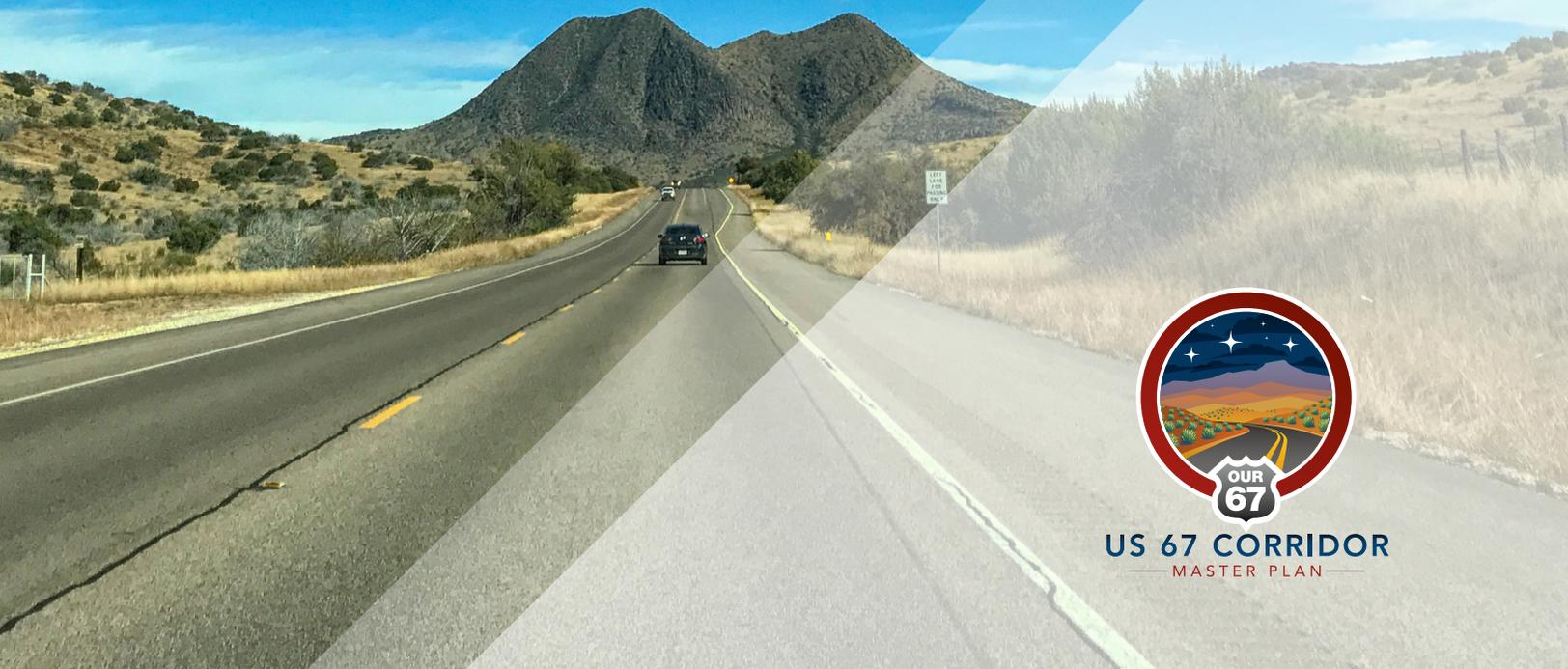
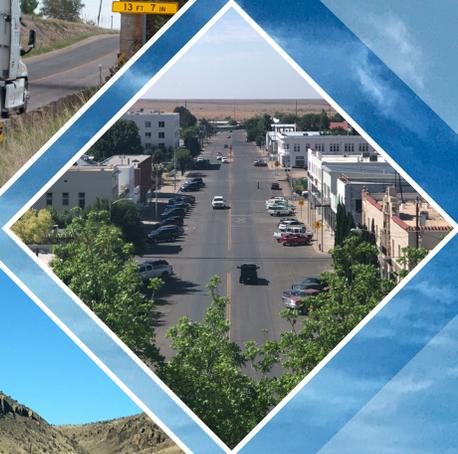




US 67 CORRIDOR MASTER PLAN

APPENDIX B

FEBRUARY 2020



US 67 CORRIDOR
MASTER PLAN

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Memorandum



US 67 CORRIDOR
— MASTER PLAN —

*To: Rebecca Reyes, TxDOT Project Manager
Christopher Weber, TxDOT Alpine Area Engineer*

From: CDM Smith

Date: February 2020

Subject: US 67 Corridor Master Plan Define Existing Conditions and Demand Technical Memorandum

1.0 Introduction

The purpose of this technical memorandum is to describe the existing conditions along the US 67 Corridor Master Plan Study corridor. This includes an evaluation of key aspects of the corridor, which are:

- Land use, demographics, forecasted population, and employment growth,
- Existing roadway infrastructure such as pavement, bridges, shoulders, curves, climbing and passing lanes, sidewalks, bicycle facilities, and intersections,
- Traffic operating conditions and average vehicle speeds,
- Corridor drainage,
- Corridor safety,
- Freight movement and truck traffic, and
- Environmental constraints, such as waters of the United States, floodplains, potential threatened and endangered species habitat, historic districts/properties, archaeological sites, and potential hazardous material sites.

This assessment identified constraints and opportunities along the corridor and provided a foundation for the identification of potential future projects to improve safety and mobility that will ensure the long-term efficiency of the US 67 corridor.

The US 67 corridor stretches 142 miles from Interstate 10 (I-10) west of Fort Stockton to the Presidio/Ojinaga Port of Entry (POE) on the United States (U.S.)/Mexico border. US 67 provides access to the towns of Alpine, Marfa, Presidio, and surrounding communities, as well as Big Bend National Park, Sul Ross State University, the Marfa Lights, Big Bend Ranch State Park, Fort Leaton State Park, and Fort Davis attractions. The corridor study area has experienced traffic growth in recent years driven by many factors including tourism growth, international commerce, and Permian Basin oil field development. In response to these trends, the Texas Department of Transportation (TxDOT), in partnership with communities along the corridor is developing a

Corridor Master Plan Study to help determine the current and future transportation needs along US 67. **Figure 1** shows the study corridor.

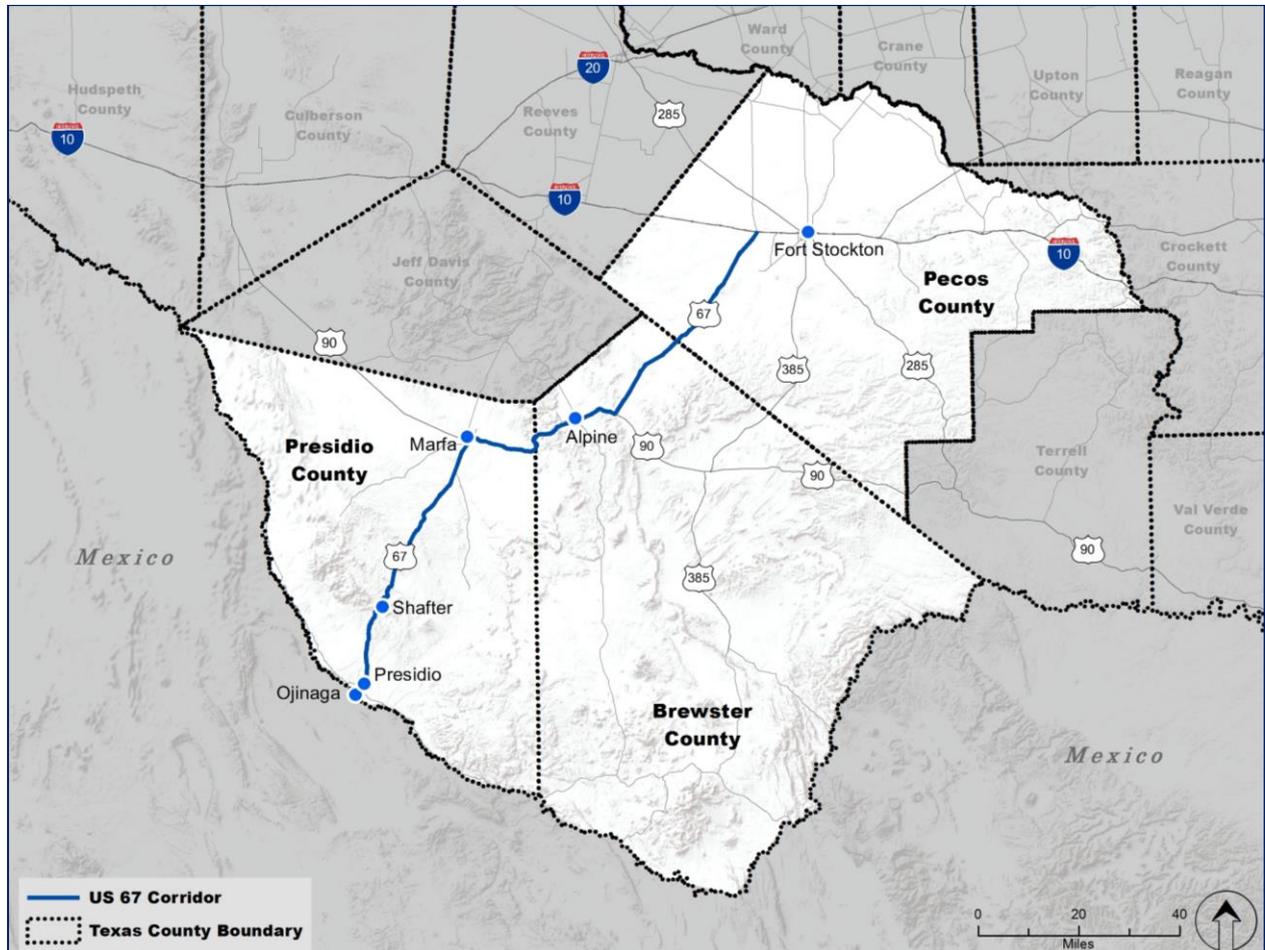


Figure 1: US 67 Corridor Master Plan Study Corridor

The study area included the entire 142 miles of US 67 as described previously and a buffer of 1,500 feet from the edge of the prescribed right-of-way (based on the County Appraisal District parcel boundary information) in all directions. This study area is not an indication of future roadway expansion; rather, it is an effort to include adjacent constraints that are not within the existing corridor limits but may still have an impact on the corridor. The study team split the US 67 study corridor into seven segments encompassing three communities and major interchanges as shown in **Figure 2**:

- Segment 1 Presidio: US 67 corridor within Presidio City limits
- Segment 2 Presidio to Marfa: between Presidio City limits and Marfa City limits
- Segment 3 Marfa: US 67 corridor within Marfa City limits
- Segment 4 Marfa to Alpine: between Marfa City limits and Alpine City limits

- Segment 5 Alpine: US 67 corridor within Alpine City limits
- Segment 6 Alpine to US 90: between Alpine City limits and the US 90 east interchange
- Segment 7 US 90 to I-10: from US 90 east interchange to I-10

Among the seven segments, Segments 1, 3, and 5 are within communities, while Segments 2, 4, 6, and 7 are segments outside of the communities.

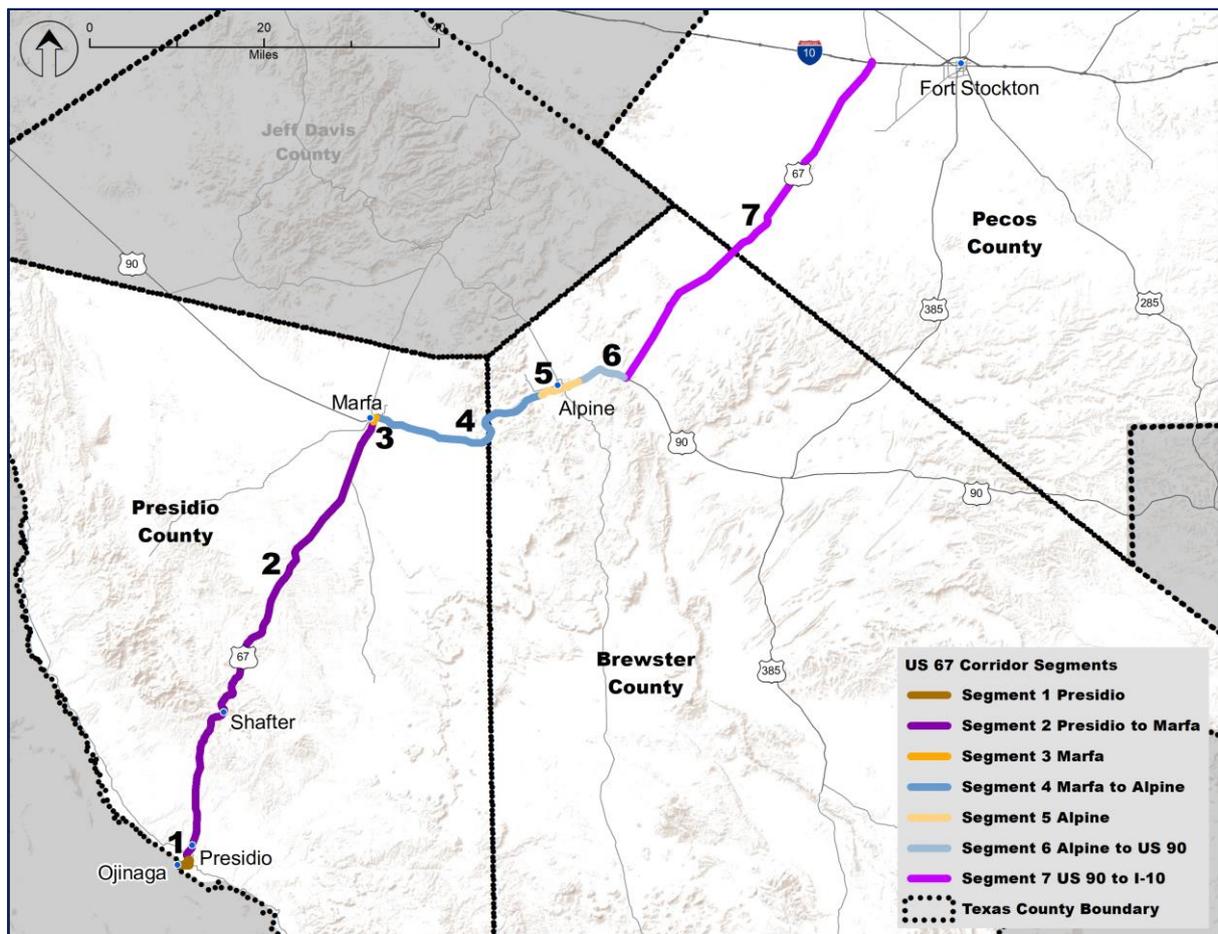


Figure 2: US 67 Corridor Segmentation

1.1 US 67 Study Purpose with Approach

The Corridor Master Plan identified current and future transportation needs along US 67 from I-10 west of Fort Stockton to the POE along the Mexican border. The study objectives focused on enhancing mobility, safety, and efficiency along the corridor by recommending future potential transportation projects and strategies for short-, mid-, and long-term implementation.

To achieve these objectives, TxDOT assembled a multi-disciplined team of planners, engineers, landscape architects, environmental specialists, and economists. The study included seven major tasks:

1. Identify and prioritize logical corridor segments, each with identified potential short-, mid- and long-term projects along with implementation plans per segment.
2. Coordinate with TxDOT and other study stakeholders to identify needed transportation improvements (improved safety, emergency response, maintenance, multimodal connectivity, and mobility) in the study corridor and to serve potential redevelopment opportunities along the corridor.
3. Develop and implement a public involvement plan using a variety of outreach mechanisms, including public meetings, to obtain the public's input on corridor transportation issues and potential corridor improvements.
4. Conduct a safety analysis and develop traffic projections, traffic analysis and simulation models to identify existing and future mobility issues and recommend alternative improvements.
5. Incorporate survey studies and data from different sources to assist in the development and refinement of potential corridor improvements.
6. Provide technical assistance, and prepare technical memoranda documenting methodology, results, and conclusions.
7. Develop a corridor master plan study report.

1.2 Previous and Related Projects

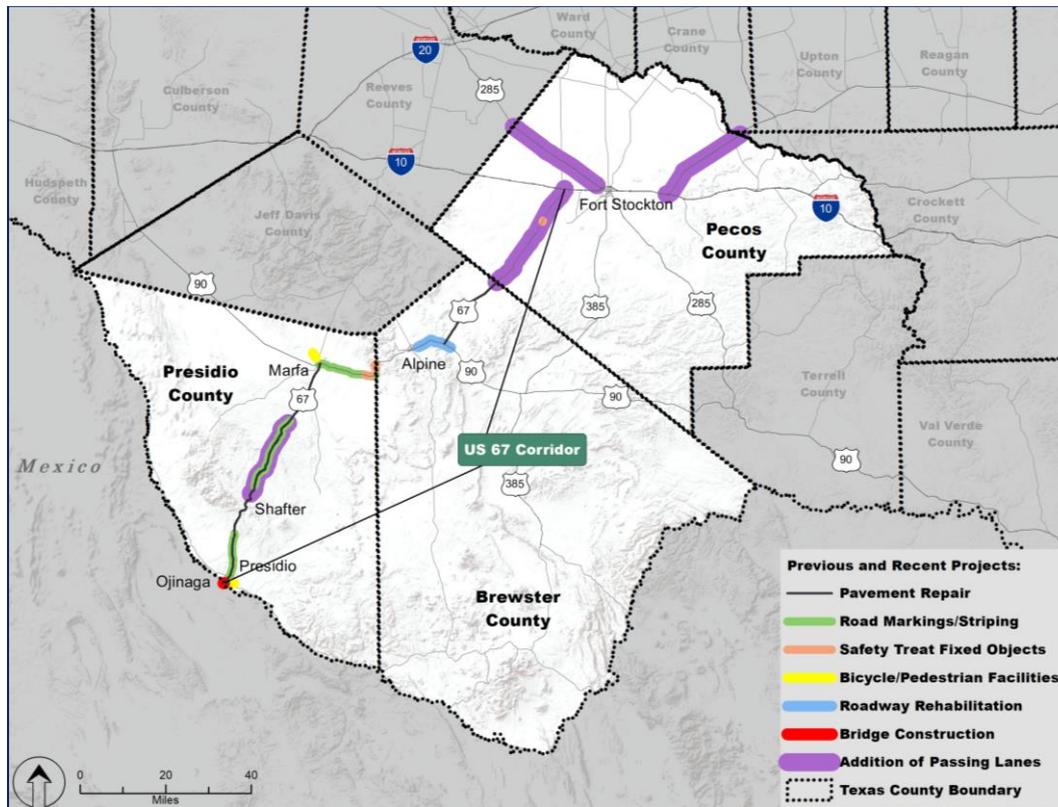
The study team reviewed previous studies and planning documents to help understand the context of the study area. Ongoing and previous studies and projects close to the US 67 corridor have been divided into the following categories:

- **Road Markings/Striping.** TxDOT is planning to improve road marking/striping along the following three segments of US 67 corridor in Presidio County. Currently, these improvements are being finalized for construction.
 - A 14-mile stretch from Brewster/Presidio County line to W. San Antonio Street in Marfa.
 - A 17-mile stretch from 15.2 miles south of the US 67/US 90 west junction in Marfa to 32.2 miles south of the US 67/US 90 west junction.
 - A 14.6-mile stretch from 12.8 miles north of FM 170 to 0.3 mile west of Business Route 67/US 67 south intersection.
- **Pavement.** Sealcoat is a protective coating that extends the life of asphalt pavements. TxDOT is planning to add sealcoat to the following sections of US 67 corridor to maintain the pavement condition in a state of good repair. These sections are listed as follows:
 - An approximately 20 mile stretch from the east junction of US 67/US 90 in Alpine to the Brewster/Pecos County Line, which is in the planning stage.

