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November 26, 2008

LaDonna Castañuela, Chief Clerk
Office of the Chief Clerk
ATTN: Agenda Docket Clerk (Mail Code 105)
Texas Commission of Environmental Quality
P.O. Box 13087
Austin, TX 78711-3087

**Re: VAL VERDE DEVELOPMENT CO.
TCEQ DOCKET NO 2008-0943-MWD**

Dear Ms. Castañuela:

Enclosed for filing are the original and seven copies of the "Requester's Reply to the Responses to a Hearing Request filed by the Executive Director, the Office of Public Interest Counsel, and Val Verde Development Co. (the Applicant)".

Sincerely,


Ronald C. Burton

cc: Mailing List

Enclosure

CHIEF CLERKS OFFICE

2008 DEC - 1 AM 10: 43

TEXAS
COMMISSION
ON ENVIRONMENTAL
QUALITY

TCEQ DOCKET NO. 2008-0943-MWD

2008 DEC -1 AM 10: 43

VAL VERDE DEVELOPMENT CO. § BEFORE THE
PROPOSED TPDES PERMIT NO. § TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
WQ0014777001 § CHIEF CLERKS OFFICE

THE REQUESTER'S REPLY TO THE RESPONSES TO HEARING REQUESTS

To the members of the Texas Commission on Environmental Quality:

The Requester files this reply to the responses to a hearing request filed by the Executive Director, the Office of Public Interest Counsel, and Val Verde Development Co. (the Applicant).

I. Introduction

The requester has received copies of the responses to a hearing request filed by the Executive Director, the Office of Public Interest Counsel, and Val Verde Development Co. (the Applicant). The requester does not challenge any of the geographical data (maps, property description, property location relative to Laughlin Air Force Base, major highways, arterial streets or the location of the proposed wastewater treatment facility) presented in any of the responses. The requester does not challenge any of the technical specifications attributed to the proposed wastewater treatment facility.

The requester has noted a similarity in the three responses concerning whether the requester is "an affected person" and whether the requester's reference to issues that affect the citizens of the City of Del Rio, Val Verde County and Kinney are significant to proceedings before the Texas Commission on Environmental Quality.

II. Pleading

The requester respectfully suggests that a contested case hearing is in order do to the impact of any development on the SE Ranch/Monarch Crossing property that is located adjacent to Laughlin Air Force Base (LAFB) on the western boundary of the air force property. The requester has included in Exhibit A, a copy of the recently completed Joint Land Use Study (JLUS) sponsored by the Department of Defense that has been approved by resolutions of the City of Del Rio and Val Verde County

The comprehensive JLUS includes recommendations significantly limiting the density of development near the air force base so that current and future missions at (LAFB) will not be impacted by encroachment.

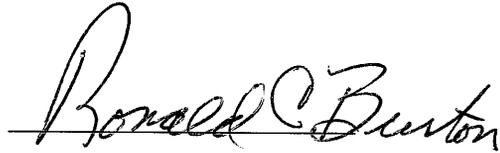
The JLUS includes an estimate of the economic impact on the area in proximity to LAFB of approximately \$250 million, including military and civilian payrolls, purchases of materials, and secondary economic activity. The LAFB economic engine is most important to the affected citizens and communities. There are other Federal agencies in Del Rio and surrounding counties, but none contribute to the local economy as LAFB.

The City of Del Rio has incurred approximately \$500,000 in legal costs to prevail in legal actions in District Court, Appellant Court, and State Supreme Court that were filed against the city by the owners of the SE Ranch/Monarch Crossings. The City of Del Rio is not in favor of any level of development that would require a wastewater treatment facility on the property. Val Verde County is not in favor of any level of development that would require a wastewater treatment facility. If any development of significant density were to occur on the subject property, the future missions of LAFB would likely be impacted to the extent that the air force would have to seek another location for the

premier flight training current at LAFB. The irony of this scenario is that the ‘supposed economic justification’ for the development would disappear as the development progressed leaving the development with little reason to exist.

All of these reasons are matters for presentation at a formal hearing to be conducted by the SOAH, following strict rules of evidence and procedure.

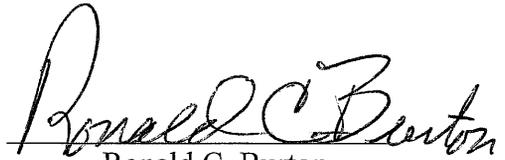
Respectfully submitted,

A handwritten signature in cursive script that reads "Ronald C. Burton". The signature is written in black ink and is positioned above a horizontal line.

RONALD C. BURTON

CERTIFICATE OF SERVICE

I hereby certify that on November 26, 2008, the original and seven true and correct copies of the foregoing document were filed with the TCEQ Chief Clerk, and copies were served to all parties listed on the attached mailing list via hand delivery, facsimile transmission, or by deposit in the U.S. Mail.


Ronald C. Burton

TEXAS
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CHIEF CLERK'S OFFICE

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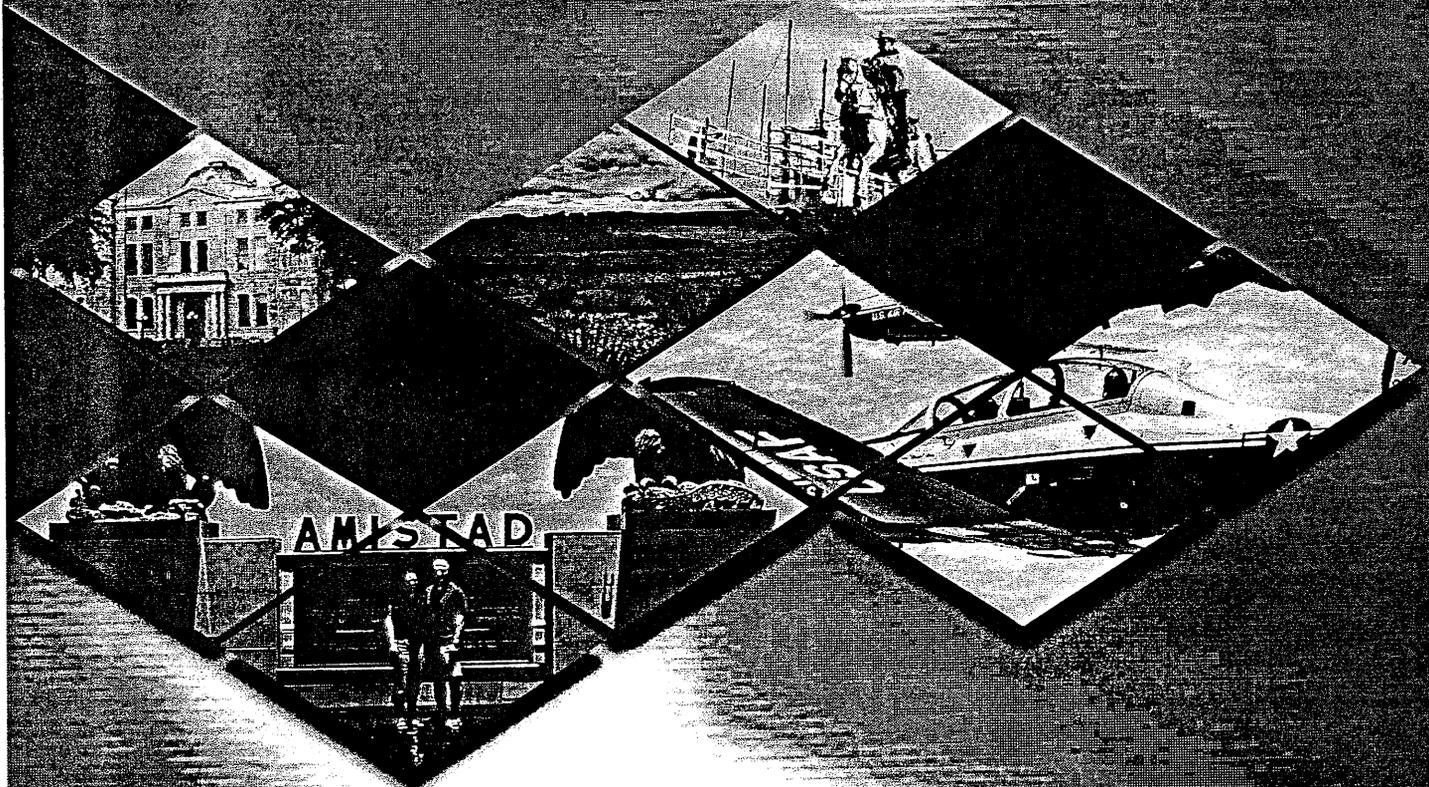
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REQUESTER'S

ATTACHMENT A

Del Rio Joint Land Use Study

June 2008



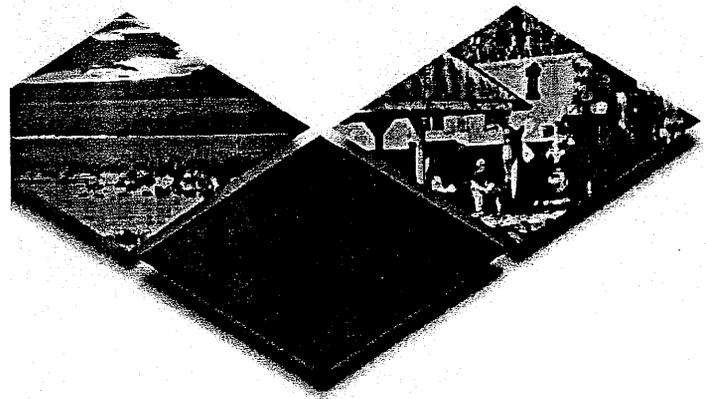
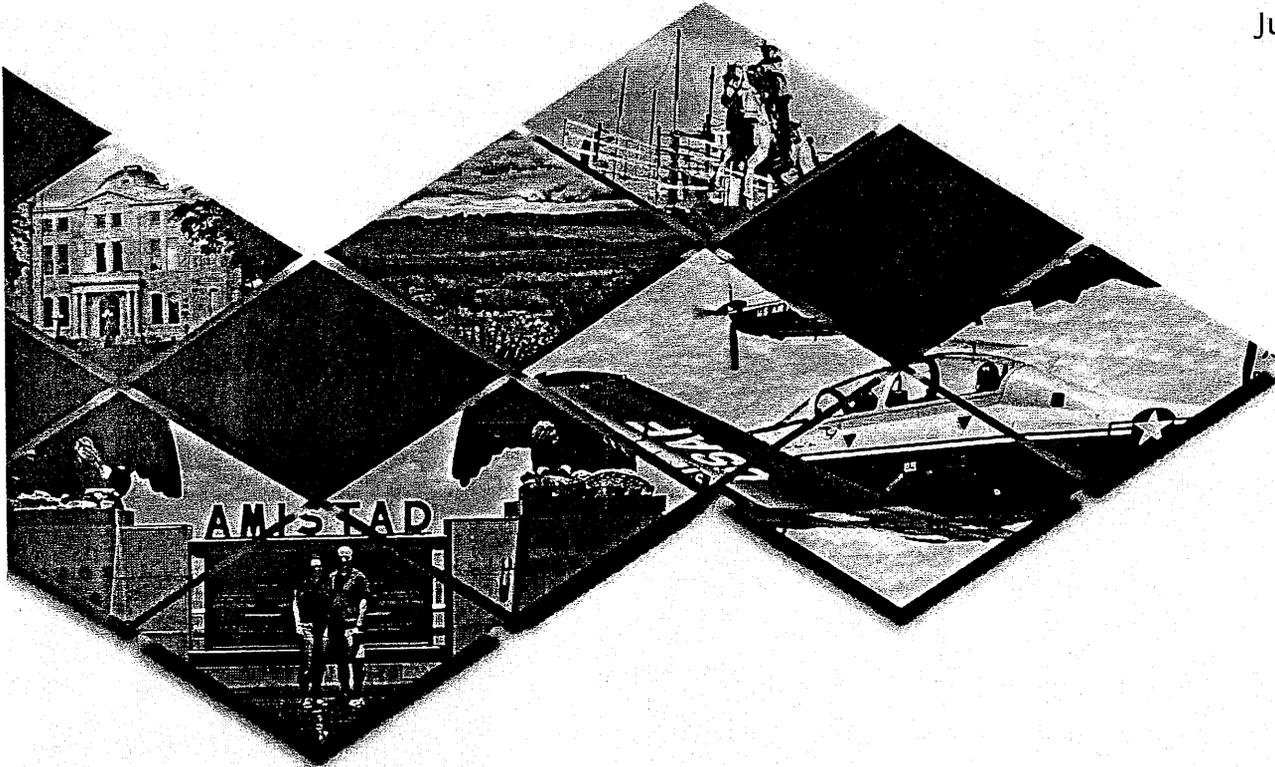
City of Del Rio and Laughlin AFB

FINAL DRAFT

Del Rio Joint Land Use Study

City of Del Rio and Laughlin AFB

Final Draft
June 2008



City of Del Rio, Texas
109 West Broadway
Del Rio, Texas 78840



Please see next page.

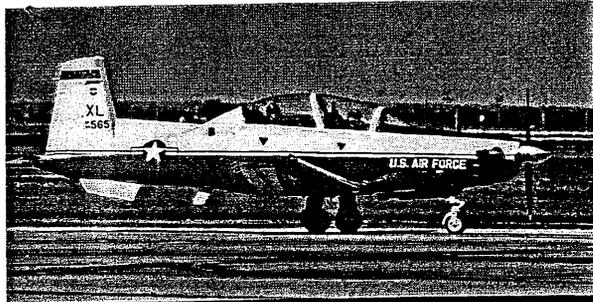


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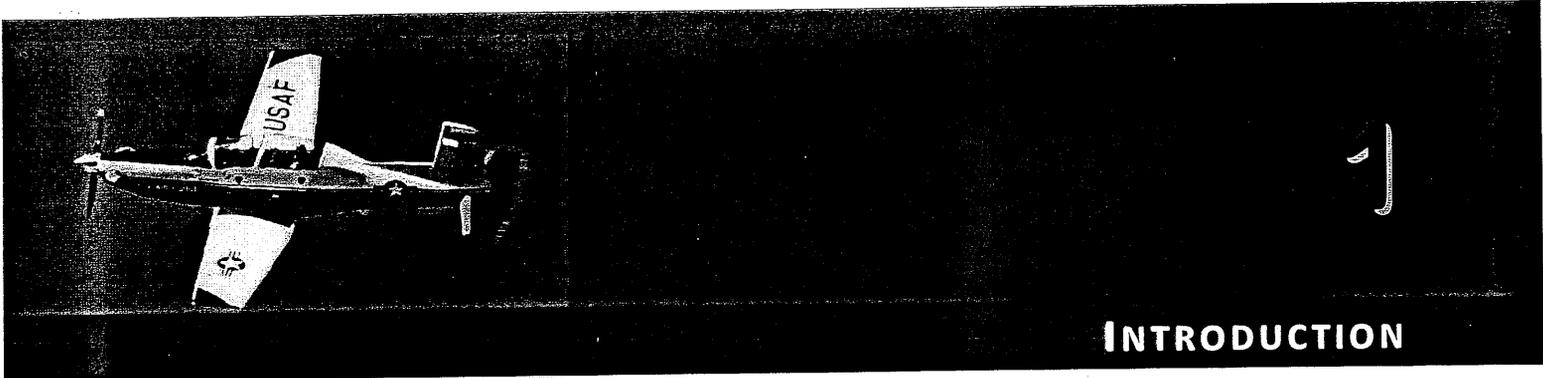
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Military installations are critical to local economies, generating thousands of jobs and millions of dollars in economic activity and tax revenue annually. In past instances, incompatible development has been a factor in the curtailment of training operations and restructuring of mission critical components to other installations. To protect the missions of military installations and the health of the economies and industries that rely on them, collaboration and joint planning between installations and local communities must occur to address encroachment. This study mitigates future issues and improves coordination between the City of Del Rio, Val Verde County, Kinney County, and Laughlin Air Force Base (AFB).

Located adjacent to a predominately rural community, the City and the region surrounding Laughlin AFB are expected to experience economic and population growth in the future. As development moves closer to the base, a coordinated effort is needed to ensure that the growth experienced allows the base to maintain its role in the nation's defense while remaining a vital member of the local community and a major contributor to the local economy.

Laughlin AFB – Strategic Importance

Laughlin AFB has a long history of training pilots for the nation's defense.

For over 40 years, Laughlin AFB's primary mission has been to train the Air Force's newest certified pilots to receive specialized undergraduate pilot training. After pilots complete primary flying training, they proceed to specialized advanced training in one of four flight tracks. Pilots are trained using the T-6A Texan II, T-38C Talon, or T-1A Jayhawk jet trainers in an intensive 52-week Student Undergraduate Pilot Training (SUPT) program. This program combines primary flying training with specific advanced track training. Laughlin AFB also provides specialized jet training for selected pilots using the T-38C in the Introduction to Fighter Fundamentals (IFF) course. This course is designed for pilots who have completed the SUPT program, and fixed-wing qualification training for previously trained helicopter pilots transitioning to fixed-wing aircraft.

Laughlin AFB – Local Importance

Currently, averages of 450 Undergraduate pilots, 150 in specialized training, are trained at Laughlin AFB each year.

Laughlin AFB has a significant economic impact on the City of Del Rio, and Val Verde and Kinney Counties. The base has indirectly created almost 1,000 jobs, and in fiscal year 2007, had a total impact to the community of over \$260 million. The total impact is summarized as follows:

- Total Annual Payroll - \$123,402,608
 - Total Annual Expenditures - \$103,322,682
 - Value of Indirect Jobs - \$36,389,975
-

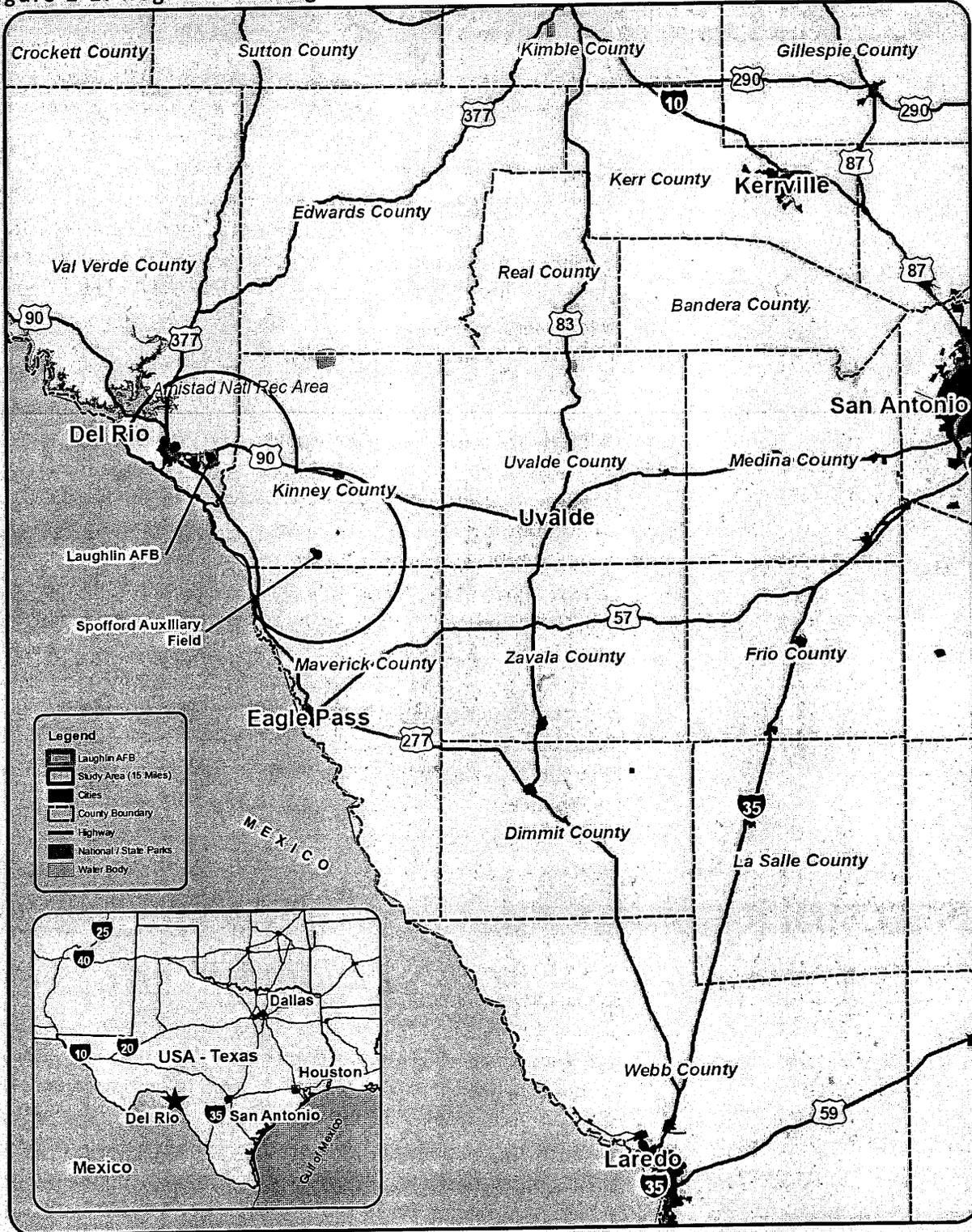
Laughlin AFB and the Community

The presence of the installation goes beyond merely economic impacts. The City of Del Rio and surrounding counties are home to a large number of Air Force military personnel and family members. Local jurisdictions and agencies provide a range of services to these personnel, from public schools and libraries to police and fire protection. The Del Rio Military Affairs Association (MAA) is an entity whose purpose is to maintain good relations between the base and the community. Laughlin AFB also gives back to local communities through the involvement of base personnel in volunteer service to schools, churches, recreational, and other organizations and responding when critical services are needed.

Del Rio and Regional Significance

Located in southwest Texas, the City of Del Rio is 150 miles west of San Antonio and just miles from the US / Mexico border (see Figure 1-1). Easy access to international trade markets and the proximity of US Highway 90 (US 90), a primary trade route connecting Texas and New Mexico with Mexico and Canada, provide increased opportunities for growth and development across southwest Texas. Once planned transportation improvements are completed, such as the US 90 outer loop road, this Ports-to-Plains corridor will see an increase in traffic, particularly freight vehicles, of approximately 12 percent. With improved accessibility of the region and the corresponding growth predicted, local communities will have to reevaluate the provision of services and housing stock needed to accommodate the increased population. In 2000, over 70 percent of homes in Val Verde County were located in the City of Del Rio, and this number is expected to increase as people are attracted to the area and the urban services provided by the City.

Figure 1-1. Regional Setting



0 20 40 Miles

Matrix Design Group, Inc.
Integrated Design Solutions

**Regional Setting
Del Rio Joint Land Use Study**

1.1 Why Prepare a Joint Land Use Study?

In addition to the many positive interactions between the City of Del Rio, Val Verde and Kinney Counties, and Laughlin AFB, the activities or actions of one entity can also negatively impact another and result in conflicts. As the community develops and expands in response to growth and market demands, land use decisions can push urban development closer to military installations and operational areas. The result can include land use and other compatibility issues, often referred to as encroachment, which can have negative impacts on community safety, economic development, and sustainability of military activities and readiness. This threat to military readiness activities is currently one of the military's greatest concerns.

Collaboration and joint planning between the military and local communities should occur to protect the military mission and the health of the economies and industries in surrounding communities before compatibility becomes an issue. Recognizing the close relationship between installations and adjacent communities, the Department of Defense (DOD) Office of Economic Adjustment (OEA) implemented the Joint Land Use Study (JLUS) program in an effort to mitigate land and air conflicts and build better relationships between all parties. This program endeavors to preserve the sustainability of local communities while protecting current and future operational missions at Laughlin AFB. The balancing of community and military needs and desires provides opportunities for growth in the existing mutually beneficial relationship for all entities.

1.2 What is a Joint Land Use Study?

A Joint Land Use Study (JLUS) is a collaborative study with local community and federal officials, residents, business owners, and the military to identify compatible land uses and growth management guidelines for active military installations. It establishes a mechanism for the base and the community to act as a team to prevent future growth issues. A JLUS is implemented, essentially, to protect the residents' quality of life, the property owners' rights, and the mission of the base. Although primarily funded by the DOD OEA, a JLUS is produced by and for local communities. The primary objectives of the OEA JLUS program are as follows:

Del Rio JLUS Study Area

Community

- Protect the health, safety, and welfare of residents and maintain quality of life
- Manage development in the vicinity of military installations that would interfere with the continued operations of these facilities
- Provide for sustainable growth in an economically, environmentally, and socially sustainable manner
- Maintain the economic vitality of the community

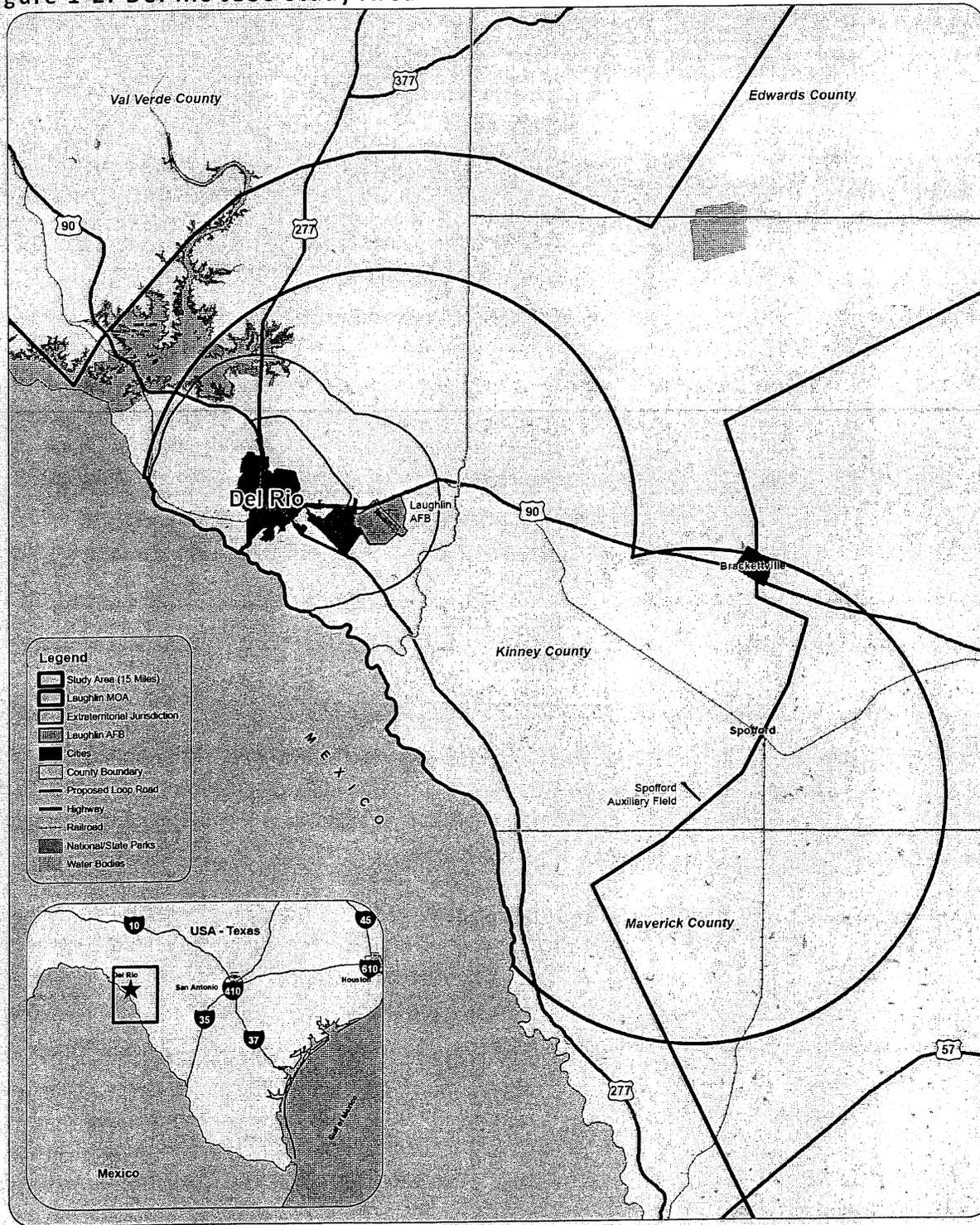
Military

- Promote the health, safety, and welfare of the military and civilian personnel living and working at or near the military installation
- Ensure the ability of the installation to achieve its mission, maintain military readiness, and support national defense objectives
- Preserve the ability of the installation to expand or adapt its mission

The study area for this JLUS is currently defined as a 15-mile oval measured from the centerline of the Laughlin AFB runway (see Figure 1-2). The defined study area contains all of the compatibility issues identified during the JLUS process, including the Laughlin AFB noise contours used to establish project actions listed in Section 5, and the area used for lower altitude overflight from the base. As defined, the study area includes the southern portion of Val Verde County including part of the Amistad National Recreation Area, a portion of west Kinney County, and the City of Del Rio.

In addition to the primary study area centered on Laughlin AFB, a secondary study area was identified for Spofford Auxiliary Field, which is used by Laughlin's pilots. Located approximately 30 miles southeast of Laughlin AFB and four miles south of Spofford, the airfield has one runway with a northwest-southeast orientation. The secondary study area includes the noise contours, clear zones, and accident potential zones as identified in the 2003 Laughlin AFB Air Installation Compatible Use Zone (AICUZ) Study for Spofford Auxiliary Field.

Figure 1-2. Del Rio JLUS Study Area



0 5 10 Miles

Study Area
Del Rio Joint Land Use Study

1.3 JLUS Objectives

The goal of the Del Rio JLUS is to protect the viability of current and future missions at Laughlin AFB while at the same time accommodating growth, sustaining the economic health of the region, and protecting public health and safety. To help meet this goal, three primary guiding principles were identified.

- **Understanding.** Convene community and Laughlin AFB representatives to study the issues in an open forum, taking into consideration both community and military viewpoints and needs. This includes public outreach and input.
- **Collaboration.** Encourage cooperative land use and resource planning between Laughlin AFB, the City of Del Rio, Val Verde County, and Kinney County so that future community growth and development are compatible with the training and operational missions on the base while, at the same time, seeking ways to reduce operational impacts on adjacent lands.
- **Actions.** Provide a set of tools, activities, and procedures from which local jurisdictions, agencies, and the installation can select and then use to implement the recommendations developed during the JLUS process. The actions proposed include both operational measures to mitigate base impacts and local government and agency approaches to reduce impacts on military operations.

1.4 Public Outreach

One of the most critical principles of the JLUS process is to create a community-based plan that builds consensus and obtains buy-in from varied interests, including residents and property owners, local elected officials, business interests, and military representatives. To achieve the outlined JLUS principles and objectives, the Del Rio JLUS process utilized a public outreach program that included a variety of opportunities for interested parties to contribute to the development of the plan.

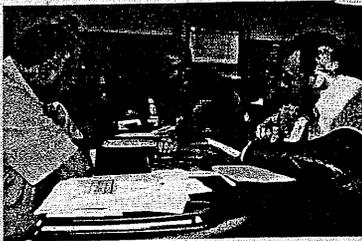
Stakeholders

Identifying stakeholders is a key component to any planning process. Informing or involving them early in the project is instrumental in the identification of stakeholder concerns and the development of plans to address these concerns. Stakeholders include individuals, groups, organizations, and political entities interested in, affected by, or

affecting the outcome of a decision or project. For the Del Rio JLUS, identified stakeholders included, but were not limited to:

- City and county elected officials, representatives, and staff
- Local, regional, and state planning regulatory and land management agencies
- DOD officials (including OEA representatives) and military installation personnel
- Environmental advocacy organizations
- Nongovernmental organizations (NGOs)
- Public Landowners and other interested persons
- Other special interest groups (including local educational institutions and school districts)

Policy and Technical Committees



The development of the Del Rio JLUS was guided by two committees, the Policy Committee (PC) and the Technical Oversight Committee (TOC). The PC was established at the beginning of the project to provide guidance and input on policy issues, provide overall direction to the process, and review study findings.

The TOC was established to provide technical expertise to the PC and the project team. The TOC consisted of City and County planners, military planners and technical specialists, state agency representatives, and others with technical expertise critical to creating a plan that could be implemented. This committee identified issues to be addressed, provided feedback on report development, and evaluated implementation options for the PC.

Table 1-1 summarizes the participants and responsibilities of the two committees and the JLUS sponsors.

Table 1-1. Committee Participants and Responsibilities

Committee / Roles	Participants	Responsibilities
Sponsors	<ul style="list-style-type: none"> ▪ OEA ▪ City of Del Rio 	<ul style="list-style-type: none"> ▪ Coordination ▪ Accountability ▪ Grant Management ▪ Financial Contribution
Policy Committee	<ul style="list-style-type: none"> ▪ City of Del Rio, Mayor ▪ City of Del Rio, Councilpersons ▪ Kinney County, Sheriff ▪ Val Verde County, Commissioners ▪ State Senate Representative, District 19 ▪ Texas House Representative, District 74 ▪ US House Representative, District 23 ▪ Laughlin AFB Commanding Officer ▪ Del Rio Military Affairs Association 	<ul style="list-style-type: none"> ▪ Policy Direction ▪ Study Oversight ▪ Monitoring ▪ Report Adoption
Technical Oversight Committee	<ul style="list-style-type: none"> ▪ Military Department Leaders ▪ Local Business Representatives ▪ State and Federal Agencies ▪ Subject Matter Experts (Developer, Environmentalist, etc) 	<ul style="list-style-type: none"> ▪ Technical Issues ▪ Alternatives ▪ Report Development ▪ Recommendations

Source: Matrix Design Group, 2007

PC and TOC served as liaisons to their respective stakeholder groups. PC and TOC members were charged with conveying committee activities and information to their organizations or constituencies and, subsequently, relaying their organization's comments and suggestions back to both committees for consideration. PC members were encouraged to set up meetings with their organizations or constituencies to facilitate this input. Meetings were held throughout the process to ensure the JLUS identified and appropriately addressed local issues. Objectives accomplished at each meeting are highlighted as follows:

PC and TOC Meetings

Policy Committee

- Meeting #1 April 19, 2007
- Meeting #2 June 14, 2007
- Meeting #3 September 13, 2007
- Meeting #4 May 21, 2008
- Meeting #5 July 2, 2008

Technical Oversight Committee

- Meeting #1 April 19, 2007
- Meeting #2 June 13, 2007
- Meeting #3 August 30, 2007
- Meeting #4 October 24, 2007
- Meeting #5 May 21, 2008

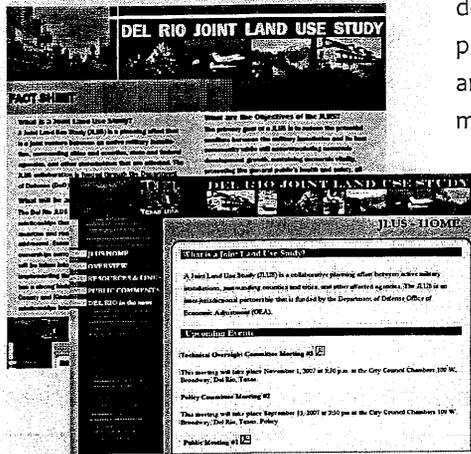
- **Meeting #1** – This meeting was conducted to educate the committee members on military and community activities, as well as encroachment issues / compatibility factors.
- **Meeting #2** – This meeting reintroduced the project to the committees, educated representatives on military and community activities, and identified encroachment issues based on a defined set of compatibility factors.
- **Meeting #3** – This meeting reviewed the identified encroachment issues, prioritized issues, and discussed initial strategies and tools for addressing identified issues.
- **Meeting #4** – This meeting refined the draft strategies and tools developed.
- **Meeting #5** – At this meeting, the committees reviewed the Draft JLUS report.

