000	6,120	47.4 pcpmpl	F
	at US 85 interchange	50%	17%	12%	6	140,000	8,400	65.1 pcpmpl	F
	north of Executive Center Boulevard	50%	17%	12%	6	126,000	7,560	58.6 pcpmpl	F
	south of Executive Center Boulevard	50%	11%	12%	8	137,000	8,220	44.7 pcpmpl	E
	b/w Cotton Street and Piedras Street	50%	11%	12%	10	185,000	11,100	47.9 pcpmpl	F
	east of Piedras Street	50%	11%	12%	10	183,000	10,980	47.4 pcpmpl	F
	west of Loop 478	50%	11%	12%	10	185,000	11,100	47.9 pcpmpl	F
	west of US 62 / Paisano Drive	50%	11%	12%	8	194,000	11,640	62.8 pcpmpl	F
	west of Trowbridge Drive	50%	8%	12%	8	203,000	12,180	63.2 pcpmpl	F
	northwest of Robert E. Lee Road	50%	8%	12%	8	202,000	12,120	41.9 pcpmpl	E
	northwest of Hawkins Road	50%	8%	12%	8	200,000	12,000	62.2 pcpmpl	F
	west of FM 2316	50%	8%	12%	6	184,000	11,040	76.3 pcpmpl	F
	east of FM 2316/ McRae	50%	8%	12%	6	167,000	10,020	69.2 pcpmpl	F
	east of Yarbrough Drive	50%	8%	12%	6	182,000	10,920	75.5 pcpmppl	F
	north of FM 659 / Zaragoza Road	50%	8%	12%	4	136,000	8,160	84.6 pcpmpl	F
	north of Joe Battle Boulevard/Loop 375	50%	8%	12%	4	104,000	6,240	64.7 pcpmpl	F
	north of FM 1281/Horizon	50%	8%	12%	4	58,000	3,480	29.6 pcpmpl	D

Table F-3. Traffic Data and LOS Along RGMP Major Roadways in El Paso County *(Continued)*

Roadway	Description	DD %	Truck %	K-Factor %	2007 TRAFFIC UNDER EXISTING CONDITION				
					# of Lanes	AADT (TxDOT)	Peak Hour	Service Measure	LOS
	north of FM 1110	50%	8%	12%	4	33,000	1,980	15.8 pcpmpl	B
	south of FM 1110	50%	8%	12%	4	27,000	1,620	13.0 pcpmpl	B
	south of FM 793	50%	8%	12%	4	22,000	1,320	10.6 pcpmpl	A
	at El Paso County Line	50%	8%	12%	4	19,800	1,188	9.5 pcpmpl	A
Cesar Chavez Memorial Highway/Loop 375 / Border Highway / Joe Battle Boulevard	at El Paso Community College	50%	7%	12%	4	7,800	468	5.7 pcpmpl	A
	south of Chamizal National Park	50%	7%	12%	4	18,800	1,128	8.9 pcpmpl	A
	south of US 54	50%	7%	12%	4	43,000	2,580	20.4 pcpmpl	C
	at Asacarte Lake	50%	7%	12%	4	45,000	2,700	21.4 pcpmpl	C
	north of FM 659 / Zaragoza Road	50%	7%	12%	4	42,000	2,520	19.9 pcpmpl	C
	south of FM 659 / Zaragoza Road	50%	7%	12%	4	56,000	3,360	27.6 pcpmpl	D
	south of SH 20	50%	7%	12%	4	57,000	3,420	28.3 pcpmpl	D
	south of North Loop Drive	50%	7%	12%	4	69,000	4,140	39.8 pcpmpl	E
	west of I-10	50%	7%	12%	4	73,000	4,380	59.8 pcpmpl	F
	east of I-10	50%	7%	12%	4	74,000	4,440	60.6 pcpmpl	F
	north of Montwood	50%	7%	12%	4	52,000	3,120	25.1 pcpmpl	C
	south of US 62 / Montana Avenue	50%	7%	12%	4	30,000	1,800	14.2 pcpmpl	B
	north of US 62 / Montana Avenue	50%	7%	12%	4	22,000	1,320	10.4 pcpmpl	A
	east of McCombs Street	50%	7%	12%	4	22,000	1,320	10.4 pcpmpl	A
	west of McCombs Street	50%	7%	12%	4	15,300	918	7.2 pcpmpl	A
Loop 375 / Transmountain Parkway	west of Loop 478	50%	7%	12%	4	23,000	1,380	16.9 pcpmpl	B
	west of US 54	50%	7%	12%	4	16,500	990	12.1 pcpmpl	B
	through Franklin Mountains State Park	50%	7%	12%	3	16,700	1,002	80.4% TSF	D

Table F-3. Traffic Data and LOS Along RGMP Major Roadways in El Paso County *(Continued)*

Roadway	Description	DD %	Truck %	K-Factor %	2007 TRAFFIC UNDER EXISTING CONDITION				
					# of Lanes	AADT (TxDOT)	Peak Hour	Service Measure	LOS
	Talbot Street west of I-10	100%	7%	12%	n/a	n/a	n/a	n/a	n/a
	Talbot Street west of Rey Place	100%	7%	12%	2	9,100	1,092	62.4% TSF	C
SH 20 / Alameda Avenue / Doniphan Drive / Mesa Street	south of Valley Chili Road	50%	5%	12%	4	8,400	504	6.0 pcpmpl	A
	north of Las Malchis	50%	5%	12%	4	12,200	732	8.7 pcpmpl	A
	north of Canutillo	50%	5%	12%	4	15,700	942	11.2 pcpmpl	B
	south of Canutillo	50%	5%	12%	4	18,000	1,080	12.9 pcpmpl	B
	south of Artcraft Road	50%	5%	12%	4	14,500	870	10.4 pcpmpl	A
	north of Mesa Street	50%	5%	12%	4	19,000	1,140	13.6 pcpmpl	B
	west of I-10	50%	5%	12%	6	46,000	2,760	22.0 pcpmpl	C
	east of Desert Boulevard	50%	5%	12%	6	46,000	2,760	22.0 pcpmpl	C
	north of Executive Center Boulevard	50%	5%	12%	6	43,000	2,580	20.5 pcpmpl	C
	north of Sun Bowl Drive	50%	5%	12%	6	39,000	2,340	18.6 pcpmpl	C
	east of Cotton Street	100%	5%	12%	2	5,800	696	63.5% TSF	C
	west of US 62 / Montana Avenue	50%	5%	12%	4	8,000	480	5.7 pcpmpl	A
	east of FM 1505 / Clark Drive	100%	5%	12%	2	14,900	1,788	84.9% TSF	E
	east of Delta Drive / N Loop Road	50%	5%	12%	4	17,900	1,074	12.8 pcpmpl	B
	west of Carolina Drive	50%	5%	12%	4	14,500	870	10.4 pcpmpl	A
	east of Yarbrough Drive	50%	5%	12%	4	17,200	1,032	12.3 pcpmpl	B
	east of Zargoza Road	50%	5%	12%	4	16,000	960	11.4 pcpmpl	B
	north of Loop 375	50%	5%	12%	4	23,000	1,380	16.5 pcpmpl	B
	south of Loop 376	50%	5%	12%	4	26,000	1,560	18.6 pcpmpl	C
	south of Moon Road	50%	5%	12%	4	22,000	1,320	15.8 pcpmpl	B
	south of Burbridge Street	50%	5%	12%	4	7,000	420	5.0 pcpmpl	A

Table F-3. Traffic Data and LOS Along RGMP Major Roadways in El Paso County *(Continued)*

Roadway	Description	DD %	Truck %	K-Factor %	2007 TRAFFIC UNDER EXISTING CONDITION				
					# of Lanes	AADT (TxDOT)	Peak Hour	Service Measure	LOS
US 85 / Paisano Drive	south of FM 1110	100%	5%	12%	2	5,900	708	62.5% TSF	C
	north of FM 793 / Fabens Street	100%	5%	12%	2	8,100	972	69.2% TSF	D
	south of FM 793 / Fabens Street	100%	5%	12%	2	6,400	768	63.5% TSF	C
	north of Grace Street	100%	5%	12%	2	4,700	564	58.9% TSF	C
	north of I-10	100%	15%	12%	2	13,200	1,584	81.4% TSF	E
	south of I-10	50%	15%	12%	4	26,000	1,560	21.2 pcpmpl	C
	north of Executive Center Boulevard	50%	15%	12%	4	26,000	1,560	21.2 pcpmpl	C
	north of Sun Bowl Drive	50%	15%	12%	4	19,400	1,164	15.8 pcpmpl	B
	west of Piedras Street	50%	15%	12%	6	19,600	1,176	16.0 pcpmpl	B
	west of US 62 / Montana Avenue	50%	15%	12%	6	14,800	888	12.1 pcpmpl	B
US 62 / Montana Avenue	north of SH 20	50%	25%	12%	6	18,000	1,080	11.0 pcpmpl	A
	north of Trowbridge Drive	50%	25%	12%	4	13,800	828	12.6 pcpmpl	B
	east of Montana Avenue	50%	25%	12%	6	40,000	2,400	24.4 pcpmpl	C
	west of Airway Boulevard	50%	25%	12%	6	32,000	1,920	19.5 pcpmpl	C
	west of McRae Boulevard	50%	25%	12%	6	43,000	2,580	26.3 pcpmpl	D
	east of McRae Boulevard	50%	25%	12%	6	41,000	2,460	25.0 pcpmpl	C
	west of Limerick Avenue	50%	25%	12%	6	39,000	2,340	23.8 pcpmpl	C
	west of George Dieter Drive	50%	25%	12%	4	34,000	2,040	31.2 pcpmpl	D
	west of FM 659 / Zaragoza Road	50%	25%	12%	4	15,400	924	14.1 pcpmpl	B
	east of FM 659 / Zaragoza Road	50%	25%	12%	4	25,000	1,500	22.9 pcpmpl	C
US 54 / Patriot Freeway	at BOTA POE	50%	17%	12%	4	45,000	2,700	24.6 pcpmpl	C
	south of US 20	50%	17%	12%	6	72,000	4,320	26.7 pcpmpl	D

Table F-3. Traffic Data and LOS Along RGMP Major Roadways in El Paso County *(Continued)*

Roadway	Description	DD %	Truck %	K-Factor %	2007 TRAFFIC UNDER EXISTING CONDITION				
					# of Lanes	AADT (TxDOT)	Peak Hour	Service Measure	LOS
	north of I-10	50%	17%	12%	8	92,000	5,520	25.3 pcpmpl	C
	south of Fred Wilson Avenue	50%	17%	12%	4	87,000	5,220	61.2 pcpmpl	F
	south of Loop 478	50%	17%	12%	4	71,000	4,260	50.0 pcpmpl	F
	north of Loop 478	50%	17%	12%	4	69,000	4,140	48.6 pcpmpl	F
	north of Honda Pass Drive	50%	17%	12%	4	64,000	3,840	45.1 pcpmpl	F
	south of Loop 375	50%	17%	12%	4	61,000	3,660	40.2 pcpmpl	E
	north of Loop 375	50%	17%	12%	4	45,000	2,700	24.6 pcpmpl	C
	south of Martin Luther King	50%	17%	12%	4	40,000	2,400	21.6 pcpmpl	C
	south of FM 2529 / McCombs Street	50%	17%	12%	4	12,200	732	10.2 pcpmpl	A
Loop 478 / US 54A	north of Kemp Avenue	50%	3%	12%	4	13,500	810	9.4 pcpmpl	A
	north of Julian Avenue	50%	3%	12%	6	12,700	762	5.9 pcpmpl	A
	north of US 54 / Patriot Freeway	50%	3%	12%	6	16,400	984	7.6 pcpmpl	A
	south of Loop 375	50%	3%	12%	6	21,000	1,260	9.7 pcpmpl	A
	north of Loop 375	50%	3%	12%	6	18,800	1,128	8.7 pcpmpl	A
	north of FM 2529 / McCombs Street	50%	3%	12%	6	11,900	714	5.5 pcpmpl	A
Artcraft Road / Paso Del Norte	at State Line	50%	15%	12%	4	13,700	822	11.2 pcpmpl	B
	east of SH 20	50%	15%	12%	6	12,500	750	4.4 pcpmpl	A
FM 76 / N Loop Drive	south of Trowbridge	50%	6%	12%	6	18,400	1,104	8.9 pcpmpl	A
	south of Tampico	50%	6%	12%	6	17,500	1,050	8.5 pcpmpl	A
	north of Yarbrough	50%	6%	12%	4	16,100	966	11.7 pcpmpl	B
	north of FM 659 / Zargoza Road	50%	6%	12%	4	23,000	1,380	16.7 pcpmpl	B
	south of FM 659 / Zargoza Road	50%	6%	12%	4	21,000	1,260	15.2 pcpmpl	B
	north of Loop 375	50%	6%	12%	4	25,000	1,500	18.2 pcpmpl	C

Table F-3. Traffic Data and LOS Along RGMP Major Roadways in El Paso County *(Continued)*

Roadway	Description	DD %	Truck %	K-Factor %	2007 TRAFFIC UNDER EXISTING CONDITION				
					# of Lanes	AADT (TxDOT)	Peak Hour	Service Measure	LOS
FM 659 / Zaragoza Road	south of Loop 375	50%	6%	12%	4	23,000	1,380	16.7 pcpmpl	B
	south of Moon Road	50%	6%	12%	4	21,000	1,260	15.2 pcpmpl	B
	north of FM 76 / N Loop Drive	50%	15%	12%	5	27,000	1,620	22.0 pcpmpl	C
	west of I-10	50%	15%	12%	5	34,000	2,040	27.8 pcpmpl	D
	east of I-10	50%	15%	12%	6	52,000	3,120	28.3 pcpmpl	D
	north of Loop 375	50%	15%	12%	4	27,000	1,620	22.0 pcpmpl	C
	south of US 62 / Montana Avenue	50%	15%	12%	5	11,000	660	9.0 pcpmpl	A
Fred Wilson Avenue / Spur 601	west of US 54A / Dyer Street	50%	7%	12%					
	east of US 54A / Dyer Street	50%	7%	12%					
	west of US 54	50%	7%	12%					
	east of US 54	50%	7%	12%					
	east of Airport Road	50%	7%	12%					
	west of Global Reach	50%	7%	12%					
	east of Global Reach	50%	7%	12%					
	west of Loop 375	50%	7%	12%					
	Global Reach E of Loop 375 & N of Walter Jones Boulevard	100%	7%	12%					
	Global Reach E of Loop 375 & N of Walter Jones Boulevard	100%	7%	12%					
Airport Road	south of Butterfield Trail	50%	7%	12%					
	north of Rickers	50%	7%	12%					
	north of Montana Avenue	50%	7%	12%					

Table F-3. Traffic Data and LOS Along RGMP Major Roadways in El Paso County *(Continued)*

Roadway	Description	DD %	Truck %	K-Factor %	2007 TRAFFIC UNDER EXISTING CONDITION				
					# of Lanes	AADT (TxDOT)	Peak Hour	Service Measure	LOS
FM 2316 / McRae	north of I-10	50%	5%	12%	6	26,000	1,560	12.4 pcpmpl	B
	south of US 62 / Montana Avenue	50%	5%	12%	4	9,400	564	6.7 pcpmpl	A

Traffic Data Source: Texas Department of Transportation Traffic Count Database, Year 2007; El Paso MPO TDM - 2015 w/BRAC, 2025 w/BRAC

LOS for Freeways / Expressways and other Multi-lane Urban Principal Arterials measured in terms of Density in passenger car per mile per lane (pcpmpl)

LOS for Two-lane Urban Principal / Minor Arterial Streets measured in terms of Percent Time Spent Following (PTSF%)

LEGEND:	
Highlighted	Segments operating at unacceptable LOS

Table F-4. El Paso District List of Proposed Major Projects (LRTP/TIP)

Priority	Project	From	To	Type	Existing Lanes	Proposed Lanes	Need and Purpose	Approximate Project Cost	MPO PID	Funding Sources (PE / ROW / CONST)
TxDOT / Other Agencies TIP Short-Term Recommendations (2008-2015)										
Roadway	North Loop Drive (FM 76) Phase VII (Socorro)	El Paso City Limits	Horizon Boulevard/ (FM 1281)	Widening to 4-Lane with Divided Median	2	4	Roadway Capacity	$20,893,000	P503X-15B	Fed/State
Other	Bus Rapid Transit (BRT) System	Schuster	Doniphan Drive	Mesa (SH 20) BRT	-	-	Intermodal Transportation / Connectivity	$28,267,000	T015C	Fed/Local
	Interstate Highway 10	Loop 375 (Transmountain)	Loop 375 (Joe Battle/Americas)	Aesthetic Enhancements / Landscaping	-	-	Quality of Life	$6,195,000	E003A	Fed/Local
	Central Business District (CBD) - Phase IV	CBD	CBD	Reconstruction and Rehabilitation	-	-	Quality of Life and Economic Development	$13,922,844	R307D	Fed/Local
	Horizon Boulevard / Buford Road (Socorro)	North Loop (FM 76)	Alameda Avenue (SH 20)	Widening to 4-Lane with Striped Median	2	4	Roadway Capacity	$11,137,450	A506X-05A	Fed/State/Local
Other	Bus Rapid Transit (BRT) System	Hueco Club Park	Airway Boulevard	Planning Studies for Montana BRT.	-	-	Intermodal Transportation / Connectivity	$2,000,000	T017D	Fed/Local
Other	Travel Demand Management (TDM)	I-10, US 54 & Loop 375	-	Real Time Traffic Information	-	-	Traffic Operations and Emergency Management	$96,000	M016B	Fed/State
Other	Travel Demand Management (TDM)	I-10 / Mesa Street	Eastlake Boulevard	Freeway Management / Dynamic Message Signs	-	-	Traffic Operations and Emergency Management	$3,114,721	M016B	Fed/State
Other	Transportation Systems Management (TSM) / Intersection Improvements	Delta Street	Loop 375	Roadway Geometrics / Traffic Signal Synchronization and Interconnect	-	-	Traffic Operations and Capacity	$2,975,000	M017X	Fed/State
Other	Sun Metro Transit Service	Pedestrian Stanton Street Bridge	Oregon Street Mall to UTEP	International Bus Service	-	-	Traffic Operations and Capacity at International POE	$3,000,000	T013A	Fed/Local

Table F-4. El Paso District List of Proposed Major Projects (LRTP/TIP) *(Continued)*

Priority	Project	From	To	Type	Existing Lanes	Proposed Lanes	Need and Purpose	Approximate Project Cost	MPO PID	Funding Sources (PE / ROW / CONST)
TxDOT / Other Agencies TIP Short-Term Recommendations (2008-2015)										
Roadway	Patriot Freeway / US 54	Yandell Overpass	Honda Pass	Roadway Widening	4	6	Roadway Capacity	$32,500,000	F002A-05A	Fed/State
	Patriot Freeway / US 54	Yandell Overpass	Van Buren Avenue	Bridge Replacement	-	-	Misc. Barrier Work	$400,000	F026X	Fed/State
Roadway	Bridge of the Americas (BOTA) Fast Lane Redesign Project	BOTA Border Safety Inspection Station	Delta Street	Construction of new dedicated Exit Gate for Fast Traffic	-	-	International Access and Mobility	$257,640	C019X	Fed/State
Other	Sun Metro Transit Service	ADJ	Paso Del Norte POE	Parking Garage, Transit Terminal & Landscaping	-	-	Intermodal Travel and Connectivity at International POE	$4,000,000	T304	Fed/Local
Other	Sun Metro Transit Service	El Paso (Sun Metro)	All Sun Metro Transit Terminals	ITS Real Time Information Kiosks Expansion	-	-	Transit Operations and Performance	$1,500,000	T007	Fed/Local
Other	Transportation Systems Management (TSM) / Intersection Improvements	El Paso District at 16 Intersections Locations		Roadway Geometrics / Traffic Signal Synchronization and Interconnect	-	-	Traffic Operations and Capacity	$2,000,000	M017X	Fed/Local
Other	Intelligent Transportation System (ITS)	EPUTS Area		Replace with Fiber Optics, Twisted Copper Cable, Video Surveillance & Detection	-	-	ITS Improvements	$3,365,820	M035A	Fed/Local
Other	Transportation Systems Management (TSM) / Intersection Improvements	El Paso District at 15 Intersections Locations		Roadway Geometrics / Traffic Signal Synchronization and Interconnect	-	-	Traffic Operations and Capacity	$2,493,200	M017X	Fed/Local
Other	Transportation Systems Management	Delta	Loop 375	Alameda Traffic Signal Interconnect	-	-	Traffic Operations and Capacity	$2,500,000	M017X	Fed/State

Table F-4. El Paso District List of Proposed Major Projects (LRTP/TIP) *(Continued)*

Priority	Project	From	To	Type	Existing Lanes	Proposed Lanes	Need and Purpose	Approximate Project Cost	MPO PID	Funding Sources (PE / ROW / CONST)
TxDOT / Other Agencies TIP Short-Term Recommendations (2008-2015)										
	(TSM)									
Other	Video Imaging Detector System (VIDS)	El Paso County - 33 intersections		Traffic Signal Timing Optimization	-	-	Traffic Signal Operations	$703,450	M048X	Fed
Other	Sun Metro Transit Service	City of El Paso		Special Purpose Bus Routes for Senior Citizen Service		-	Senior Bus Service Link	$375,648	T018	Fed/Local
Other	Travel Demand Management (TDM)	County of El Paso		Vanpool Program	-	-	Traffic Operations and Roadway Capacity	$1,000,000	T019X	Fed
	Braided Ramps	Viscount Boulevard	Hawkins Boulevard	New Construction	-	-	Access and Traffic Operations	$7,000,000	I043X	Fed/State
Other	UTEP Transportation Improvements	Mesa Street (SH 20)	I-10	Roadway and Intersection/ Pedestrian/ Transit Improvements			Roadway Capacity and Intermodal Transportation	$15,278,727	A307X	Fed/Local (UTEP)
	Education Drive	Loop 375	Existing Education Drive	Roadway Widening	-	-	Roadway Capacity and Mobility	$3,166,364	A123X	
SUB-TOTAL APPROXIMATE SHORT-TERM PROJECTS (2008-2015) COST ESTIMATE - EL PASO DISTRICT								**$168,141,864**		
Other	I-10	MP 157	MP 163.4	Traveler Information System	-	-	Travel Demand Management and Operations	$1,220,695	I050X	Fed/State
Other	Loop 375 Enhancement Project	EPUTS Area	n/a	Pedestrian Bridge Enhancements (Santa Fe/Stanton Bridge)	-	-	International Travel and Quality of Life	$2,274,163	E002X	

Table F-4. El Paso District List of Proposed Major Projects (LRTP/TIP) *(Continued)*

Priority	Project	From	To	Type	Existing Lanes	Proposed Lanes	Need and Purpose	Approximate Project Cost	MPO PID	Funding Sources (PE / ROW / CONST)
TxDOT / Other Agencies TIP Short-Term Recommendations (2008-2015)										
Other	Intelligent Transportation System (ITS)	17 Major Intersections	Citywide	Video Surveillance & Count Stations			ITS Improvements for Traffic Advisory and Surveillance	$3,845,384	M025X	Fed/State
Other	I-10	Transmountain	Mesa Road.(SH 20)	Interstate Rehabilitation	-	-	Quality of Life and Economic Development	$1,183,807	R008X	Fed/State
Other	Rural Transit Service	Socorro, San Elizario, Clint and EPCC Mission Del Paso	Alameda/Zaragoza	Purchase Fully Equipped Buses	-	-	Rural Transit Service and Intermodal Transportation	$543,575	T005A	Fed/Local
Roadway	Transmountain (Loop 375)	Doniphan (SH 20)	0.13 mi W. of I-10	ROW & New Construction	-	4	Access and Quality of Life	$23,584,668	F008X-15A	
Roadway	Spur 601	Fred Wilson Eastbound	US 54 Southbound	Patriot Freeway (US 54) - Construct Ramp					F033X-MOD	
Roadway	Spur 601	US 54	Loop 375	New Freeway			Access and Mobility	$319,962,895	Inner-Loop	Fed/State
Other	Borrego Elementary Sidewalks/Bike Lanes/Crosswalks	Chicken Ranch Road & Alarcon Road	Chicken Ranch Road & Alarcon Road	Bicycle and Pedestrian Project	-	-	Intermodal Transportation / Connectivity	$240,888	E002X	Fed/State
Roadway	Montana Avenue (US 62/180)	1.55 mi E. of Loop 375	1.4 mi W. of Loop 375	Roadway Widening w/Underpass at Loop 375	4	6	Roadway Capacity and Mobility	$44,463,477	P403C-15A	Fed/State
Roadway	Border Highway (Loop 375)	I-110 (BOTA) / US 54 Patriot Freeway	Zaragoza Road POE	Roadway Widening & Tolled Facility	4	6	Roadway Capacity, Mobility and Access	$89,466,000	F013X-15A	Fed/State
	Alameda Avenue (SH 20)	Padres	Americas Avenue (Loop 375)	Interstate Rehabilitation	4	4	Quality of Life and Economic Development	$21,625,173	P519C-15A	Fed/State
Other	NE G Avenue Sidewalks/Bike Lanes/Crosswalks	Fabens Street	San Maros Street	Bicycle and Pedestrian Project	-	-	Intermodal Transportation / Connectivity	$103,632	E002X	Fed/State

Table F-4. El Paso District List of Proposed Major Projects (LRTP/TIP) *(Continued)*

Priority	Project	From	To	Type	Existing Lanes	Proposed Lanes	Need and Purpose	Approximate Project Cost	MPO PID	Funding Sources (PE / ROW / CONST)
TxDOT / Other Agencies TIP Short-Term Recommendations (2008-2015)										
Other	Bikeway Network Implementation Plan	Trowbridge, Trawood, Montwood & Viscount		Bikeways Project	-	-	Intermodal Transportation / Connectivity	$901,042	M022X	Fed/State
Other	Bikeway Network Implementation Plan	Riverside,Yarbrough, Delta & Hunter		Bikeways Project	-	-	Intermodal Transportation / Connectivity	$1,106,482	M022X	Fed/State
Roadway	Interstate Highway 10 / Horizon Boulevard	2.2 miles west of Horizon & 0.2 miles south of I-10	0.9 miles east of Horizon & 0.3 miles north of I-10	Interchange Reconstruction	-	-	Roadway Capacity	$32,944,999	I035X	Fed/State
Other	Transportation Systems Management (TSM)	El Paso County Intersections at Various Locations		Traffic Signal Synchronization	-	-	Traffic Operations and Capacity	$315,175	M017X	Fed/State
Other	Fleet Management - Heavy Duty Alternative Fuels	El Paso County at Various Locations		Fleet Management for Energy Efficiency			Heavy Duty Alternative Fuels	$225,000	M013E	Fed/State
Other	Intelligent Transportation System (ITS)	El Paso County at Various Locations		ITS Integration			ITS Operations	$725,000	M040X	Fed/State
TOTAL APPROXIMATE SHORT-TERM PROJECTS (2008-2015) COST ESTIMATE - EL PASO DISTRICT								**$712,873,919**		
Roadway	Spur 6	FM 1905	W. of I-10	New Construction	-	4	Access and Mobility	$10,351,805	A101C-15B	Fed/State
	Northeast Parkway	Loop 375	I-10, NM	New Freeway				$226,000,000		
Roadway	Joe Battle Boulevard (Loop 375) & Zaragoza	0.5 miles N. of Loop 375 & FM 659	0.5 miles S. of Loop 375 & FM 659	New Interchange Design at Zaragoza	-	-	Access and Quality of Life	$34,700,000	F011A-PE	Fed/State
Roadway	Joe Battle Boulevard (Loop 375) & Zaragoza	0.5 miles N. of Loop 375 & FM 659	0.5 miles S. of Loop 375 & FM 659	ROW Acquisition for New Interchange Design at Zaragoza	-	-	New Construction	$34,700,000	F011A-ROW	Fed/State
Roadway	I-10 & Americas Avenue (Loop 375)	FM 659 (Zaragoza)	Eastlake Boulevard	ROW Acquisition for New Ramps	-	-	New Construction	$78,000,000	I007B-ROW	Fed/State

Table F-4. El Paso District List of Proposed Major Projects (LRTP/TIP) *(Continued)*

Priority	Project	From	To	Type	Existing Lanes	Proposed Lanes	Need and Purpose	Approximate Project Cost	MPO PID	Funding Sources (PE / ROW / CONST)
TxDOT / Other Agencies TIP Short-Term Recommendations (2008-2015)										
	Phase 2A			and Frontage Roads						
Roadway	I-10 & Americas Avenue (Loop 375) Phase 2A	FM 659 (Zaragoza)	Eastlake Boulevard	Design for New Ramps and Frontage Roads	-	-	Access and Quality of Life	$78,000,000	I007B-PE	Fed/State
Roadway	Airway Extension	Gateway Boulevard	Market Street		-	2	Access and Mobility	$5,500,000	A306X-MOD	
Roadway	Darrington Road	City Limits	I-10	Roadway Widening	2	4		$13,124,610		
Roadway	Clint Connection (FM 1110)	I-10	North Loop		2	4		$11,091,220		
Roadway		Carnes	Loop 375	New Construction	-	4		$6,957,892		
Roadway		North Loop (FM 76)	Border Highway (Loop 375)	New Construction	-	4		$29,971,323		
Roadway	Gateway Boulevard East & West	West between Hawkins & Airway/ Hawkins &Viscount	East between Hawkins & Airway/ Hawkins &Viscount	On and Off Ramp Improvements	-	-	Travel and Quality of Life	$8,310,400	I043X	Fed/State
Roadway	Hawkins Boulevard	North Loop Drive (FM 76)	I-10	ROW Acquisition	-	-	Roadway Improvements	$15,787,727	P506X-ROW	Fed/Local (El Paso)
Roadway	Vinton Road	SH 20	I-10	Roadway Upgrade and Widening			Roadway Capacity	$5,239,435	P101X-15A	Fed/State
Other	Alameda Bus Rapid Transit (BRT) - Phase I			Bus Transit	-	-	Travel and Quality of Life	$39,664,000	T016-AA	Fed/Local (El Paso)
Other	Alameda Bus Rapid Transit (BRT) - Phase I			Bus Transit	-	-	Travel and Quality of Life	$89,244,000	T015A-AA	Fed/Local (El Paso)
Other	Zaragoza Road Railroad Overpass	Sunland Street	North Mellon	ROW Acquisition	-	-	Railroad Bridge	$26,067,173	P515-ROW	Fed/Local (El Paso)

Table F-4. El Paso District List of Proposed Major Projects (LRTP/TIP) *(Continued)*

Priority	Project	From	To	Type	Existing Lanes	Proposed Lanes	Need and Purpose	Approximate Project Cost	MPO PID	Funding Sources (PE / ROW / CONST)
TxDOT / Other Agencies TIP Short-Term Recommendations (2008-2015)										
Roadway	Joe Battle Boulevard (Loop 375)	I-10	US 62 / 180 (Montana Avenue)		4	6	Roadway Capacity	$86,265,044	F032X-MOD	Fed/State
Roadway	FM3380-Manuel F. Aguilera Highway	Tornillio Guadalupe POE	I-10 at O.T. Smith Road	New Roadway and Overpass	-	2	Access and Mobility	$45,024,318	A522X-MOD	Fed/State/Local
Roadway	I-10 and Schuster Road Interchange	n/a	n/a	Interchange Improvements	-	-	Roadway Rehabilitation	$14,137,269	I045X-MOD	Fed/State
Roadway	Paso Del Norte Drive	I-10	Resler	New Construction and Rehabilitation	0-4	4	Access and Mobility	$7,882,806	P103D-MOD	Fed/Local (El Paso)
Other	Oregon Street Improvements	Glory Road	San Jacinto Plaza	Resurfacing and Rehabilitation	-	-	Quality of Life	$6,265,213	R017X	Fed/Local (El Paso)
Other	Ashford Street Overlay & Ryderwood Reconstruction	FM 1281 / Ashford Street	Ryderwood Avenue/ Darrington Road	Resurfacing and Rehabilitation			Quality of Life	$1,600,000	R017X	Fed/Local (Horizon City)
TOTAL APPROXIMATE LONG-TERM PROJECTS (2015-2035) COST ESTIMATE - EL PASO DISTRICT								**$873,884,235**		
Study	Mission Valley Traffic Analysis Study	I-10 to the North / Loop 375 to the East	Border Hwy. to the South/Yarbrough to the West	Traffic Operations and Performance	-	-	Improve Traffic Operations and Reduce Congestion	$1,000,000	M504X	Fed/Local (El Paso)
Study	New Port of Entry Feasibility Study	n/a	n/a	Yarbrough Port of Entry			International Travel and Access	$1,000,000	C018X	Fed/Local (El Paso)
Study	Expansion of Port of Entry Feasibility Study	n/a	n/a	Ysleta / Zaragoza Port of Entry	-	-	International Travel and Access	$1,000,000	C017X	Fed/Local (El Paso)
Study	Zaragoza Corridor Study	North Loop	Loop 375	Traffic Operations and Performance	-	-	Improve Traffic Operations and Reduce Congestion	$2,000,000	M505X	Fed/Local (El Paso)
TOTAL APPROXIMATE PLANNING STUDY (2005-2035) COST ESTIMATE - EL PASO DISTRICT								**$5,000,000**		

Table F-5. Traffic Projections and LOS along RGMP Major Roadways in El Paso County

Roadway	Description	DD %	Truck %	K-Factor %	2015 TRAFFIC WITH PROJECTED BRAC GROWTH					2025 TRAFFIC PROJECTED BRAC GROWTH					2025 TRAFFIC PROJECTED BRAC GROWTH WITH PROPOSED RECOMMENDATIONS				
					# of Lanes	AADT (El Paso MPO)	Peak Hour	Service Measure	LOS	# of Lanes	AADT (El Paso MPO)	Peak Hour	Service Measure	LOS	# of Lanes	AADT (El Paso MPO)	Peak Hour	Service Measure	LOS
I-10	north of Antonio Street / Mountain Pass Boulevard	50%	20%	12%	4	54,000	3,240	33.7 pcpmpl	D	4	66,900	4,020	48.4 pcpmpl	F	6	66,900	4,020	27.1 pcpmpl	D
	south of Valley Chili Road	50%	20%	12%	4	48,200	2,892	28.1 pcpmpl	D	4	54,700	3,290	36.5 pcpmpl	E	6	54,700	3,290	21.9 pcpmpl	C
	south of Nashua Road	50%	20%	12%	4	57,300	3,438	37.8 pcpmpl	E	4	64,900	3,900	46.9 pcpmpl	F	6	64,900	3,900	26.2 pcpmpl	D
	north of Paso Del Norte	50%	20%	12%	4	57,100	3,426	37.5 pcpmpl	E	4	61,000	3,660	45.1 pcpmpl	F	6	61,000	3,660	24.4 pcpmpl	C
	north of Mesa / SH 20	50%	9%	12%	4	65,500	3,930	37.7 pcpmpl	E	4	71,700	4,310	45.3 pcpmpl	F	6	71,700	4,310	25.5 pcpmpl	C
	south of Mesa / SH 20	50%	17%	12%	6	99,400	5,964	46.2 pcpmpl	F	8	127,900	7,680	45.0 pcpmpl	F	10	127,900	7,680	30.8 pcpmpl	D
	at US 85 interchange	50%	17%	12%	6	82,800	4,968	32.9 pcpmppl	D	6	93,500	5,610	44.8 pcpmpl	E	8	93,500	5,610	27.4 pcpmpl	D
	north of Executive Center Boulevard	50%	17%	12%	6	111,700	6,702	51.9 pcpmpl	F	6	131,900	7,920	61.4 pcpmpl	F	10	131,900	7,920	32.2 pcpmpl	D
	south of Executive Center Boulevard	50%	11%	12%	8	124,300	7,458	35.7 pcpmpl	E	8	143,200	8,600	46.4 pcpmpl	F	10	143,200	8,600	32.6 pcpmpl	D
	b/w Cotton Street and Piedras Street	50%	11%	12%	10	160,700	9,642	38.3 pcpmpl	E	10	158,500	9,510	39.2 pcpmpl	E	12	158,500	9,510	29.1 pcpmpl	D
	east of Piedras Street	50%	11%	12%	10	140,500	8,430	30.0 pcpmpl	D	10	145,000	8,700	33.2 pcpmpl	D					
	west of Loop 478	50%	11%	12%	10	124,800	7,488	25.5 pcpmpl	C	10	145,000	8,700	33.2 pcpmpl	D					
	west of US 62 / Paisano Drive	50%	11%	12%	8	130,300	7,818	39.4 pcpmpl	E	8	137,300	8,240	45.1 pcpmpl	F	10	137,300	8,240	30.7 pcpmpl	D
	west of Trowbridge Drive	50%	8%	12%	8	128,600	7,716	35.3 pcpmpl	E	8	137,300	8,240	42.7 pcpmpl	E	10	137,300	8,240	29.1 pcpmpl	D
	northwest of Robert E. Lee Road	50%	8%	12%	8	141,900	8,514	44.2 pcpmpl	E	8	151,800	9,110	47.2 pcpmpl	F	10	151,800	9,110	33.6 pcpmpl	D
	northwest of Hawkins Road	50%	8%	12%	8	133,800	8,028	38.3 pcpmpl	E	8	139,500	8,370	44.7 pcpmpl	E	10	139,500	8,370	29.7 pcpmpl	D
	west of FM 2316	50%	8%	12%	8	125,900	7,554	33.9 pcpmpl	D	8	141,200	8,480	45.7 pcpmpl	F	10	141,200	8,480	30.2 pcpmpl	D
	east of FM 2316/ McRae	50%	8%	12%	8	108,100	6,486	26.8 pcpmpl	D	8	126,000	7,560	35.8 pcpmpl	E	10	126,000	7,560	26.2 pcpmpl	D
	east of Yarbrough Drive	50%	8%	12%	6	104,500	6,270	42.1 pcpmpl	E	6	136,100	8,170	56.5 pcpmpl	F	6	136,100	8,170	28.8 pcpmpl	D
	north of FM 659 / Zaragoza Road	50%	8%	12%	6	91,400	5,484	32.0 pcpmpl	D	6	77,100	4,630	26.9 pcpmpl	D					

Table F-5. Traffic Projections and LOS along RGMP Major Roadways in El Paso County *(Continued)*

Roadway	Description	DD %	Truck %	K-Factor %	2015 TRAFFIC WITH PROJECTED BRAC GROWTH					2025 TRAFFIC PROJECTED BRAC GROWTH					2025 TRAFFIC PROJECTED BRAC GROWTH WITH PROPOSED RECOMMENDATIONS				
					# of Lanes	AADT (El Paso MPO)	Peak Hour	Service Measure	LOS	# of Lanes	AADT (El Paso MPO)	Peak Hour	Service Measure	LOS	# of Lanes	AADT (El Paso MPO)	Peak Hour	Service Measure	LOS
	north of Joe Battle Boulevard/Loop 375	50%	8%	12%	4	73,100	4,386	45.5 pcpmpl	F	4	78,900	4,740	45.5 pcpmpl	F	6	78,900	4,740	27.6 pcpmpl	D
	north of FM 1281/Horizon	50%	8%	12%	4	41,800	2,508	20.1 pcpmppl	C	4	44,200	2,660	22.9 pcpmpl	C					
	north of FM 1110	50%	8%	12%	4	31,800	1,908	15.3 pcpmpl	B	4	38,600	2,320	20.0 pcpmpl	C					
	south of FM 1110	50%	8%	12%	4	37,600	2,256	18.0 pcpmpl	C	4	43,400	2,610	22.5 pcpmpl	C					
	south of FM 793	50%	8%	12%	4	26,600	1,596	12.8 pcpmpl	B	4	31,600	1,900	16.4 pcpmpl	B					
	at El Paso County Line	50%	8%	12%	4	26,100	1,566	12.5 pcpmpl	B	4	30,900	1,860	16.0 pcpmpl	B					
Cesar Chavez Memorial Hwy./ Loop 375 / Border Highway / Joe Battle Boulevard	at El Paso Community College	50%	7%	12%	4	13,800	828	10.2 pcpmpl	A	4	11,400	690	8.5 pcpmpl	A					
	south of Chamizal National Park	50%	7%	12%	6	33,800	2,028	11.5 pcpmpl	B	6	53,200	3,200	18.1 pcpmpl	C					
	south of US 54	50%	7%	12%	6	42,900	2,574	14.6 pcpmpl	B	6	65,800	3,950	22.4 pcpmpl	C					
	at Asacarte Lake	50%	7%	12%	4	42,600	2,556	21.7 pcpmpl	C	4	44,900	2,700	23.0 pcpmpl	C					
	north of FM 659 / Zaragoza Road	50%	7%	12%	4	33,900	2,034	17.3 pcpmpl	C	4	22,500	1,350	11.5 pcpmpl	B					
	south of FM 659 / Zaragoza Road	50%	7%	12%	4	42,100	2,526	21.5 pcpmpl	C	4	22,500	1,350	11.5 pcpmpl	B					
	south of SH 20	50%	7%	12%	4	29,500	1,770	15.0 pcpmpl	B	4	20,100	1,210	10.3 pcpmpl	A					
	south of North Loop Drive	50%	7%	12%	4	49,700	2,982	25.5 pcpmpl	C	4	60,700	3,650	33.0 pcpmpl	D					
	west of I-10	50%	7%	12%	4	38,000	2,280	19.4 pcpmpl	C	4	23,100	1,390	11.8 pcpmpl	B					
	east of I-10	50%	7%	12%	4	49,300	2,958	25.2 pcpmpl	C	4	23,100	1,390	11.8 pcpmpl	B					
	north of Montwood	50%	7%	12%	4	33,900	2,034	17.3 pcpmpl	B	4	38,800	2,330	19.8 pcpmpl	C					
	south of US 62 / Montana Avenue	50%	7%	12%	4	27,400	1,644	14.0 pcpmpl	B	4	29,900	1,800	15.3 pcpmpl	B					
	north of US 62 / Montana Avenue	50%	7%	12%	4	49,500	2,970	25.3 pcpmpl	C	4	57,000	3,420	30.0 pcpmpl	D					
	east of McCombs Street	50%	7%	12%	4	16,300	978	8.3 pcpmpl	A	4	53,200	3,200	27.6 pcpmpl	D					
	west of McCombs Street	50%	7%	12%	4	25,200	1,512	12.8 pcpmpl	B	4	21,400	1,290	11.0 pcpmpl	A					

Table F-5. Traffic Projections and LOS along RGMP Major Roadways in El Paso County *(Continued)*

Roadway	Description	DD %	Truck %	K-Factor %	2015 TRAFFIC WITH PROJECTED BRAC GROWTH					2025 TRAFFIC PROJECTED BRAC GROWTH					2025 TRAFFIC PROJECTED BRAC GROWTH WITH PROPOSED RECOMMENDATIONS				
					# of Lanes	AADT (El Paso MPO)	Peak Hour	Service Measure	LOS	# of Lanes	AADT (El Paso MPO)	Peak Hour	Service Measure	LOS	# of Lanes	AADT (El Paso MPO)	Peak Hour	Service Measure	LOS
Loop 375 / Transmountain Parkway	west of Loop 478	50%	7%	12%	4	25,200	1,512	13.9 pcpmpl	B	4	21,400	1,290	11.9 pcpmpl	B					
	west of US 54	50%	7%	12%	4	30,100	1,806	16.6 pcpmpl	B	4	46,800	2,810	26.1 pcpmpl	D					
	through Franklin Mountains State Park	50%	7%	12%	4	30,000	1,800	16.6 pcpmpl	B	4	46,800	2,810	26.1 pcpmpl	D					
	Talbot Street west of I-10	100%	7%	12%	2	16,000	1,920	89.0% TSF	E	2	21,600	2,600	94.8% TSF	F	4	21,600	1,300	16.0 pcpmpl	B
	Talbot Street west of Rey Place	100%	7%	12%	2	9,500	1,140	73.7% TSF	D	2	14,000	1,680	82.8% TSF	E	4	14,000	840	10.3 pcpmpl	A
SH 20 / Alameda Avenue / Doniphan Drive / Mesa Street	south of Valley Chili Road	50%	5%	12%	4	16,400	984	11.7 pcpmpl	B	4	24,000	1,440	17.2 pcpmpl	B					
	north of Las Malchis	50%	5%	12%	4	13,100	786	9.4 pcpmpl	A	4	21,100	1,270	15.2 pcpmpl	B					
	north of Canutillo	50%	5%	12%	4	16,200	972	11.6 pcpmpl	B	4	25,300	1,520	18.1 pcpmpl	C					
	south of Canutillo	50%	5%	12%	4	26,500	1,590	19.0 pcpmpl	C	4	33,900	2,040	24.4 pcpmpl	C					
	south of Artcraft Road	50%	5%	12%	4	29,100	1,746	20.8 pcpmpl	C	4	41,300	2,480	29.6 pcpmpl	D					
	north of Mesa Street	50%	5%	12%	4	32,500	1,950	23.3 pcpmpl	C	4	38,500	2,310	27.6 pcpmpl	D					
	west of I-10	50%	5%	12%	6	57,500	3,450	27.5 pcpmpl	D	6	69,800	4,190	33.6 pcpmpl	D					
	east of Desert Boulevard	50%	5%	12%	6	48,800	2,928	23.3 pcpmpl	C	6	54,300	3,260	26.0 pcpmpl	C					
	north of Executive Center Boulevard	50%	5%	12%	6	51,100	3,066	24.4 pcpmpl	C	6	59,800	3,590	28.6 pcpmpl	D					
	north of Sun Bowl Drive	50%	5%	12%	6	60,500	3,630	28.9 pcpmpl	D	6	73,300	4,400	35.6 pcpmpl	E	8	73,300	4,400	29.2 pcpmpl	D
	east of Cotton Street	100%	5%	12%	2	9,200	1,104	73.5% TSF	D	2	11,500	1,380	78.6% TSF	D					
	west of US 62 / Montana Avenue	50%	5%	12%	4	23,300	1,398	16.7 pcpmpl	B	4	24,600	1,480	17.7 pcpmpl	B					
	east of FM 1505 / Clark Drive	100%	5%	12%	2	28,500	3,420	97.3% TSF	F	4	31,400	1,890	22.6 pcpmpl	C					
	east of Delta Drive / N Loop Road	50%	5%	12%	4	31,600	1,896	22.6 pcpmpl	C	4	34,900	2,100	25.1 pcpmpl	C					
	west of Carolina Drive	50%	5%	12%	4	20,900	1,254	15.0 pcpmpl	B	4	24,300	1,460	17.4 pcpmpl	B					
	east of Yarbrough Drive	50%	5%	12%	4	31,100	1,866	22.3 pcpmpl	C	4	30,800	1,850	22.1 pcpmpl	C					