- A 0.4-mile stretch from 0.4 miles east of the west junction of US 67/US 90 in Marfa to the west junction of US 67/US 90 in Marfa, whose construction has been scheduled.
 - A 15-mile stretch from the west junction of US 67/US 90 in Marfa to 15.2 miles south of the US 67/90 west junction is under development.
 - A 17.1-mile stretch from 15.2 miles south of the US 67/US 90 west junction in Marfa to 32.2 miles south of the US 67/90 west junction in Marfa is under development.
 - A 13-mile stretch from 32.2 miles south of Marfa to 5.2 miles south of Shafter is being finalized for construction.
 - A 14.6-mile stretch from 5.2 miles south of Shafter to the International Bridge in Presidio has been finalized for construction.
- **Roadway Rehabilitation.** TxDOT's El Paso and Odessa Districts worked together to implement two roadway rehabilitation projects in Brewster County: one along US 90 from the US 67 east junction to 1.6 miles east of US 67 (1.9 miles in length); and the other one along US 67 from the US 90 east junction in Alpine to 1.3 miles east of SH 223 (6.3 miles in length).
 - **Addition of Passing Lanes.** There are multiple projects in and around the corridor which are scheduled to upgrade the roadways to a Texas Super Two Passing Lanes (where a periodic passing lane is added to a two-lane rural highway to allow passing of slower vehicles and the dispersal of traffic platoons):
 - Along US 67, there is a project underway to upgrade the roadway to a Texas Super Two Passing Lane configuration, stretching from 0.5 mile north of I-10 to the Crockett County Line, approximately 22.6 miles. This project is proposed outside of the study area but is a significant project near the study area. The estimated construction cost of this project is around \$35M.
 - The Odessa District is in the process of implementing two projects along US 67 in Pecos County. The limits of these projects are from I-10 to 16.8 miles south of I-10 (15.8 miles) and from 16.8 miles south of I-10 to the Brewster County line (11.7 miles). These projects are being finalized for construction. The estimated construction cost is \$33M and the anticipated construction let date is Spring of 2021.
 - An 18.7-mile stretch along US 67, from 9 miles south of RM 169 to 22.9 miles north of FM 170. Along this stretch, TxDOT plans on working on safety treatments of fixed objects.
 - Along US 285 in Pecos County, TxDOT is proposing to improve road conditions by upgrading these roadways to Texas Super Two Passing Lanes. Along a 9.7-mile stretch from 0.3 mile south of FM 1776 to 1.5 miles north of I-10, the project is still under development. A 14-mile stretch from Reeves County line to 0.3 mile south of FM 1776, the project is finalizing for construction.

- **Safety Treat Fixed Objects.** TxDOT is proposing four projects related to safety in terms of fixed objects, along different sections of US 67 corridor. These projects aim to remove, relocate, or safety treat all fixed objects including the installation of guardrail for safety treatment of a fixed object or drainage structures within the project limits, to include both point and continuous objects. In addition to the safety improvements along the aforementioned 18.7-mile-long stretch from south of RM 169 to 22.9 miles north of FM 170, there are three more projects in the finalizing stage for construction:
 - A 0.2-mile stretch from 9.2 miles south of I-10 to 9.4 miles south of I-10.
 - A 1.4-mile stretch from 1 mile west of Brewster County Line to 2.4 miles west of Brewster County Line.
 - A 1.4-mile stretch located between the Presidio and Brewster County Line.
- **Bridge Construction.** The addition of a bridge adjacent to the existing bridge in Presidio has been planned along a 0.6-mile stretch from Puerto Rico Street to the International Demarcation line along US 67 corridor. The new two-lane twin bridge structure would serve southbound traffic into Mexico. And the current bridge would be restructured to accommodate only northbound traffic coming into the U.S. The project is planned to be completed in 2020.
- **Pedestrian & Bicycle Facilities.** Several sidewalk and bicycle-lane projects have been funded under the Transportation Alternatives Set-Aside Program to enhance the multimodal transportation within Presidio and Marfa:
 - Marfa: A total of \$280,490 in funding was awarded to construct a shared use path in Marfa.
 - Presidio: A total of \$4.1M in funding was awarded to improve the pedestrian and bicycle facilities in Presidio.

Figure 3 depicts the locations of the above noted projects.



Source: TxDOT Project Tracker

Figure 3: Recent Projects near US 67 Corridor

2.0 Public Participation Process

Public participation is a vital component for the development of corridor master plans, and for this study, corridor stakeholders have been involved early and often throughout the process. The study team began by creating a Corridor Working Group comprised of local community leaders and government agencies. This group included representatives from City of Alpine, City of Marfa, City of Presidio, Pecos County, Brewster County, Presidio County, local community organizations and non-profits, law enforcement and emergency services, and many other entities. The Corridor Working Group assisted the study team to solicit public input and provide direction on the development of the Corridor Master Plan Study.

The study team has also held three rounds of public meetings about the Corridor Master Plan in May 2018, November 2018, and June 2019. These meetings provided an opportunity to communicate the purpose of the study to the public, present key information on existing corridor conditions, and gather feedback about the corridor from the users' point of view.

The first round of public meetings included a video presentation, educational displays, large maps on which attendees could note areas of concern for the study team, and the Corridor Planning Tool (a GIS-based tool allowing users to submit comments with spatial references to the map of the study area).

The second round of public meetings included a presentation, educational displays, and a survey to assess community priorities for the Corridor Master Plan.

The third round of public meetings presented recommended solutions to issues raised by the public in the previous two public meetings and all additional outreach. A survey was provided for public input. A total of 47 surveys/comments were received by survey, comment forms, emails, mail, and through the virtual public meeting. A copy of the Public Meeting Series #3 Summary and the results of the survey can be found on the TxDOT website at <https://www.txdot.gov/inside-txdot/projects/studies/el-paso/us67-i10-presidio.html>.

For all the three series of meetings, the study team deployed an online survey tool designed to gather input from corridor users about issues and opportunities along US 67 and their overall vision for the corridor.

The study team held three bus tours with stakeholders, interested parties, local communities, and elected officials in December 2017, September 2018, and April 2019 to discuss specific issues/concerns that may affect the respective stakeholder/community and to obtain input on current and future planning efforts along the corridor.

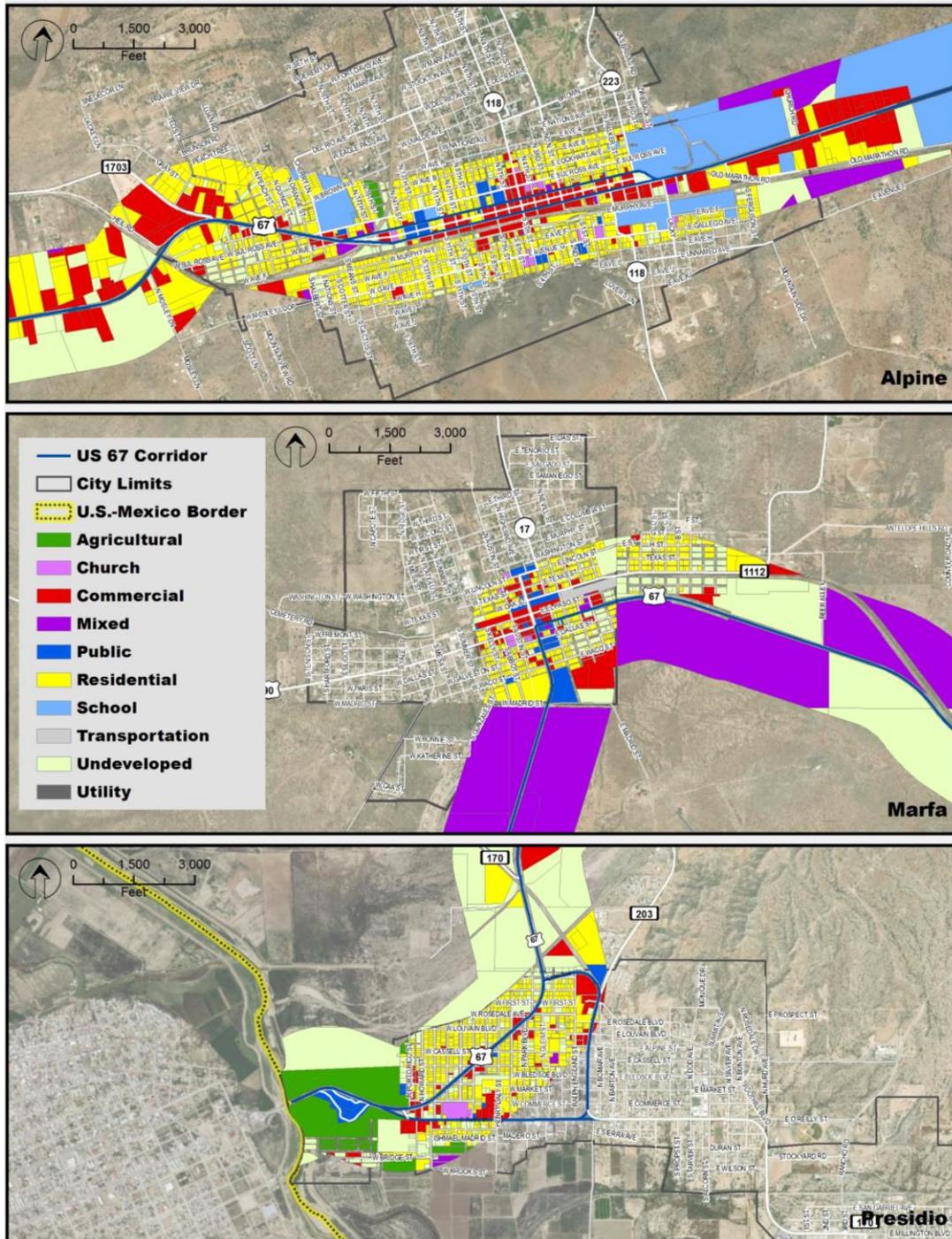
Finally, the study team conducted focus group meetings with key stakeholders which included representatives of tourism/business and commerce, state and national parks, law enforcement, school districts, emergency services, the communities along the corridor, and developers to better understand corridor safety issues, community needs, and future development patterns.

3.0 Land Use

The US 67 study corridor travels through three communities: Presidio, Marfa, and Alpine. Among these communities, Alpine is the only urbanized area based on the Federal Highway Administration's (FHWA's) definitions of Urban and Rural areas¹. The US 67 corridor also provides access to other surrounding communities including Shafter, Fort Stockton, and Fort Davis.

Land along the US 67 corridor is predominantly undeveloped except within the three communities where residential and commercial development exist. Community facilities and services include churches, government offices, the Alpine Amtrak Passenger Station, Sul Ross State University, art installations, and other points of interest. **Figure 4** depicts existing land use in the three communities of Alpine, Marfa, and Presidio.

¹ FHWA Definition of Rural and Urban Areas.
https://minnesotago.org/application/files/4214/5825/6165/Urbanization_public_Final.pdf



Source: Blanton and Associates, 2018

Figure 4: Land Use along Alpine, Marfa, and Presidio Communities

Within these three communities, the US 67 corridor serves as a major arterial for local and regional commutes. Outside the three communities, US 67 is also a major corridor facilitating long-distance freight movement and tourist travel. Major freight generators include the Presidio/Ojinaga POE, Biad Chili Company, Solitaire Manufactured Homes, Tri-County Concrete and Steel, CSA Materials, and the Presidio Stockyards. Tourist attractions near the US 67 corridor

include Big Bend National Park, Big Bend Ranch State Park, Elephant Mountain Wildlife Management Area, the Marfa Lights, Chinati Mountains State Natural Area, Mount Livermore, the McDonald Observatory, and Davis Mountains State Park.

Figure 5 and **Figure 6** depict two of the major trip generators near the US 67 corridor.



Figure 5: Presidio/Ojinaga POE



Figure 6: Big Bend National Park

Figure 7 depicts the locations of major trip generators along the US 67 corridor.

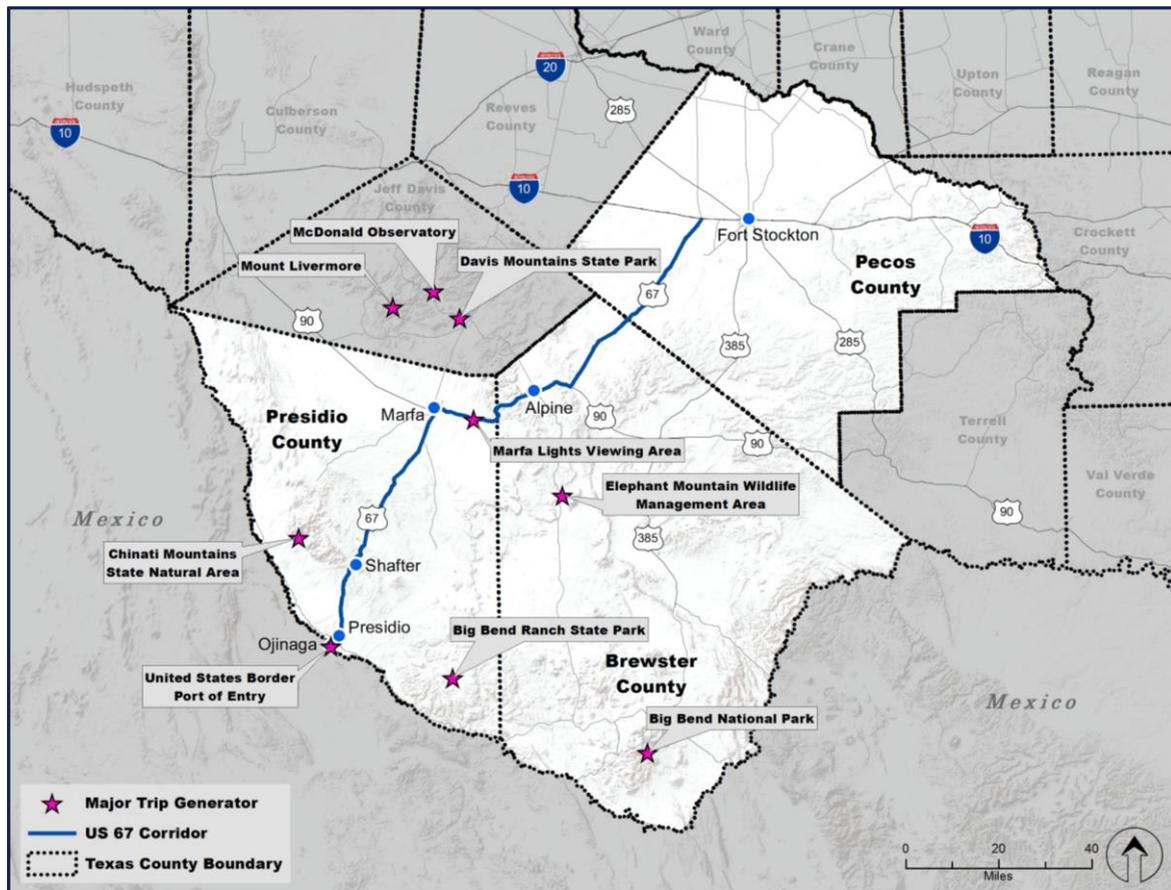


Figure 7: Major Trip Generators

4.0 Demographics

The US 67 corridor study area did not experience significant population growth from 2010 to 2017. Pecos County experienced a slight increase in population from 2010 to 2017 with a growth of approximately 1.9 percent. During the same period, the population in Presidio County decreased by 8 percent.

However, according to the TxDOT Statewide Analysis Model (SAM) 2014 population projection, the population of the three counties is forecasted to experience growth through 2040. Presidio County is projected to have the largest growth at 47 percent. Brewster and Pecos counties are also projected to experience higher percentages of growth at 29 and 16 percent, respectively. Population increases would, in turn, generate more traffic on the US 67 corridor and nearby roads. **Table 1** shows historical and forecasted population growth.

Population and employment are typically the major drivers for transportation improvements. With the forecasted growth in population and employment, US 67 is expected to remain an efficient and convenient transportation corridor to commuting, shopping, services, and educational facilities, as well as for moving freight.

Table 1: Historical and Forecasted Population Growth

	2010	2017	2040	% Change (2010 -2017)	% Change (2017 -2040)
Presidio County	7,818	7,191	10,548	-8%	47%
Brewster County	9,232	9,220	11,920	0%	29%
Pecos County	15,50	15,804	18,333	1.9%	16%
Texas	24,311,981	27,419,612	40,458,796	13%	48%

Source: U.S. Census, 2010; American Community Survey, 2017; Statewide Analysis Model (SAM), 2014

4.1 Employment

Likewise, forecasted employment growth will also generate more traffic on the US 67 corridor and nearby roads. According to employment projection data from Woods & Poole Economics, Inc., Presidio County employment is projected to grow by 32 percent by 2040. Brewster and Pecos counties will also experience job growth at 24 percent as shown in **Table 2**.

Both population and employment increases would likely be supported by an increase in freight to provide household goods for the growing population, transport supplies for new businesses, and move manufacturing inputs and finished products for distribution.

Table 2: Employment Growth

	2010	2016	2040	% Change (2010 -2016)	% Change (2016 -2040)
Presidio County	3,030	3,220	4,240	6%	32%
Brewster County	6,670	5,960	7,410	-11%	24%
Pecos County	8,260	8,020	9,940	-3%	24%
Texas	14,272,930	16,644,170	25,130,200	17%	51%

Source: Woods & Poole Economics, Inc., 2018

4.2 Income and Poverty

Rising transportation costs have a negative impact on lower-income households. The Bureau of Labor Statistics (BLS) Consumer Expenditure Survey showed that transportation is the second-highest American household expenditure, only exceeded by housing costs². Vehicle cost, increased prices at the pump, and transit fare increases all pose a financial burden to the mobility of all households, especially economically challenged populations.

According to the 2017 American Community Survey (ACS), the median household income for Texas was \$59,206. Median household income for the US 67 corridor study area is below this average. Pecos County has a slightly lower median household income of \$50,543. Presidio County, Brewster County, Alpine, Marfa, and Presidio are further below the state average with median household income ranging from \$22,900 to \$42,600. Approximately 26 percent of people in

² "CONSUMER EXPENDITURES--2012." BLS Economic News Release 10 Sept. 2013. Web. 4 Sept. 2014.

Presidio County, 29 percent in Presidio, and 21 percent in Marfa fall in the poverty levels ³, which is higher than the state average of 16 percent. By comparison, Pecos County, Brewster County and Alpine have approximately 12 percent of people living below poverty, which is lower than the state average. The percentage of zero-vehicle households for the US 67 corridor study area ranges from 6 percent to 12 percent (see **Table 3**) which is higher than the statewide average of 5 percent.

Table 3: Income and Poverty Level

	Median Household Income (2017)	Percent of Individuals below poverty level (2017)	Percent of Zero Vehicle Household (2017)
Presidio County	\$ 26,486	26%	10%
Presidio	\$ 22,959	29%	9%
Marfa	\$ 42,647	21%	12%
Brewster County	\$ 38,906	11%	6%
Alpine	\$ 37,402	13%	8%
Pecos County	\$ 50,543	11%	6%
Texas	\$ 59,206	16%	5%

Source: American Community Survey, 2017

5.0 Transportation Elements

In general, the design and condition of transportation infrastructure on a corridor have a significant impact on the experience of travelers using the corridor as well as on the quality of life for area residents. The following sections describe the corridor characteristics, pavement and bridge conditions, traffic conditions, travel patterns, bicycle and pedestrian accommodations, transit service, and crash trends.

5.1 Roadway Network

Most of the US 67 study corridor was built in the 1930s and 1940s. In the 1960s and 1970s, TxDOT reconstructed the portion of the corridor within Presidio County. The US 67 study corridor is primarily a two-lane undivided roadway. It is classified as a principal arterial and is part of TxDOT roadway system. TxDOT owns the transportation right-of-way (ROW) for the length of the corridor.