Public Forums

In addition to the PC and TOC meetings, a series of public forums were held throughout the development of the study. These forums provided an opportunity for the exchange of information with the greater community, assisted in identifying the issues to be addressed in the JLUS, and provided input on the strategies proposed. Each forum included a traditional presentation and oral comment session preceded by an informal, open house. These meetings included facilitated exercises providing a “hands on,” interactive opportunity for stakeholders to participate in the development of the plan.

- **Public Forum #1 August 29, 2007**
This forum introduced the JLUS program and process to the public, defined the project, presented the initial land use analysis, and collected information from the public on encroachment concerns. During this meeting, residents were asked to participate in surveys and discussions used to identify compatibility issues relevant to Laughlin AFB and the surrounding community.
- **Public Forum #2 July 2, 2008**
This forum presented the draft recommendations, strategies and implementation tools. Input will be solicited from the public and reviewed for incorporation into the Final JLUS.

Public Outreach Materials



www.westplanning.com/docs/delrio

At the beginning of the JLUS program, a Fact Sheet was developed describing the JLUS program, objectives, methods for the public to provide input into the process, and the Del Rio JLUS proposed study area. This Fact Sheet was made available at all meetings for all interested members of the public.

In addition to the Fact Sheet, a project website was developed and maintained that provided stakeholders, the public, and media representatives with access to project information. This website was maintained for the entire project to ensure information was easily accessible. Information contained on the website included: program points of contact, schedules, documents, maps, public meeting information, and downloadable comment forms.

1.5 JLUS Implementation

Once completed, it is important to note that this JLUS is not an adopted plan. It is a strategy guide that will be used by local jurisdictions, agencies, and organizations in the study area to guide their future compatibility efforts. For instance, local jurisdictions will use the strategies in this JLUS to guide future general plan and zoning updates, as well as assist in the review of development proposals. Laughlin AFB will use the JLUS to guide their interaction with local jurisdictions on future projects, as well as manage internal planning processes with a compatibility based approach. It is through the future actions of the stakeholders involved that the JLUS strategies will become a reality.

The key to implementation of the strategies presented in this JLUS is the establishment of the JLUS Coordinating Committee that oversees the implementation of the JLUS after it is complete. Through this Committee, local jurisdictions, Laughlin AFB, and other interested parties will be able to work together to establish procedures, recommend or refine specific actions for member agencies, and make adjustments to strategies over time to ensure the JLUS remains relevant to the planning issues of the area.

1.6 JLUS Document Organization

The following is a brief overview of the organization of the Del Rio JLUS, including the contents of each section and materials included in the appendices.

Chapter 1, Introduction. Chapter 1 provides an introduction and context for the Del Rio JLUS. This chapter describes the principles and objectives used to guide development of the JLUS, who was involved in making the JLUS a success, public outreach methods, and the organization of the document.

Chapter 2, Study Area Profile. In developing a JLUS, a good understanding of the installation and local jurisdictions within the study area is necessary. For the Del Rio JLUS, this chapter provides: an overview of Laughlin AFB's history, as well as a description of the primary activity areas on the base; a look at the current mission, facilities, and aircraft located at the base; military family housing assets; the economic impact of the base on the region; and a discussion of future missions. This is followed by an overview of the region's growth potential and a profile of the study area in Val Verde County, Kinney County and the City of Del Rio. This profile includes population, housing, and employment statistics.

Chapter 3, Compatibility. Compatibility, in relationship to military readiness, can be defined as the balance or compromise between community needs and interests and military needs and interests. The goal of compatibility planning is to promote an environment where both entities can coexist successfully. To develop potential solutions, it is critical to understand the nature of existing and potential compatibility issues. This section presents the compatibility issues identified for the Del Rio JLUS. These issues were identified based on input from the PC and TOC, members of the public, existing plans and technical reports, and evaluation by the Project Team. This chapter provides a detailed analysis of land use in the City of Del Rio, Val Verde County and Kinney County, as well as other identified compatibility issues.

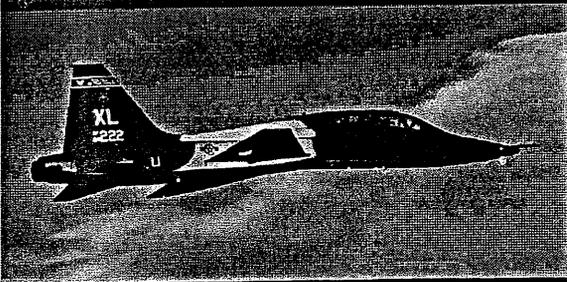
Chapter 4, Existing Plans and Programs. This chapter provides an overview of relevant plans, programs, and studies currently used to address compatibility issues in the study area. This includes technical studies, such as the current Laughlin AFB AICUZ Study, local general plans, and zoning ordinances.

Chapter 5, Implementation Plan. The final chapter of the Del Rio JLUS provides a specific course of action that has been developed cooperatively with representatives from local jurisdictions, Laughlin AFB, state and federal agencies, local organizations, and interested individuals and landowners. The recommendations in this section are the result of a collaborative planning process and represent a true consensus plan: a realistic, coordinated approach to compatibility planning developed with the support of the stakeholders involved.

Appendices. The main JLUS document is supported by the following appendices.

- A. Fact Sheet
- B. Compatibility Issues
- C. Land Use Compatibility Guidelines
- D. Sample Avigation Easement
- E. Sample Disclosure Language
- F. Sample Joint Airport Board Zoning Ordinance
- G. Chapter 241, Texas Local Government Code, Municipal and County Zoning Authority Around Airports
- H. Sample Request for Interim Study
- I. HB 1852
- J. FAA Part 77

Please see next page.



STUDY AREA PROFILE

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2.3 County and City Profiles	2-24

This chapter provides information about Laughlin Air Force Base (AFB), Val Verde County, Kinney County and the City of Del Rio, to provide the reader with an understanding of the Joint Land Use Study (JLUS) study area and the mutual importance of the base and local communities. Additionally, it provides decision-makers and stakeholders with an overview of area-wide development trends and growth potential, as well as a breakdown of factors leading to Laughlin AFB's role as a strategic and national asset. This information allows for a comprehensive means of reaching consensus on local land use issues and enables stakeholders to make informed decisions on future growth and development.

2.1 Laughlin AFB

History



Laughlin AFB trained on the B-26 Marauder during World War II

The stated mission of Laughlin AFB is to “graduate the world’s best-trained pilots through teamwork and innovation.”

Since its opening, the training of Air Force pilots has been the principle mission for Laughlin AFB. Established in 1942 as the Laughlin Army Air Field, the installation provided training for the Martin B-26 Bomber (the Marauder) for World War II personnel. Closed after the war, the base reopened in 1952 as Laughlin AFB to support Air Force training for the Korean War. During the 1950s and 1960s, Laughlin AFB base served as home to several U-2 high altitude reconnaissance aircraft from the 408th Strategic Reconnaissance Wing. Among the first to provide photographic evidence of Soviet missile installations in Cuba, these aircraft provided distinguished service to the Air Force prior to their relocation to Davis-Monthan AFB in Arizona in the late 1960s. Since then, Laughlin AFB has concentrated on executing its flight training mission.

In 1993, the operations group at Laughlin AFB was realigned under the newly designated Air Education and Training Command (AETC). With this transition, the Air Force implemented the Student Undergraduate Pilot Training (SUPT) program which was the first of its kind. This intensive

52 week program integrates primary flight training and specific advanced track training. Since the program transition, there have been over 12,000 Air Force pilots trained at the base, currently producing an average of 400 new pilots annually. Air Force air power begins at Laughlin AFB with graduates assigned to several different aircraft supporting the peacetime and wartime operations. Often, in less than one year after graduation, pilots trained at Laughlin AFB are flying operational missions in Iraq, Afghanistan, and other areas requiring US air power.

Units at Laughlin AFB

47th Flying Training Wing (47 FTW)

The host unit of Laughlin AFB is the 47th Flying Training Wing, which is responsible for training United States Air Force (USAF), Air Force Reserve, Air National Guard, and allied nation military pilots under the SUPT program and the Introduction to Fighter Fundamentals (IFF) course. There are four subordinate units that support the mission of the 47 FTW. These are the Operations Group, Mission Support Group, Medical Group, and the Maintenance Directorate. Figure 2 1 illustrates the organization of the 47 FTW.

47th Operations Group (47 OG)

The 47th Operations Group supports the entire USAF and allied nations with the SUPT program and IFF training. The 47 OG also provides airfield management at Laughlin AFB. There are a total of five active squadrons, a support squadron, and a reserve squadron. The 52 weeks of intensive SUPT training includes approximately 900 hours of aircraft, simulator, and classroom time. The IFF course is specialized jet training for selected pilots following successful completion of the SUPT program. The IFF course is an eight week course that comprises approximately 120 to 140 hours of aircraft, simulator, and classroom time. The Fixed wing Qualification course is another specialized training course to qualify selected rotary wing pilots to perform the duties and responsibilities of flying fixed wing. This 40 week training course is conducted in the T 6 and T 1 aircraft and is approximately 700 hours of aircraft, simulator, and classroom time. The missions of the squadrons are described below:

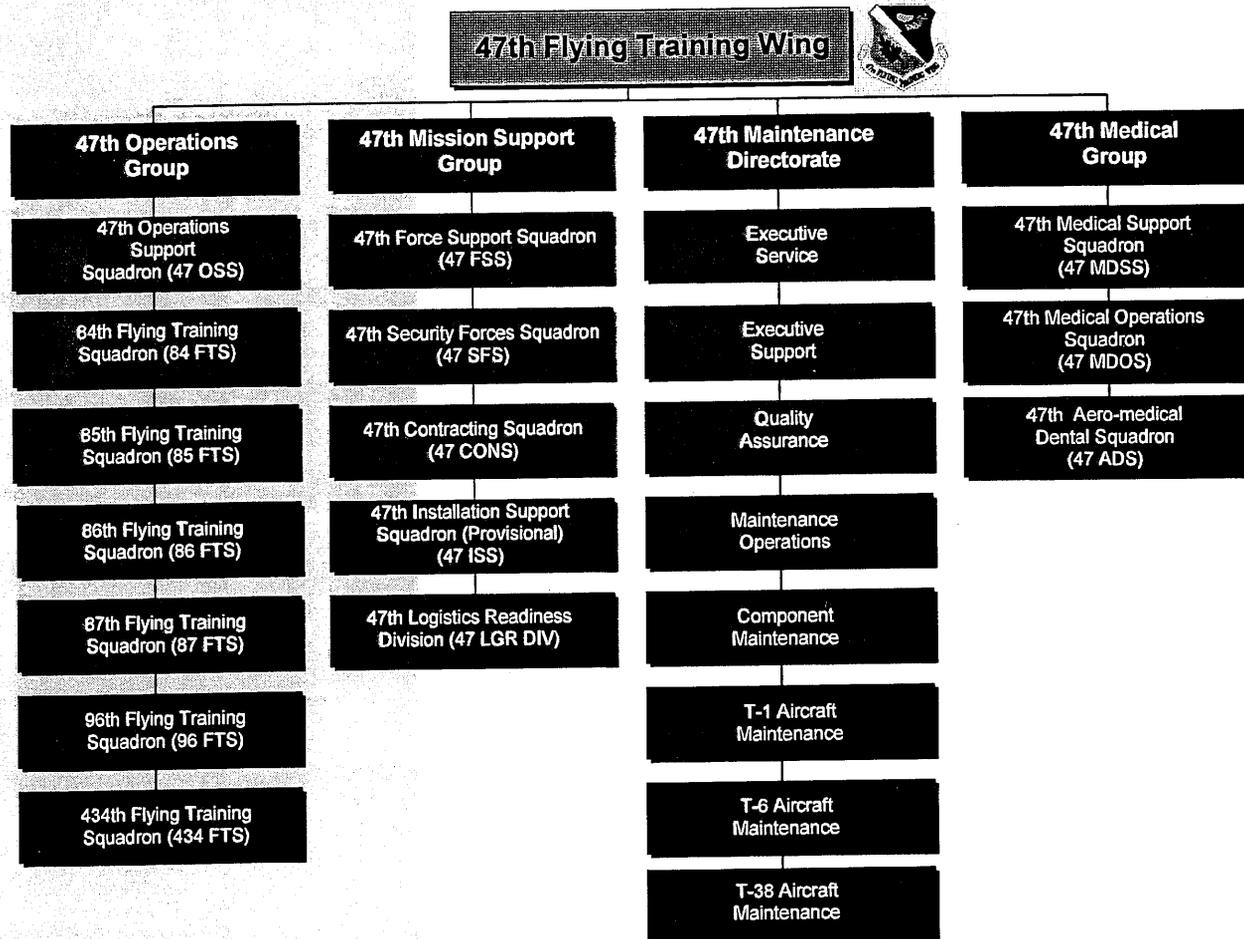
The 84th Flying Training Squadron (FTS) and the 85 FTS conduct the initial flying training and fixed wing qualification using the T 6A Texan II.

The 86 FTS specializes in advance airlift tanker training with the T 1A Jayhawk.

The 87 FTS specializes in fighter bomber flight training with the T 38C Talon Supersonic Trainer.

- The 96 FTS is a reserve supplemental squadron with instructor pilots that are trained in the T-6A, T-1A, and the T-38C aircraft.
- The 434 FTS provides advanced fighter training using the T-38C.
- The 47th Operations Support Squadron (47 OSS) supports all flying training units for Laughlin AFB by providing instructional program development and academic instruction for the SUPT program, student management, air traffic control, airspace and airfield management, weather services, simulator and instruction, aircraft scheduling, aircrew flight records and life support.

Figure 2-1. Laughlin AFB Organizational Structure



47th Mission Support Group (47 MSG)

The 47 MSG is responsible for the daily operations and services of the base. There are six units (five squadrons and one division) that comprise the group.

The 47th Force Support Squadron (47 FSS) was formed in May 2007 as a test squadron for the USAF. This new squadron merged former 47th Services Division and the 47th Mission Support Squadron. The 47 FSS supports the quality of life by operating the facilities and programs developed for military personnel and family. Additionally, it provides personal and professional personnel support.

The 47th Security Forces Squadron (47 SFS) supports the installation with law enforcement and force protection. In addition, the squadron also provides worldwide deployment for security support wherever needed.

The 47th Contracting Squadron (47 CONS) is comprised of all contractors that support operations at Laughlin AFB.

The 47th Installation Support Squadron (Provisional) (47 ISS) was formed in May 2008. This squadron combines the former 47th Civil Engineer Squadron (47 CES) and 47th Communications Squadron (47 CS).

The Civil Engineer portion of the 47 ISS is responsible for 5,351 acres of land and the ongoing operations, maintenance, and repair of all of Laughlin facilities. It also provides engineering support for new construction and renovations, oversight of environmental programs, planning for disaster preparedness, and management of base utility systems and the fire protection agency.

The communications element of the 47 ISS performs all acquisition and support of communications systems and infrastructure.

The 47th Logistics Readiness Division (47 LGR DIV) manages all surface and air transportation vehicles and equipment.

47th Medical Group (47 MDG)

The 47 MDG is composed of three squadrons that provide direct medical and dental services to eligible personnel and family.



Current Mission Operations

47th FTW Maintenance Directorate (47 FTW / MX)

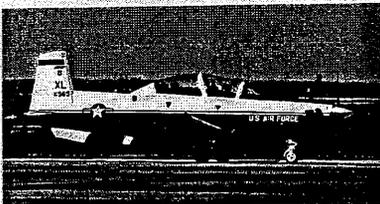
The 47 FTW Maintenance Directorate is a Group equivalent comprised of civil service, military, and contract technicians for the support of the SUPT Program.

Source: Laughlin AFB General Plan and www.laughlin.af.mil

Under the SUPT program, training pilots start with basic operating and flight training. They then move on to specific flight track training in fighter-bomber, airlift-tanker, turbo-prop aircraft, or helicopters. Three aircraft are used for training at Laughlin AFB: the T-6A Texan II, T-38C Talon, and the T-1A Jayhawk; however, the T-6A Texan is the primary training aircraft. The T-38C Talon is used for specialized advanced training in fighter-bomber aircraft. The T-1A Jayhawk is used for pilots selected to fly airlift or tanker aircraft.

In late 2006, the IFF course relocated to Laughlin AFB at the recommendation of the 2005 Base Realignment and Closure (BRAC) Committee. This course is for pilots who have completed specialized undergraduate pilot training and are advancing to the sophisticated high-performance fighter jets, such as the F-15, F-16, F-22A, F-35, or A-10. Using the T-38C, IFF students gain valuable experience and achieve proficiency in air-to-air, air-to-ground, and in-depth low-level flying.

Aircraft



T-6A Texan II

The T-6A Texan II is a single engine turbo-prop aircraft with two highly dependable ejector seats for the instructor and the student. In the summer of 2004, the T-6A replaced the T-37B Tweet, which had been the primary training aircraft. Both aircraft were designed for primary use in the SUPT program and have very similar operating characteristics. Due to the similarities, there were little changes to flight tracks and traffic patterns when the T-6A began use at the installation. The change from the T-37 to the T-6A has been welcomed by instructors and new pilots due to the T-6A's reliability and simplicity in performing aerobatics.



T-38C Talon

The T-38C Talon is a twin engine, high-altitude, supersonic jet trainer. It is used in the advanced phases of the SUPT program for training of bomber or fighter aircraft. The T-38C is specifically flown in aerobatics, formation, night, instrument, and cross-country navigation training. The cockpit accommodates the instructor and student pilot who sit in rocket-pressured ejection seats. The T-38C uses a gun sight and an electronic "no drop bomb" scoring system for testing.

T 1A Jayhawk

The T 1A Jayhawk is a medium range, twin engine jet trainer that seats a pilot, co pilot, and an instructor. It also has structural enhancements that provide increased resistance to bird strikes and an additional fuselage fuel tank.

Table 2.1 displays the number and type of aircraft that operate at Laughlin AFB.

Aircraft Type	Quantity
T 6A Texan II	110
T 1A Jayhawk	52
T 38C Talon	82
TOTAL	264

Source: Laughlin AFB Economic Impact Statement, FY07

Operating Areas

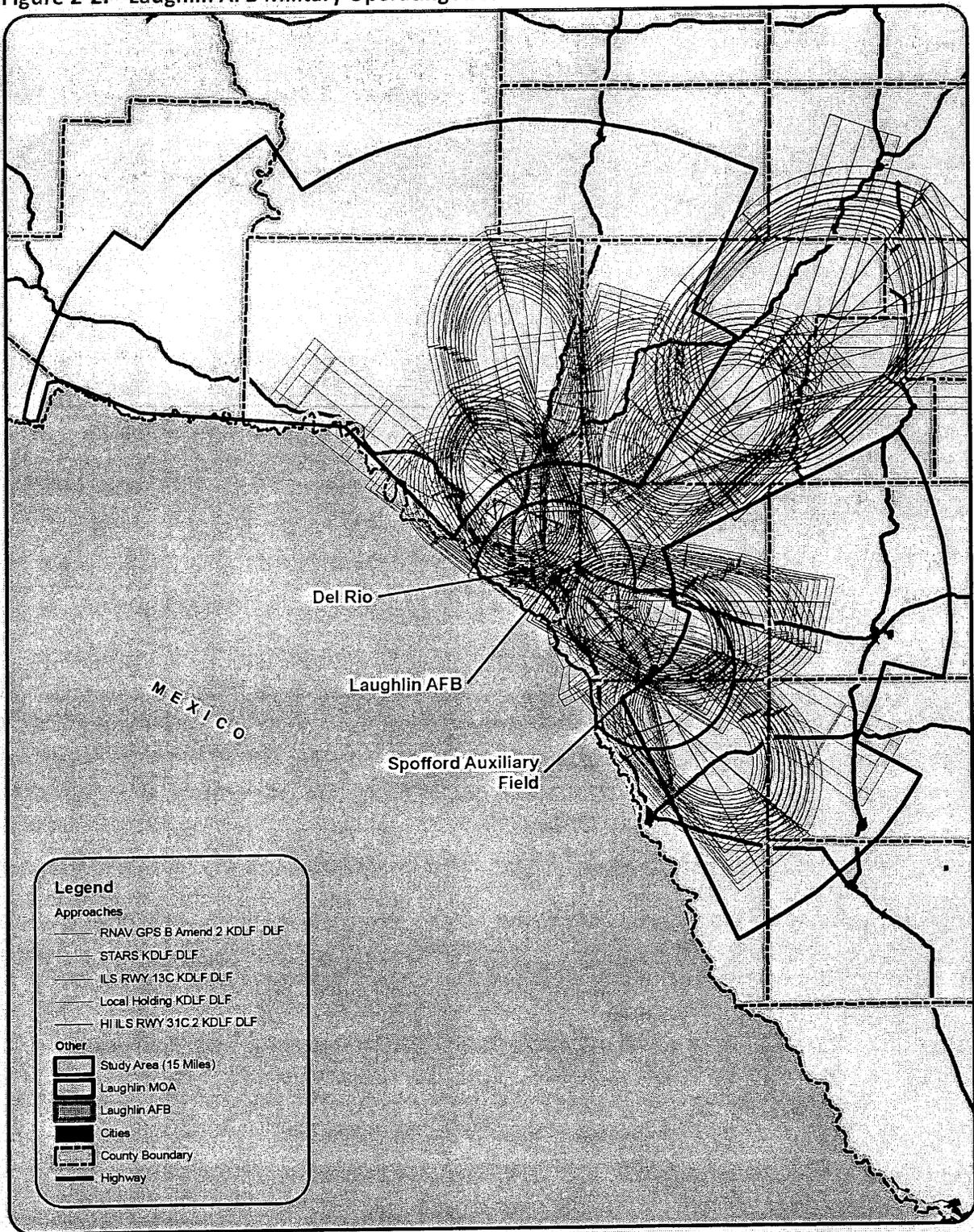
Laughlin AFB has two designated Military Operating Areas (MOA) from 7,000 to 23,000 feet altitude depth. These are displayed in Figure 2.2. MOAs are defined as general areas that are used for the operations of the base. Laughlin AFB has an average 1,856 average busy day flight operations and an annual average of 504,000 flight operations. An aircraft operation is defined as one take off / departure or one approach / landing. This is also known as a half closed pattern; therefore a closed pattern will consist of two operations. According to the Fiscal Year (FY) 2007 Economic Impact Statement, student pilots training at Laughlin AFB flew 62,238 sorties equating to 91,835 hours.

Installation Operation Tempo

The Laughlin AFB airfield operates Monday through Friday, whereas many airfields and airports operate 24 hours per day and seven days a week. With its compressed schedule, Laughlin AFB airfield compares to the Dallas Fort Worth International Airport in terms of the number of aircraft in the air at any one time (Table 2.2). A comparison of the total number of operations handled by Laughlin AFB and a number of civilian airports is shown below. As of 2007, Laughlin AFB airfield is the fourth busiest in AETC, 5th busiest in the Air Force, and the 12th busiest by comparison to the US International airports.

T 6A Texan II
repairing for a mission

Figure 2-2. Laughlin AFB Military Operating Areas



**Military Operating Areas
Del Rio Joint Land Use Study**



Matrix Design Group, Inc.
Integrated Design Solutions

Table 2 2. Aircraft Operations Comparison, 2007

Airfield/Airport	Operations
Atlanta Hartsfield	994,000
Dallas-Fort Worth	685,000
Laughlin AFB	504,000
London Heathrow	481,000
Detroit Metropolitan	467,000
Amsterdam Schiphol	454,000
Minneapolis/St. Paul	450,000
Newark Liberty	444,000

Source: LtCol Garrett Thompson, 47 OG/CD, Laughlin AFB, May 27, 2008.

Flight Planning

Adequate flight planning is extremely important for Laughlin AFB. One key reason for this is its proximity to the City of Del Rio. Flight planning on the base is the product of several considerations such as the routing of flight patterns away from populated areas. The controlling and scheduling of missions to minimize noise levels is a priority for the base. To mitigate the impact of noise on the surrounding community, the base limits most of its intensive operations to weekdays between 7:00 am and 10:00 pm, unless it is a scheduled night training flight. Only about 10 percent of air operations are conducted between 10:00 pm and 7:00 am.

Flight patterns for Laughlin AFB are influenced by three factors: accident potential to adjacent properties, aircraft noise, and hazards to flying operations from land uses, which include height obstructions. As a result of these factors, flight traffic flows in a southeasterly direction away from Del Rio, over 70 percent of the time.

In conjunction with careful and compatible flight planning, Laughlin AFB uses the following basic flight patterns:

Straight out departure / straight in arrival

Turn out after takeoff

Overhead pattern and landing

Closed pattern to the inside downwind

Instrument Flight Rule (IFR) or radar closed pattern to the northeast of the airfield to the outside radar downwind

- Visual Flight Rule (VFR) or radar closed pattern to the northeast of the airfield to the outside radar downwind
- Re-entry VFR patterns

Future Mission Operations

According to the 47 FTW Civil Engineer Squadron Community Planner, Laughlin AFB has no new missions planned at this time. The installation expects its mission of training pilots for the USAF and other nations to remain unchanged for the foreseeable future; however, the student population can vary depending on the needs of the Air Force. The typical student loads can range up to 800 students (average daily students). For FY08, the daily student total should average 457 students. For FY09, the base forecasts a daily student population average of 464.

Source: Jennifer Harris, 47 CES/CEAO, Laughlin AFB, May 6, 2008

Installation Setting

Laughlin AFB is located on 4,524 acres of land eight miles to the east of the City of Del Rio. The installation is also responsible for an additional 827 acres of land which includes Spofford Auxiliary Field in Kinney County, a recreation area in the Amistad area, and a Next Generation Weather Radar (NEXRAD) site in Brackettville. Table 2-3 details the acreage, facilities, and buildings for each of these locations, and Figure 2-3 shows the spatial relationship of Laughlin AFB to Spofford Auxiliary Field, also referred to as Laughlin AFB Auxiliary Field.

Table 2-3. Physical Assets of Laughlin AFB

Installation Description	Acres	Facilities	Buildings
Laughlin AFB	4,524	817	522
Auxiliary Airfield, Spofford	724	32	5
Recreation Annex, Amistad*	101	44	9
NEXRAD Site, Brackettville*	2	8	2
TOTAL	5,351	901	538

Note: () The locations in Amistad and Brackettville are not included in the Del Rio JLUS
Source: Laughlin AFB General Plan*

Runways

Pilots training at Laughlin AFB can use a total of four runways. Three runways are located on Laughlin AFB, and one is at Spofford Auxiliary Field. The three runways on Laughlin AFB are parallel and oriented

Figure 2 3. Laughlin AFB Facilities

northwest southeast. These runways and adjacent land designated for aircraft operations occupy just over 50 percent of the total acreage. The inner runway is designated as Runway 13R/31L. This

runway is 6,246 feet long. The center runway (Runway 13C/31C) is the primary runway and measures 8,858 feet in length. This runway is used by transient aircraft operations, as well as to support base operations. Runway 13L/31R is the outer runway and is 8,310 feet long. The center runway is typically controlled by the air traffic control tower personnel; whereas, the other two runways are controlled by instructor pilots in supervisory units.

The runway at Spofford Auxiliary Field is also oriented northwest southeast. This runway is 6,277 feet long and 150 feet wide. Used only for basic training and to alleviate congestion on main runways, the auxiliary field has no control tower. There are, however, Runway Control Structures (RCS) at the Spofford Auxiliary Field where instructor pilots monitor and instruct air operations. The auxiliary airfield has a single perpendicular taxiway that intersects the runway at midfield and provides access to an aircraft parking ramp.

Source: Laughlin AFB General Plan

Base Demographics

In FY07, Laughlin AFB had a reported population of 5,407 people (employment plus active duty dependents). In addition to that figure, the base graduated 355 students in FY07. Table 2 4 provides a breakdown of the direct employment figures.

Variable	Breakdown	Total
Appropriated Fund Military		1,574
Active Duty	1,482	
Air Force Reserve/National Guard	92	
Active Duty Military Dependents		2,526
Appropriated Fund Civilians		1,004
and Private Business		203
TOTAL BASE POPULATION		6,060
Students (1)		355

Military Housing



Family housing at Laughlin AFB

Approximately 51 percent of Laughlin AFB military personnel and their families live off-base in local communities such as Del Rio.

Family Housing

Laughlin AFB's family housing is located on the west side of the installation separate from incompatible land uses such as Industrial and Aircraft Operations and Maintenance.

In October 2007, family housing at Laughlin AFB was privatized as part of the AETC Group II housing privatization project, which included a total of six USAF installations. The AETC project involved 2,257 total housing units. Of that number, 420 will be new units, 1,359 will be renovated, and 478 other units will require no work.

The Air Force conveyed (leased) Laughlin's existing 534 family housing units and 166 acres to a private developer, Pinnacle Hunt Communities, LLC, for a term of 50 years. Housing infrastructure systems such as streets and associated improvements, utilities, playgrounds, and recreation areas were included in the lease. The developer is responsible for the design, development, construction, renovation, and management of the family housing units at the installation. The February 2008 Laughlin AFB Privatization Master Plan provides a blueprint for housing privatization investment, operations, and maintenance. This Master Plan identifies a 2010 endstate housing stock of 450 units at Laughlin AFB. Pinnacle Hunt is also scheduled to construct a family housing community center for use by housing residents.

According to the Air Force, today more than 38 percent of housing does not meet modern standards and requires either major improvement or replacement. Through privatization, Laughlin AFB could offer more space, modern features, and additional amenities such as garages, hiking trails, and recreational facilities to residents. Other than personnel deemed key and essential, married personnel stationed at Laughlin AFB have the option of living in privatized housing or living in the local community. Improving living conditions at the installation creates more competition for the Del Rio housing market as on-base housing becomes more attractive and convenient for military personnel and their families. The distribution of personnel living on and off-base is shown in Table 2-5.

Table 2 5. Military Housing Status

Designation	Living On-Base	Living Off-Base	Total
Active Duty	745	737	1,482
Air Force Reserve/ Air National Guard	2	90	92
Dependents	1,276	1,260	2,536
TOTAL	2,023	2,087	4,110

Source: Laughlin AFB Economic Impact Statement, FY07

Unaccompanied Housing

Unaccompanied officers permanently assigned to Laughlin AFB must find housing off the installation. Student pilots training in the SUPT program or IFF course must live in one of the three Unaccompanied Officer Quarters / Student Office Quarters or in one of the few duplexes currently designated for use by unaccompanied officers. These buildings have space for a total of 340 people.

Enlisted personnel permanently assigned to the installation and who are unaccompanied must live in one of the two Unaccompanied Enlisted dormitories. These buildings provide space for 264 people.

Source: Tinker Valero, 47 CES/CEH, 6 May 2007 and www.swtexaslive.com

Installation Economic Impact

Laughlin AFB contributed \$263 million to local economies in FY07.

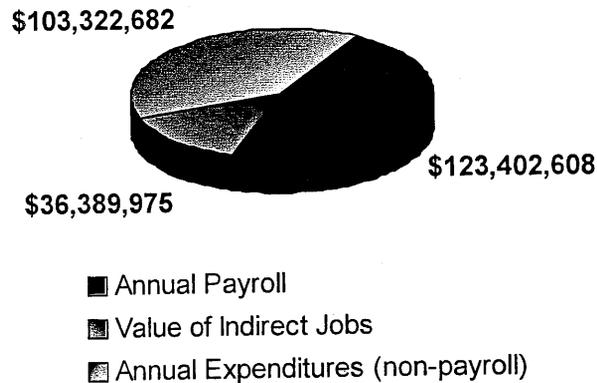
The relationship between a city and a military installation becomes entwined and complex over time. When population growth and residential development creep closer to a military installation, operational effectiveness may decrease, possibly resulting in the closure of that installation. When this occurs, one of the greatest challenges for a community to overcome is the economic hardship this inflicts on the economy. This is especially true for the significant economic ties existing between Del Rio and Laughlin AFB.

Compared with other major employers of the area in FY07, Laughlin AFB employed approximately 40 percent of the local workforce. As previously demonstrated, the base directly employed 2,871 people, with 45 percent being civilians. Also, Laughlin AFB generated employment for 999 people in indirect local jobs. Total annual expenditures excluding payroll for the installation in FY07 were \$103,322,682. This amount includes construction programs, service contracts, commissary, base exchange, health care, educational, and temporary duty dispersed to the

local community. The total annual economic impact to the local economy was \$263,115,265 (see Table 2-6).

Figure 2-4 displays the elements comprising the FY07 Laughlin AFB total economic impact to the local community while Table 2-6 provides the corresponding dollar value of the elements.

Figure 2-4. Total Annual Economic Impact, Laughlin AFB (FY07)



Source: Laughlin AFB Economic Impact Statement, FY07

Table 2-6. Total Annual Economic Impact, Laughlin AFB (FY07)

Aircraft Type	Quantity
Annual Payroll	\$123,402,608
Number of Indirect Jobs Created	999
Value of Indirect Jobs	\$36,389,975
Annual Expenditures (non-payroll)	\$103,322,682
TOTAL Economic Impact	\$263,115,265

Source: Laughlin AFB Economic Impact Statement, FY07

2.2 Study Area Profile and Growth Trends

The Del Rio JLUS study area extends 15 miles from the centerline of the Laughlin AFB runway. This area encompasses all of the City of Del Rio, Laughlin AFB, and portions of Val Verde County and Kinney County. Although it falls outside of the primary study area, as an active training resource for student pilots, the Spofford Auxiliary Field is also addressed in the JLUS. The following information provides a profile for these entities in relation to population growth, housing growth, and housing

median home values. This information is presented to assist in setting the context for the JLUS.

Regional Trends

Located within the South Texas Border Region of southern Texas, the region is comprised of 13 counties including Val Verde County and the City of Del Rio. It has experienced significant growth from 1970 to 2000. During this 30 year period, the area experienced a dramatic 4.6 percent annual growth rate in their Gross Regional Product. This increased from \$5.3 billion in 1970 to \$20.3 billion in 2000. During the same period, both employment and population increased. Population increased 3.2 percent from 535,000 people in 1970 to 1.3 million people in the year 2000. Employment saw a correlating increase from 177,000 available jobs in 1970 to 535,000 jobs in 2000 (3.8 percent). Compared with the entire state of Texas, the South Texas Border Region accounted for 6.7 percent of the population and 4.4 percent of the employment.

Source: June 2002, Texas Comptroller of Public Affairs, South Texas Border Region Outlook Report

Study Area Trends

Population Growth Trends

As shown in Table 2 7, population growth over the past seven years in Val Verde County, Kinney County, and the City of Del Rio is well below that of the State of Texas. However, Val Verde County and Del Rio growth over that period greatly exceeds the growth in neighboring counties, which have experienced declines in their populations. The overall low growth rates may be attributed to the rural nature of these counties.

Projected growth to the year 2030 shows a different situation than past growth in all of these jurisdictions. Val Verde County is expected to grow with 5 percent of the projected growth of 35 percent. In addition, four of the five counties bordering Val Verde County are expected to experience double digit population growth, with the majority surpassing 20 percent. Del Rio growth is projected to reach just below 20 percent. With completion of planned regional and local infrastructure improvements, this number may ultimately be higher. These improvements are discussed in detail below.

Table 2-7. Study Area Population

Jurisdiction	Population		% Change (2000 to 2007)	Population	
	2000	2007		2030	% Change (2007 to 2030)
Texas	20,851,820	23,834,206	14%	33,052,506	39%
Val Verde County	44,856	47,372	6%	63,265	34%
City of Del Rio	33,867	36,164	7%	42,869	19%
Kinney County	3,379	3,321	-2%	3,529	6%
Crockett County	4,099	3,962	-3%	4,966	25%
Edwards County	2,162	1,860	-14%	2,364	27%
Sutton County	4,077	4,229	4%	4,780	13%
Terrell County	1,081	995	-8%	1,200	21%

Sources: 2000 and 2007 data from Texas State Data Center; 2030 data from Texas Water Development Board, 2006 Regional Water Plan.