Table F-5. Traffic Projections and LOS along RGMP Major Roadways in El Paso County *(Continued)*

Roadway	Description	DD %	Truck %	K-Factor %	2015 TRAFFIC WITH PROJECTED BRAC GROWTH					2025 TRAFFIC PROJECTED BRAC GROWTH					2025 TRAFFIC PROJECTED BRAC GROWTH WITH PROPOSED RECOMMENDATIONS				
					# of Lanes	AADT (El Paso MPO)	Peak Hour	Service Measure	LOS	# of Lanes	AADT (El Paso MPO)	Peak Hour	Service Measure	LOS	# of Lanes	AADT (El Paso MPO)	Peak Hour	Service Measure	LOS
US 85 / Paisano Drive	east of Zargoza Road	50%	5%	12%	4	31,800	1,908	22.8 pcpmpl	C	4	36,200	2,180	26.0 pcpmpl	D					
	north of Loop 375	50%	5%	12%	4	24,900	1,494	17.8 pcpmpl	B	4	25,300	1,520	18.1 pcpmpl	C					
	south of Loop 376	50%	5%	12%	4	28,500	1,710	20.4 pcpmpl	C	4	33,000	1,980	23.6 pcpmpl	C					
	south of Moon Road	50%	5%	12%	4	23,200	1,392	16.6 pcpmpl	B	4	27,000	1,620	19.3 pcpmpl	C					
	south of Burbridge Street	50%	5%	12%	4	11,100	666	7.9 pcpmpl	A	4	13,200	800	9.5 pcpmpl	A					
	south of FM 1110	100%	5%	12%	2	10,400	1,248	75.5% TSF	D	2	11,600	1,400	78.1% TSF	D					
	north of FM 793 / Fabens Street	100%	5%	12%	2	8,000	960	68.9% TSF	D	2	5,900	710	62.5% TSF	C					
	south of FM 793 / Fabens Street	100%	5%	12%	2	6,400	768	63.5% TSF	C	2	4,100	500	55.9% TSF	C					
	north of Grace Street	100%	5%	12%	2	5,100	612	60.7% TSF	C	2	3,000	360	48.7% TSF	B					
	north of I-10	100%	15%	12%	2	7,000	840	65.6% TSF	D	2	5,600	680	63.3% TSF	C	2				
	south of I-10	50%	15%	12%	4	60,900	3,654	55.2 pcpmpl	F	4	77,500	4,650	70.3 pcpmpl	F	8	77,500	4,650	35.0 pcpmpl	D
	north of Executive Center Boulevard	50%	15%	12%	4	59,500	3,570	54.0 pcpmpl	F	4	75,100	4,510	68.2 pcpmpl	F	8	75,100	4,510	34.1 pcpmpl	D
	north of Sun Bowl Drive	50%	15%	12%	4	36,900	2,214	30.1 pcpmpl	D	4	52,700	3,170	45.9 pcpmpl	F	6	52,700	3,170	28.8 pcpmpl	D
	west of Piedras Street	50%	15%	12%	6	36,200	2,172	19.7 pcpmpl	C	6	42,100	2,530	23.0 pcpmpl	C					
	west of US 62 / Montana Avenue	50%	15%	12%	6	21,600	1,296	11.8 pcpmpl	B	6	26,900	1,620	14.7 pcpmpl	B					
US 62 / Montana Avenue	north of SH 20	50%	25%	12%	6	21,600	1,296	13.2 pcpmpl	B	6	29,700	1,790	18.2 pcpmpl	C					
	north of Trowbridge Drive	50%	25%	12%	4	40,000	2,400	37.6 pcpmpl	E	4	43,800	2,630	42.2 pcpmpl	E	6	43,800	2,630	26.8 pcpmpl	D
	east of Montana Avenue	50%	25%	12%	6	67,000	4,020	43.2 pcpmpl	E	6	73,100	4,390	49.7 pcpmpl	F	6	73,100	4,390	31.1 pcpmpl	D
	west of Airway Boulevard	50%	25%	12%	6	37,700	2,262	23.0 pcpmpl	C	6	42,200	2,540	25.9 pcpmpl	C					
	west of McRae Boulevard	50%	25%	12%	6	56,700	3,402	35.1 pcpmpl	E	6	63,800	3,830	40.6 pcpmpl	E	8	63,800	3,830	32.5 pcpmpl	D
	east of McRae Boulevard	50%	25%	12%	6	41,900	2,514	25.6 pcpmpl	C	6	46,900	2,820	21.5 pcpmpl	C					

Table F-5. Traffic Projections and LOS along RGMP Major Roadways in El Paso County *(Continued)*

Roadway	Description	DD %	Truck %	K-Factor %	2015 TRAFFIC WITH PROJECTED BRAC GROWTH					2025 TRAFFIC PROJECTED BRAC GROWTH					2025 TRAFFIC PROJECTED BRAC GROWTH WITH PROPOSED RECOMMENDATIONS				
					# of Lanes	AADT (El Paso MPO)	Peak Hour	Service Measure	LOS	# of Lanes	AADT (El Paso MPO)	Peak Hour	Service Measure	LOS	# of Lanes	AADT (El Paso MPO)	Peak Hour	Service Measure	LOS
	west of Limerick Avenue	50%	25%	12%	6	42,600	2,556	26.0 pcpmpl	D	6	49,100	2,950	22.5 pcpmpl	C					
	west of George Dieter Drive	50%	25%	12%	4	23,300	1,398	21.4 pcpmpl	C	4	27,000	1,620	18.5 pcpmpl	C					
	west of FM 659 / Zaragoza Road	50%	25%	12%	4	19,900	1,194	18.2 pcpmpl	C	4	26,400	1,590	18.2 pcpmpl	C					
	east of FM 659 / Zaragoza Road	50%	25%	12%	4	36,600	2,196	33.8 pcpmpl	D	4	55,500	3,330	53.8 pcpmpl	F	6	55,500	3,330	34.3 pcpmpl	D
US 54 / Patriot Freeway	at BOTA POE	50%	17%	12%	4	34,200	2,052	19.8 pcpmpl	C	4	35,100	2,110	20.4 pcpmpl	C					
	south of US 20	50%	17%	12%	6	42,700	2,562	16.5 pcpmpl	B	6	52,000	3,120	20.1 pcpmpl	C					
	north of I-10	50%	17%	12%	8	61,000	3,660	17.7 pcpmpl	B	8	71,200	4,280	20.7 pcpmpl	C					
	south of Fred Wilson Avenue	50%	17%	12%	6	86,500	5,190	37.5 pcpmpl	E	6	88,900	5,340	39.8 pcpmpl	E	8	88,900	5,340	25.9 pcpmpl	C
	south of Loop 478	50%	17%	12%	6	69,800	4,188	27.3 pcpmpl	D	6	77,200	4,640	31.1 pcpmpl	D					
	north of Loop 478	50%	17%	12%	6	73,400	4,404	29.0 pcpmpl	D	6	81,400	4,890	33.7 pcpmpl	D					
	north of Honda Pass Drive	50%	17%	12%	4	60,700	3,642	41.9 pcpmpl	E	6	77,000	4,620	30.9 pcpmpl	D					
	south of Loop 375	50%	17%	12%	4	50,500	3,030	30.2 pcpmpl	D	6	78,500	4,710	31.8 pcpmpl	D					
	north of Loop 375	50%	17%	12%	4	48,400	2,904	28.6 pcpmpl	D	4	56,500	3,390	36.1 pcpmpl	E	6	56,500	3,390	21.8 pcpmpl	C
	south of Martin Luther King	50%	17%	12%	4	40,600	2,436	23.5 pcpmpl	C	4	46,700	2,810	27.5 pcpmpl	D					
	south of FM 2529 / McCombs Street	50%	17%	12%	4	10,000	600	8.4 pcpmpl	A	4	10,900	660	9.2 pcpmpl	A					
Loop 478 / US 54A	north of Kemp Avenue	50%	3%	12%	4	11,600	696	8.1 pcpmpl	A	4	19,700	1,190	13.8 pcpmpl	B					
	north of Julian Avenue	50%	3%	12%	6	12,400	744	5.8 pcpmpl	A	6	20,200	1,220	9.4 pcpmpl	A					
	North of US 54 / Patriot Freeway	50%	3%	12%	6	19,800	1,188	9.2 pcpmpl	A	6	27,100	1,630	12.6 pcpmpl	B					
	south of Loop 375	50%	3%	12%	6	19,100	1,146	8.9 pcpmpl	A	6	25,800	1,550	12.0 pcpmpl	B					
	north of Loop 375	50%	3%	12%	6	17,500	1,050	8.1 pcpmpl	A	6	25,800	1,550	12.0 pcpmpl	B					
	north of FM 2529 / McCombs Street	50%	3%	12%	6	15,600	936	7.2 pcpmpl	A	6	21,400	1,290	10.0 pcpmpl	A					

Table F-5. Traffic Projections and LOS along RGMP Major Roadways in El Paso County *(Continued)*

Roadway	Description	DD %	Truck %	K-Factor %	2015 TRAFFIC WITH PROJECTED BRAC GROWTH					2025 TRAFFIC PROJECTED BRAC GROWTH					2025 TRAFFIC PROJECTED BRAC GROWTH WITH PROPOSED RECOMMENDATIONS				
					# of Lanes	AADT (El Paso MPO)	Peak Hour	Service Measure	LOS	# of Lanes	AADT (El Paso MPO)	Peak Hour	Service Measure	LOS	# of Lanes	AADT (El Paso MPO)	Peak Hour	Service Measure	LOS
Artcraft Road / Paso Del Norte	at State Line	50%	15%	12%	4	15,000	900	12.2 pcpmpl	B	4	32,600	1,960	26.7 pcpmpl	D					
	east of SH 20	50%	15%	12%	6	19,500	1,170	7.9 pcpmpl	A	6	42,400	2,550	17.4 pcpmpl	B					
FM 76 / N Loop Drive	south of Trowbridge	50%	6%	12%	6	44,800	2,688	21.7 pcpmpl	C	6	53,300	3,200	25.8 pcpmpl	C					
	south of Tampico	50%	6%	12%	6	46,000	2,760	22.3 pcpmpl	C	6	51,800	3,110	25.1 pcpmpl	C					
	north of Yarbrough	50%	6%	12%	4	30,900	1,854	22.4 pcpmpl	C	4	31,200	1,880	22.8 pcpmpl	C					
	north of FM 659 / Zargoza Road	50%	6%	12%	4	26,800	1,608	19.5 pcpmpl	C	4	27,700	1,670	20.2 pcpmpl	C					
	south of FM 659 / Zargoza Road	50%	6%	12%	4	23,100	1,386	16.8 pcpmpl	B	4	27,700	1,670	20.2 pcpmpl	C					
	north of Loop 375	50%	6%	12%	4	21,400	1,284	15.5 pcpmpl	B	4	27,000	1,620	19.6 pcpmpl	C					
	south of Loop 375	50%	6%	12%	4	30,100	1,806	21.9 pcpmpl	C	4	36,400	2,190	26.5 pcpmpl	D					
	south of Moon Road	50%	6%	12%	4	23,700	1,422	17.2 pcpmpl	B	4	21,600	1,300	15.7 pcpmpl	B					
	north of FM 76 / N Loop Drive	50%	15%	12%	4	23,200	1,392	18.9 pcpmpl	C	6	30,100	1,810	16.4 pcpmpl	B					
FM 659 / Zaragoza Road	west of I-10	50%	15%	12%	4	35,000	2,100	28.6 pcpmpl	D	6	45,300	2,720	24.7 pcpmpl	C					
	east of I-10	50%	15%	12%	6	40,800	2,448	22.6 pcpmpl	C	6	46,300	2,780	25.2 pcpmpl	C					
	north of Loop 375	50%	15%	12%	4	11,000	660	9.0 pcpmpl	A	6	18,600	1,120	10.2 pcpmpl	A					
	south of US 62 / Montana Avenue	50%	15%	12%	4	16,800	1,008	13.7 pcpmpl	B	6	29,200	1,760	16.0 pcpmpl	B					
Fred Wilson Avenue / Spur 601	west of US 54A / Dyer Street	50%	7%	12%	4	14,800	888	10.9 pcpmpl	A	4	17,400	1,050	12.9 pcpmpl	B					
	east of US 54A / Dyer Street	50%	7%	12%	6	15,000	900	7.4 pcpmpl	A	6	13,500	810	6.6 pcpmpl	A					
	west of US 54	50%	7%	12%	6	15,000	900	7.4 pcpmpl	A	6	13,800	830	6.8 pcpmpl	A					
	east of US 54	50%	7%	12%	6	76,700	4,602	38.9 pcpmpl	E	6	81,700	4,910	42.2 pcpmpl	E	8	81,700	4,910	33.5 pcpmpl	D
	east of Airport Road	50%	7%	12%	6	18,500	1,110	9.1 pcpmpl	A	6	22,400	1,350	11.0 pcpmpl	B					
	west of Global Reach	50%	7%	12%	4	25,800	1,548	19.0 pcpmpl	C	4	25,500	1,530	18.8 pcpmpl	C					
	east of Global Reach	50%	7%	12%	6	23,700	1,422	11.6 pcpmpl	B	6	13,400	810	6.6 pcpmpl	A					

Table F-5. Traffic Projections and LOS along RGMP Major Roadways in El Paso County *(Continued)*

Roadway	Description	DD %	Truck %	K-Factor %	2015 TRAFFIC WITH PROJECTED BRAC GROWTH					2025 TRAFFIC PROJECTED BRAC GROWTH					2025 TRAFFIC PROJECTED BRAC GROWTH WITH PROPOSED RECOMMENDATIONS				
					# of Lanes	AADT (El Paso MPO)	Peak Hour	Service Measure	LOS	# of Lanes	AADT (El Paso MPO)	Peak Hour	Service Measure	LOS	# of Lanes	AADT (El Paso MPO)	Peak Hour	Service Measure	LOS
	west of Loop 375	50%	7%	12%	**6**	27,000	1,620	13.2 pcpmpl	B	**6**	16,900	1,020	8.3 pcpmpl	A					
	Global Reach E of Loop 375 & N of Walter Jones Boulevard	100%	7%	12%	**2**	63,400	7,608	99.9% TSF	F	**2**	53,800	6,460	99.8% TSF	F	6	53,800	3,230	26.4 pcpmpl	D
	Global Reach E of Loop 375 & N of Walter Jones Boulevard	100%	7%	12%	**2**	37,500	4,500	100.3% TSF	F	**2**	36,600	4,400	100.1% TSF	F	4	36,600	2,200	27.0 pcpmpl	D
Airport Road	south of Butterfield Trail	50%	7%	12%	**6**	42,600	2,556	20.9 pcpmpl	C	**6**	44,300	2,660	21.8 pcpmpl	C					
	north of Rickers	50%	7%	12%	**6**	63,900	3,834	31.4 pcpmpl	D	**6**	69,000	4,140	34.2 pcpmpl	D					
	north of Montana Avenue	50%	7%	12%	**4**	20,500	1,230	15.1 pcpmpl	B	**4**	27,000	1,620	19.9 pcpmpl	C					
FM 2316 / McRae	north of I-10	50%	5%	12%	6	34,800	2,088	16.6 pcpmpl	B	6	43,400	2,610	20.8 pcpmpl	C					
	south of US 62 / Montana Avenue	50%	5%	12%	4	28,100	1,686	13.4 pcpmpl	B	4	26,600	1,600	12.7 pcpmpl	B					

Traffic Data Source: Texas Department of Transportation Traffic Count Database, Year 2007; El Paso MPO TDM - 2015 w/BRAC, 2025 w/BRAC

LOS for Freeways / Expressways and other Multi-lane Urban Principal Arterials measured in terms of Density in passenger car per mile per lane (pcpmpl)

LOS for Two-lane Urban Principal / Minor Arterial Streets measured in terms of Percent Time Spent Following (PTSF%)

LEGEND:	
Bold Blue Text	Short or Long-Term LRTP/TIP Improvements
Highlighted	Segments operating at unacceptable LOS
Highlighted	RGMP Proposed Roadway Widening Improvements
Highlighted	RGMP Proposed Roadway Functional Classification Improvements
	(Requires upgrade to a Freeway/Expressway Facility)

Table F-6. El Paso County Proposed Short- and Long-Term Improvement Projects

Proposed Project	No.	From	To	Type	Existing / LRTP Lanes	Proposed Lanes	Implementation Period	Need and Purpose	Approximate Project Cost	Funding Sources (PE / CONST)
Proposed Short-Term Projects (2007-2015):										
Interstate Highway 10 (I-10)	1	north of Mesa Street / SH 20	south of Valley Chili Road	Interstate Widening (3.70 miles) / Bridge Replacements (5 overpass & 2 bridge)	4	6	2007-2015	Capacity	$108,500,000	Fed/State
	2	at Franklin Avenue	-	Interstate Widening (0.80 miles) / Bridge Replacements (10 bridge)	6	8	2007-2015	Capacity	$204,000,000	Fed/State
	3	east of Franklin Avenue	-	Interstate Widening (0.20 miles)	8	10	2007-2015	Capacity	$1,000,000	Fed/State
	4	west of Cotton Street		Interstate Widening (0.34 miles)	10	12	2007-2015	Capacity	$1,700,000	Fed/State
	5	US 62 / Paisano Drive	Trowbridge Drive	Interstate Widening (0.35 miles) / Bridge Replacements (2 overpass)	8	10	2007-2015	Capacity	$21,750,000	Fed/State
	6	Trowbridge Drive	Robert E. Lee Road	Interstate Widening (1.20 miles) / Bridge Replacements (2 overpass)	8	10	2007-2015	Capacity	$26,000,000	Fed/State
	7	Robert E. Lee Road	Hawkins Road	Interstate Widening (1.37 miles) / Bridge Replacements (2 overpass)	8	10	2007-2015	Capacity	$26,850,000	Fed/State
	8	Hawkins Road	FM 2316 / McRae	Interstate Widening (1.50 miles) / Bridge Replacements (2 overpass)	8	10	2007-2015	Capacity	$27,500,000	Fed/State

Proposed Project	No.	From	To	Type	Existing / LRTP Lanes	Proposed Lanes	Implementation Period	Need and Purpose	Approximate Project Cost	Funding Sources (PE / CONST)
	9	FM 2316 / McRae	Yarbrough Drive	Interstate Widening (1.45 miles) / Bridge Replacements (2 overpass)	8	10	2007-2015	Capacity	$27,250,000	Fed/State
	10	Yarbrough Drive	FM 659 / Zaragoza Road	Interstate Widening (1.75 miles) / Bridge Replacements (1 overpass & 1 bridge)	6	8	2007-2025	Capacity	$38,750,000	Fed/State
	11	FM 659 / Zaragoza Road	Joe Battle Boulevard/ Loop 375	Interstate Widening (0.87 miles)	4	6	2007-2025	Capacity	$4,350,000	Fed/State
Loop 375 / Talbot Street	12	west of I-10	Rey Place	Widening (0.40 miles)	2	4	2007-2015	Capacity	$1,200,000	
US 85 / Paisano Drive	13	south of I-10	north of Executive Center Boulevard	Widening (1.05 miles)	4	8	2007-2015	Capacity	$6,300,000	Fed/State/Local
Paisano Drive	14	north of Trowbridge Drive	south of Montana Avenue	Widening (0.18 miles)	4	6	2007-2015	Capacity	$540,000	State/Local
Paisano Drive	15	at US 62 / Montana Avenue	-	Proposed interchange	6	6	2007-2015	Traffic Operations and Capacity	$0	Fed/State/Local
US 62 / Montana Avenue	16	Hawkins Road	McRae Boulevard	Widening (0.92 miles)	6	8	2007-2015	Capacity	$2,760,000	Fed/State/Local
US 54 / Patriot Freeway	17	Cassidy Road	Fred Wilson Avenue	Interstate Widening (0.30 miles) / Bridge Replacements (2 flyover bridges)	6	8	2007-2015	Capacity	$21,500,000	Fed/State
Fred Wilson Avenue / Spur 601	18	US 54 / Patriot Freeway	Airport Road	Widening (0.47 miles)	6	8	2007-2015	Capacity	$1,410,000	Fed/State/Local

Proposed Project	No.	From	To	Type	Existing / LRTP Lanes	Proposed Lanes	Implementation Period	Need and Purpose	Approximate Project Cost	Funding Sources (PE / CONST)
Global Reach E of Loop 375 & N of Walter Jones Boulevard	18	Fred Wilson Avenue / Spur 601	Purple Heart Memorial / Loop 375	Widening (2.50 miles)	2	4	2007-2015	Capacity	$7,500,000	Fed
Global Reach E of Loop 375 & N of Walter Jones Boulevard	20	Fred Wilson Avenue / Spur 601		Widening (1.30 miles)	2	6	2007-2015	Capacity	$7,800,000	Fed
TOTAL APPROXIMATE (SHORT-TERM + LONG-TERM) COST ESTIMATE - EL PASO COUNTY									**$536,660,000**	
Proposed Long-Term Projects (2015-2025):										
Interstate Highway 10 (I-10)	21	south of Nashua Road	north of Antonio Street	Interstate Widening (7.91 miles) / Bridge Replacements (5 overpass & 3 bridge)	4	6	2015-2025	Capacity	$149,550,000	Fed/State
	22	south of Mesa Street	south of Sunland Park	Interstate Widening (0.53 miles) / Bridge Replacements (1 overpass)	8	10	2015-2025	Capacity	$12,650,000	Fed/State
	23	at US 85 Interchange	-	Interstate Widening (1.67 miles) / Bridge Replacements (2 cross-street & 2 flyover bridge)	6	8	2015-2025	Capacity	$68,350,000	Fed/State
	24	south of US 85 Interchange	north of Executive Center Boulevard	Interstate Widening (1.52 miles) / Bridge Replacements (2 overpass)	6	10	2015-2025	Capacity	$35,200,000	Fed/State
	25	at Executive Center Boulevard	-	Interstate Widening (0.42 miles) / Bridge Replacements	6	8	2015-2025	Capacity	$22,100,000	Fed/State

Proposed Project	No.	From	To	Type	Existing / LRTP Lanes	Proposed Lanes	Implementation Period	Need and Purpose	Approximate Project Cost	Funding Sources (PE / CONST)
				(1 bridge)						
	26	south of Executive Center Boulevard	Franklin Avenue	Interstate Widening (2.37 miles) / Bridge Replacements (2 overpass & 3 bridge)	8	10	2015-2025	Capacity	$91,850,000	Fed/State
	27	Cotton Street	Piedras Street	Interstate Widening (0.84 miles) / Bridge Replacements (2 overpass)	10	12	2015-2025	Capacity	$24,200,000	Fed/State
Loop 375 / Talbot Street	28	Rey Place	Doniphan Drive / SH 20	Widening (0.52 miles)	2	4	2015-2025	Capacity	$1,560,000	State/Local
SH 20 / Mesa Street	29	north of Sun Bowl Drive	south of Executive Center Boulevard	Widening (0.75 miles)	6	8	2015-2025	Capacity	$2,250,000	State/Local
US 85 / Paisano Drive	30	south of Executive Center Boulevard	north of Yandell Drive	Widening (2.03 miles)	4	6	2015-2025	Capacity	$6,090,000	Fed/State/Local
US 62 / Montana Avenue	31	east of FM 659 / Zaragoza Road	Oshea Street	Widening (3.25 miles)	4	6	2015-2025	Capacity	$9,750,000	Fed/State/Local
US 54 / Patriot Freeway	32	Loop 375		Interstate Widening (1.89 miles) / Bridge Replacements (2 overpass)	4	6	2015-2025	Capacity	$29,450,000	Fed/State/Local
TOTAL APPROXIMATE (SHORT-TERM + LONG-TERM) COST ESTIMATE - EL PASO COUNTY									**$453,000,000**	

FINAL
EL PASO REGIONAL GROWTH MANAGEMENT PLAN

Appendix G

Action Plan

SECTION 3.1 ECONOMIC DEVELOPMENT					
Recommended Action	Responsible Entity/ Regional Ops	Timing* (Rationale)	Estimated Resources	Funding Sources/ Implementation Strategies	Implementation Indicator
1. Create a cooperative training & recruiting engine as a means to fill upcoming jobs • Identify training needs for specific jobs coming to El Paso • Identify curricula that meet needs or create them • Identify schools that can train & share capabilities • Fund & Use a central organization, perhaps REDCO, to act as a recruiting center • Include distance learning to allow incoming personnel to prepare for jobs before arriving • Create a City based web page that points to individual jobs, training funds, & training providers	City of El Paso (Lead) Regional Work Force Board Texas & New Mexico Universities El Paso community colleges El Paso regional high schools Fort Bliss	B (By 2015, El Paso will gain over 50,000 new jobs another 50,000 jobs by 2025)	$750,000	http://www.doleta.gov/neg/disaster.cfm http://www.oea.gov http://caa.milspouse.org/, http://www.soc.aascu.org/socad/ http://www.aerhq.org/education_spouseeducation_StateSide.asp http://www.gibill.va.gov/ http://www.tvc.state.tx.us/StateBenefits.html http://www.ed.gov/fund/grant/apply/grantapps/index.html, https://www.goarmyed.com/public/public_tuition_assistance_policies.aspx Note: Military spouses now have priority in hiring for Federal jobs	Application within 3 months Plan within 6 months thereafter
2. Create a public/private organization to assist in BRAC expansion coordination & promote awareness using this city wide organization	City of El Paso Mayor (co-lead) City Council (co-lead)	A (The task is very large & needs many	$100,000 yearly in organizational & support	http://www.oea.gov	Receive OEA grant

* *A – 6 Months* *B – 1 Year* *C – 2 Years*

SECTION 3.1 ECONOMIC DEVELOPMENT					
Recommended Action	Responsible Entity/ Regional Ops	Timing* (Rationale)	Estimated Resources	Funding Sources/ Implementation Strategies	Implementation Indicator
• Provide city based staff support for coordinator	Regional Businesses Regional Charitable & Civic Organizations Fort Bliss County Governments	hands)	costs		
3. Create a new position of BRAC process coordinator & grants writers. This position supports the organization in Item 2 & provides support for a number of activities listed below	City of El Paso (lead)	A (Coordination, information flow & leadership are essential)	$450,000 per year (4 Full Time Employees = 1 Coordinator, 1 Assistant, & 2 Grant Writers)	http://www.oea.gov	City formally creates organization; receive OEA grant to establish these positions
4. Create automatic transferability state licensing for qualified out-of-state for barbers, etc for short period	City of El Paso (lead) City of San Antonio City of Killeen Other impacted Texas cities & organizations The three El Paso Chambers of Commerce Texas Military Preparedness Commission	A (Current process is cumbersome & time consuming)	Low	Internal City Funds This will be a legislative effort, where the city should lead	Regulatory relief followed by legislation
5. Increase the technology content of the El Paso workforce (15 USC	City Of El Paso (Lead)	B	$50,000 to	http://www.oea.gov	Create

* *A – 6 Months* *B – 1 Year* *C – 2 Years*

SECTION 3.1 ECONOMIC DEVELOPMENT					
Recommended Action	Responsible Entity/ Regional Ops	Timing* (Rationale)	Estimated Resources	Funding Sources/ Implementation Strategies	Implementation Indicator
3715) • Utilize a partnership intermediary form	Universities With Support From REDCO & The El Paso Chambers Of Commerce	(Long term plan to create higher valued products which in turn create higher wage jobs)	start $500,000 yearly for operation	http://www.techlinkcenter.org/cgi-bin/techlink/index.html http://www.hud.gov/offices/cpd/communitydevelopment/programs/stateadmin/ http://www.eda.gov/AboutEDA/Programs.xml	organization May link Fort Bliss maneuver battle lab with Columbus State University & UTEP
6. Provide small & minority businesses access to contracting opportunities	City of El Paso (lead) State delegation Congressional delegation Chambers of commerce REDCO Fort Bliss Paso Del Norte	A for planning fair B for holding fair (Extending access to lower economic strata is vital to area's prosperity)	$35,000 planning $30,000 action yearly	http://www.sba.gov/services/financialassistance/index.html http://www.nbia.org/, See plan outline in Appendix http://www.acq.osd.mil/osbp/doing_business http://www.acq.osd.mil/osbp/doing_business/subdir-2005-11.pdf http://siadapp.dmdc.osd.mil/procurement/historical_reports/statistics/procstat.html http://sellingtoarmy.com/ http://www.aafes.com/pa/selling/ http:www.dla.mil/db/procurem.htm http://www.aca.army.mil/index.htm http://www.fedbizopps.gov http://www.sba.gov/contractingopportunities/owners/index.html, page 78 Congressional offices & agencies will PROVIDE TRAVEL & personnel costs & some Operational & COMMUNICATION COSTS. Expense will consist of	Hold procurement fairs

* *A – 6 Months* *B – 1 Year* *C – 2 Years*

SECTION 3.1 ECONOMIC DEVELOPMENT					
Recommended Action	Responsible Entity/ Regional Ops	Timing* (Rationale)	Estimated Resources	Funding Sources/ Implementation Strategies	Implementation Indicator
				organization & advertizing.	
7. Develop a plan for day care & after school programs Expect assistance from staff in items 2 & 3 of 3.1	YWCA share lead with City of El Paso Paso Del Norte Group Workforce board may be the fiscal agent	A (By 2012, 10,000 new children age 4 & under; 100,000 by 2025) major city wide problem	$250,000	http://www.oea.gov http://www.childcare.gov/ http://www.childcare.gov/xhtml/links/g_43/t_4723.html http://www.childcare.gov/xhtml/links/g_4/t_47.html http://www.acf.hhs.gov/programs/ccb/providers/index.htm http://www.afterschool.gov/ http://nccic.acf.hhs.gov/ http://www.acf.hhs.gov/programs/ccb/law/allocations/current/state2009/2009_arra.htm	Plan created

* *A – 6 Months* *B – 1 Year* *C – 2 Years*

SECTION 3.4 Land USE COMPATIBILITY & BUFFER ZONES					
Recommended Action	Responsible Entity/ Regional Ops	Timing* (Rationale)	Estimated Resources	Funding Sources/ Implementation Strategies	Implementation Indicator
1. Rewrite the Comprehensive Plan to accurately reflect the impact of projected growth of Fort Bliss, commercial & industrial sectors on all parts of the city & its citizens, specifically road, transit & housing, especially multifamily	City of El Paso (lead) County Fort Bliss	A Use RGMP information wherever possible	$3,500,000	http://www.oea.gov	Grant received Plan updated
2. Fort Bliss & the city need to enter into a joint encroachment review to identify land use, development, light, sound, electro-magnetic pulse & environmental threats to full military use of Fort Bliss Amend zoning ordinances & Comprehensive Plan to create predestinated high density & mixed use areas to be reflected on future land • This activity ties directly to the Comprehensive Plan above	City of El Paso (co-lead) Fort Bliss (co-lead) MPO County (Consider a statewide request) City of El Paso (Lead)	B (Fort Bliss must request first) A (Will speed multi-family dwelling construction)	About $400,000 Funded as part of the comprehensive plan effort	http://www.oea.gov/OEAWeb.nsf/Encroachment?readform https://www.denix.osd.mil/portal/page/portal/content/range/Compatible/REPI/REPIFactSheet.PDF http://www.sustainability.army.mil/tools/programtools_acub.cfm http://www.afcee.af.mil/resources/aicuz/index.asp	Zoning change to preclude encroachment Multi-family dwelling areas approved

* *A – 6 Months* *B – 1 Year* *C – 2 Years*

SECTION 3.5 TRANSPORTATION					
Recommended Action	Responsible Entity/ Regional Ops	Timing* (Rationale)	Estimated Resources	Funding Sources/ Implementation Strategies	Implementation Indicator
1. Implement planned road improvements See RGMP Section 3.5 & Appendix F for listing	City of El Paso (lead) El Paso County State of Texas Federal DOT U.S. Congress	There is a plan in place with timing milestones	$ Billions	Internal City Funds County State DOT Federal DOT http://www.txplanning.org http://www.txdot.gov/about_us/administration/divisions/tpp.htm http://www.txdot.gov/txdot_library/publications/stimulus.htm http://www.fhwa.dot.gov/aap/PRIMER09.PDF http://www.fhwa.dot.gov/legsregs/legislat.html http://flh.fhwa.dot.gov/defense.htm Consider Congressional assistance Note the five year Federal DOT authorization is in discussion now & is expected out next year	Track plan periodically

* *A – 6 Months* *B – 1 Year* *C – 2 Years*

SECTION 3.5 TRANSPORTATION					
Recommended Action	Responsible Entity/ Regional Ops	Timing* (Rationale)	Estimated Resources	Funding Sources/ Implementation Strategies	Implementation Indicator
2. Develop a plan for council approval to utilize smart growth concepts to improve known transportation problems areas • Transportation dem & management tools • Corridor wide signal coordination & interconnection • This approach is a critical part of comprehensive planning & is required for amending the major thoroughfare plan	City of El Paso (lead) El Paso Municipal Planning Organization	See Comprehensive Plan, Item 1, Section 3.4	$300,000	http://www.smartgrowth.org/about/bytype.asp?typ=16 http://www.smartgrowth.org/search/default.asp http://www.smartgrowth.org/ http://www.realtor.org/smart_growth.nsf/pages/grants http://www.txplanning.org http://www.txdot.gov/about_us/administration/divisions/tpp.htm http://www.txdot.gov/txdot_library/publications/stimulus.htm http://www.fhwa.dot.gov/aap/PRIMER98.PDF http://flh.fhwa.dot.gov/defense.htm	Plan developed
3. Create public-private partnerships for transportation system improvements • Use information & presentations by a national public private partnership association to identify strategies for use of private sector funding for public purpose, including enhanced used leasing.	City of El Paso (lead) El Paso developers Fort Bliss	A (Utilize experience of others in use of alternate fund sources)	About $10,000	Internal city funds Chambers of commerce Paso Del Norte Business interests http://www.ncppp.org/ http://www.ncppp.org/councilinstitutes/index.shtml http://www.fhwa.dot.gov/PPP/ http://www.treas.gov/press/releases/tg65.htm http://eul.army.mil	Conference held
4. Develop a plan to extend public transit connections from residential	City of El Paso (lead)	A	$375,000	City	Plan developed

* *A – 6 Months* *B – 1 Year* *C – 2 Years*

SECTION 3.5 TRANSPORTATION					
Recommended Action	Responsible Entity/ Regional Ops	Timing* (Rationale)	Estimated Resources	Funding Sources/ Implementation Strategies	Implementation Indicator
areas to work sites, including specific station area plans • Work in this area will be a supplement to the transit component of the Comprehensive Plan	El Paso Transit Authority MPO El Paso County See Item 1, Section 3.4			County State Federal DOT http://www.fta.dot.gov/funding/grants/grants_financing_3623.html Congress Do not forget new transportation reauthorization now under consideration in the house of representatives Consider Congressional assistance	
5. Plan for expanded industrial transportation resulting from the inevitable growth of El Paso's manufacturing & distribution businesses • This activity will be a supplement to the Comprehensive Plan	City of El Paso (lead) MPO Federal & State DOT Airport Authority Fort Bliss Railroads servicing El Paso	B (Plan for long range expansion of commerce & industry generated traffic)	$1,000,000	Look to the upcoming 5 year DOT reauthorization http://www.hud.gov/offices/cpd/communitydevelopment/programs/ http://www.faa.gov/airports_airtraffic/airports/aip/ http://www.txplanning.org http://www.txdot.gov/about_us/administration/divisions/tpp.htm Consider Congressional assistance	Plan developed

* *A – 6 Months* *B – 1 Year* *C – 2 Years*

SECTION 3.6 PUBLIC UTILITIES & INFRASTRUCTURE					
Recommended Action	Responsible Entity/ Regional Ops	Timing* (Rationale)	Estimated Resources	Funding Sources/ Implementation Strategies	Implementation Indicator
1. Prioritize utility expansion to coincide with Comprehensive Plan identification of housing, school & commercial expansion	City of El Paso (lead) El Paso Water Utility	A	Low Assumes completion of the Comprehensive Plan rewrite	http://www.oea.gov http://www.hud.gov/offices/cpd/communitydevelopment/programs/stateadmin/	Priority plan created Update annually
2. El Paso & Fort Bliss should cooperate in the development of new landfill & renewable energy projects. Consider the combination of refuse streams to justify waste-to-energy facility within a new joint landfill. applicability of the Fort Bliss / El Paso waste streams, must be studies as well as opportunities for geothermal, solar & wind generation	City of El Paso (co-lead) Fort Bliss (co-lead)	B (Takes advantage of the Army requirement to reach 25% of energy used to be derived from renewable sources)	$200,000 of which $70 to $100,000 required for waste stream analysis	http://www.oea.gov http://army-energy.hqda.pentagon.mil/ http://www.msnbc.msn.com/id/7745709/ http://www.army.mil/-news/2008/01/17/7041-armys-largest-solar-array-generates-more-than-power/ http://www.wired.com/dangerroom/2009/06/army-wants-portable-wind-power-for-grunts/ http://army-energy.hqda.pentagon.mil/programs/procurement.asp http://www.desc.dla.mil/DCM/DCMPage.asp?pageid=246 http://www.fhwa.dot.gov/PPP/	Cooperative activity undertaken

* *A – 6 Months* *B – 1 Year* *C – 2 Years*

SECTION 3.7 HOUSING & MARKET CONDITIONS					
Recommended Action	Responsible Entity/ Regional Ops	Timing* (Rationale)	Estimated Resources	Funding Sources/ Implementation Strategies	Implementation Indicator
1. Confirmation of Fort Bliss expansion from Army & Congressional leadership see Item 2 of Section 3.1	City of El Paso (lead) Fort Bliss (lead)	A (Reassurance to developers, investors & builders of Army intent)	No funds needed		Confirmation given
2. Enable developers to qualify for construction financing • EL Paso Water Utility might lease instead of sell land • EPWU might itself act as a developer • City might act as developer • EPWU might make land an equity contribution in a project • City might use some of its pension funding to assist in developer financing • Texas multi-family & pension funds might be used to assist in developer financing	City of El Paso (lead) El Paso Water Utility Texas pension & other state funds	A (Enabling multi-family dwelling construction)	Legal fees to develop new lease & equity sharing agreements	City internal funds	Financing for new projects secured
3. Create a task force to concentrate joint resources on the housing construction finance issues	City of El Paso Economic Development (lead) County	A (Get all parties together to explore	$200,000	http://www.oea.gov Consider Congressional assistance	Task force created

* *A – 6 Months* *B – 1 Year* *C – 2 Years*

SECTION 3.7 HOUSING & MARKET CONDITIONS					
Recommended Action	Responsible Entity/ Regional Ops	Timing* (Rationale)	Estimated Resources	Funding Sources/ Implementation Strategies	Implementation Indicator
	Developer Builder Paso Del Norte Group State	options)			
4. Create a center of excellence to integrate & provide information concerning all available federal & state housing assistance programs & provide the information at convenient places throughout the city	City of El Paso Economic Development Department El Paso Realtors Fort Bliss	A (Centralizes expertise saving time)	$100,000	http://www.hud.gov/offices/hsg/omhar/ http://www.tdhca.state.tx.us/homeownership/fthb/mort_cred_certificate.htm http://www.tdhca.state.tx.us/htf/single-family/ http://www.tdhca.state.tx.us/home-division/mf-home/ http://www.hud.gov/offices/cpd/ http://www.hud.gov/offices/cpd/communitydevelopment/programs/neighborhoodspg/ http://www.hud.gov/offices/pih/programs/hcv/ http://www.tvc.state.tx.us/StateBenefits.html http://eul.army.mil/ http://www.acq.osd.mil/housing/ http://www.phma.com/pds/presentations/Thur-22-January/Navy/Navy_BH_Planning.pdf http://www.army.com/news/item/5367 http://www.nao.usace.army.mil/hap/ http://www.rurdev.usda.gov/	Organization created

* *A – 6 Months* *B – 1 Year* *C – 2 Years*

SECTION 3.7 HOUSING & MARKET CONDITIONS					
Recommended Action	Responsible Entity/ Regional Ops	Timing* (Rationale)	Estimated Resources	Funding Sources/ Implementation Strategies	Implementation Indicator
				http://www.careeronestop.org/ http://www.nab.usace.army.mil/dnrp/ http://www.hud.gov/offices/cpd/communitydevelopment/programs/	
5. Plan expansion of existing 3rd party program to expedite increased zoning change requests, plan approvals & construction inspection requirements	City of El Paso (lead) County	A (Current staffing level not prepared for anticipated building expansion)	Could be as many as 10 Full Time Employees	Based upon current projections	Expand current 3rd party contracts
6. Request inclusion of Fort Bliss in the Army program to add bachelor enlisted & officer housing to privatized housing projects	Mayor of El Paso Fort Bliss	A	Low	See navy approach http://phma.com/pds/presentations/Thurs-22-january/nNavy_BH_Okabbubg.pdf Army has added BOQ & senior enlisted bachelor quarters at Forts Bragg, Steward, Drum, & Irwin. http://www,army.com/news/item/5367 If accepted, additions will be paid from military construction, military construction appropriation & private sector sources as an addition to existing residential construction initiative (RCI) contracts	RCI contracts at Fort Bliss amended

* *A – 6 Months* *B – 1 Year* *C – 2 Years*

SECTION 3.8 EDUCATION					
Recommended Action	Responsible Entity/ Regional Ops	Timing* (Rationale)	Estimated Resources	Funding Sources/ Implementation Strategies	Implementation Indicator
1. Make recruitment of teachers & support personnel a collaborative effort	City of El Paso (lead) Texas & New Mexico Universities Community colleges Independent school districts REDCO	A (Joint action will save costs & speed results)	$900,000 for three years.	http://www.doleta.gov/neg/disaster.cfm http://caa.milspouse.org/ http://www.soc.aascu.org/socad/ http://www.aerhq.org/education_spouseeducation_StateSide.asp http://www.tvc.state.tx.us/StateBenefits.html http://www.ed.gov/fund/grant/apply/grantapps/index.html https://www.goarmyed.com/public/public_tuition_assistance_policies.aspx http://ritter.tea.state.tx.us/research/pdfs/prr4.pdf http://www.spousestoteachers.com http://www.texastroopstoteachers.org/ http://www.defenselink.mil/prhome/mcfpreports.html http://www.dodea.edu/pressroom/releasesDisplaycfm?prId=20070412 http://www.militaryimpactedschoolsassociation.org/ http://rutter,tea,state,tx,ys/reserach/pdfs/prr4.pdf http://www.ed.gov/admins/tchrqual/recruit/altroutes/report.pdf. http://www.ed.gov/programs/heatqp/tqpsum.html http://www.ed.gov/about/offices/list/ope/pol/tsa.pdf	Plan developed