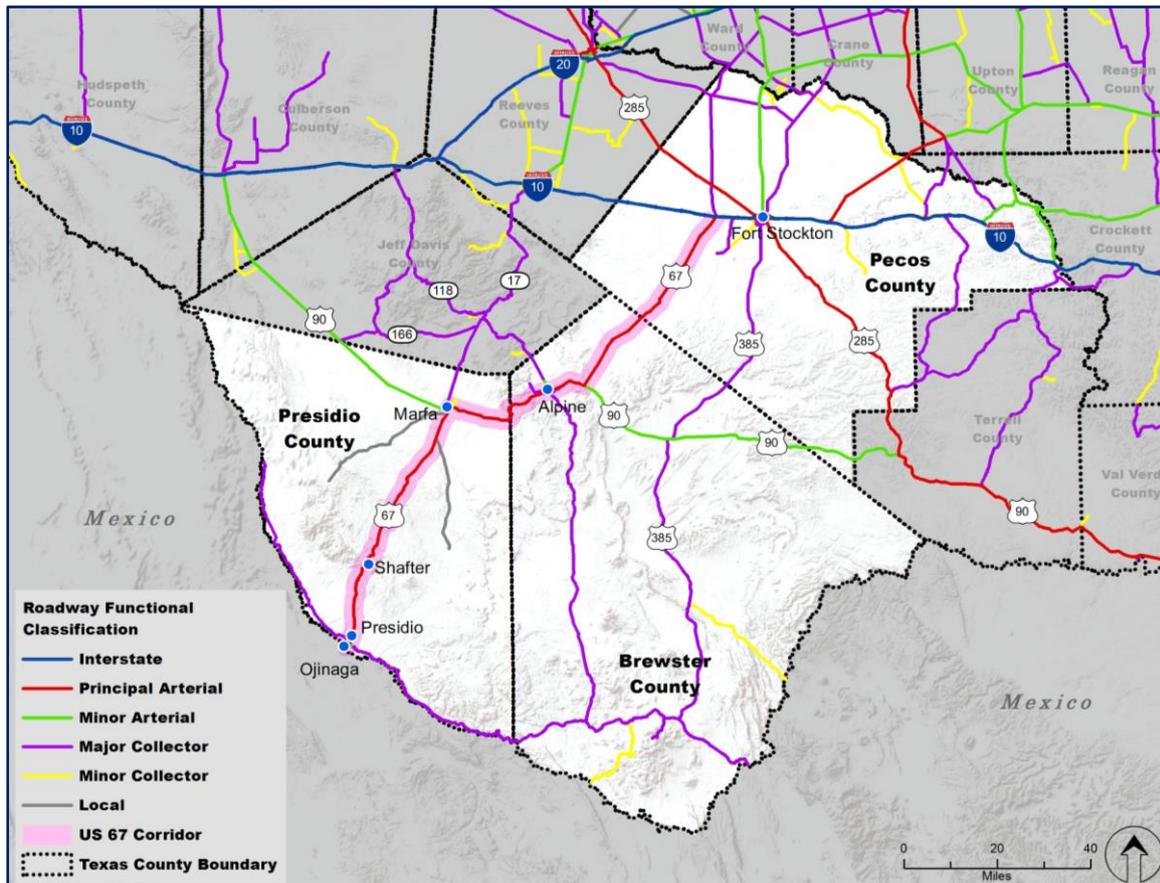
I-10 is the only interstate facility intersecting the US 67 corridor. I-10 near the US 67 corridor has two general purpose lanes and frontage roads in each direction with a posted speed limit of 80 miles per hour (mph). As an interstate facility, I-10's primary function is to facilitate long-distance travel and trade.

US 90 is a major east-west arterial serving the US 67 corridor study area. It is a two-lane undivided facility. It starts at I-10 to the west, travels east and merges with US 285 to the east. Within the

³ Poverty Guidelines from US Department of Health and Human Services. <https://aspe.hhs.gov/poverty-guidelines>

corridor study area, US 90 shares common segments with US 67 between Marfa and seven miles east of Alpine.

Other major roads near the US 67 corridor include US 385, SH 17, and SH 118. These facilities provide north/south and east/west connectivity for the US 67 corridor study area. **Figure 8** depicts the roadway network near the US 67 corridor.



Source: TxDOT, 2016

Figure 8: Roadway Network

5.2 Corridor Characteristics

5.2.1 Configuration

The US 67 corridor has an existing ROW width ranging between 70 feet and 200 feet. **Figure 9** depicts typical roadway cross sections along the US 67 corridor:

- **Rural Segments.** In rural areas, the US 67 study corridor is primarily a two-lane undivided facility, with a typical ROW of approximately 120 feet with 6-foot to 10-foot paved shoulders on both sides of the road. For some sections, there are passing and climbing lanes present.
- **Marfa Segment.** Within Marfa, the ROW varies from 100 feet to 200 feet. This section features 12 feet to 25 feet of paved shoulder and some 5-foot to 12-foot sidewalks on both sides of the road.

- Presidio Segment.** The Presidio segment is a two-lane divided facility with a ROW ranging from 100 feet to 200 feet and a 12-foot center two-way left-turn lane for left-turn movements. Eight-foot shoulders and 6-foot sidewalks are present on both sides of the road.
- Alpine Segment.** The US 67 corridor splits into two one-way alignments inside of Alpine. Each alignment has a typical ROW of approximately 70 feet with 8-foot outer parking lanes and 5-foot to 10-foot sidewalks on both sides of the road.

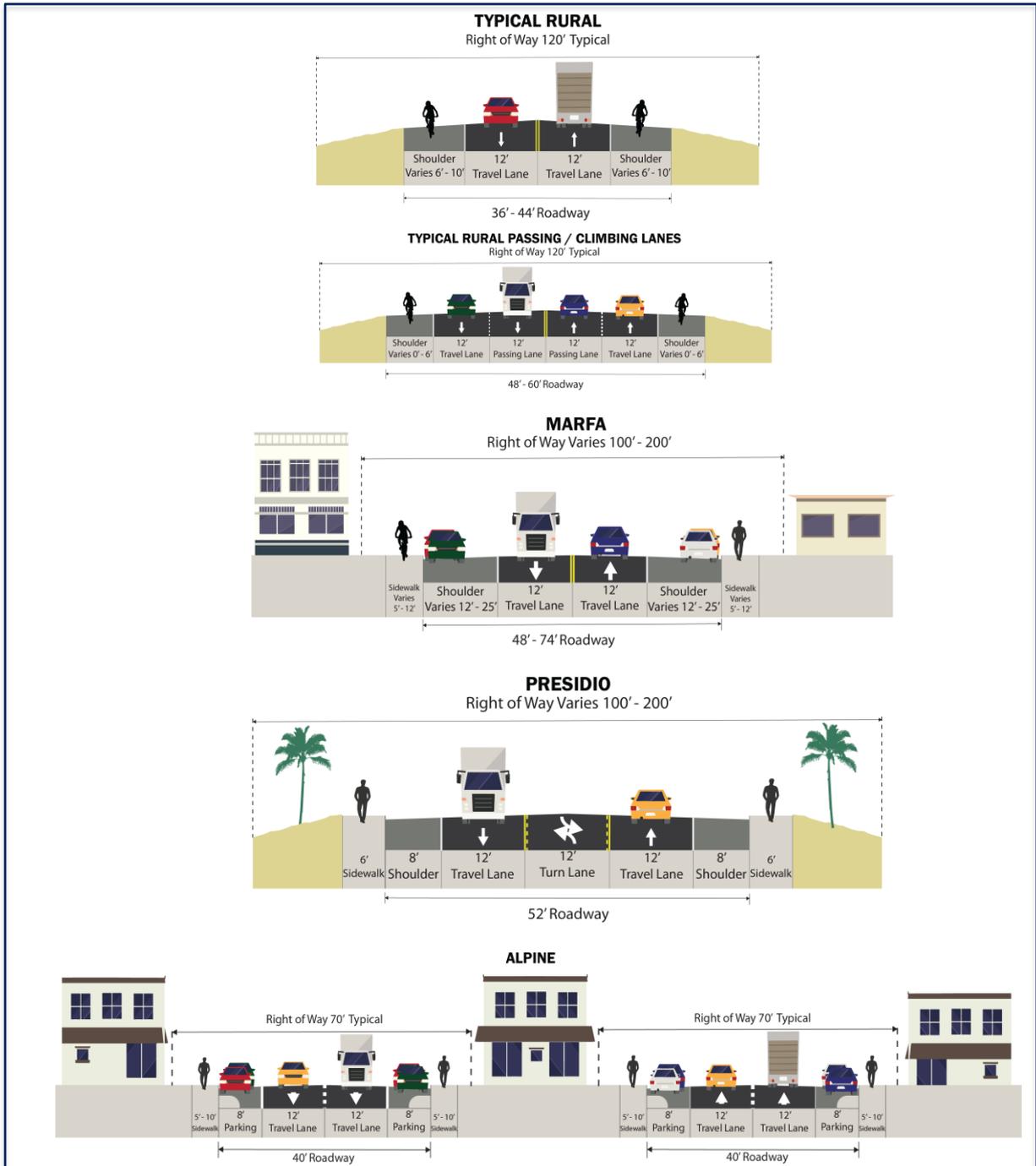
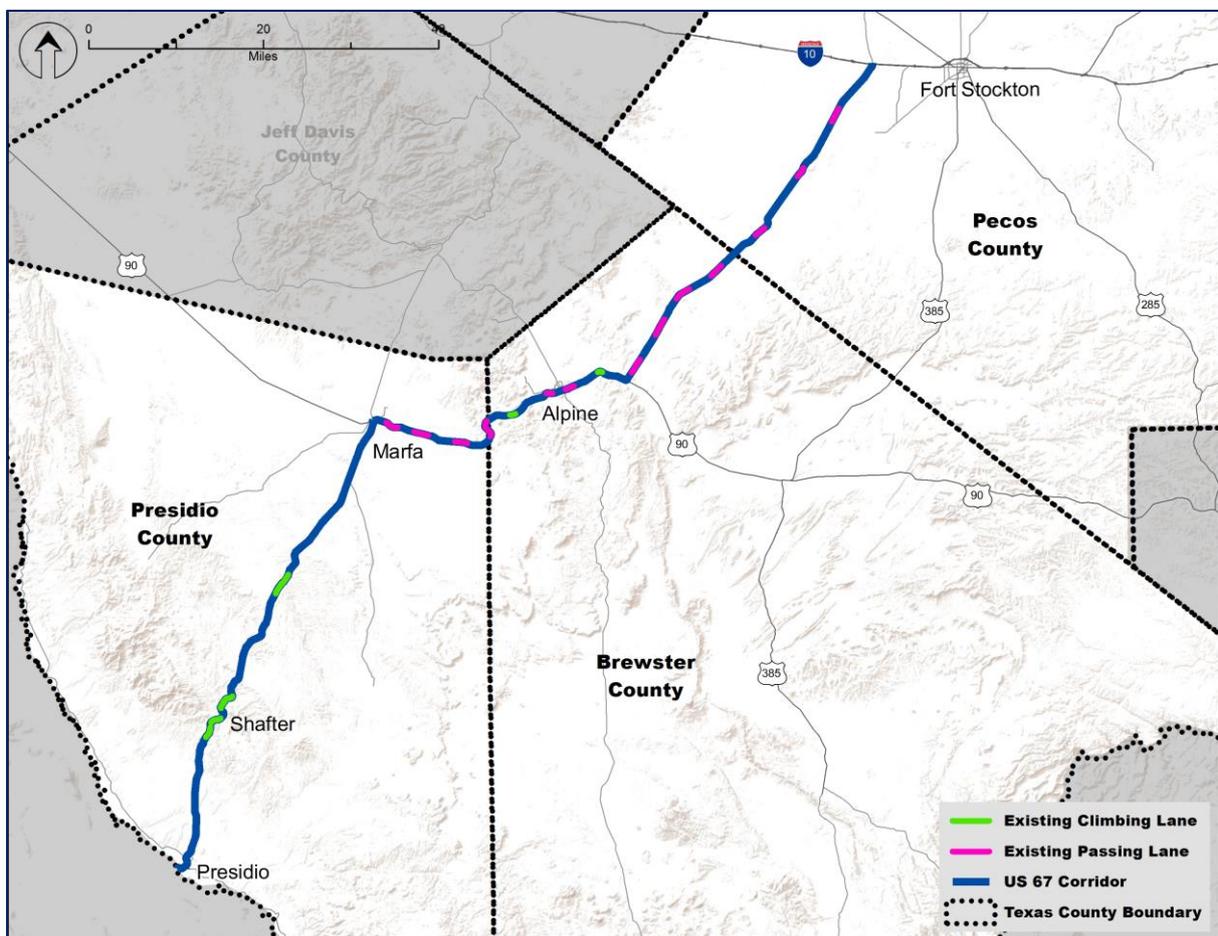


Figure 9: Typical Cross Sections along US 67

5.2.2 Climbing Lanes and Passing Lanes

Climbing and passing lanes provide additional lanes for vehicles to safely pass other vehicles while maintaining speeds. A climbing lane is designed to allow slower travel for large vehicles, such as large trucks or semi-trailer trucks ascending a steep grade. Since climbing uphill is difficult for these vehicles, they can travel in the climbing lane without slowing traffic. A passing lane is used to overtake vehicles moving slower, in the right lane.

The US 67 corridor has 22 miles of passing lanes between I-10 and Marfa. This accounts for 15 percent of the corridor length. Passing lanes do not exist between Marfa and Presidio. Climbing lanes along US 67 are mostly at the mountainous area where roadway elevation changes. Currently, the US 67 corridor has 9 miles of climbing lanes mostly concentrated in the Shafter area where the elevation reaches 5,000 feet. **Figure 10** depicts the passing lanes and climbing lanes in the corridor. **Figure 11** shows the climbing lane just west of Alpine.



Source: TxDOT Open Data Portal

Figure 10: US 67 Climbing Lanes and Passing Lanes



Figure 11: Climbing Lane West of Alpine

During field reconnaissance, climbing lane and passing lane signs were observed along the corridor to advise motorists of an upcoming overtaking lane. These signs increase road safety by allowing motorists to relax their search for an informal overtaking opportunity, knowing that a dedicated passing lane is approaching.

Input from public meetings revealed the desire for adding more passing and climbing lanes, and to add additional signage to existing lanes to avoid passing vehicles traveling on the opposing lane and to reduce the risk of head-on collisions.

5.2.3 Speed Limit

The US 67 corridor has a speed limit of 70 mph to 75 mph except near Shafter and US 90 interchange where the speed limit is between 55 mph and 70 mph. For Alpine, Marfa, and Presidio, the speed limit ranges from 30 mph to 55 mph. High speed limits at sharp curves cause a safety concern. Currently, the sharp curves in the mountainous areas near Shafter and west of Alpine near the Presidio County line have a posted speed limit as high as 70 mph, as shown in **Figure 12**.

During field reconnaissance, a railroad crossing was observed between two sharp curves approximately 30 miles east of Alpine. The speed limit traveling through that railroad crossing is 75 mph. There are grade crossing advance warning signs and pavement markings located 1,000 feet before the railroad crossing in both directions.

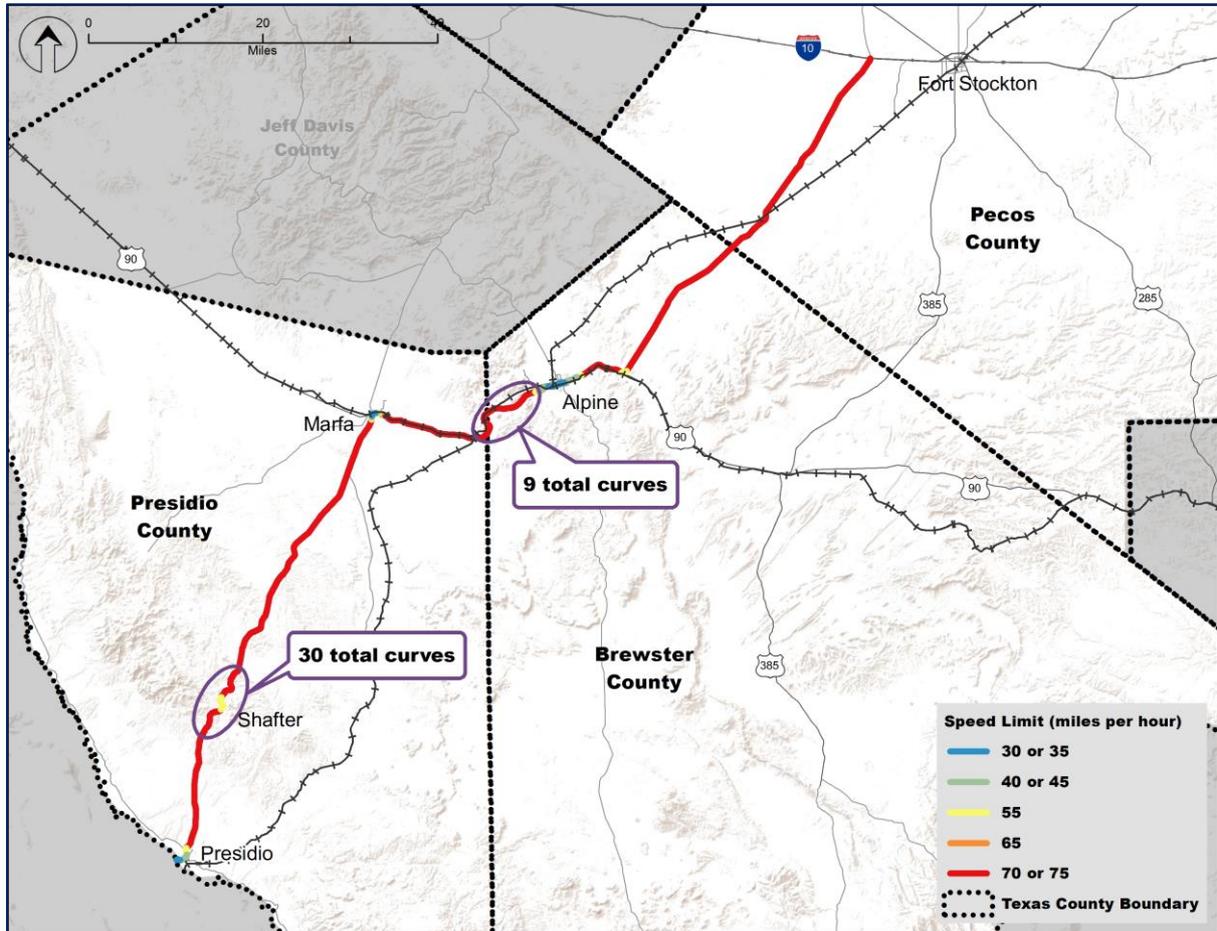


Figure 12: Speed Limits and Curves

5.2.4 Superelevation on Curves

Superelevation is the amount of cross slope or “bank” provided on a horizontal curve to counterbalance, in combination with the side friction, the centrifugal force of a vehicle taking the curve. As a vehicle drives through a horizontal curve, centrifugal force is counter-balanced by the vehicle weight due to roadway superelevation and by the side friction between tires and road surface.

The maximum rate of superelevation (e_{max}) is an overall superelevation control used on a widespread basis. According to TxDOT Roadway Design Manual⁴, for urban freeways and all types of rural highways, maximum rates of 6 or 8 percent are generally used and serves as the basis for the superelevation analysis along the corridor.

As per TxDOT Roadway Design Manual, the absolute minimum radius, using e_{max} of 6 percent for a 70-mph design speed, is 2,040 feet. For e_{max} of 8 percent for a 70-mph design speed, the absolute minimum radius is 1,810 feet. Given the criteria for the e_{max} of 6 percent and a thorough review of as-built information, it was determined that 48 curves, for all control sections on the US

⁴ Roadway Design Manual. <http://onlinemanuals.txdot.gov/txdotmanuals/rdw/index.htm>

67 corridor did not meet the criteria for the required superelevation. The number of insufficient curves significantly increased when compared to the 8 percent maximum superelevation criteria. Of the total 112 curves present throughout the corridor, 88 curves did not meet the criteria for required superelevation. The required superelevation rates based on emax of 6 and 8 percent were calculated and compared with existing superelevation rates.