Increased interest in the City of Del Rio, improved transportation access, and future economic development potential are all factors expected to influence population growth.

In looking at growth potential, one of the major contributing factors is the stimulation of the local economy by the completion of the Ports-to-Plains Corridor. The Ports-to-Plains Corridor is a major planned highway improvement plan that is expected to directly impact development trends and growth in the City of Del Rio. With the completion of the corridor, a dramatic increase in travel to and through the City is anticipated. Amenities and facilities will need to be reevaluated and developed to accommodate the increase, furthering clearing way for employment opportunities. Historically, population increases and residential development have followed employment opportunities.

The City of Del Rio must monitor its growth trend annually during the horizon of this plan. Any significant deviations to the projected population, whether an increase or decrease, will indicate the need for the study to be re-evaluated.

Housing Growth Trends

Housing development in Val Verde County and the City of Del Rio are projected to increase with the area's anticipated growth in economy and development. This development can already be seen to the southeast of the City and adjacent to the base where plans are being formulated.

There are also plots of land to the east of US Highway 90 (Highway 90) that are reserved for private residential housing.

Table 2 8 displays occupancy status and the density of homes and population per square mile. Considering the size and location of Del Rio, the city has a considerably high population density of 2,194 people per square mile. If growth trends continue as expected over the next decade, either the density will increase or the land area of the entire city will increase. Regardless of which occurs, each poses a potential threat to Laughlin AFB in terms of compatibility factors for air operations.

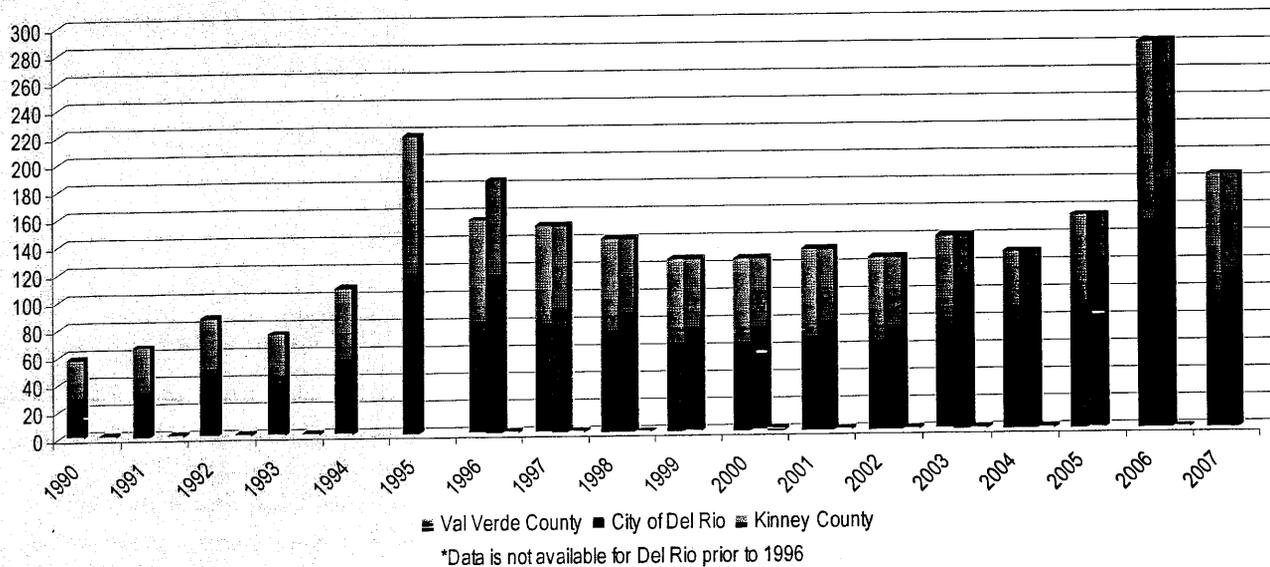
Table 2 8. General Housing Characteristics, City of Del Rio

Housing Type	Housing Units		Density/Sq. Mile	
	Occupied	Vacant	Population	Housing
Single Family Detached	7,888	669		
Multi Family Attached	2,003	337		
Mobile Home	854	83		
TOTAL	10,745	1,089	2,194	770.6

Source: Laughlin AFB Economic Impact Statement, FY07

There were approximately 11,895 housing units in the City of Del Rio in 2000, according to the US Census. Of this number, 11,754 units were single family dwellings in urban clusters. The remaining units were located in rural areas. Of the 10,925 acres of land designated for residential use, 10,409 acres are single family residential. Figure 2 5 illustrates the residential building permit activity in Val Verde County, Kinney County, and the City of Del Rio from 1990 to 2007. According to US Census Bureau data, City and County residential building permits issued from 1996 to 2007 are equivalent, which highlights Del stance within the County as the leading area for residential development over the past decade. From 1994 to 1995, Val Verde County experienced a 98 percent increase in residential building permits, with 218 issued from 108 the year before. From 1996 forward, Del building permit issuance remained at a relatively steady level with approximately 150 each year (give or take up to 30 permits). An exception to this steady stream occurred in 2006, when the City experienced a significant increase of 122 percent from 2005, which equates to an increase of 127 permits. More rural in nature, Kinney County has experienced very little building permit activity with an average of only 2 permits issued per year, ranging from 0 to 3 from 1990 to 2007.

Figure 2-5. Val Verde County, Kinney County and City of Del Rio Building Permit Trends (1990-2007)



A dramatic increase in the number of single family residential permits is expected after the completion of the Del Rio Loop. This coincides with anticipated growth in commercial and industrial developments. To invite development into the City, Del Rio has initiated and adopted a tax abatement and incentive program into their municipal code. Chapter 31, Economic Development and Incentives, focuses on providing tax abatement and incentives for commercial, industrial, and retail development. To qualify, the code sets criteria that must be met prior to approval. These criteria include: the entity maintaining a minimum number of full-time employment positions; filling a minimum number of positions with local residents; and the industry being considered a target industry. Location of the facility and the overall benefit the entity provides to the community also impacts the approval of abatement and incentive qualification.

This plan, coupled with the expected number of companies attracted by Ports-to-Plains Corridor would open the door for a shift in economic interest in Del Rio.

Regional Assessment

Infrastructure

Roadways

The City of Del Rio is served by two major highways, Highway 277 and Highway 90, which merge both north and east of the city. The merged portions of the highways run through the commercial zoned area of the City; however, Highway 90 diverges from Highway 277 in the industrial zoned area of the City and continues in an east west direction.

Figure 2 6. Del Rio Proposed Loop Road

As described earlier, The Ports to Plains Corridor is a 1,390 mile multimodal transportation corridor that will connect Denver, Colorado to the US Mexican border in Laredo, Texas. It is routed through New Mexico and Oklahoma. The intention of the corridor is to enhance trade relations by providing efficient infrastructure to transport goods and services between the US and Mexico. Eventually, the corridor will assist in trade between the US, Mexico, and Canada, as well. This will be accomplished by a connection to the Pacific Northwest. Because the highway being improved traverses through the heart of Del Rio, the County currently has plans to develop a loop road designed to absorb and alleviate congestion on local roads

east of the County (see Figure 2 6). The loop will also connect to the Laughlin / West Gate entrance of Laughlin AFB. The first phase of the project is slated to begin in 2008.

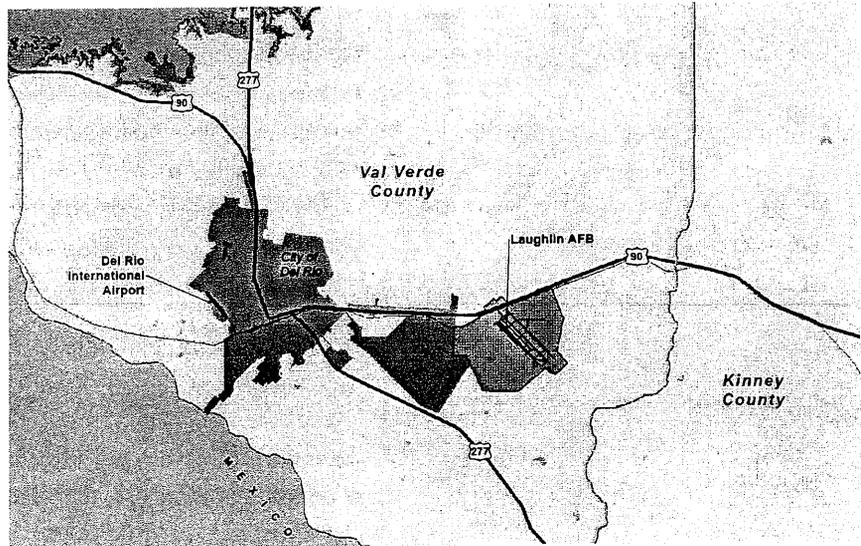
Air

The Del Rio International airport is located eight miles to the west of Laughlin AFB, in the southwest portion of the City. Figure 2 7 shows the proximity of the Del Rio airport to Laughlin AFB. It is a public airport with one 6,300 foot long runway. Typically used for general aviation, the airport also offers services to Houston with a major airline, Continental Airlines.

Currently, air operations at Laughlin AFB have created a transition corridor over the installation for aircraft arriving and departing the

municipal airport. Aircraft using this corridor are required to be in radio contact with the Laughlin AFB air traffic control tower.

Figure 2-7. Laughlin AFB and Del Rio International Airport



Environmental Resources

Amistad Dam and Reservoir

Amistad Dam and Reservoir was completed in November of 1969 by the International Boundary and Water Commission and is still maintained jointly by the US and Mexico. The dam is over six miles long and stands 254 feet above the riverbed. The dam was constructed for flood control and water conservation to benefit both Mexico and the US. Lake Amistad covers approximately 68,000 acres at conservation level and has a capacity of 5,658,600 acre-feet of water. The reservoir was built for flood control, conservation, irrigation, power, and recreation. The cleanliness, warmth, and clarity of the water attract a large number of tourists and local residents. There are also many submerged caves and underground rock formations popular with scuba divers.

Central Flyway

Val Verde County, the City of Del Rio, Laughlin AFB, and Spofford Auxiliary Field in Kinney County are located on the western edge of the Central Migratory Bird Flyway. There are roughly 600 varieties of birds that can be spotted in this area of Texas. The flyway forms when two smaller routes come together in southeastern Texas to create the majority of the Central Flyway.

Edwards Plateau

The Edwards Plateau, also known as Texas Hill Country, occupies over 36,000 square miles in 26 counties in southern Texas. The vegetation of the Edwards Plateau ranges from savannah grassland to brushland. The majority of the region supports grazing.

Val Verde County and Kinney County are unique in that they are covered by three ecoregions. Both counties are covered by the South Texas Plains, the Chihuahuan Desert and the Edwards Plateau. Although, the majority of Kinney County is located in the South Texas Plains, only the northeastern area is considered in the Edwards Plateau. The South Texas Plains have been primarily recognized for the cattle industry and copious wildlife.

Threatened and Endangered Species. The Texas Parks and Wildlife Department has identified a number of species for inclusion on Val Verde Endangered, Threatened, or Rare Species List. These species are listed below with both their federal and state listing status. Although all of these species are identified within Val Verde County, the presence of these species may not exist within the study area.

Birds

American Peregrine Falcon, (DL, E)

Arctic Peregrine Falcon, (DL, T)

Black capped Vireo, (LE, E)

Common Black Hawk, (T)

Interior Least Tern, (LE, E)

Peregrine Falcon, (DL, E,T)

Zone tailed Hawk, (T)

Fish

Blotched gambusia, (T)

Blue sucker, (T)

Conchos pupfish, (T)

Devils river minnow, (LT, T)

Pecos pupfish, (T)

Proserpine shiner, (T)

- Rio Grande darter, (T)
- Rio Grande silvery minnow, (LE, E)

Mammals

- Black bear, (T/SA,NL, T)
- Gray wolf, (LE, E)
- Ocelot, (LE, E)
- White-noised coati, (T)

Mollusks

- Texas hornshell, (C)

Reptiles

- Indigo snake, (T)
- Reticulate collared lizard, (T)
- Texas horned lizard, (T)
- Texas tortoise, (T)
- Trans-pecos black-headed snake, (T)

Plants

- Texas snowbells, (LE, E)
- Tobusch fishhook cactus, (LE, E)

Notes:

C = Candidate for Listing, Federal

DL = Species Delisted, Federal

LE = Listed Endangered, Federal

LT = Listed Threatened, Federal

T/SA = Threatened by Similarity of Appearance, Federal

E = Endangered, State

T = Threatened, State

NL = Not Federal Listed

Water Resources

Texas Water Development Board (TWDB)

The TWDB was established in 1956 to issue water development bonds for the conservation and development of water resources for the State through loans to political subdivisions. Today, there are 16 water planning areas (WPAs) in Texas that manage water resources through

TWDB funds and guidelines. The TWDB provides leadership, planning, financial assistance, information, and education for the conservation and development of water to these WPAs. Val Verde County lies within

Figure 2 8. Plateau Region Water Planning Area

Source: Texas Water Development Board

Region J the Plateau Region (see Figure 2 8).

Plateau Region Water Planning Area (WPA)

The Plateau Region, geographically defined by the southern edge of the Edwards Plateau, includes six counties: Bandera, Edwards, Kerr, Kinney, Real, and Val Verde. Portions of the Colorado, Guadalupe, Nueces, Rio Grande, and San Antonio river basins mark the region. Del Rio is one of two of the principal cities in the area, as the remainder of the Plateau Region includes range land, forest land, agricultural areas, government use (primarily that of Laughlin AFB), and rural areas. The 2007 State Water Plan projects that less than one percent of population will reside in this WPA by 2010. With a projected 52 percent population increase by 2060, it is expected that water demands will increase by 13 percent. Of these demands, Val Verde County and neighboring Kinney County are not expected to have significant water demands by 2060.

San Felipe Springs swimming hole in Del Rio

Source: www.edwardsaquifer.net

Groundwater for the Plateau Region is supplied by three aquifers: the Edwards Trinity (Plateau) Aquifer, which underlies nearly all of Val Verde and the remaining counties; the Trinity Aquifer; and the Edwards (Balcones Fault Zone) Aquifer. Surface water is fed by the San Felipe Springs, Las Moras Creek, the Frio River, the Upper Guadalupe River, Cienagas Creek, and the Nueces River. The San Felipe Springs are located in Val Verde County inside the City of Del Rio, supplying both the City and Laughlin AFB with water. Only two of the ten San Felipe Springs, accessed by pumps, are sourced by the City, and have never ceased to flow in the recorded history of their use.

The Texas Legislature authorized the establishment of groundwater conservation districts to manage local groundwater resources by providing for the conservation, protection, recharging, and prevention of waste of groundwater within their jurisdiction. The Plateau Region has four such districts; however, Val Verde County is the only county in the region not subject to a groundwater district's jurisdiction.

According to the Plateau Region Water Plan, prepared in 2006, the City of Del Rio is the only jurisdiction in the Plateau Region that is a wholesale water provider, providing water to Laughlin AFB and outlying subdivisions. By means of Texas water laws, a wholesale water provider may contract to sell more than 1,000 acre-feet of water in a given year of a five year time span prior to the adoption of the latest regional water plan. Table 2-9 shows Del Rio's wholesale demand within Val Verde County through 2060.

Table 2-9. Del Rio Wholesale Demand Projection (in acre-feet / year)

Water User Group	2000	2010	2020	2030	2040	2050	2060
City of Del Rio	11,988	12,898	13,817	14,646	15,314	15,855	16,281
Laughlin AFB	1,245	1,238	1,231	1,225	1,217	1,212	1,212
Other areas within Val Verde County	528	708	884	1,050	1,182	1,287	1,362

Source: Plateau Region Water Plan, 2006

Cultural Resources

Currently, there have not been cultural resource issues identified for the Del Rio JLUS, as cultural sites do not directly buffer Laughlin AFB, and therefore, do not offer encroachment challenges within installation operating areas. However, it is important to note the Amistad National Recreation Area (NRA) as an area of cultural resource significance, as it lies within the study area located just twelve miles north of the City along the Rio Grande River (see Figure 2-9). If development were to occur to the north of the City, issues relating to development near cultural sites could become an issue.



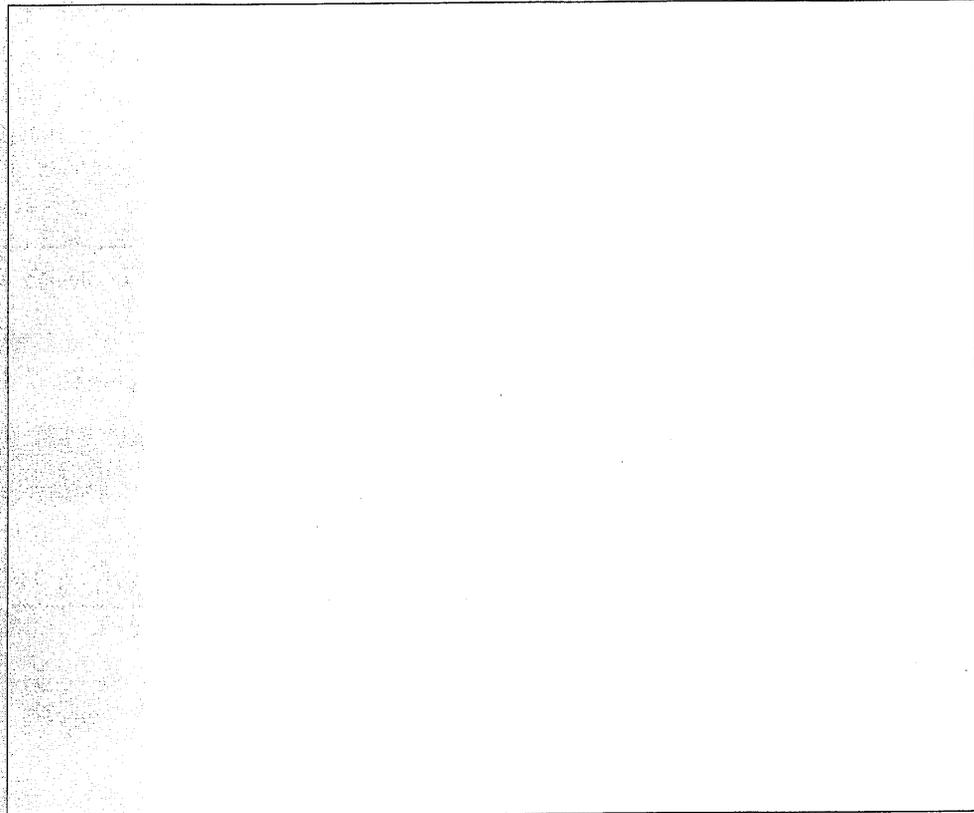
Parida Cave pictograph dating to the Archaic period

Source: National Park Service, 2008

The Pecos River region of the Amistad NRA dates from the Paleo-Indian occupation (before 7000 BC), the Archaic period (7000 BC to AD 600), the Late Historic period (AD 600 to 1600), up to the present. Four

National Register of Historic Places lie within the NRA, encompassing at least 182 archeological sites. The entire Amistad NRA manages about 1,900 known historic and prehistoric archeological sites. The main threat against these sites remains to be deterioration by water damage.

Figure 2.9. Amistad National Recreation Area



Source: National Park Service, 2008

2.3 County and City Profiles

Kinney County

Kinney County is located to the southeast of Val Verde County and is a part of the Rio Grande Plain Region. The County was commissioned in 1850 and was originally part of Bexar County. Kinney County has over 1363 square miles of land and has a population density of 2.5 persons per square mile. The county seat and most populated city in the County is Brackettville, with 1,876 people. This accounts for approximately 55 percent of the entire County population. According to the US Census, Kinney total 2000 population was 3,379 people. Just behind Brackettville, Spofford is the next most populated area with a population of only 75 people. To the southwest of the town is Spofford Auxiliary Field. Agriculture is the most prominent land use in the County supporting activities like ranching.

Val Verde County

Val Verde County, Texas was incorporated in 1885 with lands from Crockett, Kinney, and Pecos Counties. The County sits on a canyon-like plateau with a variety of vegetation. Val Verde translates into the “green valley.” Elevations in Val Verde County vary from 2,248 to 2,925 feet above sea level. The majority of land was and is still used for ranching and farming. The City of Del Rio is the county seat and accounts for roughly more than three quarters of the total County population. Throughout the history of Val Verde County, there has been a correlating increase between population growth and the amount of land used for agriculture purposes. This peaked in 1940, when there was a recorded high of 309 farms or ranches. Crops that bring the highest yield in Val Verde County are grains, fruits, and vegetables. Ranching includes goats, sheep, and cattle.

City of Del Rio

Del Rio is located in the southernmost portion of Val Verde County, with Kinney County less than 15 miles to the east. Del Rio is the most populated City in either county. Laughlin AFB is located approximately six miles east of downtown Del Rio. Original settlers knew the area by the nearby San Felipe Creek. In 1883, after the opening of the first post office, the city officially shortened its name from San Felipe del Rio to simply Del Rio. This was done mainly to avoid confusion with the nearby town of San Felipe de Austin. Developments in Del Rio can be dated back to just after the Civil War; however, the City was not incorporated until 1911.

The land within the city limits is predominately zoned for residential even though the land surrounding the City is primarily undeveloped or used for agricultural purposes. According to the Del Rio Comprehensive Plan, single and multi-family residential occupy a total of 10,925 acres, and a total of 1,009 acres are classified as commercial or industrial. Approximately three miles of land has been incorporated into the City located along Highway 90 abutting Laughlin AFB. Development along this strip is zoned for commercial; however, the area is sparsely developed with low density commercial and residential. As the City begins to grow, this area will need to be closely monitored to prevent incompatible land uses.

Please see next page.

3.1 Evaluation of Compatibility

During the preparation of the Del Rio JLUS, the public, the Policy Committee (PC), and the Technical Oversight Committee (TOC) assisted in identifying compatibility issues in or near the study area. At various workshops and public meetings, these groups identified the location and type of compatibility issues they thought existed today or could occur in the future. Other issues were also added by the project team based on evaluation of existing information. When reviewing this information, it is important to note the following:

- This section provides background on the issues discussed based on available information. The intent is to provide a context for discussion and is not designed or intended to be an exhaustive technical evaluation of existing conditions.
- The number for each issue matches the number of the corresponding compatibility factor. The letters were added to distinguish each issue. The numbers and letters used to identify each issue are not meant to convey priorities or rankings.
- Of the 24 standard compatibility factors, 13 factors were determined to not be an issue for this area (#2 Safety Zones, #4 Local Housing Availability, #7 Noise, #8 Vibration, #9 Dust, #10 Light and Glare, #12 Air Quality, #13 Frequency Spectrum Impedance and Interference, #14 Public Trespassing, #16 Legislative Initiatives, #19 Threatened and Endangered Species, #20 Marine Environments, and #21 Scarce Natural Resources).
- The issues presented in this chapter represent a consolidated list of issues as determined by the PC and TOC after consideration and discussion of all the issues identified throughout the duration of this process.

Compatibility Issues Identification Process

A total of 24 individual compatibility issues were identified during the JLUS process. The complete list of issues and corresponding maps identifying their respective locations can be found in Figures 3-1, 3-2, 3-3, and 3-4, as well as in Appendix B.

The three criteria used to evaluate the identified issues included current impact, issue location, and potential impact. Each criterion assessed each issue using a scale ranging from “1” being most critical to “3” reflecting least critical. The three criteria rankings were then averaged to determine the overall compatibility concern for each of the identified issues.

3.1 Evaluation of Compatibility

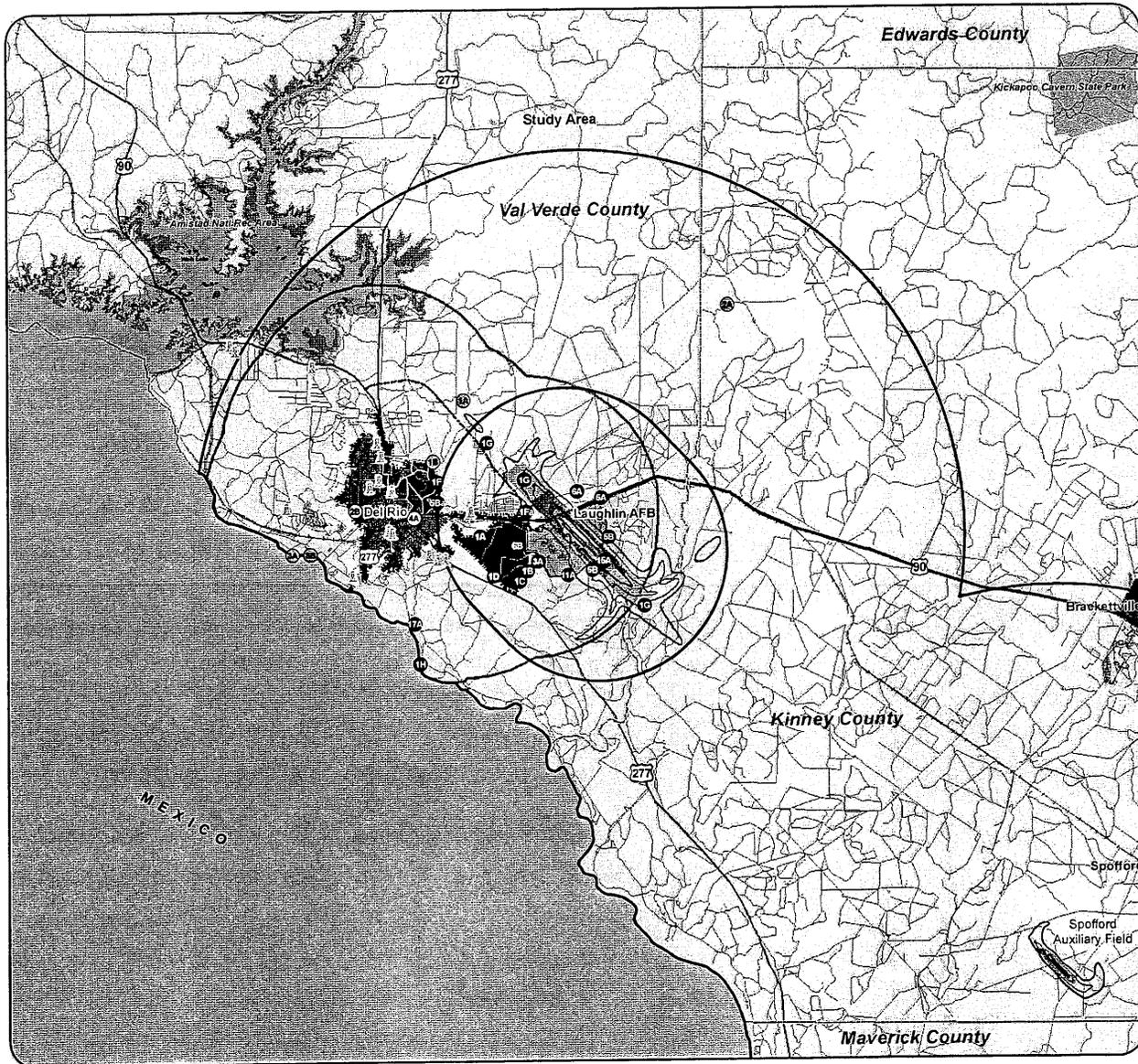
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Legend

Noise Contours*

- 60 dB DNL
- 70 dB DNL
- 75 dB DNL
- 80 dB DNL

Accident Potential Zones

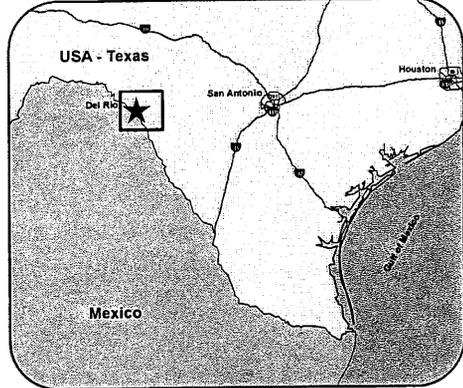
- APZ1
- APZ2

Other

- City Limit
- Extrajurisdictional Jurisdiction
- County Boundary
- Laughlin AFB
- Study Area (15 Miles)
- Spofford Field
- Del Rio International Airport
- FAA Visual Obstruction
- JAP Lower Sub Sections
- Proposed Loop Road
- Highway 90 Widening Project
- Railroad
- Highway
- Local Road
- Telecommunication Towers
- National State Parks

Compatibility Factors

- Man Made**
 - 1 Compatible Land Use
 - 2 Safety Zones
 - 3 Vertical Obstruction
 - 4 Local Housing Availability
 - 5 Infrastructure Extensions
 - 6 AT/FP
 - 7 Noise
 - 8 Vibration
 - 9 Dust
 - 10 Light and Glare
 - 11 Alternative Energy Development
 - 12 Air Quality
- Natural**
 - 13 Frequency Spectrum Impedance and Interference
 - 14 Public Trespassing
 - 15 Cultural Sites
 - 16 Legislative Initiatives
 - 17 Interagency Coordination
- Competition for Scarce Resources**
 - 1 Scarce Natural Resources
 - 2 Land, Air, and Sea Spaces
 - 3 Frequency Spectrum Capacity
 - 4 Ground Transportation Capacity

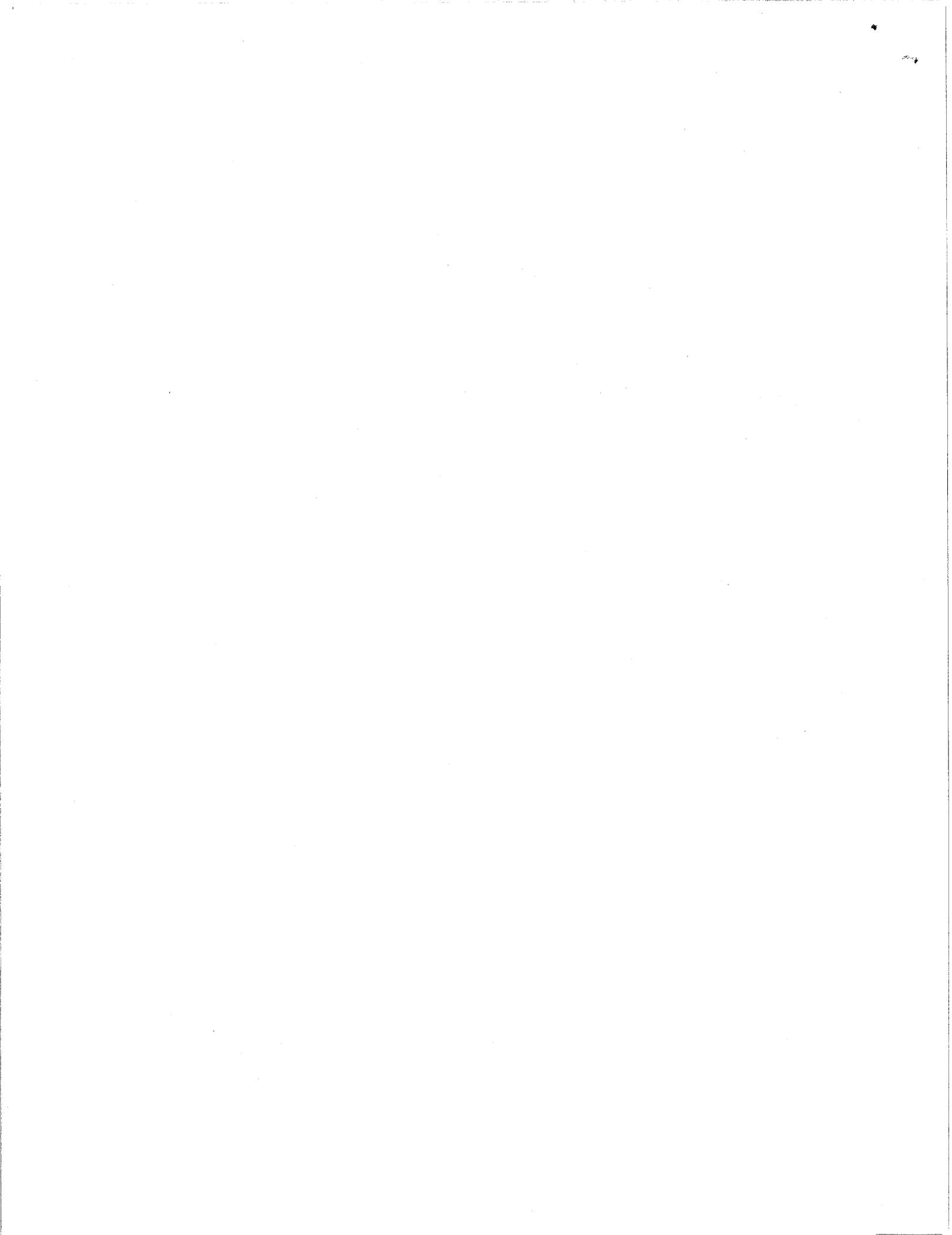


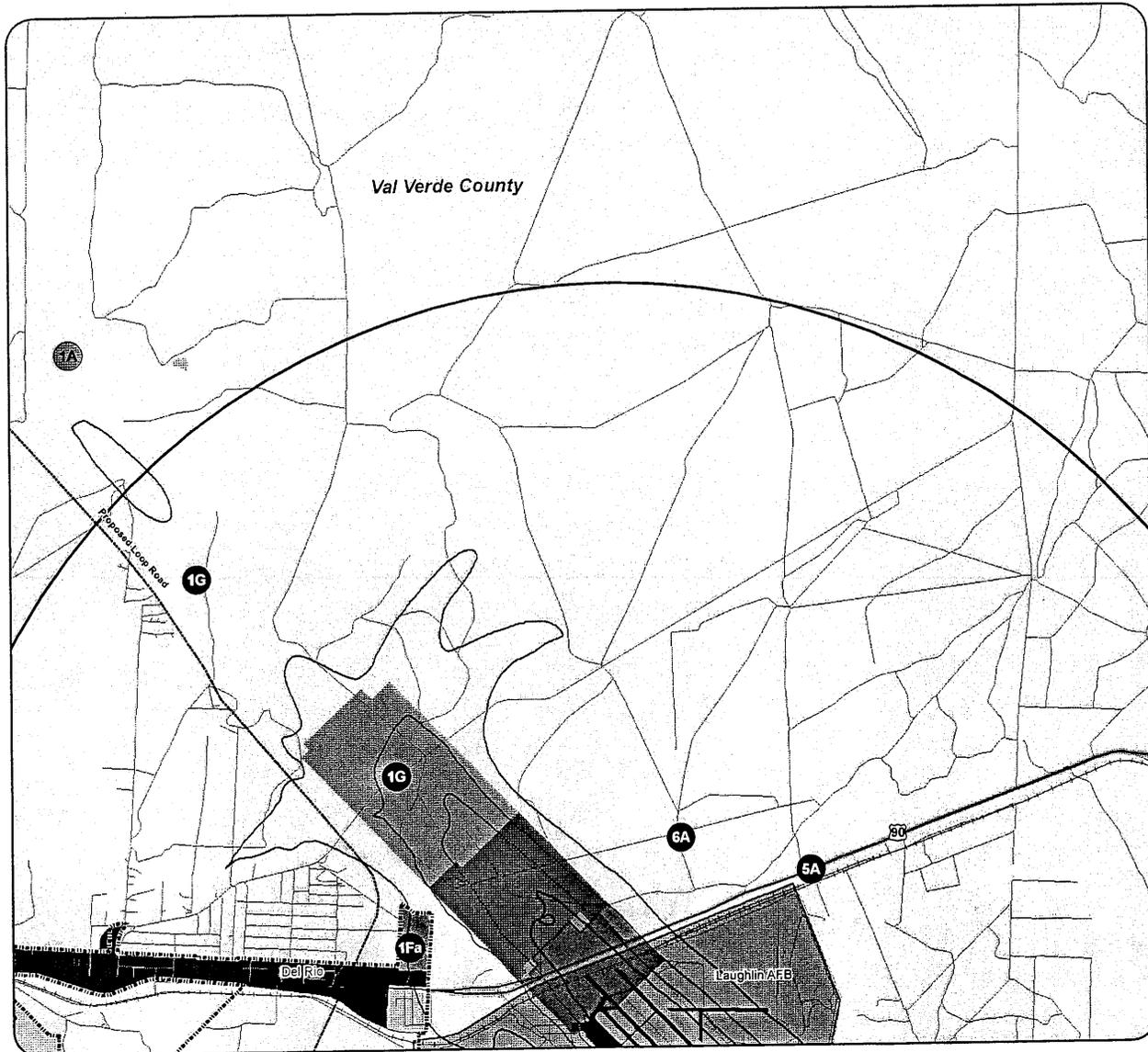
0 5 10 Miles

Matrix Design Group, Inc.
Integrated Design Solutions

**Compatibility Issues
Del Rio Joint Land Use Study**

Del_Rio_Fig_03_01_issues_studyarea_2008_06_28_RRR





Legend

Noise Contours*

- 65 dB DNL
- 70 dB DNL
- 75 dB DNL
- 80 dB DNL

Accident Potential Zones

- Clear Zone
- APZ

Del Rio Zoning Classifications

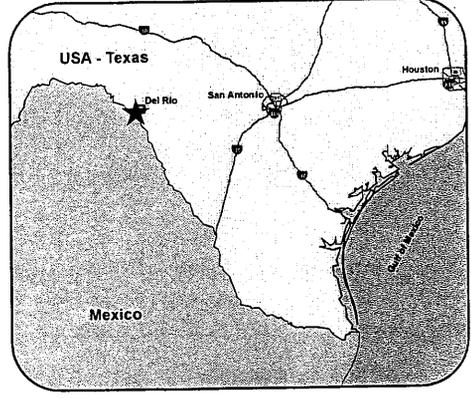
- Commercial
- Medium Density Residential
- Low Density Residential