* *A – 6 Months* *B – 1 Year* *C – 2 Years*

SECTION 3.8 EDUCATION					
Recommended Action	Responsible Entity/ Regional Ops	Timing* (Rationale)	Estimated Resources	Funding Sources/ Implementation Strategies	Implementation Indicator
2. Seek legislation to streamline accreditation & pension transfers for out-of-state teachers • Expect support from the staff described in items 2 & 3, Section 3.1	City of El Paso (lead) City of Killeen City of San Antonio Workforce board Texas Military Preparedness Commission Nominate an El Paso delegate to the commission	A (Military spouses & teacher recruits from other states will be needed to fill open positions at each city)	Low	Internal funds http://www.oea.gov Consider interstate compact on educational opportunity for military children http://www.csg.org/contact/default.aspx http://www.spousestoteachers.com http://www.texastroopstoteachers.org	Regulatory relief & legislation
3. Affirm data for federal & defense impact fees paid to school districts	Each Independent school district	A (Maximize federal reimbursement for local expenditures)	Low	Internal city Funds Description of the program http://www.hud.gov/offices/hsg/omhar/ http://www.ed.gov/programs/8003/eligibility.html http://www.ed.gov/about/offices/list/oese/impactaid/index.html	Increased federal reimbursement Yearly Audit of process & results
4. Utilize Science & Technology & Education & Math (STEM) education programs to strengthen technology in education	Independent school districts	C (Technology additions to curriculum will increase workforce productivity & add value to	Low	http://www.stemedcoalition.org/ http://ritter.tea.state.tx.us/ed_init/thsp/tstem/index.html http://aggie-stem.tamu.edu/	STEM programs present in all ISD

* *A – 6 Months* *B – 1 Year* *C – 2 Years*

SECTION 3.8 EDUCATION					
Recommended Action	Responsible Entity/ Regional Ops	Timing* (Rationale)	Estimated Resources	Funding Sources/ Implementation Strategies	Implementation Indicator
		products)			
5. Plan for increasing bi-lingual education for all ages • Expect support from organization & coordinator described in items 2 & 3 of Section 3.1	City of El Paso (lead) Note: See economic development Item 2	A (Critical need to adapt to El Paso's bilingual region)	Low – training to be accomplished largely through charitable organizations, churches, etc.	Internal City Funds Source of advice – http://www.languageplus.com/ http://www.childcare.gov/xhtml/links/g_4/t_47.html http://www.ncela.gwu.edu/ Resources http://www.languageplus.com http://www.studyspanish.com/destinatins/spanish_in_el_paso_texas.htm	Plan created
6. Plan for coordination of Head Start Program, day care, pre-school & after school programs	City of El Paso (lead) YWCA (day care & Head Start) Independent school districts	A (Encourage greater use of these programs)	Low	Internal city funds http://www.oea.gov http://www.childrenslearninginstitute.org/our-programs/program-overview/TX-head-start/default.html http://childcare.gov http://www.childcare.gov/xhtml/links/g_4/t_47.html http://www.acf.hhs.gov/programs/ccb/providers/index.htm http://www.afterschool.gov http://nccic.acf.hhs.gov Consider Congressional assistance	Plan created
7. The comprehensive planning effort	Independent School	B	Low	Internal city funds	Feedback

* *A – 6 Months* *B – 1 Year* *C – 2 Years*

SECTION 3.8 EDUCATION					
Recommended Action	Responsible Entity/ Regional Ops	Timing* (Rationale)	Estimated Resources	Funding Sources/ Implementation Strategies	Implementation Indicator
described in Item 1, Section 3.4 should utilize public facilities citing data. The ISDs should also consider Comprehensive Plan & RGMP growth location data as part of their sitting decision	Districts (lead) City of El Paso MPO	(RGMP data represents the latest projections for school facility needs			memoranda from ISD
8. Rapidly expanding school age population will require long term funding for new classroom & school construction	Independent School Districts	A		Bonding authority	Bond referendum proposed & passed

* *A – 6 Months* *B – 1 Year* *C – 2 Years*

SECTION 3.9 HEALTH & SOCIAL SERVICES					
Recommended Action	Responsible Entity/ Regional Ops	Timing* (Rationale)	Estimated Resources	Funding Sources/ Implementation Strategies	Implementation Indicator
1. El Paso's medical & social services community must develop a plan for joint effort to identify needs, jointly recruit & cooperate in the provision of services • Expect support from the organization & staff created in items 1, 2 & 3 of Section 3.1	City of El Paso Health (fiscal agent) Partners REDCO Three El Paso chambers of commerce Hospitals Paso Del Norte group & health foundation Fort Bliss Medical & other professional societies Regional universities, colleges & training organizations City of El Paso Work force board	A (The region faces severe trained personnel shortages)	$1,500,000	Funds – http://www.oea.gov http://www.hud.gov/offices/cpd/communitydevelopment/programs/stateadmin/ http://www.hrsa.gov/bcrs/ http://www.bhpr.hrsa.gov/shortage/ http:/granteefind.hrsa.gov/searchbystate.aspx?select=TX=&indes=51&year= http://www.earmarkwatch.org/earmark/41490/ Advice – http://fdrhpo.org http://www.fdrhpo.org http://www.alaskaphysicianjobs.net/ http://www.alaskanp.org/jobs/jobs.asp http://www.akapa.org/akapa_jobs.html https://www.hnfs.net/bene/home/charity/fort_drum.htm Consider Congressional assistance	Plan developed & implemented
2. Cooperative effort with other Texas medically underserved areas to modify the Texas medical licensing process for expedited certification	Greater Chamber of Commerce (lead) City of El Paso Medical professional societies Other underserved	A (Ongoing activity to meet severe shortages in trained	Low	Internal city funds http://www.oea.gov	Regulatory relief & legislation

* *A – 6 Months* *B – 1 Year* *C – 2 Years*

SECTION 3.9 HEALTH & SOCIAL SERVICES					
Recommended Action	Responsible Entity/ Regional Ops	Timing* (Rationale)	Estimated Resources	Funding Sources/ Implementation Strategies	Implementation Indicator
	Texas communities Texas Military Preparedness Commission Texas Legislative & Congressional delegations	personnel)			
3. Create/expand accelerated associate, bachelors & masters degree programs for all health & social services professional careers	El Paso & New Mexico Universities (co-lead) Community colleges (co-lead)	A (Faster graduation will help fill severe shortages in trained personnel)	Low	http://www.ahrq.gov/fund/training/infragrt.htm	Accelerated programs Created

4. Provide funded chairs, stipends & other incentives to encourage nurses to become teaching professionals	El Paso & New Mexico Universities (co-lead)
	Community colleges (co-lead)
	EL Paso regional hospitals
		A
		(Nurse-teachers required to expand nursing supply)
			About $25,000 per lecturer per year	http://www.ahrq.gov/fund/training/trainix.htm
				http://www.twc.state.tx.us/svcs/funds/sdfintro.html
				http://www.hrsa.gov/grants/default.htm
				http://www.hrsa.gov/diversity/hcop/default.htm
				http://;//www.ahrq.gov/trainint/reshtng.htm#ITA
				May be funded through an endowed chair, grants, and gifts, or combinations of all three
				Consider Congressional assistance
					Expanded nursing faculty

* *A – 6 Months* *B – 1 Year* *C – 2 Years*

SECTION 3.9 HEALTH & SOCIAL SERVICES					
Recommended Action	Responsible Entity/ Regional Ops	Timing* (Rationale)	Estimated Resources	Funding Sources/ Implementation Strategies	Implementation Indicator
5. Develop a plan to expand the scholarship program for the most needed health & social service positions	El Paso & New Mexico Universities (co-lead) Community colleges (co-lead) El Paso hospitals (co-lead) Work force board (co-lead)	A (Expanded enrollment help fill severe shortages in trained personnel)	Various based upon curriculum & funding source	http://www.ahrq.gov/fund/training/infragrt.htm http://www.ahrq.gov/fund/training/rsrchtng.htm#ITA http://www.rwjf.org/grants/ http://www.hrsa.gov/grants/default/htm http://www.gene.com/gene/imed/ http://www.nationalahec.org/ http://rwif.org/grants/ http://www.nationalahec.org/Publications/PublishedDocuments.asp Consider Congressional assistance	Plan developed & implemented
6. Develop plan to train Community civic & religious organizations to recognize signs of family stress & local resources to help families in need	City of El Paso (co-lead) Fort Bliss (co-lead)	A (With 70% of military families living off post, community training in stress identification & possible solutions)	$250,000	http://www.behavioralhealth.army.mil/families/index.html http://archive.sesameworkshop.org/tlc/ http://www.militarychild.org/publications http://www.aap.org/sections/uniformedservices/deployment/videos.html http://www.lfcc.on.ca/children_exposed_to_domestic_violence.html Consider Congressional assistance	Plan created

* *A – 6 Months* *B – 1 Year* *C – 2 Years*

SECTION 3.9 HEALTH & SOCIAL SERVICES					
Recommended Action	Responsible Entity/ Regional Ops	Timing* (Rationale)	Estimated Resources	Funding Sources/ Implementation Strategies	Implementation Indicator
7. Strengthen ties between El Paso & Fort Bliss medical & social services providers this effort is tied to Item 11 of this section. Expect Staff assistance from Items 2 & 3 of Section 3.1. See San Antonio 411 System	City of El Paso (co-lead) Fort Bliss (co-lead) Hospitals (co-lead)	A (Information exchange is absolutely required for coordinated medical care)	Low	Internal city/ Army/ hospital http://www.ojp.usdoj.gov/odp/grants_programs.htm#fy2006empg Consider Congressional assistance	Sharing of information occurring

* *A – 6 Months* *B – 1 Year* *C – 2 Years*

SECTION 3.10 PUBLIC SAFETY & EMERGENCY SERVICES					
Recommended Action	Responsible Entity/ Regional Ops	Timing* (Rationale)	Estimated Resources	Funding Sources/ Implementation Strategies	Implementation Indicator
1. Maintain a ratio of 2.2 police officers per 1,000 residents in the city	City (lead) County	B (Recognize & stem continual outmigration of trained El Paso police & first responders to federal jobs)	See RGMP Section 3.10	http://www.ojp.usdoj.gov/BJA/funding/index.html http://www.atf.gov/recovery/project-gunrunner.htm http://www.cops.usdoj.gov/pdf/chrp_report.pdf	Ratio maintained
2. Establish a 6th Fire & EMS Regional Command Center to serve growth area	City (lead) County	B (Maintain same high levels of service)	See RGMP Section 3.10	http://www.ojp.usdoj.gov/odp/grants_programs.htm#fy2006empg http://www.firehouse.com/funding/grants.html http://www.firegrantsupport.com/, http://www.usfa.dhs.gov/fireservice/grants/ http://www.usfa.dhs.gov/fireservice/grants/	Current Service metrics maintained
3. Strengthen Urban Area Security Initiative Committee to increase coordination, communication, & facility sharing among all El Paso federal, state & local public safety agencies • Utilizing non-FAR agreements, communities & bases are increasing capability sharing. Examples stretch from	City (co-lead) Fort Bliss (co-lead) FBI (co-lead) Border Patrol (co-lead) Customs Service (co-lead) US Marshalls Service	A (Increase service to the community & reduces costs)	Low	Internal funds of each co-lead organization http://www.ci.el-paso.tx.us/fire/emergency_management_UASI.asp; http://www.dhs.gov/xlibrary/assets/grant-program-overview-fy2009.pdf page 16, 18, 20 http://www.citizencorps.gov/index.shtm; http://www.texascitizencorps.org/ http://www.fema.gov/pdf/government/grant/hsgp/fy09_hsgp_	Increased cooperative activity

* *A – 6 Months* *B – 1 Year* *C – 2 Years*

SECTION 3.10 PUBLIC SAFETY & EMERGENCY SERVICES					
Recommended Action	Responsible Entity/ Regional Ops	Timing* (Rationale)	Estimated Resources	Funding Sources/ Implementation Strategies	Implementation Indicator
libraries to water purification plants	(co-lead) DEA (co-lead)			overview.pdf page 10 for Texas	
4. Identify the need & funding necessary to upgrade volunteer fire districts with paid staff based on percentage of growth	County (lead)	B (Improve local fire protection)	See RGMP Section 3.10	http://www.firegrantsupport.com/ http://www.usfa.dhs.gov/fireservice/grants/	Upgrades implemented
5. Bench & bar associations to develop plan to upgrade staffing needed to handle expected legal paperwork increase in courts	City (co-lead) County (co-lead) State & federal bench & bar (co-lead)	B (Significant increases in population will require increases in resources to meet legal needs)	Low	Internal resources of each co-lead organizations	Plan created
6. Develop plan that identifies physical requirements & costs for a new detention center	City (co-lead) County (co-lead)	B (Significant increases in population will require increases in facility capacity)	See RGMP Section 3.10	Funding usually provided by directed appropriations Consider public private partnership with organization like Corrections Corporation of America, or Bail for Battee http://www.balfourbeatty.com/bby/media/inthenews/2003-11-27/2003-11-27.pdf http://www.correctionscorp.com/	Plan created

* *A – 6 Months B – 1 Year C – 2 Years*

SECTION 3.11 QUALITY OF LIFE					
Recommended Action	Responsible Entity/ Regional Ops	Timing* (Rationale)	Estimated Resources	Funding Sources/ Implementation Strategies	Implementation Indicator
1. Concentrate funds authorized by future Quality of Life Bonds for improvements to existing facilities	City (lead)	B (Improve quality of life for current & future residents)	2010 bond issue effort has not yet been undertaken		To be determined
2. Develop a plan to expand park financing	City of El Paso	Expand this quality of life requirement in the future	$50,000 to identify locations & develop plan	http://www.ncrc.nps.gov/uparr/ Directed appropriations are often the source of park recreation financing. http://appropriations.house.gov/witness_testimony/INT/Daniel_Wenk_05_14_09.pdf. Outlines sources http://www.nps.gov/ncrc/programs/lwcf/history.html, http://www.nps.gov/uprr// authorization http://www.tpwd.state.tx.us/business/grants/ http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111_cong_reports&docid=f:hr180.111.pdf	
3. Develop a plan to open recreation facilities on school properties for after use casual use • Recognize & assist schools with liability issues involving playground injuries & equipment	City (co-lead) Independent school districts (co-lead)	A (increased use of more accessible facilities)	$400,000	http://www.oea.gov http://smartgrowthschools.org/	Plan created

* *A – 6 Months* *B – 1 Year* *C – 2 Years*

SECTION 3.11 QUALITY OF LIFE					
Recommended Action	Responsible Entity/ Regional Ops	Timing* (Rationale)	Estimated Resources	Funding Sources/ Implementation Strategies	Implementation Indicator
damage • School design & siting considerations will substantially reduce costs • Consider these issues in the development of the comprehensive planning effort					
4. Develop plan to ensure that day care & after school programs are available for spouses (including military spouses) needing employment • Expect assistance from items 2 & 3 of Section 3.1	Workforce board (fiscal agent) YWCA & City of El Paso (lead) United Way Fort Bliss	A (Plan needed to absorb more than 10,000 children 4 or younger by 2012)	To be determined in plan	http://www.oea.gov/ http://www.childcare.gov/ http://www.acf.hhs.gov/programs/ccb/providers/index.htm http://www.afterschool.gov, http://nccic.acf.hhs.gov/	Plan created
5. Develop plan to expand library services & increase technological services at public libraries	City (co-lead) Fort Bliss (co-lead)	B (Intent for city & Fort Bliss to share resources & capability)	To be determined in plan	http://www.tsl.state.tx.us/ld/funding/#gates http://www.neh.gov/grants/ http://www.tsl.state.tx.us/ld/funding/eratereport.pdf http://www.gatesfoundation.org/topics/Pages/libraries.aspx http://www.texasbookfestival.org/Library_Grants.php http://www.tsl.state.tx.us/agency/txreads.html	Plan created

* *A – 6 Months* *B – 1 Year* *C – 2 Years*

FINAL
EL PASO REGIONAL GROWTH MANAGEMENT PLAN

Exhibit 1

RGMP Public Meeting Presentation 2008

Ft. Bliss Expansion Project Community Meeting

August 2008

The SAIC Role in the **El Paso Regional Growth Management Plan**

Tim Wittig
Principal
SAIC Technology Management Advisors

SAIC

Science Applications International Corporation

- An international company involved in hundreds of areas of technology with the public and private sector organizations
- My part of SAIC has been involved in public and private sector uses of Federal technology and facilities for over 15 years.
- We work with Federal, State, and City organizations concerning
  - Use of Federal property by non Federal organizations
  - Preparing for BRAC decisions
  - Anticipating BRAC impacts
  - Developing systems and partnerships to cope with BRAC impacts

SAIC Role

Assist El Paso to Identify:

- Impacts of Growth at Ft. Bliss
- Gaps between today and 2025

Transportation	Land Use and Housing
Economic Development	Public Safety
Health and Social Services	Utilities
Education	Quality of Life

- Public Priorities concerning these areas
- An action plan that identifies the location of programs and funds for solutions.

The SAIC Team

- Institute for Policy and Economic Development
  - Dr. Dennis Soden- Dean of the University College and Executive Director of IPED
  - Carlos Olmedo- Associate Director – IPED
- Two Ton Creativity- El Paso Communications Firm
- Benham Inc- Architectural and Engineering Firm- over 400 Architects and Planners
- Akin, Gump, Strauss, Hauer, and Feld
- Environmentalists, Housing, and Fiscal Analysis Experts

What will we do today?

- Describe the current state
- Ask for your comments and concerns

What's Next?

- IPED will generate the impacts of growth at Ft. Bliss. We will apply those projections to the existing conditions we are discussing today.
- Identify Gaps
- Solicit your views
- Propose Solutions

Institute for Policy and Economic Development

We are working to identify shortage areas in:

1. Employment opportunities
2. Educational infrastructure
3. Health care and social services
4. Quality of life resources

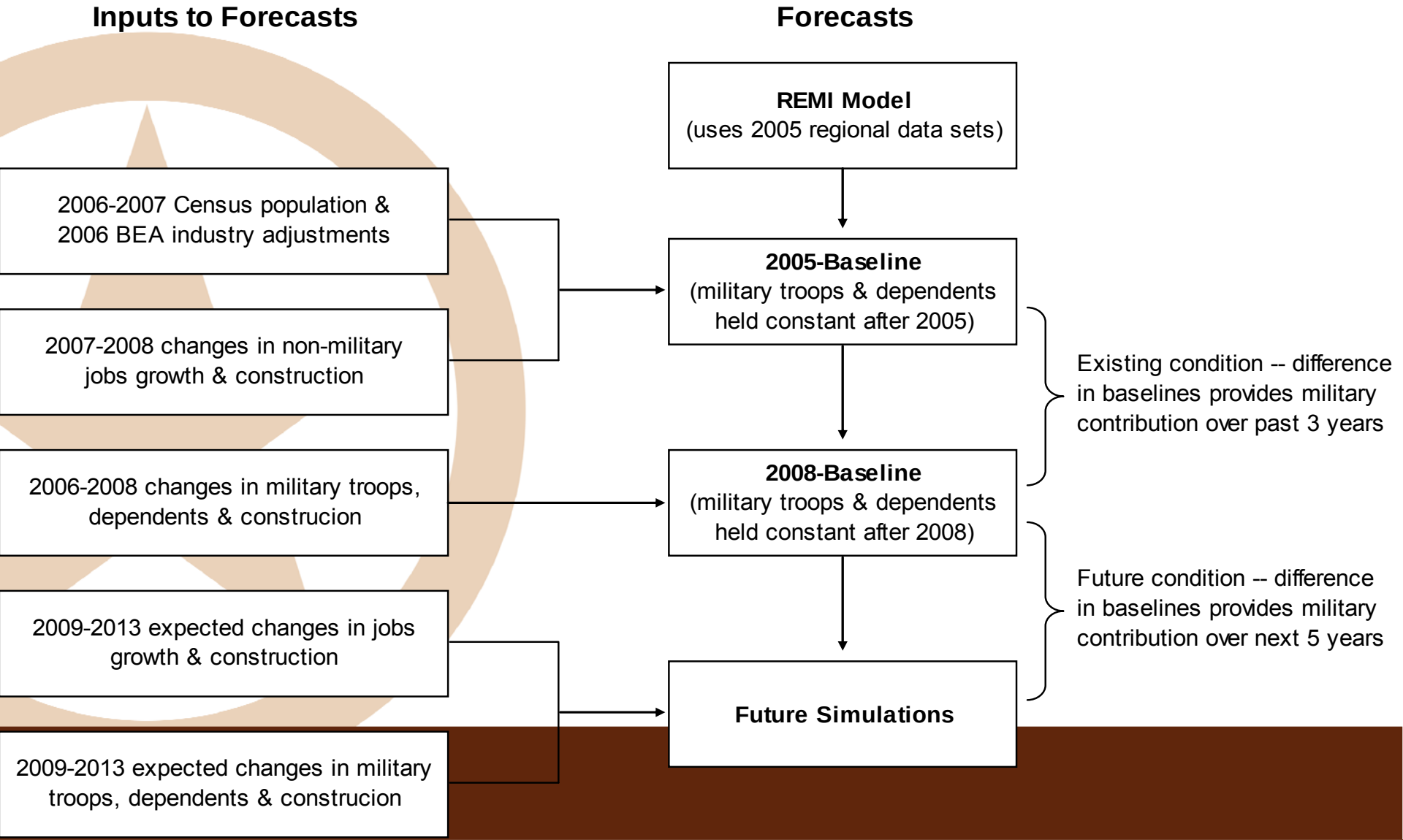
Economic Development

- As 2-region forecast model representing El Paso and Doña Ana Counties was developed:

- 2 baseline forecasts were then developed for the Existing Conditions Assessment in order to:

1. Measure the existing state of the regional economy.
2. Measure the contribution of the military over the past 3 years.
3. Serve as a benchmark for future military expansion.

Economic Development



Fort Bliss

	2005	2006	2007	2008	Net
Military Troops	9,330	13,174	14,122	16,900	
Net Troops		3,844	948	2,778	7,570
Military Dependents	15,330	20,512	21,789	25,535	
Net Dependents		5,182	1,277	3,746	10,205
Military Children	10,385	13,337	14,065	16,199	
Net Children Change		2,952	728	2,134	5,814

Source: Fort Bliss Growth 2006 – 2012, FMWRC/MCEC Model

WSMR

	2005	2006	2007	2008	Net
Military Troops	277	436	257	360	
Net Troops		159	-179	103	83
Military Dependents	421	663	391	547	
Net Dependents		242	-272	156	126
Troops & Dependents	698	1,099	648	907	
Net Troops & Dependents		401	-451	259	209

Source: WSMR Growth 2003 – 2013, SAMAS/TAADS Model

The 2008-Baseline includes an additional **7,653** troops at Fort Bliss and WSMR and the total increase including troops and dependents is **17,984**.

Economic Development

We examined 3 primary factors that will impact every other planning effort:

1. Population
   - Total and by age groups
2. Employment
   - Total and occupational employment in the areas of health care and social services.
3. Gross regional product
   - Spending from consumers, business and government

Regional Population

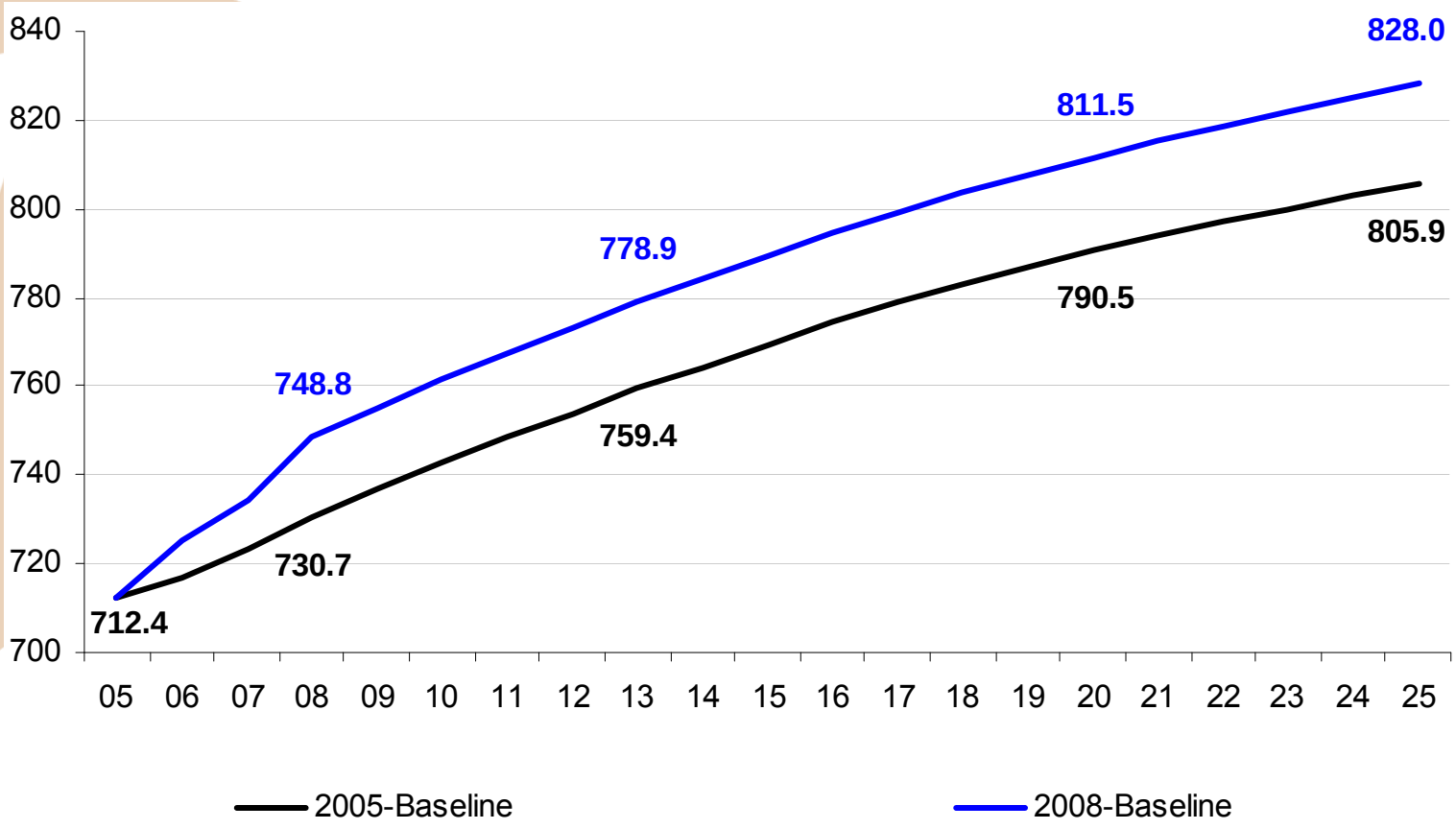
	2005 Baseline	2008 Baseline	Net
2008	932,636	951,148	18,512
2025	1,046,480	1,071,058	24,578

Source: Institute for Policy and Economic Development, UTEP

- The regional population in 2008 is 951,148
  - @ 748,800 in El Paso
  - @ 202,400 in Doña Ana

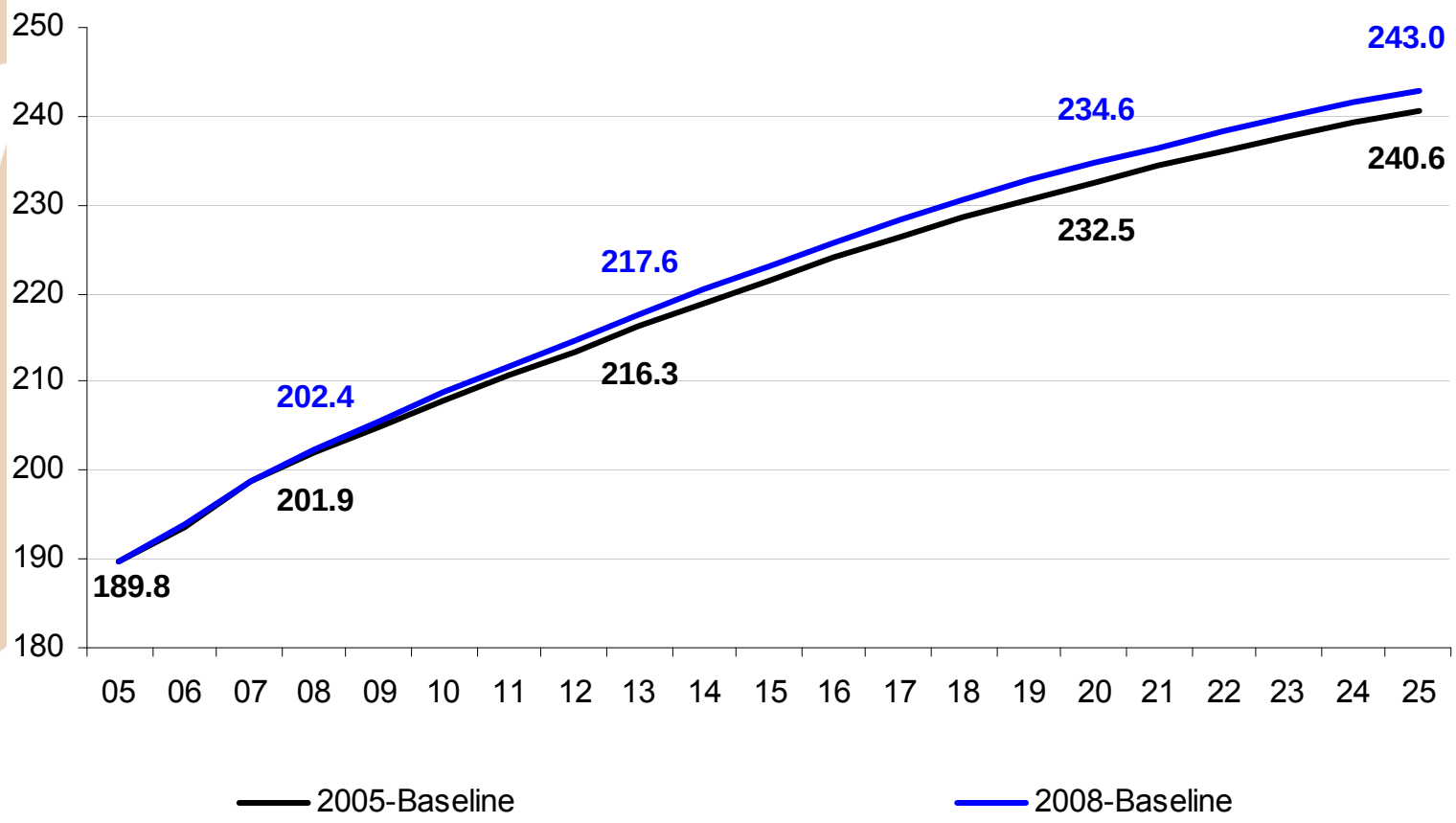
- Between 2005 and 2008, the increase of 17,984 soldiers and dependents has resulted in over 500 more persons residing in the area (18,512 less 17,984)

El Paso Population (in thousands)



Source: Institute for Policy and Economic Development, UTEP

Doña Ana Population (in thousands)



Source: Institute for Policy and Economic Development, UTEP

Regional Population Ages 0 to 4

	2005 Baseline	2008 Baseline	Net
2008	87,898	90,566	2,668

Regional Population Ages 5 to 18

	2005 Baseline	2008 Baseline	Net
2008	216,283	220,851	4,568

Regional Population Ages 19 to 64

	2005 Baseline	2008 Baseline	Net
2008	525,556	536,809	11,253

In relation to education and the labor force, the military presence since 2005 has already added:

- over 2,600 small children
- over 4,500 children of school age (pre-K to 12th)
- 3,600 new adults, excluding troops, of working age (11,253 less 7,653 troops)

Impact on Regional Employment

	2005 Baseline	2008 Baseline	Net
2008	455,686	468,728	13,042

Impact on Gross Regional Product (millions 2000 $)

	2005 Baseline	2008 Baseline	Net
2008	20,966	21,787	821

- Full- and part-time employment in 2008 is 468,278
  - 375,700 in El Paso
  - 93,100 in Doña Ana
- Military expansion since 2005 has resulted in additional
  - 5,400 non-military jobs (13,042 less 7,653 troops)
  - GRP of $821 million

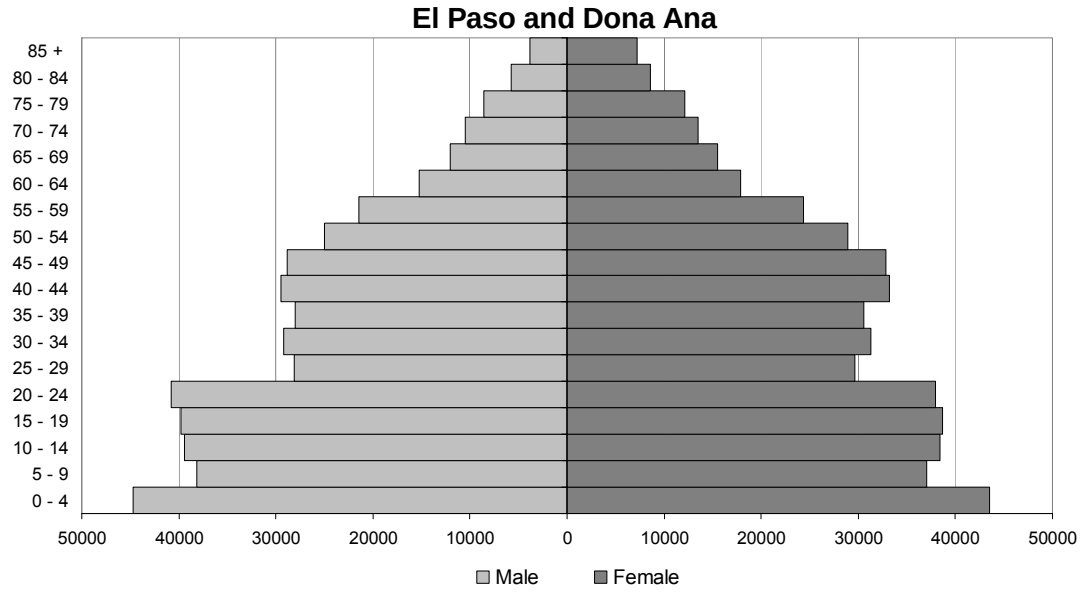
Impact on Education

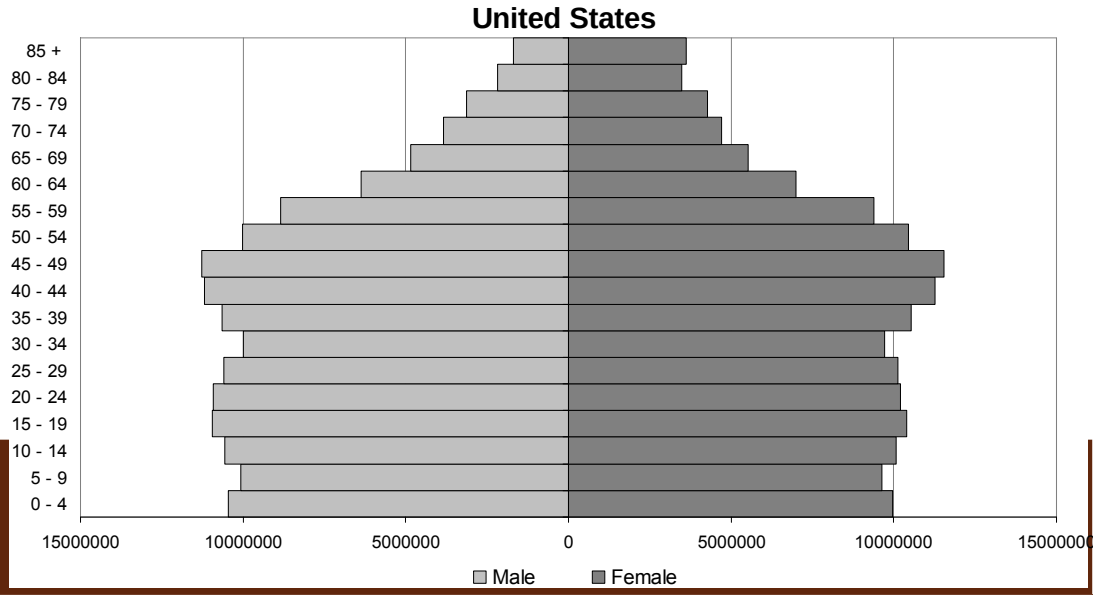
Note region's young population with 43% under the age of 25 vs. 34% nationally.

Over past 3 years:

Increase of over 2,600 children 0 to 4 years old increases demand for child care.

Increase of over 4,500 school age children has increased Pre-K to 12 grade demand.





Source: Census Bureau, 2006

Pre-K to 12th Grade Education

- 9 ISDs in El Paso: Anthony, Canutillo, Clint, El Paso, Fabens, San Elizario, Socorro, Tornillo, and Ysleta.
- Canutillo, Clint, El Paso, Socorro, and Ysleta ISDs are identified as primarily impacted districts (PIDs).
- Socorro, Canutillo and Clint ISDs have gained significant enrollment relative other ISDs, indicative of the eastward and westward population growth of El Paso.

Pre-K to 12th Grade Education

District	Enrollment	% Economically Disadvantaged	% Hispanic	% Graduated	$ per Pupil	Students: Teacher
Canutillo	5,483	82.8	94.1	72.4	11,264	13.7
Clint	9,993	87.7	95.4	75.5	8,852	17.1
El Paso	62,635	69.2	81.2	72.8	9,085	13.7
Socorro	38,162	72.8	92.7	81.2	9,426	16.4
Ysleta	45,143	79.2	91.2	78.3	9,826	15.1
Anthony	797	99.9	97.0	80.0	8,808	14.7
Fabens	2,521	92.9	98.3	84.9	9,295	14.4
San Elizario	3,760	96.7	99.5	74.6	9,725	14.5
Tornillo	1,216	96.6	98.3	86.0	9,069	14.7
Texas		**55.5**	**46.3**	**80.4**	**9,629**	**14.7**

Source: Texas Education Agency

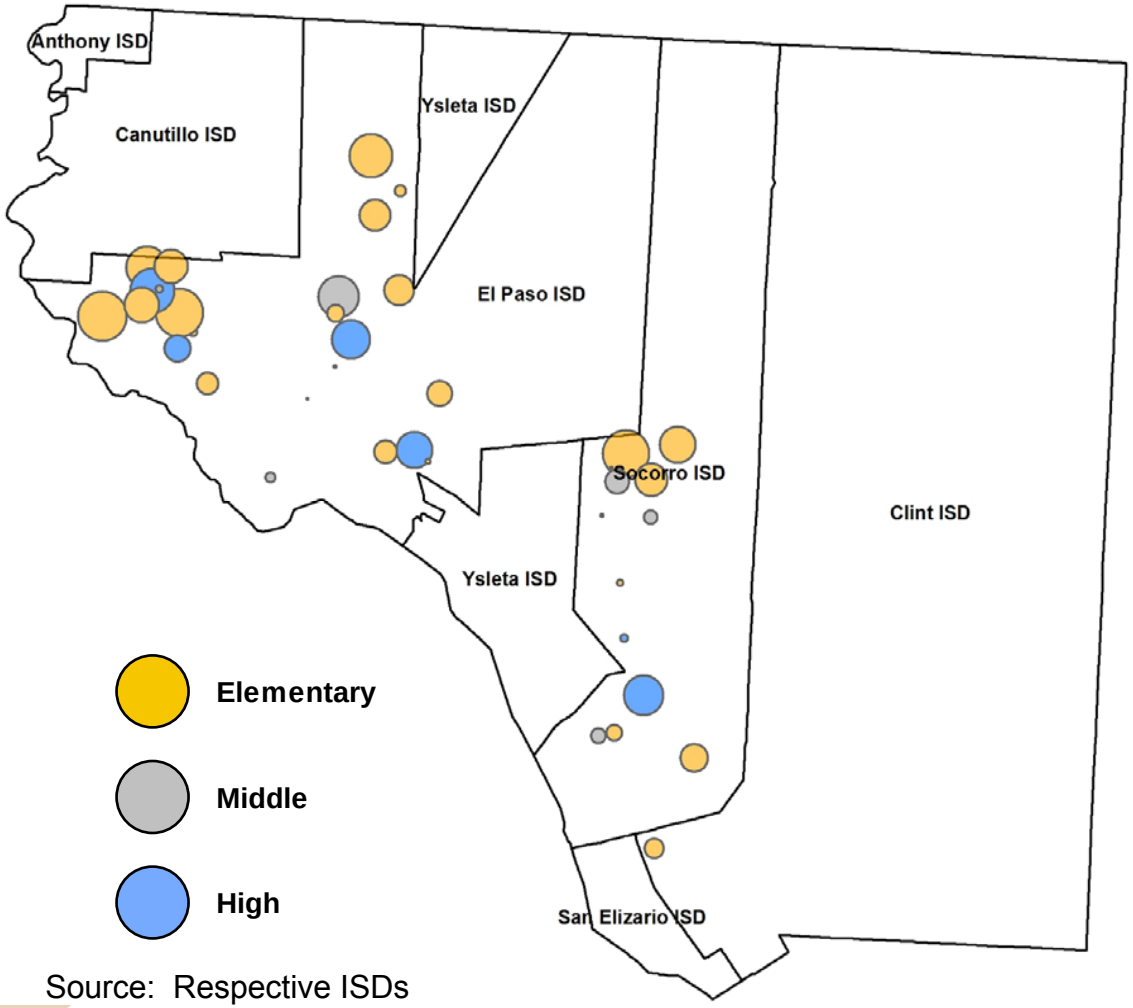
3 largest ISDs are El Paso, Ysleta and Socorro, comprising 86 percent of the total number of Pre-K to 12th grade students.

Over Capacity and Close to Capacity at PID Schools

- EPISD has 17 over capacity and 8 close to capacity
  (18 elementary; 4 middle; 3 high)
- SISD has 7 over capacity and 7 close to capacity
  (7 elementary; 5 middle; 2 high)
- Clint ISD has 1 over capacity
  (1 elementary)
- YISD and Canutillo ISD data unavailable

Note: Over capacity = school with student enrollment > capacity
Close to capacity = school that is 25 students from reaching capacity

Overcapacity and Close to Capacity at PIDs



Source: Respective ISDs

PID Remaining Bond Revenue for New Projects

Bond Election	Total (million)	New Schools Remaining	Type	Total Schools	Known Capacity	Total Capacity
EPISD 2007	$230.0	7	ES MS HS	5 1 1	4 1 0	2,636 1,224
YISD 2004	$252.3	2	PK ES	1 1	1 1	600 600
SISD 2004	$188.7	3	ES 9th HS	1 1 1	1 1 1	600 900 1,200
Clint 2006	$90.0	3	ES MS HS	1 1 1	0 0 0	not available
Canutillo 2006	$39.0	1	ES	1	1	675

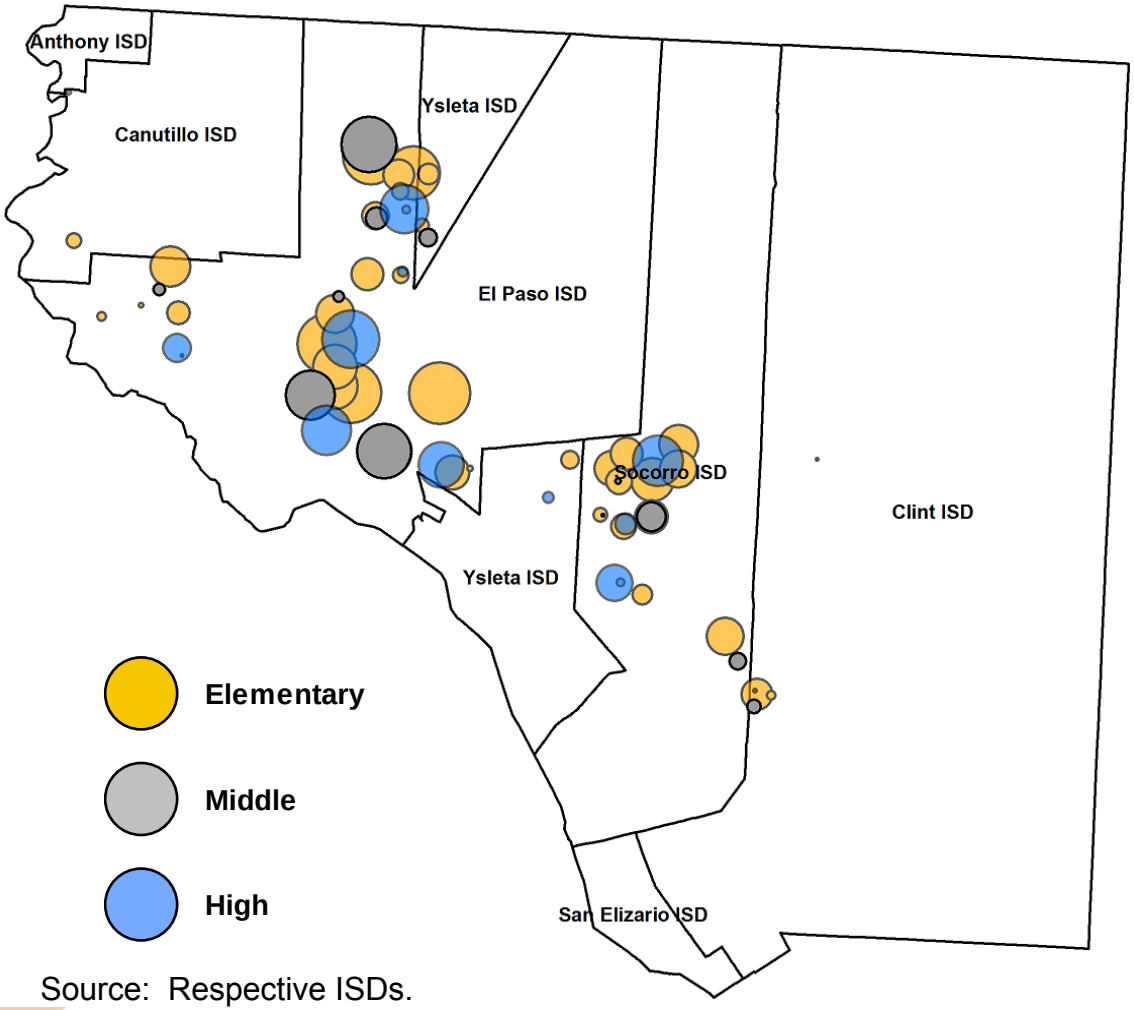
Source: Respective School Districts

- 16 schools remain to be built
- Additional planned capacity for
  - 600 pre-K students
  - 4,511 elementary students
  - 1,224 middle school students
  - 2,100 high school students.