Figure 13 shows the deficient curves according to the emax of 8 percent methodology along the corridor, classified into three ranges. The map highlights the section close to Shafter, wherein the majority of the curves are deficient by more than 1 percent.

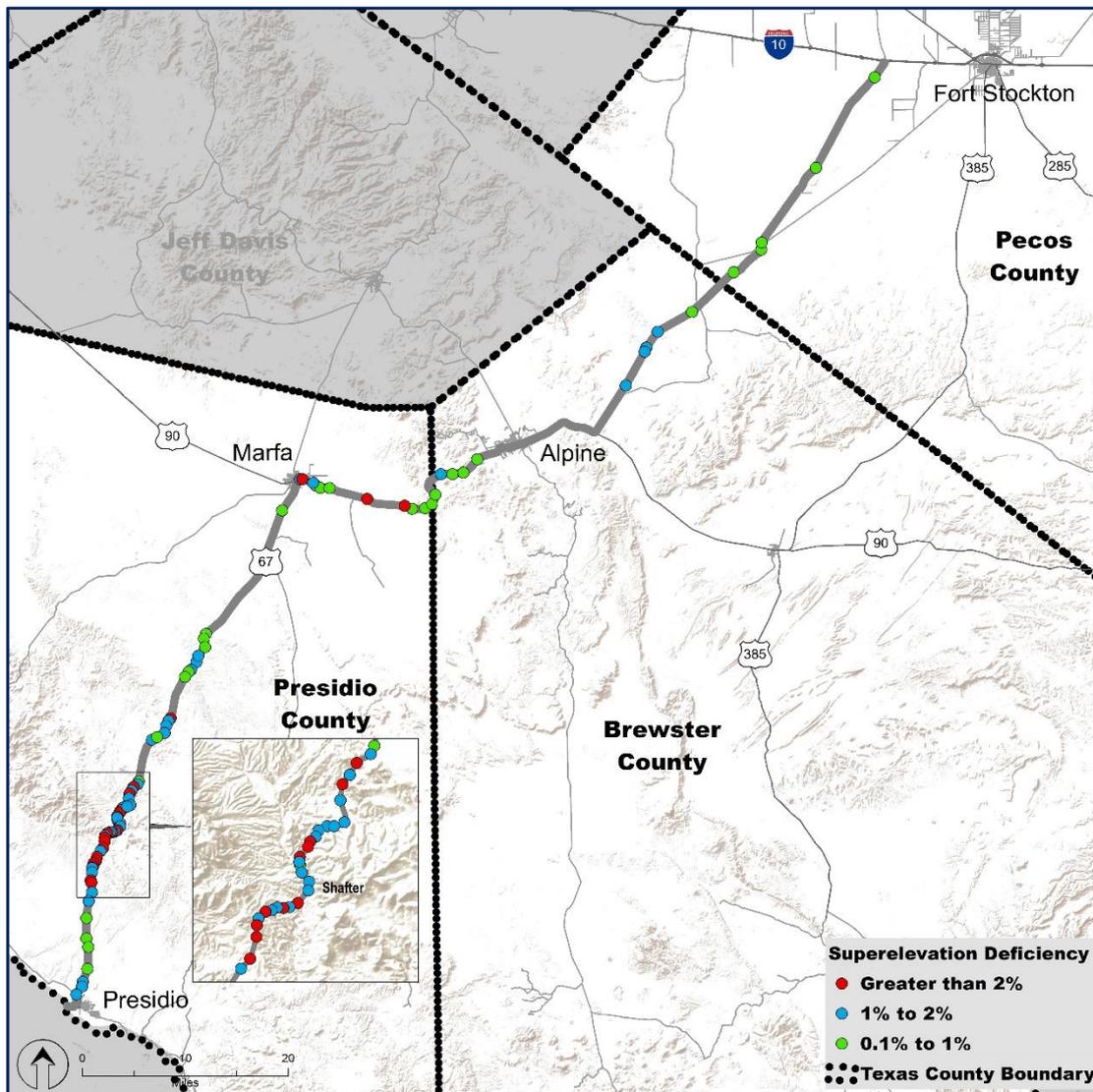


Figure 13: Curves with Superelevation Deficiency according to emax=8% Methodology

5.3 Pavement Conditions

Generally, the existing driving surface of the US 67 corridor is an asphaltic concrete surface with approximately 0-foot to 10-foot wide asphaltic paved shoulder on both sides of the road. Inside the three communities, instead of paved shoulders, the corridor features concrete curbs, and

gutters along the center median and drainage channels to convey stormwater between the edge of the road and the ROW.

Based on available TxDOT record drawings, the US 67 corridor was mostly built during the 1930s and 1940s. TxDOT reconstructed the corridor in the 1960s and 1970s. TxDOT El Paso and Odessa Districts currently conduct routine pavement preservation activities to retain or assure the ongoing functionality of the US 67 corridor.

The TxDOT Pavement Management Information System survey (2019) identifies pavement distress types, quantities, and severities. This survey also accounts for ride quality or roughness as part of the overall performance of the pavement condition evaluation.

According to the TxDOT 2019 PMIS survey, 73 percent of the pavement is in very good condition, 25 percent is in good condition, and 2 percent is in fair condition.

Following are the locations along the US 67 corridor where the pavement is in fair condition:

- A 2,649 feet section along US 67 on segment 2, located 10.5 miles south from Marfa.
- A 2,646 feet section along US 67 on segment 4, located 7.6 miles east of Marfa.
- A 2,645 feet section along US 67 corridor on segment 4, located 8.6 miles east of Marfa.
- A 2,645 feet section along US 67 corridor on segment 4, located 12.6 miles east of Marfa.
- A 2,645 feet section along US 67 corridor on segment 4, located 13.6 miles east of Marfa. (**Figure 14**).
- A 58 feet section along US 67 corridor on segment 7, located at the intersection of I-10 and US 67 (**Figure 15**).

Thirty percent of the US 67 corridor has shoulder rumble strips. **Figure 16** shows the existing pavement condition and rumble strips along the US 67 corridor.

TxDOT repaved the section east of Alpine between US 90 and the Pecos County line in May 2018.



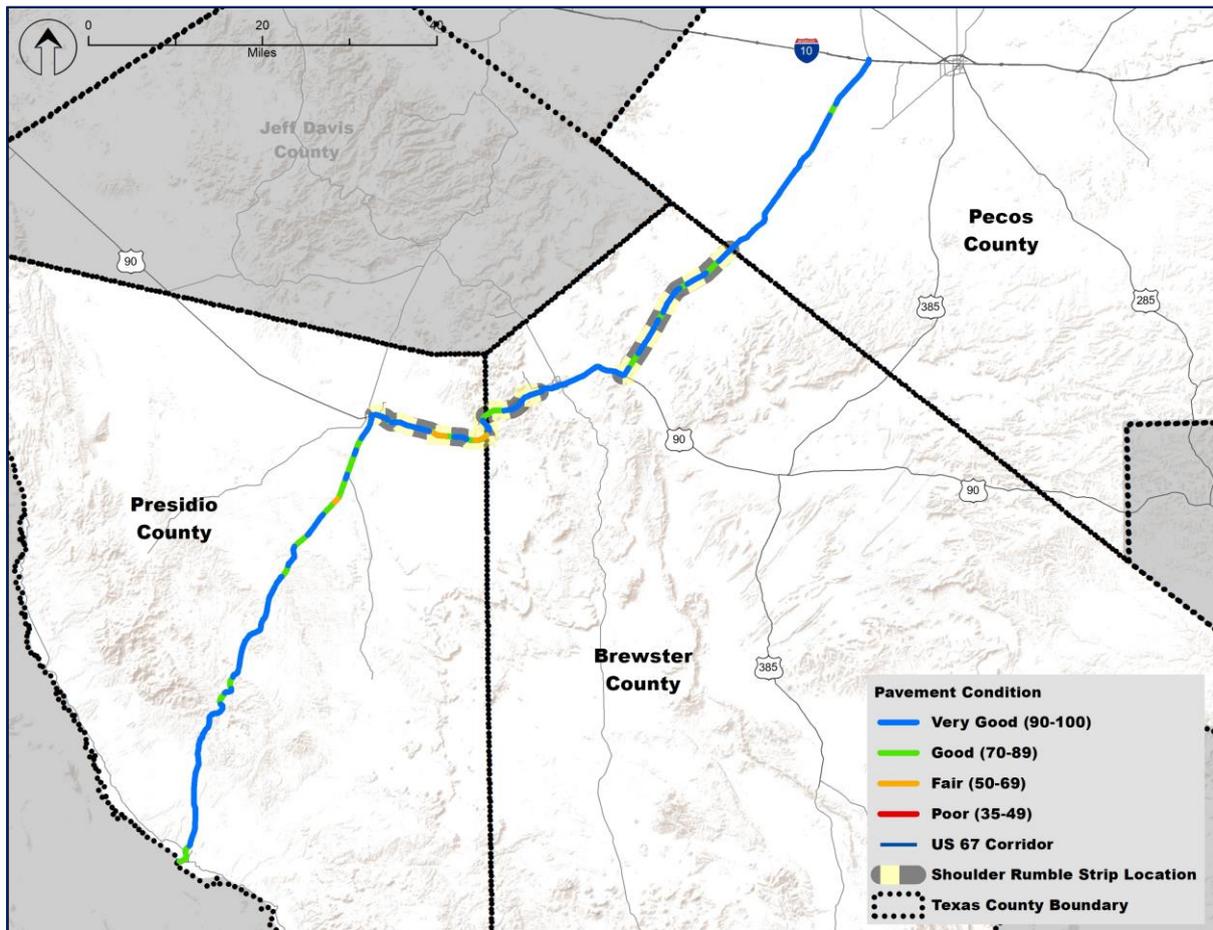
Source: Google, "Streetview," Google Maps

Figure 14: Fair Pavement Condition on US 67 Corridor 13.6 miles east of Marfa



Source: Google, "Streetview," Google Maps

Figure 15: Fair Pavement Condition on US 67 Corridor at I-10 Interchange



Source: TxDOT PMIS, 2019

Figure 16: Pavement Conditions

A shoulder rumble strip is a longitudinal safety feature installed on a paved roadway shoulder near the outside edge of the travel lane. It is made of a series of milled or raised elements intended to alert drivers (through vibration and sound) that their vehicles have left the travel lane. Shoulder rumble strips are one of the proven countermeasures identified by FHWA to reduce the risks of roadway departure crashes⁵. According to TxDOT Crash Records Information System database, approximately 54 percent of crashes along the US 67 corridor between 2010 to 2018 were roadway departure crashes. Currently, Segment 4, Marfa to Alpine, and part of Segment 7, US 67/90 junction to Pecos County line, are the only two sections with shoulder rumble strips, as shown in **Figure 16**. Input from public involvement suggested a need to install shoulder rumble strips throughout the US 67 corridor to reduce future roadway departure crashes.

The US 67 corridor also serves freight traffic with truck traffic to and from the Presidio/Ojinaga POE, as well as trucks that supply retail outlets and other businesses along the corridor. Heavy vehicles are a major cause of pavement damage. According to the FHWA Pavement Comparative Analysis Technical Report⁶, heavy truck traffic results in the majority of the pavement damage caused by vehicles traversing over it. During the public meetings, some of the residents of the three communities (Presidio, Marfa, and Alpine) indicated concerns about the increasing truck traffic passing through their communities and the continuous damage to the pavement on the US 67 corridor.

5.4 Bridges and Culverts

A bridge is a structure that supports a roadway over an obstruction by means of abutments or piers and does not have a constructed bottom. A culvert is a structure that supports a roadway over a waterbody by means of a complete pipe or box embedded in fill that always has a constructed bottom and does not have abutments or piers.

According to the FHWA's 2018 National Bridge Inventory (NBI), there are 16 bridge structures and 93 culvert structures along the US 67 corridor. The 16 bridges are excluding the bridge structure at the Ojinaga POE. Among the 109 structures, 107 are part of the US 67 drainage system. The remaining two are grade separation bridges at I-10 and a railroad crossing west of Alpine. Out of the 109 structures, 29 are in Presidio County, 42 are in Brewster County, and 38 are in Pecos County. Ninety-one of these structures (83 percent) were constructed in the 1930s and 1940s. The remaining 18 (17 percent) were constructed between 1950 and 1992. Since 1992, no new bridge or culvert structures have been constructed.

5.4.1 Structure Rating

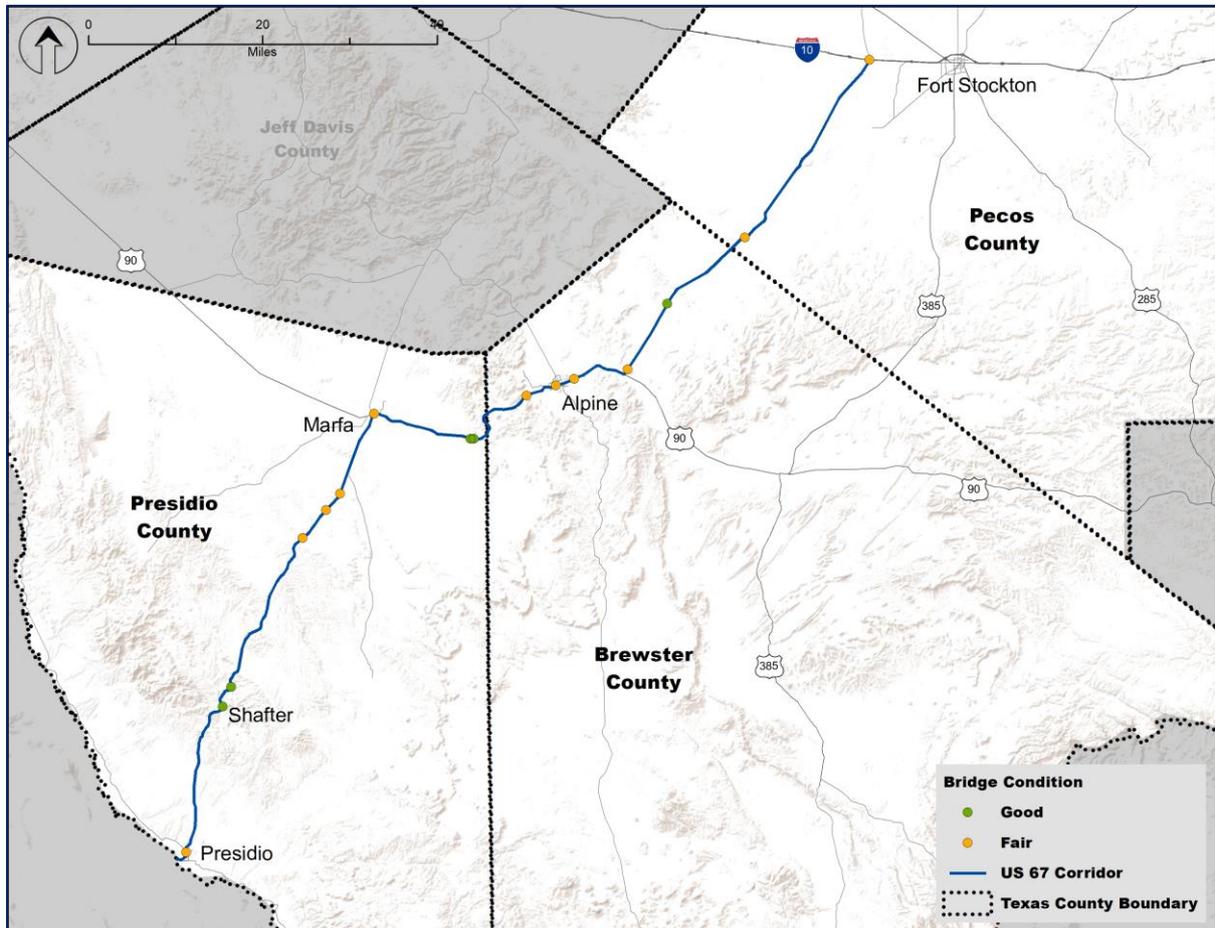
NBI data contain the bridge or culvert structure condition rating following the FHWA's Recording and Coding Guide for the Structure Inventory. According to NBI data, the bridge condition and the channel condition on the US 67 corridor can generally be classified as satisfactory. Out of 16 bridges, eleven show some minor structural element deterioration and out of 14 drainage

⁵ A roadway departure crash is defined as a crash which occurs after a vehicle crosses an edge line or a center line, or otherwise leaves the traveled way.

⁶ FHWA's Pavement Comparative Analysis Technical Report.
https://ops.fhwa.dot.gov/freight/sw/map21tswstudy/technical_rpts/pcanalysis.pdf

bridges, two have channel banks beginning to slump and potential improvement may be required based on additional structural analysis.

Figure 17 depicts the condition of bridges on the US 67 corridor.

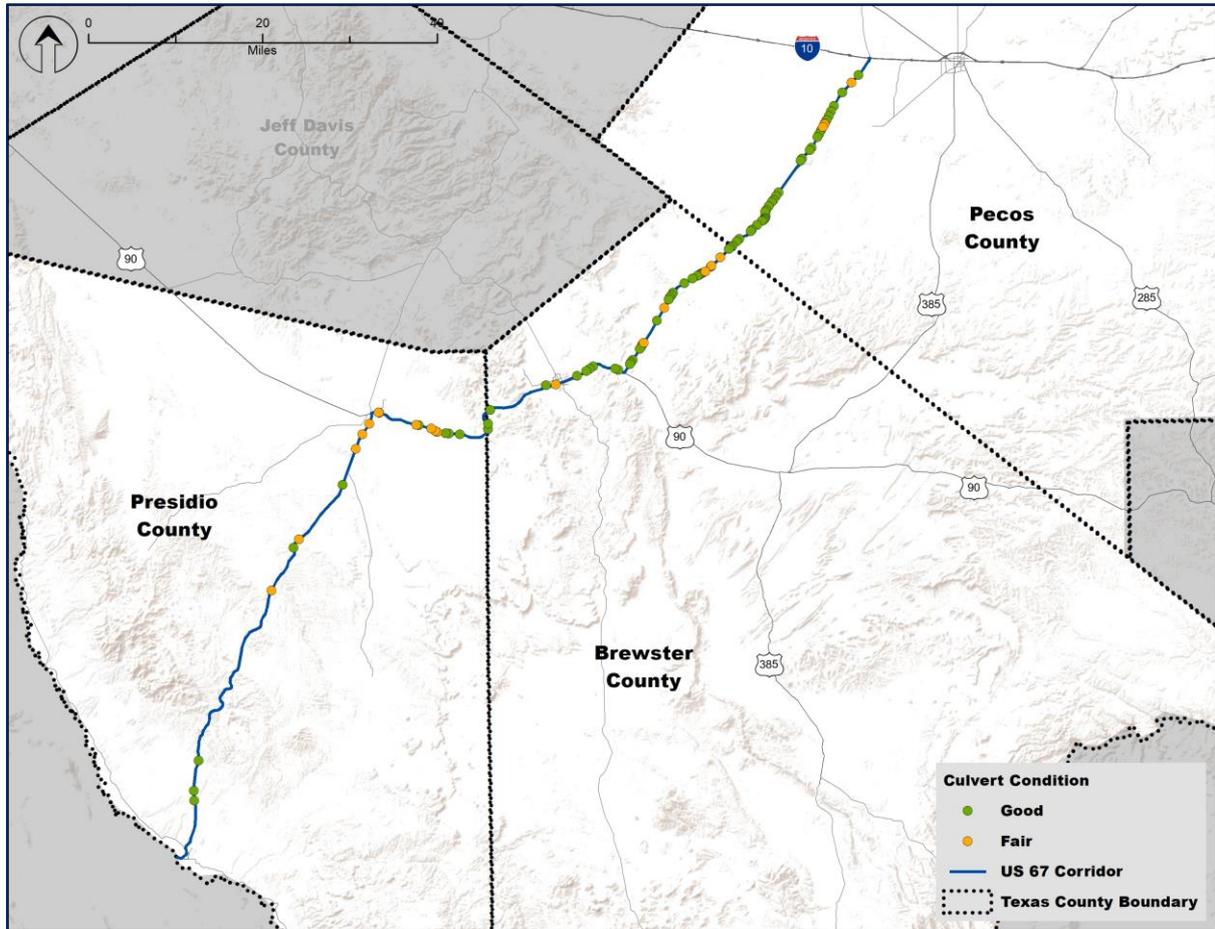


Source: National Bridge Inventory, 2018

Figure 17: Bridge Conditions

The culvert condition and the channel condition on the US 67 corridor can generally be classified as fair to good. Out of the 93 culverts, 21 showed signs of deterioration or initial disintegration and 18 have channel banks beginning to slump or erode. **Figure 18** depicts the condition rating for each culvert and culvert channel within the US 67 corridor.