Other

- City Limits
- County Boundary
- Laughlin AFB
- FAA Vertical Obstruction
- Proposed Loop Road
- SH50 Highway 50 Widening Project
- Railroad
- Highway
- Local Roads
- 2008 for Laughlin AFB
- 2002 to Quarter Road

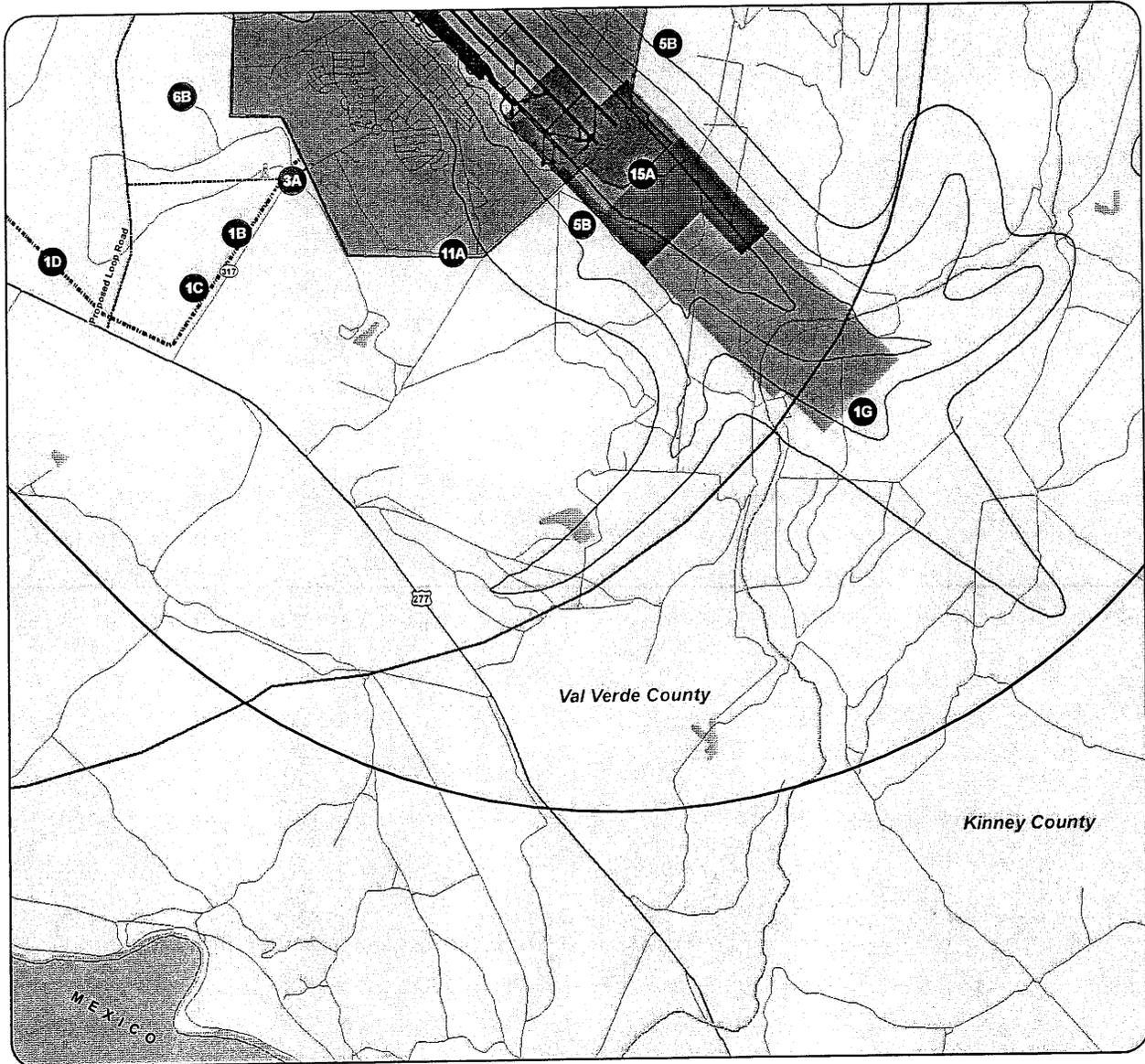
Compatibility Factors

- **Man Made**
 - 1 Compatible Land Use
 - 2 Safety Zones
 - 3 Vertical Obstruction
 - 4 Local Housing Availability
 - 5 Infrastructure Extensions
 - 6 AT/FP
 - 7 Noise
 - 8 Vibration
 - 9 Dust
 - 10 Light and Glare
 - 11 Alternative Energy Development
 - 12 Air Quality
 - 13 Frequency Spectrum Impedance and Interference
 - 14 Public Trespassing
 - 15 Cultural Sites
 - 16 Legislative Initiatives
 - 17 Interagency Coordination
- **Natural**
 - 1 Water Quality / Quantity
 - 2 Threatened and Endangered Species
 - 3 Marine Environments
- **Competition for Scarce Resources**
 - 1 Scarce Natural Resources
 - 2 Land, Air, and Sea Spaces
 - 3 Frequency Spectrum Capacity
 - 4 Ground Transportation Capacity



0 0.5 1 1.5 Miles

Compatibility Issues, North Del Rio Joint Land Use Study



Legend

Noise Contours*

- 65 dB DNL
- 70 dB DNL
- 75 dB DNL
- 80 dB DNL

Accident Potential Zones

- Clear Zone
- APZ-I
- APZ-II

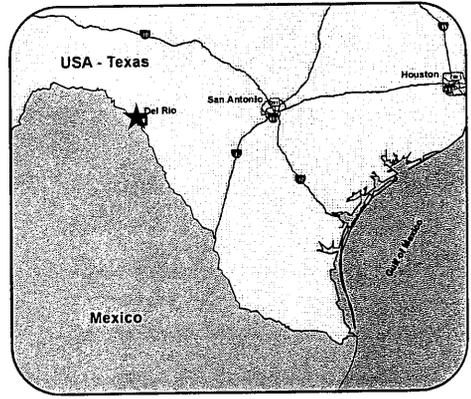
Other

- City Limits
- County Boundary
- Extrajurisdictional Jurisdiction
- Lights AFB
- FAA Vertical Obstruction
- Proposed Loop Road
- Railroad
- Highway
- Telecommunication Towers

*2008 by Jacobs AEC
2003 by Spafford Field

Compatibility Factors

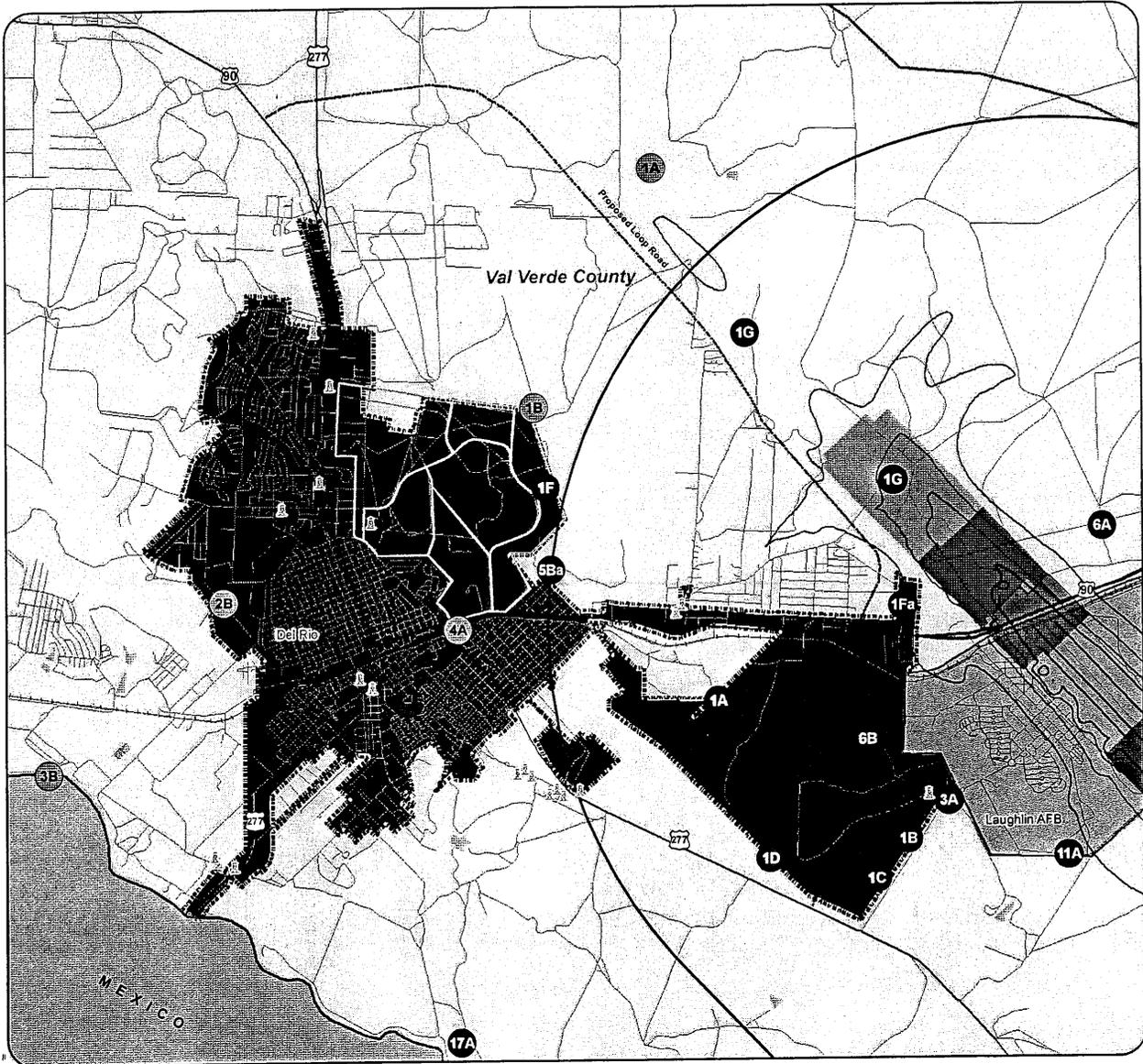
- Man Made
 - 1 Compatible Land Use
 - 2 Safety Zones
 - 3 Vertical Obstruction
 - 4 Local Housing Availability
 - 5 Infrastructure Extensions
 - 6 AT/FP
 - 7 Noise
 - 8 Vibration
 - 9 Dust
 - 10 Light and Glare
 - 11 Alternative Energy Development
 - 12 Air Quality
 - 13 Frequency Spectrum Impedance and Interference
 - 14 Public Trespassing
 - 15 Cultural Sites
 - 16 Legislative Initiatives
 - 17 Interagency Coordination
- Natural
 - 1 Water Quality / Quantity
 - 2 Threatened and Endangered Species
 - 3 Marine Environments
- Competition for Scarce Resources
 - 1 Scarce Natural Resources
 - 2 Land, Air, and Sea Spaces
 - 3 Frequency Spectrum Capacity
 - 4 Ground Transportation Capacity



0 0.5 1 1.5 Miles

Matrix Design Group, Inc.
Integrated Design Solutions

**Compatibility Issues, South
Del Rio Joint Land Use Study**



Legend

Noise Contours*

- 60 dB DNL
- 70 dB DNL
- 75 dB DNL
- 80 dB DNL

Accident Potential Zones

- Clear Zone
- APZ-1
- APZ-2

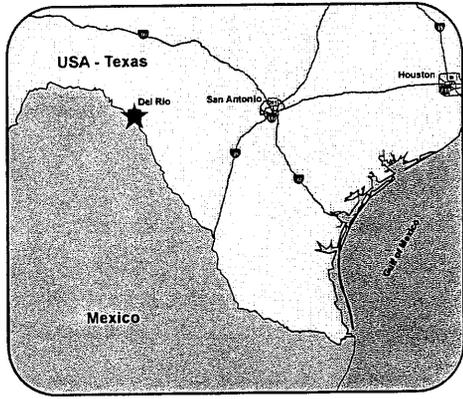
Other

- City Limits
- County Boundary
- Jurisdictional Jurisdiction
- Laughlin AFB
- FAA Vertical Obstruction
- JAP Lower Phases
- Del Rio International Airport
- Proposed Loop Road
- Highway 80 Widening Project
- Railroad
- Highway
- Local Road
- Telecommunication Towers

2008 for Laughlin AFB
2003 for Spofford Field

Compatibility Factors

- **Man Made**
 - 1 Compatible Land Use
 - 2 Safety Zones
 - 3 Vertical Obstruction
 - 4 Local Housing Availability
 - 5 Infrastructure Extensions
 - 6 AT/FP
 - 7 Noise
 - 8 Vibration
 - 9 Dust
 - 10 Light and Glare
 - 11 Alternative Energy Development
 - 12 Air Quality
 - 13 Frequency Spectrum Impedance and Interference
 - 14 Public Trespassing
 - 15 Cultural Sites
 - 16 Legislative Initiatives
 - 17 Interagency Coordination
- **Natural**
 - 1 Water Quality / Quantity
 - 2 Threatened and Endangered Species
 - 3 Marine Environments
- **Competition for Scarce Resources**
 - 1 Scarce Natural Resources
 - 2 Land, Air, and Sea Spaces
 - 3 Frequency Spectrum Capacity
 - 4 Ground Transportation Capacity



0 1 2 Miles

Compatibility Issues, West Del Rio Joint Land Use Study

The criteria utilized for this assessment included the following:

- **Current Impact.** Each issue was rated based on its current impact to sustainability of either the installation or a local jurisdiction. Issues posing the greatest operational constraints or community concerns were identified as the highest priority and rated a “1”. Issues resulting in a moderate impact were rated a “2”. Issues that present very little impact or do not currently impact the installation or local jurisdictions were rated a “3” meaning a low priority.
- **Location.** This criterion measures the proximity of each issue in relation to activities occurring on the installation or within local jurisdictions. Issues occurring on or near the installation or local communities are often more critical than those occurring remotely or in areas more distant from operational activities. Based on this, challenges that were located inside the JLUS study area and were presently occurring were rated a “1” as the highest priority. Challenges located inside the JLUS study area with the potential to occur or located outside the JLUS study area and presently occurring were rated a “2” signifying that the issue is moderately critical. Lastly, challenges located outside the JLUS study area with little or no potential of occurring were considered the lowest priority and rated a “3”.
- **Potential Impact.** Although an issue may not currently be a threat to the installation or the local community, it may possess the ability to become an issue in the future should conditions change, development increase, or other factors become apparent that conflict with the existing or future missions and operational activities on Laughlin AFB. Issues were rated based on their future potential using the same criteria established for current impact.

The three criteria described above were averaged to the nearest whole integer to determine the overall threat level for each challenge. Challenges ranking a “1” are considered the most critical (designated in red), “2” are moderately critical (designated in yellow), and “3” are least critical (designated in green). Table 3-1 presents a summary of the consolidated issues and their corresponding threat evaluations grouped according to the three compatibility factors. The implementation actions/strategies and the timing of these actions are identified in Chapter 5 and are based on prioritization of these issues.

Table 3-1. Compatibility Issues Summary

ID	Compatibility Issue	Current Impact	Location	Potential Impact	Total Threat
1A	Existing and proposed landfills as bird attractant	M	H	H	H
1B	Future development in the vicinity of the Del Rio Loop Road	H	H	H	H
1C	Laughlin mission impacts associated with the proposed wastewater treatment plant within the vicinity of the new Del Rio Loop Road	L	M	H	H
1D	Contamination of ground water resource supply from existing and future development	L	M	M	M
1F	Aircraft noise within the JAP Low Estates area	M	H	H	H
1Fa	Aircraft noise within the Gateway Apartments area	H	H	H	H
1G	Construction of towers and other high structures in the areas located within the Laughlin approach and departure corridors for both the south and north end of Laughlin's runways	H	H	H	H
1H	Safety operations issues with Unmanned Aerial Vehicles (UAV)	L	M	H	M
3A	Existing phone towers near Laughlin's West Gate	L	H	H	H
5A	Widening of US 90	L	H	H	M
5B	Future extension of utility lines	L	M	M	M
5Ba	Potential extension of City water service to Escondido Estates	M	M	H	H
6A	Trespassing on Laughlin AFB	L	H	M	H
6B	AT/FP buffer	L	H	H	H
11A	Future development of alternative energy methods	M	M	H	M
15A	Archaeological sites	M	H	L	M
17A	Airspace coordination between Laughlin AFB training mission and US Border Patrol surveillance mission	L	H	H	M
1A	Sulfur contamination in ground water resource supply	H	H	H	H
1B	Decrease in ground water resource supply in and around the Jap Low Estates area due to low water recharge	L	H	L	M
2A	Potential for development to result in changes to Laughlin AFB training mission	L	H	H	M
2B	Potential conflicts with expanded operations at Del Rio International Airport	L	M	H	M
3A	Potential issues with availability and use of frequencies between Laughlin AFB and the US Border Patrol's use of the UAV	L	L	H	M
3B	Lack of frequency coordination by agencies and the FCC	L	H	H	H
4A	Peak hour traffic congestion within the surrounding community impacts the quick response time required for Laughlin AFB personnel to travel to the base during emergency response events	M	H	L	M

Source: Matrix Design Group, 2008.

Notes: H = High; M = Moderate; L = Low

■ = Man-made Compatibility Issues

■ = Natural Resources Compatibility Issues

■ = Competition for Scarce Resources Compatibility Issues

3.2 Man-Made Compatibility Factors

For the Del Rio JLUS, most of the compatibility issues identified fell under one of the man-made compatibility factors. Man-made factors can be generated by community development which conflicts with military activities, or can be generated by the military and encroach upon nearby communities. Either way, these factors can impact military readiness or a community's quality of life.

1 Land Use

Definition:

The basis of land use planning relates to the government's role in protecting the public's health, safety, and welfare. Local jurisdictions' general plans and zoning ordinances can be the most effective tools for avoiding or resolving land use compatibility issues. These tools ensure the separation of land uses that differ significantly in character. Land use separation also applies to properties where the use of one property may impact the use of another. For instance, industrial uses are often separated from residential uses to avoid impacts related to noise, odors, lighting, and so forth.

Land use planning around military installations is similar to the process used to evaluate other types of land uses. For instance, local jurisdictions already consider compatibility issues such as noise when locating residential developments near commercial or industrial areas. As the land between the city and the installation are sold and developed, many facets of life are affected. New residents or end users, whether the development is commercial, industrial, or residential, are typically not fully aware of the implications of living close to an active installation.

Evaluating land use compatibility can be seen as the act of integrating all of the compatibility issues described in this section in relation to the range of land uses possible in an area. The issues identified for this compatibility factor are listed in Table 3-2.

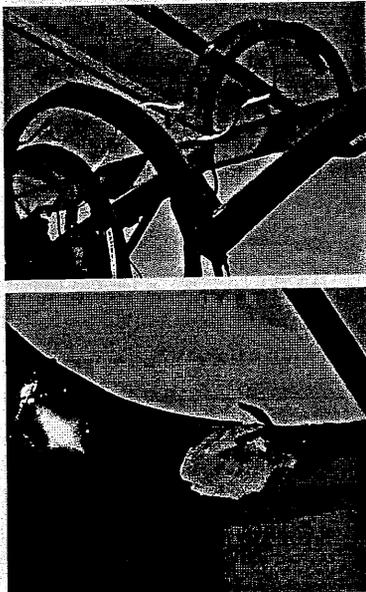
Table 3-2. Compatible Land Use Issues

ID	Compatibility Issue	Current Impact	Location	Potential Impact	Total Threat
1A	Existing and proposed landfills as bird attractant.	M	H	H	H
1B	Future development in the vicinity of the Del Rio Loop Road.	H	H	H	H
1C	Laughlin mission impacts associated with the proposed wastewater treatment plant within the vicinity of the new Del Rio Loop Road.	L	M	H	H
1D	Contamination of ground water supply from existing and future resource development	L	M	M	M
1F	Aircraft noise within the JAP Low Estates area	M	H	H	H
1Fa	Aircraft noise within the Gateway Apartments area	H	H	H	H
1G	Construction of towers and other high structures in the areas located within the Laughlin approach and departure corridors for both the south and north end of Laughlin's runways	H	H	H	H
1H	Safety operations issues with Unmanned Aerial Vehicles (UAV)	L	M	H	M

Note: H = High; M = Moderate; L = Low

The existing City landfill attracts birds, which pose a hazard to Laughlin's aviation training mission. This issue is defined as Bird Air Strike Hazard (BASH). The existing 106 acre landfill is located at 1897 Railway Road, across from the San Felipe Country Club and approximately 500 feet south of US 90. The landfill receives waste from the City of Del Rio, Val Verde County, and Laughlin AFB. It is permitted to operate six cells. There are currently four operating cells, the first three are at capacity and no longer received waste but are not considered closed. Cell 4 was just recently constructed in 2003-2004 to readily accept waste after Cell 3 reached capacity. Cell 4 is located on 8.3 acres of land and has been collecting waste for the past two years. Typically, a cell stays in operation for approximately four to ten years.

The existing landfill is surrounded by predominately low density residential development. As it is located, aircraft overflights are low in number. As the next cells reach capacity, and the limit of the current landfill site of six cells is reached, a new landfill will need to be sited for the City to be able to continue to collect waste. The landfill does have a



Bird strikes can lead to extensive damage to aircraft

bird management control program. This consists of a person chasing away birds that settle around the landfill with "screamers", or a high pitch whistle every few hours. Crows are the main nuisance found around the landfill. It is possible for other types of species to be attracted to the area.

Currently, the City is working to permit 80 acres of land to the southeast of the existing landfill. If permitted, this site will not be used for the next 25-50 years. To mitigate the potential of future problems in relation to a bird aircraft strike, the City should look into locating the future landfill site further south of the City. The prime location would be outside of the city limits, to the west of the US 277, and four miles south of the San Felipe Cemetery. With US 277, accessibility to the landfill would not pose an issue. It also is located away from the installation and in an area with little aircraft overflights, so if vultures and other scavenger birds become a problem, they would have moderate or little impact on military air operations.

A total of nearly 12 miles of roadway will be constructed with the completion of the Del Rio Loop. The loop road will connect US Highway 90 (US 90) West and US Highway 277 South (US 277) east of the City. With the completion of the loop, traffic congestion within the City is expected to decrease, as drivers from the north will bypass downtown Del Rio to continue south.

In addition to this primary route, there will also be almost one mile of new roadway that will connect the loop to Laughlin AFB's west gate entrance. Construction of the 11.5 miles of Loop Road is projected to be completed by 2010.

The land surrounding the Del Rio Loop has a high probability of medium to high density commercial and industrial uses to accommodate the amount of traffic that is expected. Building permits and development applications will need to be monitored and plans will need to be reviewed thoroughly to ensure that the development that does occur will not be affected by the air operations from Laughlin AFB.

Developing incompatible land uses in close proximity to installations operating aircraft, under flight paths, or close to weapons ranges can subject occupants to high levels of noise. Aircraft noise is currently an issue within the Jap Lowe Estates area. The estates have approximately 1,700 acres reserved for development northwest of the northeast of the City. The development for the site is divided into six phases or sections. Phases are not platted for development unless the previous phase is completely developed. Currently, Laughlin has received little to no noise

Aircraft Noise

Further information on noise from installation operations are described under Compatibility Factor 7, Noise

complaints from this area. However, many of the existing residents in this area are long time residents who have and continue to support Laughlin AFB. As residential development growth occurs in this area, the concern is that new residents will not be as receptive to aircraft noise.

Aircraft noise is also an issue within the Gateway Apartments area. The apartments are located within the AICUZ noise contour area and located close to APZ1 inside the Controlled Compatibility Land Use Area. The Gateway Apartment community is located less than one mile from Laughlin AFB. The community consists of 200 apartments. The community is within the left side of the 65 dBA noise contour and is half a mile from the Accident Potential Zone I. Not only is the apartment community in close proximity to the base, but it also experiences a high number of aircraft overflights.

2 Safety Zones**Definition:**

Safety zones are areas in which development should be more restrictive in terms of use and concentrations of people due to the higher risks to public safety. Issues to consider include aircraft accident potential zones, weapons firing range safety zones, and explosive safety zones.

Military installations often have activities or facilities that require special consideration by local jurisdictions when evaluating compatibility due to public safety concerns. The activities evaluated relative to this compatibility factor include aircraft hazard areas. The close proximity of the runway to these boundaries raises some compatibility issues relative to designated safety zones.

The proposed Loop Road has a high probability to attract new development within Laughlin's APZ area and within its immediate area that may be incompatible.

3 Vertical Obstructions

Definition:

Vertical obstructions are created by buildings, structures, or other features that may encroach into the navigable airspace used by military operations (aircraft approach, transitional, inner horizontal, outer horizontal, and conical areas, as well as military training routes), presenting a safety hazard to both the public and military personnel and potentially impacting military readiness.

Vertical obstructions can compromise the value of low-level flight training by limiting the areas where such training can occur. The issues identified for this compatibility factor are summarized in the table below.

Table 3-3. Vertical Obstructions Issues

ID	Compatibility Issue	Current Impact	Location	Potential Impact	Total Threat
3A	Existing phone towers near Laughlin's West Gate.	L	H	H	H

Note: H = High; M = Moderate; L = Low

Vertical obstruction in relation to flight operations from an airport (military or civilian) are addressed through compliance with Federal Regulation Title 14 Part 77, which establishes standards and notification requirements for objects affecting navigable airspace. Commonly referred to as Part 77 compliance, this regulation provides details on how to evaluate the potential for a vertical obstruction based on the elevation of the airfield, the height and resulting elevation of the new structure or facility, and the location of the structure or facility in relation to the airfield in question. Figure 3-4 depicts common terminology associated with Part 77 related to determining vertical obstructions.

To determine when structures or facilities should be evaluated regarding vertical obstruction, Part 77 states the following requirements.

§77.13 - Any person / organization who intends to sponsor any of the following construction or alterations must notify the Administrator of the FAA:

- Any construction or alteration exceeding 200 ft above ground level
- Any construction or alteration
 - within 20,000 ft of a public use or military airport which

More on Part 77

More information on Part 77 can be found in Appendix J and at the following website:

http://www.faa.gov/airports/airtraffic/airports/regional_guidance/central/instruction/part77/

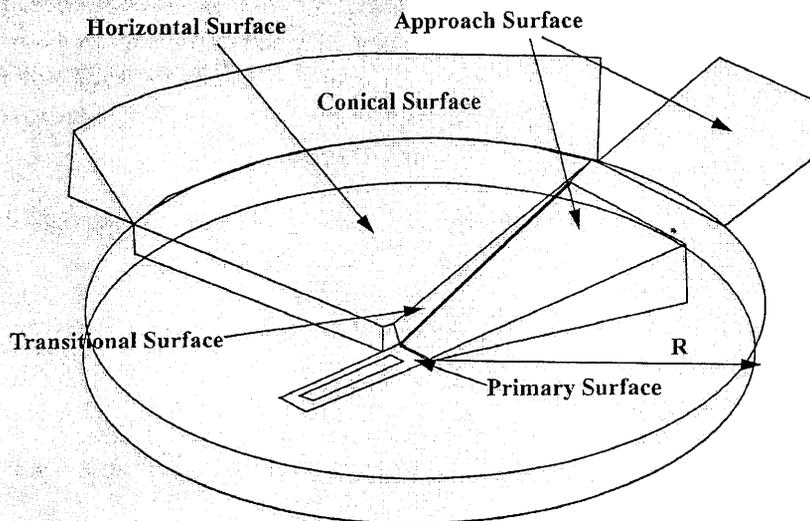
exceeds a 100:1 surface from any point on the runway of each airport with at least one runway more than 3,200 ft.

- within 10,000 ft of a public use or military airport which exceeds a 50:1 surface from any point on the runway of each airport with its longest runway no more than 3,200 ft.
- within 5,000 ft of a public use heliport which exceeds a 25:1 surface

- Any highway, railroad, or other traverse way whose prescribed adjusted height would exceed that above noted standards
- When requested by the FAA
- Any construction or alteration located on a public use airport or heliport regardless of height or location

Several agencies in and around the area have been erecting towers for broadcasting agency information without informing others. Any construction of towers or high structures located in Laughlin AFB's approach and departure corridors will impact air operations. In the JLUS study area, there are 21 telecommunication towers. Ten of these are located along US 277 and/or located in commercial zoned areas. There are a cluster of seven telecommunication towers in the southeastern portion of Del Rio.

Figure 3-5. Part 77 Terminology



There is one telecommunication tower located outside of Laughlin AFB's West Gate. This tower has also been identified as a potential threat to air and base operations as a vertical obstruction, as well as frequency interference. Several existing aircraft approaches cross above the telecommunication tower. One approach is the most effected by the existing telecommunication tower, as the approach flight path crosses over the towers at multiple points. Consequently, this limits the number of low level flights that can occur using these approaches.

As the area around Laughlin AFB continues to develop and urban growth encroaches further onto the land surrounding the base, new project proposals will need to be reviewed thoroughly to ensure compliance with Part 77. It is important to note that Part 77 compliance is not limited to buildings. For Laughlin AFB, potential structures of greatest interest concerning vertical obstruction include cell towers and wind generation facilities.

4 Local Housing Availability

Definition:

Local housing availability addresses the supply and demand for housing in the region, the competition for housing that may result from changes in the number of military personnel, and the supply of military family housing provided by the base.

As identified in the Laughlin AFB FY07 Economic Impact Statement and as detailed in Chapter 2, 51 percent of military personnel permanently assigned to Laughlin AFB choose to live on base while the remaining 49 percent seek housing in the local community, primarily Del Rio.

There were no identified issues concerning this compatibility factor.

5 Infrastructure Extensions

Definition:

This factor covers the extension or provision of infrastructure (roads, sewer, water, etc.)

Infrastructure plays an interesting role in compatibility. On the positive side, infrastructure can enhance the operations of the installation by providing needed services, such as sanitary sewer treatment capacity and transportation systems. Infrastructure can also be an encroachment issue if enhanced or expanded infrastructure could encourage growth into areas near the installation that would not be compatible with current or future missions. Table 3-4 below presents the identified compatibility issues.

Table 3-4. Infrastructure Extensions Issues

ID	Compatibility Issue	Current Impact	Location	Potential Impact	Total Threat
5A	Widening of US 90	L	H	H	M
5B	Future extension of utility lines	L	M	M	M
5Ba	Potential extension of City water service to Escondido Estates	M	M	H	H

Note: H = High; M = Moderate; L = Low

The extension or expansion of infrastructure to a military installation, or to areas near an installation, raises issues of growth inducement. If infrastructure is extended toward Laughlin AFB, growth may be directed to these areas, causing a potential conflict with sustaining military readiness. Historically, new development and growth usually occurs within the area adjacent to where the extension of utilities and other infrastructure is sited. New development increases the probability of incompatible land uses, which would impact the mission of Laughlin AFB. Through careful planning, the extension of infrastructure can serve as a means to guide development into appropriate areas while providing the community opportunities for new development potential.

A water utility line extension to provide water service to the major subdivision Escondido Estates would be in close proximity to Laughlin AFB. In addition to closely monitoring development as utility and infrastructure expansions are planned, Laughlin AFB's waterline from the springs will need to be protected and preserved. As these areas begin to develop and because the waterlines are routed close to Laughlin

6 Antiterrorism / Force Protection

AFB's waterline, there is a potential threat that the new developments will be extracting water from Laughlin's waterline.

Definition:

Antiterrorism / Force Protection (AT / FP) relates to the safety of personnel, facilities, and information on an installation from outside threats. Also refer to Compatibility Factor 14, Public Trespassing.

As residential development moves into areas adjacent to Laughlin AFB, protective measures will need to be built into these developments and into the installation's security to ensure that the security of the installation can be maintained.

Compatibility issues related to this factor are listed in the below table.

Table 3-5. AT / FP Issues

ID	Compatibility Issue	Current Impact	Location	Potential Impact	Total Threat
6A	Trespassing on Laughlin AFB.	L	H	M	H
6B	AT/FP buffer	L	H	H	H

Note: H = High; M = Moderate; L = Low

Union Pacific rail is the largest railroad network in the US; it also is one of the main contributors to trespassing onto Laughlin AFB. The train runs through the southern portion of the City and traverses the northern border of Laughlin AFB. The base and Union Pacific currently have an informal agreement that the train will avoid stopping for extended periods of time at Laughlin's crossing.

7 Noise

Definition

Defining noise from a technical perspective, sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. More simply stated, sound is what we hear. As sounds reach unwanted levels, this is referred to as noise.

As an Air Force installation with several active runways, high noise levels resulting from aircraft operations are the primary noise impacts on the surrounding area.

Noise associated with aircraft operations is presented in the discussion of Compatibility Factor #1, Land Use. As such, there are no issues identified for this compatibility factor.

Understanding Noise

Due to the technical nature of this resource topic and its importance to the JLUS process, this section provides a discussion of the characteristics of sound and the modeling process used to evaluate noise impacts.

The following key terms are used to describe noise.

- **Ambient Noise.** The total noise associated with an existing environment and usually comprising sounds from many sources, both near and far.
- **Attenuation.** Reduction in the level of sound resulting from absorption by the surrounding topography, the atmosphere, distance from the source, barriers, construction techniques and materials, and other factors.
- **A-weighted decibel (dBA).** A unit of measurement for noise having a logarithmic scale and measured using the A-weighted sensory network on a noise-measuring device. An increase or decrease of 10 decibels corresponds to a tenfold increase or decrease in sound energy. A doubling or halving of sound energy corresponds to a 3-dBA increase or decrease.
- **Day-Night Average Sound Level (Ldn).** Ldn represents an average sound exposure over a 24-hour period. Ldn values are calculated from hourly Leq values, with the Leq values for the nighttime period (10:00 p.m. to 7:00 a.m.) increased by 10 dB to reflect the greater disturbance potential from nighttime noises.