Students of Military Families in PIDs

- EPISD enrolls 4,777
  (63% elementary; 17% middle; 20% high)
- SISD enrolls 1,169
  (62% elementary; 12% middle; 26% high)
- YISD enrolls 536
  (69% elementary; 17% middle; 14% high)
- Clint ISD enrolls 196
  (62% elementary; 20% middle; 18% high)
- Canutillo ISD enrolls 97
  (52% elementary; 25% middle; 23% high)

Students of Military in PID Schools



Source: Respective ISDs.

Key Needs for Education

- Provide sufficient capacity.
- Careful accounting of military student populations is important to insure adequate federal impact aid.
- Address funding shortages needed to finance expansion (in staff, programs and facilities).
- Continued strategic planning by UTEP and EPCC to absorb military population.
  - Special courses on-post may be limited by faculty resources and professional accreditation concerns
  - Promote off-campus and online programs

Key Needs for Education Workforce

- Promote education fields, certifications, and teacher attraction and retention.
- Work to ease certification requirements, the movement of pensions, and pension buy-in for certified professionals.
- Outreach to military families describing education-related employment, requirements and training opportunities.
- Expand bi-lingual programs for all ages.

Impact on Health Occupations

	2005-Baseline	2008-Baseline	Net
2008	31,959	32,287	328
2025	41,860	42,293	433
2008-2025 Gain		10,006	

Impact on Community and Social Occupations

	2005-Baseline	2008-Baseline	Net
2008	9,891	10,007	116
2025	12,221	12,353	131
2008-2025 Gain		2,345	

- Increase in population over the past 3 years has added significant demand in both occupation fields, primarily in nursing fields.

Impact on Health

Even with an increase in health employment over the past 3 years, there are current shortages in medical, nursing and dental professions.

	EL PASO				TEXAS
	Total	Professionals per 100,000 Population	Rank (of all TX Counties)	Shortage (needed to match TX)	Professionals per 100,000 Population
MEDICAL PROFESSIONS					
Direct Patient Care Physicians	816	111	54	**327**	156
Primary Care Physicians	348	47	110	**148**	67
Physicians Assistants	88	12	114	**31**	16
NURSE PROFESSIONS					
Registered Nurse	3,803	518	59	**987**	652
Licensed Vocation Nurse	1,044	142	233	**961**	273
Nurse Practitioners	127	17	87	**22**	20
Certified Nursing Aides	3,142	428	219	**444**	488
Promotoras	71	10	8	**--**	2
DENTAL PROFESSIONS					
Dentists (General)	124	17	160	**143**	36
Dental Hygienists	207	28	100	**76**	38

Source: Texas Department of State Health Services

Impact on Social Services

- The shortage in the supply of health providers and access to health care, as well as socio-demographics of the region (low education and income levels and young population) results in a greater need for social services.

Impact on Mental Health

- Increase in caseloads throughout a system already above capacity.
- Increase in the number of soldiers returning from combat with Post Traumatic Stress Disorder
- Increase in the number of military children requiring mental health support within the schools

Challenges for Health

- Texas licensing process takes longer than in other states.
- The recruitment of physicians into El Paso is difficult.
- Low insurance reimbursement rates and a large number of TRICARE, Medicaid or uninsured individuals.
- Need more state and/or federal funding for UTEP's School of Nursing to increase enrollment in graduate programs.

Quality of Life Perceptions

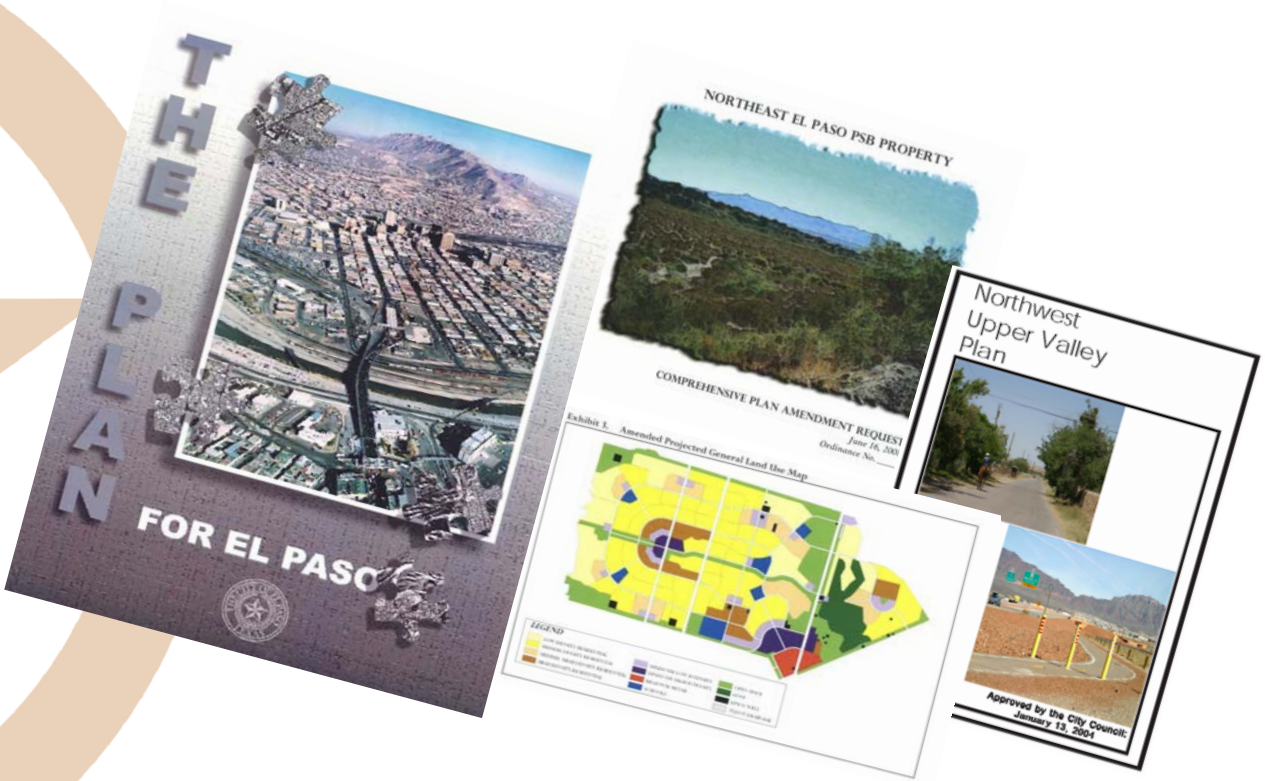
- A survey of citizen perceptions tell us that:
  - Majority believe that El Paso is getting better as a place to live.
  - Climate and weather, border location, and culture, history and people were considered El Paso's biggest strengths.
  - A consensus that Quality of Life Services was an underfunded.

Project Study Area

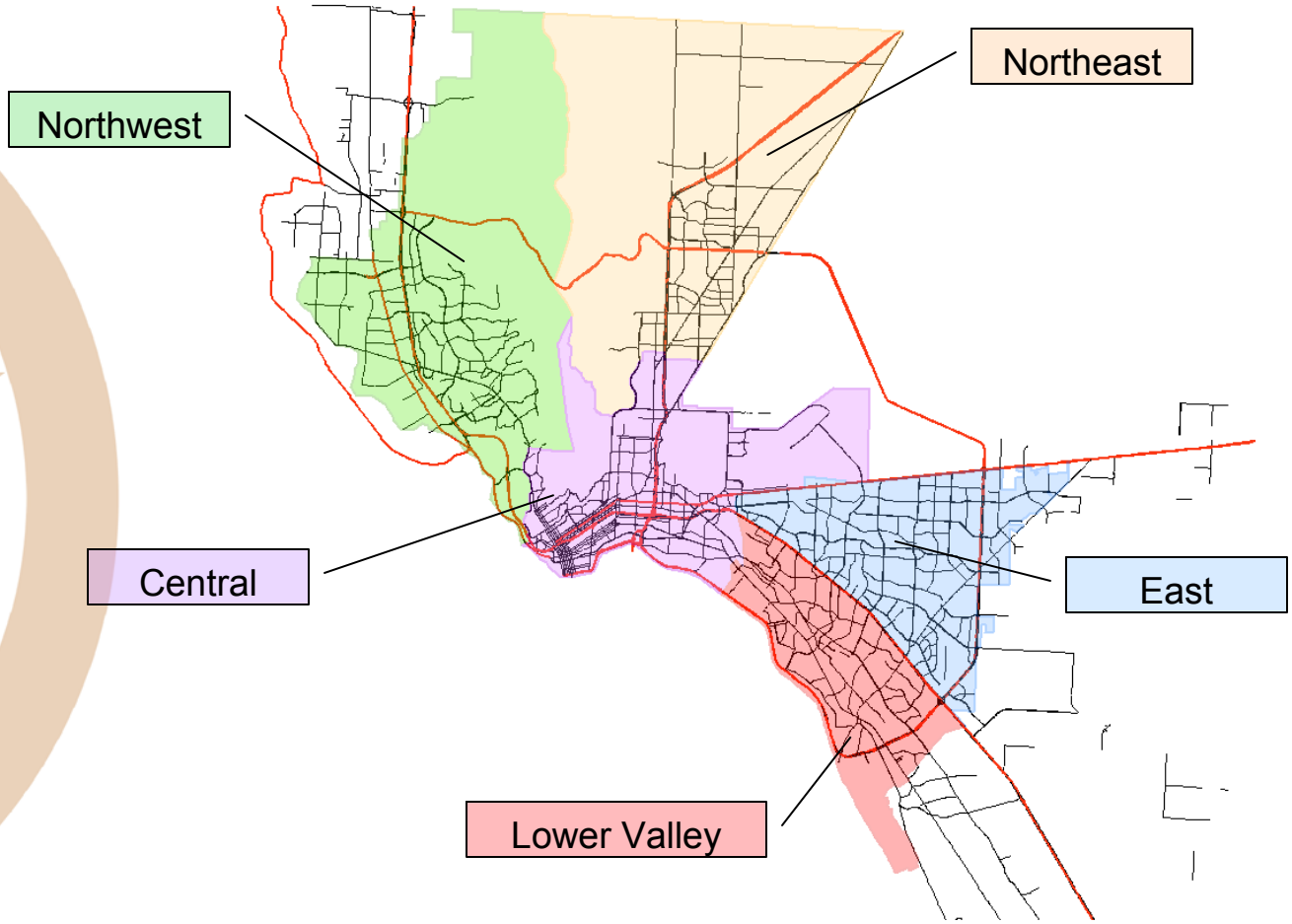
Investigative Tasks

- Land Use
- Transportation
- Infrastructure/Utilities
- Public Safety Facilities

Planning History

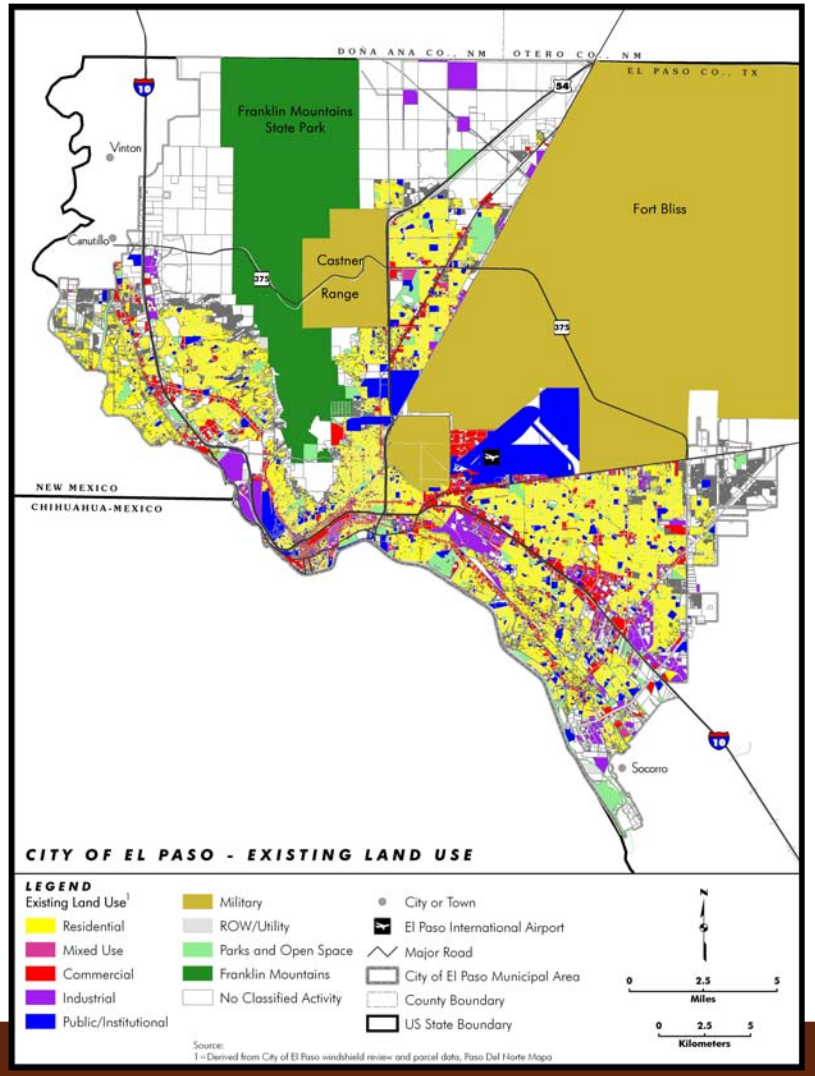


El Paso Planning Areas

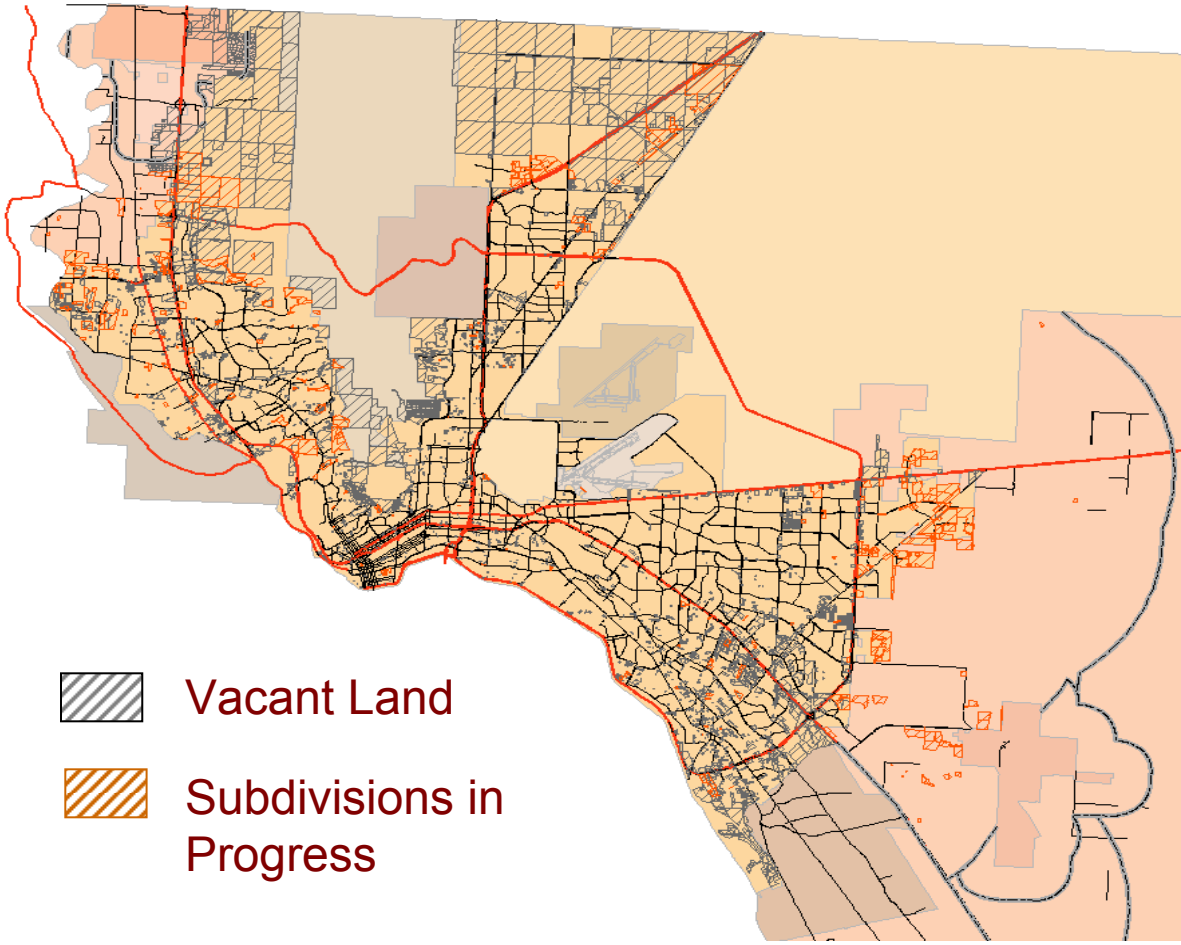


Existing Land Use

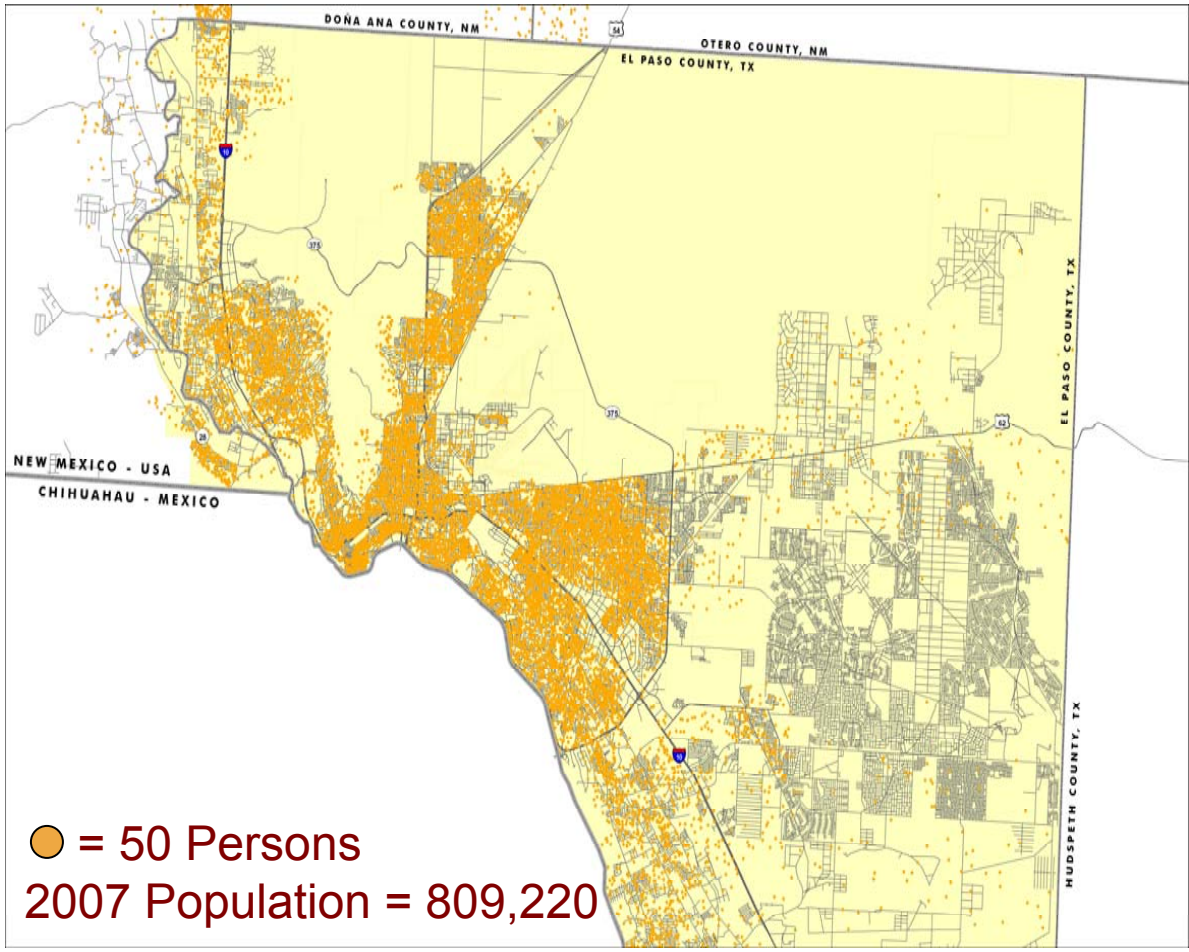
Land Use	Acres	%
Residential	29,073	18.0
Office/ Commercial	6,976	4.3
Industrial	5,157	3.2
Other	35,141	21.8
Franklin Mountains	26,149	16.2
Vacant	58,586	36.4
Total Acres	161,082	99.9



Growth Areas

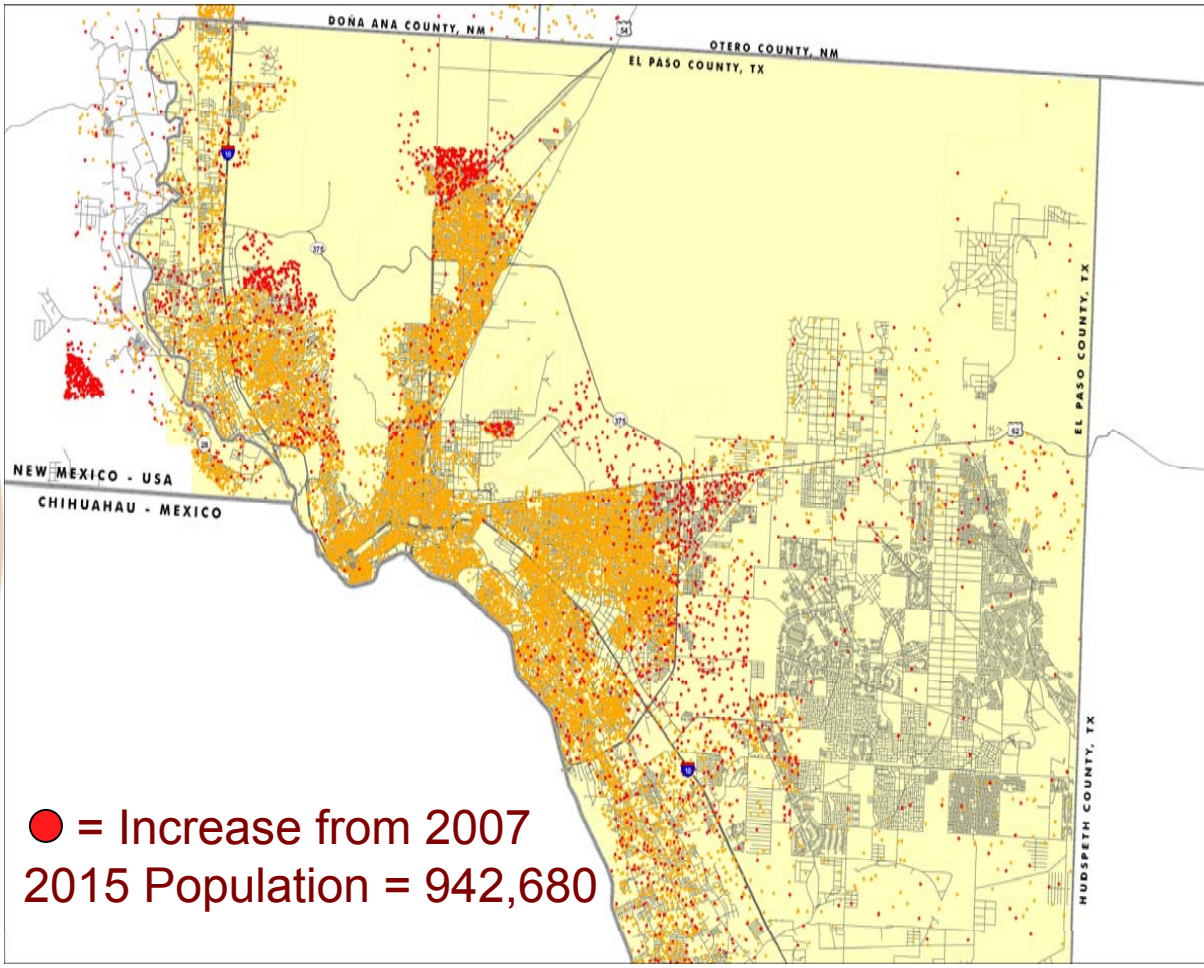


2007 Population Density



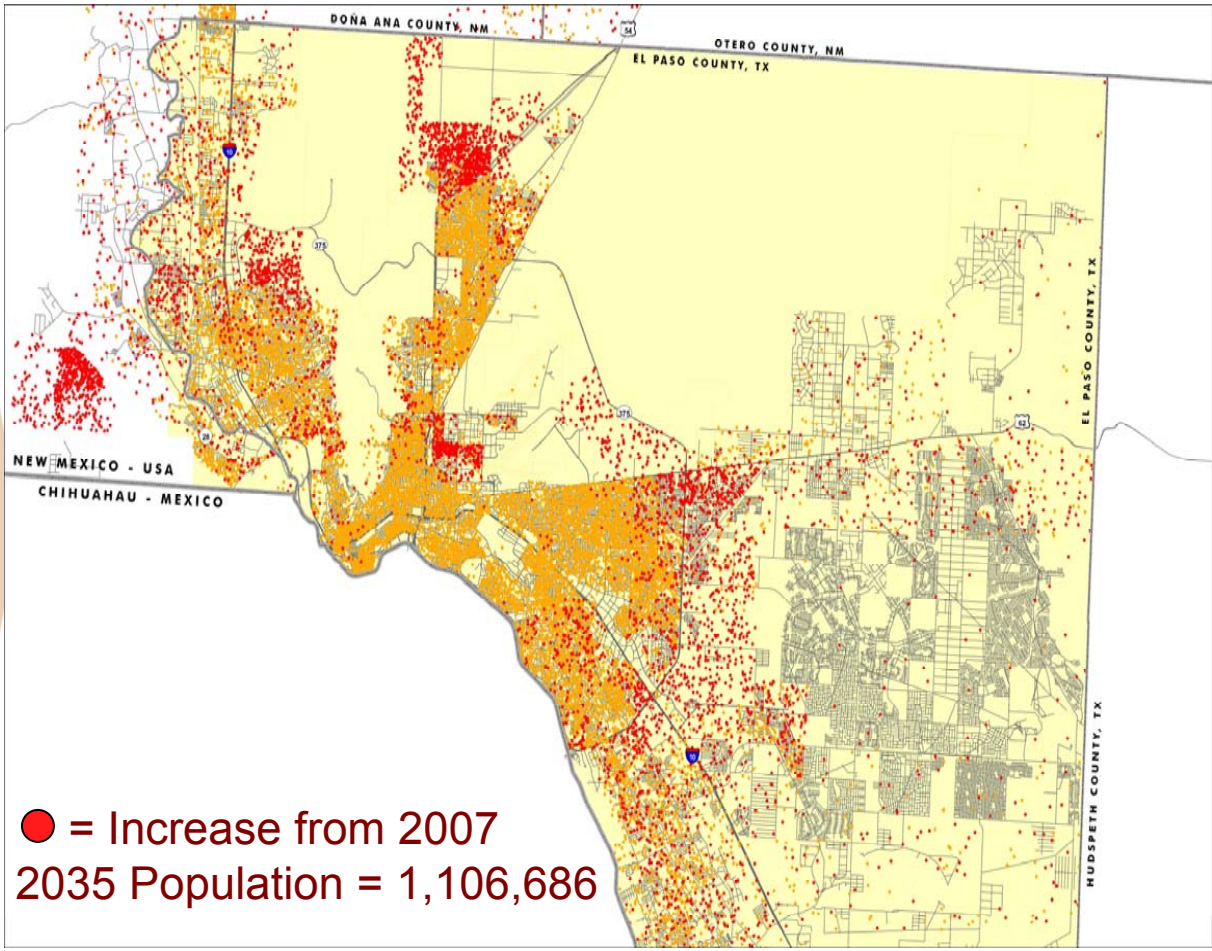
Source: El Paso MPO TAZ Data

2015 Population Density



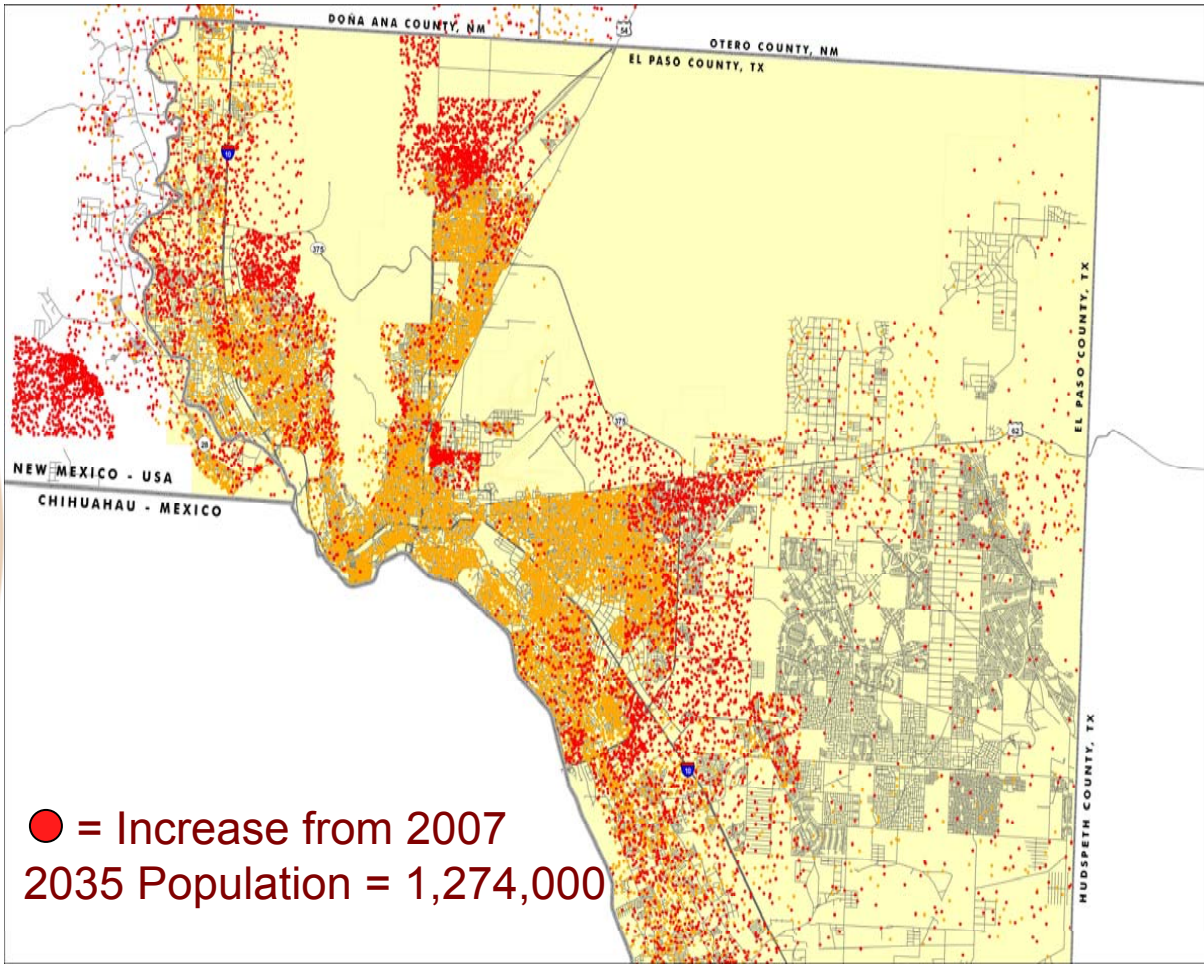
Source: El Paso MPO TAZ Data

2025 Population Density



Source: El Paso MPO TAZ Data

2035 Population Density



Source: El Paso MPO TAZ Data

Challenges & Opportunities

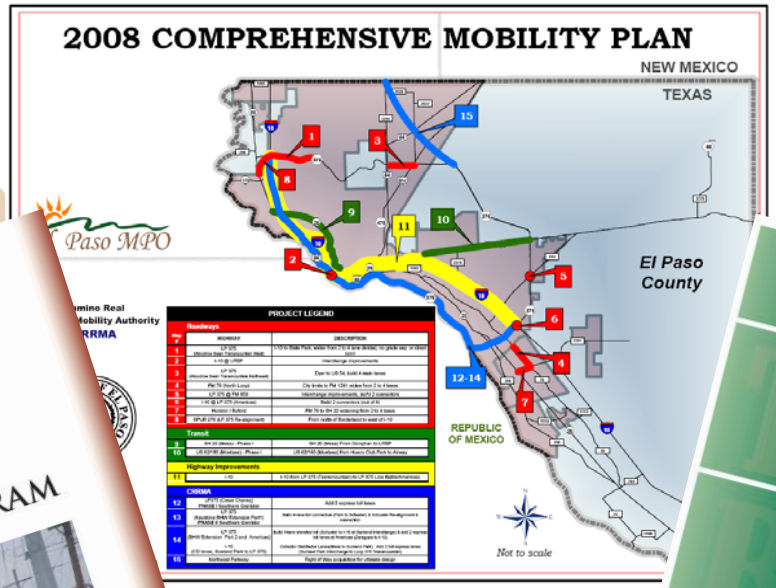
- Lots of Land
- Strong Market
- Available Water Resources
- Maximize Housing Choices
- Maximize Infill and Redevelopment Opportunities

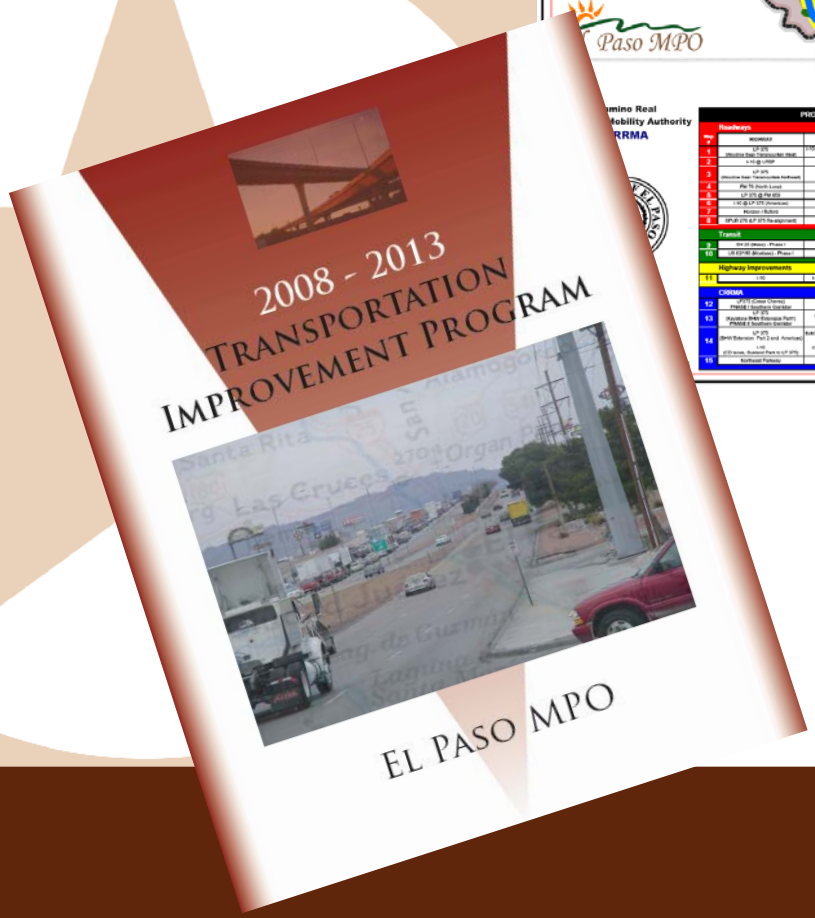
Transportation

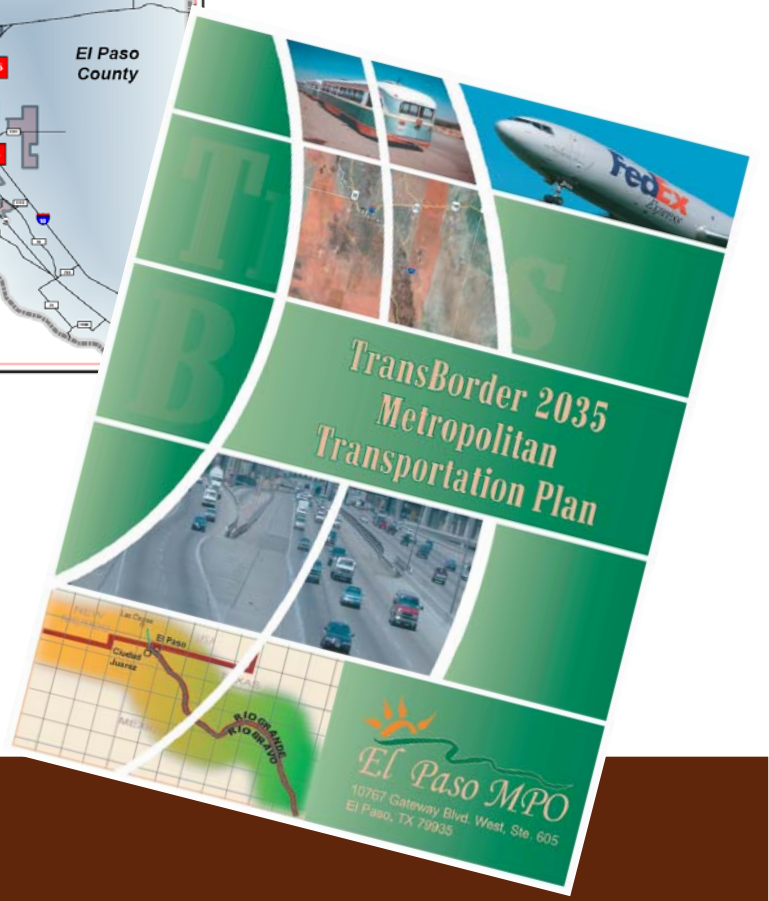
Transportation - is the movement of goods and people from one point to another…..

…safely and efficiently.