Some improvements may be required to maintain a good rating of the highway structures along the US 67 corridor.



Source: National Bridge Inventory, 2018

Figure 18: Culvert Conditions

5.4.2 Vertical Clearance

There are five railroad crossings in the corridor. Out of the five railroad crossings, two are grade separated with railroad bridges over the US 67 corridor - one located 0.4 mile west of Alpine and the other within Alpine just west of North 15th Street. Field reconnaissance indicated these two railroad bridges have a vertical clearance of 13 feet 7 inches and 14 feet 9 inches. Neither bridge meets the current minimum vertical clearance standard from FHWA for an arterial. The bridge 0.4 miles west of Alpine with a clearance of 13 feet 7 inches does not meet the state standard for a normal load of 14 feet. Input from public meetings also indicated that some members of the public feel that the vertical clearances of these bridges are barriers for truck traffic. Truck drivers had to continue north to Fort Davis and back south to the US 67 corridor to avoid these bridges.

Figure 19 and Figure 20 depict the two railroad bridges over the US 67 corridor.



Source: Google, "Streetview," Google Maps

Figure 19: Railroad Bridge with Substandard Vertical Clearance over US 67 Corridor west of Alpine



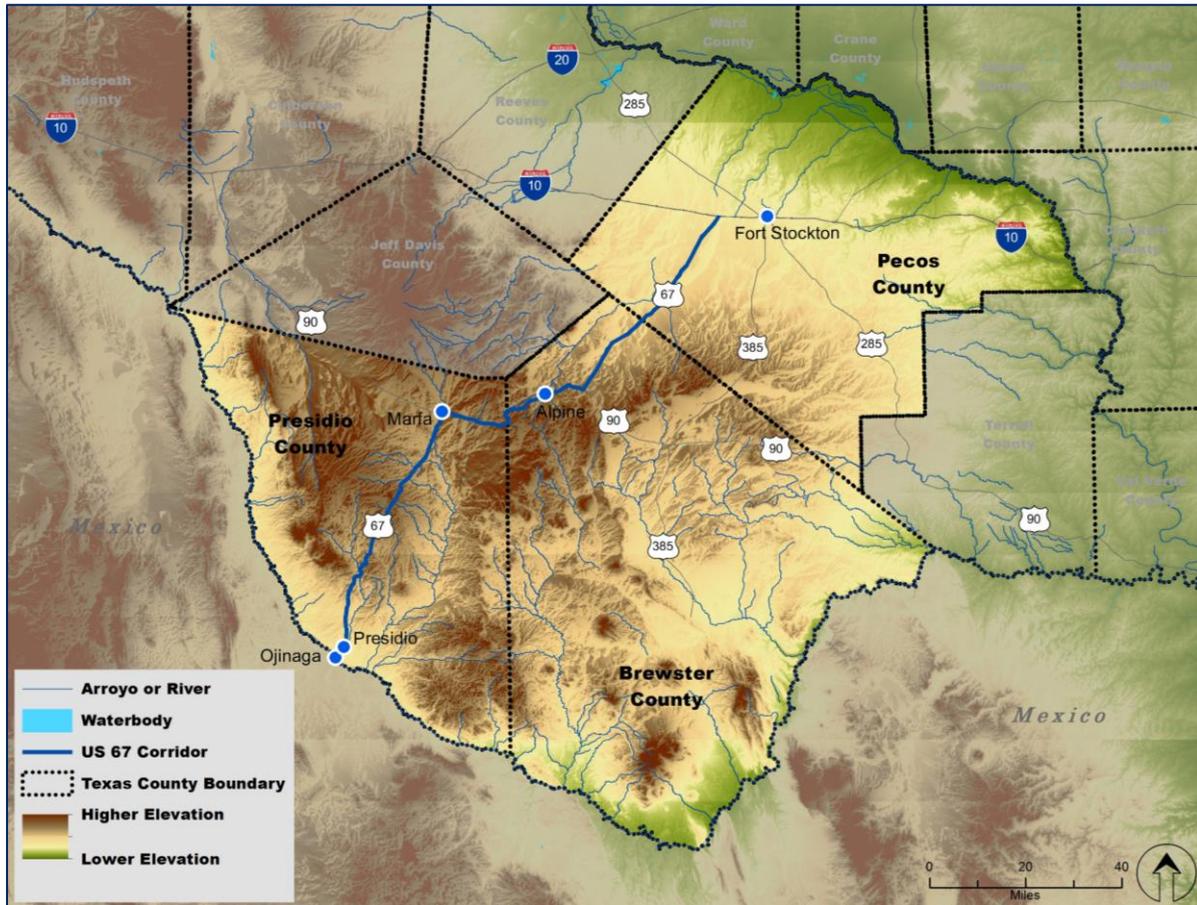
Source: Google, "Streetview," Google Maps

Figure 20: Railroad Bridge with Substandard Vertical Clearance over US 67 Corridor within Alpine

5.5 Drainage

Based on the U.S. Geological Survey, the US 67 corridor study area is approximately 3,600 feet to 5,000 feet above sea level. The topography at the US 67 corridor area typically includes a sloped

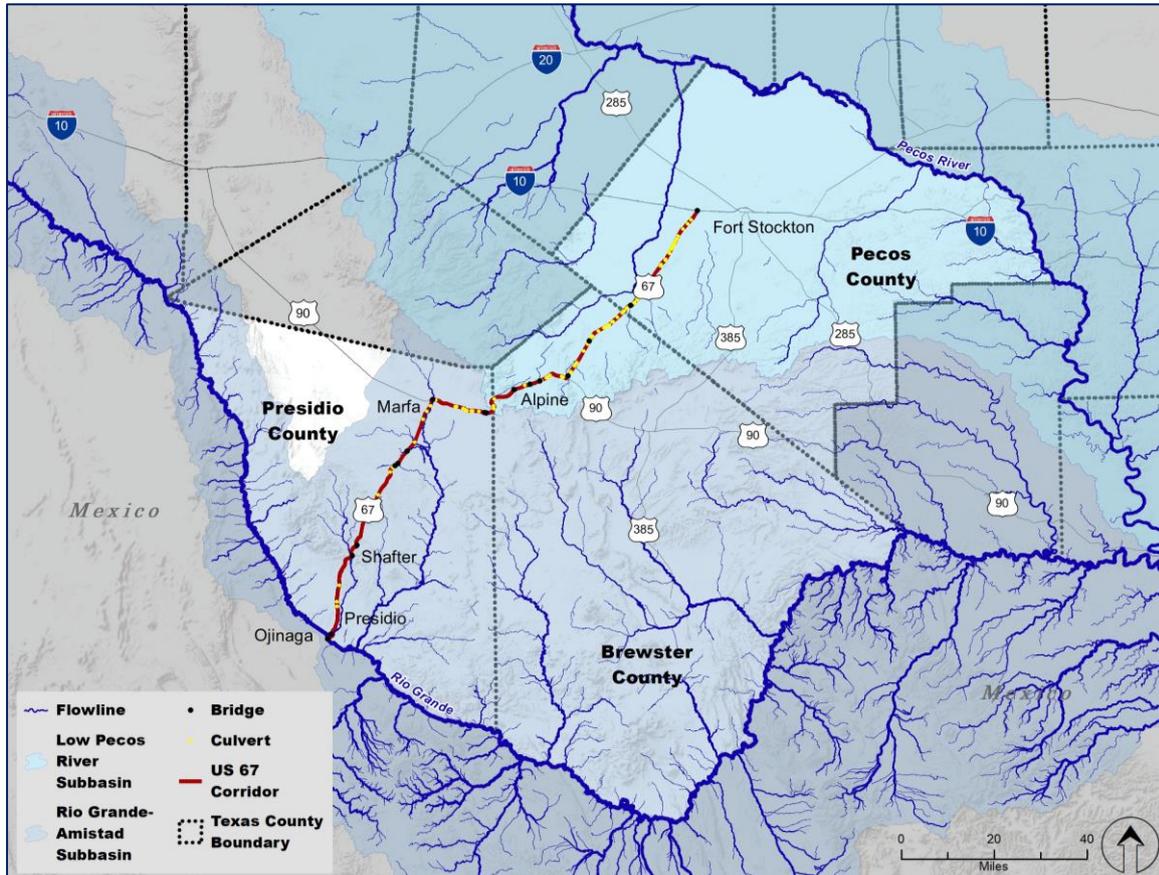
terrain with lower elevations as the corridor nears I-10 and higher elevations in the mountainous areas. This sloped terrain allows groundwater and surface water to flow following the same direction from south and west to north and east. **Figure 21** depicts the topography of the US 67 corridor study area.



Source: Texas Natural Resources Information System, 2018

Figure 21: US 67 Corridor Study Area Topography

Typical rainfall in the region ranges from 4 inches to 20 inches per year based on the period between 1981 and 2010. The US 67 corridor has 107 identified drainage structures. Most of these structures were originally built in the 1930s and 1940s when US 67 was constructed. Since then, these structures have never been fully reconstructed or significantly improved. Of the 107 drainage structures, 93 are culverts that convey runoff under the roadway. The remaining 14 are bridges. The structures ultimately drain to the Rio Grande Basin. The northeastern portion of the corridor is part of the Lower Pecos River and the southwestern portion of the corridor is part of the Rio Grande-Amistad sub-basin. The boundary between the two sub-basins falls about halfway between Alpine and Marfa near the border between Brewster and Presidio Counties. **Figure 22** displays the locations and drainage patterns of the two hydrologic regions that cross the US 67 corridor.



Source: United States Geological Survey, 2018

Figure 22: US 67 Corridor Study Area Hydrology

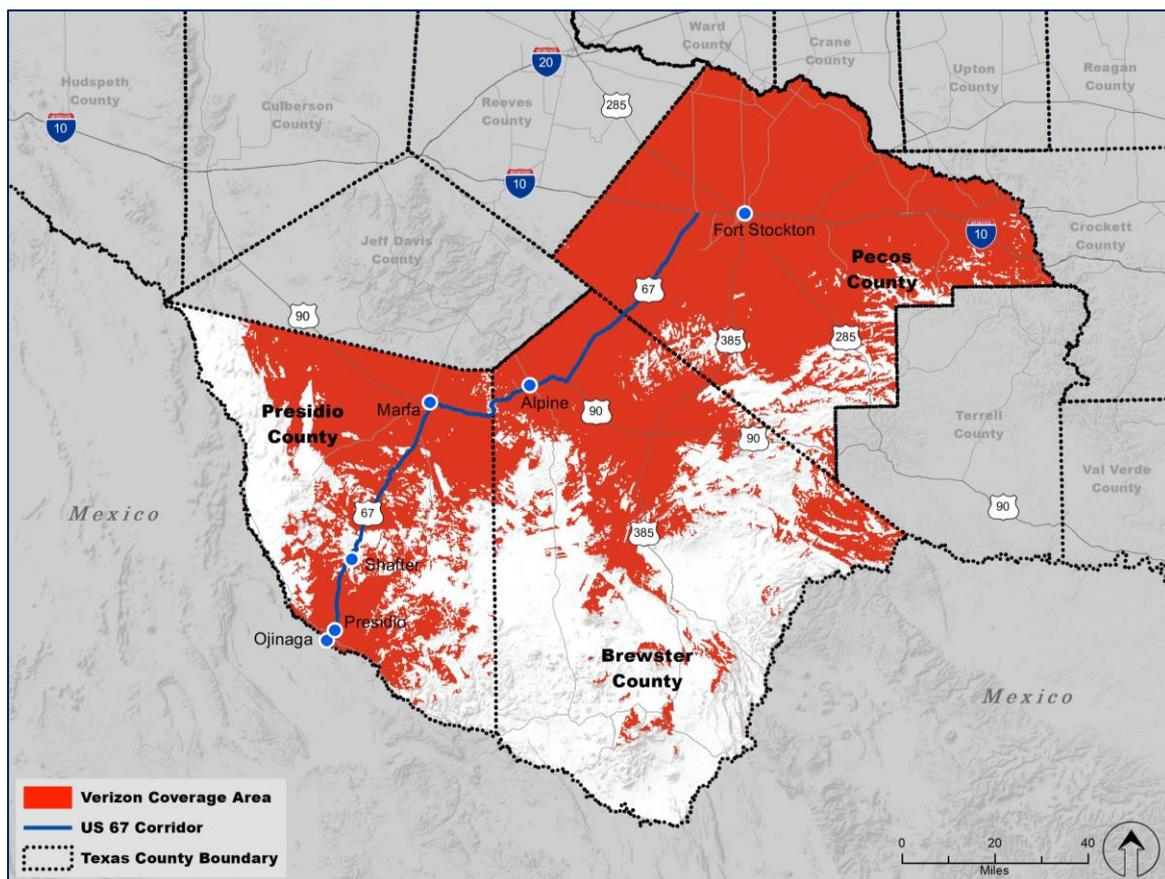
According to National Resources Conservation Service (NRCS), soils can be classified in one of four hydrologic soils groups (Group A, Group B, Group C, and Group D) based on their transmission of water under wet conditions. Group A soils have low runoff potential and water is freely transmitted through the soil, while Group D soils have the highest runoff potential of all the soil groups with very restricted water movement through the soil. Soils along the corridor in Brewster County are primarily composed of hydrologic soil Group D soils, which typically have substantial clay content. Soils along the corridor in Pecos County are composed of a mix of hydrologic soil Group C and D soils. Group C soils are sandy clay loams that have low infiltration rates (although these are higher than those of Group D soils). As a result, Group C soils have lower runoff potential than Group D soils. Soils along the corridor in Presidio County are primarily composed of hydrologic soil Group D soils with a small mix of soils from Groups A, B, and C. Soils in Groups A and B have higher sand content and lower percentages of clay. Hence, drainage needs to be considered when developing improvements on and around US 67, especially if they will increase impervious ground cover.

5.6 Utilities

The study team coordinated with TxDOT on utilities serving the US 67 corridor study area. Based on the limited data from TxDOT, the US 67 corridor between Marfa and Presidio includes multiple aboveground and underground utilities owned by electricity, cable and telephone, pipeline, and oil and gas companies. These utilities are within 1,000 feet of the US 67 corridor ROW.

Currently, Verizon Communications Inc. is the prominent telecommunication company providing cell phone service in the US 67 corridor study area. **Figure 23** depicts the Verizon coverage area. As shown in **Figure 23**, most of the US 67 corridor is covered by cell phone service. There are also 18.6 miles (13 percent) of corridor without cell phone service. These sections are concentrated at the mountainous area near Shafter (**Figure 24**) and the mountainous area west of Alpine near the Presidio County line known as Paisano Pass. The lack of cell phone coverage in these areas prevents drivers from reporting roadway emergency situations such as flat tires, crashes, fire, and flooding.

Public meeting comments also expressed emerging safety and security concerns due to the poor cell phone coverage within the US 67 corridor study area.



Source: Utah Department of Transportation, 2019

Figure 23: US 67 Corridor Study Area Cell Phone Coverage Map by Verizon



Figure 24: US 67 Corridor near Shafter with no Cell Phone Service

5.7 Traffic Conditions

The study team conducted a traffic study to analyze the existing overall corridor operations. This study included collecting traffic count data, developing a traffic model for intersections along the corridor, and assessing individual link and intersection measures of effectiveness, such as intersection delay, to understand how traffic currently moves along the corridor. The traffic study focused on the roadway segments and the intersections in the corridor.

5.8 Historical Traffic Volumes

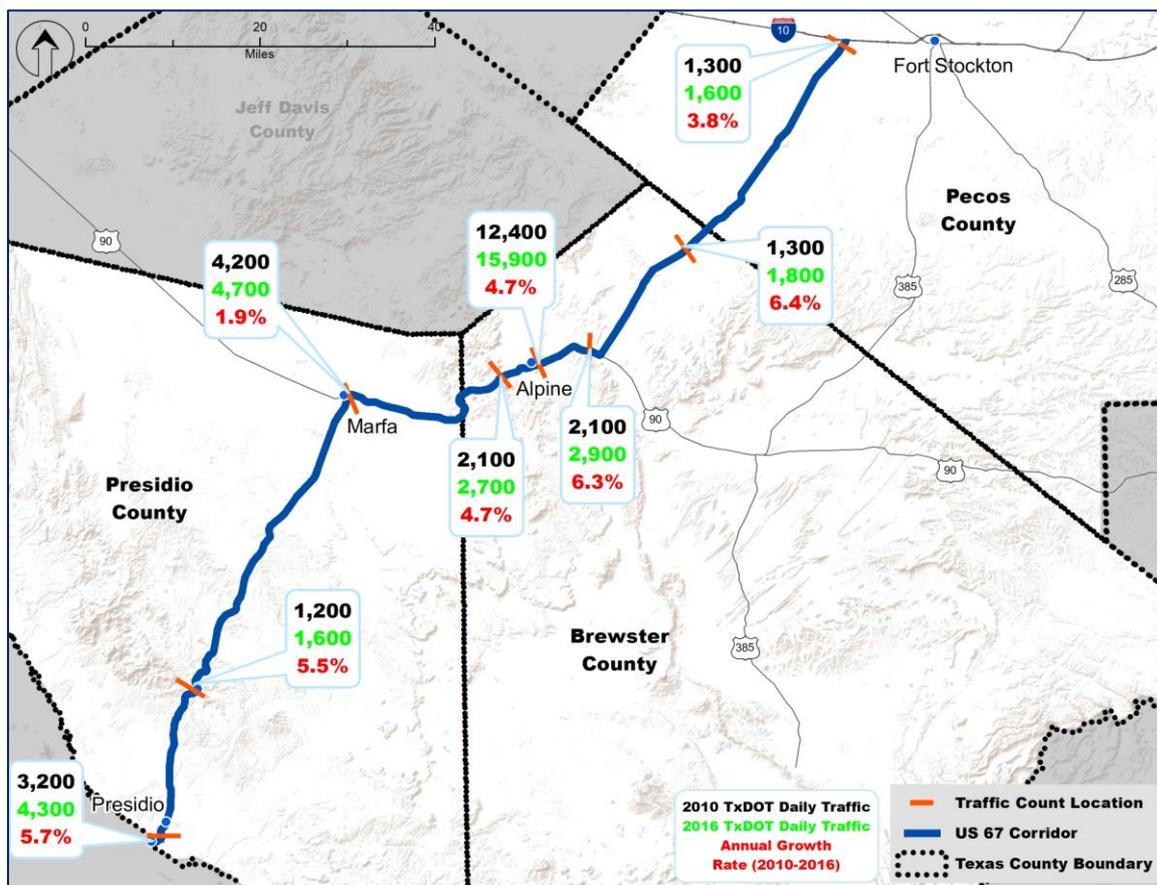
Although the population within the three communities did not show a significant increase since 2010, traffic in the corridor has experienced growth. Part of the increase was due to tourism growth, international commerce, and Permian Basin oil field development. Based on TxDOT traffic maps, the segments outside city limits of the US 67 corridor carried relatively less traffic compared with the three segments within the communities:

- **Segments outside City limits.** Segment 2 (between Presidio and Marfa) and Segment 7 (between the US 90 interchange and I-10) carried the lowest traffic on the corridor with daily traffic of approximately 1,200 and 1,300 vehicles per day (vpd) in 2010 and approximately 1,600 and 1,800 vpd in 2016, respectively. The linear annual growth rate at these two segments was 5.5 percent and 6.4 percent, respectively. Compared with Segments 2 and 7, Segment 4 (Marfa to Alpine) and Segment 6 (Alpine to US 90 interchange) carried more traffic due to the merging traffic from US 90. These two segments also experienced growth since 2010 with daily traffic for both segments of 2,100 vpd in 2010 and approximately 2,700 and

2,900 vpd in 2016, respectively. The linear growth rate of these two segments was 4.7 percent and 6.3 percent, respectively.