- **Equivalent Sound Level (Leq).** The level of a steady-state sound that, in a stated time period and at a stated location, has the same sound energy as the time-varying sound (approximately equal to the average sound level). The equivalent sound level measured over a 1-hour period is called the hourly Leq or Leq (h).
- **Noise Contours.** Connecting points of equal noise exposure. Typically expressed in 5-dBA increments (60, 65, 70, 75, etc.).
- **Sensitive Receptors.** Sensitive receptors are defined as locations and uses typically more sensitive to noise, including residential areas, hospitals, convalescent homes and facilities, schools, and other similar land uses.

Characteristics of Sound

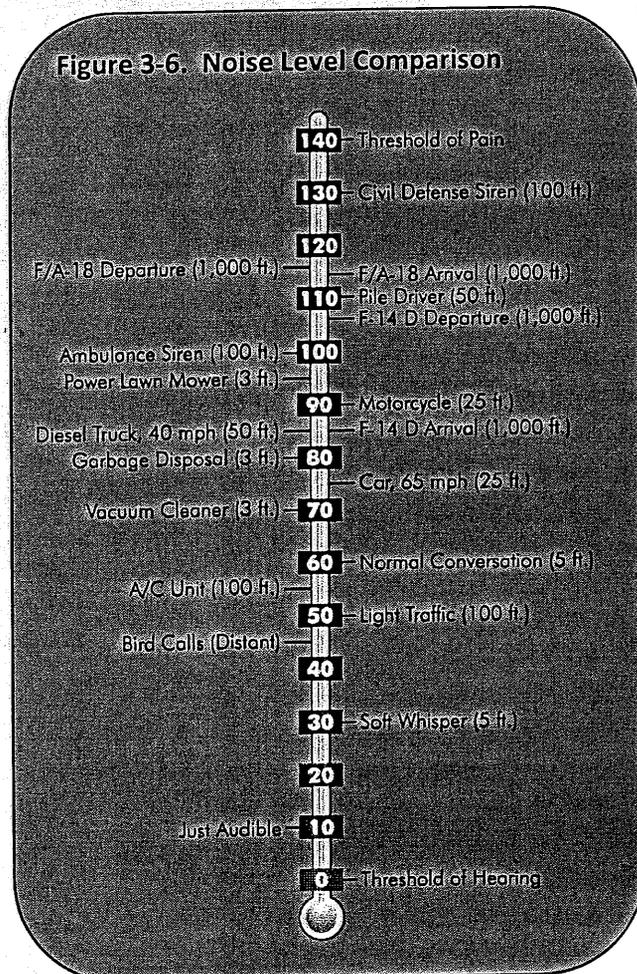
Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). The sound pressure level has become the most common descriptor used to characterize the

loudness of an ambient sound level. The decibel scale is used to quantify sound intensity. Because sound pressure can vary by over one trillion times within the range of human hearing, a logarithmic loudness scale (i.e., dB scale) is used to present sound intensity levels in a convenient format.

Since the human ear is not equally sensitive to all frequencies within the entire spectrum, noise measurements are weighted more heavily within those frequencies of maximum human sensitivity in a process called "A-weighting" written as dBA. The human ear can detect changes in sound levels of approximately 3 dBA under normal conditions. Changes of 1 to 3 dBA are typically noticeable under controlled conditions, while changes of less than 1 dBA are only discernable under controlled, extremely quiet conditions. A change of 5 dBA is typically noticeable to the general public in an outdoor environment. Figure 3-5 summarizes typical A-weighted sound levels for a range of indoor and outdoor activities.

Environmental noise fluctuates over time. While some noise fluctuations are minor, others can be substantial. These fluctuations include regular and random patterns, how fast the noise fluctuates, and

Figure 3-6. Noise Level Comparison



the amount of variation. When describing noise impacts, it is common to look at the average noise over an average day.

Aircraft Noise

For noise sources attributable to Laughlin AFB, aircraft noise is the primary concern relative to compatibility planning. Implemented by the Department of Defense (DOD) in 1973, the Air Installation Compatible Use Zone (AICUZ) program is utilized by the Navy and Air Force to promote a pattern of development, both on and off the installation, which is compatible with the noise and safety hazards created by aircraft operations. Under this program, aircraft noise is analyzed based on existing operations to determine accident potential areas and develop noise reduction strategies for affected properties. The analysis of airborne noise varies on the type of aircraft modeled, flight operations, training activities, flight frequency, and airspace. Prepared in 2000, the Laughlin AFB AICUZ Study outlined suggested compatibility land uses for the surrounding area. Specifics of the existing AICUZ are presented in Chapter 4, Existing Plans and Programs.

8 Vibration

Definition:

Vibration is an oscillation or motion that alternates in opposite directions and may occur as a result of an impact, explosion, noise, mechanical operation, or other change in the environment. In the study area, vibration may be caused by military and civilian activities.

Vibration from Noise...

Further information on noise from installation operations are described under Compatibility Factor #7, Noise.

Vibration from military operations or civilian activities does not present any current or future concerns within the study area. Vibration associated with aircraft noise is presented in the discussion of Compatibility Factor #7, Noise. As such, there are no issues identified for this compatibility factor.

9 Dust



Smoke from fires can be a compatibility issue but has not been a problem at Laughlin

Definition:

Dust is the common term used to describe the suspension of particulate matter in the air. Dust can be created by fire (controlled burns, agricultural burning), ground disturbance (agricultural operations, grading), industrial activities, or other similar processes.

Civilian and military activities can produce dust from grading, agriculture practices, vehicle movement, or weapons training. Dust becomes a compatibility issue if sufficient in quantity to impact flight operations (such as reduced visibility or equipment damage) or substantially impacting the quality of life of local residents.

There were no identified compatibility issues regarding dust.

10 Light and Glare



Effects of glare on a cockpit canopy

Source: www.flicker.com

Definition:

This factor refers to man-made lighting (street lights, airfield lighting, building lights) and glare (direct or reflected light that is harsh and disrupts normal vision).

Light sources from commercial, industrial, and residential uses at night can cause glare and excess illumination, which impacts the use of military night vision devices and air operations. Conversely, high intensity light sources generated from a military area (such as ramp lighting) may have a negative impact on the adjacent community.

Outside the installation, light and glare impacts could potentially become an issue for pilots as urbanized uses move closer to Laughlin AFB. In the night sky, some training operations use night vision equipment to simulate battlefield conditions. As light pollution in the area increases, this type of training could be impacted. From an air operations standpoint, concerns would include unshielded new lighting sources and the introduction of reflective surfaces that could impact a pilot's vision.

The base has urban lighting similar to any community. The one area that stands out in the night sky is the lighting from the flightline of the airfield. The tall light standards and high intensity lights create a strong illumination that is noticeable from the surrounding areas but is typical for an airport use. Since development around the installation is currently

scattered, this existing illumination is not a compatibility concern, but it would need to be considered when deciding on future adjacent land uses.

There were no identified compatibility issues regarding light and glare.

11 Alternative Energy Development

Definition

Alternative energy refers to sources, such as solar, wind, or biofuels that can be used to replace or supplement traditional fossil-fuel sources, as coal, oil, and natural gas.

The desire to reduce dependence on oil resources for the production of energy, coupled with renewed national interest in the reduction of greenhouse gases, is dramatically increasing the attractiveness of alternative energy production techniques. Alternative energy development could pose compatibility issues related to glare (solar energy) and vertical obstruction (wind generation). Other alternative energy developments, such as biofuel generation, have no typical compatibility issues and would be judged for compatibility on a case-by-case basis.

The identified compatibility issue regarding alternative energy development is listed in Table 3-6.

Table 3-6. Alternative Energy Development Issues

ID	Compatibility Issue	Current Impact	Location	Potential Impact	Total Threat
11A	Future development of alternative energy methods	M	M	H	M

Note: H = High; M = Moderate; L = Low

Solar Energy

Solar energy production facilities pose potential hazards to pilots primarily from the glare from solar panels or mirrors. Light and glare is described in greater detail in Compatibility Factor #10. Another potential hazard associated with solar facilities is vertical obstruction. This relates primarily with the tall towers supporting overhead distribution lines transferring generated power. Vertical obstructions are further discussed in Compatibility Factor #3.

Wind Energy

Although identified as not being a current threat to operations at Laughlin AFB, the State of Texas has the most installed wind power generating capacity of any state. It has 2,768-megawatts installed and 1,013-megawatts under construction, according to the American Wind Energy Association. Furthermore, wind power capacity in the United States grew 27 percent in 2006 and was projected to increase by another 26 percent in 2007. Favorable wind conditions off the coast of South Texas provide a number of opportunities within the region for the development of wind turbines.



Texas wind farm

Source: www.blogs.business2com/

Wind turbines have two potential compatibility issues, vertical obstruction and frequency impedance. The most prominent is the vertical obstruction aspect of the systems, which can be several hundred feet in height for a commercial structure. These structures reduce the area where low-level testing and training can be accomplished. Impacts from these structures can be compounded by the nearby location of overhead transmission lines connecting wind turbines to power distribution facilities. Future placement of wind turbines, commercial and private, would need to be coordinated with Laughlin AFB to avoid height issues (i.e., vertical obstruction). Wind turbines can also produce a “Doppler effect” with the ability to disrupt electronic communication systems producing additional radar ground clutter and false radar echoes. Multiple wind turbines in the same vicinity exacerbate this effect.

In addition to the placement of wind turbines, transmission system network plans to connect alternative energy generators will also need to be evaluated as they too create obstacles for aviation.

12 Air Quality

Definition:

Air quality is defined by a number of components that are regulated at the federal and state level. For compatibility, the primary concerns are pollutants that limit visibility, such as particulates, ozone, and potential non-attainment of air quality standards that may limit future changes in operations at the installation.

Air quality in the region is generally good and is classified as being in attainment under federal Clean Air Act standards. As a predominantly rural area, the greatest threat to air quality is from airborne particulates associated with agricultural burning (as previously described under Compatibility Factor #9, Dust).

There were no identified compatibility issues regarding this factor.

13 Frequency Spectrum Impedance and Interference

Definition:

Frequency spectrum impedance and interference refers to the interruption of electronic signals by a structure (impedance) or the inability to distribute / receive a particular frequency because of similar frequency competition (interference).

In performance of typical operations, the military relies on a range of frequencies for communications and support systems. Similarly, public and private uses rely on a range of frequencies to support daily life. Although specific frequencies are generally reserved for designated uses, as the demand for this limited resource increases (such as the rapid rise in cellular phone technology over the last decade) so does the issue of frequency spectrum impedance, interference, and competition.

There were no identified compatibility issues regarding frequency spectrum impedance and interference currently affecting Laughlin AFB; however, clear frequencies are especially critical to the mission of Laughlin AFB. The air operators on the ground (i.e., RCS and control tower) must be able to communicate clearly with the student pilots and instructors during in-flight training. These communications can be impacted by the range of frequencies the public needs to support daily life. In addition, the construction of buildings or other facilities, as well

as the natural terrain, may block or impede the transmission of signals from antennas, satellite dishes, or other transmission / reception devices affected by line-of-sight requirements.

Frequency interference can result from a number of factors, including:

- New transmissions using a frequency that is near an existing frequency
- Moving an antennae transmitting on a similar frequency to a closer location
- Increasing the power of a similar transmission signal
- Using a poorly adjusted transmission devices that transmit outside their assigned frequency
- Production of an electromagnetic signal that interferes with a signal transmission
- Increased use of some low power consumer devices (as development moves closer to the installation), such as remote controls, cordless phones, garage door openers, and baby monitors, that can utilize frequencies assigned to the military.

As more of the radio frequency (RF) spectrum is made available to private entities and public agencies, the competition for frequency spectrum capacity increases. As a result, more coordination with the Federal Communications Commission (FCC) and other users will be necessary.

14 Public Trespassing

Definition:

This factor addresses public trespassing, either purposeful or unintentional, onto Laughlin AFB.

Although this compatibility factor focuses more on the public responsibility of trespassing than the military's, this issue is related to Compatibility Factor #6, AT / FP. As such, no issues were identified for this compatibility factor.

15 Cultural Resources

Definition:

Cultural resources may prevent development on the base, apply development constraints, or require special access by native groups or other authorities.

Although the area exhibits considerable historic and archaeological significance, most cultural resource sites are located outside of potential development areas and the presence of these resources does not constrain development or mission operations.

The identified compatibility issues regarding cultural resources are listed below in Table 3-7.

Table 3-7. Cultural Resources Issues

ID	Compatibility Issue	Current Impact	Location	Potential Impact	Total Threat
15A	Archaeological sites	M	H	L	M

Note: H = High; M = Moderate; L = Low

16 Legislative Initiatives

Definition:

Legislative initiatives are federal, state, or local law and regulations that may have a direct or indirect effect on a military installation to conduct its current or future mission.

Federal, state, or local legislative initiatives can directly or indirectly limit the ability for local jurisdictions or the military to conduct operations or initiate needed policies or programs designed to improve sustainability.

There were no issues identified with this compatibility factor.

17 Interagency Coordination

Definition

Interagency coordination relates to the level of interaction on compatibility issues between military installations, jurisdictions, land and resource management agencies, and conservation authorities.

The development of proactive partnerships between the US military, local jurisdictions, and other governmental agencies is required to ensure continued sustainability for all entities. The identified issue for this factor is listed below in Table 3-8.

Table 3-8. Interagency Coordination Issues

ID	Compatibility Issue	Current Impact	Location	Potential Impact	Total Threat
17A	Airspace coordination between Laughlin AFB training mission and US Border Patrol surveillance mission	L	H	H	M

Note: H = High; M = Moderate; L = Low

The US Border Patrol has a significant presence in the City of Del Rio with three Border Patrol Stations. Currently, the Border Patrol operates helicopters along the Rio Grande River to monitor the US-Mexican border. With the Laughlin AFB flying training mission and associated flight tracks, high levels of coordination are required to avoid mid-air conflicts between Air Force aircraft and Border Patrol helicopters.

3.3 Natural Resources Compatibility Factors

In addition to man-made compatibility factors, natural compatibility factors are also potential sources of conflict with military readiness activities.

18 Water Quality / Quantity

Definition:
 Water quality / quantity concerns include ensuring adequate water supplies of good quality for use by the base and surrounding communities as the area develops.

The availability of water of sufficient quality and quantity within the study area is vital to sustaining both local jurisdictions and Laughlin AFB. The issues identified for this compatibility factor are listed in Table 3-9.

Table 3-9. Water Quality / Quantity Issues

ID	Compatibility Issue	Current Impact	Location	Potential Impact	Total Threat
1A	Sulfur contamination in ground water resource	H	H	H	H
1B	Decrease in groundwater resource in and around the Jap Low Estates area due to low water recharge	L	H	L	M

Note: H = High; M = Moderate; L = Low

Existing Development within the southeast area of Del Rio are dependent on septic tanks and wells, which are located on sulfur contaminated soil posing a threat of and currently contaminating the region's groundwater resource.

In addition to the area to the southeast of Del Rio, the groundwater in the Escondido Estates area has been found to contain a high percentage of sulfur. This contamination could possibly be generated from fault lines located in the area. As with the water wells, there is concern that development pressures would lead to the further contamination of other water sources.

The City of Del Rio currently relies on a combination of underground and surface water supplies, and Texas common law follows the "rule of capture" doctrine in areas outside the jurisdiction of groundwater districts. Under this common law rule, and with only limited exceptions, the water may be pumped to the surface without regard to whether it is drawn from a neighbor's property or whether it lessens surface water

flows for the neighbor. Groundwater resource issues will need to be monitored closely. It will be important for the City of Del Rio and Val Verde County to pay close attention to local water resources and issues concerning groundwater.

19 Threatened & Endangered Species

Definition:

A *threatened* species is one that may become extinct if measures are not taken to protect it. An *endangered* species is one that has a very small population and is at greater risk of becoming extinct. Many species that become extinct never make it to the endangered species list. The presence of threatened and endangered species may require special development considerations and should be included early in planning processes to ensure compatibility with military missions.

There are several known species within the study area that are either federally or state listed. These species are not currently impacting mission operations on the installation or development potential within the City of Del Rio; however, future elevation in species listing status may require additional compliance with federal or state regulations leading to operational or land use restrictions in the future.

Although prevalent within the area, the protection of threatened and endangered species was determined to be manageable. As a result, no issues were identified for this compatibility factor.

20 Marine Environments

Definition:

Regulatory or permit requirements protecting marine and ocean resources can cumulatively affect the military's ability to conduct operations, training exercises, or testing in the marine environment.

As noted in the Laughlin AFB General Plan, wetlands have not been formally delineated at Laughlin AFB; however, potential wetland areas have been identified during previous studies. Potential wetlands are generally located along the base perimeter on underdeveloped lands in

the northwestern and eastern portions of the base. The presence of wetlands within the study area could potentially present unique challenges for development and military sustainability; however, no current issues were identified for this compatibility factor.

3.4 Competition for Scarce Resources Compatibility Factors

Competition for scarce resources can cause compatibility issues due to competition between local and federal government agencies, other agencies, private development concerns, and the military. The following is a description of some of the key resources that can be in high demand.

21 Scarce Natural Resources

Definition:

Pressure to gain access to valuable natural resources (such as oil, gas, minerals, and water resources) located on military installations, within military training areas, or on public lands historically used for military operations can impact resource utilization and military operations. The military manages or uses land, air, and sea space to accomplish testing, training, and operational missions. These resources must be available and of a sufficient size, cohesiveness, and quality to accommodate effective training and testing.

Pressures to gain access to valuable natural resources located on military installations, within military training areas, or on public lands historically used for military testing and training can affect the ability to use these areas for operational activities.

There were no issues identified for this compatibility factor.

22 Land, Air, and Sea Spaces

Definition:

Land, Air, and Sea Spaces with regard to other airports in the proximity of the military installations.

Laughlin AFB manages or uses various land and air spaces to accomplish its training and operational missions. These resources must be available and of sufficient size, cohesiveness, and quality to accommodate effective training. In a similar manner, local governments and private citizens seek to use these resources to maximize their development potential and desired uses.

Identified compatibility issues regarding competition for land, air, and sea spaces are listed in Table 3-10.

Table 3-10. Land, Air, and Sea Spaces Issues

ID	Compatibility Issue	Current Impact	Location	Potential Impact	Total Threat
2A	Potential for development to result in changes to Laughlin AFB training mission	L	H	H	M
2B	Potential conflicts with expanded operations at Del Rio International Airport	L	M	H	M

Note: H = High; M = Moderate; L = Low

Although identified as not currently impacting the Laughlin AFB flying training mission, there is potential for development of incompatible land uses near the base or under existing flight tracks. Should this occur, it could result in requirements for Laughlin AFB to change its flight training routes to accommodate the growth. This could have a significant impact on the base and possibly jeopardize the future of the installation.

Airspace in the region is a high-demand resource. Increases in demand for flights from local airports or the Del Rio International Airport may impact existing and future aircraft operations at Laughlin AFB (i.e., approach and departure tracks, closed pattern flight tracks, etc.). Current facilities at the Del Rio International Airport include one runway and one primary commercial airline. Growth at this facility could have negative impacts to Laughlin AFB and its mission.



Saab 340 is one aircraft operating at Del Rio's International Airport

Source: www.flicker.com

23

Frequency Spectrum Capacity

Definition

Frequency spectrum capacity is critical for maintaining existing and future missions at Laughlin AFB. This also needs to be addressed from the standpoint of consumer electronics.

The electromagnetic spectrum is important to training missions of the military. The competition for available frequency spectrum may lead to a reduction in available spectrum from military training. The lack of spectrum may decrease the effectiveness of exercises by restricting the number of warfighting systems that can participate. In addition, spectrum limitations may restrict the use of the state-of-the-art instrumentation systems. Lack of available spectrum may result from federal agency regulations or from expanding public and commercial use of the frequency spectrum.

Additional information related to Frequency Spectrum Impedance and Interference is found in the discussion of Compatibility Issue 13.

The issues identified for this compatibility issue are listed in the table below.

Table 3-11. Frequency Spectrum Capacity Issues

ID	Compatibility Issue	Current Impact	Location	Potential Impact	Total Threat
3A	Potential issues with availability and use of frequencies between Laughlin AFB and the US Border Patrol's use of the UAV	L	L	H	M
3B	Lack of frequency coordination by agencies and the FCC	L	H	H	H

Note: H = High; M = Moderate; L = Low

As mentioned in Compatibility Factor #17, Interagency Coordination, the US Border Patrol performs airborne surveillance of the US-Mexican border. The Border Patrol is to receive the Unmanned Aerial Vehicle (UAV) to assist in this mission. The UAV platform will require its own frequencies to maintain communications with the operator on the ground and to relay images and data. This has the potential to impact the availability of frequencies for Laughlin AFB to use for training.

Similar to the UAV issue above, crowding of the frequency spectrum by civilian entities and other government agencies can interfere with

frequencies used by Laughlin AFB. This can reduce overall training effectiveness and ability to perform missions.

24 Ground Transportation Capacity

Definition:

This factor addresses ground transportation capacity on highways and other local roads.

As urban development expands into rural areas, roads once used primarily to provide access to agricultural lands or transport a limited number of vehicles per day begin to function more as urban major arterial roadways. These once rural roads are often the main transportation corridors for access to military installations. In addition, these facilities also induce growth as rural areas become more accessible. The identified issues for this factor are listed in Table 3-12.

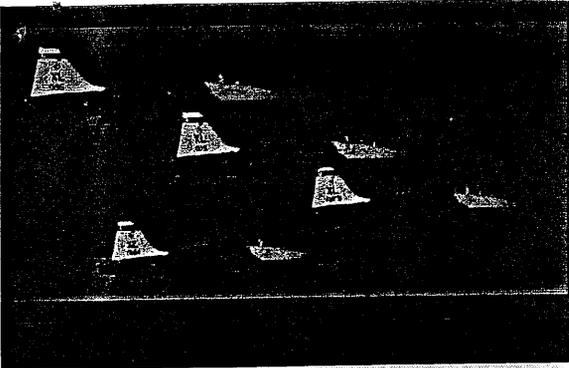
Table 3-12. Ground Transportation Capacity Issues

ID	Compatibility Issue	Current Impact	Location	Potential Impact	Total Threat
4A	Peak hour traffic congestion within the surrounding community impacts the quick response time required for Laughlin AFB personnel to travel to the base during emergency response events.	M	H	L	M

Note: H = High; M = Moderate; L = Low

Peak hour traffic congestion was identified as a current challenge to compatible uses. However, with the scheduled completion of the Del Rio Loop, congestion in and around the City of Del Rio is expected to decrease significantly. The construction of the road leading from the new loop to the Laughlin AFB West Gate will provide more convenient and efficient access for base personnel.

Please see next page.



EXISTING PLANS AND PROGRAMS

In this section...

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This section provides an overview of the primary plans and programs that are currently used or applied in evaluating and addressing compatibility issues in the study area.

Section 4.1 provides an overview of the Laughlin AFB Air Installation Compatible Use Zone (AICUZ) study, Bird Aircraft Strike Hazard (BASH) plan, and installation General Plan.

Section 4.2 highlights plans and programs currently used by local jurisdictions to address compatibility issues

Section 4.3 discusses plans and programs maintained by the State of Texas and region that relate to compatibility planning in the study area.

The final section, Section 4.4, describes legislation and other regulations that directly apply to compatibility planning.

4.1 Laughlin AFB Plans

Air Installation Compatible Use Zone (AICUZ) Study

The Noise Control Act of 1972 found that noise not adequately controlled has the potential of endangering the health and welfare of people. It states that all Americans are entitled to an environment free from noise that can jeopardize their general health and quality of life. Along with state and local governments, actions from the Federal government were needed to ensure that the objectives of the Act were met. Concurrently, military installations were experiencing the impacts related to urban development moving closer to the installation and commenting on noise from flight operations. In 1973, the Department of Defense (DOD) responded by establishing the AICUZ program.

The AICUZ program seeks to develop a cooperative relationship between communities and military installations and provides land use compatibility guidelines designed to protect public health and safety, as well as maintain military readiness. As designed, the AICUZ study evaluates three components: noise, vertical obstructions, and accident potential zones.

In 2008, Laughlin AFB updated their 2000 AICUZ study to reflect changes to aircraft operations at Laughlin AFB that occurred during the period of 2000 to 2007. Two types of changes to operations were made: changes to the mix of aircraft using Laughlin; and changes to the operational tempo resulting from the advent of the Global War on Terrorism. Specifically, the Air Force began flying the T-6A Texan II at Laughlin AFB, replacing the T-37 Tweet. The 2008 Laughlin AFB AICUZ report can be found on the Laughlin AFB public website: <http://www.laughlin.af.mil/>

Source: Laughlin AFB, AICUZ Update Final Report 2008

Noise Zone Profile

Noise is the cornerstone of the AICUZ study. The noise generated by military aircraft operations and the effects of that noise on local communities are presented numerous ways in the study (i.e., written text, graphically, etc.). To fully appreciate the findings and recommendations presented in the AICUZ study, it is beneficial for the reader to have an understanding of how military aircraft noise is measured, evaluated, and graphically illustrated. Information on this can be found in Section 3 under Compatibility Factor #7, Noise.

Vertical Obstructions

Vertical obstructions are evaluated based on Federal Aviation Administration (FAA) Regulation Part 77, Subpart C. This regulation looks at the height of vertical structures or natural features in relation to their distance from the ends of the runway. Using a distance formula from this regulation, local jurisdictions can easily assess the height restrictions near airfields. Additional information on Part 77 can be found in Section 3 under Compatibility Factor #3, Vertical Obstruction, in Appendix J, or on the Federal Aviation Administration Internet site at <http://www.faa.gov/>.

Accident Potential Zones

As part of the AICUZ program and to aid in land use planning surrounding military bases, the DOD established Accident Potential Zones or APZs. These are defined as Clear Zones (CZ), Accident Potential Zone I (APZ I), and Accident Potential Zone II (APZ II). These are determined based on a statistical analysis of all DOD aircraft accidents.

The CZ for Laughlin AFB extends out 3,000 feet from the end of the runway and is 3,000 feet in width. APZ I onset is at the end of the CZ and extends out 5,000 feet. APZ II extends from the end of APZ I and stretches out an additional 7,000 feet. The widths for APZ I and APZ II are 3,000 feet.

Aircraft accidents are most likely to occur in the CZ; therefore, it is not recommended that this area be used for any type of development. APZ I and APZ II have a likelihood of an aircraft accident occurring, but because of the extended distance from the runways, development can occur with restrictions. To prevent incompatible land development in the CZ, the Air Force has acquired property rights through the purchase of land or easements within the CZ land designation. Within the APZ I and APZ II, this has not been necessary.

Each AICUZ Study contains land use guidelines. The Laughlin AFB AICUZ shows the recommended land uses relative to the DNL noise exposure and accident potential in tabular format. Noise guidelines are essentially the same as those published by the Federal Interagency Committee on Urban Noise in the June 1980 publication, *Guidelines for Considering Noise in Land-Use Planning and Control*. The 1965 US Department of Transportation publication, *Standard Land Use Coding Manual (SLUCM)*, was used in the Laughlin AFB AICUZ study for identifying and coding land use activities

Bird Aircraft Strike Hazard (BASH) Study

In January of 2007, Laughlin AFB developed and adopted a Bird Aircraft Strike Hazard (BASH) plan for implementation on the main base and the auxiliary field. A BASH plan is designed to control birds, alert aircrew and operations personnel, and provide increased levels of flight safety, especially during the critical phases of flight, take-off, and landing operations. Specifically the plan is designed to:

- Designate a Bird Hazard Working Group (BHWG) and outline the members' responsibilities
- Establish procedures to identify high hazard situations and establish aircraft and airfield operating procedures to avoid these situations.
- Ensure that all permanent and transient aircrews are aware of bird hazards and the procedures for avoidance.
- Develop guidelines to decrease the attractiveness of the airfield to birds and disperse the number of birds on the airfield.

Laughlin AFB General Plan

The Laughlin AFB General Plan is designed to help base personnel understand existing conditions, documents, existing needs and future expectations, and provide programs and projects that can help the base fluidly react to an ever-changing world. Last updated in 2007, the General

Plan provides Air Force and installation decision makers, as well as local governments with essential information on the plans for the future of Laughlin AFB and the projects needed to attain Laughlin's vision.

Although this document focuses on development within the installation boundaries, it is an important reference for the City of Del Rio when planning. Information and plans detailed in the General Plan can impact Del Rio and Val Verde County, both directly and indirectly.

Also identified in the installation's General Plan are the on-base wetland areas that are primarily located along the base's northwestern and eastern perimeter. Although wetlands have not been formally delineated at Laughlin AFB, these areas may have possible impacts on nearby future civilian development.

4.2 Local Jurisdiction Planning Tools

City of Del Rio Comprehensive Plan

The State of Texas does not require municipalities to maintain a master or comprehensive plan; however, the City of Del Rio recently adopted such a plan to help guide future development and community facilities. A comprehensive plan is designed to serve as the jurisdiction's "construction" or "blueprint" for future decisions concerning land use, infrastructure, public services, and resource conservation. All specific plans, subdivisions, and zoning decisions made by the City must be consistent with the comprehensive plan.

Typically, there are three defining features to a comprehensive plan:

- **General.** As the name implies, a comprehensive plan provides general guidance that will be used to direct future land use and resource decisions.
- **Comprehensive.** A comprehensive plan covers a wide range of social, economic, infrastructure, and natural resource factors. These include topics such as land use, housing, circulation, utilities, public services, recreations, agriculture, biological resources, and many other topics.
- **Long-range.** Comprehensive plans provide guidance on reaching a future envisioned 20 or more years in the future.

The purpose of a comprehensive plan is to:

- Identify the jurisdiction's land use, circulation, environmental, economic, and social goals and policies as they relate to future development in the region;
- Provide a basis for local government decision-making, including decisions on development approvals;
- Provide citizens with opportunities to participate in the planning and decision making processes of their communities; and
- Inform citizens, developers, decision-makers, other cities and counties, and other organizations, such as Laughlin AFB, of the policies that guide development within a particular community.

Adopted in November of 2007, the Del Rio Comprehensive Plan provides a snapshot of the current conditions within the City. In addition, the Plan contains five elements or chapters that present guiding goals and recommendations. These elements include Land Use, Transportation, Parks and Recreation, Growth Capacity, and Economic Development. In addition to the five elements, the Plan also presents an Implementation Chapter that identifies a course of implementation for the recommendations outlined.

Laughlin AFB is recognized and emphasized throughout the Plan, most notably in the Land Use Element. Not only is the base recognized for its overall importance to the local community, but the Plan also takes the extra step of developing a goal that suggests protecting the "short-term and long-range missions and operations of the base and the Del Rio International Airport" with "effective land use management and zoning controls." There are a total of 17 recommendations that directly deal with land use and airport conflicts. The main points of some of the key recommendations are summarized below:

- Amend the Laughlin AFB Compatible Land Use and Hazard Zoning Ordinance to add specific language that regulates development density, height, and noise reduction standards. The ordinance should be accompanied by a zoning map that corresponds to the amendment.
- Include a designated "fringe" in the Controlled Compatible Land Use Area, as defined in the Compatible Land Use and Hazard Zoning Ordinance, to accommodate for any changes in the missions or air operations activity on base.
- Develop criteria for variances to be included in the Compatible Land Use and Hazard Zoning Ordinance.

- Include “provisions in the ordinance relating to the extended authority for the issuance of building permits and inspection of construction.”
- Establish an intergovernmental board that is comprised of representatives from the City, Del Rio Airport Board, Val Verde and Kinney Counties, Laughlin AFB and all other public or private agencies to coordinate activities that would effect air operations.
- Adopt a telecommunication facility ordinance in the City’s Zoning Ordinance and the Compatible Land Use and Hazard Zoning Ordinance.
- Develop and require criteria that must be met to approve infrastructure extensions or improvements within the compatible use zones.

Municipal Code

Municipal Codes are an all-encompassing set of ordinances that the city develops to regulate policies and programs that impact the functionality of a municipality. In addition to the Zoning Ordinance described in detail in this section, the following ordinances impact land uses:

Chapter 8. Buildings and Building Regulations

Building codes prescribe the basic requirements that regulate the design, construction process, materials, alteration, and occupancy of any structure to insure human safety and welfare. These regulations generally address matters such as fire protection, structural safety, health requirements, accessibility, and other related activities. Although building codes do not prevent development, they can be used to ensure development occurs in a compatible manner with nearby military installations. For example, these codes could require sound attenuation measures for residences and other sensitive receptors located within certain noise levels.

Chapter 26. Subdivisions

Subdivision regulation is accomplished through plat approval. Cities in Texas may exercise some authority over new subdivisions in unincorporated areas within its extraterritorial jurisdiction (ETJ). Although the purpose of subdivision regulation is to promote the health, safety, morals and general welfare of the municipality, a subdivision ordinance may not regulate (1) the use of any building or property for business, industrial, residential or other purposes; (2) the bulk, height, or number of buildings constructed on a particular tract of land; (3) the size of a building that can be constructed, including restrictions on the floor

area ratio; or (4) the number of residential units that can be built per acre of land. Although these limitations exist, subdivision regulations can still be effectively used for compatibility planning purposes. For example, in areas without existing wastewater infrastructure, subdivision regulations might prohibit or limit the development of land, require open space set-asides, or stipulate that use may not impact a sensitive environmental area.

Chapter 30. Zoning Ordinance

Considered one of the key tools in the implementation of a comprehensive or master plan, the zoning ordinance (also referred to as a development code), is the primary mechanism whereby local governments can influence the direction, type, use, density, and location of development. The primary purpose of zoning is to:

- Protect public health, safety, and welfare;
- Protect against physical danger, particularly safety considerations for properties in proximity to military ranges or within military flight areas;
- Protect against common law nuisances – noise, vibration, air pollution, etc. – associated with military operations;
- Protect against aesthetic nuisances impacting military installations;
- Protect against “psychological nuisances,” such as perceived and actual dangers associated with military operations;
- Protect against negative impacts of light, glare, air, and privacy; and
- Provide open space and agricultural preservation.

Zoning ordinances enumerate uses permitted by right or by special exception within each category of land use. Most ordinances also possess a means to grant special exceptions, provided certain conditions are met. These exceptions are often referred to as conditional use permits (CUP) or special use permits (SUP). In addition to land uses, zoning ordinances also set the standards for permitted densities, location of structures, building heights, setbacks, acreage requirements, and other standards. Currently in Texas, municipal zoning does not extend beyond the City limits; however, subdivision regulations (as defined further below) can be enforced by the City within the ETJ. Zoning authority in Texas is derived from Chapter 11 of the Texas Local Government Code.

Laughlin AFB Compatible Land Use and Hazard Zoning Ordinance

The City of Del Rio Zoning Ordinance in the Municipal Code outlines standards for 14 land uses. These range from very low density development, such as agriculture-open district or estate, to rural single family residential classifications, to higher density such as multiple family districts, commercial, and industrial land uses.

Given authority by Texas Local Government Code Chapter 241 Municipal and County Zoning Authority around Airports, the Del Rio-Val Verde County Joint Airport Zoning Board was established. The Board then developed and adopted the Laughlin AFB Compatible Land Use and Hazard Zoning Ordinance. Adopted in March of 1993, the ordinance establishes restrictions on the height of structures and land uses surrounding Laughlin AFB by establishing airport noise zones and the controlled compatible land use area. The Airport Hazard Abatement Zones, which are the Approach, Transition, Horizontal and Conical Zones developed by the Laughlin AFB, were adopted into the ordinance as well.

Val Verde County Subdivision Regulations

Unlike counties in other states, counties in Texas have little regulatory authority. For example, counties do not have the power to regulate zoning on land in the county, or the use or appearance of property. They are also not legally bonded to develop comprehensive plans such as a municipality.

Similar to cities, Section 232 of the Texas Local Government Code gives counties the authority to regulate the subdivision of land. Under this authority, the focus of a county's ability to regulate the subdivision of land is on the roads, streets and rights-of-way.