Transportation Planning



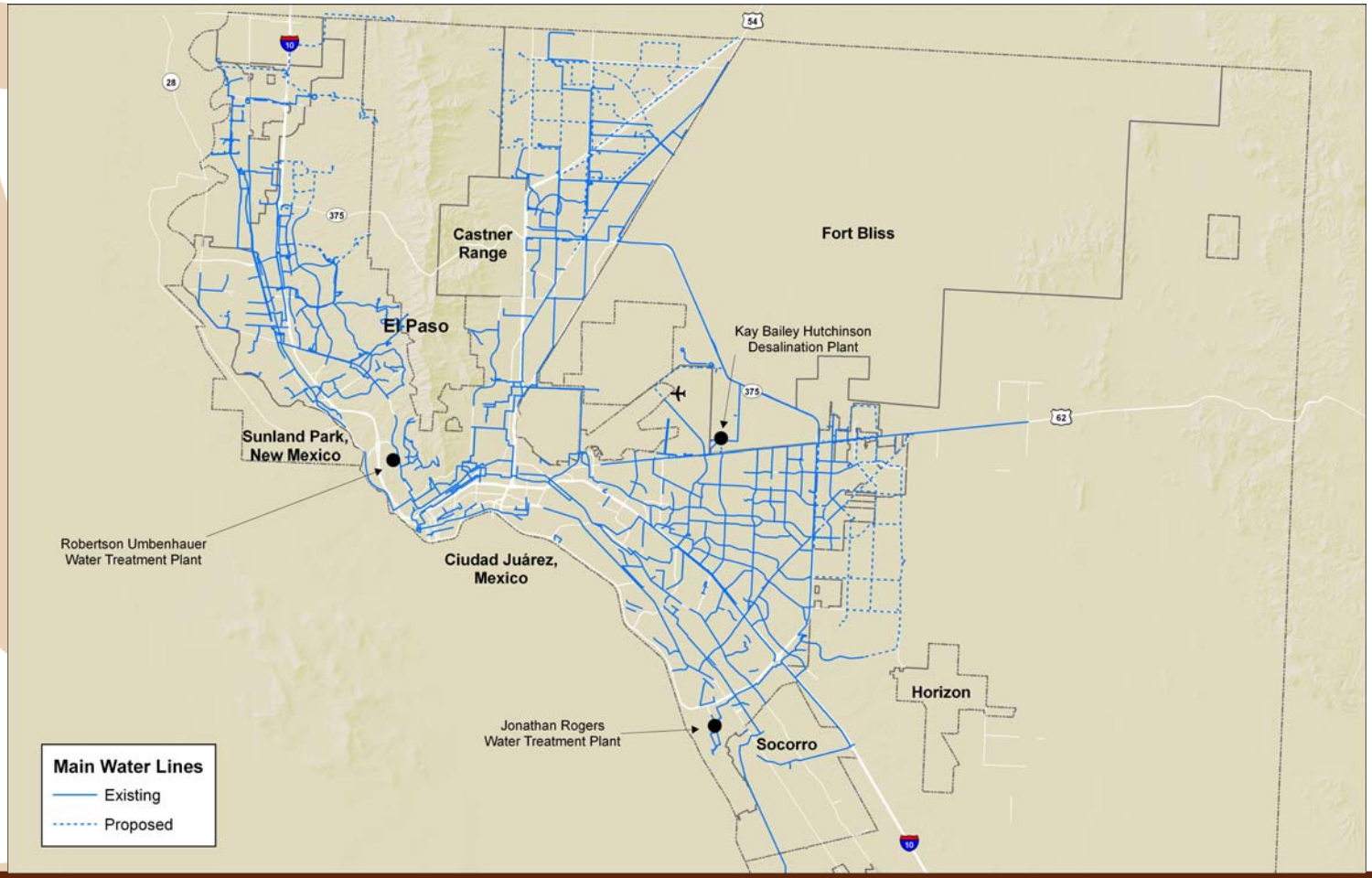




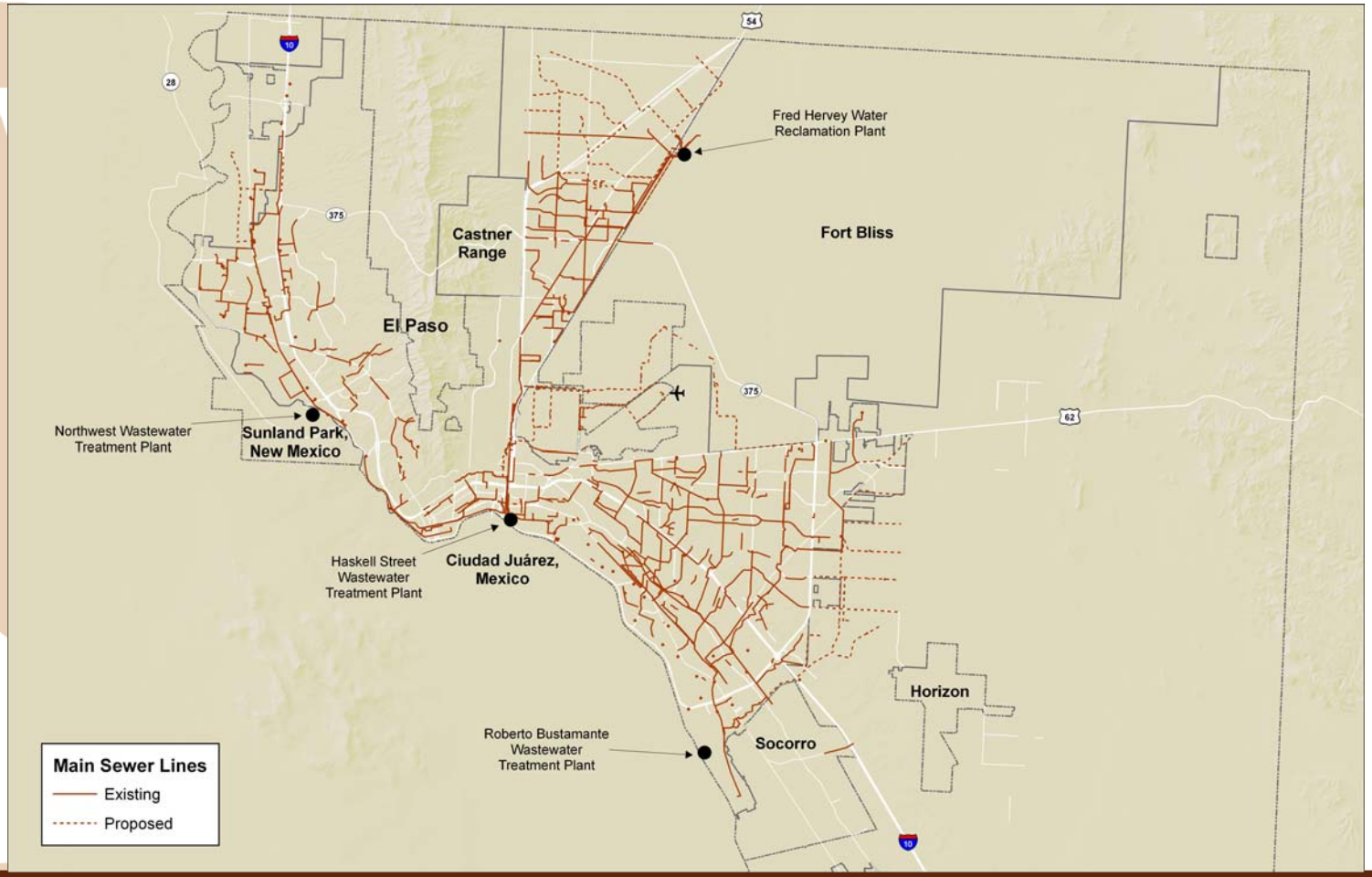
Infrastucture/Utilities

- Water
- Wastewater
- Solid Waste
- Electric
- Gas
- Communications

EPWU Water Facilities

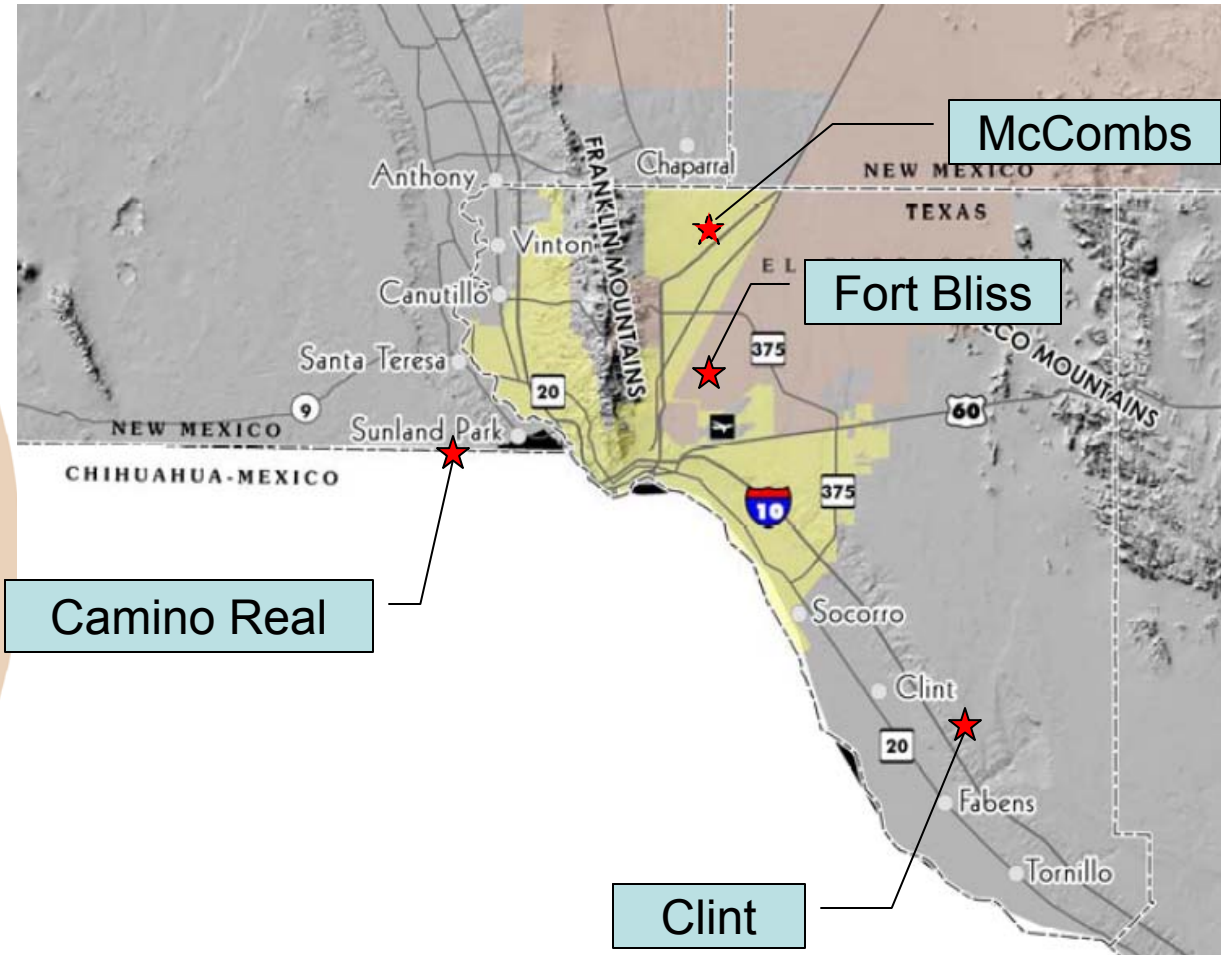


EPWU Sewer Facilities



Solid Waste Management

Land Fill Sites



Public Safety Services

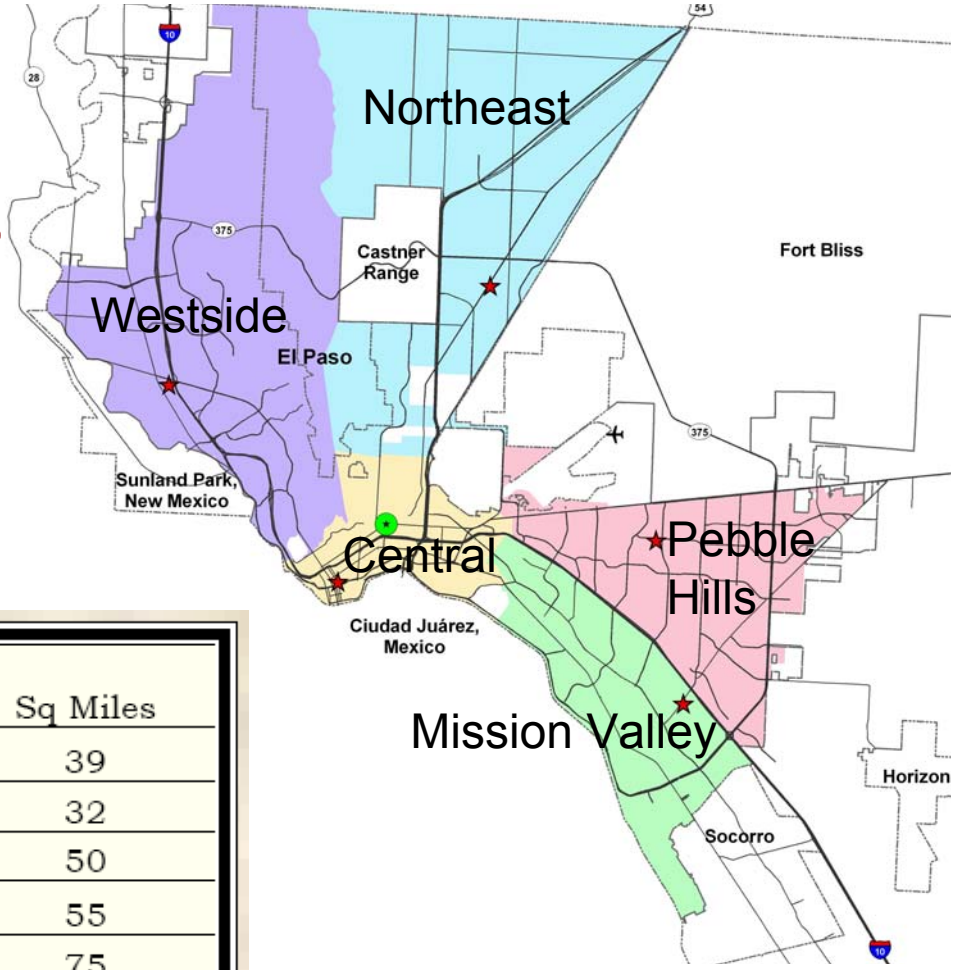
- Law Enforcement
- Fire Protection
- Emergency Response

El Paso Police Department

- Rated 2nd Safest City in 2007
- 2008 Uniform positions = 1108
- 2007 Calls for Service -390,253
- Response time for priority 2 and 3 calls – 13:39 minutes.

El Paso Police Districts

- Regional Command Centers
- Police Headquarters



Regional Command	Population Estimates	Sq Miles
Central	156,000	39
Mission Valley	130,000	32
Pebble Hills	150,000	50
Northeast	130,000	55
Westside	85,000	75
Total	**651,000**	**251**

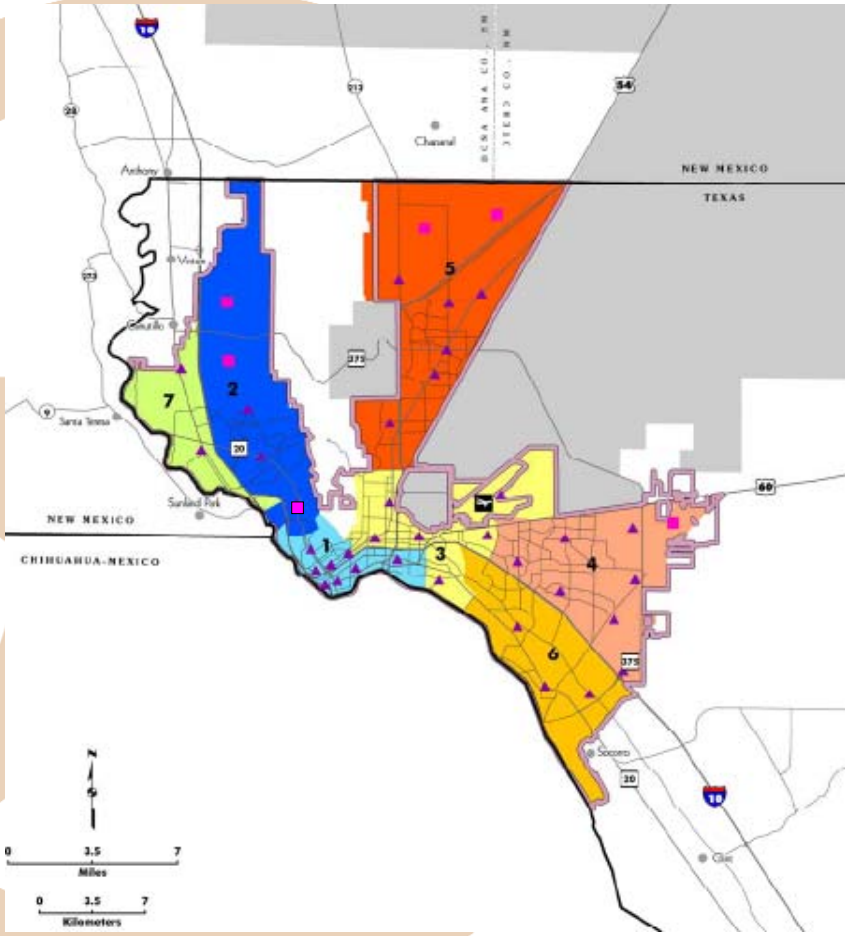
Challenges and Opportunities

- Implementation of 2007 Magellan Staffing and Facility Needs Assessment Recommendations.
- Recruitment, Training and Retention.
- County detention facilities near capacity.
- Criminal Justice System

El Paso Fire Department

- Class 1 ISO Rating
- 2007 Uniformed fire personnel 804
- No. of Fire Stations – 34
- 2007 Fire Responses – 3,376
- 2007 Medical Responses – 41,216
- Average Response Time – 4:37 minutes

El Paso Fire Station Planning



- 7 Fire Districts
- 35 Existing Fire Stations
- 6 Planned Future Stations

Initial Observations

Initial Observations

- Land Planning
  - El Paso has already adopted or initiated many of the planning tools essential to orderly growth management.
    - Updated Subdivision regulations incorporating TND street standards and other Smart Code provisions
    - Adoption of “Smart Code Zone” to encourage more compact sustainable development patterns.
    - Annexation study and impact fees analysis near completion
    - Update to City’s Comprehensive Plan programmed.

Initial Observations

- Transportation
  - Major transportation initiatives include:
    - Over 11 billion dollars in transportation projects identified in 2035 TransBorder Plan.
    - Inner Loop Spur 601 and Global Reach Extension programmed as the first ever private sector pass-through financing project.
    - Establishment of CRRMA to plan and finance transportation improvements.
    - Increased transit opportunities including Bus Rapid Transit (BRT).

Initial Observations

- Infrastructure/Utilities
  - Water
    - El Paso appears well positioned to accommodate the water supply demands associated with future growth.
    - EPWU provides 90 percent of all municipal water in El Paso County.
    - EPWU can produce 347 million gallons of water per day (mgd).
    - Current peak demand is 165 mgd.
    - Implementation of water conservation practices has reduced per capita consumption from 210 gallons per day in the 1980's to 140 gpd today.
    - There remain colonias in rural El Paso county not served by a public water supply.

Initial Observations

- Infrastructure/Utilities (cont.)
  - Sanitary Sewer Facilities
    - Four Treatment plants with combined capacity to treat 94.2 million gallons of wastewater per day.
    - EPWU has programmed system improvements to increase service capacity to Fort Bliss to accommodate base realignment.
- Solid Waste Management
  - Anticipated growth will shorten projected life of Clint landfill.
  - City has initiated recycling program and needs to explore additional waste stream reduction programs and land fill alternatives.
  - Regional opportunity to address waste management solution.

Initial Observations

- Public Safety
  - Law Enforcement
    - Implementation of Magellan facility needs assessment is a priority for the El Paso Police Department.
    - County detention facilities near capacity
  - Fire Protection
    - Capital Improvement Plans for future fire stations may need to be accelerated to meet growth.

Mathew regains the gavel

Next we will ask you to give your opinion on the most important issues facing El Paso as the city and its citizens as Ft. Bliss receives thousands of men and women in uniform and their families.

How to comment

Card fill out

Face the camera

Other rules

FINAL
EL PASO REGIONAL GROWTH MANAGEMENT PLAN

Exhibit 2

RGMP Public Meeting Presentation 2009

El Paso of the Future

A Discussion of Growth in El Paso Resulting from an Expansion at Ft. Bliss

The SAIC Planning Team

- A National Team of Attorneys, Economists, Planners, Environmentalists, MBAs, Civil Engineers, and other smart people.
  - Significant experience with planning efforts from military bases, through states to regional transformation plans
- In 2007 we competed with a number of other firms to work with El Paso to identify the impacts of the expansion of Ft. Bliss
- We started working with Mathew McElroy in April of 2008 and we are meeting today with you to discuss our results

Since that Time

- We have:
  - read dozens of studies concerning the region.
  - talked with dozens of people
  - run scores of simulations
  - reviewed mountains of data
  - Created an enormous amount of information about El Paso now and into the future.

What's Next

- We will talk about each off the areas we have studied.
  - Carlos Olmeda (IPED – UTEP) will explain how his team of experts built the prediction system upon which our talk is based and what it tells us about the El Paso of the future.
  - Tom Kuntz (Behnam-SAIC) will talk about the El Paso Subdivision Ordnance, and Land Use, and
  - Then we will talk about housing.
- This is an open session and questions are welcome. Please identify your self and your organization loudly enough that all can hear.
- ***NOTE:*** Our information comes from many sources, not all of which match each other. Further, since we started, the Army has changed its plan.

What do we hope to accomplish?

- We hope to describe to you an El Paso of the future. It will be larger and more economically robust, with over 100 thousand new residents and thousands of new jobs.
- We will also describe the issues that you will face as you grow to that new El Paso.
- At the end of our presentation, I will ask you to help us understand what you believe are the issues most important to you and tell us where you think the City should put its emphasis.
- We intend, at the end of this effort to give to the City an action plan that describes the many issues raised tonight and a few more, what you believe to be the most important, and, where appropriate, funding sources that El Paso might tap to help pay for the super growth that is coming.

You Face a Wonderful Opportunity

Changes at Ft. Bliss will be an engine of economic growth for the entire community.

- increases in job opportunities
- increases in the regional domestic product
- Increases in the tax base that will generate new income to fund expansion

BUT

- You face many difficulties along the way.
  - Sufficient housing, health care and social services recruiting, schools and teachers, job training, and day care are some of the most significant issues

IF YOU DON'T HELP, IT WON'T WORK!

As you listen this morning, remember:

- You must lend your experience, knowledge, leadership, and assistance to make it work
- There will be calls for your help and you must respond.
  - We will provide a mountain of data
  - Learn all you can – RGMP on the city web site
  - Think about the implications
  - Don't just describe problem, provide answers!
- As you listen today, make some notes on areas of your interest and look for the City to be asking you for help.
- I urge you to respond.

First, we should hear from the Army

- Rob Weatherly
  - Team Bliss Base Transformation Office
  - A long term resident of Ft. Bliss
    - Roots deep in the community
    - Wife is a teacher in the

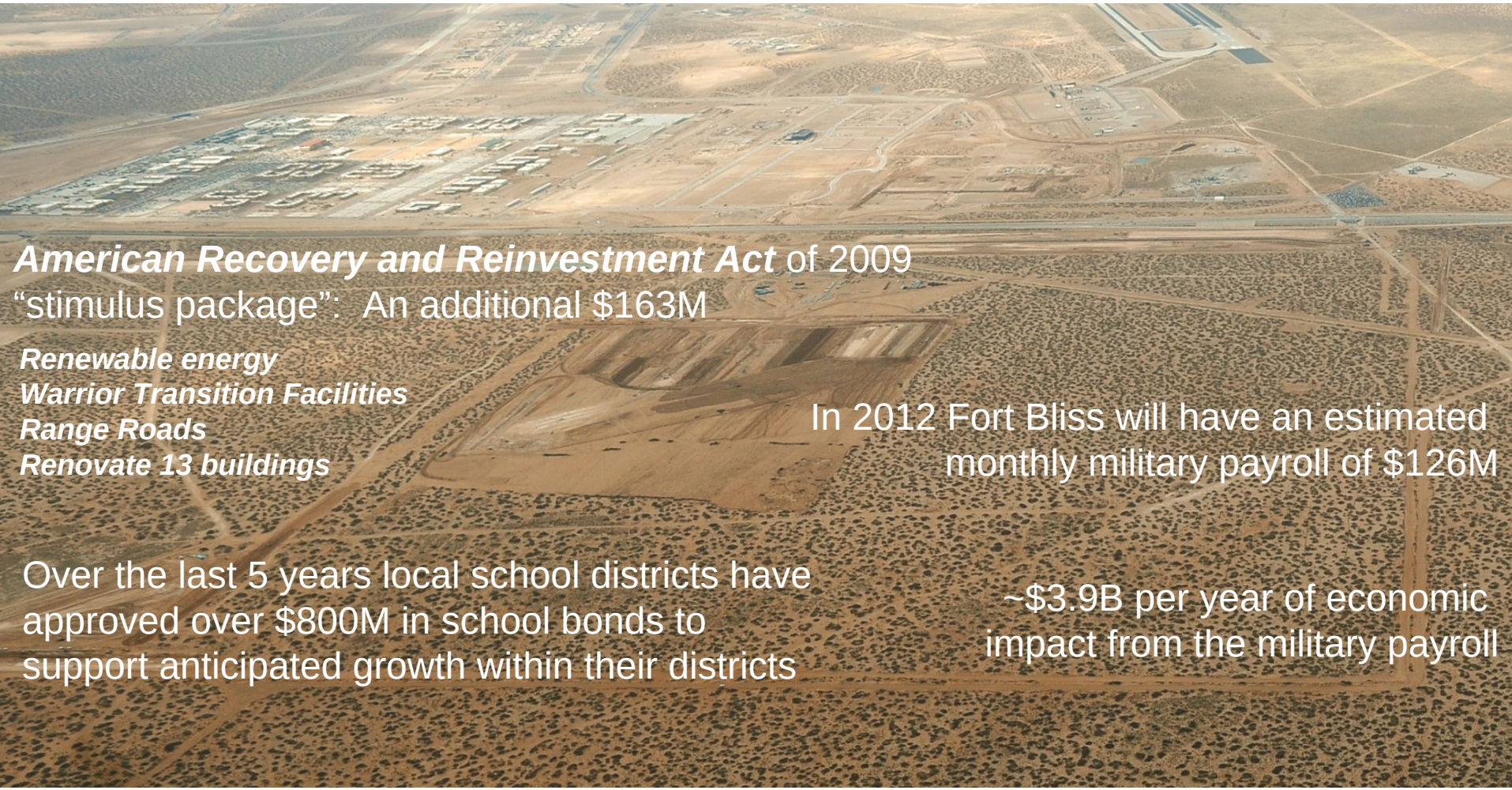
TeamBliss

"Serving the Nation"

"Fort Bliss"
Strength of our Army
Pride of the Southwest

Total Military Construction is: ~$4.6B

Other Impacts



American Recovery and Reinvestment Act of 2009
"stimulus package": An additional $163M

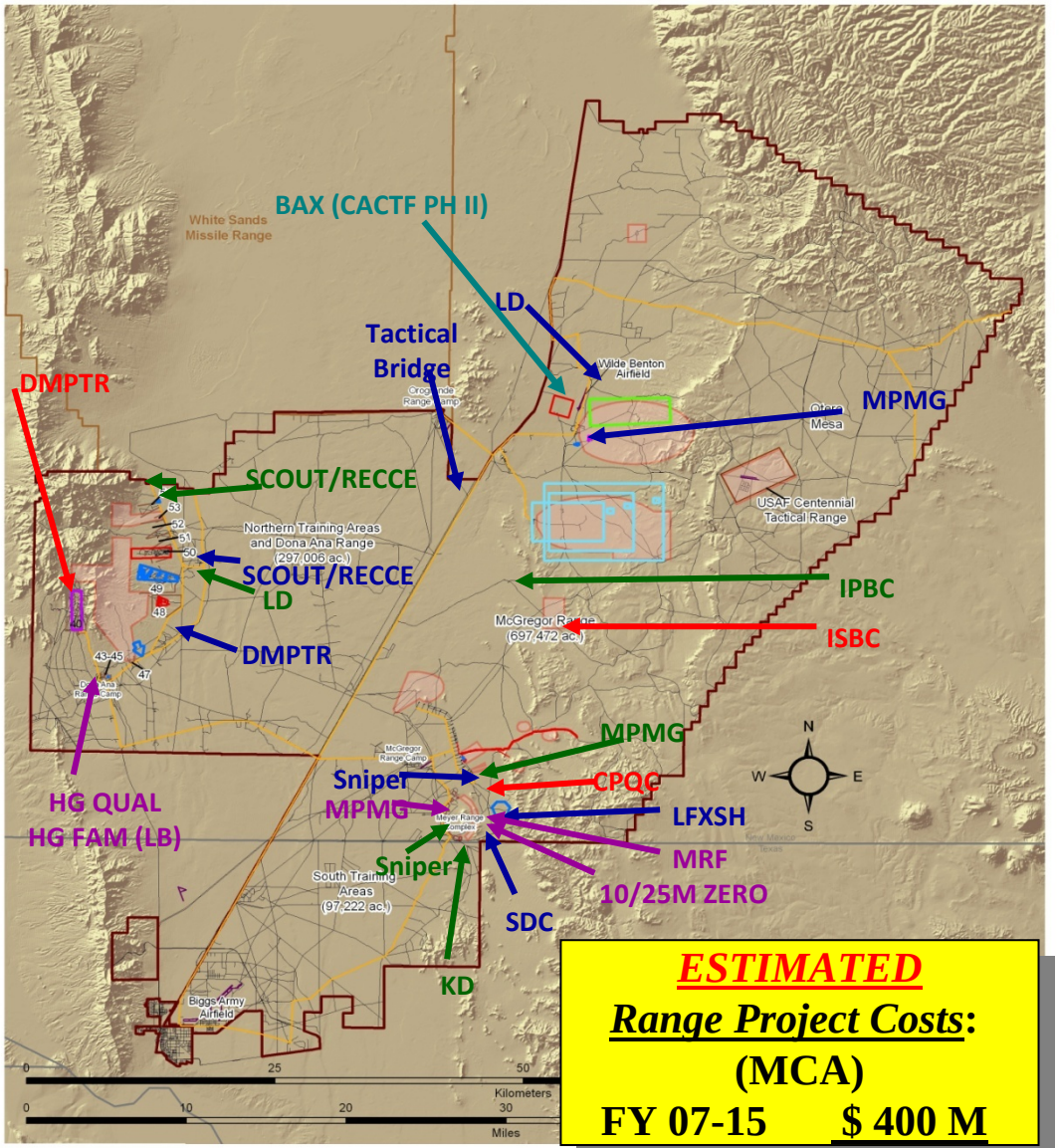
Renewable energy
Warrior Transition Facilities
Range Roads
Renovate 13 buildings

In 2012 Fort Bliss will have an estimated monthly military payroll of $126M

Over the last 5 years local school districts have approved over $800M in school bonds to support anticipated growth within their districts

~$3.9B per year of economic impact from the military payroll

FY 10-15 Ranges *



ESTIMATED

***Range Project Costs*:**

(MCA)

FY 07-15 $ 400 M

FY10

-Light Demo/Live Fire Breach (LD)- 72167
-Scout/RECCE Range - 72165
-Multipurpose Machine Gun - 72164
-Known Distance - 72163
-Sniper Range (KD) - 72161
-Infantry Platoon Battle Course (IPBC) - 72168

FY11

-Digital Multipurpose Training Range (DMPTR) – 72182
-Scout/RECCE Range - 72179
-Heavy Sniper Range - 72181
-Squad Defense Course (SDC) - 72184
-Live Fire Exercise Shoot House (LFXSH) - 72183
-Multipurpose Machine Gun Range (MPMG) - 72178
-Light Demo/Live Fire Breach (LD) - 72180
-Vehicle Bridge (Tactical Overpass US Hwy 54) - 64604

FY13

-Hand Grenade Familiarization Course - 67773
-Hand Grenade Qualification Course - 67776
-Modified Record Fire (M) - 66912
-10/25 Meter Zero Range - 66913
-Multipurpose Machine Gun Range (MPMG) - 66911

FY14

-Combat Pistol Qualification Range (CPQC) - 66922
-Digital Multipurpose Training Range (DMPTR) 70145 (Range 50 upgrade)
-Infantry Squad Battle Course (ISBC) - 70142

FY15

-Combined Arms Collective Training Facility (CACTF) PH II - 70151

*Currently on POM - 1 July 08.

•Validated during TSS Conference 19-22 August 08.

2005-2012
Population Comparison

By 2012 nearly 1 in every 8 people living in El Paso County will have a direct relationship to Fort Bliss

	2005	2012 Auth	Net Gain/ Loss	Projected % of Growth
Soldiers	9,330	33,469	24,139	259%
Military Students	2,132	700	-1,432	
Family Members	15,330	47,869	32,539	212%
Civilian Employees	3,621	6,962	3,341	92%
Total	30,413	89,001	58,588	

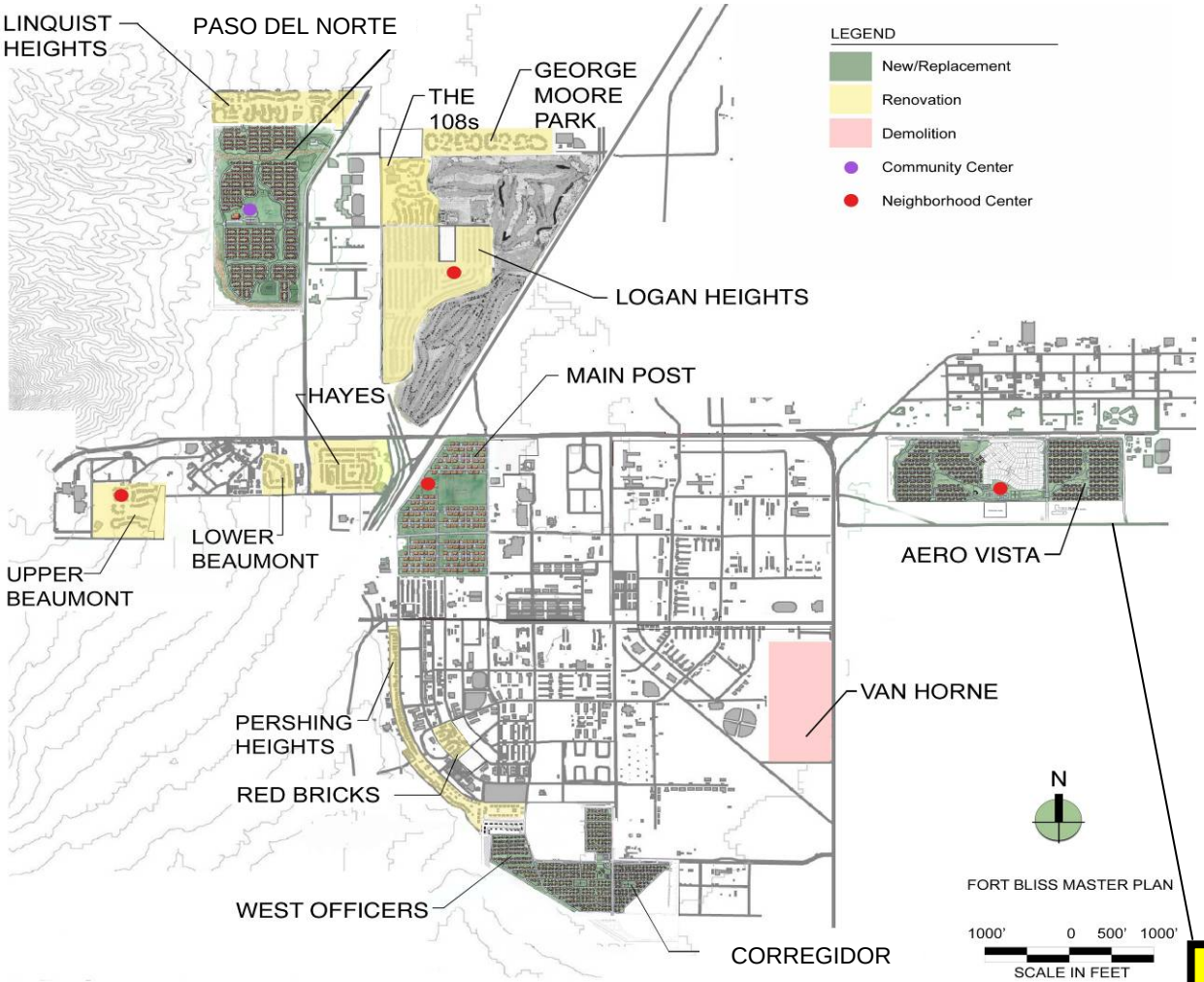
Family Members
School Year Synchronization

	Baseline 2006		SY 07/08	SY 08/09	SY 09/10	SY 10/11	SY 11/12	SY 12/13	Endstate 2013
Soldiers	13178	+/-	1468	3448	1933	8162	1493	3787	**33469**
		Cumulative	14646	18094	20027	28189	29682	33469	
Spouses	7177	+/-	851	2000	1121	4734	866	2196	**18946**
		Cumulative	8028	10028	11149	15883	16749	18946	
Children	13340	+/-	1127	2648	1485	6268	1147	2908	**28923**
		Cumulative	14467	17115	18600	24868	26015	28923	
K-5th (55%)	4623	+/-	391	918	514	2172	397	1008	**10023**
		Cumulative	5014	5931	6446	8618	9015	10023	
6-8th (21.5%)	1807	+/-	153	359	201	849	155	394	**3918**
		Cumulative	1960	2318	2519	3369	3524	3918	
9th-12th (23.5%)	1975	+/-	167	392	220	928	170	431	**4282**
		Cumulative	2142	2534	2754	3682	3852	4282	
Total School Age	8405	+/-	710	1668	935	3949	722	1832	**18223**
		Cumulative	9115	10784	11719	15668	16390	18223	
Actuals	7798		8257						

FMWRC/MCEC Model:
Spouses = # of Soldiers * .58
Children = (# of Soldiers * .48) * (1.6 Kids)
School-age = # of children * .63

School Year = 1 July – 30 June

Fort Bliss RCI Master Plan
Main post

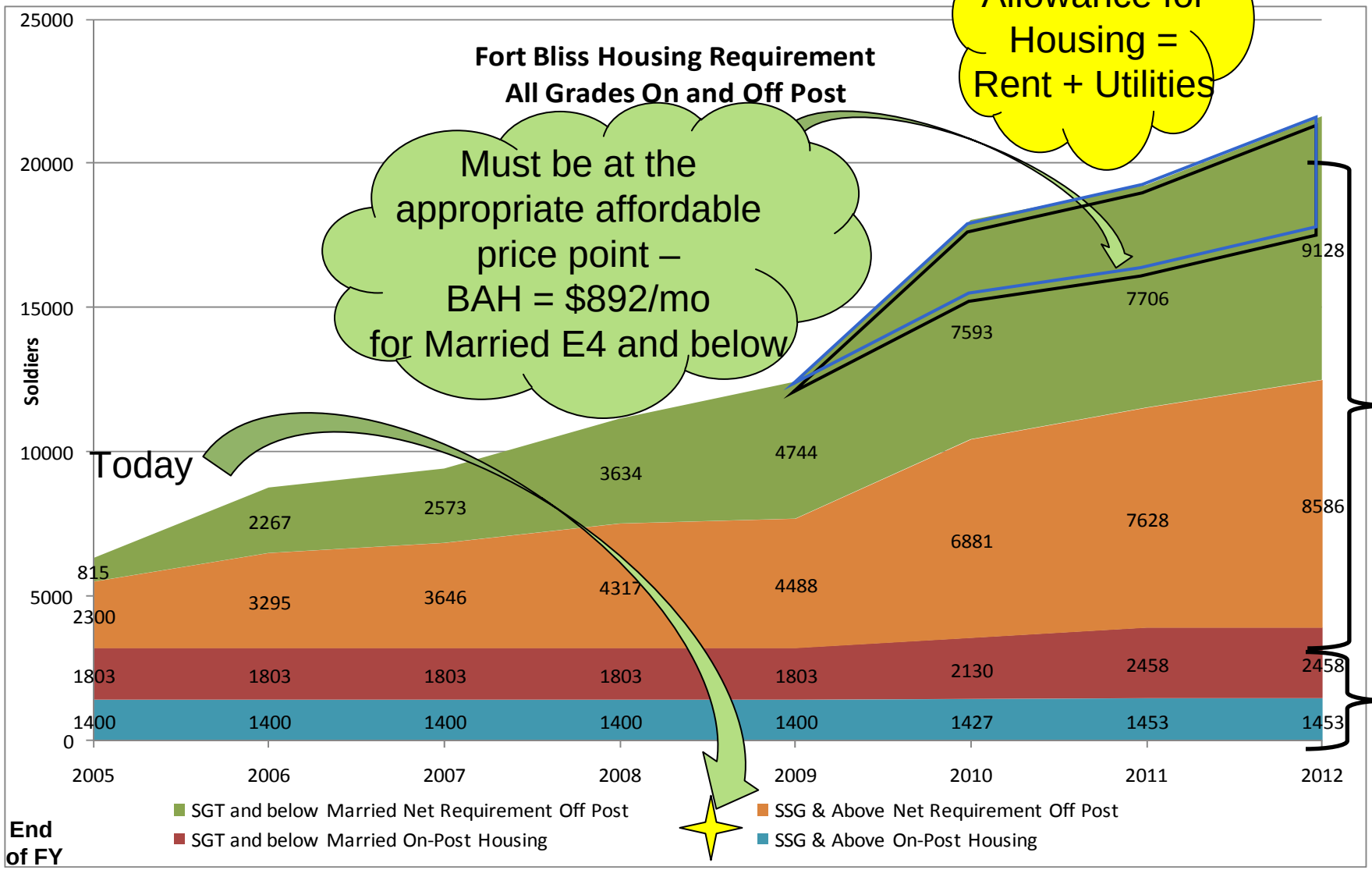


Housing Market Analysis As of 6-30-08	
Estimated On Post Housing Requirement	6946

Fort Bliss RCI Housing Inventory	
Prior to BRAC and Growth the Army	3,203
Planned (approx)	708
Total	3,911

Ft. Bliss Housing Requirements Summary	
Soldiers requiring housing (includes on and off post)	21,609
Projected On Post Home Inventory	3,911
Projected Total Soldiers Off Post	17,698

Future RCI Housing Development


Basic Allowance for Housing = Rent + Utilities
Must be at the appropriate affordable price point – BAH = $892/mo for Married E4 and below
Today
Fort Bliss Housing Requirement
All Grades On and Off Post
Soldiers
25000
20000
15000
10000
5000
0
2005
2006
2007
2008
2009
2010
2011
2012
End of FY
2267
2573
3634
4744
7593
7706
9128
3295
3646
4317
4488
6881
7628
8586
815
2300
1803
1803
1803
1803
1803
2130
2458
2458
1400
1400
1400
1400
1400
1427
1453
1453
SGT and below Married Net Requirement Off Post
SSG & Above Net Requirement Off Post
SGT and below Married On-Post Housing
SSG & Above On-Post Housing
OFF POST
ON POST

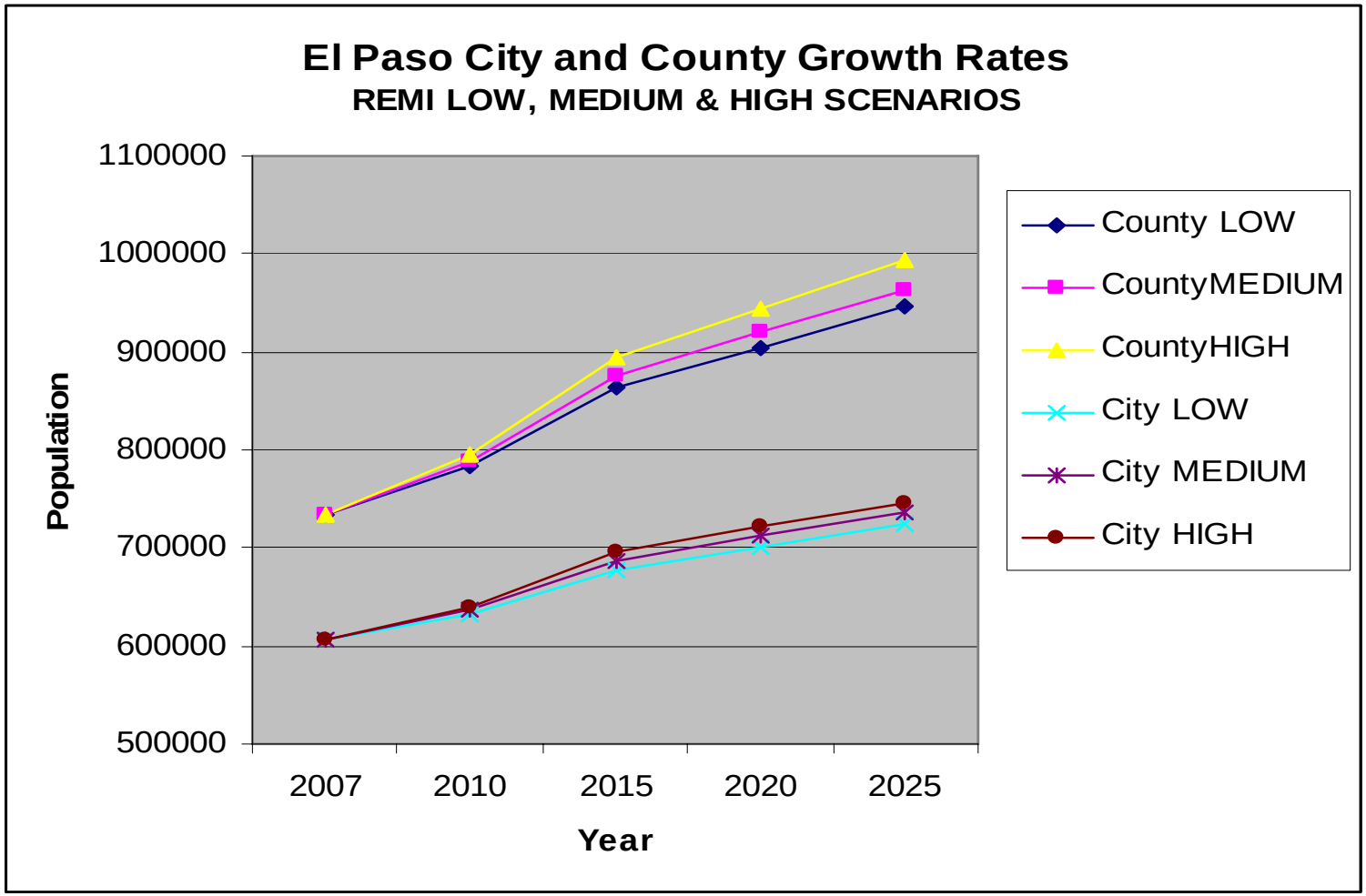
Carlos Olmedo, IPED - UTEP

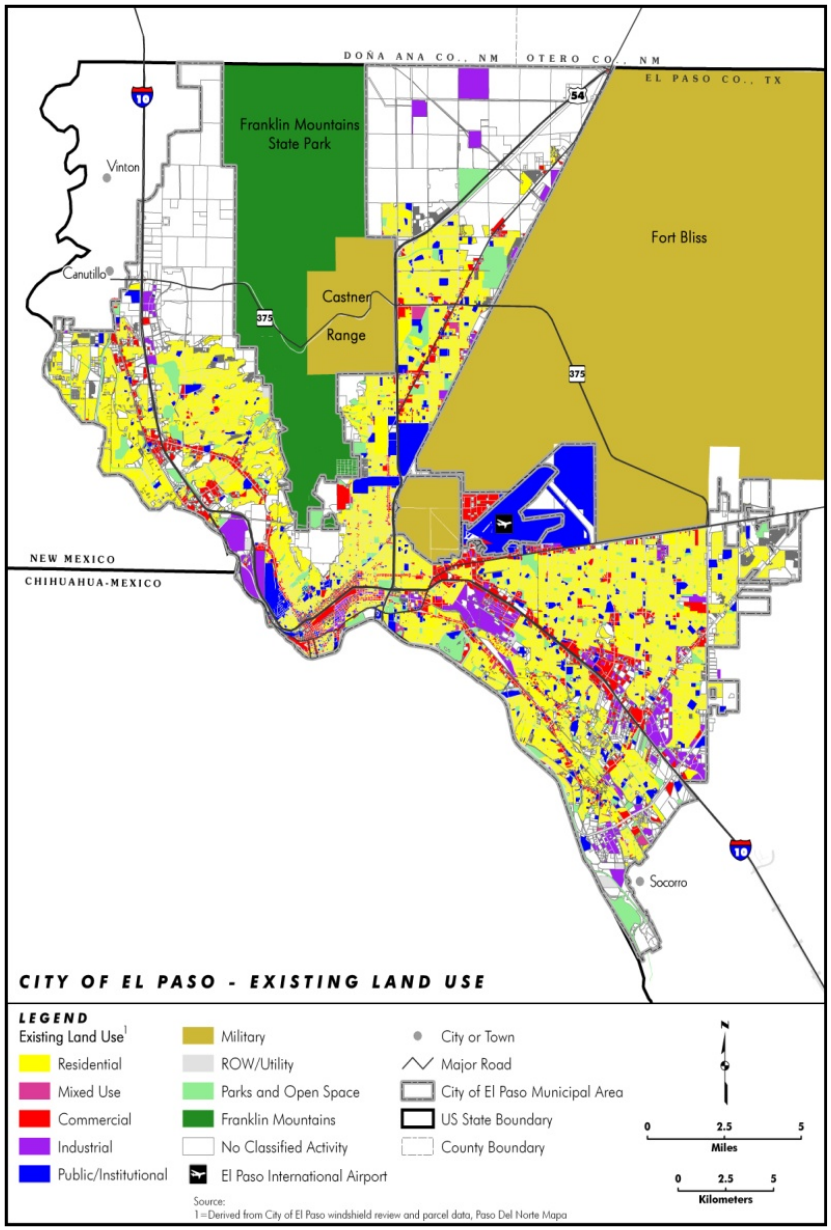
Carlos, just accepted into the University of Texas for a doctoral program, is the Deputy Director of the Institute for Policy and Economic Development at UTEP.