- Segments within City limits.** Within Alpine, the US 67 corridor served both local traffic and passing traffic with daily traffic of 12,400 vpd in 2010 and 15,900 vpd in 2016. The linear annual growth rate of this segment was 4.7 percent. Compared with Alpine, the US 67 corridor carried relatively less traffic within Marfa, with approximately 4,700 vpd in 2016, up from 4,200 vpd in 2010. This segment had a lower linear annual growth rate of around 1.9 percent. Similar to Marfa, the US 67 corridor within Presidio had daily traffic of approximately 4,300 vpd in 2016, but had a higher linear annual growth rate since 2010 (5.7 percent).

Figure 25 depicts traffic growth from 2010 to 2016.



Source: TxDOT Statewide Traffic Analysis and Reporting System (STARS II)

Figure 25: US 67 Corridor Study Area Historic Traffic

5.8.1 Existing Traffic Volume

A comprehensive traffic data collection program was conducted in October and November of 2017. The data collection included a series of traffic counts within the US 67 study area encompassing the study corridor and at several locations on corridors that intersect US 67. The traffic data collection program for the study is described herein.

C J Hensch & Associates, Inc., a traffic data collection firm, was retained to conduct traffic counts along the roadways within the US 67 study area. These counts included volume counts, vehicle classification counts, and turning movement counts (TMC) at select locations. A few locations had data collected on October 31, 2017, and on November 1, 2017, to assess peak period hours for which 6-hour turning movement counts would be collected. The complete program (all volume, classification, and turning movement counts) was conducted on November 5, 2017, and November 6, 2017, except for three classification count locations where the data was collected on the same weekday but on later dates, as listed in **Attachment A**. Out of the complete data collection program, a few locations were then chosen, and additional data was collected on November 22 and November 26, 2017, during the Thanksgiving week, to analyze corridor patterns during holidays due to the study corridor's proximity to the Presidio/Ojinaga Port of Entry (POE). Input received from the public and stakeholders indicated much greater volumes during holiday periods.

The count program included one hundred turning movement counts performed during the three-hour morning and the three-hour evening peak periods at key intersections and at connecting roads, thirty-six 24-hour traffic counts, and eleven 24-hour classification counts, as listed in **Attachment A**. The table in **Attachment A** provides the assigned identification or location number, the direction of the count, a description of the count location, the duration of the count, the type of the count conducted and the dates for which the traffic count was conducted.

A summary of this analysis is described below.

Weekend Traffic

The US 67 corridor carries higher traffic during the weekend than on weekdays:

- During the weekend, the US 67 corridor at the Presidio/Ojinaga POE has a daily volume of approximately 4,100 vpd.
- Near Marfa, daily volume on the US 67 corridor ranges from 2,500 vpd to 2,800 vpd.
- Traffic along US 67 near Alpine has a daily volume ranging from 3,200 vpd to 4,900 vpd.
- After the split with US 90, the US 67 corridor near I-10 carries daily traffic of approximately 3,600 vpd (see **Figure 26**).
- The northbound/eastbound traffic constitutes approximately 70 percent of the daily traffic volume, while the southbound/westbound traffic constitutes approximately 30 percent of the daily traffic.

- Truck traffic during the weekend is approximately 10 to 140 vpd, which comprises approximately 0.2 percent to 4 percent of the traffic volumes on the corridor (**Figure 26**).

Weekday Traffic

The weekday traffic is summarized as follows:

- Compared with the weekend, the US 67 corridor carries a similar amount of daily traffic during the weekday at the Presidio/Ojinaga POE with a daily volume of 4,200 vpd.
- Compared with the weekend, the US 67 corridor carries a lower amount of daily traffic near Marfa with a daily volume ranging from 2,000 vpd to 2,500 vpd.
- Traffic near Alpine reduced by 7 percent to 23 percent during the weekday, compared to the weekend, with a daily volume ranging from 3,000 vpd to 4,000 vpd.
- Volumes on the US 67 corridor near I-10 also show a decrease of approximately 40 percent with daily traffic of about 2,200 vpd.
- The northbound/eastbound traffic constitutes approximately 60 percent of the daily traffic volume, while the southbound/westbound traffic constitutes approximately 40 percent of the daily traffic during the weekday.
- Although the US 67 corridor shows lower overall daily traffic during the weekday, higher truck traffic is observed. The truck traffic is approximately 120 vpd to 190 vpd, which comprises approximately 3 percent to 8 percent of the traffic volume. This is partially due to the fact that the Presidio/Ojinaga POE is only open to commercial traffic on weekdays. The largest truck volumes were found east of Marfa and near the I-10 interchange (see **Figure 26**).

Table 4: Comparison of Existing 2017 Study Counts and TxDOT AADT Counts

Study Count Location ID	Location	TxDOT AADT Location ID	2017 Study Weekday Count	2017 TxDOT AADT	2016 TxDOT AADT	Ratio of 2017 TxDOT AADT to 2017 Study Count	Ratio of 2016 TxDOT AADT to 2017 Study Count
101	US 67 West of O'Reilly St.	189H8DT	4,200	3,900	4,300	0.93	1.02
104	US 67 between Harrington St. and Lafayette St.	189H8C	2,500	2,300	2,600	0.92	1.04
111	US 67 South of Utopia Rd.	189H8B	2,700	2,600	2,600	0.96	0.96
113	US 67 North of FM 170 Utopia Rd.	189H8A	2,200	2,200	2,200	1.00	1.00
116	US 67 South of Cibolo Creek Rd.	189H7	1,900	900	1,600	0.47	0.84
118	US 67 South of FM 169	189H5A	1,800	1,300	1,500	0.72	0.83
120	US 67 South of Madrid St.	189H5	2,100	1,600	2,000	0.76	0.95
30*	US 67 South of San Antonio St. (Intersection of US 67 and San Antonio St.)	189T7	3,400	3,200	4,000	0.94	1.18
30*	US 67 East of Highland Ave. (Intersection of US 67 and San Antonio St.)	189T6	4,500	4,400	4,700	0.98	1.04
123	US 67 East of Aparejo St.	189H4	2,500	2,800	2,800	1.12	1.12
124	US 67 South of Paisano Dr.	189D2	2,800	1,800	2,600	0.64	0.93
125	US 67 West of Driveway into U.S. Border Patrol Alpine Station	22H12	3,000	2,400	2,700	0.80	0.90
70/71*	US 67 West of 5th St. (Intersection of US 67 and 5th St.)	22T11	13,800	10,300	15,900	0.75	1.15
132	US 67 South of Hovey Rd.	22H7A	1,700	1,400	1,800	0.82	1.06
134	US 67 South of I-10	186H22	2,200	1,500	1,600	0.68	0.73

**These are turning movement count locations for which 24-hour data was received.*

Input from the public also revealed the seasonal impact on the US 67 corridor traffic. The US 67 corridor serves not only local traffic but also regional freight movement and tourist traffic. Based on input from the Corridor Working Group and the public, the US 67 corridor experiences delay during holiday and special event periods when more border crossings and increases in international trade occur.

Regarding the increases in directional traffic along US 67 during the weekend, based on the input from public meetings, one possible reason is the international traffic traveling northbound/eastbound into the U.S. on Sunday and leaving the U.S. on Friday. In addition,

regional, national, and global trends, such as expansion in certain business sectors, along with improvements made or planned at the international POE (**Figure 27**), may lead to increasing freight traffic on the corridor in the future. Communities along US 67 have expressed concern about the potential safety, traffic operations, and quality of life associated with such growth.

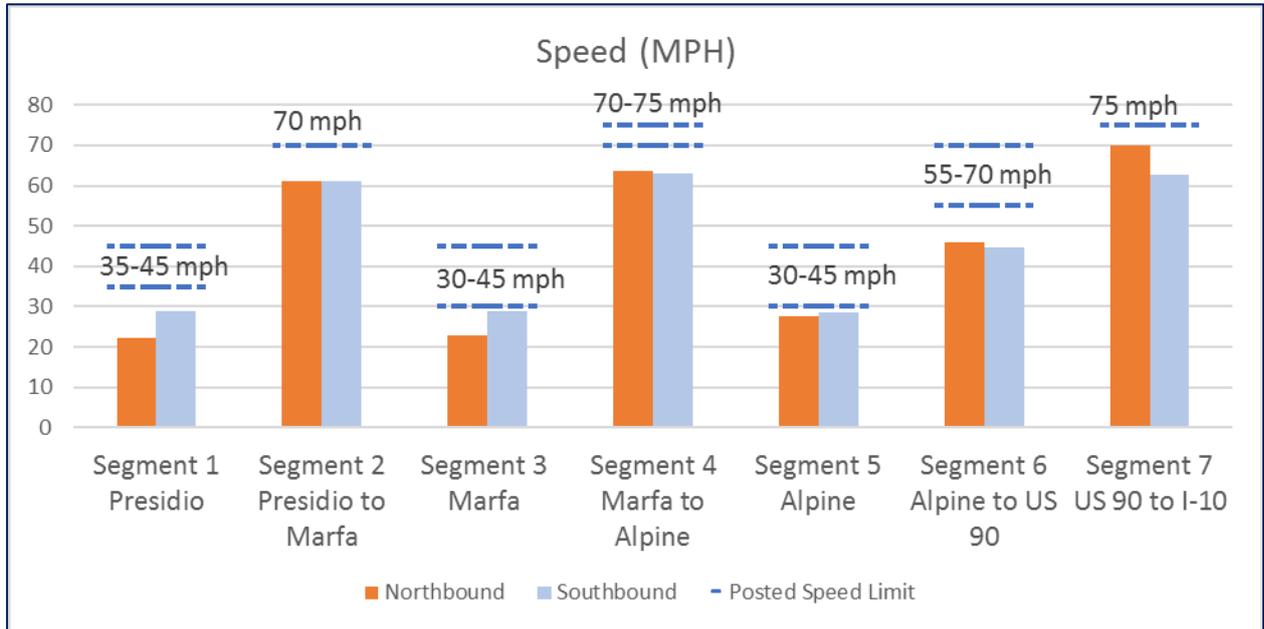


Figure 27: Presidio/Ojinaga POE

5.8.2 Travel Speeds

TxDOT provided the 2017 National Performance Management Research Data Set (NPMRDS) data, which were analyzed to determine travel speed information for the study corridor. The study team summarized these data by direction, hour, time period, and segment. Daily travel speeds for each segment were calculated by averaging 24-hour speed data.

Figure 28 depicts the posted speed limit and daily travel speeds for each segment. As shown in **Figure 28**, operating speeds are generally lower than the posted speed limit for the entire corridor. Among the seven segments, Segments 1, 3, and 5 are within the three communities with a posted speed limit ranging from 35 mph to 45 mph. For both directions, these three segments have daily travel speeds slightly below 30 mph. Due to the delay at the Presidio/Ojinaga POE, the Presidio Segment has travel speeds below 30 mph in both directions. Segments 2, 4, and 7 have a posted speed limit of 70 mph or 75 mph. Daily travel speeds along both directions of these three segments are approximately 60 mph to 70 mph. Segment 6 has a lower speed limit ranging from 55 mph to 70 mph. Currently, daily travel speeds along both directions of Segment 6 are approximately 45 mph.



Source: 2017 NPMRDS data provided by TxDOT

Figure 28: Average Observed Daily Speeds along US 67 by Direction and Segment

5.8.3 Capacity Analysis

Level of Service is a quantitative measure of traffic operations, ranging from Level of Service A through Level of Service F. Level of Service A, B and C represents traffic ranging from free-flow conditions to stable flow conditions causing minor traffic flow disruptions. Level of Service D represents unstable traffic flow conditions with significantly reduced travel speeds. Level of Service E represents noticeable traffic congestion with travel demand approaching or at roadway capacity, and Level of Service F represents severe traffic congestion with travel demand exceeding roadway capacity causing stop-and-go traffic flow conditions. Unsignalized intersections are also associated with more uncertainty for users, as delays are less predictable than they are at signals. The *Highway Capacity Manual 6th Edition* provides measures of effectiveness used to determine Level of Service for unsignalized intersections, which are shown in **Table 5**. Level of Service is determined using the average delay (in seconds per vehicle) for the intersections.

Table 5: Unsignalized Intersection Level of Service Criteria

Level of Service	Average Control Delay (seconds/vehicle)
A	0 to 10
B	> 10 to 15
C	> 15 to 25
D	>25 to 35
E	>35 to 50
F	> 50

Source: *Highway Capacity Manual 6th Edition*

The traffic analysis software Synchro (version 10) was utilized to analyze the existing conditions and measure the control delay for the 100 study area intersections during the morning and afternoon weekday peak hours. First, traffic count data were balanced and summarized within the city limits of Presidio, Marfa, and Alpine where the study area intersections are connected. The balanced peak hour volumes, existing geometry, and two-way or all-way stop controls were coded into the Synchro software to develop a baseline of existing conditions. **Figure 29** presents the Level of Service results for the existing morning peak hour and **Figure 30** presents the Level of Service results for the existing evening peak hour based on Highway Capacity Manual 6th Edition analysis procedures.

The existing intersection analysis indicates that no intersections are operating at Level of Service D or worse. Most of the study intersections are operating at Level of Service A or B during both the morning and afternoon peak hours. There are also 12 intersections operating at Level of Service C. All of these 12 intersections were in Alpine. These 12 intersections are described as follows:

- W Avenue E at 11th Street
- E Avenue E at 2nd Street
- E Avenue E at 4th Street
- Avenue E at 5th Street
- E Avenue E at Garnett Street
- W Holland Avenue at 11th Street
- Holland Avenue at 5th Street
- E Avenue E at Cockrell Street
- E Avenue E at Harrison Street
- E Holland Avenue at Harrison Street
- US 67 at Cherry Street (US 67)
- W Avenue E at 7th Street

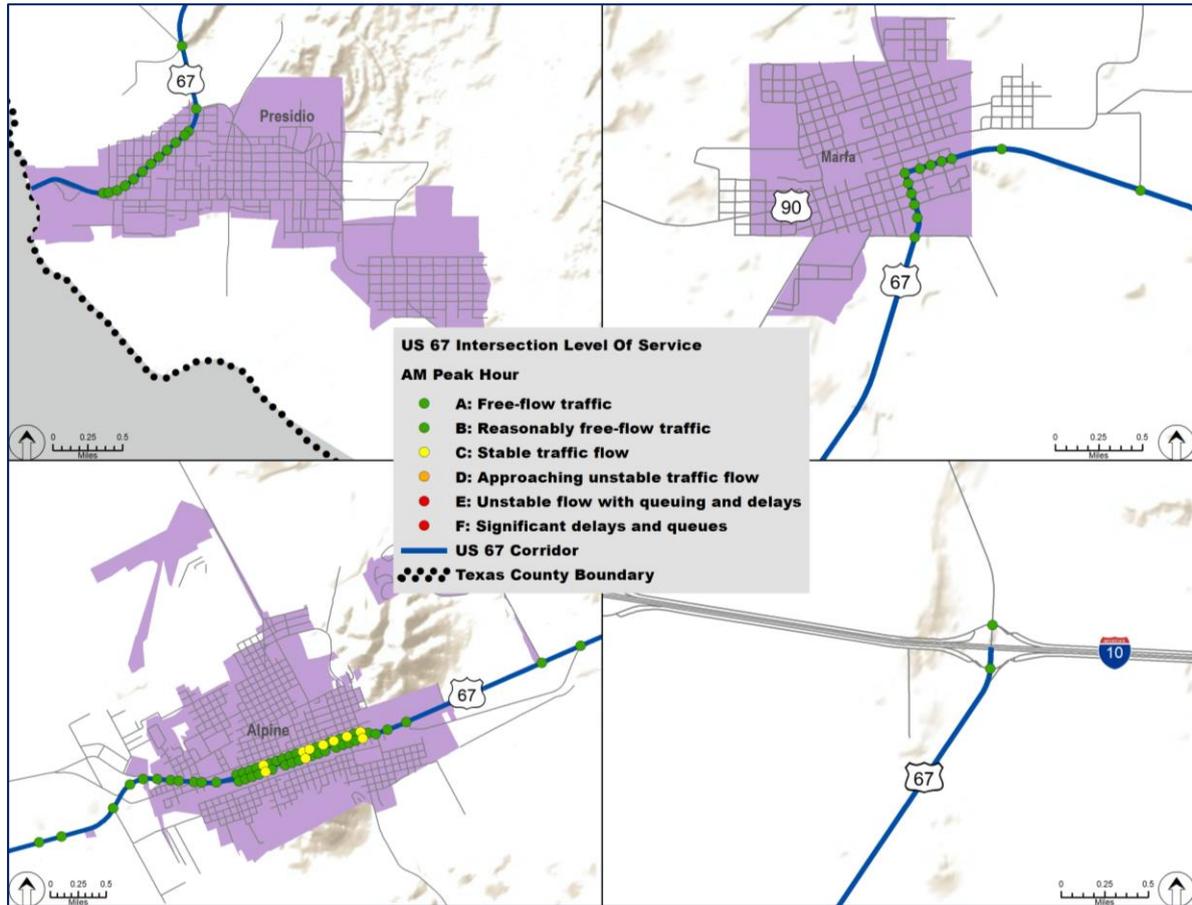


Figure 29: Intersection Level of Service Morning Peak Hour

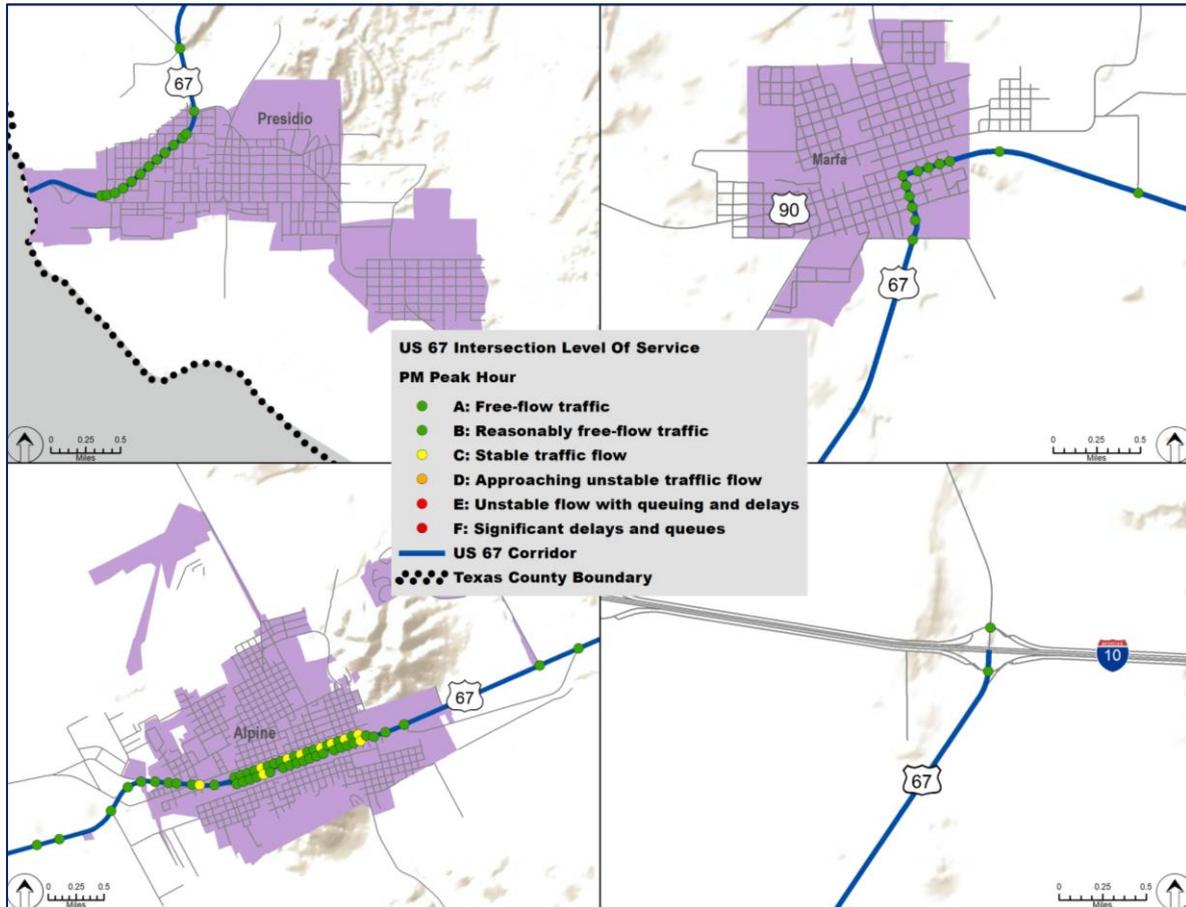


Figure 30: Intersection Level of Service Afternoon Peak Hour

The results summarized above are consistent with feedback received at the public meetings, where no traffic backup issues were identified at intersections. Although all intersections are currently under stop control or uncontrolled, the stakeholder and public meeting attendees did not express any desire for signalized intersections. One public meeting attendee noted that drivers got confused by the flashing red signal light at North 5th Street in Alpine. Several stakeholders and members of the public expressed the safety concern at US 67/US 90 Y-interchange east of Alpine, especially during nighttime. This interchange is uncontrolled. Yield signs are missing at the conflict points where left-turn vehicles need to yield to opposing through traffic traveling at a speed of approximately 70 mph (**Figure 31**).