The *Rules and Regulations of Val Verde County, Texas for Land Subdivision* were adopted in June of 1985. This ordinance outlines the preliminary and final plat approval process. Regulations state that the developer or individual must obtain approval from the adjacent city, if the planned development is located in a "dual jurisdiction." However, there is no requirement of the developer or individual to submit plans to Laughlin AFB for review or approval if development is planned in the vicinity of the base.

4.3 State and Regional Tools

Airport Compatibility Guidelines



The *Airport Compatibility Guidelines: Compatibility Planning, Compatible Land Use Zoning, Hazard Zoning for Airports in Texas*, was published by the Texas Department of Transportation Aviation Division in January of 2003. Essentially, the guidelines are a compliment to the State of Texas Local Government Code Chapter 241, Municipal and County Zoning Authority around Airports (see Section 4.4). The guidelines are intended to aid decision-makers on how to plan for compatibility as housing and other types of development begin to move closer to airports. The primary tools discussed in the guidelines are Airport Compatible Land Use Zoning Ordinances and Hazard Zoning Ordinances.

The first two chapters explain the necessity for compatible land use planning by presenting data and background information on land use conflicts and assessing the current land use patterns in Texas. Chapter Three discusses how a municipality can determine if an Airport Compatible Land Use Ordinance or a Hazard Zoning Ordinance is best suited for the municipality. It also outlines preparation, such as the prerequisites, needed for implementation of Airport Compatible Land Use Zoning Ordinance and Hazard Zoning Ordinance. Chapter Four details procedural steps in developing and adopting an Airport Compatible Land Use Zoning Ordinance and / or a Hazard Zoning Ordinance.

Groundwater Conservation Districts

To understand the purpose and responsibilities of a Groundwater Conservation District it is important to understand Texas water laws. There are two classifications for water in the State of Texas; groundwater and surface water. Each has a set of corresponding laws that govern use.

Surface water can be categorized as either natural surface water or diffused surface water. Natural surface water is essentially water found in watercourses and is the property of the State. Therefore the State holds the right to allocate the water through “water rights” permits that are the responsibility of the Texas Commission on Environmental Quality (TCEQ). Diffused surface water is primarily rain runoff. This type of water flows, typically, from a higher elevation or is rain, to the lower elevation across state and municipality boundary lines. Diffused surface water is considered to be the property of the landowner until it runs into a natural watercourse, at which time it becomes the property of the State.

Under the Texas Water Code, “groundwater” is defined to be “water percolating below the surface of the earth.” The common law of Texas groundwater has historically followed the so-called “rule of capture”, sometimes referred to in non-legal circles as the “law of the biggest pump.” Texas courts have placed some limits on the “rule of capture.” As a general rule, and subject to various exceptions, for groundwater not inside the regulatory jurisdiction of a groundwater district, the first one to pump it to the surface controls its use and disposition.

While there is no groundwater district in Val Verde County, there is one in neighboring Kinney County, the Kinney County Groundwater Conservation District. Initial attempts to establish a district in Val Verde County occurred in 2004; however those efforts in the 2006 Texas Legislature failed. Consequently, an advocacy group was formed.

4.4 Legislation and Other Regulations

State Legislation and Other Regulations

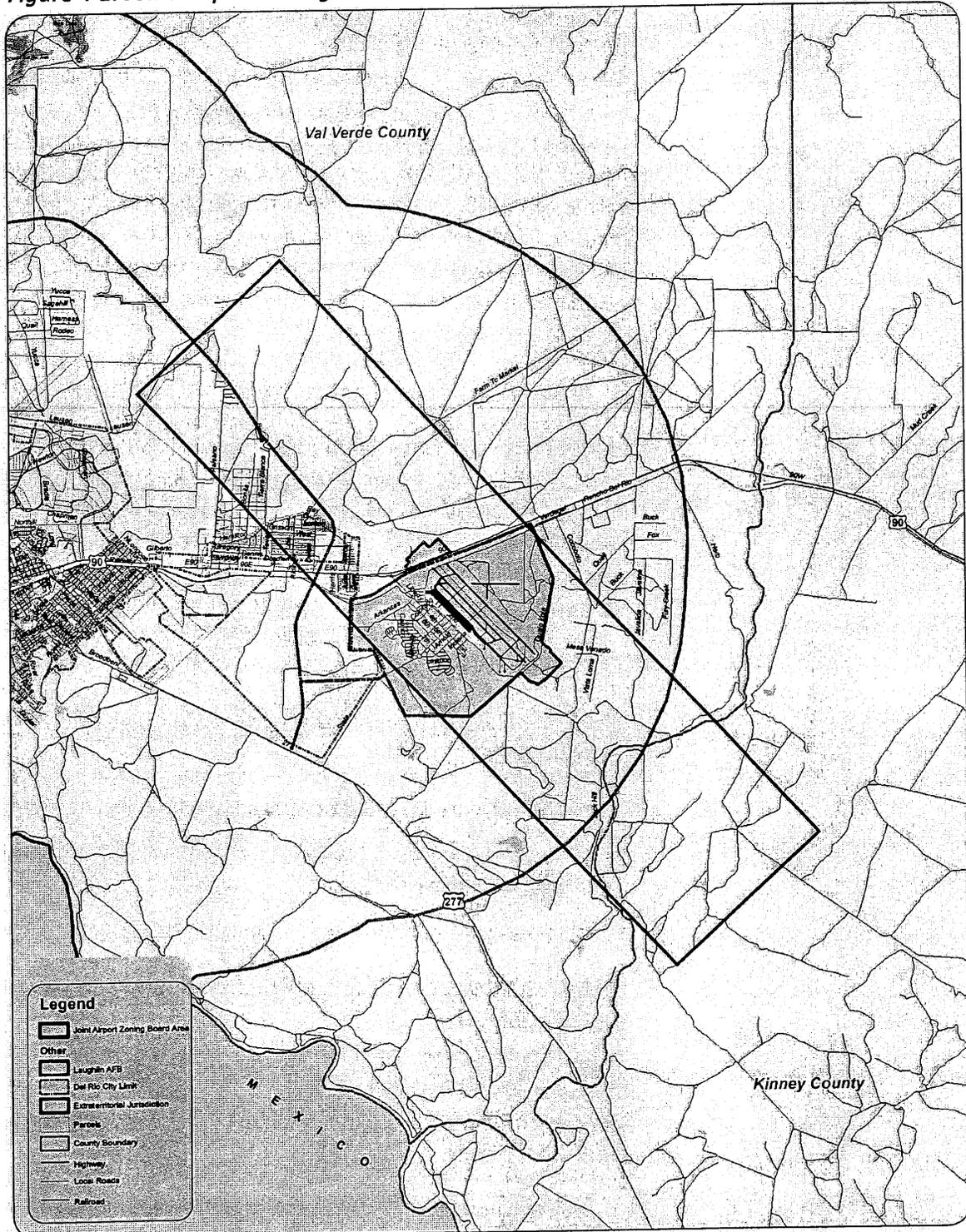
Texas Local Government Code Chapter 241, Municipal and County Zoning Authority around Airports

Chapter 241 of the Texas State Local Government Code gives a municipality or county authority to regulate land use within a designated airport hazard area. The airport hazard area for Laughlin AFB is shown in Figure 4-1. This is done through the creation of a Joint Airport Zoning Board that is appointed by a primary jurisdiction in partnership with another agency or jurisdiction to work jointly. The code details the board as having the authority to adopt, administer, and, when necessary, enforce land use to ensure public safety and compatibility.

Although, the board is intended to solely develop and adopt an Airport Compatible Land Use Zoning Ordinance or Hazard Zoning Ordinance, it is possible for the Board to continue after adoption. For this to occur, the municipality must name the Board as the administrative body for this function, which would then grant it the authority to review and approve building permits and have zoning authority over the designated area.

The City of Del Rio and Val Verde County established a Joint Airport Zoning Board in 1991. The Board developed and adopted the Compatible Land Use and Hazard Zoning Ordinance for Laughlin AFB, described in further detail in Section 4.4.1. Although each jurisdiction appointed two new members to the Board in 2002, the Board has been relatively inactive.

Figure 4-1. Joint Airport Zoning Board



0 1 2 Miles

Matrix Design Group, Inc.

Joint Airport Zoning Board Area

Del Rio Joint Land Use Study

Texas Local Government Code Chapter 42, Extraterritorial Jurisdictions of Municipalities

Chapter 42 of the Texas State Local Government Code, Extraterritorial Jurisdictions (ETJ) of Municipalities, designates a municipality a certain amount of land surrounding the city for future growth. The municipality has no zoning authority, since the designated area does not actually belong to the city. However, the code does give the city the right to regulate subdivision development within the ETJ. The designated ETJ is based on the population of the municipality and has the ability to grow in accordance with population. The ETJ also increases as land is annexed to the City.

In border areas of Texas, requirements related to the platting, selling, and connecting utilities depend on a variety of factors. Under Texas state law (LGC § 212.001) applying to counties that border the Rio Grande, the ETJ of a city with a federal decennial census population of 5,000 or more is expanded to five miles for purposes of subdivision and development regulation (including utility connection) under Chapter 212. Consequently, the Del Rio ETJ generally extends five miles from the city limits (see Figure 4-1). The exceptions to this are to the City's southeast where the ETJ encompasses Laughlin AFB and to the City's south and west where the ETJ stops at the US-Mexican border.

In the border area, state law (LGC § 242.001) requires subdivision plat approval by:

- Only the city if the land being subdivided is within the city limits
- By both the city and county if the land is outside the city limits, but inside the city's ETJ
- Only the county if the land is not within any city or its ETJ

Texas Local Government Code Chapter 240, Subchapter D, Outdoor Lighting

Subchapter D of Texas Local Government Code Chapter 240 addresses the authority of counties to regulate the use of outdoor lighting. Subdivision requirements for this bill require the commissioner's court to adopt specifications in the subdivision to minimize negative effects of outdoor lighting. The county may regulate the installation and use of outdoor lighting in any unincorporated area within the county to protect against excessive glare, light trespass, skyglow, environmental concerns, or any other negative effect on public safety or the ability of another person to use or enjoy his or her private property. However, the commissioner's court may not regulate outdoor lighting that was installed or used before the date of the order and supports the operation

of: an electrical utility, power generation, or transmission and distribution utility company; a gas utility; surface coal mining and reclamation operations; a telecommunications provider; a correctional facility; a single family residence located outside the boundaries of a platted subdivision; or structures, activities or lands maintained for agricultural use.

House Bill No. 1852

House Bill No. 1852 was passed to preserve the dark sky environment for military operations. The bill grants counties the authority to regulate the use of lighting to mitigate interference with training activities, operations, or research within five miles of a military installation. Under this legislation, counties are provided with the authority to regulate the type of lighting allowed to control glare, setting shielding requirements and time of usage.

Federal Initiatives

National Environmental Policy Act

The National Environmental Policy Act (NEPA) of 1969 requires Federal agencies to file an environmental assessment (EA) and sometimes an environmental impact statement (EIS) for major Federal actions that have an environmental impact. NEPA is applicable to all Federal agencies, including the military.

NEPA mandates that the military analyze the impact of its actions and operations on the environment, including that of the surrounding communities. Inherent in this analysis is an exploration of methods to lessen any adverse environmental impact. The EIS is a public process that allows participation by the community.

For local planning officials, an EIS or EA is a valuable planning document in determining the extent of impacts of changing military actions or operations on their policies, plans, and programs, if any, and on the surrounding community. Public hearings are required for all EIS and EA documents released by the military under NEPA. A Finding of No Significant Impact (FONSI) under an EA or a full EIS that considers alternatives to the proposed military actions or operations also is required and is subject to public scrutiny. The information obtained by the EIS / EA is valuable in planning coordination and policy formulation at the local government level.

Department of Defense Conservation Partnering Initiative

In 2003, Congress amended Title 10 U.S.C. § 2684a and § 2692a (P.L. 107-314), the National Defense Authorization Act, to add authority to the DOD to partner with other federal agencies, states, local governments, and conservation based Non-Governmental Organizations (NGO) to set aside lands near military bases for conservation purposes and to prevent incompatible development from encroaching on, and interfering with, military missions. This law provides an additional tool to support smart planning, conservation, and environmental stewardship on and off military installations.

Department of Defense Readiness and Environmental Protection Initiative (REPI)

To implement the authority provided by Department of Defense Conservation Partnering Initiative, the DOD established the Readiness and Environmental Protection Initiative (REPI). This initiative enables DOD to work with state and local governments, non-governmental organizations, and willing landowners to limit encroachment and incompatible land use.

REPI funds are used to support a variety of DOD partnerships that promote compatible land use. By relieving encroachment pressures, the military is able to test and train in a more effective and efficient manner. By preserving the land surrounding military installations, habitats for plant and animal species are conserved and protected.

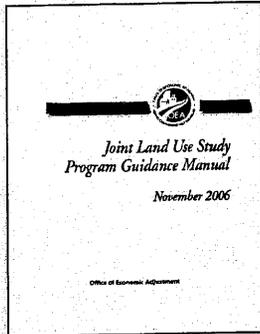
Source: www.fedcenter.gov and www.cooperativeconservation.gov/

Federal Aviation Act

The Act requires the Secretary of Transportation to make long-range plans to formulate policy for the orderly development and use of “navigable air space” to serve the needs of civilian aeronautics and national defense except for the specific needs of military agencies. Military planning strives to work alongside local, state, and federal aviation law and policies but sometimes must supersede other levels of government due to national security interests.

The ‘500-foot rule’ is discussed in the Federal Aviation Act. It states that flights 500 feet or more above ground level (AGL) do not represent a compensable taking because flights 500 feet AGL enjoy a right of free passage without liability to the owners below. This is important to Laughlin AFB and the surrounding communities when considering land acquisition and development rights.

4.5 Other Resources



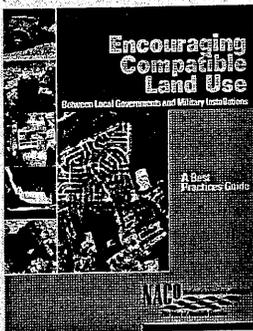
In hopes of preventing land use compatibility issues between the military and the local community, the DOD Office of Economic Adjustment (OEA) and other public interest groups, such as the National Association of Counties (NACO), have taken steps to inform the public on encroachment issues and methods that can be used to address or completely avoid compatibility issues. Below are five resources that have been published to inform the public on those issues.

Documents

The Practical Guide to Compatible Civilian Development near Military Installations (July 2007), OEA. This guide offers general information on community development and civilian encroachment issues. The guide can be found at: <http://www.oea.gov/>.

Joint Land Use Study Program Guidance Manual (November 2006). This manual provides guidance on the JLUS program, process, and efforts to support compatible development. This manual can be obtained on the OEA internet site at the following address: <http://www.oea.gov/>.

Encouraging Compatible Land Use between Local Governments and Military Installations: A Best Practices Guide (April 2007), NACO. This guidebook presents case studies of best practices between the military and communities through communication, regulatory approaches, and Joint Land Use Studies. The guide can be accessed on the NACO internet site at the following address: <http://www.naco.org/>.

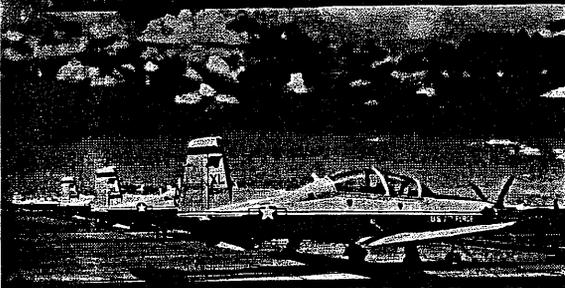


Videos

The Base Next Door: Community Planning and the Joint Land Use Study Program, OEA. This informative video discusses the issue of encroachment on military installations as urban development occurs in the vicinity of installations.

Managing Growth, Communities Respond, OEA. This video highlights the lessons learned from three successful communities managing growth near military installations.

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IMPLEMENTATION PLAN

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5.2 Recommended JLUS Strategies	5-3
5.3 JLUS Strategies	5-6
5.4 Strategy Summaries	5-31

This section lays out a specific course of action that has been developed cooperatively with representatives from the City of Del Rio, Val Verde County, Kinney County, Laughlin Air Force Base (AFB), state and federal agencies, local organizations, and other interested entities. The recommended strategies represent a realistic and coordinated approach to compatibility planning developed with the support of the stakeholders involved.

5.1 Developing Recommendations

There are several measures of a successful planning process. As described below, the Del Rio JLUS process has met these requirements.

Q *Did the process provide for substantial involvement of those responsible for implementation?*

A *The Del Rio Policy Committee (PC) and Technical Oversight Committee (TOC) met throughout the development of the JLUS and provided input on each step of the study's development. The committees assisted in the identification of compatibility issues (both current and future) and the development and refinement of the strategies presented in this section. The committee members' insight also helped to develop a set of strategies that not only resolved the compatibility issues identified, but could be implemented by the stakeholders involved.*

The recommendations presented in this section represent a consensus supported by all members of the PC and TOC.

Q *Does the plan cover the geographic area necessary to ensure appropriate compatibility planning?*

A *At the beginning of the JLUS process, the project team invited agencies and organizations from the surrounding region to be a part of the planning process and to assist in identifying any area that may be important to the development and implementation of the study. During the process, the committees refined the study area to two specific study areas that reflected the issues identified within the region of Laughlin AFB and its auxiliary airfield, Spofford Field.*

Q *Are the proposed strategies realistic?*

A *The design of the Policy and Technical Oversight committees helped ensure that the plan would be realistic in approach. The PC members represented decision makers from each of the agencies and organizations involved. They helped develop approaches that could be implemented. The TOC members represented the technical staff functions of these agencies and organizations. They helped refine the strategies and provided input on the processes, staffing, and funding necessary for implementation of the JLUS.*

Q *Do the strategies strike a balance between sustaining military operations and providing opportunities for local economic development?*

A *Bringing together all of the stakeholders, and opening lines of communication on a wide range of compatibility issues, started a higher level of communication on issues than had been achieved in the past. The consensus of both the PC and TOC to support the JLUS study is a testament to striking the right balance.*

Q *Does the plan include a mechanism to oversee the implementation of the JLUS recommendations?*

A *Strategy 13 establishes a JLUS Coordinating Committee. Made up of representatives from Laughlin AFB and the local jurisdictions in the study areas, they will monitor, assess, and refine the recommendations in this JLUS to address the changing conditions and ensure the JLUS provides a long-term vision for meeting encroachment challenges.*

5.2 Recommended JLUS Strategies

The strategies presented herein were developed to resolve the compatibility issues introduced by the PC and TOC members, the public and the project team, as well as mitigate any future compatibility issues similar in nature to the identified issues. The JLUS Implementation plan is comprised of 12 compatibility tools and 38 recommended JLUS strategies. The recommended JLUS strategies were ordered under the compatibility tools that best represent the strategy. The compatibility tools are listed below:

- Military Influence Area (Table 5-2)
- Acquisition (Table 5-3)
- Air Installation Compatible Use Zone (Table 5-4)
- Bird / Wildlife Aircraft Strike Hazard Coordination (Table 5-5)
- Capital Improvement Plan (Table 5-6)
- Comprehensive Plan (Table 5-7)
- Communication / Coordination (Table 5-8)
- Deed Restrictions (Table 5-9)
- Legislative Tools (Table 5-10)
- Memorandum of Understanding (Table 5-11)
- Real Estate Disclosure (Table 5-12)
- Zoning Ordinance / Subdivision Ordinance / Building Code / Other Local Regulations (Table 5-13)

Figure 5-1 provides a guide on how to read the strategies presented in Tables 5-2 through 5-13 in this section of the JLUS. In the tables describing strategies, the Responsibility / Partners column identifies what agency or organization is responsible for implementing the strategy (Primary Responsibility) and which agencies and organizations are considered to be Partners in the strategy. A Partner is simply an agency or organization that can provide technical information or can otherwise support the efforts to implement the strategy. The geographic area in which each strategy is recommended for implementation is identified in the location column of each strategy table. There are three geographic areas that may be associated with each strategy, the study area, as described in Section 1, and two different Military Influence Areas (MIA), Laughlin AFB MIA I and Spofford Field MIA II as described in Section 5.3.

#	Strategy	Location	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
1	<p>Define and Establish a MIA for Laughlin AFB and Spofford Field</p> <p>Create a Military Influence Area for Laughlin AFB and Spofford Field that reflect the types and intensity of compatible land uses.</p> <p>The MIA overlay zone should:</p> <ol style="list-style-type: none"> 1. Be used by local jurisdictions via the Joint Airport Zoning Board (JAZB) to regulate compatible land uses through land use planning and zoning authority. The JAZB should formally notify all property owners, whose property is located within the MIA, that they are required to follow the planning and zoning regulations of the MIA. The JAZB should develop an MOU with the City of Del 	MIA I, MIA II	<p><u>Primary Responsibility</u></p> <ul style="list-style-type: none"> City of Del Rio Kinney County Maverick County Val Verde County Joint Airport Zoning Board <p><u>Partners</u></p> <ul style="list-style-type: none"> Laughlin AFB 	■		■

Strategy Number.
Used for reference.

Strategy. This column contains a description of the strategy, including actions to be taken.

Geographic Area. For each strategy, this box describes where the strategy applies. For example, if it only applies to areas in MIA I, that will be the only area called out.

Who Will Complete. This column lists the organizations with primary responsibility for the strategy, and the partners that can assist them with implementation.

When. These columns show when the strategy is proposed to be completed. Some strategies are also marked as "Ongoing" activities.

Figure 5-1. Guide to Using Strategy Tables

Table 5-1 provides an index of the strategies contained under each compatibility tool type. The corresponding page number for each strategy is also listed.

Table 5-1. Index of JLUS Strategies

Strategy Title	Page
Military Influence Area (MIA)	
1. Define and Establish an MIA for Laughlin AFB and Spofford Field.....	5-9
Acquisition	
2. Identify Priority Locations for Acquisition.....	5-13
3. Establish a Voluntary Acquisition Program / Purchase of Development Rights.....	5-13
4. Develop and Implement a Conservation Easement Education Program.....	5-14
5. Leverage the DOD Encroachment Partnering Program.....	5-14
AICUZ	
6. Implement AICUZ Recommendations.....	5-15
BASH Coordination	
7. Develop and Distribute BASH Educational Materials.....	5-16
8. Control Bird and Wildlife Attractions Near Laughlin AFB.....	5-16
Capital Improvement Plan	
9. Update Appropriate CIP and Master Infrastructure Plans.....	5-17
10. Incorporate Laughlin AFB into Regional Infrastructure Planning.....	5-18
Comprehensive Plan	
11. Update City of Del Rio Comprehensive Plan.....	5-19
12. Develop a Joint Comprehensive Plan for the MIA.....	5-19
Communication / Coordination	
13. Establish a JLUS Coordinating Committee.....	5-19
14. Develop and Distribute Public Education Materials.....	5-20
15. Laughlin AFB to Provide Technical Support to the Planning and Zoning Boards.....	5-20
16. Include Laughlin AFB AICUZ on City Website.....	5-20
17. Laughlin AFB to Provide Technical Support to the JAZB.....	5-21
18. Develop a Formal Communication Process for Information Exchange Between all Entities.....	5-21
19. Develop a Groundwater Conservation District Educational Program.....	5-21
20. Actively Seek Local Input on Compatibility Issues.....	5-21
21. Coordinate School Site Planning.....	5-21
22. Establish Procedures for Plan Review and Comment.....	5-22
Deed Restrictions	
23. Identify Areas for Deed Restrictions.....	5-24
24. Develop a Voluntary Deed Restriction Program.....	5-24
Legislative Tools	
25. Include Laughlin AFB in Wildlife Management Legislation.....	5-25
26. Encourage Statewide Legislation Addressing Military Base Encroachment.....	5-25
Memorandum of Understanding	
27. Develop General MOU to Implement JLUS Process.....	5-26
28. Develop Specific MOUs to Implement JLUS Recommendations.....	5-26
Real Estate Disclosure	
29. Require Properties to Receive Full Disclosure at the Time of Advertisement.....	5-27
30. Modify Subdivision Regulations to Require Appropriate Real Estate Disclosure.....	5-27
Zoning Ordinance / Subdivision Ordinance / Building Code / Other Local Regulations	
31. Amend the Laughlin AFB Compatible Land Use and Hazard Zoning Ordinance and Zoning Map.....	5-29
32. Require Sound Attenuation for Buildings and Retrofit Existing Buildings.....	5-30
33. Update or Develop Light and Glare Regulations.....	5-30
34. Ensure Part 77 Compliance.....	5-31
35. Mitigate Frequency Spectrum Impedance and Interference Issues Associated with Development.....	5-31
36. Develop and Adopt a Height Restrictions Ordinance.....	5-31
37. Require a Water, Utility, and Environmental Resources Study for Large Developments.....	5-31
38. Promote Compatible Land Uses Along the Del Rio Relief Route.....	5-31

5.3 JLUS Strategies

Military Influence Area (MIA)

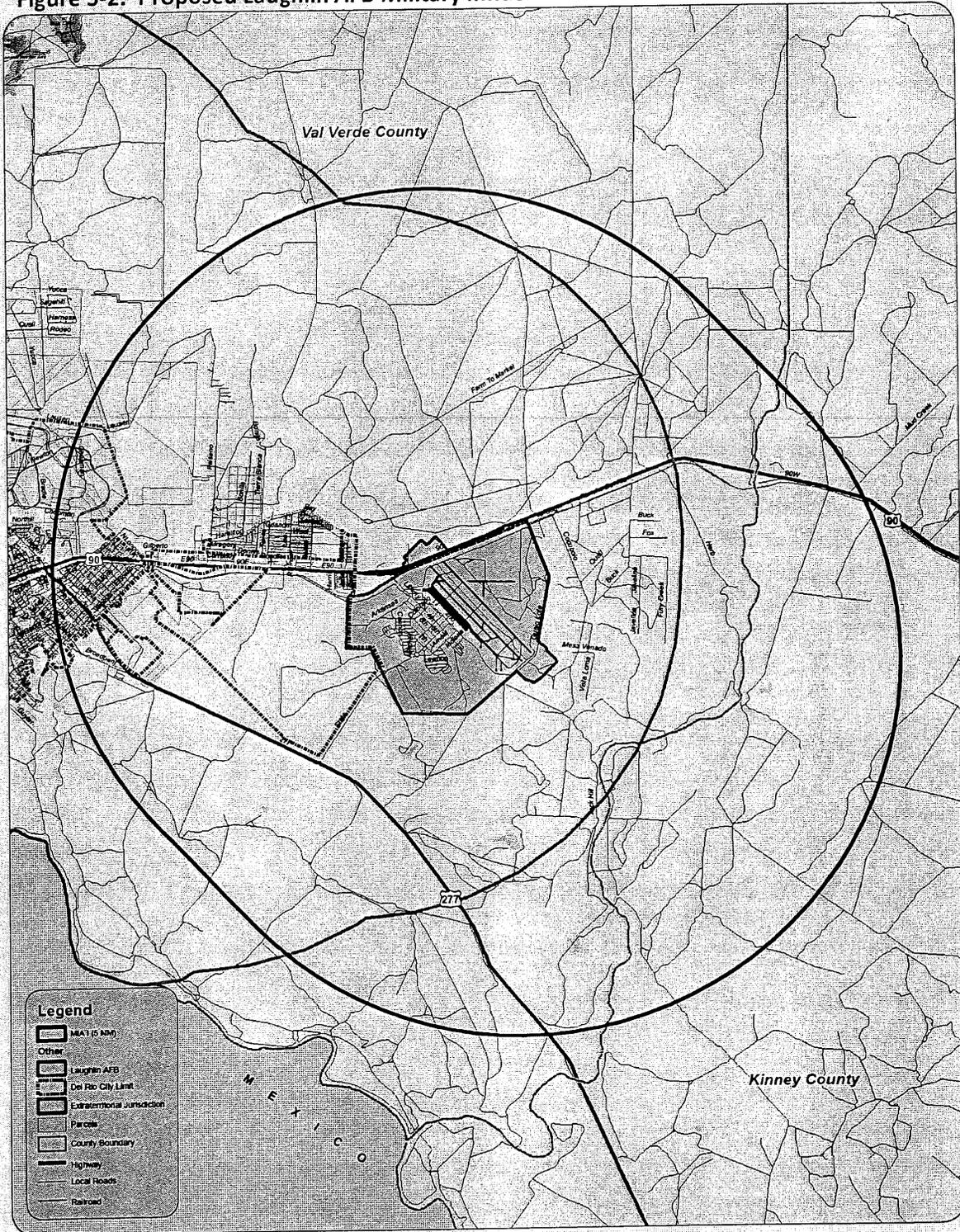
A Military Influence Area (MIA) is a formally designated geographic planning area where military operations may impact local communities, and conversely, where local activities may affect the military's ability to carry out its mission. An MIA is designated to promote an orderly transition between community and military land uses to ensure that they are compatible.

An MIA is designated to accomplish the following purposes:

- Promote an orderly transition between community and military land uses so that they remain compatible
- Protect public health, safety, and welfare
- Maintain operational capabilities of military installations and areas
- Promote awareness of the size and scope of military training areas to protect areas separate from the actual military installation (i.e., critical air and sea spaces) used for training purposes
- Establish compatibility requirements within the designated area, such as requirements for sound attenuation, real estate disclosure, and aviation easements

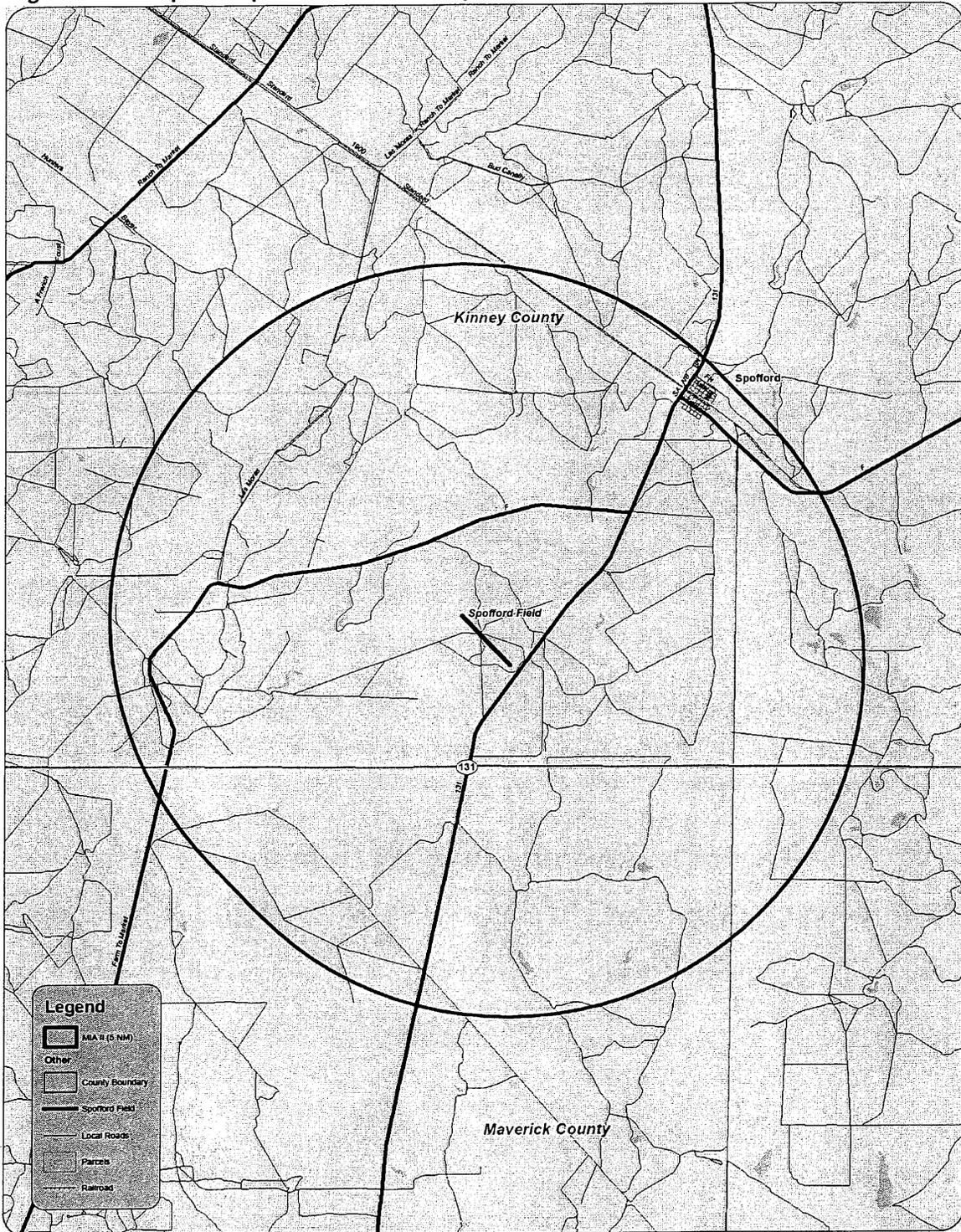
Figures 5-2 and 5-3 visually represent the MIAs for Laughlin AFB and Spofford Field. Table 5-2 presents compatible land use strategies related to the MIAs.