He has been responsible for the work of his team in projecting the future. He will talk about how the population of El Paso will change

Land Use

Where will all the people go?


El Paso City and County Growth Rates
REMI LOW, MEDIUM & HIGH SCENARIOS
Population
1100000
1000000
900000
800000
700000
600000
500000
2007
2010
2015
2020
2025
Year
County LOW
CountyMEDIUM
CountyHIGH
City LOW
City MEDIUM
City HIGH



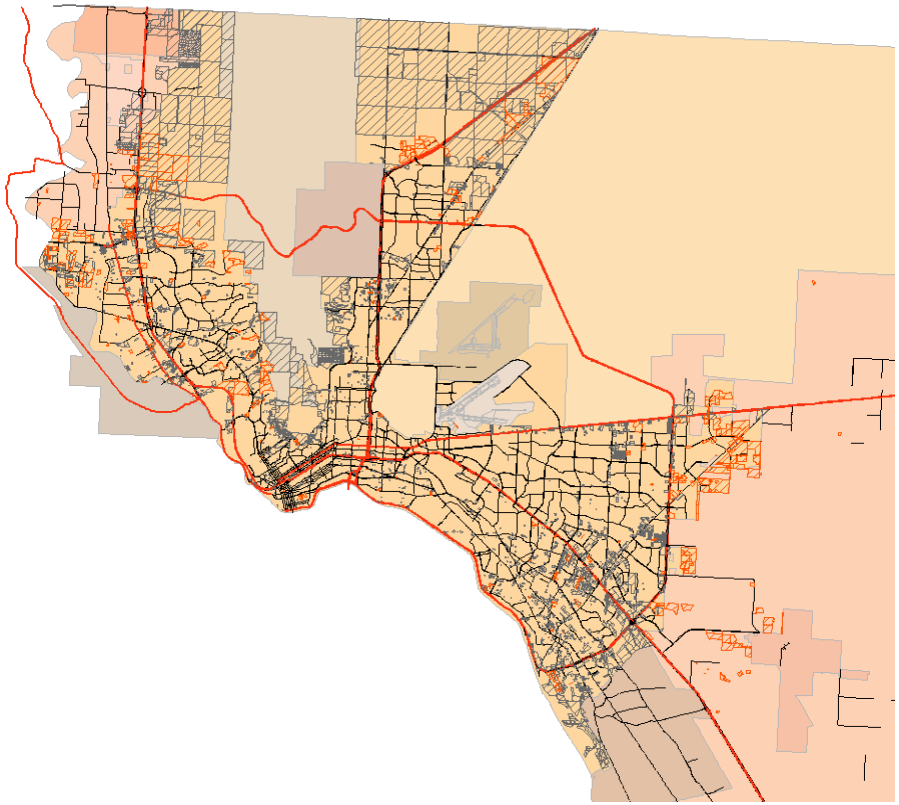
2007 Land Use

Use Category	Acres
Residential	35,869
Office/Commercial	7,024
Industrial	5,173
Other	33,885
Franklin Mtns	26,149
Undeveloped	52,394

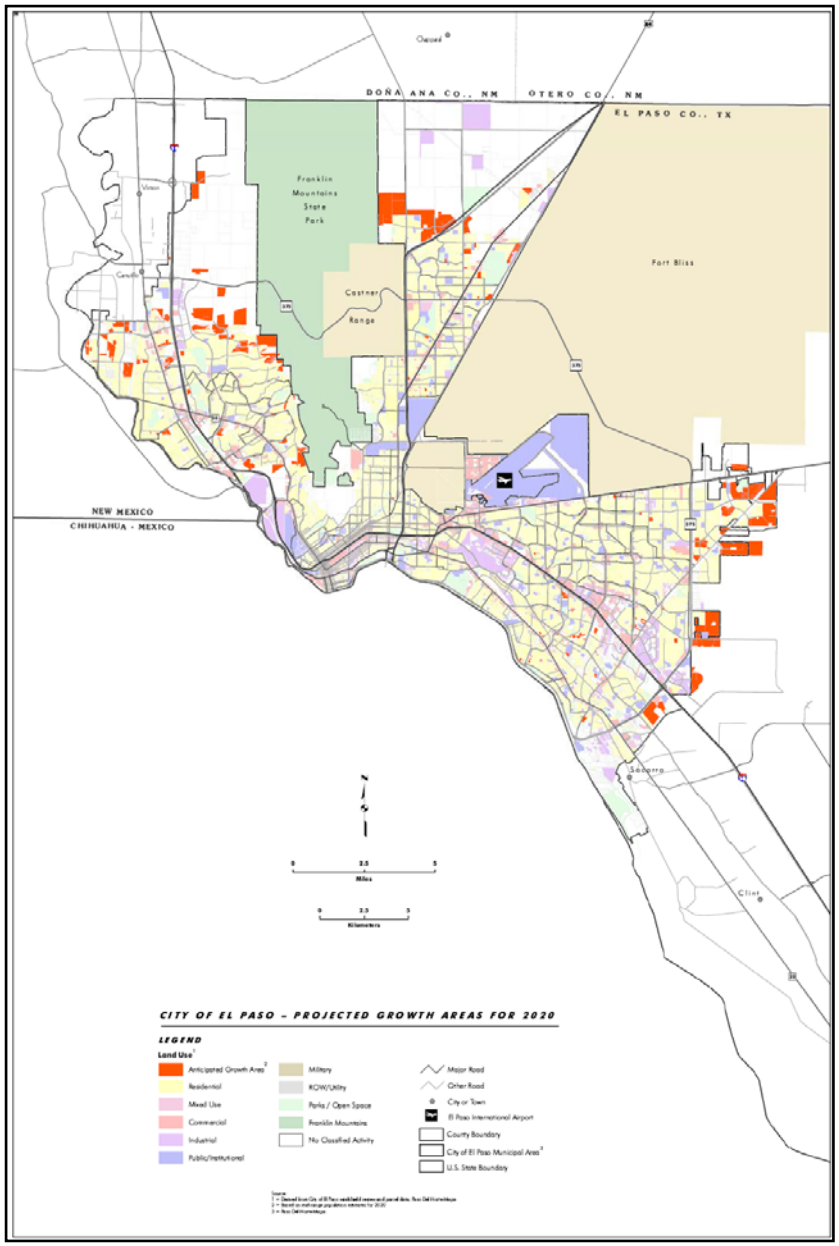
City of El Paso
Residential Growth

Forecast Population	2007	2010	2015	2020
LOW	606,913	632,881	676,161	700,532
MEDIUM	606,913	636,904	686,888	711,857
HIGH	606,913	640,177	695,618	721,125
New Households	**2007-2010**	**2010-2015**	**2015-2020**	**2007-2020**
LOW	8,627	14,379	8,097	31,103
MEDIUM	9,964	16,606	8,295	34,865
HIGH	11,051	18,419	8,474	37,944
Residential Land Area Requirements (Acres)	**2007-2010**	**2010-2015**	**2015-2020**	**2007-2020**
LOW	1,871	3,119	1,756	6,747
MEDIUM	2,161	3,602	1,799	7,563
HIGH	2,397	3,995	1,838	8,231

GIS DATA MAPS



- Vacant Land
- Existing Zoning
- Proposed Land Use
- Subdivisions in Progress
- Land Studies
- Sensitive Areas (steep slopes, arroyos, recharge areas, flood plains)
- Existing and Planned Roads
- Existing and Planned Utilities



2020 Land Use

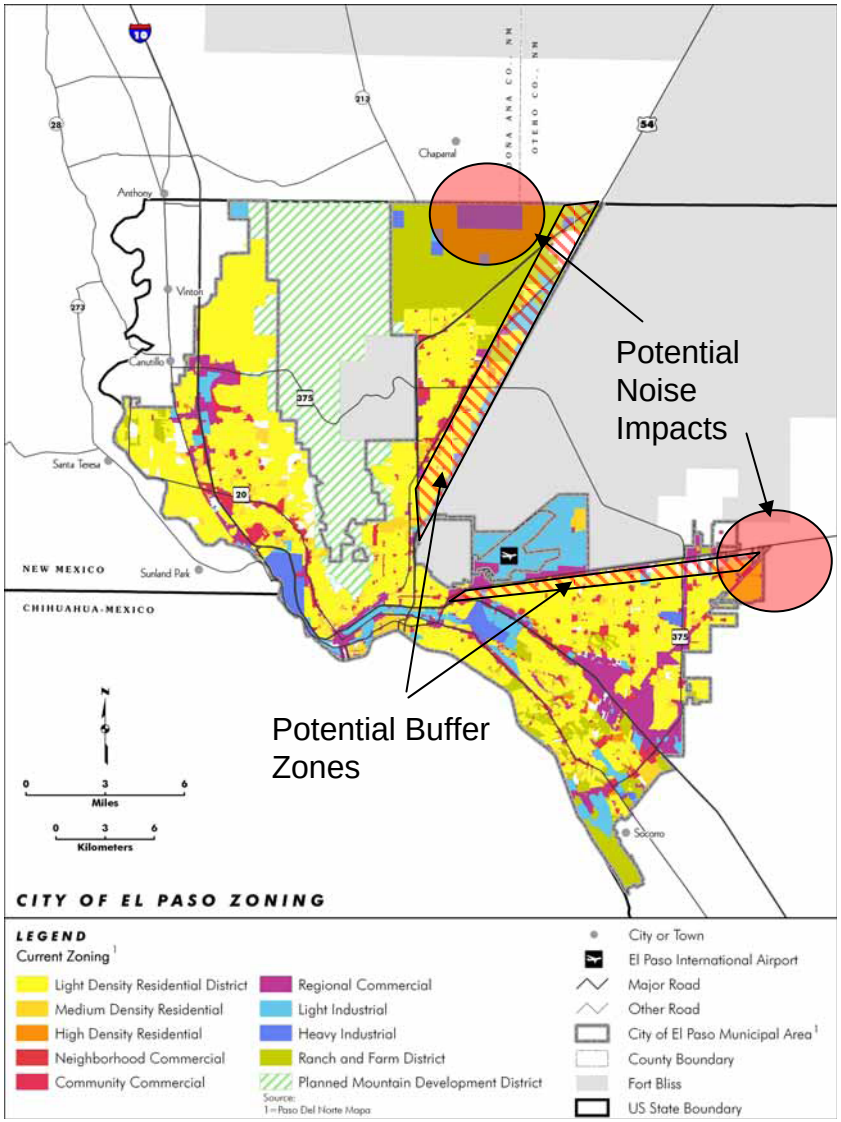
Medium Growth Scenario

Use Category	Acres
Residential	43,152
Office/Commercial	8,417
Industrial	5,173
Other	38,309
Franklin Mtns.	26,149
Undeveloped	43,430

2020 Residential Growth Characteristics

- 15% of new households are located in platted subdivisions not yet built out.
- 41% are in subdivisions in progress
- 10% are infill development
- 33% are located more than ¼ mi from a water main and/or sewer trunk line.

Land Use Issues Related to Fort Bliss



- Noise from McGregor and Dona Ana Training Ranges Range
- Compatible Use Buffers
- Off Installation Housing Needs

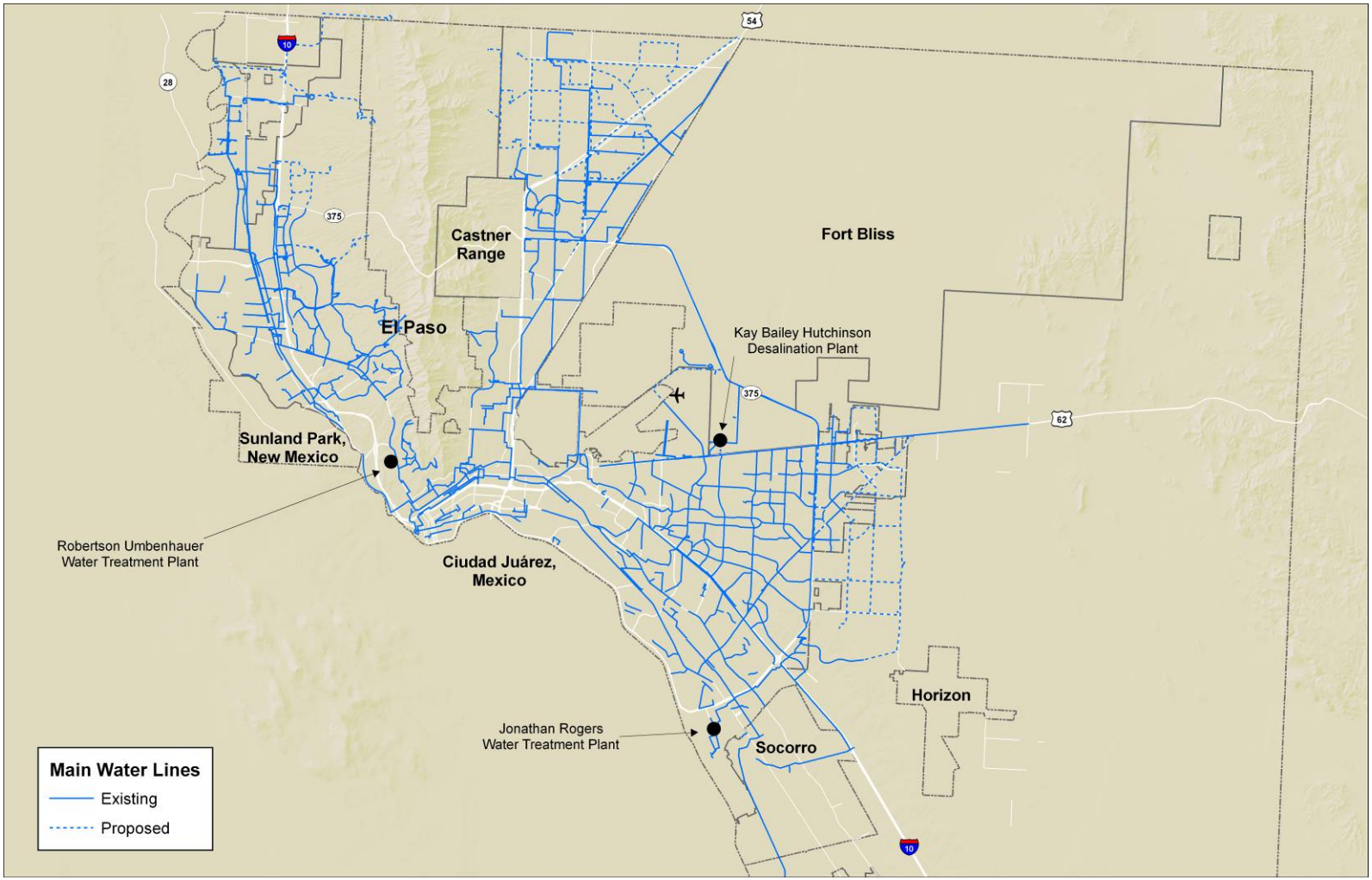
Recommendations

- Land Use
  - Update Land Use Plan
    - Fort Bliss Interface
    - Realistic Future Land Use Projections
    - Critical and Sensitive Areas
    - Smart Growth Element
  - Incorporate design standards in place of "planned districts"
  - "Pre-Zone" areas along transportation corridors. for high density residential and mixed use development

Utilities

- Water – EPWU
- Sewer – EPWU
- Electricity – El Paso Electric
- Gas – Texas Gas Service
- Communications – ATT, Time Warner
- Solid Waste – City of El Paso, private contractors

EPWU Water Facilities



Source: El Paso Water Utilities

EPWU Water Treatment Plant Capacity

Treatment Plant	PLANT Capacity (MGD)
Robertson/Umbenhauer	40.0
Jonathon W. Rogers	60.0
Wells	161.0
Desalination Plant	27.5
Total Capacity (MGD)	288.5
Total Capacity (Service Units*)	419,331

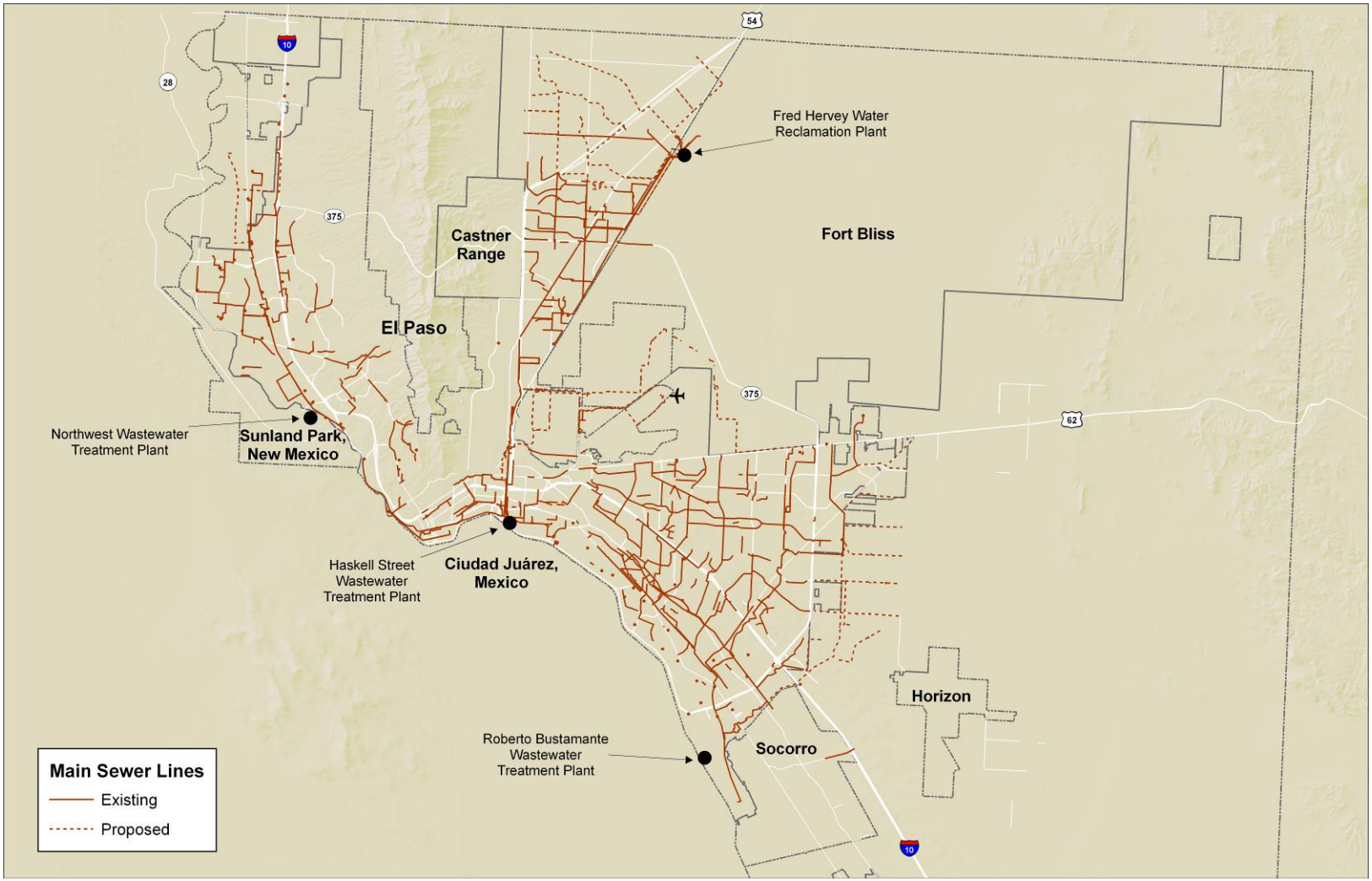
* Flows per Service Unit based on 688 gal/person/day with 3.5 persons/household.

2007 Service Units = 223,670

Available Capacity = 419,331 – 223,670 = 195,494

Source: Annexation Assessment and Strategy

EPWU Wastewater Facilities



Source: El Paso Water Utilities

EPWU Wastewater Treatment Plant Capacity

Treatment Plant	PLANT Capacity (MGD)
Northwest WWTP	17.5
Haskell R. Street/Delta WWTP	27.7
Bustamante WWTP	39.0
Fred Harvey Water Reclamation Plant	10.0
Total Capacity (MGD)	94.2
Total Capacity (Service Units*)	276,611

* Flows per Service Unit based on 342 gal/person/day at 3.5 persons/household.

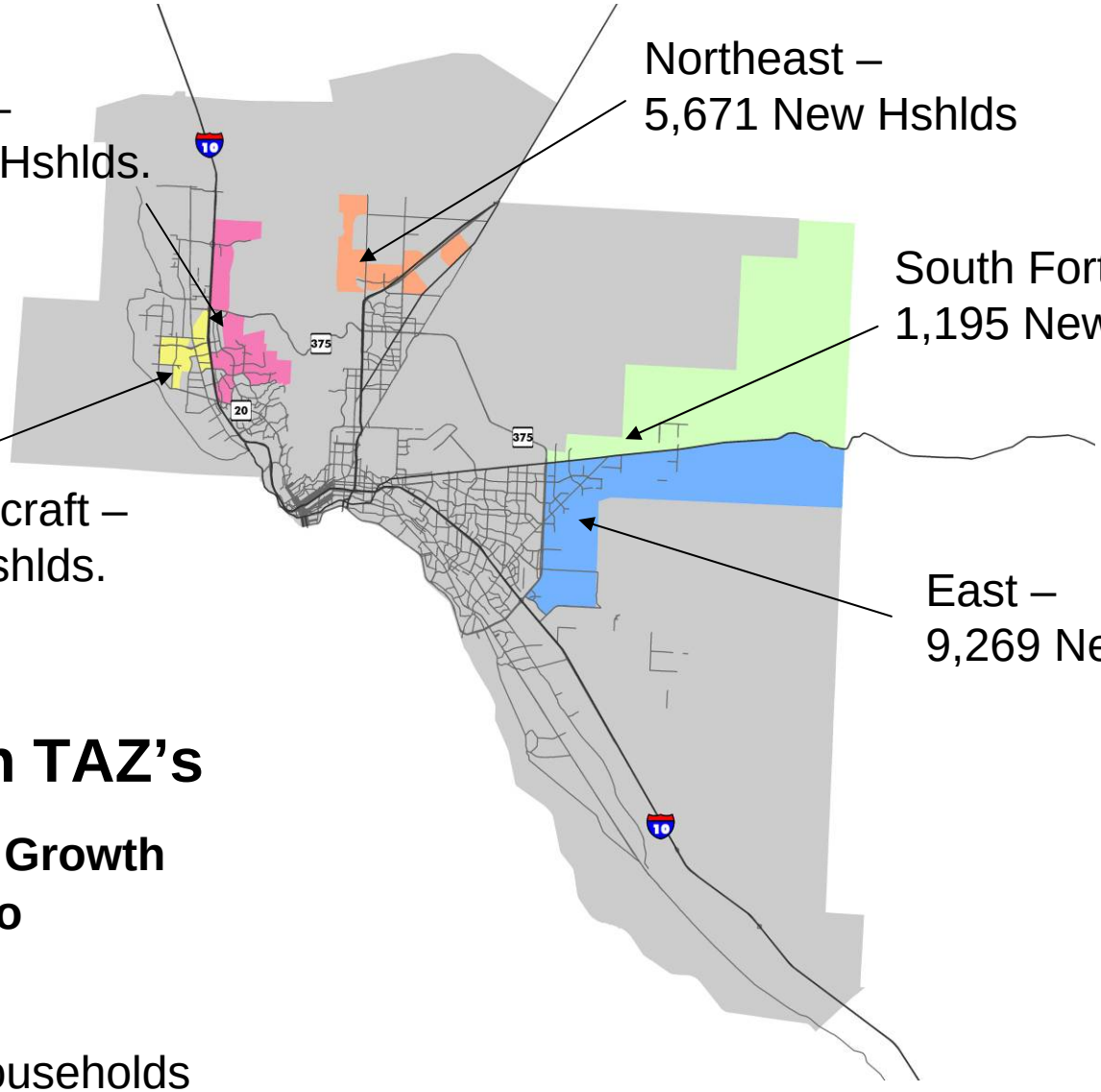
2007 Service Units = 168,918
Available Capacity = 276,611 – 168,198 = 107,126

Source: Annexation Assessment and Strategy

EPWU 10-Year CIP

Water Projects	Treatment System	Distribution System
Water Supply Facilities	$14,760,000	
Reservoirs		$54,230,000
Distribution Pumping Equipment		$39,000,000
Distribution Lines		$84,100,000
Total Water Projects	$14,760,000	$177,330,000
Wastewater Projects	**Treatment System**	**Collection System**
Treatment Plant Expansions	$33,000,000	
Collection System		$78,610,000
Pumping and Force Mains		$12,831,000
Wastewater Reuse Distribution System		$39,310,852
Total Wastewater Projects	$33,000,000	$130,751,852

Source: Annexation Assessment and Strategy

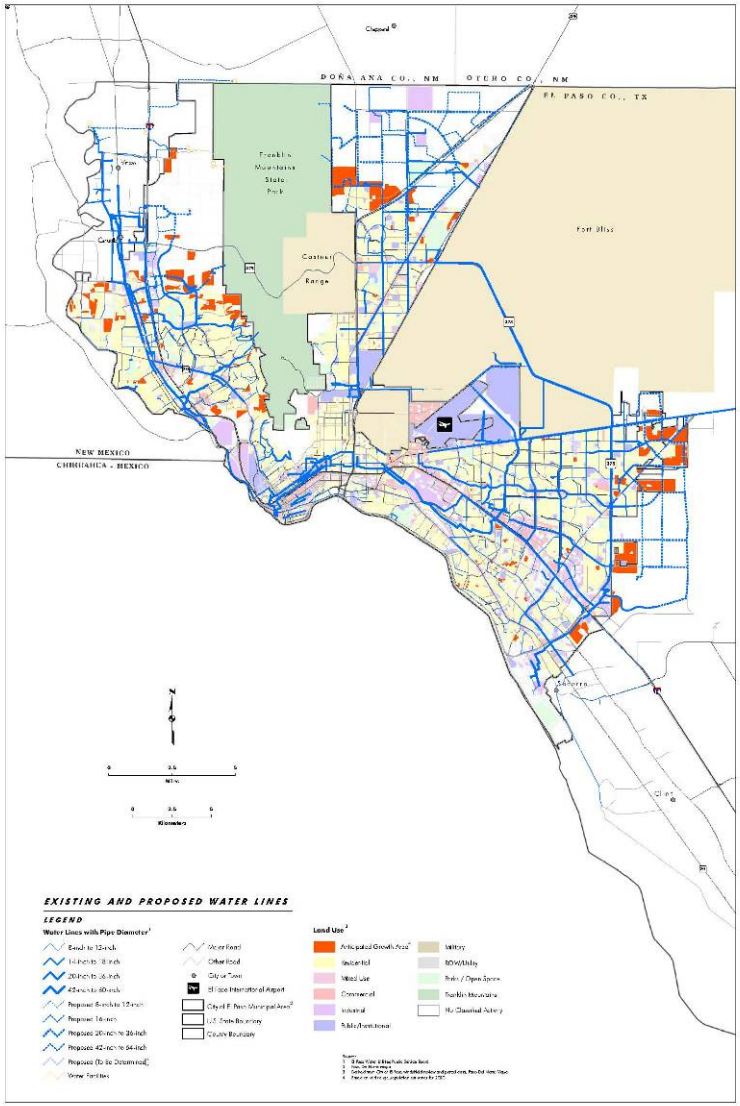


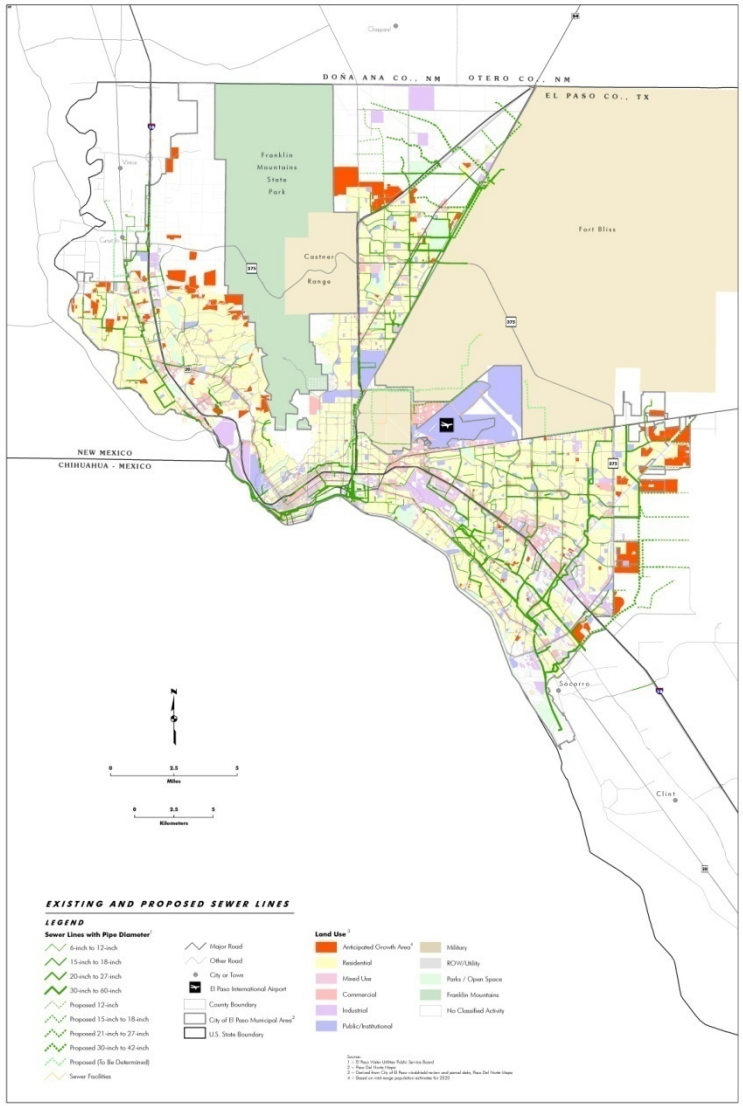
High Growth TAZ's

2020 Medium Growth Scenario

24,163 New Households

2020 Growth Area with Water and Wastewater



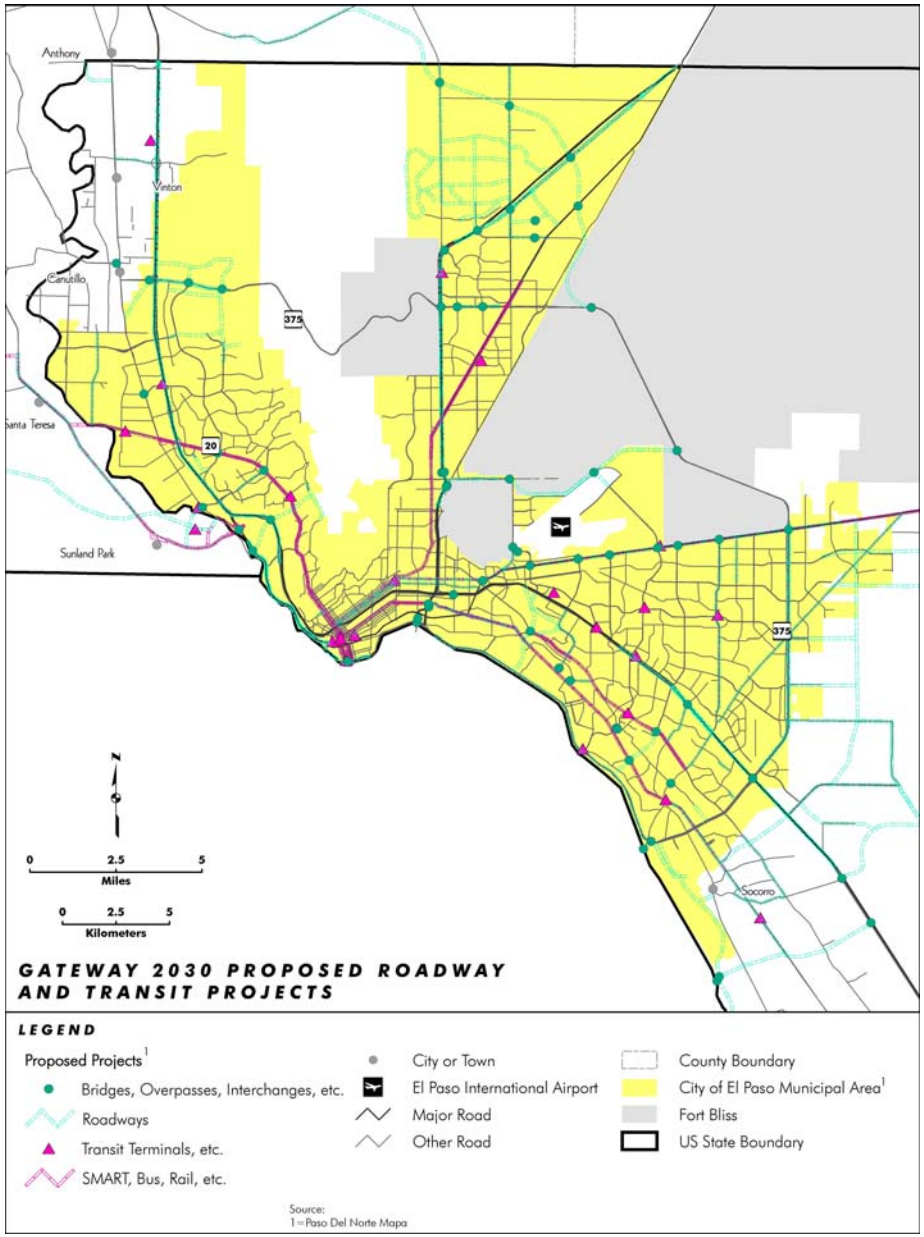


Recommendations

- Utilities
  - Focus facility improvements in growth area particularly East and Northeast planning areas.
  - Explore creative funding sources for infrastructure.
    - Impact Fees / Excise Tax
    - TIF
    - Improvement Districts

Transportation

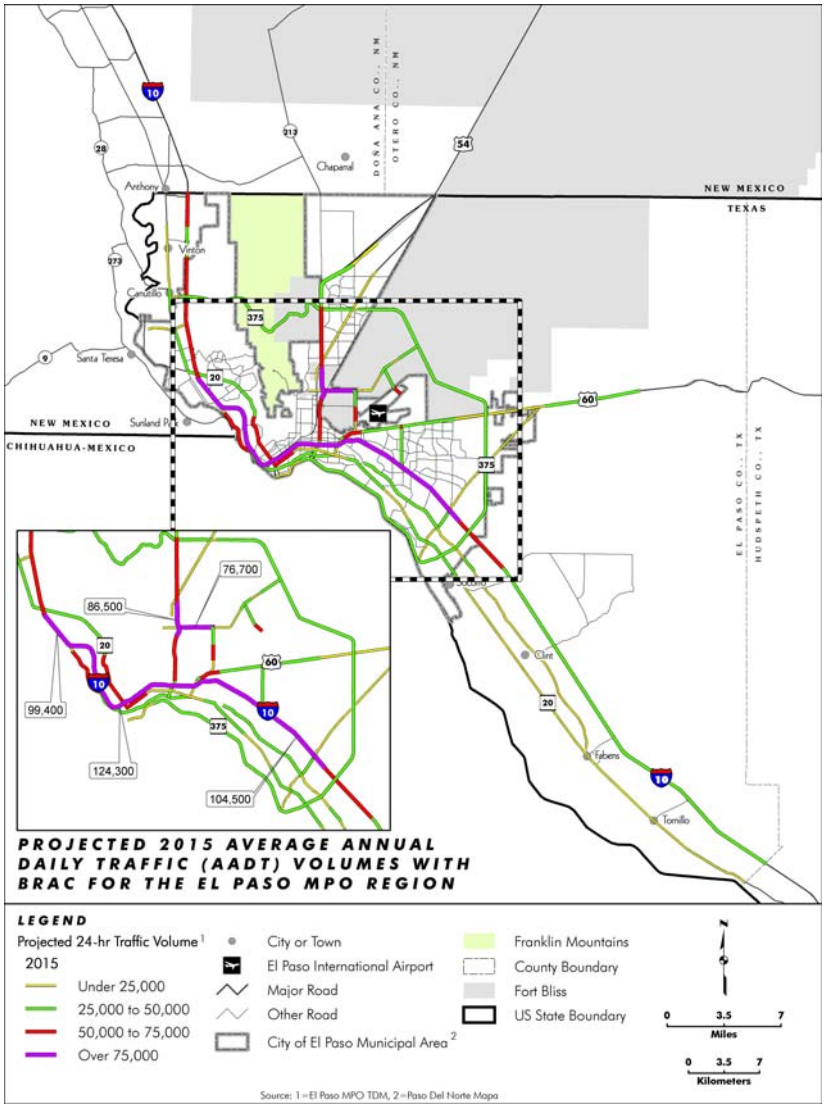
Where is everyone going?