Figure 31: US 67 and US 90 Interchange

5.9 Pedestrian and Bicycle Facilities

According to the 2016 ACS, approximately 7 percent to 10 percent of households within the three communities do not own an automobile, leaving some residents dependent on other modes of travel such as walking and bicycling for transportation and transit. Hence, it is important to assess the bicycle and pedestrian infrastructure available to better understand the needs and issues for non-motorized transportation modes. Since pedestrian and bicycle activities mostly occur near communities, the following section focuses on pedestrian and bicycle facilities within and near the three communities where this activity is the greatest.

Figure 32, Figure 33 and Figure 34 show the existing sidewalks within the three communities. In general, Alpine has a more robust sidewalk network than Marfa and Presidio. Most of the US 67 corridor within Alpine has sidewalk facilities on both sides of the road except the section west of North Orange Street. Sidewalks are also present along most of the crossing or intersecting streets. Compared with Alpine, Marfa, and Presidio have limited sidewalk connectivity. Within Marfa, sidewalks are missing from the US 67 corridor east of South Aparejo Street and south of West Galveston Street. Sidewalks are either missing or not continuous on crossing streets. In Presidio, sidewalks are only available along the US 67 corridor, FM 170, and FM 203.

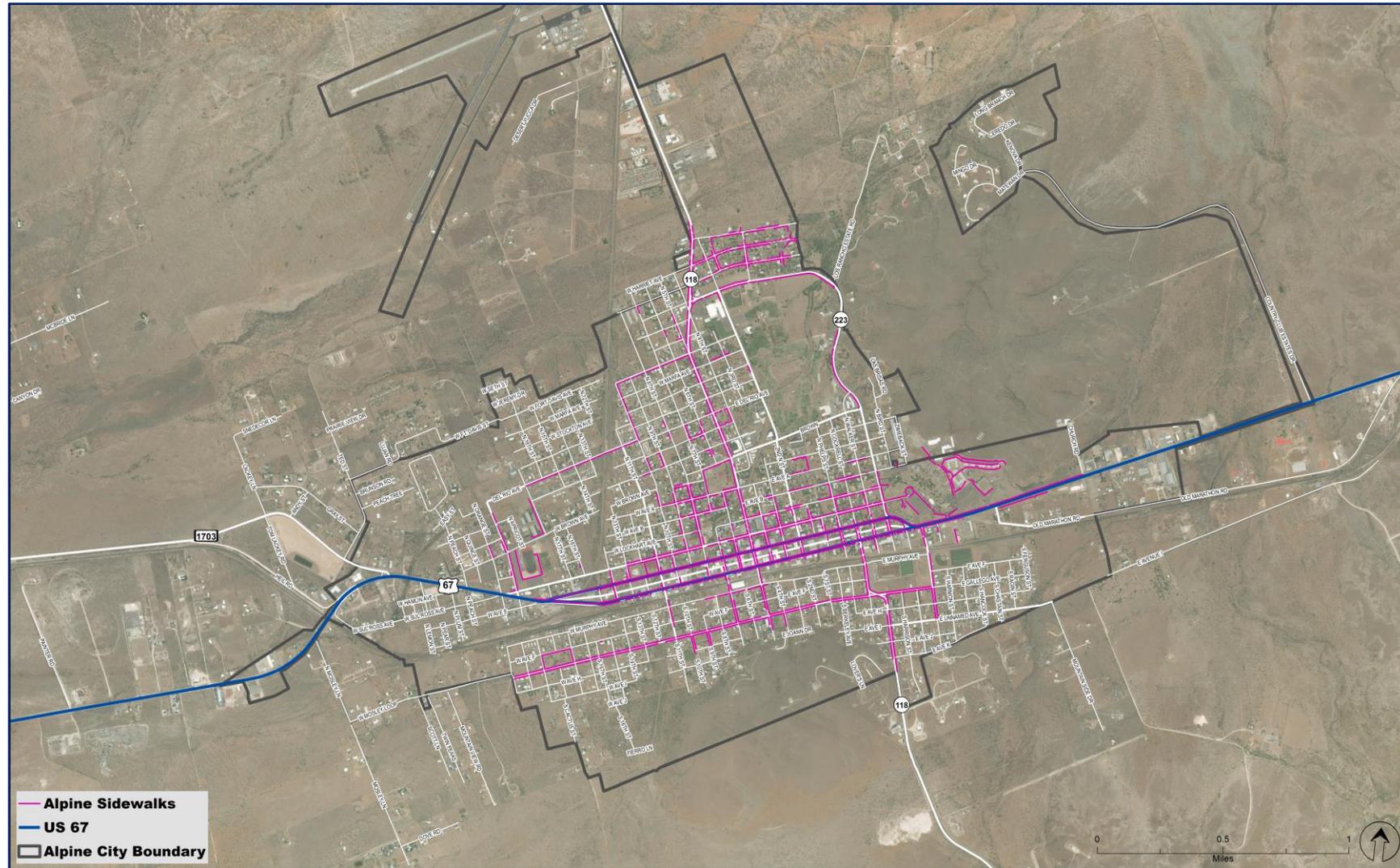


Figure 32: Alpine Pedestrian Facilities

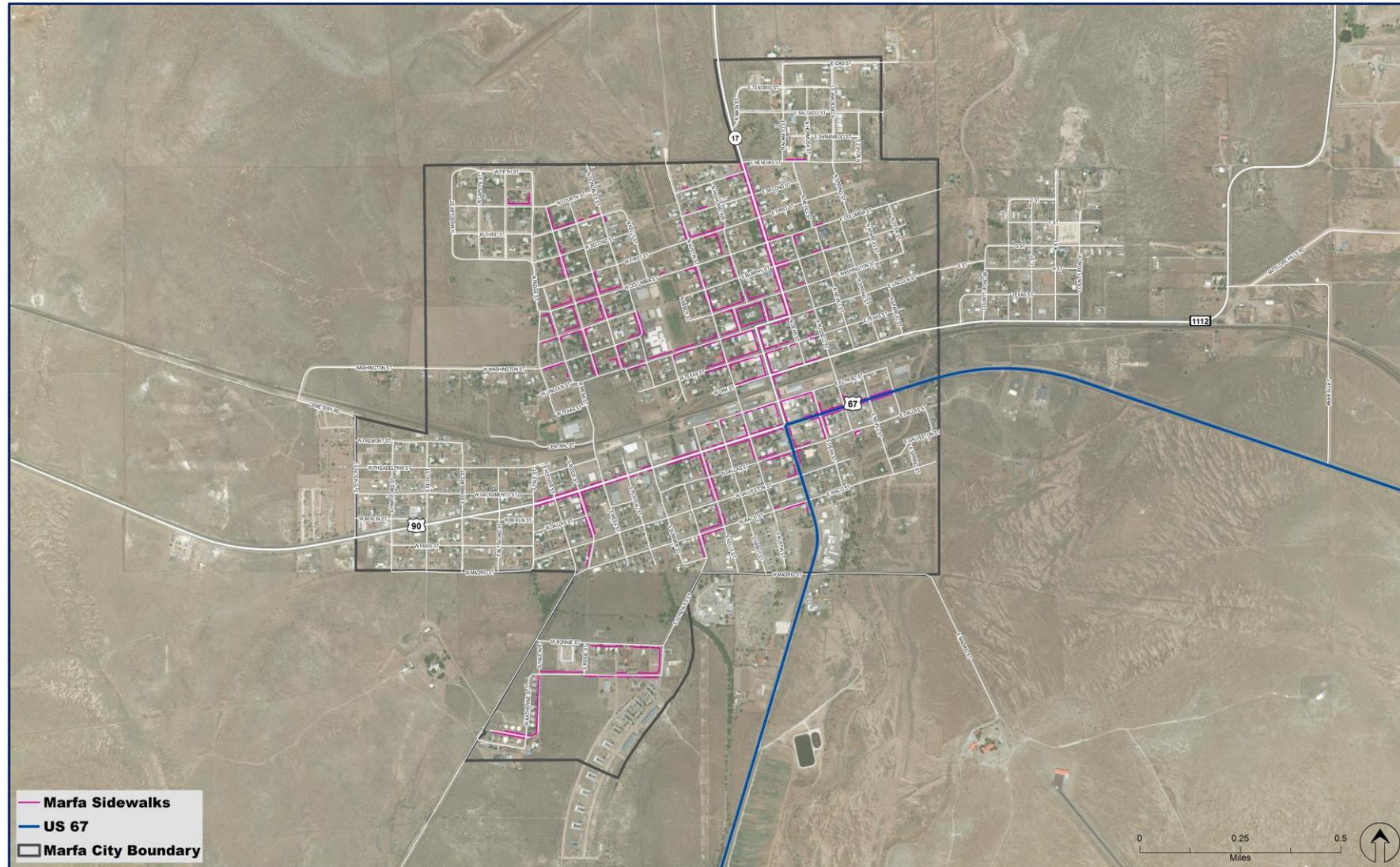


Figure 33: Marfa Pedestrian Facilities

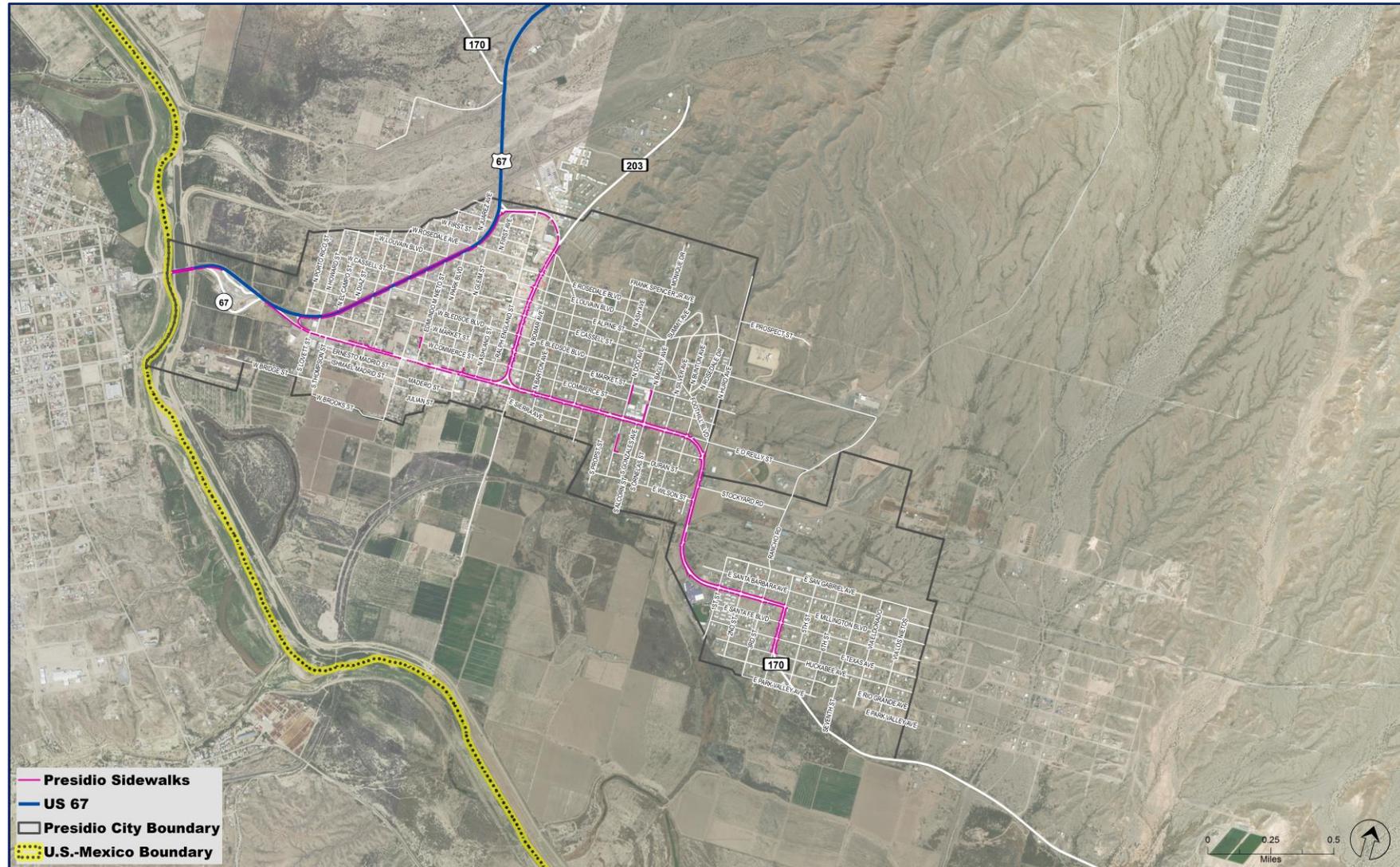


Figure 34: Presidio Pedestrian Facilities

No bicycle facilities are designated along the US 67 corridor. Bicycle signs were observed just outside of Marfa. Cyclists were riding on the paved shoulder along US 67 south of Marfa where the speed limit is 70 mph (**Figure 35**).



Figure 35: Cyclist Riding on Paved Shoulder South of Marfa

Sidewalks can reduce crashes involving pedestrians walking along the road by providing separation from motor vehicle traffic. Streets with inadequate or no sidewalks may discourage or limit safe pedestrian/bicycle movement. During field reconnaissance, active pedestrian movements were observed within the three communities. Pedestrians were also observed walking in travel lanes. At the first series of public meetings, some attendees expressed a desire for a continuous and accessible sidewalk network within their communities to connect to schools, churches, medical, and community facilities.

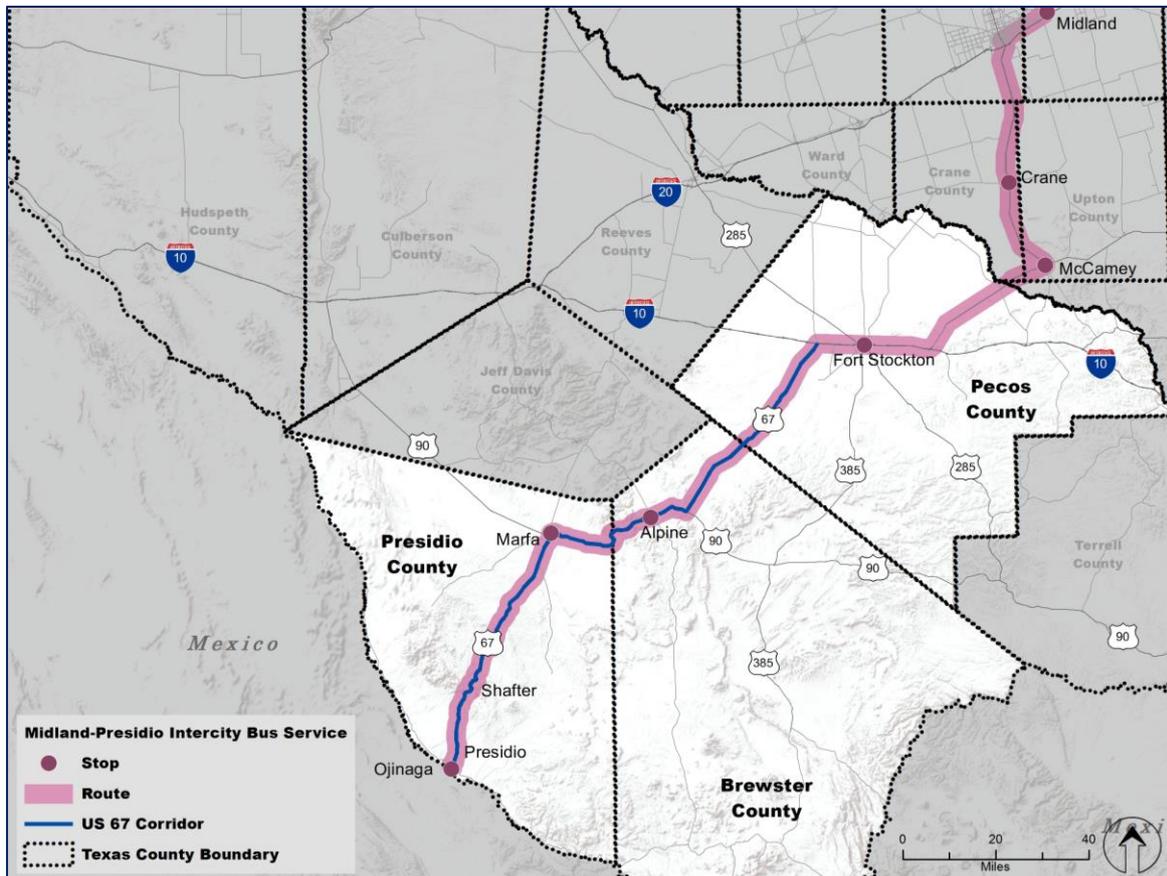
5.10 Transit

According to the Federal Transit Administration (FTA), no public transit agencies currently provide public transit service within the US 67 corridor study area. However, ALL ABOARD AMERICA! provides regular intercity bus service twice a day between Presidio on the Mexican border and Midland International Air and Space Port. The southbound route originates at the Midland International Air and Space Port, stops at Odessa Greyhound, Crane, McCamey, Fort Stockton Greyhound, and enters the US 67 corridor, stopping at Alpine, Marfa, and Presidio. The northbound route departs from Presidio, runs through the same cities and makes its final drop at the Midland International Air and Space Port. **Figure 36** depicts the Midland – Presidio intercity bus and **Figure 37** depicts the Midland – Presidio intercity bus routes.