Figure 5-2. Proposed Laughlin AFB Military Influence Area I



**Laughlin AFB
Military Influence Area I
Del Rio Joint Land Use Study**

Figure 5-3. Proposed Spofford Field Military Influence Area II



0 1 2 Miles

Matrix Design Group, LLC

**Spofford Field
Military Influence Area II
Del Rio Joint Land Use Study**

Table 5-2. Military Influence Area (MIA) Strategies

#	Strategy	Location	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
1	<p>Define and Establish an MIA for Laughlin AFB and Spofford Field</p> <p>Create a Military Influence Area for Laughlin AFB and Spofford Field that reflects the types and intensity of compatible land uses.</p> <p>The MIA overlay zone should:</p> <ol style="list-style-type: none"> 1. Be used by local jurisdictions via the Joint Airport Zoning Board (JAZB) to regulate compatible land uses through land use planning and zoning authority. The JAZB should formally notify all property owners, whose property is located within the MIA, that they are required to follow the planning and zoning regulations of the MIA. The JAZB should develop an MOU with the City of Del Rio that states the City will provide assistance (staffing and resources) to the JAZB to assist in enforcing the MIA planning and zoning regulations. The JAZB should obtain an IGA with the City of Spofford that states that the City delegates their responsibility for planning and zoning within their incorporated area to the JAZB. 2. Be codified via zoning ordinance by the JAZB comprised of representatives from the City of Del Rio, Kinney, Val Verde, and Maverick Counties, and Laughlin AFB. 3. Be enacted by state legislation granting counties and / or the Joint Airport Zoning Board land use planning and zoning authority in the MIAs. 4. Include zones within the MIA that may have land use planning and zoning regulations specific to the area within the zone. 5. Include at a minimum the zones already established in the Laughlin AFB Compatible Land Use Zoning and Hazard Ordinance that includes, but is not limited to the clear zone, APZs, and noise contours. These zones need to be amended each time the Laughlin AFB AICUZ is updated, when the new DOD Land Use Compatibility Guidance is approved and released and other DOD instructions associated with compatible planning around military installations are updated. Laughlin AFB is responsible for providing updated AICUZ documents and DOD compatibility standards to the City, Counties and the JAZB. 6. Where appropriate, use purchase of Development Rights, conservation easements, agriculture/cattle easements, aviation easements, or fee simple acquisition of property within the MIAs where there is a willing or voluntary property owners in priority areas where land use compatibility may be an issue that planning or zoning may not be able to mitigate or prevent encroachment. 	MIA I, MIA II	<p><u>Primary Responsibility</u></p> <ul style="list-style-type: none"> City of Del Rio Kinney County Maverick County Val Verde County Joint Airport Zoning Board <p><u>Partners</u></p> <ul style="list-style-type: none"> Laughlin AFB 	■		■

<p>7. Be limited to a density no higher than one (1) dwelling unit per ten (10) acres. Existing residential zoning and development located within the incorporated and unincorporated areas of the MIAs shall be grandfathered in at their existing zoning and development densities but if the property owner proposes to increase the density of existing residential zoning or developments, they are required to adhere to the same requirement that residential development shall be limited to a density of one (1) dwelling unit per ten (10) acres.</p> <p>8. Support a Voluntary Deed Restriction Program. The deed restriction should disclose that the said property is located within an MIA and that activity associated with the missions at the military installation may have an impact within this area. Investigate the opportunity to require that a deed restriction be filed with a property owner's deed at time of any type of development application approval through the JAZB and / or counties, and any connection permits associated with water districts or domestic utility companies.</p> <p>9. Require deed restrictions at time of sale of property disclosing if the said property has or does not have water associated with the said property.</p> <p>10. Develop a joint comprehensive plan and zoning ordinance for the MIA that will be the bases for planning and zoning regulation by the JAZB.</p> <p>11. Discourage annexation within MIAs that do not address compatible land use that assists in preserving the mission of Laughlin AFB.</p> <p>12. Investigate the benefit of using purchase of development rights as a tool to mitigate incompatible land uses within the MIA.</p> <p>13. Discourage the planning or siting of any school or education institution within the MIA.</p> <p>14. Require that school districts consult with the JAZB prior to planning or siting a school or education institution within the MIA.</p> <p>15. Limit noise sensitive land uses (hospitals, schools, daycare center) to be located within the MIA.</p> <p>16. Ensure all industrial and commercial uses located in the MIA do not emit smoke, steam or dust; limit the development of bird and wildlife attractors (i.e., landfills); regulate the development of alternative energy structures (i.e., solar panels, wind turbines); establish procedures for the coordination of controlled or open burns; establish additional light and glare regulations (see Strategy #33).</p> <p>17. Require the JAZB in cooperation with Laughlin AFB to evaluate and confirm the MIA planning and zoning regulations still provide the guidance and laws associated with providing compatible development if missions at Laughlin AFB change.</p> <p>The boundary of the MIA I for Laughlin AFB and MIA II for Spofford Field are defined as follows, and are illustrated on Figures 5-2 and 5-3.</p> <p>MIA I and II includes the area as defined by a 5 nautical mile radius from the centerline of the Laughlin AFB's and</p>					
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<p>Spofford Field's primary runway. If any part of the MIA five (5) nautical mile radius boundary lines bisects a parcel of property, the entire parcel of property is considered to be located within the MIA.</p> <p>The JAZB should investigate different funding mechanisms including state funding to assist the JAZB in enforcing the planning and zoning regulations associated with the MIA.</p> <p>Note: In order for these areas to be fully integrated and implemented into local land use policy and regulations, state legislation must be developed that either expands the area of authority for the Joint Airport Zoning Board or provides counties additional land use authority surrounding military installations.</p>					
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Acquisition

As a land use planning tool, property rights can be acquired through donation, easement, or the outright purchase of property for public purposes. The purpose of acquisition tools is to eliminate land use incompatibilities through market transactions and the local development process. Acquisition tools are particularly effective because they advance the complementary goals of shifting future growth away from the military installations and preserving community assets such as agriculture, open space, rural character, or sensitive natural habitats. Using these tools, land use compatibility issues can be addressed by:

- Creating a land barrier between active military installations and incompatible land uses
- Shifting future growth away from critical military lands
- Protecting public safety by directing incompatible land uses to other locations
- Protecting the natural environment
- Maintaining and protecting existing agriculture resources
- Conserving open space

The following types of acquisition are being recommended:

Voluntary Acquisition

Properties located within MIAs (specifically at a minimum the noise contours and safety zones within the Laughlin AFB AICUZ footprint located within the MIAs) should be eligible to participate in a voluntary acquisition program. Federal legislation supports the notion of a voluntary acquisition program under section 104(a) of the Aviation Safety and Noise Abatement Act of 1979. Under this legislation, an airport operator (including military installations) may submit a noise compatibility program to the Federal Aviation Administration (FAA)

which sets forth the methods for the reduction of incompatible land uses.

Conservation or Agricultural/Cattle Ranching Easement

Conservation or agricultural/cattle ranching easements can be acquired through a number of mechanisms, but are primarily donated or purchased. With donation, there are a number of incentives for the property owner, such as a federal income tax deduction, making this option more desirable to the property owner. A conservation or agricultural/cattle ranching easement is a more cost effective method to acquire land than outright purchase and allows the property owner to retain more private property rights than other methods of acquisition. Although predominantly open space and ranch land, development pressure in the future could influence urbanization of portions of the cattle/agricultural ranches in proximity to the installation.

Fee Simple Acquisition (Conservation Partnering)

This option involves the purchase of property and is typically the most costly method to protect open space, sensitive, or critical areas. The cost of acquisition and the need for a willing seller can be constraints. As mentioned in Chapter 4, federal legislation passed in 2003 (National Defense Reauthorization Act) granted authority to the DOD to partner with local governments and conservation organizations to assist in the acquisition of land. In order to receive funding, the DOD must identify willing sellers with property that if acquired would achieve the following objectives:

- Limiting development or use of the property that would be incompatible with the mission of the installation
- Preserving habitat on the property that is compatible with environmental requirements and/or may eliminate or relieve current or anticipated environmental restrictions that would or might otherwise restrict, impede, or otherwise interfere, whether directly or indirectly, with current or anticipated military training, testing or operations on the installation

In addition to the DOD conservation partnering funds, additional funding could also come from the US Department of Agriculture's Farms and Ranch Lands Protection Program (FRPP) and the Texas Military Preparedness Commission's Texas Military Revolving Loan Fund Program.

Table 5-3. Acquisition Strategies

#	Strategy	Location	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
2	<p>Identify Priority Locations for Acquisition</p> <p>Identify priority locations for acquisition programs (property purchase, easement purchase, or purchase of development rights) should funds become available.</p> <ul style="list-style-type: none"> ▪ Laughlin AFB to work with local jurisdictions to identify priority locations (critical parcels) within the MIA requiring additional and more permanent protection from incompatible land use. ▪ Identify the priority locations (critical parcels) that provide protections to sustaining the mission of the installation and also provide habitat values that can be used to identify properties acceptable under DOD Conservation Partnering opportunities. ▪ Work with State congressional delegation to obtain necessary appropriations in the DOD budget for the purchase of critical parcels and conservation easements that protect current and future missions at Laughlin AFB. 	MIA I, MIA II	<p><u>Primary Responsibility</u></p> <ul style="list-style-type: none"> ▪ City of Del Rio ▪ Kinney County ▪ Maverick County ▪ Val Verde County ▪ Laughlin AFB <p><u>Partners</u></p> <ul style="list-style-type: none"> ▪ Land Trust Organizations ▪ Department of Defense 	■		■
3	<p>Establish a Voluntary Acquisition Program / Purchase of Development Rights</p> <p>Establish a Voluntary Acquisition / Purchase of Development Rights program for priority locations identified in Strategy #2</p> <ul style="list-style-type: none"> ▪ Program should include provision of fee simple acquisition or acquisition of development rights ▪ Program should include transfer of property to a trust of property or conservation easement limiting future uses of the land ▪ Program should provide brochures that define the Voluntary Acquisition Program (to serve as an educational tool) ▪ Program should investigate the use of a transfer of development rights (TDR) program ▪ Program should include development of an agricultural / ranching overlay district for the preservation of agricultural and ranching industries 	MIA I, MIA II	<p><u>Primary Responsibility</u></p> <ul style="list-style-type: none"> ▪ City of Del Rio ▪ Kinney County ▪ Maverick County ▪ Val Verde County <p><u>Partners</u></p> <ul style="list-style-type: none"> ▪ Laughlin AFB ▪ Land Trust Organizations ▪ Department of Defense 		■	■

Table 5-3. Acquisition Strategies

#	Strategy	Location	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
4	<p>Develop and Implement a Conservation Easement Education Program</p> <p>Develop and implement a Conservation Easement Education Program to inform landowners of the various benefits of a conservation easement.</p> <ul style="list-style-type: none"> The program should identify the areas for potential inclusion. The program should focus on the possible conservation partnering possibilities where easements would benefit the base, and protect the rights of the landowner. Pamphlets should be created with pertinent information and distributed to local landowners. 	MIA I, MIA II	<p><u>Primary Responsibility</u></p> <ul style="list-style-type: none"> City of Del Rio Kinney County Maverick County Val Verde County <p><u>Partners</u></p> <ul style="list-style-type: none"> Laughlin AFB Land Trust Organizations 		■	■
5	<p>Leverage the DOD Encroachment Partnering Program</p> <p>Pursue conservation opportunities within the MIA and other priority locations utilizing the DOD's Readiness and Environmental Protection Initiative (REPI) to identify priority locations for acquisition programs (property purchase, land deed transfer, or easement purchase). This should be done in addition to working with State Congressional delegation to obtain necessary appropriations in the DOD budget for the purchase of critical parcels and conservation easements to protect current and future missions at Laughlin AFB</p>	MIA I, MIA II	<p><u>Primary Responsibility</u></p> <ul style="list-style-type: none"> Laughlin AFB Department of Defense <p><u>Partners</u></p> <ul style="list-style-type: none"> City of Del Rio Kinney County Maverick County Val Verde County Land Trust Organizations 	■		■

**Air Installation
Compatible Use Zone
Study**

The Air Installation Compatible Use Zone (AICUZ) program is a DOD planning program that was developed in response to incompatible urban development and land use conflicts around military airfields. The AICUZ program seeks to provide information on compatibility, develop a cooperative relationship between communities and military bases, and provide land use compatibility guidelines that protect public health and safety while maintaining military readiness.

The AICUZ program has two objectives:

- To assist local, regional, state, and federal officials in protecting the public health, safety, and welfare by promoting compatible development within the AICUZ area of influence
- To protect operational capabilities from the effects of land use that is incompatible with aircraft operations

While prepared in aid of military bases, the primary users of an AICUZ study are the local communities surrounding the base or an off-site

location (such as auxiliary fields or training areas). The AICUZ study is also a tool used by the base's community planner to evaluate proposed projects (both on- and off-base) for their compliance with the information presented in the AICUZ study.

Table 5-4. AICUZ Strategies

#	Strategy	Location	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
6	<p>Implement AICUZ Recommendations</p> <p>Implement recommendations contained in the current and all subsequent Laughlin AFB AICUZ Studies.</p> <ul style="list-style-type: none"> ▪ Incorporate AICUZ policies and guidelines into City of Del Rio Comprehensive Plan and the proposed JAZB Joint Comprehensive Plan. ▪ Amend the Laughlin AFB Compatible Land Use and Hazard Zoning Ordinance to include the recommendations from the updated Laughlin AFB AICUZ Studies. The recommendations shall specify the type of land uses permitted, the type of structures permitted, and height restrictions for structures and objects of natural growth to prevent obstructions to flight operations or air navigation. ▪ Ensure height and obstruction ordinances reflect current Air Force and Federal Aviation Administration (FAA) Part 77 requirements. ▪ Amend the JAZB's Laughlin AFB Airport Zoning Ordinance to reflect any changes within the updated AICUZ. ▪ Modify building codes to ensure that new construction within the AICUZ area has the recommended noise level reductions incorporated into its design and construction. ▪ Continue to coordinate with Laughlin AFB for planning and zoning actions that have the potential of affecting base operations. Develop a working group representing city, county, JAZB, and base planners to meet periodically, as needed, to discuss AICUZ concerns and major development proposals that could affect airfield operations. 	MIA I, MIA II	<p><u>Primary Responsibility</u></p> <ul style="list-style-type: none"> ▪ City of Del Rio ▪ Kinney County ▪ Maverick County ▪ Val Verde County ▪ Joint Airport Zoning Board <p><u>Partners</u></p> <ul style="list-style-type: none"> ▪ Laughlin AFB 	■		■

Bird / Wildlife Strike Hazard Coordination

The Bird / Wildlife Strike Hazard (BASH) program is aimed at reducing the potential for collisions between military aircraft and birds. Aircraft accidents due to birds are becoming more frequent due to the increase in flight demands. Knowledge of where birds travel, nest, and feed helps the DOD avoid problem areas, and therefore save lives and avoid the destruction of valuable aircraft. The program considers not only wildlife within the confines of the airfield, but also in neighboring areas. The BASH program covers predatory birds, nuisance flocking birds (gulls),

and migratory geese and ducks. In addition to birds, the BASH program also addresses other animals that could pose a hazard to aircraft operations around the airfield such as coyotes, deer and rabbits. The BASH program promotes land management practices that minimize bird attractants, and increase safety procedures to recognize, control, and avoid hazardous bird concentrations.

Table 5-5. BASH Strategies

#	Strategy	Location	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
7	<p>Develop and Distribute BASH Educational Materials</p> <p>Provide educational information program on reducing the potential for bird and wildlife attractions that may impede safe air operations to local jurisdictions and agencies in the region. The program should include a hotline for the community to assist in identifying key habitat areas.</p>	MIA I, MIA II	<p><u>Primary Responsibility</u></p> <ul style="list-style-type: none"> ▪ Laughlin AFB <p><u>Partners</u></p> <ul style="list-style-type: none"> ▪ City of Del Rio ▪ Kinney County ▪ Maverick County ▪ Val Verde County ▪ Joint Airport Zoning Board ▪ US Fish and Wildlife 	■		■
8	<p>Control Bird and Wildlife Attractions Near Laughlin AFB</p> <p>Work directly with local jurisdictions, the JAZB and other appropriate agencies to explore various methods to control bird and wildlife attractions in the immediate vicinity of the base. Potential programs/actions may include the following:</p> <ul style="list-style-type: none"> ▪ Coordination with wildlife specialist to develop research programs to identify characteristics of bird and wildlife species and develop safe and effective methods of deterrence from the known information ▪ Development of a Points of Contact list for the installation and local entities for BASH coordination ▪ Development of MOUs or other agreements to allow Air Force personnel, such as an USDA BASH person, onto private property under designated conditions and agreed procedures to perform BASH actions (i.e. use of "bird busters") ▪ Purchase a Bird Radar in joint efforts with Del Rio International Airport and Laughlin AFB 	MIA I, MIA II	<p><u>Primary Responsibility</u></p> <ul style="list-style-type: none"> ▪ Laughlin AFB <p><u>Partners</u></p> <ul style="list-style-type: none"> ▪ City of Del Rio ▪ Kinney County ▪ Maverick County ▪ Val Verde County ▪ Joint Airport Zoning Board ▪ US Department of Agriculture ▪ US Fish and Wildlife 			■

Capital Improvement Plan (CIP)

A Capital Improvement Plan (CIP) is a fiscal and detailed planning document used to plan and direct a jurisdiction's or agency's investment in public facilities, including infrastructure. The CIP lays out the public facilities plans and programs of the jurisdiction or agency and provides details on expenditures that can be incorporated into the jurisdiction's or agency's annual budgeting process. Most CIPs cover multiple years in order to plan for major expenditures and projects that may occur in the future.

Table 5-6. Capital Improvement Plan Strategies

#	Strategy	Location	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
9	<p>Update Appropriate CIP and Master Infrastructure Plans</p> <p>Update appropriate CIPs and Master Infrastructure Plans to include the following:</p> <ul style="list-style-type: none"> ▪ Incorporate land use compatibility planning concepts into the CIPs for infrastructure extensions and improvements, to include but not to be limited to: <ol style="list-style-type: none"> 1. Review heights of water towers within the MIA for compatibility with flight operations 2. Consider that infrastructure extensions generates development which may be incompatible with the mission of Laughlin AFB ▪ Insert language into the CIPs to notify the installation of any proposed new or expanding infrastructure or facility plans. ▪ Identify sources of funding for local and state road maintenance as development occurs and population grows. ▪ Public utilities shall not be extended south of US 90 with the exception for commercial / industrial uses along the Loop Road which are compatible with Laughlin AFBs current and future missions. A Loop Road Corridor Study should be conducted to determine which areas along the loop road would be compatible for development. ▪ If public utilities are extended to a parcel in the unincorporated portion of the county, a deed restriction will be filed prior to connection that states service is only provided to the original parcel for one dwelling unit. Service to new lots created by splitting or otherwise dividing the original parcel will not be allowed connection to the public utility. ▪ Prior to approval, the CIPs should be reviewed for compatibility by Laughlin AFB. 	MIA I, MIA II	<p><u>Primary Responsibility</u></p> <ul style="list-style-type: none"> ▪ City of Del Rio ▪ Texas Department of Transportation ▪ School Districts <p><u>Partners</u></p> <ul style="list-style-type: none"> ▪ Kinney County ▪ Maverick County ▪ Val Verde County ▪ Laughlin AFB ▪ Edwards Aquifer Authority ▪ Texas Water Development Board 			■

Table 5-6. Capital Improvement Plan Strategies

#	Strategy	Location	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
10	<p>Incorporate Laughlin AFB into Regional Infrastructure Planning</p> <p>As part of regional infrastructure planning, consider regional needs, including those of Laughlin AFB, for new and expanded infrastructure as well as ongoing maintenance needs for those infrastructure systems.</p>	Study Area	<p><u>Primary Responsibility</u></p> <ul style="list-style-type: none"> ▪ City of Del Rio ▪ Texas Department of Transportation ▪ School Districts <p><u>Partners</u></p> <ul style="list-style-type: none"> ▪ Kinney County ▪ Maverick County ▪ Val Verde County ▪ Laughlin AFB ▪ Edwards Aquifer Authority ▪ Texas Water Development Board 	<input type="checkbox"/>		<input type="checkbox"/>

Comprehensive Plan

A comprehensive plan is a long range general plan that outlines goals and polices to guide the physical development of a city. Comprehensive plans are designed to serve as the jurisdiction’s blueprint for future decisions concerning physical development, including land use, infrastructure, public services, and resource conservation. Most comprehensive plans consist of written text discussing the community’s goals, objectives, policies, and programs for the distribution of land use as well as one or more diagrams or maps illustrating the general location of existing and future land uses. The primary goals of the Comprehensive Plan are to:

- Identify the community’s land use, circulation, environmental, economic, and social goals and policies as they relate to future development in the community
- Provide a basis for local government decision making, including decisions on development approvals
- Provide citizens with opportunities to participate in the planning and decision making processes of their communities
- Inform citizens, developers, decision makers, and other cities and counties of the policies that guide development within a particular community

Table 5-7. Comprehensive Plan Strategies

#	Strategy	Location	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
11	<p>Update City of Del Rio Comprehensive Plan</p> <p>Ensure all updates to the City of Del Rio Comprehensive Plan include implementation of the recommendations from Laughlin AFB AICUZ and Del Rio JLUS.</p> <p>Policies within the Comprehensive Plan should address groundwater protection, frequency interference, light and glare, sound attenuation, and air quality in relation to population growth and Laughlin AFB.</p>	Study Area	<p><u>Primary Responsibility</u></p> <ul style="list-style-type: none"> ■ City of Del Rio <p><u>Partners</u></p> <ul style="list-style-type: none"> ■ Laughlin AFB 			■
12	<p>Develop a Joint Comprehensive Plan for the MIA</p> <p>Develop a Joint Comprehensive Plan that identifies a compatible land use plan that sustains the mission of Laughlin AFB</p>	MIA I, MIA II	<p><u>Primary Responsibility</u></p> <ul style="list-style-type: none"> ■ Joint Airport Zoning Board <p><u>Partners</u></p> <ul style="list-style-type: none"> ■ Laughlin AFB 	■		

Communication / Coordination

In any planning effort, successful implementation can be obtained by maintaining open and constant communications between Laughlin AFB, the City of Del Rio, Val Verde County, Kinney County, local agencies, landowners, and the general public. Enhanced communication and coordination is seen as being the key towards successful compatible planning in the study area.

Table 5-8. Communication / Coordination Strategies

#	Strategy	Location	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
13	<p>Establish a JLUS Coordinating Committee</p> <p>Designate a JLUS Coordinating Committee comprised of local decision makers, base personnel, community planners, resource managers, and stakeholders to implement, uphold, and enforce the strategies and tools developed through the JLUS Program and to mitigate future compatibility issues as they arise. Coordination between all entities shall focus on the implementation of the JLUS recommendations.</p> <ul style="list-style-type: none"> ■ An initial action of this board shall be to develop a formal communication process between the City of Del Rio, Kinney County, Maverick County, Val Verde County, Laughlin AFB, JAZB and other key stakeholders to ensure all entities have the necessary information needed to make informed planning and/or operational decisions. To the extent possible, information collaboratively shared 	Study Area	<p><u>Primary Responsibility</u></p> <ul style="list-style-type: none"> ■ City of Del Rio ■ Kinney County ■ Maverick County ■ Val Verde County ■ Laughlin AFB ■ Joint Airport Zoning Board <p><u>Partners</u></p> <ul style="list-style-type: none"> ■ Del Rio Chamber of Commerce 	■		■

Table 5-8. Communication / Coordination Strategies

#	Strategy	Location	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
	<p>shall include updates to local plans and development policies, housing needs and availability, and other changes that may affect the sustainability of local communities or the installation.</p> <ul style="list-style-type: none"> ▪ It will also be the responsibility of the committee to ensure all parties have necessary information to make informed land use decisions. ▪ The JLUS Coordinating Committee should actively pursue funding from OEA and/or DOD for implementation. ▪ The JLUS Coordinating Committee shall meet on a quarterly basis, or as otherwise agreed to by the Committee. 					
14	<p>Develop and Distribute Public Education Materials</p> <p>Laughlin AFB shall develop and distribute public education materials providing information on the installation's AICUZ program, land use, noise, safety, and operational overviews, and the ability to take public comments</p> <ul style="list-style-type: none"> ▪ Printed summaries on these issues should be provided to local jurisdictions within the study area for staff education and as a handout to the public. ▪ Information on these topics should be provided on the publicly available part of the installation's website. ▪ To further educate the community, Laughlin AFB leadership should brief these issues at public government / civic forums as appropriate. ▪ Laughlin AFB should provide timely updates as key information changes to ensure local jurisdictions, agencies, and the public are informed on current mission requirements and operations. 	Study Area	<p><u>Primary Responsibility</u></p> <ul style="list-style-type: none"> ▪ Laughlin AFB <p><u>Partners</u></p> <ul style="list-style-type: none"> ▪ City of Del Rio ▪ Kinney County ▪ Maverick County ▪ Val Verde County ▪ Joint Airport Zoning Board 	■		■
15	<p>Laughlin AFB to Provide Technical Support to the Planning and Zoning Boards.</p> <p>Laughlin AFB needs to play an active role in providing technical support to the recommending body / staff to the Planning Commission, Zoning Board of Adjustments, and other appropriate planning and zoning boards. This may require an amendment to each planning and / or zoning board official procedures.</p>	Study Area	<p><u>Primary Responsibility</u></p> <ul style="list-style-type: none"> ▪ City of Del Rio <p><u>Partners</u></p> <ul style="list-style-type: none"> ▪ Laughlin AFB 	■		■
16	<p>Include Laughlin AFB AICUZ on City Website</p> <p>Update the City website regularly to educate the public on the AICUZ program and inform the public on base changes that will affect the residents</p>	Study Area	<p><u>Primary Responsibility</u></p> <ul style="list-style-type: none"> ▪ City of Del Rio <p><u>Partners</u></p> <ul style="list-style-type: none"> ▪ Laughlin AFB 	■		■

Table 5-8. Communication / Coordination Strategies

#	Strategy	Location	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
17	<p>Laughlin AFB to Provide Technical Support to the JAZB</p> <p>Laughlin AFB needs to work closely with the staff that supports the JAZB on planning and zoning issues in a technical support role.</p>	Study Area	<p><u>Primary Responsibility</u></p> <ul style="list-style-type: none"> ▪ Joint Airport Zoning Board <p><u>Partners</u></p> <ul style="list-style-type: none"> ▪ Laughlin AFB 	■		■
18	<p>Develop a Formal Communication Process for Information Exchange Between all Entities</p> <p>Develop a formal communication process between the City of Del Rio, Kinney County, Maverick County, Val Verde County, Laughlin AFB, and the Joint Airport Zoning Board to ensure all entities have the necessary information needed to make informed planning and / or operational decisions. To the extent possible, information collaboratively shared shall include updates to local plans and development policies, housing needs and availability, and other changes that may affect the sustainability of local communities or the installation.</p>	Study Area	<p><u>Primary Responsibility</u></p> <ul style="list-style-type: none"> ▪ City of Del Rio ▪ Kinney County ▪ Maverick County ▪ Val Verde County ▪ Laughlin AFB ▪ Joint Airport Zoning Board <p><u>Partners</u></p> <ul style="list-style-type: none"> ▪ None Identified 	■		■
19	<p>Develop a Groundwater Conservation District Educational Program</p> <p>With the aid of the Val Verde County Water Advisory Board, develop educational programs for all residents on the benefits of implementing a groundwater conservation district as well as explore other methods on water conservation to ensure availability for the future.</p>	Study Area	<p><u>Primary Responsibility</u></p> <ul style="list-style-type: none"> ▪ City of Del Rio <p><u>Partners</u></p> <ul style="list-style-type: none"> ▪ Val Verde County Water Advisory Board 	■		
20	<p>Actively Seek Local Input on Compatibility Issues</p> <p>Actively seek input from local jurisdictions on compatibility issues and use this input in the preparation of plans. As part of this effort, ensure that local jurisdictions have information they need to make informed planning decisions regarding the base. To the extent possible, update local jurisdictions on plans, programs, housing needs, and other changes that may impact areas outside the base.</p>	Study Area	<p><u>Primary Responsibility</u></p> <ul style="list-style-type: none"> ▪ Laughlin AFB <p><u>Partners</u></p> <ul style="list-style-type: none"> ▪ City of Del Rio ▪ Kinney County ▪ Maverick County ▪ Val Verde County ▪ Joint Airport Zoning Board 			■
21	<p>Coordinate School Site Planning</p> <p>Provide input to local school districts on areas that are not suitable for school development due to noise, safety, or other operational concerns.</p> <ul style="list-style-type: none"> ▪ Provide information on the location of MIAs and the desire to avoid school sites in these areas ▪ Request school districts consult with Laughlin AFB on school site selection in MIAs to provide a cooperative foundation for more informed land use decisions. 	Study Area	<p><u>Primary Responsibility</u></p> <ul style="list-style-type: none"> ▪ School Districts <p><u>Partners</u></p> <ul style="list-style-type: none"> ▪ City of Del Rio ▪ Kinney County ▪ Maverick County ▪ Val Verde County ▪ Laughlin AFB ▪ Joint Airport Zoning Board 			■

Table 5-8. Communication / Coordination Strategies

#	Strategy	Location	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
22	<p>Establish Procedures for Plan Review and Comment</p> <p>Local jurisdictions and relevant agencies should establish procedures for consultation with the base relative to planning and zoning review and comment. This will include:</p> <ul style="list-style-type: none"> ▪ Definition of project types that require review ▪ Identification of the Points of Contact for all coordination ▪ Integrate Laughlin AFB into the development application review process (including the pre-application process). Develop procedures for this review, including project types that should be forwarded to the installation, areas of potential impact based on encroachment threat, and expectations on review timeframes. ▪ Establish a formal procedure for requesting and receiving comments for all types of planning and zoning requests. ▪ Develop a consolidated checklist with the appropriate Laughlin AFB personnel for the review of development applications. ▪ Establish a standard timeline for responses, keeping in mind mandated review time periods as specified by State law and local procedures. ▪ Develop outreach plan ▪ Providing notice to Laughlin AFB on all public hearings regarding projects identified for coordination <p>While consultation is expected to occur primarily on projects in the defined MIAs, the installation should establish contacts and procedures for receiving notices and review opportunities on significant regional projects inside of the MIAs. Procedures should be reviewed annually and updated as appropriate by the JLUS Coordinating Committee.</p>	Study Area	<p><u>Primary Responsibility</u></p> <ul style="list-style-type: none"> ▪ City of Del Rio ▪ Kinney County ▪ Maverick County ▪ Val Verde County ▪ Joint Airport Zoning Board ▪ School Districts ▪ State and Federal Agencies ▪ Texas Department of Transportation <p><u>Partners</u></p> <ul style="list-style-type: none"> ▪ Laughlin AFB 	■		■

Deed Restrictions

Deed Restrictions are written agreements that restrict or limit some of the rights associated with property ownership. These restrictions are recorded with the deed for the property and remain in effect even when it is sold to a new owner. Deed restrictions are private agreements or contracts between an interested buyer and a seller. They are often established by the initial sub divider, either voluntarily or as a condition of approval in the subdivision.

Deed restrictions can cover a wide range of restrictions or can be altered to meet specific needs. As a compatible land use tool, deed restrictions can be tailored to eliminate or mitigate impacts associated with local development on military bases. Specifically by incorporating restrictions or placing limitations on development types of certain land uses. Examples include specifying a maximum height for trees and structures, restricting the use of motorized vehicles, limiting light usage, etc.

Table 5-9. Deed Restrictions Strategies

#	Strategy	Location	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
23	<p>Identify Areas for Deed Restrictions</p> <p>Work collaboratively with base planners and resource managers to identify areas where deed restrictions can be used to mitigate land use conflicts.</p>	MIA I, MIA II	<p><u>Primary Responsibility</u></p> <ul style="list-style-type: none"> Joint Airport Zoning Board <p><u>Partners</u></p> <ul style="list-style-type: none"> Laughlin AFB 	■		
24	<p>Develop a Voluntary Deed Restriction Program</p> <p>Develop a voluntary deed restriction program for the areas identified by Laughlin AFB per Strategy #23. The deed restriction should restrict any future structural design, and / or activity that could impede operations of the base.</p> <ul style="list-style-type: none"> Develop a voluntary deed restriction program Develop a deed restriction template for use as part of the program 	MIA I, MIA II	<p><u>Primary Responsibility</u></p> <ul style="list-style-type: none"> City of Del Rio Kinney County Maverick County Val Verde County Joint Airport Zoning Board <p><u>Partners</u></p> <ul style="list-style-type: none"> Laughlin AFB 			■

Legislative Tools

Legislative tools are created to protect an issue of concern. Legislations are typically the supreme ruling; therefore all municipal plans are to be altered according to the legislation. In short, legislation is proposed by a member of Congress and after references, revisions, and debates, members of Congress vote for the approval or rejection of the bill. Thousands of bills can be introduced but only a few hundred become public law.

Table 5-10. Legislative Tools Strategies

#	Strategy	Location	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
25	<p>Include Laughlin AFB in Wildlife Management Legislation</p> <p>With any proposed Federal or State legislation pertaining to wildlife management, ensure the inclusion of adequate language to protect the mission of Laughlin AFB.</p>	MIA I, MIA II	<p><u>Primary Responsibility</u></p> <ul style="list-style-type: none"> ▪ State and Federal Agencies ▪ State Legislators <p><u>Partners</u></p> <ul style="list-style-type: none"> ▪ City of Del Rio ▪ Kinney County ▪ Maverick County ▪ Val Verde County ▪ Laughlin AFB 	■		
26	<p>Encourage Statewide Legislation Addressing Military Base Encroachment</p> <p>Work with state legislators to develop new legislation addressing military base encroachment.</p> <ul style="list-style-type: none"> ▪ Develop legislation to grant planning and zoning authority to the JAZBs and / or the counties to regulate land use within the MIAs in order to implement the JLUS. ▪ Extend the area of planning and zoning authority for the JAZB to include the entire MIA boundary. ▪ Incorporate the recommendations associated with the MIA Strategy #1 into State legislation. ▪ The State legislation should include funding sources or mechanisms that support the implementation of the legislation. ▪ Investigate the value of adding a state funded military preservation acquisition program to the State legislation. 	MIA I, MIA II	<p><u>Primary Responsibility</u></p> <ul style="list-style-type: none"> ▪ State Legislators <p><u>Partners</u></p> <ul style="list-style-type: none"> ▪ City of Del Rio ▪ Kinney County ▪ Maverick County ▪ Val Verde County ▪ Laughlin AFB 	■		

Memorandum of Understanding (MOU)

A Memorandum of Understanding (MOU) is a contract between two or more government entities. The governing bodies of the participating public agencies must take appropriate legal actions, often adoption of an ordinance or resolution, before such agreements become effective. The purpose of an MOU is to establish a formal framework for coordination and cooperation. These agreements may also assign roles and responsibilities for all of the agreements' signatories. MOUs generally promote:

- Coordination and collaboration by sharing information on specific community development proposals, such as rezoning and subdivisions.

- Joint communication between participating jurisdictions and the military ensuring that residents, developers, businesses, and local decision makers have adequate information about military operations, possible impacts on surrounding lands, procedures to submit comments, and any additional local measurements to promote land use compatibility around bases.
- Formal agreement on land use planning activities, such as implementation of a Joint Land Use Study (JLUS).

Table 5-11. Memorandum of Understanding Strategies

#	Strategy	Location	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
27	<p>Develop General MOU to Implement JLUS Process</p> <p>Member jurisdictions and agencies of the JLUS Coordinating Committee should develop a general MOU to be executed at the beginning stages of implementation of the recommendations adopted by each jurisdiction. This MOU will detail the expectations for coordination and agreement to establish and maintain the JLUS Coordinating Committee.</p>	Study Area	<p><u>Primary Responsibility</u></p> <ul style="list-style-type: none"> ▪ City of Del Rio ▪ Kinney County ▪ Maverick County ▪ Val Verde County ▪ Laughlin AFB ▪ Joint Airport Zoning Board <p><u>Partners</u></p> <ul style="list-style-type: none"> ▪ Del Rio Chamber of Commerce 	■		
28	<p>Develop Specific MOUs to Implement JLUS Recommendations</p> <p>Sign specific MOUs between individual jurisdictions and Laughlin AFB as tools are adopted. Examples include:</p> <ul style="list-style-type: none"> ▪ Official agreement between Union Pacific and Laughlin AFB to avoid unnecessary train stops along the boundary of Laughlin AFB. ▪ Develop a general MOU between Laughlin AFB and the US Border Patrol that implements the recommendations outlined in the JLUS in regards to frequency interference and air-to-air conflicts associated with border patrol operations. 	Study Area	<p><u>Primary Responsibility</u></p> <ul style="list-style-type: none"> ▪ City of Del Rio ▪ Kinney County ▪ Maverick County ▪ Val Verde County ▪ Laughlin AFB ▪ Joint Airport Zoning Board <p><u>Partners</u></p> <ul style="list-style-type: none"> ▪ US Border Patrol ▪ Union Pacific Railroad 	■		

Real Estate Disclosure

Prior to the transfer of real property to a new owner, real estate disclosure requires sellers and their agents to disclose certain specified facts related to the condition of the property. These facts could include noise or other proximity impacts associated with property near a military base or operations area. The purpose of real estate disclosure is to protect the seller, buyer, and sales agent from potential litigation resulting from specified conditions (i.e., hazard areas, existing

easements). Disclosures are perhaps the most practical and cost effective land use compatibility tools for the reason that the buyers are informed of the possible affects of living nearby to a military base prior to a purchase.