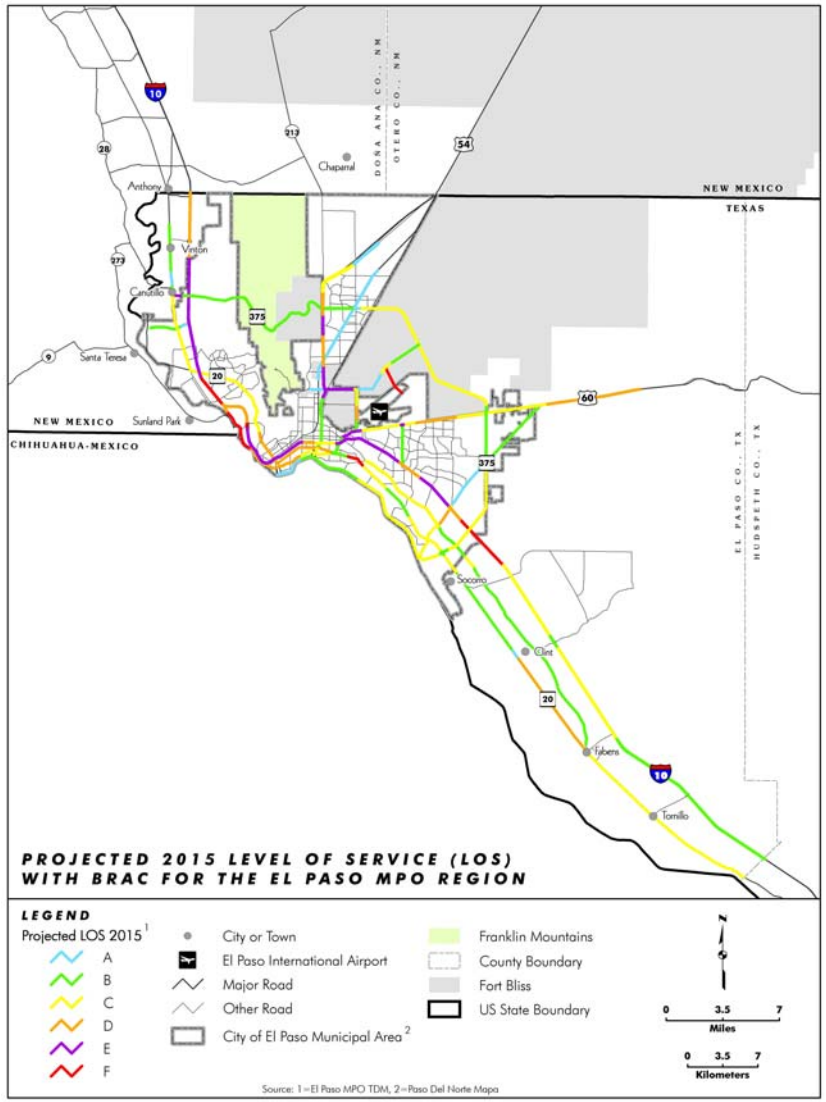


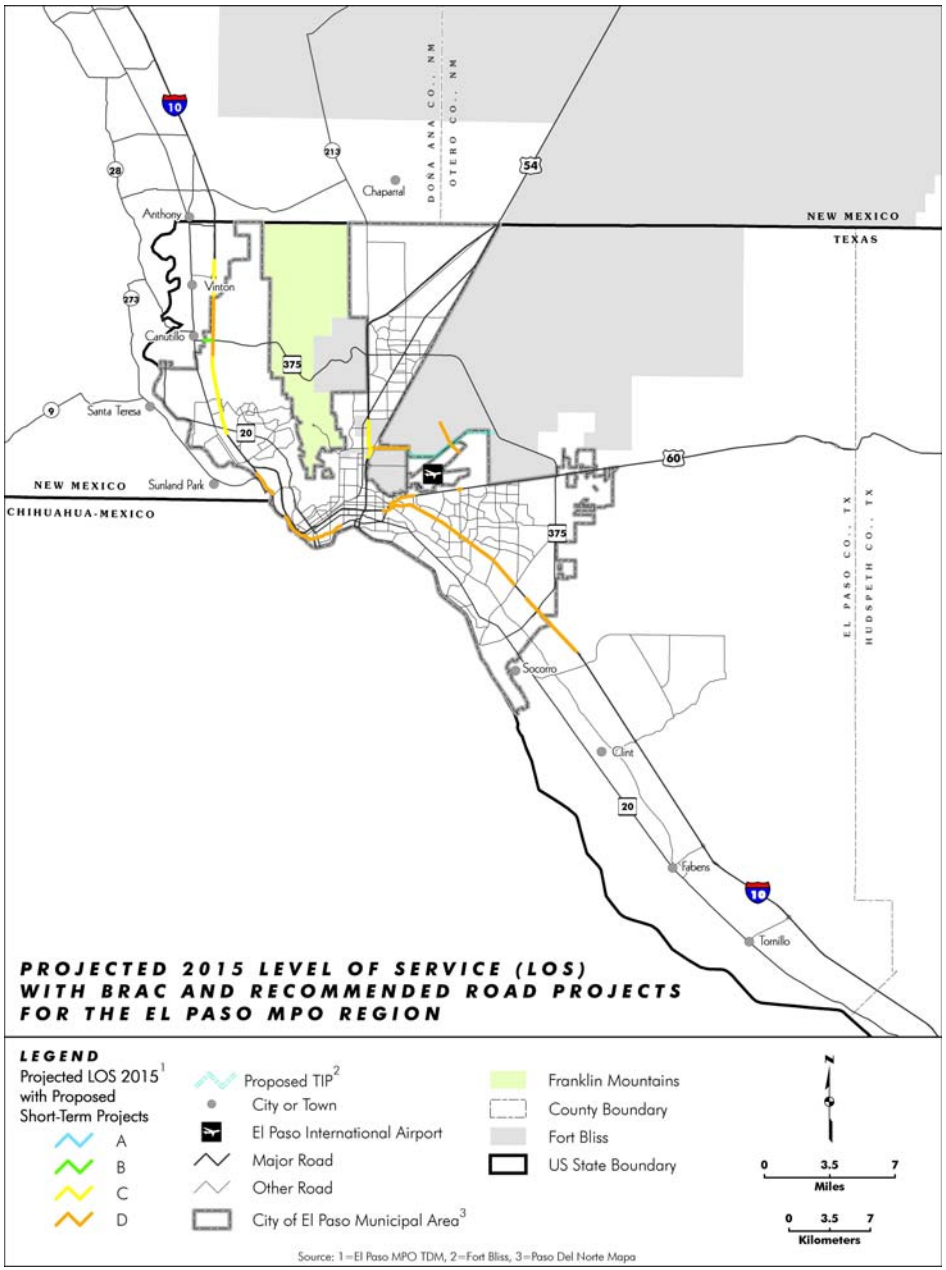
Proposed Roadway and Transit Projects

Long-Range Transportation Plan

Projected 2015 Traffic Conditions







2015 Level of Service with RGMP Recommended Road Improvements

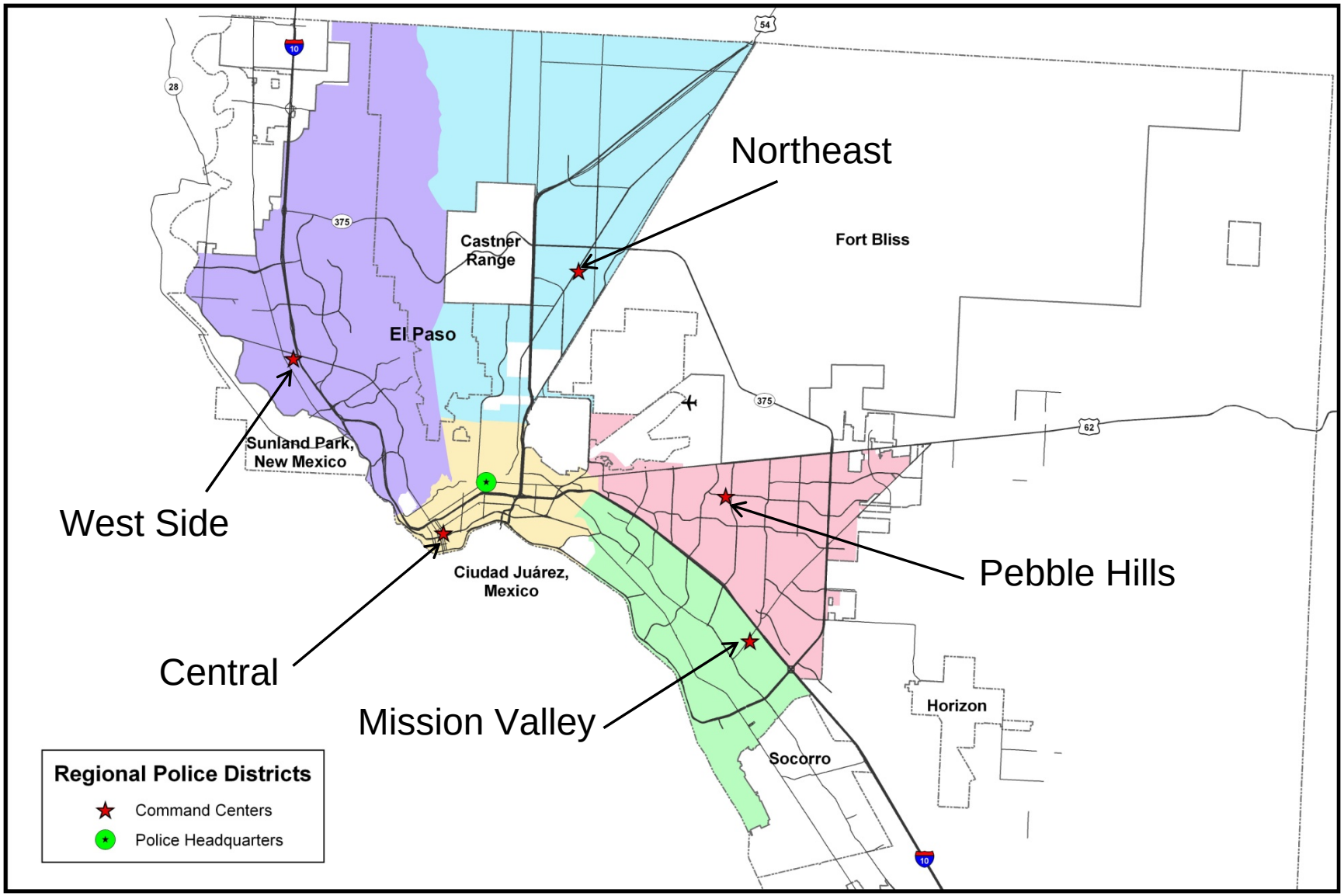
Recommendations

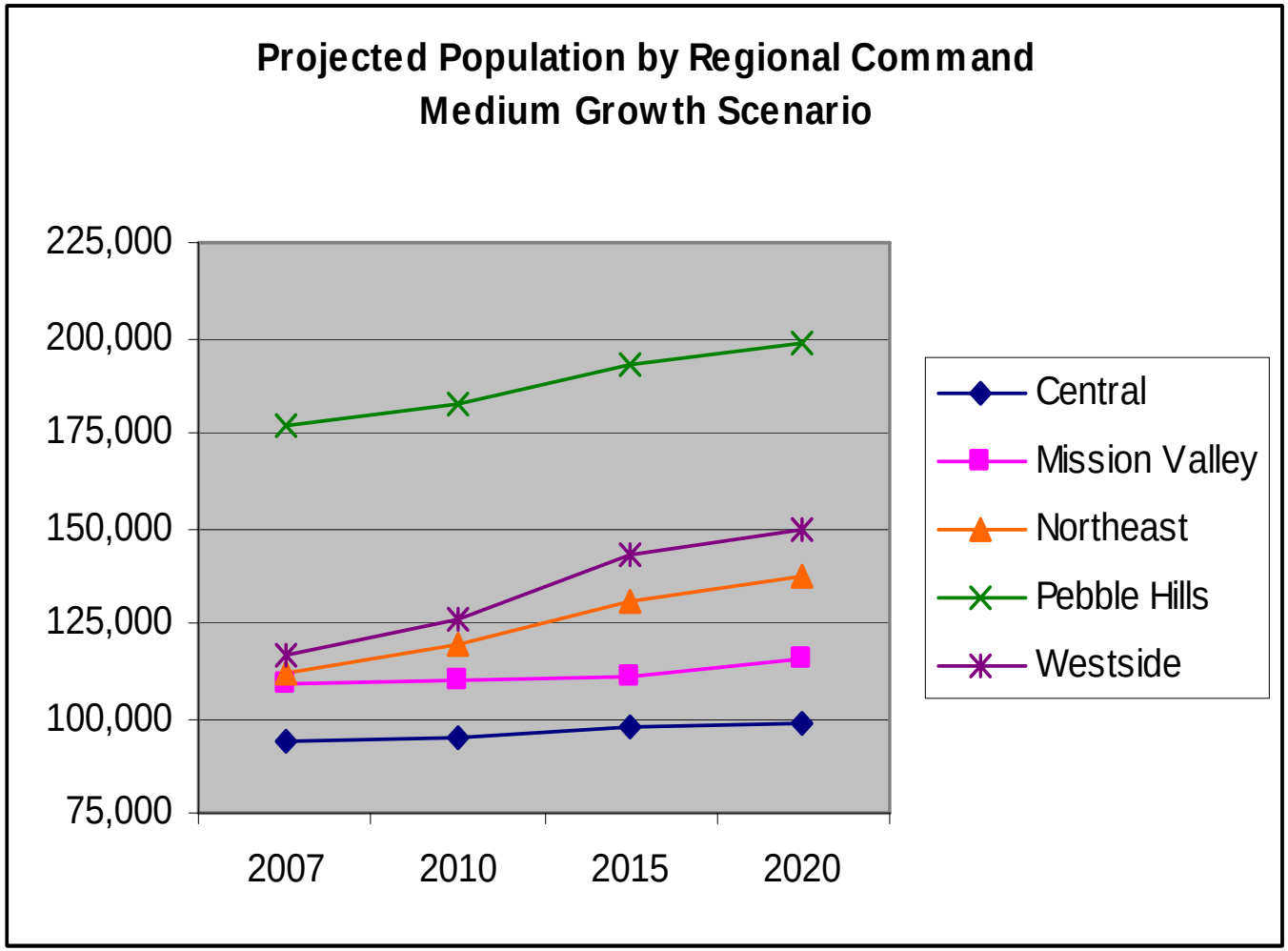
- Transportation
  - Completion of Proposed Inner Loop / Spur 601 from US 54 to Loop 375 to improve access and mobility to Fort Bliss army installation.
  - Construction of new interchanges along Inner Loop at Sgt Major Boulevard / Global Reach and Loop 375.
  - Introduce HOV & HOT lanes along the interstate and other freeway facilities in the El Paso region to promote car pools and Transit use.
  - Widening of IH-10, US 85, US 54, US 62 and Loop 375 at critical sections highlighted in the report to improve capacity and satisfy demand.

Recommendations

- Transportation (Continued)
  - Introduce more SMART lines within the El Paso metropolitan region to promote transit use. Develop transit lines connecting Downtown Cuidad Juarez with El Paso with monthly travel passes to ease travel for regular commuters.
  - Construct Northeast Parkway / Outer Loop for truck and freight travel thus eliminating truck corridors from with the business district.
  - Construct intermodal facility at the El Paso International Airport (EPIA) to improve air and rail freight travel.
  - Construct continuous bike paths and sidewalks in the business district, around transit transfer stations, near parks and recreational facilities to encourage non vehicular travel.

Public Safety

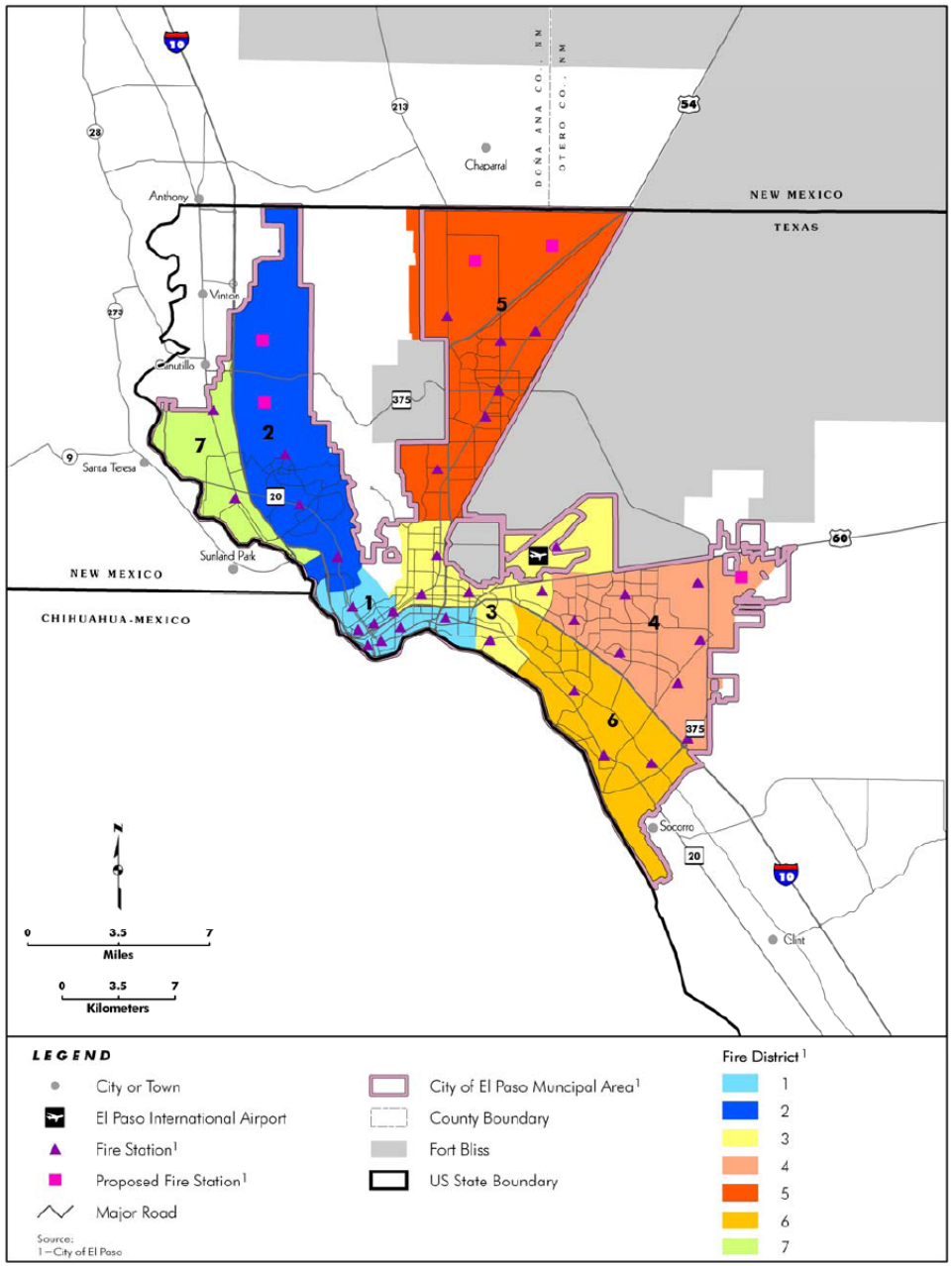

Northeast
Fort Bliss
Castner Range
El Paso
Sunland Park, New Mexico
West Side
Ciudad Juárez, Mexico
Central
Pebble Hills
Mission Valley
Horizon
Socorro
Regional Police Districts
Command Centers
Police Headquarters


Projected Population by Regional Command
Medium Growth Scenario
225,000
200,000
175,000
150,000
125,000
100,000
75,000
2007
2010
2015
2020
Central
Mission Valley
Northeast
Pebble Hills
Westside

Projected Cost of City of El Paso Police Services Based on Medium Growth Scenario

Year	Population	Sworn Police Officers Required	Projected Budget for Police Services (1,000)
2010	654,912	1,441	$123,778,000
2015	722,224	1,589	$136,504,000
2020	760,933	1.674	$143,816, 000

Assumptions:
2.2 Sworn Police Officers per 1000 residents
Per Captia cost of Police Services is $168 per resident
Estimated 2008 baseline population for cir city of El Paso is 618,782



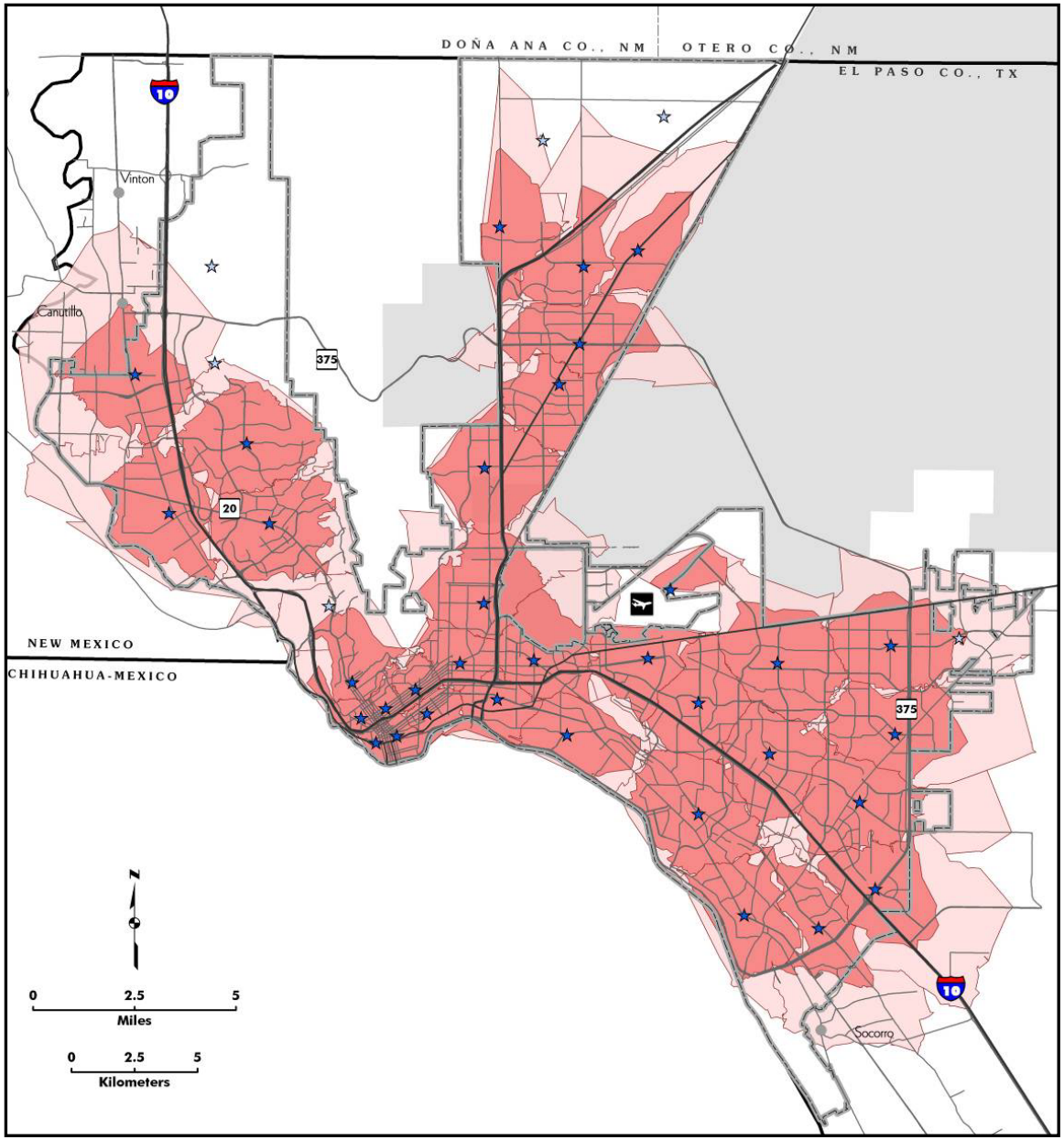
El Paso Fire Districts

Projected Cost of Fire and Emergency Services

Medium Growth Scenario

Year	Projected Population	Projected Number of Fire Fighters*	Projected Cost of Fire Services**
2010	654,912	892	$81,864,000
2015	722,244	962	$90,281,000
2020	760,933	997	$95,117,000

*Projection based on 14 firefighters per 1,000 population
**Projected costs based on $125 per capita



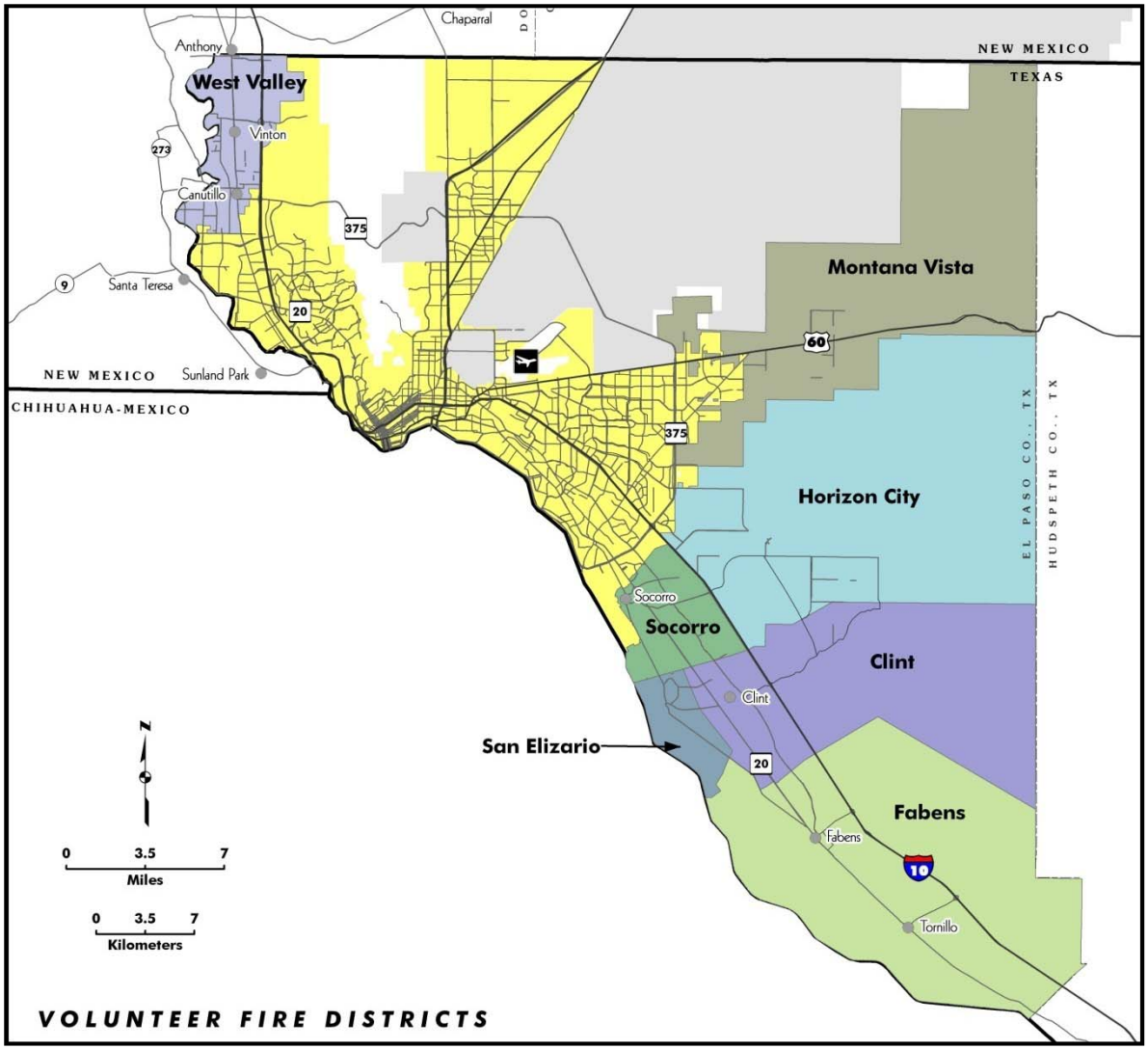
City of El Paso Fire Department

4 & 8 Minute Travel

LEGEND

Fire Station Service Areas [1]

- ★ Existing Fire Station
- ☆ Proposed Fire Station
- 4-Minute Response Time Area
- 8-Minute Response Time Area

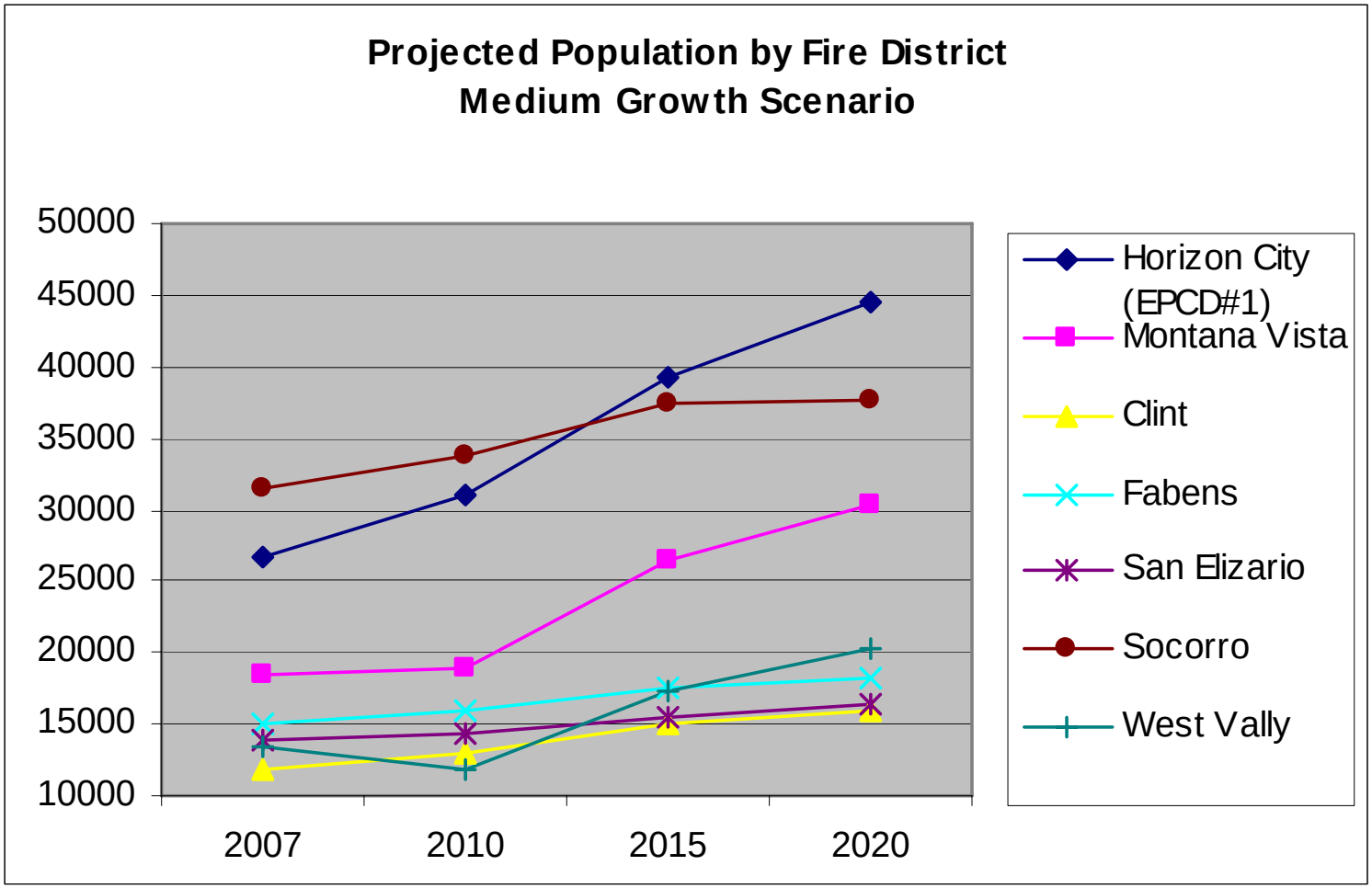


El Paso County Volunteer Fire Districts

El Paso County
Volunteer Fire Districts and Manning

Volunteer Department	No of Stations	*No of Volunteer Firefighters
El Paso County Emergency District #1		
Horizon City	1	50
El Paso County Emergency District #2		
West ValleyFire Department	3	36
Montana Vista Fire Rescue, Inc.	2	46
Clint Fire Department	3	17
Socorro Volunteer Fire Department	1	30
Fabens Volunteer Fire Department, Inc.	2	19
San Elizario	1	25

**November 2008*


Projected Population by Fire District
Medium Growth Scenario
50000
45000
40000
35000
30000
25000
20000
15000
10000
2007
2010
2015
2020
Horizon City (EPCD#1)
Montana Vista
Clint
Fabens
San Elizario
Socorro
West Vally

Recommendations

- El Paso Police Department
  - Increase staff levels identified in Comprehensive Staff Allocation and Needs Plan and continue to
  - Benchmark performance measures as a means to evaluate staffing needs.
  - Establish a sixth Regional Command to serve new growth on the far eastside of the community as recommended in the Facility Study Report and Strategic Plan. The projected population within the Pebble Hills Regional Command will grow to 200,000 residents and cover and area of over 40 square miles.
  - Through Team Bliss, establish a working committee of representatives from the various law enforcement agencies within the region including the military to develop a strategic plan to identify and address law enforcement issues.

Recommendations

- El Paso Fire Department
  - Program construction funding for Fire Station No 37. New development east of Zaragoza is outside the four-minute response time for Fire Station No. 33.
  - Begin reporting response times using fractile data rather than average times with an objective of the first responder on the scene within four minutes of receiving an emergency call 90 percent of the time.
  - Develop a method for maintaining records and analyzing the costs of providing fire protection services outside the EPFD service jurisdiction and identify ways in which such costs could be recovered.
  - Maintain an aggressive annexation policy for new development within its ETJ and negotiate pre-annexation agreements that provide for the reservation/dedication of land for future fire station sites as identified in the new Comprehensive Plan.

Recommendations

- Volunteer Fire Departments
  - The volunteer fire districts should add paid fire fighters to staff fire departments serving high growth areas particularly Montana Vista, Horizon City and Socorro.
- El Paso County Sheriff's Department
  - Capital planning for the design and construction of new or expanded detention facilities should begin immediately in order to meet projected capacity requirements by 2012.

Your Opinion Counts

- In each area, I will ask your opinion of 4 or so choices. I will read them through and then ask, one by one, which you think is most important. We will keep score. The areas are:
- Economic Development
- Land Use, Housing, Encroachment
- Transportation
- Public Services
- Education
- Health Care and Social Services
- Quality of Life

Topics for your consideration

- What follows are a series of recommendations from the Report.
- We will ask you about your priorities
- Yours answers will help guide the city in its work.

Economic Development

Number 1

- Create a cooperative grow your own and recruiting engine approach
  - Identify jobs coming and then training needs
  - Identify curricula that meet these needs or create them
  - Identify schools that have the ability to train, and share capabilities
  - Create Shared El Paso oriented Recruiting Programs

Number 2

- Create a public/private or organization to assist in BRAC expansion coordination

Number 3

- Create a new position of BRAC process coordinator with an assistant (OEA)

Land Use, Compatibility and Zoning

Number 1

- Update the City of El Paso Comprehensive Plan to accurately reflect projected growth. Ft. Bliss & the city need to enter into a joint review of land use, using the El Paso comprehensive plan renewal effort and Ft. Bliss just completed EIS supplement avoid conflicts in land use.

Number 3

- Amend zoning ordinances to create areas pre-approved high density residential & mixed use development – especially in transportation corridors

Transportation

Number 1

- Implement planned road improvements

Number 4

- Develop a plan for council approval to extend public transit connecting residential areas to work opportunities

Number 7

- El Paso is a critical multi-modal transportation hub. Insure that a review begins on better planning for industrial transportation

Public Utilities and Infrastructure

Number 1

- Prioritize improvements by growth area focusing on off-post housing projects & significant commercial centers

Number 3

- Create El Paso & Ft. Bliss committee to examine ways to jointly use solid waste facilities

Housing

Number 1

- Develop ways for the city to partner with developers to reduce initial costs of development
  - The City is now considering using long term leases to reduce initial cost of land acquisition
  - The City should also consider reduced purchase price in return for an equity share in the development
  - The City might also consider use of some part of the City pension funds as a partial source of funds for multi-family housing construction

Number 2

- Create a City, County, Developer, Builder Task Force to tackle the housing construction finance problem

Number 3

- Combine all Federal & State housing assistance programs in a single organization & provide direct assistance to home buyers & renters, linking the location to the Ft. Bliss & city webpage

Number 5

- Amend zoning ordinances to create areas pre-approved high density residential & mixed use development – especially in transportation corridors.

Education

Number 1

- Make recruitment and training of teachers & support personnel a collaborative effort among school districts, community colleges and universities.

Number 2

- Seek legislation to streamline accreditation & pension transfers for out-of-state teachers so that El Paso can utilize military spouses seeking employment

Number 5

- School Districts that educate the children of federal workers must take special care to identify such children to insure that El Paso tax payers are fairly reimbursed for educational costs paid in advance

Number 6

- Bi-lingual education

Number 7

- Carefully Coordinate the Head Start Program, day care, pre-school& after school programs

Health Care & Social Services

Number 1

- El Paso is now a medically underserved area. Local hospitals and schools must cooperatively recruit while working together to grow local talent and meet medical and social services needs during a very difficult time.

Number 2

- Cooperative effort with other Texas medically underserved areas is needed to modify the Texas medical licensing process for expedited certification, improve reimbursement ratio for services, create improved recruitment packages for these areas & double funding maximums for critical health care professional students

Number 3

- Joint action by Medical & Social Services trainers is needed to create accelerated associate bachelors & master's degree programs for all health & social services professional careers and share training capabilities to expand graduation rates

N umber 4

- Provide funded chairs, stipends, & the like to entice professionals from the nursing service to teaching to expand all levels of nursing supply

Number 5

- Expand scholarship programs to expand the number of students preparing for health & social services careers

Number 6

- Strengthen ties between El Paso & Ft. Bliss medical & social services to provide seamless assistance to soldiers & their families. (See sharing of emergency services below)

Public Safety & Emergency Services

Number 1

- Maintain a ratio of 2.2 Police officers per 1,000 residents in the city
  - Now short 355

Number 2

- Establish a Sixth Regional Command Center to serve new growth area

Number 3

- Increase coordination, communication, & facility sharing among all El Paso Federal, State & local public safety agencies to improve emergency response of all kinds

Quality of Life

Number 1

- Concentrate funds authorized by 2010 Quality of Life bond for improvements to existing facilities and support existing facilities.

Number 2

- Open recreation facilities on school properties for casual use (after hours) assisting school districts with liability issues

Number 4

- Develop a plan to ensure that day care & after school programs are available so that spouses (including military spouses) needing employment can work outside the home

Number 5

- Extend library services & increase technological services at public libraries

Some Closing Thoughts

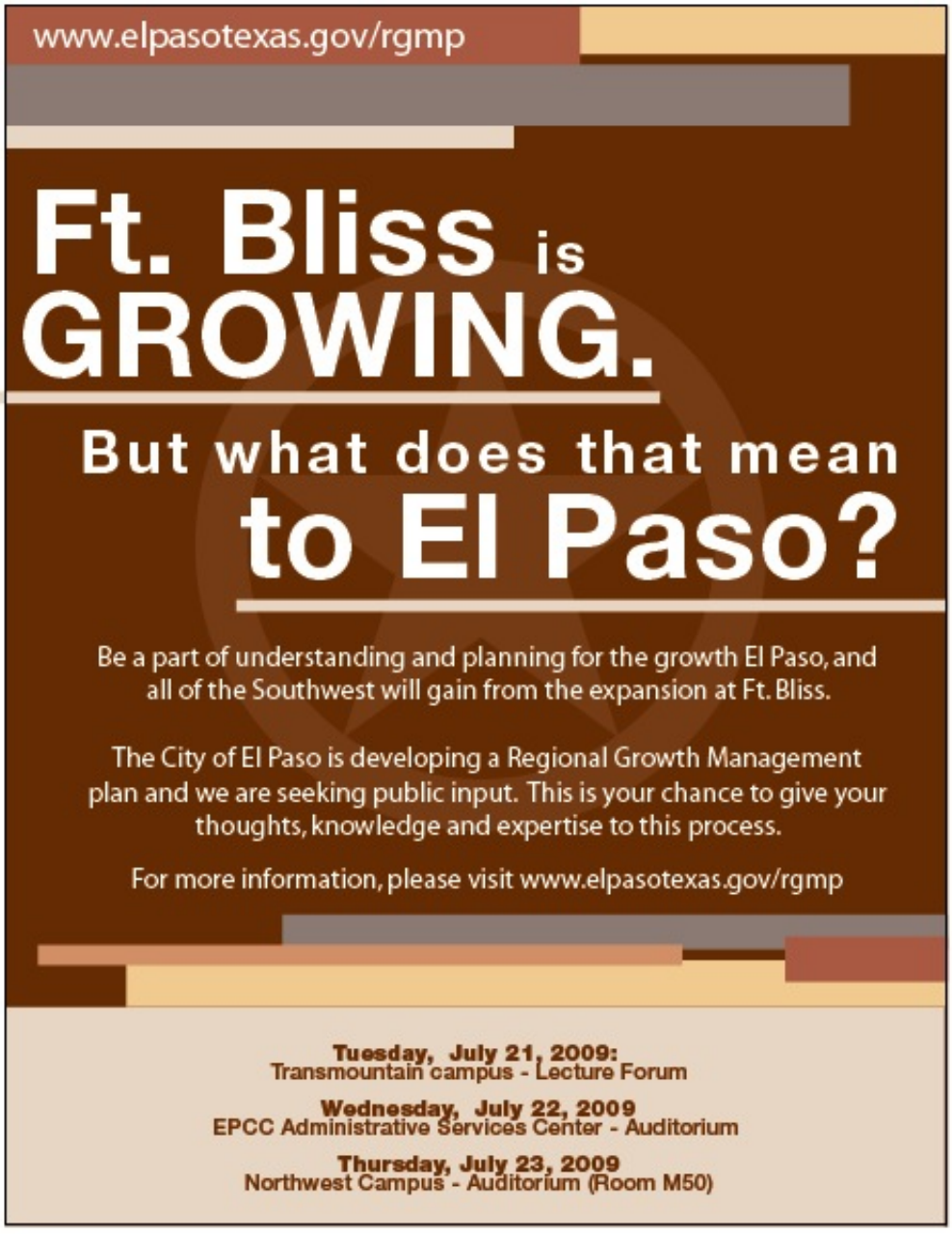
- This is a fascinating community in which you should be justly proud.
  - On my first day here, I visited some of the missions in the lower valley. You had a community in place and were building missions when the Mayflower landed. You should make the most of your great history
  - This is a bi-lingual community. I am deeply impressed. The thousands of families moving here will need your help to learn the customs and the language of El Paso. They will need your help as there is not enough money to provide language lessons for 60,000 soldiers, spouses and kids. Help them to appreciate your culture and your language.
  - These men and women coming to El Paso are the warriors of our Army. They train, deploy, serve and sometimes die for us and our way of life. All need to recognize how much they will need you! They are strong and brave but very young (70% E-5 and below) and are living in a new place, new customs, new words. Reach out to help them. Form groups to adopt them and channel those who need help to the right place to get help. They defend America, please welcome them to their new home

FINAL
EL PASO REGIONAL GROWTH MANAGEMENT PLAN

Exhibit 3

Sample Media and Web Site Pages

Sample Advertisement



Sample Brochure (page 1 of 2)

What Is Brac?

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Meetings

Tuesday, July 21, 2009:
Transmountain campus - Lecture Forum

Wednesday, July 22, 2009
EPCC Administrative Services Center - Auditorium

Thursday, July 23, 2009
Northwest Campus - Auditorium (Room M50)

Contacts

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Questions

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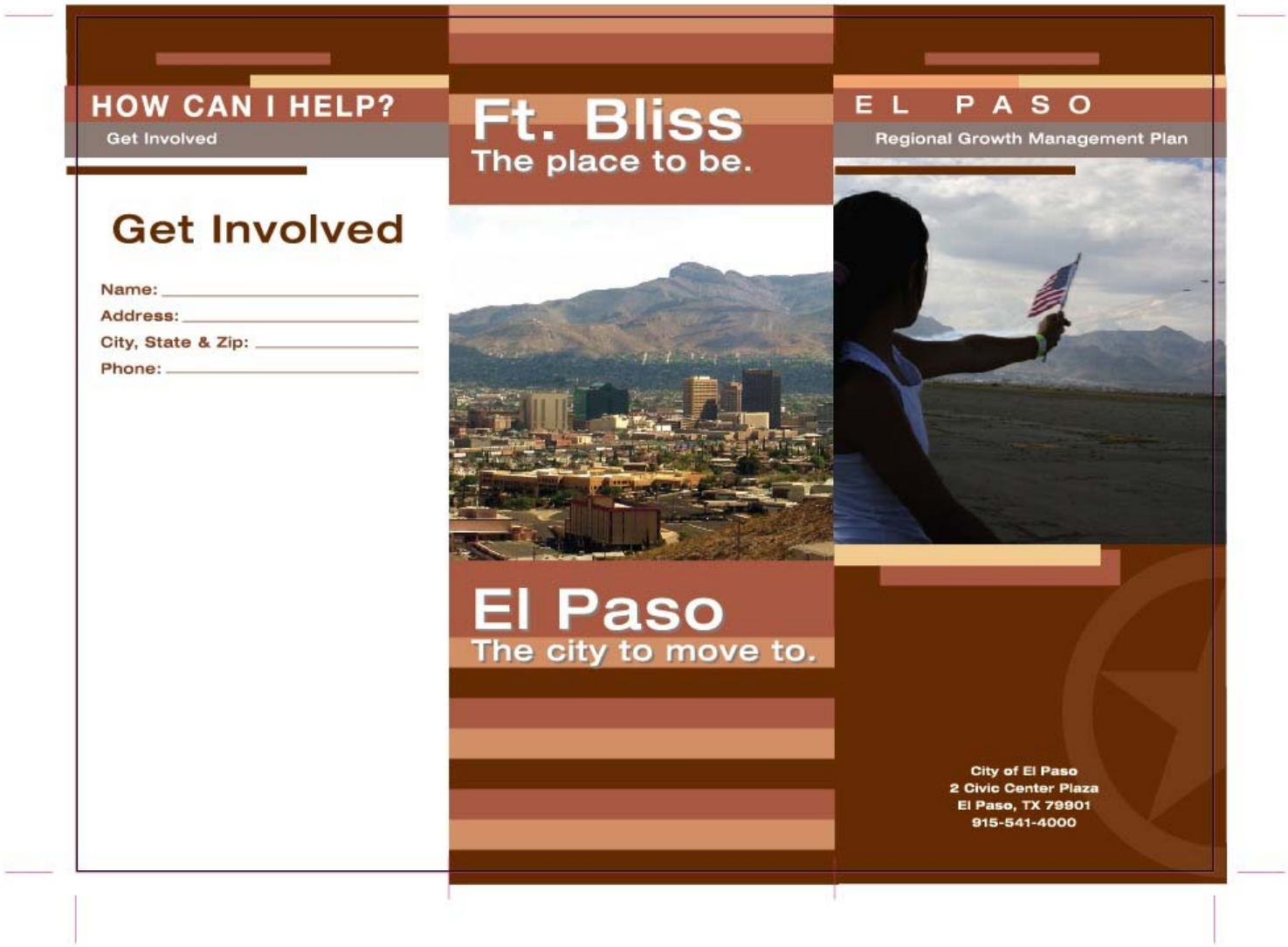
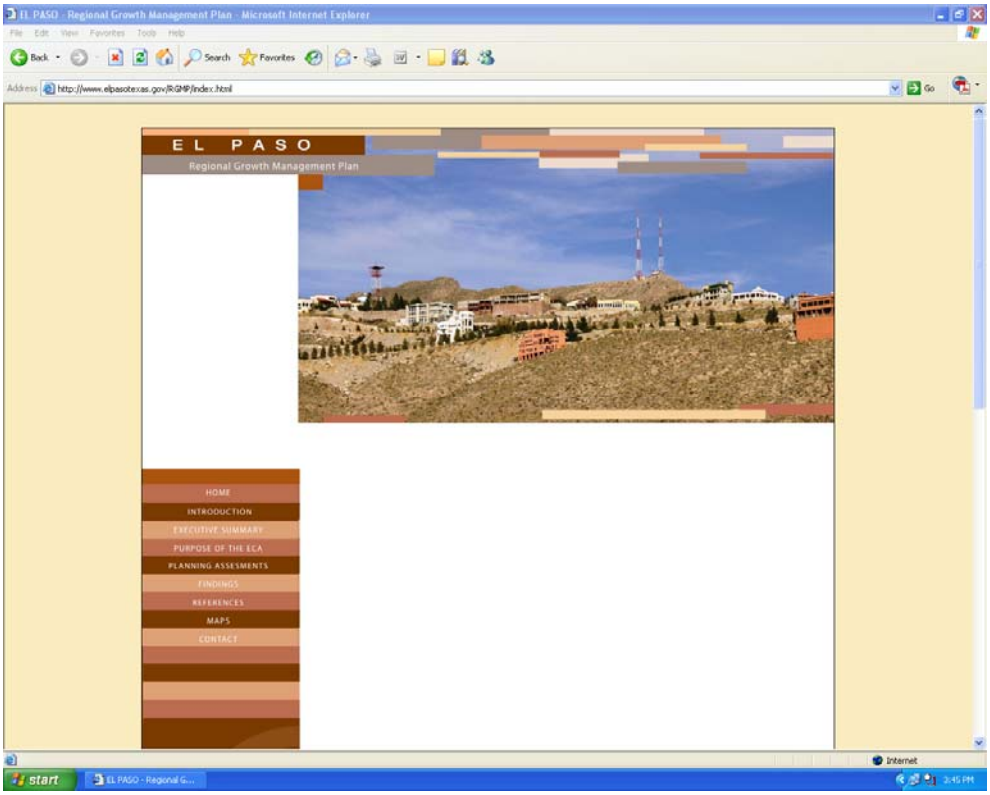
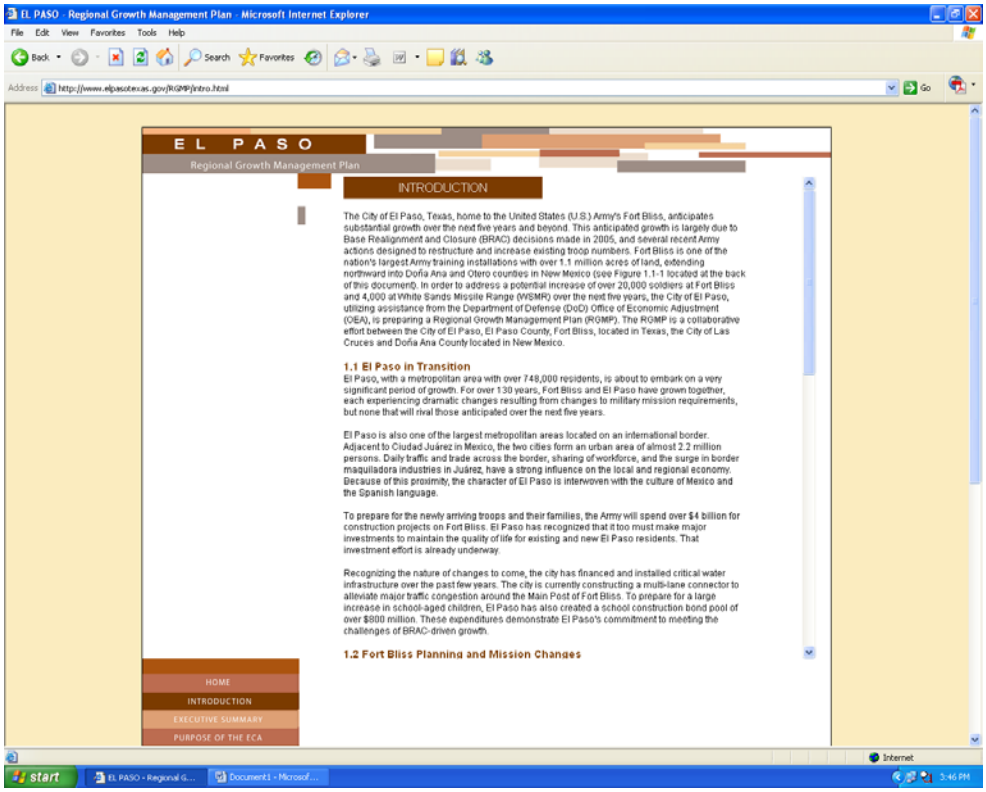
Sample Brochure (page 2 of 2)



Sample Homepage

Sample Web Site Pages





Sample Letter Sent to Stakeholders

The City of El Paso
Development Services
Two Civic Center Plaza
El Paso, TX 79901-1196

August 8, 2008

Dear:

El Paso is on the verge of unprecedented growth due to the expansion of Ft. Bliss and White Sands Missile Range. Anticipating this and through the resources of a federal grant, the city of El Paso has engaged Science Applications International Corporation (SAIC) to develop a regional Growth Management Plan (RGMP) for our region.

You have been identified as a potential stakeholder and a valuable member of our community with even more valuable input. We would like to invite you to be a participant in a focus group designed to gather community input and local perspective vital to the creation of the RGMP. By attending this focus group you will have a stellar opportunity to shape the El Paso community.

We will conduct focus groups three times during the week of August 19th-August 22nd in City Hall.

Your peer group will take place on _____. Please let us know if your schedule can accommodate this time and if you would be interested in participating.

You can confirm by contacting Melissa Kellum at 915-541-4730 or via email at kellumma@elpasotexas.gov.

Thank you for your interest in El Paso and our exciting future.

Sincerely,
The City of El Paso

FINAL
EL PASO REGIONAL GROWTH MANAGEMENT PLAN

Exhibit 4

Fort Bliss Transformation Planning Data

FINAL
EL PASO REGIONAL GROWTH MANAGEMENT PLAN

Exhibit 4A

Fort Bliss Personnel and Dependent Projections

Family Members
School Year Synchronization

	Baseline 2006		SY 07/08	SY 08/09	SY 09/10	SY 10/11	SY 11/12	SY 12/13	Endstate 2013
Soldiers	13178	+/-	1468	3448	1933	8162	1493	3787	**33469**
		Cumulative	14646	18094	20027	28189	29682	33469	
Spouses	7177	+/-	851	2000	1121	4734	866	2196	**18946**
		Cumulative	8028	10028	11149	15883	16749	18946	
Children	13340	+/-	1127	2648	1485	6268	1147	2908	**28923**
		Cumulative	14467	17115	18600	24868	26015	28923	
K-5th (55%)	4623	+/-	391	918	514	2172	397	1008	**10023**
		Cumulative	5014	5931	6446	8618	9015	10023	
6-8th (21.5%)	1807	+/-	153	359	201	849	155	394	**3918**
		Cumulative	1960	2318	2519	3369	3524	3918	
9th-12th (23.5%)	1975	+/-	167	392	220	928	170	431	**4282**
		Cumulative	2142	2534	2754	3682	3852	4282	
Total School Age	8405	+/-	710	1668	935	3949	722	1832	**18223**
		Cumulative	9115	10784	11719	15668	16390	18223	
Actuals	7798		8257						

FMWRC/MCEC Model:
Spouses = # of Soldiers * .58
Children = (# of Soldiers * .48) * (1.6 Kids)
School-age = # of children * .63

School Year = 1 July – 30 June

Family Members
Fiscal Year Synchronization

	Baseline 2005		2006	2007	2008	2009	2010	2011	2012	Endstate 2012
		+/-	3848	948	2778	2388	5845	4405	3927	24139
Soldiers	9330	Cumulative	13178	14126	16904	19292	25137	29542	33469	33469
		+/-	2232	550	1611	1385	3390	2555	2278	14001
Spouses	4945	Cumulative	7177	7727	9338	10723	14113	16668	18946	18946
		+/-	2955	728	2134	1834	4489	3383	3016	18539
Children	10385	Cumulative	13340	14068	16202	18036	22525	25908	28924	28924
6-12 years		+/-	1005	248	725	624	1526	1150	1025	6303
(34%)	3531	Cumulative	4536	4783	5509	6132	7659	8809	9834	9834
13-18 years		+/-	857	211	619	532	1302	981	875	5376
(29%)	3012	Cumulative	3869	4080	4699	5231	6533	7514	8388	8388
Total School		+/-	1862	459	1344	1155	2828	2131	1900	11679
Age	6543	Cumulative	8405	8863	10208	11363	14191	16322	18222	18222

FMWRC/MCEC Model:
Spouses = # of Soldiers * .58
Children = (# of Soldiers * .48) * (1.6 Kids)
School-age = # of children * .63

FINAL
EL PASO REGIONAL GROWTH MANAGEMENT PLAN

Exhibit 4B

Fort Bliss Child and Youth Services Space Requirements

CHILD & YOUTH SERVICES (CDC 0-5) SPACE REQUIREMENTS

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Number of Children		4,935	5,205	5,994	6,673	8,334	9,585	10,701	10,753	10,753
Demand @15%		740	781	899	1,001	1,250	1,438	1,605	1,613	1,613
Spaces Available										
Main CDC	264	264	264	264	264	264	264	264	*0*	264
Logan CDC	240	240	240	240	240	240	240	240	240	240
Logan Annex CDC (Interim)	82	82	82	82	82	82	82	82	82	0
PN64647 CDC 0-5	232						232	232	232	232
PN64652 CDC 0-5	232						232	232	232	232
PN68814 CDC 0-5	338						338	338	338	338
Actual Spaces		586	586	586	586	586	1,050	1,388	1,124	1,306
Total Demand		740	781	899	1,001	1,250	1,438	1,605	1,613	1,613
Shortage Space		**154**	**195**	**313**	**415**	**664**	**388**	**217**	**489**	**307**
Business Rule R/G/A	**New Number**	79%	75%	65%	59%	47%	73%	86%	70%	81%

Available Spaces
divided by Total Demand
Green > 80%
Amber 60-80%
Red < 60 %

With loss of one IBCT, the installation marginally attains "green rating" in FY12, reverts to amber in FY13 for renovation of the main CDC, then marginally returns to green rating in FY14.

changes in 2014 Loss of Logan Annex

Now red in FY 09 with change in space requirements. Logan CDC reduced from 265 to 240.
Now red in FY10 due to 2 CDC's not being awarded in FY08
Main CDC Renovation project FY13

CHILD & YOUTH SERVICES SA (6-18) SPACE REQUIREMENTS

		2006	2007	2008	2009	2010	2011	2012	2013	2014
Number of Children		8,405	8,863	10,208	11,363	14,191	16,322	18,222	18,310	18,310
Demand @5%		420	443	510	568	710	816	911	916	916
Spaces Available										
Main CDC	264		0	0	0	0	0	0	0	0
Logan CDC	240		0	0	0	0	0	0	0	0
Logan Annex CDC	82		0	0	0	0	0	0	0	0
Main SAS (Interim)	100	100	100	100	100	100	100	100	100	0
Logan SAS (Interim)	100	100	100	100	100	100	100	100	100	0
YouthPlex MS&T	135	135	135	135	135	135	135	135	135	135
PN64616 YAC	60					0	0	0	0	0
PN64096 SAS	150					150	150	150	150	150
PN64615 SAS	90					90	90	90	90	90
PN64653 SAS	150					150	150	150	150	150
PN71220 YAC (Perm Mod)	150					150	150	150	150	150
PN64647 CDC 0-5	232									
PN64652 CDC 0-5	232									
PN64649 SAS	150						150	150	150	150
PN68814 CDC 0-5	338									
Actual Spaces		335	335	335	335	875	1,025	1,025	1,025	825
Total Demand		420	443	510	568	710	816	911	916	916
Shortage Space		85	108	175	233	-165	-209	-114	-110	91
Business Rule R/G/A	**New Number**	80%	76%	66%	59%	123%	126%	113%	112%	90%
	Compared to:	90%	86%	74%	78%	147%	122%	109%	109%	89%

Available Spaces
divided by Total Demand
Green > 80%
Amber 60-80%
Red < 60 %

changes in 2014

Loss of 2 SAS interim facilities

Red in FY09 as Milam YAC is not complete until Dec 09.

SAS/YAC remain green at end state with loss of IBCT, 6-1 AD (GTA BCT #48).

FINAL
EL PASO REGIONAL GROWTH MANAGEMENT PLAN

Exhibit 4C

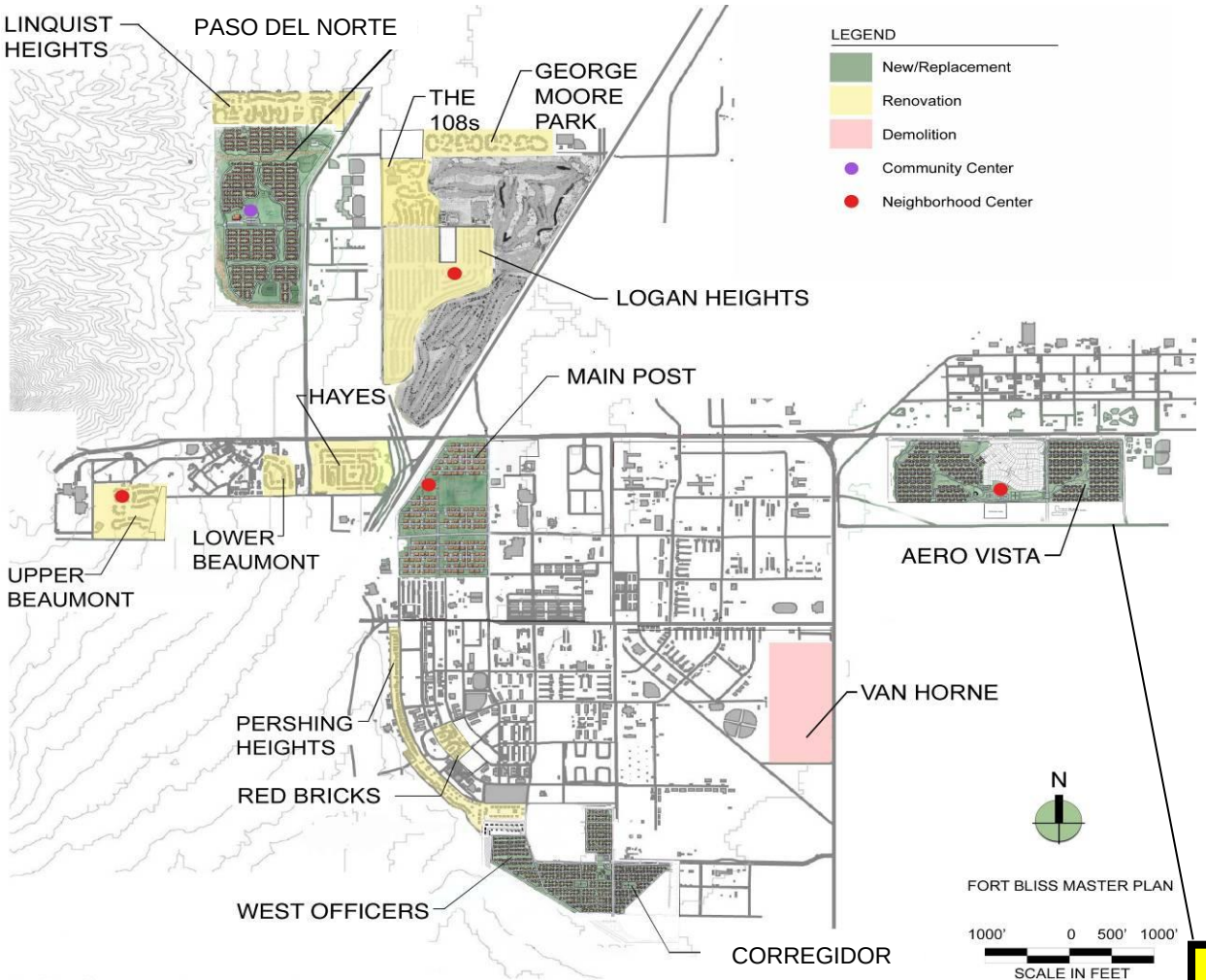
Fort Bliss 2009 Base Pay, Basic Allowance for Housing (BAH), and Housing Requirements

2009 Pay and 2009 BAH - Fort Bliss and El Paso, TX																							
	<2	2	3	4	6	8	10	12	14	16	18	20	22	24	26		BAH W/Dep	BAH WO		AVG Base Pay			
O10												14,688.60	14,760.30	15,067.20	15,602.10								
O9												12,846.90	13,032.00	13,299.30	13,765.80							08/09 Comp	
O8	9,090.00	9,387.60	9,585.30	9,640.50	9,887.10	10,299.00	10,395.00	10,786.20	10,898.10	11,235.30	11,722.50	12,172.20	12,472.50	12,472.50	12,472.50					12,472.50		W/Dep	WO Dep
O7	7,553.10	7,904.10	8,066.40	8,195.40	8,429.10	8,660.10	8,926.80	9,192.90	9,460.20	10,299.00	11,007.30	11,007.30	11,007.30	11,007.30	11,063.10		1569.00	1259.00		11,025.90		230.00	130.00
O6	5,598.30	6,150.30	6,553.80	6,553.80	6,578.70	6,860.70	6,897.90	6,897.90	7,290.00	7,983.30	8,390.10	8,796.60	9,027.90	9,262.20	9,716.70		1551.00	1234.00		9,335.60		227.00	127.00
O5	4,666.80	5,257.20	5,621.40	5,689.80	5,916.60	6,052.80	6,351.60	6,570.60	6,853.80	7,287.30	7,493.40	7,697.40	7,928.70	7,928.70	7,928.70		1538.00	1154.00		7,706.50		225.00	66.00
O4	4,026.90	4,661.40	4,972.20	5,041.80	5,330.40	5,640.00	6,025.20	6,325.50	6,534.30	6,654.00	6,723.30	6,723.30	6,723.30	6,723.30	6,723.30		1412.00	1102.00		7,051.28		185.00	27.00
O3	3,540.30	4,013.40	4,332.00	4,722.90	4,948.80	5,197.20	5,358.00	5,622.30	5,759.70	5,759.70	5,759.70	5,759.70	5,759.70	5,759.70	5,759.70		1230.00	980.00		5,056.73		124.00	-10.00
O2	3,058.80	3,483.90	4,012.50	4,148.10	4,233.30	4,233.30	4,233.30	4,233.30	4,233.30	4,233.30	4,233.30	4,233.30	4,233.30	4,233.30	4,233.30		1013.00	908.00		3,748.20		-37.00	57.00
O1	2,655.30	2,763.60	3,340.50	3,340.50	3,340.50	3,340.50	3,340.50	3,340.50	3,340.50	3,340.50	3,340.50	3,340.50	3,340.50	3,340.50	3,340.50		928.00	866.00		2,763.60		32.00	134.00
O3E				4,722.90	4,948.80	5,197.20	5,358.00	5,622.30	5,844.90	5,972.70	6,146.70	6,146.70	6,146.70	6,146.70	6,146.70		1313.00	1015.00		5,392.50		152.00	-39.00
O2E				4,148.10	4,233.30	4,368.30	4,595.70	4,771.50	4,902.30	4,902.30	4,902.30	4,902.30	4,902.30	4,902.30	4,902.30		1218.00	960.00		4,659.45		115.00	6.00
O1E				3,340.50	3,567.60	3,699.30	3,834.30	3,966.60	4,148.10	4,148.10	4,148.10	4,148.10	4,148.10	4,148.10	4,148.10		1111.00	917.00		3,843.18		34.00	41.00
W5												6,505.50	6,835.50	7,081.20	7,353.60		1379.00	1113.00		7,217.40		174.00	35.00
W4	3,658.50	3,935.70	4,048.80	4,159.80	4,351.20	4,540.50	4,732.20	5,021.10	5,274.00	5,514.60	5,711.40	5,903.40	6,185.70	6,417.30	6,681.90		1301.00	1035.00		6,054.45		148.00	-24.00
W3	3,340.80	3,480.30	3,622.80	3,669.90	3,819.60	4,114.20	4,420.80	4,565.10	4,731.90	4,904.10	5,213.10	5,422.20	5,547.30	5,680.20	5,860.80		1234.00	970.00		5,437.95		127.00	-2.00
W2	2,956.50	3,236.10	3,322.20	3,381.60	3,573.30	3,871.20	4,018.80	4,164.30	4,341.90	4,480.80	4,606.80	4,757.10	4,856.40	4,935.00	4,935.00		1129.00	936.00		4,658.20		47.00	26.00
W1	2,595.30	2,874.00	2,949.60	3,108.30	3,296.10	3,572.70	3,701.70	3,882.30	4,059.90	4,199.40	4,328.10	4,484.40	4,484.40	4,484.40	4,484.40		1017.00	882.00		3,057.00		-37.00	90.00
E9							4,420.50	4,520.70	4,646.70	4,795.50	4,944.90	5,185.20	5,388.00	5,601.90	5,928.30		1283.00	967.00		5,409.66		143.00	1.00
E8						3,618.60	3,778.80	3,877.80	3,996.60	4,125.00	4,357.20	4,474.80	4,674.90	4,785.90	5,059.50		1180.00	936.00		4,579.55		86.00	25.00
E7	2,515.50	2,745.60	2,850.60	2,990.10	3,098.70	3,285.30	3,390.30	3,577.50	3,732.60	3,838.50	3,951.30	3,995.40	4,142.10	4,221.00	4,521.00		1094.00	893.00		3,803.96		21.00	84.00
E6	2,175.60	2,394.00	2,499.60	2,602.20	2,709.30	2,950.80	3,044.70	3,226.20	3,282.00	3,322.50	3,369.90	3,369.90	3,369.90	3,369.90	3,369.90		1015.00	970.00		3,223.71		-39.00	179.00
E5	1,993.50	2,127.00	2,229.60	2,334.90	2,499.00	2,670.90	2,811.00	2,828.40	2,828.40	2,828.40	2,828.40	2,828.40	2,828.40	2,828.40	2,828.40		917.00	807.00		2,685.86		41.00	106.00
E4	1,827.60	1,920.90	2,025.00	2,127.60	2,218.50	2,218.50	2,218.50	2,218.50	2,218.50	2,218.50	2,218.50	2,218.50	2,218.50	2,218.50	2,218.50		892.00	686.00		2,147.40		88.00	50.00
E3	1,649.70	1,753.50	1,859.70	1,859.70	1,859.70	1,859.70	1,859.70	1,859.70	1,859.70	1,859.70	1,859.70	1,859.70	1,859.70	1,859.70	1,859.70		892.00	686.00		1,833.15		88.00	50.00
E2	1,568.70	1,568.70	1,568.70	1,568.70	1,568.70	1,568.70	1,568.70	1,568.70	1,568.70	1,568.70	1,568.70	1,568.70	1,568.70	1,568.70	1,568.70		892.00	686.00		1,568.70		88.00	50.00
E1	1,399.50																892.00	686.00		1,399.50		88.00	50.00

BAH BREAKDOWN BY GRADE

	TOTAL SOLDIERS	MARRIED	MARRIED BAH $	SINGLE	SINGLE BAH$ TO CITY	LIVING ON POST	BAH $ TO POST	LIVING OFF POST	MARRIED BAH $ TO CITY	% Off Post - Married	% Off Post - Single	% of Total Soldiers
E-1 - E-4	16683	7660	$6,832,720.00	9023		1046	$933,032.00	6614	$5,899,688.00	20%		50.3%
E-5	6429	4347	$3,986,199.00	2082		628	$575,876.00	3719	$3,410,323.00	11%		19.4%
E-6	3329	2286	$2,320,290.00	1043	$1,011,710.00	419	$425,285.00	1867	$2,906,715.00	6%	3%	10.0%
E-7	1647	1264	$1,382,816.00	383	$342,019.00	164	$179,416.00	1100	$1,545,419.00	3%	1%	5.0%
E-8	790	606	$715,080.00	184	$172,224.00	164	$193,520.00	442	$693,784.00	1%	1%	2.4%
E-9	520	400	$513,200.00	120	$116,040.00	217	$278,411.00	183	$350,829.00	1%	0%	1.6%
W-1	244	188	$191,196.00	56	$49,392.00	38	$38,646.00	150	$201,942.00	0%	0%	0.7%
W-2	252	190	$214,510.00	62	$58,032.00	62	$69,998.00	128	$202,544.00	0%	0%	0.8%
W-3	176	136	$167,824.00	40	$38,800.00	9	$11,106.00	127	$195,518.00	0%	0%	0.5%
W-4	51	42	$54,642.00	9	$9,315.00	9	$11,709.00	33	$52,248.00	0%	0%	0.2%
W-5	15	11	$15,169.00	4	$4,452.00	9	$12,411.00	2	$7,210.00	0%	0%	0.0%
O-1	543	416.5	$386,512.00	126	$109,116.00	25	$23,200.00	391.5	$472,428.00	1%	0%	1.6%
O-2	555	416.5	$421,914.50	138	$125,304.00	38	$38,494.00	378.5	$508,724.50	1%	0%	1.7%
O-3	1135	875	$1,076,250.00	260	$254,800.00	88	$108,240.00	787	$1,222,810.00	2%	1%	3.4%
O-4	550	422	$595,864.00	128	$141,056.00	18	$25,416.00	404	$711,504.00	1%	0%	1.7%
O-5	210	163	$250,694.00	47	$54,238.00	87	$133,806.00	76	$171,126.00	0%	0%	0.6%
O-6	60	49	$75,999.00	11	$13,574.00	45	$69,795.00	4	$19,778.00	0%	0%	0.2%
O-7	5	4	$6,276.00	1	$1,259.00	4	$6,276.00	1	$1,259.00	0%	0%	0.0%
O-8	1	1	$1,569.00	0	$0.00	1	$1,569.00	0	$0.00	0%	0%	0.0%
TOTAL	33194	19477	$19,208,724.50	13717	$2,501,331.00	3071	$3,136,206.00	16407	$18,573,849.50			

Fort Bliss RCI Master Plan
Main post

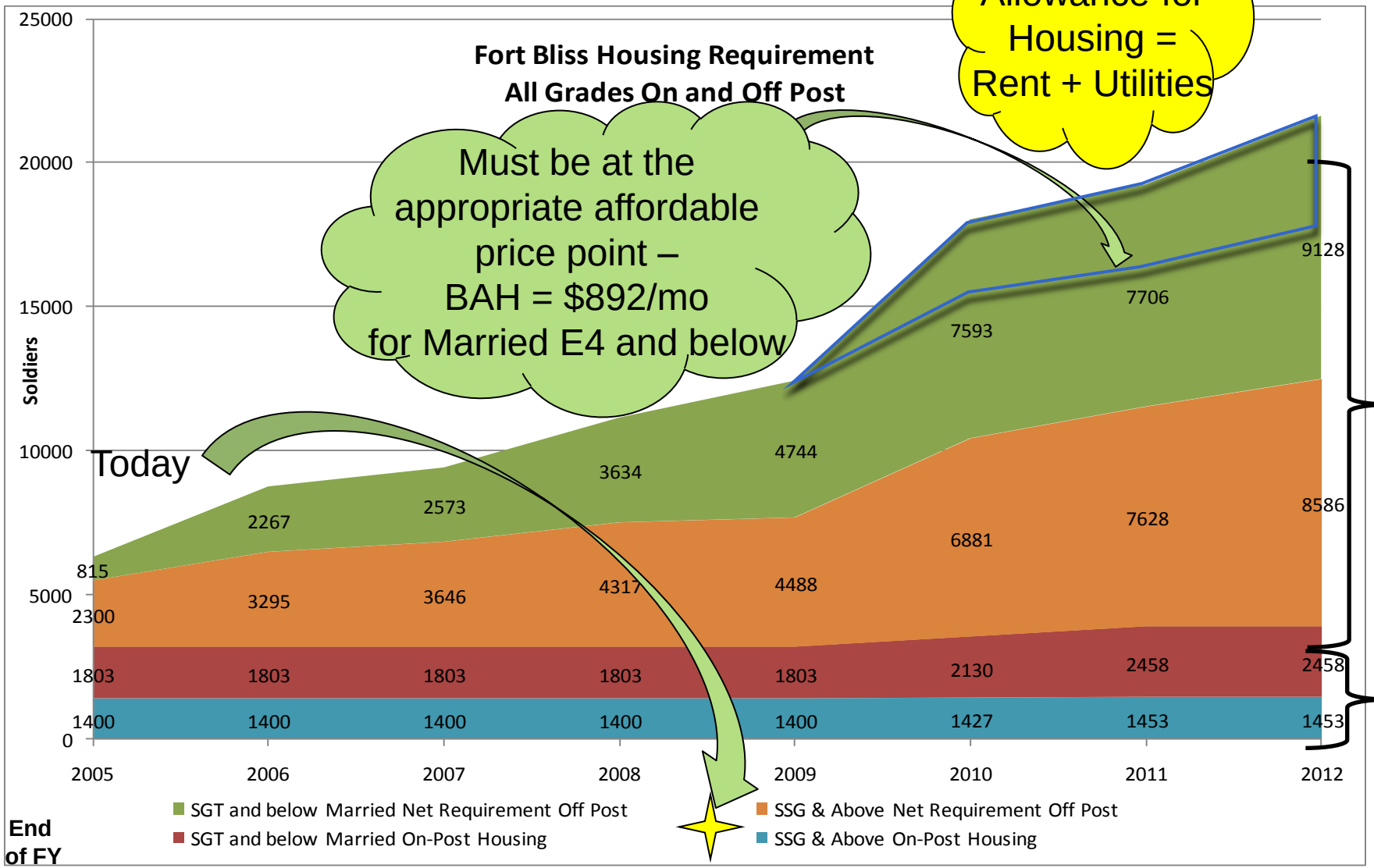


Housing Market Analysis As of 6-30-08	
Estimated On Post Housing Requirement	6946

Fort Bliss RCI Housing Inventory	
Prior to BRAC and Growth the Army	3,203
Planned (approx)	708
Total	3,911

Ft. Bliss Housing Requirements Summary	
Soldiers requiring housing (includes on and off post)	21,609
Projected On Post Home Inventory	3,911
Projected Total Soldiers Off Post	17,698

Future RCI Housing Development

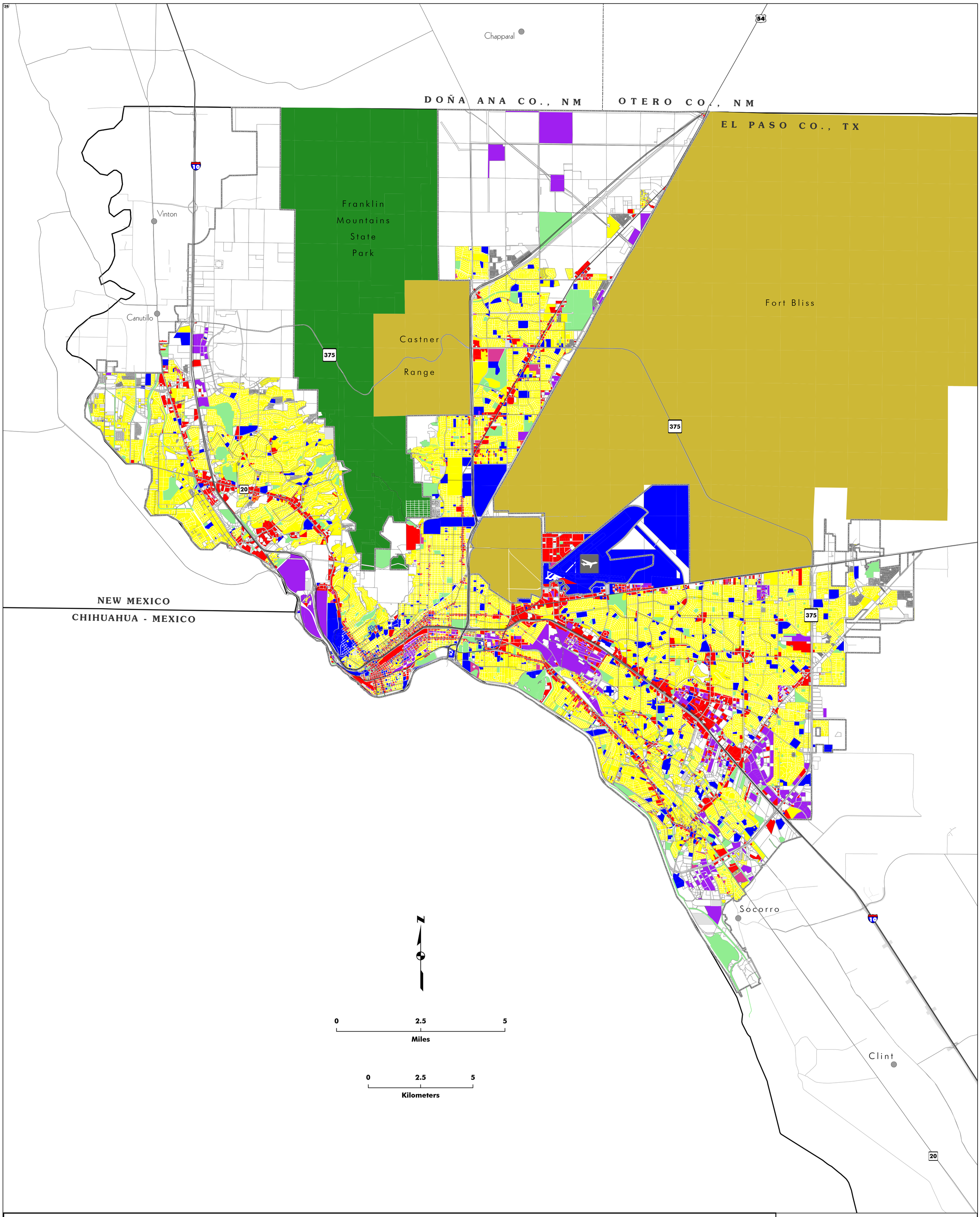

Fort Bliss Housing Requirement
All Grades On and Off Post
Basic Allowance for Housing = Rent + Utilities
Must be at the appropriate affordable price point – BAH = $892/mo for Married E4 and below
Today
Soldiers
25000
20000
15000
10000
5000
0
2005
2006
2007
2008
2009
2010
2011
2012
End of FY
815
2267
2573
3634
4744
7593
7706
9128
2300
3295
3646
4317
4488
6881
7628
8586
1803
1803
1803
1803
1803
2130
2458
2458
1400
1400
1400
1400
1400
1427
1453
1453
SGT and below Married Net Requirement Off Post
SGT and below Married On-Post Housing
SSG & Above Net Requirement Off Post
SSG & Above On-Post Housing
OFF POST
ON POST

FINAL
EL PASO REGIONAL GROWTH MANAGEMENT PLAN

Plates

City of El Paso

Scaled-down versions of plates follow
Full-size, printable versions are contained on CD



LEGEND

Land Use [1]

- Residential
- Mixed Use
- Commercial
- Industrial
- Public/Institutional
- Military
- ROW/Utility
- Parks/Open Space
- Franklin Mountains State Park
- Not Classified

- Major Road
- Other Road
- City or Town
- El Paso International Airport
- City of El Paso Municipal Area [2]
- County Boundary
- U.S. State Boundary

Source:
1 = Derived from City of El Paso windshield review and parcel data, Paso Del Norte Mapa
2 = Paso Del Norte Mapa

EXISTING LANDUSE 2007

PLATE 1

Chapparal

DOÑA ANA CO., NM

OTERO CO., NM

EL PASO CO., TX

54

10

Vinton

Canutillo

Franklin Mountains State Park

Castner Range

Fort Bliss

375

20

NEW MEXICO

CHIHUAHUA - MEXICO

Socorro

Clint

N

0 2.5 5

Miles

0 2.5 5

Kilometers

LEGEND

Land Use [1]

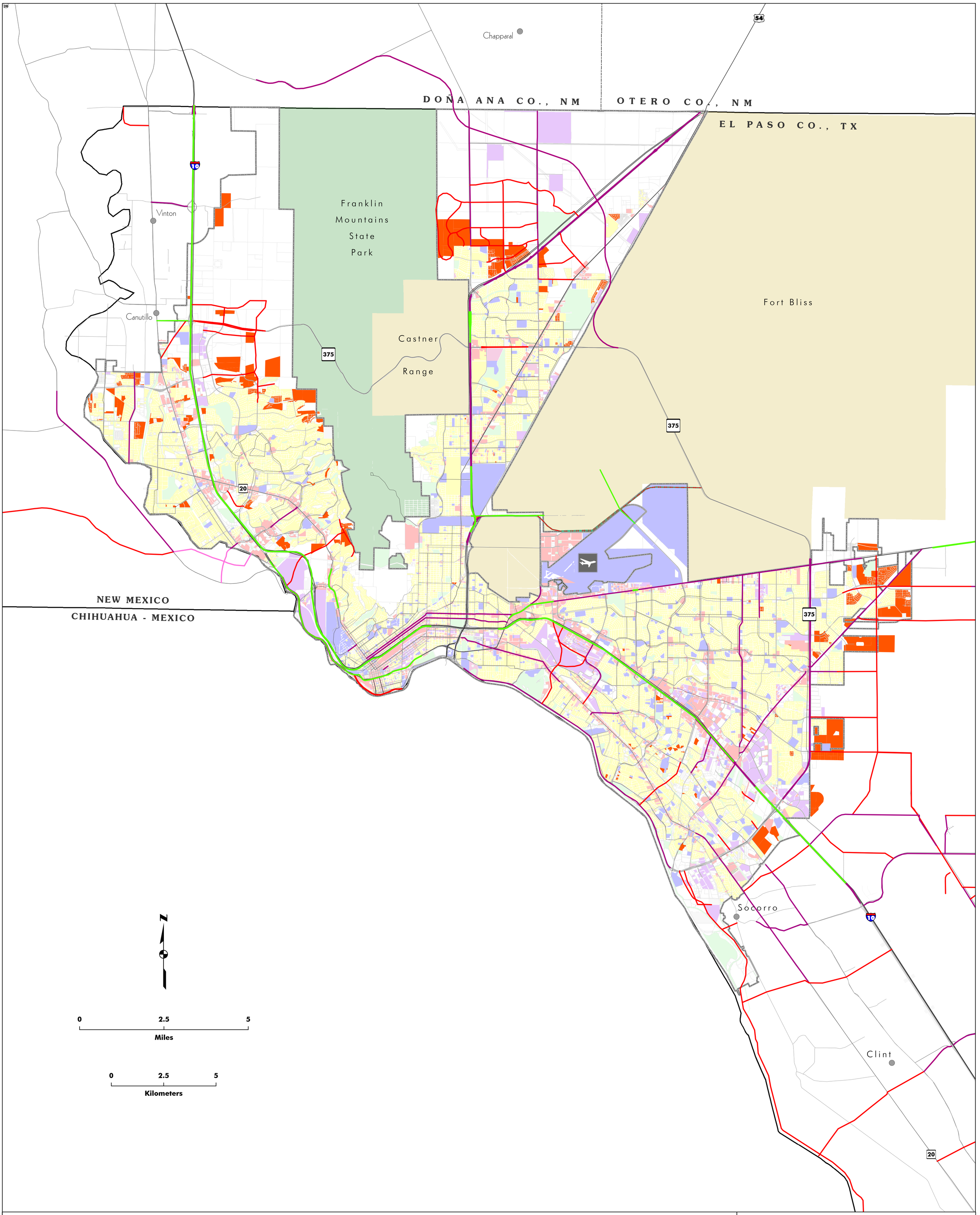
- Anticipated Growth Area [2]
- Residential
- Mixed Use
- Commercial
- Industrial
- Public/Institutional
- Military
- ROW/Utility
- Parks/Open Space
- Franklin Mountains State Park
- Not Classified

- Major Road
- Other Road
- City or Town
- El Paso International Airport
- City of El Paso Municipal Area [3]
- County Boundary
- U.S. State Boundary

Source:
1 = Derived from City of El Paso windshield review and parcel data, Paso Del Norte Mapa
2 = Based on mid-range population estimates for 2020
3 = Paso Del Norte Mapa

PROJECTED GROWTH AREAS FOR 2020

PLATE 2



LEGEND

Road Classifications

- Upgrades to Existing Roads
- New Road
- Upgrades/New Construction
- Proposed Transportation Improvement Program [1]
- RGMP Proposed Road Upgrades
- Major Road
- Other Road
- City or Town
- El Paso International Airport
- City of El Paso Municipal Area[2]
- County Boundary
- U.S. State Boundary

Land Use[3]

- Anticipated Growth Area[4]
- Residential
- Mixed Use
- Commercial
- Industrial
- Public/Institutional
- Military
- ROW/Utility
- Parks/Open Space
- Franklin Mountains State Park
- Not Classified

Source:
1 = Fort Bliss
2 = Paso Del Norte Mapa
3 = Derived from City of El Paso windshield review and parcel data, Paso Del Norte Mapa
4 = Based on mid-range population estimates for 2020

FUTURE TRANSPORTATION

PLATE 3

DOÑA ANA CO., NM

OTERO CO., NM

EL PASO CO., TX

NEW MEXICO

CHIHUAHUA - MEXICO

Chapparal

Vinton

Canutillo

Franklin Mountains State Park

Castner Range

Fort Bliss

Socorro

Clint

54

10

375

20

N

0 2.5 5

Miles

0 2.5 5

Kilometers

LEGEND

Water Lines with Pipe Diameter [1]

- 8-inch to 12-inch
- 14-inch to 18-inch
- 20-inch to 36-inch
- 42-inch to 60-inch
- Proposed 8-inch to 12-inch
- Proposed 16-inch
- Proposed 20-inch to 36-inch
- Proposed 42-inch to 54-inch
- Proposed (To Be Determined)
- Water Facilities

- Major Road
- Other Road
- City or Town
- El Paso International Airport
- City of El Paso Municipal Area [2]
- County Boundary
- U.S. State Boundary

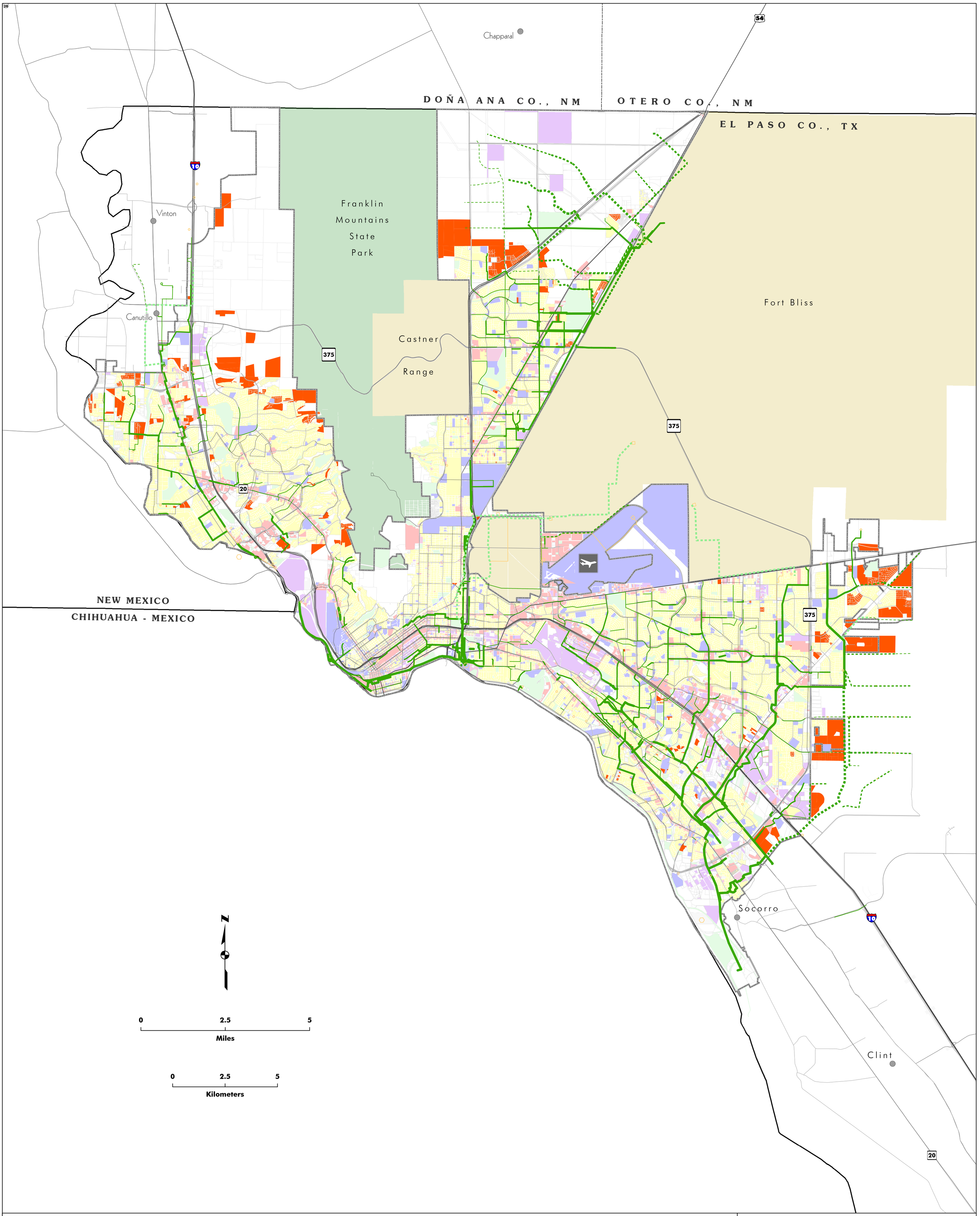
Land Use [3]

- Anticipated Growth Area [4]
- Residential
- Mixed Use
- Commercial
- Industrial
- Public/Institutional
- Military
- ROW/Utility
- Parks/Open Space
- Franklin Mountains State Park
- Not Classified

Source:
1 = El Paso Water Utilities Public Service Board
2 = Paso Del Norte Mapa
3 = Derived from City of El Paso windshield review and parcel data, Paso Del Norte Mapa
4 = Based on mid-range population estimates for 2020

EXISTING AND PROPOSED WATER LINES

PLATE 4



LEGEND

Sewer Lines with Pipe Diameter[1]

- 6-inch to 12-inch
- 15-inch to 18-inch
- 20-inch to 27-inch
- 30-inch to 60-inch
- Proposed 12-inch
- Proposed 15-inch to 18-inch
- Proposed 21-inch to 27-inch
- Proposed 30-inch to 42-inch
- Proposed (To Be Determined)
- Sewer Facilities

- Major Road
- Other Road
- City or Town
- El Paso International Airport
- City of El Paso Municipal Area [2]
- County Boundary
- U.S. State Boundary

Land Use [3]

- Anticipated Growth Area[4]
- Residential
- Mixed Use
- Commercial
- Industrial
- Public/Institutional
- Military
- ROW/Utility
- Parks/Open Space
- Franklin Mountains State Park
- Not Classified

Source:
1 = El Paso Water Utilities Public Service Board
2 = Paso Del Norte Mapa
3 = Derived from City of El Paso windshield review and parcel data, Paso Del Norte Mapa
4 = Based on mid-range population estimates for 2020

EXISTING AND PROPOSED SEWER LINES

PLATE 5