Table 5 12. Real Estate Disclosure Strategies

#	Strategy	Location	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
29	<p>Require Properties to Receive Full Disclosure at the Time of Advertisement</p> <p>Require that all purchasable property City-wide and within the MIA receive full real estate disclosure on the potential affects of noise, vibration, lighting, and other operational impacts by the base on the property at the time of advertisement to avoid any misunderstandings or conflicts. Work with local entities to incorporate these requirements into local codes and ordinances.</p> <p>Work with State Real Estate Board and local real estate representatives to develop and implement adequate language for inclusion in disclosure notices.</p> <p>Local jurisdictions and Laughlin AFB should work cooperatively to make available the information required for real estate disclosure (as defined by this strategy) regarding operational issues at Laughlin AFB (overflight, light and glare, noise, etc).</p> <p>Work with local entities to incorporate these requirements into local codes and ordinances.</p>	MIA I, MIA II	<p><u>Primary Responsibility</u></p> <p>City of Del Rio Kinney County Maverick County Val Verde County</p> <p><u>Partners</u></p> <p>Laughlin AFB Kinney County Tax Assessor Maverick County Tax Assessor Val Verde County Tax Assessor State Real Estate Board Title Companies</p>			
30	<p>Modify Subdivision Regulations to Require Appropriate Real Estate Disclosure</p> <p>Modify subdivision regulations to require a real estate disclosure is recorded as part of a</p> <p>a) Plat Note. Disclosure shall notify purchasing party of Laughlin AFB operations and potential compatibility issues</p>	MIA I, MIA II	<p><u>Primary Responsibility</u></p> <p>City of Del Rio Kinney County Maverick County Val Verde County Joint Airport Zoning Board</p> <p><u>Partners</u></p> <p>Laughlin AFB Kinney County Tax Assessor Maverick County Tax Assessor Val Verde County Tax Assessor State Real Estate Board Title Companies</p>			

**Zoning Ordinance /
Subdivision Ordinance /
Building Code / Other
Local Regulations**

Zoning Ordinance

Zoning is the division of a jurisdiction into districts (zones) within which permissible uses are prescribed and restrictions on building height, bulk, layout, and other requirements are defined.

The primary purpose of zoning is the protection of public health, safety, and welfare. Refining this goal further, zoning provides opportunities for the implementation of regulations supporting land use compatibility, as shown through:

- Protection against physical danger, particularly safety considerations for properties in proximity to military ranges or within military flight areas.
- Protection against nuisances associated with military operations, such as noise, vibration, air emissions, etc.
- Protection against heavy traffic flows or truck routes in residential areas.
- Protection against aesthetic nuisances impacting military bases.
- Protection against “psychological nuisances” such as perceived and actual dangers associated with military operations.
- Protection against light and glare, air emissions, and loss of privacy.
- Provision of open space and agricultural preservation.
- Zoning and the general plan are inexorably tied to each other. Policies recommended within the general plan should be reflected within the zoning ordinance or development code.
- Zoning ordinances requiring rigid separation of uses or inflexible provisions can make creative solution to land use compatibility, such as cluster development, difficult or impossible.
- When designating military compatible use districts, the ordinance should recognize that the local community has no regulatory control over development or activity on federal property.

Subdivision Ordinance

Land cannot be divided without local government approval. The local general plan, zoning, subdivision, and other ordinances govern the design of a subdivision, the size of its lots, and the types of required improvements; such as street construction, sewer lines, and drainage facilities. Subdivisions set forth the minimum requirements deemed necessary to protect the health, safety, and welfare of the public.

Applications for subdivisions must be submitted to the local government for consideration.

Building Code

Construction standards and building codes are ordinances and regulations controlling the design, construction process, materials, alteration, and occupancy of any structure to insure human health, safety and welfare protection. They include both technical and functional standards and generally address the following:

- **Structural Safety.** Buildings should be strong enough to resist internally and externally applied forces without collapsing.
- **Fire Safety.** Includes requirements to prevent fire from spreading to and from neighboring structures, provide warning to occupants, provide for safe exit routes from the building, and provide access for fire suppression.
- **Health Requirements.** Provides for adequate plumbing and sanitation facilities for occupation of a structure.
- **Accessibility.** Requires a building to be accessible for persons in wheelchairs or having other disabilities.

Table 5-13. Zoning Ordinance / Subdivision Ordinance / Building Code / Other Local Regulations

#	Strategy	Location	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
31	<p>Amend the Laughlin AFB Compatible Land Use and Hazard Zoning Ordinance and Zoning Map</p> <p>Amend the Laughlin AFB Compatible Land Use and Hazard Zoning Ordinance and Zoning Map to include the following provisions:</p> <p>Codify the MIAs established in Strategy #1.</p> <p>Include the additional land use compatibility provisions recommended for the MIAs into the regulations for the established Airport Noise Zones and Airport Hazard Abatement Zones.</p> <p>Regulations shall include the unincorporated and incorporated areas located in the MIAs as defined in Strategy #1.</p> <p>Develop a zoning map for the MIAs that support the MIAs Joint Comprehensive Plan.</p>	MIA I, MIA II	<p><u>Primary Responsibility</u></p> <p>Joint Airport Zoning Board</p> <p><u>Partners</u></p> <p>Laughlin AFB</p>			

Table 5-13. Zoning Ordinance / Subdivision Ordinance / Building Code / Other Local Regulations

#	Strategy	Location	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
32	<p>Require Sound Attenuation for Buildings and Retrofit Existing Buildings</p> <p>Require sound attenuation for occupied buildings in or near the noise contours and the retrofitting of existing structures. The level of sound protection should be based on level of noise exposure and the type of land use.</p>	MIA I, MIA II	<p><u>Primary Responsibility</u></p> <ul style="list-style-type: none"> ■ City of Del Rio ■ Kinney County ■ Maverick County ■ Val Verde County ■ Joint Airport Zoning Board <p><u>Partners</u></p> <ul style="list-style-type: none"> ■ None Identified 	■		
33	<p>Update or Develop Light and Glare Regulations</p> <p>Develop light and glare controls to protect the operational environment near Laughlin AFB. These controls should be designed to reduce the amount of light that spills into surrounding areas and impacts regional ambient illumination.</p> <p>For the City of Del Rio and the (JAZB, and / or counties) specific light and glare regulations should be developed and codified within the Zoning Ordinance placing emphasis on the preservation of a dark sky environment near the installation. These regulations should include the following:</p> <ul style="list-style-type: none"> ■ Recommendations shall be based on the light use ■ Light should be measured in phototropic lumens ■ Lighting should be designed and installed to be fully shielded and shall have a specified maximum lamp wattage ■ Lighting attached to single-family home structures should not exceed the height of the eave ■ Recommend that State Legislation provide counties the authority to develop and codify light and glare standards for the entire County. Not just for the 5-mile radius that the counties are authorized to codify light and glare ordinance currently. <p>For Val Verde, Kinney, and Maverick Counties, ordinances and regulations shall be developed that regulate the use of outdoor lighting within a 5-mile radius of Laughlin AFB (as per 80(R) HB 1852).</p>	MIA I, MIA II	<p><u>Primary Responsibility</u></p> <ul style="list-style-type: none"> ■ City of Del Rio ■ Kinney County ■ Maverick County ■ Val Verde County ■ Joint Airport Zoning Board <p><u>Partners</u></p> <ul style="list-style-type: none"> ■ Laughlin AFB 	■		

Table 5-13. Zoning Ordinance / Subdivision Ordinance / Building Code / Other Local Regulations

#	Strategy	Location	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
34	<p>Ensure Part 77 Compliance</p> <p>For all structures, ensure compliance with FAA Part 77 requirements when establishing height regulations or restrictions. Review the City of Del Rio subdivision and zoning ordinances and county subdivision ordinances to ensure compliance. Ensure regulations remind applicants of the FAA requirement to prepare an Obstacle Evaluation (OE).</p>	MIA I, MIA II	<p><u>Primary Jurisdiction</u></p> <ul style="list-style-type: none"> ▪ City of Del Rio ▪ Kinney County ▪ Maverick County ▪ Val Verde County ▪ Joint Airport Zoning Board <p><u>Partners</u></p> <ul style="list-style-type: none"> ▪ Laughlin AFB 			■
35	<p>Mitigate Frequency Spectrum Impedance and Interference Issues Associated with Development</p> <p>Work with the City of Del Rio, Kinney County, Maverick County and Val Verde County to establish procedures to identify proposed projects that may potentially involve a source of frequency emissions (including WiFi).</p> <ul style="list-style-type: none"> ▪ Develop regulations to incorporate into the City of Del Rio Zoning Ordinance that designates what level of frequency and location is attuned with established military frequencies to avoid interference with flight operations. Update the ordinance with changes in FAA / FCC restrictions. ▪ Work with the legislature to grant counties in the vicinity of military installations the ability to develop and enforce such regulations. 	MIA I, MIA II	<p><u>Primary Jurisdiction</u></p> <ul style="list-style-type: none"> ▪ City of Del Rio ▪ Kinney County ▪ Maverick County ▪ Val Verde County ▪ Joint Airport Zoning Board <p><u>Partners</u></p> <ul style="list-style-type: none"> ▪ Laughlin AFB ▪ Federal Aviation Administration ▪ Federal Communications Commission 	■		
36	<p>Develop and Adopt a Height Restrictions Ordinance</p> <p>Develop a Height Restrictions Ordinance that establishes guidelines for all structures including alternative energy generating facilities (wind generators, solar energy, etc.). Restrictions should be particularly stringent in critical military operations areas.</p>	MIA I, MIA II	<p><u>Primary Responsibility</u></p> <ul style="list-style-type: none"> ▪ City of Del Rio ▪ Joint Airport Zoning Board <p><u>Partners</u></p> <ul style="list-style-type: none"> ▪ Laughlin AFB 	■		
37	<p>Require a Water, Utility, and Environmental Resources Study for Large Developments</p> <p>For 10 acre or larger development projects, require a study of the quality and availability of wells and other utility resources be conducted, including an assessment of environmental and economic impacts in the pre-application process.</p>	Study Area	<p><u>Primary Responsibility</u></p> <ul style="list-style-type: none"> ▪ City of Del Rio ▪ Kinney County ▪ Maverick County ▪ Val Verde County ▪ Joint Airport Zoning Board <p><u>Partners</u></p> <ul style="list-style-type: none"> ▪ None Identified 		■	■

Table 5-13. Zoning Ordinance / Subdivision Ordinance / Building Code / Other Local Regulations

#	Strategy	Location	Responsibility / Partners	0-2 Years	3-5 Years	Ongoing
38	<p>Promote Compatible Land Uses Along the Del Rio Relief Route</p> <p>The City of Del Rio and Val Verde County shall work with Laughlin AFB and the local development community to promote a compatible pattern of land use along the Del Rio Relief Route. Development within this area shall adhere to the established guidelines developed for MIA I and II as proposed in Strategy #1.</p>	Study Area	<p><u>Primary Responsibility</u></p> <ul style="list-style-type: none"> ▪ City of Del Rio ▪ Val Verde County ▪ Joint Airport Zoning Board <p><u>Partners</u></p> <ul style="list-style-type: none"> ▪ Laughlin AFB 	■		

5.4 Strategy Summaries

The following section provides a set of summary tables designed to allow readers to look up applicable strategies based on the following sorting criteria:

- Responsible or partner jurisdiction, organization or agency (Table 5-14); and
- Implementation timeline (Table 5.15).

Each table lists the strategy number and title. Details on each strategy can be found in Tables 5-2 through 5-13 presented earlier in this section.

Since a majority of the strategies involve actions by the City of Del Rio; Kinney, Maverick, and Val Verde counties; and Laughlin AFB, these organizations are listed first in the summary tables, followed by the other organizations involved in the successful implementation of the JLUS.

Table 5-14. Strategies by Agency
City of Del Rio

As a Primary Responsible Party	As a Partner
Military Influence Area (MIA) Strategies	Acquisition Strategies
1 Define and Establish an MIA for Laughlin AFB and Spofford Field	5 Leverage the DOD Encroachment Partnering Program
Acquisition Strategies	BASH Strategies
2 Identify Priority Locations for Acquisition	7 Develop and Distribute BASH Educational Materials
3 Establish a Voluntary Acquisition Program / Purchase of Development Rights	8 Control Bird and Wildlife Attractions Near Laughlin AFB
4 Develop and Implement a Conservation Easement Education Program	Communication / Coordination Strategies
AICUZ Strategies	14 Develop and Distribute Public Education Materials
6 Implement AICUZ Recommendations	20 Actively Seek Local Input on Compatibility Issues
Capital Improvement Plan Strategies	21 Coordinate School Site Planning
9 Update Appropriate CIP and Master Infrastructure Plans	Legislative Tools Strategies
10 Incorporate Laughlin AFB into Regional Infrastructure Planning	25 Include Laughlin AFB in Wildlife Management Legislation
Comprehensive Plan Strategies	26 Encourage Statewide Legislation Addressing Military Base Encroachment
11 Update City of Del Rio Comprehensive	
Communication / Coordination Strategies	
13 Establish a JLUS Coordinating Committee	
15 Laughlin AFB to Provide Technical Support to the Planning and Zoning Boards	
16 Include Laughlin AFB AICUZ on City Website	
18 Develop a Formal Communication Process for Information Exchange Between all Entities	
19 Develop a Groundwater Conservation District Educational Program	
22 Establish Procedures for Plan Review and Comment	
Deed Restriction Strategies	
24 Develop a Voluntary Deed Restriction Program	
Memorandum of Understanding Strategies	
27 Develop General MOU to Implement JLUS Process	
28 Develop Specific MOUs to Implement JLUS Recommendations	
Real Estate Disclosure Strategies	
29 Require Properties to Receive Full Disclosure at the Time of Advertisement	
30 Modify Subdivision Regulations to Require Appropriate Real Estate Disclosure	
Zoning / Subdivision / Building Code / Other Local Regulations Strategies	
32 Require Sound Attenuation for Buildings and Retrofit Existing Buildings	
33 Update or Develop Light and Glare Regulations	
34 Ensure Part 77 Compliance	
35 Mitigate Frequency Spectrum Impedance and Interference Issues Associated with Development	
36 Develop and Adopt a Height Restrictions Ordinance	
37 Require a Water, Utility, and Environmental Resources Study for Large Developments	
38 Promote Compatible Land Uses Along the Del Rio Relief Route	

Table 5-14. Strategies by Agency (*continued*)

Kinney County

As a Primary Responsible Party	As a Partner
Military Influence Area (MIA) Strategies	Acquisition Strategies
1 Define and Establish an MIA for Laughlin AFB and Spofford Field	5 Leverage the DOD Encroachment Partnering Program
Acquisition Strategies	BASH Strategies
2 Identify Priority Locations for Acquisition	7 Develop and Distribute BASH Educational Materials
3 Establish a Voluntary Acquisition Program / Purchase of Development Rights	8 Control Bird and Wildlife Attractions Near Laughlin AFB
4 Develop and Implement a Conservation Easement Education Program	Capital Improvement Plan Strategies
AICUZ Strategies	9 Update Appropriate CIP and Master Infrastructure Plans
6 Implement AICUZ Recommendations	10 Incorporate Laughlin AFB into Regional Infrastructure Planning
Communication / Coordination Strategies	Communication / Coordination Strategies
13 Establish a JLUS Coordinating Committee	14 Develop and Distribute Public Education Materials
18 Develop a Formal Communication Process for Information Exchange Between all Entities	20 Actively Seek Local Input on Compatibility Issues
22 Establish Procedures for Plan Review and Comment	21 Coordinate School Site Planning
Deed Restriction Strategies	Legislative Tools Strategies
24 Develop a Voluntary Deed Restriction Program	25 Include Laughlin AFB in Wildlife Management Legislation
Memorandum of Understanding Strategies	26 Encourage Statewide Legislation Addressing Military Base Encroachment
27 Develop General MOU to Implement JLUS Process	
28 Develop Specific MOUs to Implement JLUS Recommendations	
Real Estate Disclosure Strategies	
29 Require Properties to Receive Full Disclosure at the Time of Advertisement	
30 Modify Subdivision Regulations to Require Appropriate Real Estate Disclosure	
Zoning / Subdivision / Building Code / Other Local Regulations Strategies	
32 Require Sound Attenuation for Buildings and Retrofit Existing Buildings	
33 Update or Develop Light and Glare Regulations	
34 Ensure Part 77 Compliance	
35 Mitigate Frequency Spectrum Impedance and Interference Issues Associated with Development	
37 Require a Water, Utility, and Environmental Resources Study for Large Developments	

Table 5-14. Strategies by Agency (continued)
Maverick County

As a Primary Responsible Party	As a Partner
Military Influence Area (MIA) Strategies 1 Define and Establish an MIA for Laughlin AFB and Spofford Field	Acquisition Strategies 5 Leverage the DOD Encroachment Partnering Program
Acquisition Strategies 2 Identify Priority Locations for Acquisition 3 Establish a Voluntary Acquisition Program / Purchase of Development Rights 4 Develop and Implement a Conservation Easement Education Program	BASH Strategies 7 Develop and Distribute BASH Educational Materials 8 Control Bird and Wildlife Attractions Near Laughlin AFB
AICUZ Strategies 6 Implement AICUZ Recommendations	Capital Improvement Plan Strategies 9 Update Appropriate CIP and Master Infrastructure Plans 10 Incorporate Laughlin AFB into Regional Infrastructure Planning
Communication / Coordination Strategies 13 Establish a JLUS Coordinating Committee 18 Develop a Formal Communication Process for Information Exchange Between all Entities 22 Establish Procedures for Plan Review and Comment	Communication / Coordination Strategies 14 Develop and Distribute Public Education Materials 20 Actively Seek Local Input on Compatibility Issues 21 Coordinate School Site Planning
Deed Restriction Strategies 24 Develop a Voluntary Deed Restriction Program	Legislative Tools Strategies 25 Include Laughlin AFB in Wildlife Management Legislation 26 Encourage Statewide Legislation Addressing Military Base Encroachment
Memorandum of Understanding Strategies 27 Develop General MOU to Implement JLUS Process 28 Develop Specific MOUs to Implement JLUS Recommendations	
Real Estate Disclosure Strategies 29 Require Properties to Receive Full Disclosure at the Time of Advertisement 30 Modify Subdivision Regulations to Require Appropriate Real Estate Disclosure	
Zoning / Subdivision / Building Code / Other Local Regulations Strategies 32 Require Sound Attenuation for Buildings and Retrofit Existing Buildings 33 Update or Develop Light and Glare Regulations 34 Ensure Part 77 Compliance 35 Mitigate Frequency Spectrum Impedance and Interference Issues Associated with Development 37 Require a Water, Utility, and Environmental Resources Study for Large Developments	

Table 5-14. Strategies by Agency (*continued*)*Val Verde County*

As a Primary Responsible Party	As a Partner
Military Influence Area (MIA) Strategies 1 Define and Establish an MIA for Laughlin AFB and Spofford Field	Acquisition Strategies 5 Leverage the DOD Encroachment Partnering Program
Acquisition Strategies 2 Identify Priority Locations for Acquisition 3 Establish a Voluntary Acquisition Program / Purchase of Development Rights 4 Develop and Implement a Conservation Easement Education Program	BASH Strategies 7 Develop and Distribute BASH Educational Materials 8 Control Bird and Wildlife Attractions Near Laughlin AFB Capital Improvement Plan Strategies 9 Update Appropriate CIP and Master Infrastructure Plans 10 Incorporate Laughlin AFB into Regional Infrastructure Planning
AICUZ Strategies 6 Implement AICUZ Recommendations	Communication / Coordination Strategies 14 Develop and Distribute Public Education Materials 20 Actively Seek Local Input on Compatibility Issues 21 Coordinate School Site Planning
Communication / Coordination Strategies 13 Establish a JLUS Coordinating Committee 18 Develop a Formal Communication Process for Information Exchange Between all Entities 22 Establish Procedures for Plan Review and Comment	Legislative Tools Strategies 25 Include Laughlin AFB in Wildlife Management Legislation 26 Encourage Statewide Legislation Addressing Military Base Encroachment
Deed Restriction Strategies 24 Develop a Voluntary Deed Restriction Program	
Memorandum of Understanding Strategies 27 Develop General MOU to Implement JLUS Process 28 Develop Specific MOUs to Implement JLUS Recommendations	
Real Estate Disclosure Strategies 29 Require Properties to Receive Full Disclosure at the Time of Advertisement 30 Modify Subdivision Regulations to Require Appropriate Real Estate Disclosure	
Zoning / Subdivision / Building Code / Other Local Regulations Strategies 32 Require Sound Attenuation for Buildings and Retrofit Existing Buildings 33 Update or Develop Light and Glare Regulations 34 Ensure Part 77 Compliance 35 Mitigate Frequency Spectrum Impedance and Interference Issues Associated with Development 37 Require a Water, Utility, and Environmental Resources Study for Large Developments 38 Promote Compatible Land Uses Along the Del Rio Relief Route	

Table 5-14. Strategies by Agency (continued)

Laughlin AFB

As a Primary Responsible Party	As a Partner
<p>Acquisition Strategies</p> <p>2 Identify Priority Locations for Acquisition</p> <p>5 Leverage the DOD Encroachment Partnering Program</p> <p>BASH Strategies</p> <p>7 Develop and Distribute BASH Educational Materials</p> <p>8 Control Bird and Wildlife Attractions Near Laughlin AFB</p> <p>Communication / Coordination Strategies</p> <p>13 Establish a JLUS Coordinating Committee</p> <p>14 Develop and Distribute Public Education Materials</p> <p>18 Develop a Formal Communication Process for Information Exchange Between all Entities</p> <p>20 Actively Seek Local Input on Compatibility Issues</p> <p>Memorandum of Understanding Strategies</p> <p>27 Develop General MOU to Implement JLUS Process</p> <p>28 Develop Specific MOUs to Implement JLUS Recommendations</p>	<p>Military Influence Area (MIA) Strategies</p> <p>1 Define and Establish an MIA for Laughlin AFB and Spofford Field</p> <p>Acquisition Strategies</p> <p>3 Establish a Voluntary Acquisition Program / Purchase of Development Rights</p> <p>4 Develop and Implement a Conservation Easement Education Program</p> <p>AICUZ Strategies</p> <p>6 Implement AICUZ Recommendations</p> <p>Capital Improvement Plan Strategies</p> <p>9 Update Appropriate CIP and Master Infrastructure Plans</p> <p>10 Incorporate Laughlin AFB into Regional Infrastructure Planning</p> <p>Comprehensive Plan Strategies</p> <p>11 Update City of Del Rio Comprehensive Plan</p> <p>12 Develop a Joint Comprehensive Plan for the MIA</p> <p>Communication / Coordination Strategies</p> <p>15 Laughlin AFB to Provide Technical Support to the Planning and Zoning Boards</p> <p>16 Include Laughlin AFB AICUZ on City Website</p> <p>17 Laughlin AFB to Provide Technical Support to the JAZB</p> <p>21 Coordinate School Site Planning</p> <p>22 Establish Procedures for Plan Review and Comment</p> <p>Deed Restriction Strategies</p> <p>23 Identify Areas for Deed Restrictions</p> <p>24 Develop a Voluntary Deed Restriction Program</p> <p>Legislative Tools Strategies</p> <p>25 Include Laughlin AFB in Wildlife Management Legislation</p> <p>26 Encourage Statewide Legislation Addressing Military Base Encroachment</p> <p>Real Estate Disclosure Strategies</p> <p>29 Require Properties to Receive Full Disclosure at the Time of Advertisement</p> <p>30 Modify Subdivision Regulations to Require Appropriate Real Estate Disclosure</p> <p>Zoning / Subdivision / Building Code / Other Local Regulations Strategies</p> <p>31 Amend the Laughlin AFB Compatible Land Use and Hazard Zoning Ordinance and Zoning Map</p> <p>33 Update or Develop Light and Glare Regulations</p> <p>34 Ensure Part 77 Compliance</p> <p>35 Mitigate Frequency Spectrum Impedance and Interference Issues Associated with Development</p> <p>36 Develop and Adopt a Height Restrictions Ordinance</p> <p>38 Promote Compatible Land Uses Along the Del Rio Relief Route</p>

Table 5-14. Strategies by Agency (*continued*)*Del Rio Chamber of Commerce*

As a Primary Responsible Party	As a Partner
None Identified	Communication / Coordination Strategies 13 Establish a JLUS Coordinating Committee Memorandum of Understanding Strategies 27 Develop General MOU to Implement JLUS Process

Department of Defense

As a Primary Responsible Party	As a Partner
Acquisition Strategies 5 Leverage the DOD Encroachment Partnering Program	Acquisition Strategies 2 Identify Priority Locations for Acquisition 3 Establish a Voluntary Acquisition Program / Purchase of Development Rights

Edwards Aquifer Authority

As a Primary Responsible Party	As a Partner
None Identified	Capital Improvement Plan Strategies 9 Update Appropriate CIP and Master Infrastructure Plans 10 Incorporate Laughlin AFB into Regional Infrastructure Planning

Federal Aviation Administration

As a Primary Responsible Party	As a Partner
None Identified	Zoning / Subdivision / Building Code / Other Local Regulations Strategies 35 Mitigate Frequency Spectrum Impedance and Interference Issues Associated with Development

Federal Communications Commission

As a Primary Responsible Party	As a Partner
None Identified	Zoning / Subdivision / Building Code / Other Local Regulations Strategies 35 Mitigate Frequency Spectrum Impedance and Interference Issues Associated with Development

Table 5-14. Strategies by Agency (continued)

Joint Airport Zoning Board

As a Primary Responsible Party	As a Partner
Military Influence Area (MIA) Strategies	BASH Strategies
1 Define and Establish an MIA for Laughlin AFB and Spofford Field	7 Develop and Distribute BASH Educational Materials
AICUZ Strategies	8 Control Bird and Wildlife Attractions Near Laughlin AFB
6 Implement AICUZ Recommendations	Communication / Coordination Strategies
Comprehensive Plan Strategies	14 Develop and Distribute Public Education Materials
12 Develop a Joint Comprehensive Plan for the MIA	20 Actively Seek Local Input on Compatibility Issues
Communication / Coordination Strategies	21 Coordinate School Site Planning
13 Establish a JLUS Coordinating Committee	
17 Laughlin AFB to Provide Technical Support to the JAZB	
18 Develop a Formal Communication Process for Information Exchange Between all Entities	
22 Establish Procedures for Plan Review and Comment	
Deed Restriction Strategies	
23 Identify Areas for Deed Restrictions	
24 Develop a Voluntary Deed Restriction Program	
Memorandum of Understanding Strategies	
27 Develop General MOU to Implement JLUS Process	
28 Develop Specific MOUs to Implement JLUS Recommendations	
Real Estate Disclosure Strategies	
30 Modify Subdivision Regulations to Require Appropriate Real Estate Disclosure	
Zoning / Subdivision / Building Codes / Other Local Regulations Strategies	
31 Amend the Laughlin AFB Compatible Land Use and Hazard Zoning Ordinance and Zoning Map	
32 Require Sound Attenuation for Buildings and Retrofit Existing Buildings	
33 Update or Develop Light and Glare Regulations	
34 Ensure Part 77 Compliance	
35 Mitigate Frequency Spectrum Impedance and Interference Issues Associated with Development	
37 Encourage Use of Cluster Development Techniques	
36 Develop and Adopt a Height Restrictions Ordinance	
37 Require a Water, Utility, and Environmental Resources Study for Large Developments	
38 Promote Compatible Land Uses Along the Del Rio Relief Route	

Table 5-14. Strategies by Agency (continued)

Kinney County Tax Assessor

As a Primary Responsible Party	As a Partner
None Identified	Real Estate Disclosure Strategies 29 Require Properties to Receive Full Disclosure at the Time of Advertisement 30 Modify Subdivision Regulations to Require Appropriate Real Estate Disclosure

Land Trust Organizations

As a Primary Responsible Party	As a Partner
None Identified	Acquisition Strategies 2 Identify Priority Locations for Acquisition 3 Establish a Voluntary Acquisition Program / Purchase of Development Rights 4 Develop and Implement a Conservation Easement Education Program 5 Leverage the DOD Encroachment Partnering Program

Maverick County Tax Assessor

As a Primary Responsible Party	As a Partner
None Identified	Real Estate Disclosure Strategies 29 Require Properties to Receive Full Disclosure at the Time of Advertisement 30 Modify Subdivision Regulations to Require Appropriate Real Estate Disclosure

School Districts

As a Primary Responsible Party	As a Partner
Capital Improvement Plan Strategies 9 Update Appropriate CIP and Master Infrastructure Plans 10 Incorporate Laughlin AFB into Regional Infrastructure Planning Communication / Coordination Strategies 21 Coordinate School Site Planning 22 Establish Procedures for Plan Review and Comment	None Identified

State / Federal Agencies

As a Primary Responsible Party	As a Partner
Communication / Coordination Strategies 22 Establish Procedures for Plan Review and Comment Legislative Tools Strategies 25 Include Laughlin AFB in Wildlife Management Legislation	None Identified

Table 5-14. Strategies by Agency (continued)

State Real Estate Board

As a Primary Responsible Party	As a Partner
None Identified	Real Estate Disclosure Strategies 29 Require Properties to Receive Full Disclosure at the Time of Advertisement 30 Modify Subdivision Regulations to Require Appropriate Real Estate Disclosure

State Legislators

As a Primary Responsible Party	As a Partner
Legislative Tools Strategies 25 Include Laughlin AFB in Wildlife Management Legislation 26 Encourage Statewide Legislation Addressing Military Base Encroachment	None Identified

Texas Department of Transportation

As a Primary Responsible Party	As a Partner
Capital Improvement Plan Strategies 9 Update Appropriate CIP and Master Infrastructure Plans 10 Incorporate Laughlin AFB into Regional Infrastructure Planning Communication / Coordination Strategies 22 Establish Procedures for Plan Review and Comment	None Identified

Texas Water Development Board

As a Primary Responsible Party	As a Partner
None Identified	Capital Improvement Plan Strategies 9 Update Appropriate CIP and Master Infrastructure Plans 10 Incorporate Laughlin AFB into Regional Infrastructure Planning

Title Companies

As a Primary Responsible Party	As a Partner
None Identified	Real Estate Disclosure Strategies 29 Require Properties to Receive Full Disclosure at the Time of Advertisement 30 Modify Subdivision Regulations to Require Appropriate Real Estate Disclosure

Table 5-14. Strategies by Agency (*continued*)*Union Pacific Railroad*

As a Primary Responsible Party	As a Partner
None Identified	Military Influence Area (MIA) Strategies 28 Develop Specific MOUs to Implement JLUS Recommendations

US Border Patrol

As a Primary Responsible Party	As a Partner
None Identified	Military Influence Area (MIA) Strategies 28 Develop Specific MOUs to Implement JLUS Recommendations

US Department of Agriculture

As a Primary Responsible Party	As a Partner
None Identified	BASH Strategies 8 Control Bird and Wildlife Attractions Near Laughlin AFB

US Fish and Wildlife

As a Primary Responsible Party	As a Partner
None Identified	BASH Strategies 7 Develop and Distribute BASH Educational Materials 8 Control Bird and Wildlife Attractions Near Laughlin AFB

Val Verde County Tax Assessor

As a Primary Responsible Party	As a Partner
None Identified	Real Estate Disclosure Strategies 29 Require Properties to Receive Full Disclosure at the Time of Advertisement 30 Modify Subdivision Regulations to Require Appropriate Real Estate Disclosure

Val Verde County Water Advisory Board

As a Primary Responsible Party	As a Partner
None Identified	Communication / Coordination Strategies 19 Develop a Groundwater Conservation District Educational Program

Table 5-15. Implementation Timeline

Strategies Corresponding with 0-2 Year Strategy Timeline	
<p>Military Influence Area (MIA) Strategies</p> <p>1 Define and Establish an MIA for Laughlin AFB and Spofford Field</p> <p>Acquisition Strategies</p> <p>2 Identify Priority Locations for Acquisition</p> <p>5 Leverage the DOD Encroachment Partnering Program</p> <p>AICUZ Strategies</p> <p>6 Implement AICUZ Recommendations</p> <p>BASH Strategies</p> <p>7 Develop and Distribute BASH Educational Materials</p> <p>Capital Improvement Plan Strategies</p> <p>10 Incorporate Laughlin into Regional Infrastructure Planning</p> <p>Comprehensive Plan Strategies</p> <p>12 Develop a Joint Comprehensive Plan for the MIA</p> <p>Communication / Coordination Strategies</p> <p>13 Establish a JLUS Coordinating Committee</p> <p>14 Develop and Distribute Public Education Materials</p> <p>15 Laughlin AFB to Provide Technical Support to the Planning and Zoning Boards</p> <p>16 Include Laughlin AFB AICUZ on City Website</p> <p>17 Laughlin AFB to Provide Technical Support to the JAZB</p> <p>18 Develop a Formal Communication Process for Information Exchange Between all Entities</p> <p>19 Develop a Groundwater Conservation District Educational Program</p> <p>22 Establish Procedures for Plan Review and Comment</p> <p>Deed Restriction Strategies</p> <p>23 Identify Areas for Deed Restrictions</p>	<p>Legislative Tools Strategies</p> <p>25 Include Laughlin AFB in Wildlife Management Legislation</p> <p>26 Encourage Statewide Legislation Addressing Military Base Encroachment</p> <p>Memorandum of Understanding Strategies</p> <p>27 Develop General MOU to Implement JLUS Process</p> <p>28 Develop Specific MOUs to Implement JLUS Recommendations</p> <p>Real Estate Disclosure Strategies</p> <p>29 Require Properties to Receive Full Disclosure at the Time of Advertisement</p> <p>30 Modify Subdivision Regulations to Require Appropriate Real Estate Disclosure</p> <p>Zoning / Subdivision / Building Code / Other Local Regulations Strategies</p> <p>31 Amend the Laughlin AFB Compatible Land Use and Hazard Zoning Ordinance</p> <p>32 Require Sound Attenuation for Buildings and Retrofit Existing Buildings</p> <p>33 Update or Develop Light and Glare Regulations</p> <p>35 Mitigate Frequency Spectrum Impedance and Interference Issues Associated with Development</p> <p>36 Develop and Adopt a Height Restrictions Ordinance</p> <p>38 Promote Compatible Land Uses Along the Del Rio Relief Route</p>

Strategies Corresponding with 3-5 Year Strategy Timeline	
<p>Acquisition Strategies</p> <p>3 Establish a Voluntary Acquisition Program / Purchase of Development Rights</p> <p>4 Develop and Implement a Conservation Easement Education Program</p> <p>Zoning / Subdivision / Building Code / Other Local Regulations Strategies</p> <p>37 Require a Water, Utility, and Environmental Resources Study for Large Developments</p>	

Table 5-15. Implementation Timeline (*continued*)

Strategies Corresponding with Ongoing Strategy Timeline	
Military Influence Area (MIA) Strategies	
1	Define and Establish an MIA for Laughlin AFB and Spofford Field
Acquisition Strategies	
2	Identify Priority Locations for Acquisition
3	Establish a Voluntary Acquisition Program / Purchase of Development Rights
4	Develop and Implement a Conservation Easement Education Program
5	Leverage the DOD Encroachment Partnering Program
AICUZ Strategies	
6	Implement AICUZ Recommendations
BASH Strategies	
7	Develop and Distribute BASH Educational Materials
8	Control Bird and Wildlife Attractions Near Laughlin AFB
Capital Improvement Plan Strategies	
9	Update Appropriate CIP and Master Infrastructure Plans
10	Incorporate Laughlin into Regional Infrastructure Planning
Comprehensive Plan Strategies	
11	Update City of Del Rio Comprehensive Plan
Communication / Coordination Strategies	
13	Establish a JLUS Coordinating Committee
14	Develop and Distribute Public Education Materials
15	Laughlin AFB to Provide Technical Support to the Planning and Zoning Boards
16	Include Laughlin AFB AICUZ on City Website
17	Laughlin AFB to Provide Technical Support to the JAZB
18	Develop a Formal Communication Process for Information Exchange Between all Entities
20	Actively Seek Local Input on Compatibility Issues
21	Coordinate School Site Planning
22	Establish Procedures for Plan Review and Comment
Deed Restriction Strategies	
24	Develop a Voluntary Deed Restriction Program
Real Estate Disclosure Strategies	
29	Require Properties to Receive Full Disclosure at the Time of Advertisement
30	Modify Subdivision Regulations to Require Appropriate Real Estate Disclosure
Zoning / Subdivision / Building Codes / Other Local Regulations Strategies	
34	Ensure Part 77 Compliance
37	Require a Water, Utility, and Environmental Resources Study for Large Developments

Please see the next page.



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Integrated Design Solutions