Source: ALL ABOARD AMERICA!, 2018

Figure 36: ALL ABOARD AMERICA! Intercity Bus



Source: ALL ABOARD AMERICA!, 2018

Figure 37: ALL ABOARD AMERICA Intercity Bus Route

In addition to the intercity bus service, Amtrak provides passenger rail service in the study region. The Amtrak Sunset Limited and Texas Eagle routes (see **Figure 38**) each stop in Alpine.



Figure 38: Amtrak Passenger Train

The Alpine Station, located at 102 West Holland Street depicted in **Figure 39**, is less than a mile from Sul Ross State University, and is also the nearest Amtrak station to the Big Bend National Park. It is not staffed but has partial wheelchair accessibility, an enclosed waiting area, public payphones, and parking. The Sunset Limited Route travels between Louisiana and California. It picks up passengers at Alpine Station at 10:38 A.M. every Tuesday, Thursday, and Sunday. The Texas Eagle Route travels between Chicago and Los Angeles. The Texas Eagle travels daily between Chicago and San Antonio through major cities from Austin to Dallas, and three times a week between San Antonio and Los Angeles via the Sunset Limited service.



Figure 39: Amtrak Alpine Station

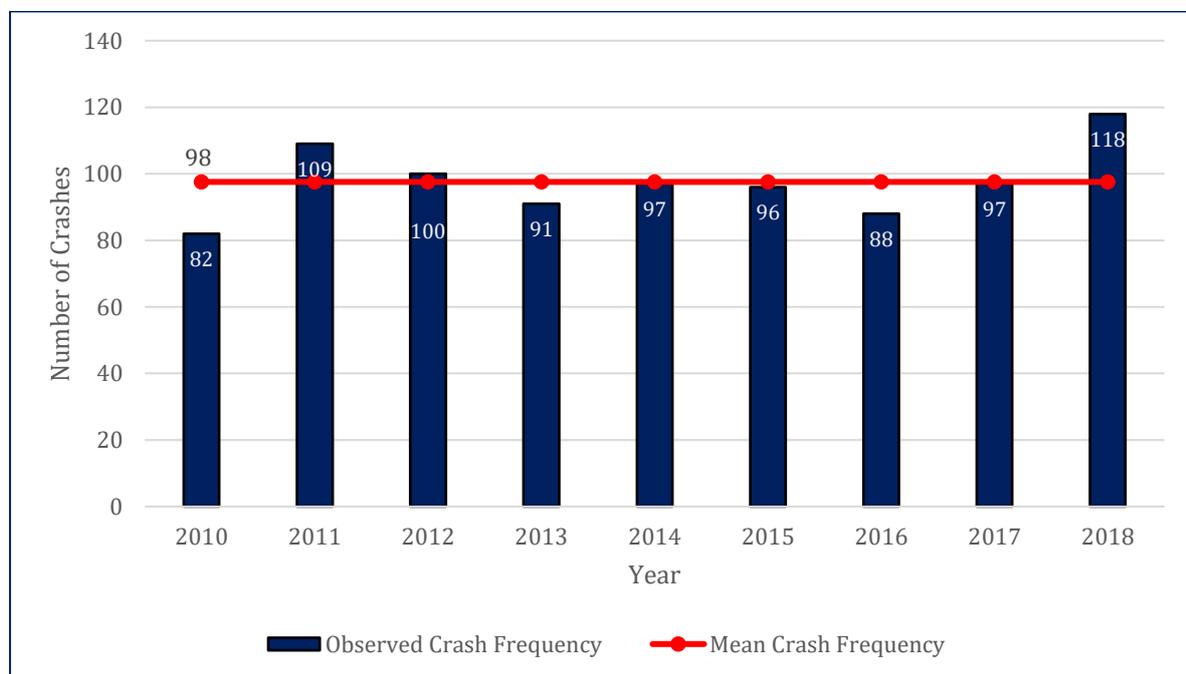
Tourism is the major economic driver for the US 67 corridor study area. With more than 400 hotel rooms, along with restaurants, shopping, and groceries, Alpine, Marfa, and Presidio are the hubs for the Big Bend National Park and other attractions and annual special events such as the Marfa Lights, McDonald Observatory, Gallery Night, and the Cowboy Poetry Gathering. Currently, the only bus service to the Big Bend National Park is provided by Greyhound between the Big Bend National Park and Alpine. Improved tourist transit service between the three communities and major attractions near the corridor study area would likely improve the local economy and mobility, especially during the holiday season.

6.0 Crash Analysis

The study team conducted a thorough safety analysis using 9-year crash data (2010 to 2018) from TxDOT Crash Records Information System (CRIS) to better understand traffic safety in the study corridor.

6.1 Crash Statistics

Over the 9-year period, there were a total of 878 reported crashes in the corridor with 869 vehicular crashes, eight pedestrian crashes, and one bicycle crash. **Figure 40** depicts the overall crash trend for the US 67 corridor from 2010 to 2018. As shown in **Figure 40**, the number of crashes ranged from 82 to 118 over the 9-year period. The fewest crashes (82) occurred in 2010 and the most crashes (118) occurred in 2018. Since 2010, crashes have been fluctuating slightly above and below the 2010 – 2018 annual average frequency of 98 crashes.



Source: TxDOT Crash Records Information System data, 2010 - 2018

Figure 40: Crash Trends

Segments 1, 3, and 5, within the city limits of Presidio, Marfa, and Alpine respectively, total 8.7 miles in length (6 percent of the study corridor). However, the total crashes along the three

segments during the 2010-2018 period totaled 433, comprising 49 percent of total crashes from 2010-2018. Due to the higher population density and traffic volume in the Alpine segment, it observed the most number of crashes (375), approximately 43 percent of total crashes. Following the Alpine segment, Segments 2 and 7 combined, which are two of the longest segments, accounted for 40 percent of all crashes. **Table 6** depicts the crashes by segment.

Table 6: Crashes by Segment

Segment	Outside City Limits		Within City Limits		Total Crashes
	Length (miles)	Crashes	Length (miles)	Crashes	
Segment 1 Presidio	-	-	3.3	29	29
Segment 2 Presidio to Marfa	58.3	209	-	-	209
Segment 3 Marfa	-	-	0.8	29	29
Segment 4 Marfa to Alpine	23.5	81	-	-	81
Segment 5 Alpine	-	-	4.6	375	375
Segment 6 Alpine to US 90	5.8	16	-	-	16
Segment 7 US 90 to I-10	47.4	139	-	-	139
Total	135	445	8.7	433	878

Source: TxDOT Crash Records Information System, 2010 - 2018

Although weather-related crashes account for only 11 percent of total crashes, these crashes were concentrated on Segment 4 between Marfa and Alpine. During the first series of public meetings, some attendees expressed safety concerns about icy, snowy, slushy pavement between Marfa and Alpine during severe weather conditions (**Figure 41**).

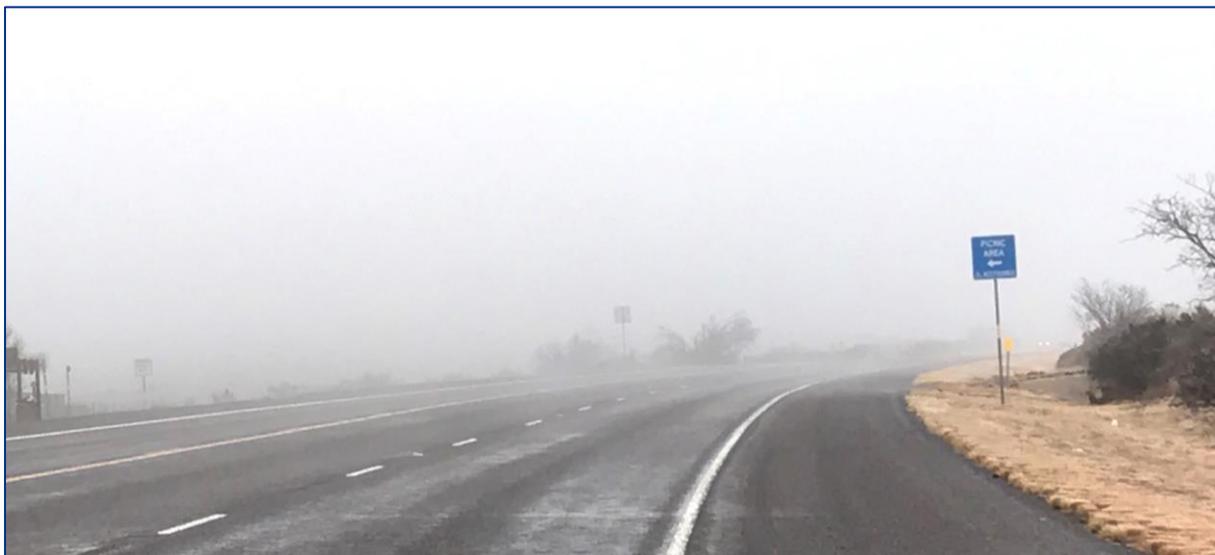
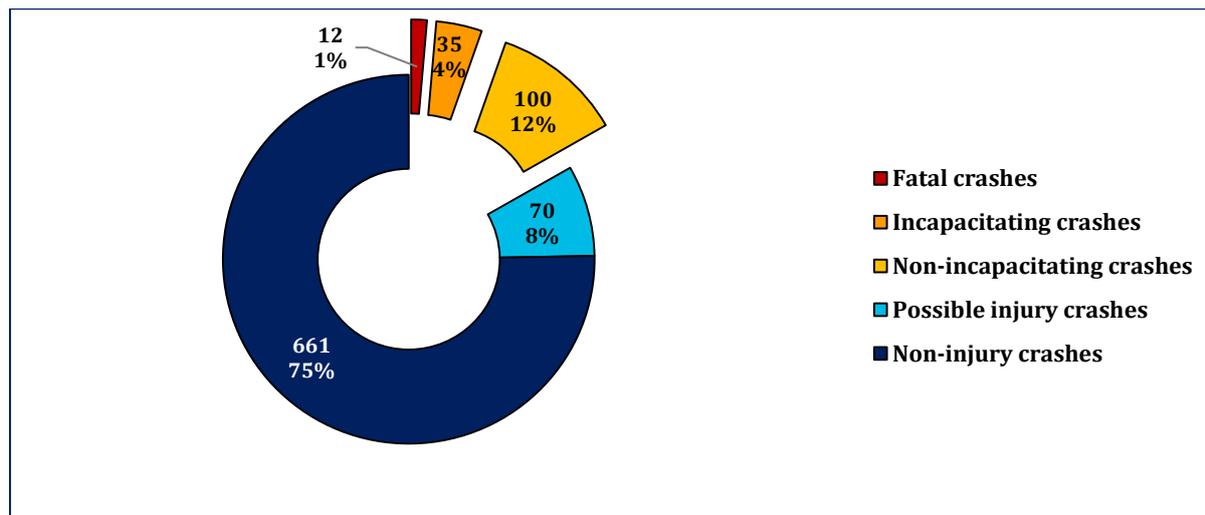


Figure 41: Foggy Weather Condition between Marfa and Alpine

6.2 Crash Severity

Of the 878 crashes from 2010 to 2018, 661 (75 percent) were non-injury crashes, 70 (8 percent) were possible injury crashes, 12 (1 percent) were fatal crashes, and 135 (16 percent) were injury crashes which included 100 (12 percent) non-incapacitating crashes and 35 (4 percent) incapacitating crashes. These 878 crashes recorded 343 injuries and 15 fatalities. **Figure 42** summarizes the crash severity along the US 67 corridor.



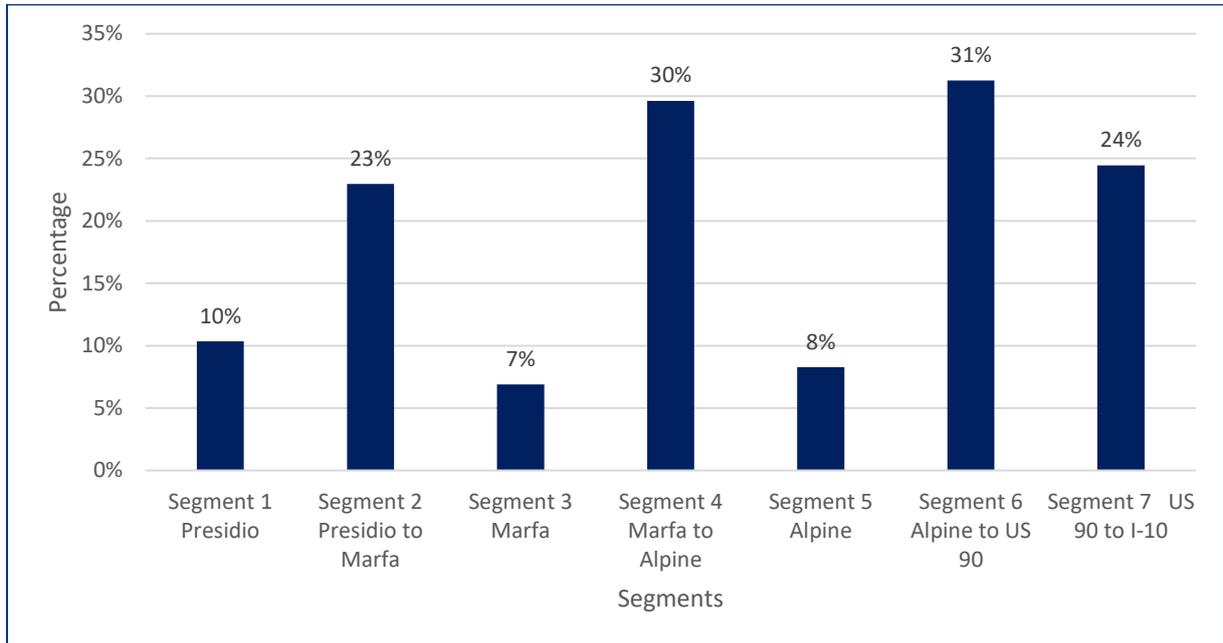
Source: TxDOT Crash Records Information System, 2010 - 2018

Figure 42: Crash Severity

Severe crashes include fatal crashes, incapacitating crashes, and non-incapacitating crashes. Non-severe crashes include possible injury and non-injury crashes. Compared with non-severe crashes, the cost of severe crashes is much higher due to fatalities or injuries associated with severe crashes. Rural crashes tend to be more severe than urban crashes. According to the 2001 National Highway Traffic Safety Administration⁷ (NHTSA) traffic safety statistics, 61 percent of traffic fatalities occurred in rural areas even though rural areas account for only 40 percent of the vehicle miles traveled and 21 percent of the population. Rural motor vehicle fatality rates have been higher than urban rates in several state and local studies as well as in studies of different countries. Although motor vehicle injury and fatality rates have declined over the last 20 years, rural rates continue to exceed urban rates.

Figure 43 depicts the percentage of severe crashes to total crashes for each segment along the US 67 corridor. Seven to 10 percent of total crashes on segments within the three communities were severe. Crashes occurring on the segments outside city limits tend to be more severe with the percentage ranging from 23 to 31 percent. All 12 fatal crashes over the 9-year period occurred on these segments outside city limits.

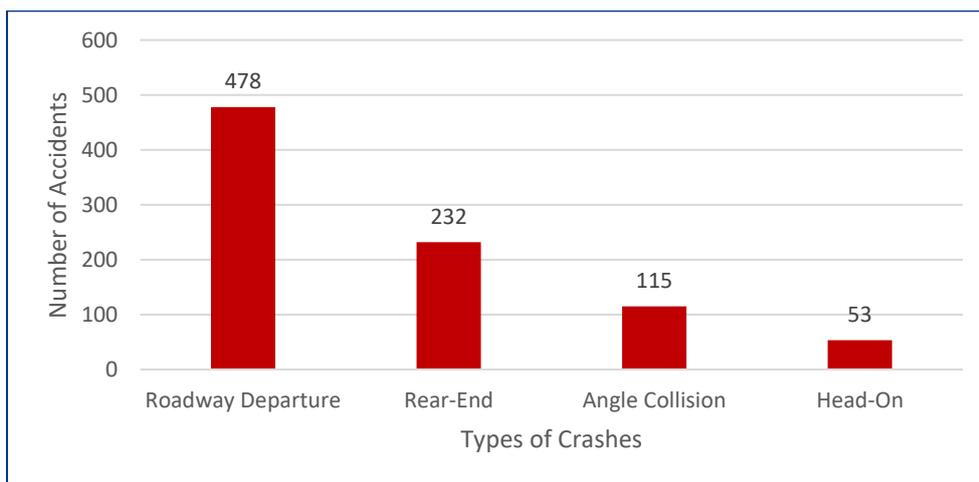
⁷ National Highway Traffic Safety Administration. Traffic safety facts 2001: rural/urban comparison. Washington, DC: National Center for Statistics and Analysis, US Department of Transportation, December 2002; (20590).



Source: TxDOT Crash Records Information System, 2010 – 2018

Figure 43: Percentage of Severe Crashes to Total Crashes by Segment

The study team analyzed the crash types, and in general, the majority of crashes are roadway departure crashes which accounted for 54 percent (478) of total crashes. The percentage of rear-end and angle crashes are approximately 26 percent (232) and 13 percent (115), respectively. The number of head-on crashes was 53 accounting for 7 percent of total crashes (**Figure 44**).

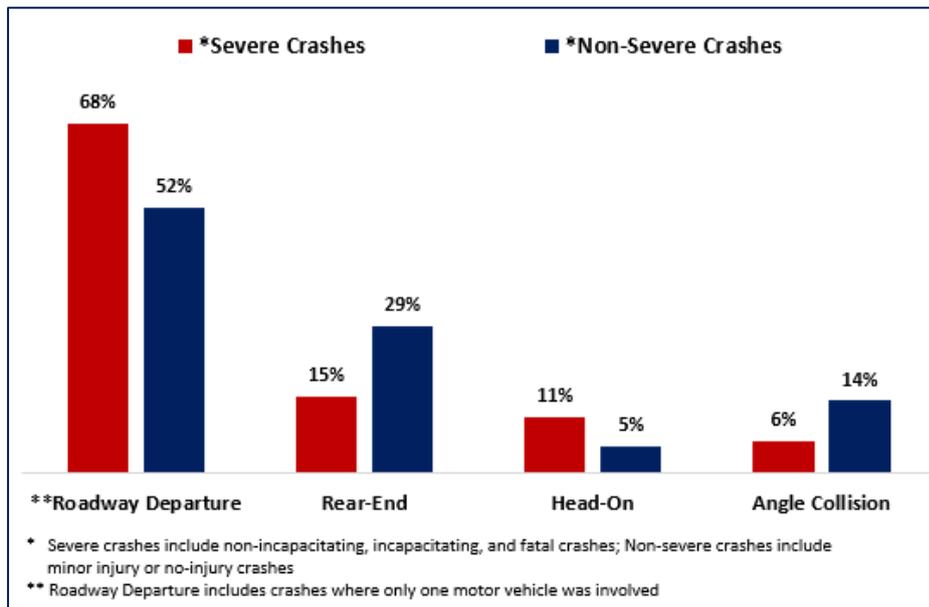


Source: TxDOT Crash Records Information System, 2010 – 2018

Figure 44: Crash Types

Figure 45 depicts the distribution of severe and non-severe crashes by crash types. As shown, the roadway departure crashes were about 52 percent of total non-severe crashes but

represented 68 percent of severe crashes. Similarly, head-on crashes are only 5 percent of the non-severe crashes, but they account for 11 percent of the total severe crashes. These data indicate that roadway departure and head-on crashes are more severe than rear-end and angle crashes. Reducing the fatal and severe crashes along rural segments is one of the major goals for this study, consistent with TxDOT vision for safety.



Source: TxDOT Crash Records Information System, 2010 – 2018

Figure 45: Severe and Non-Severe Crash Distribution by Crash Type

6.3 High Frequency Crash Locations

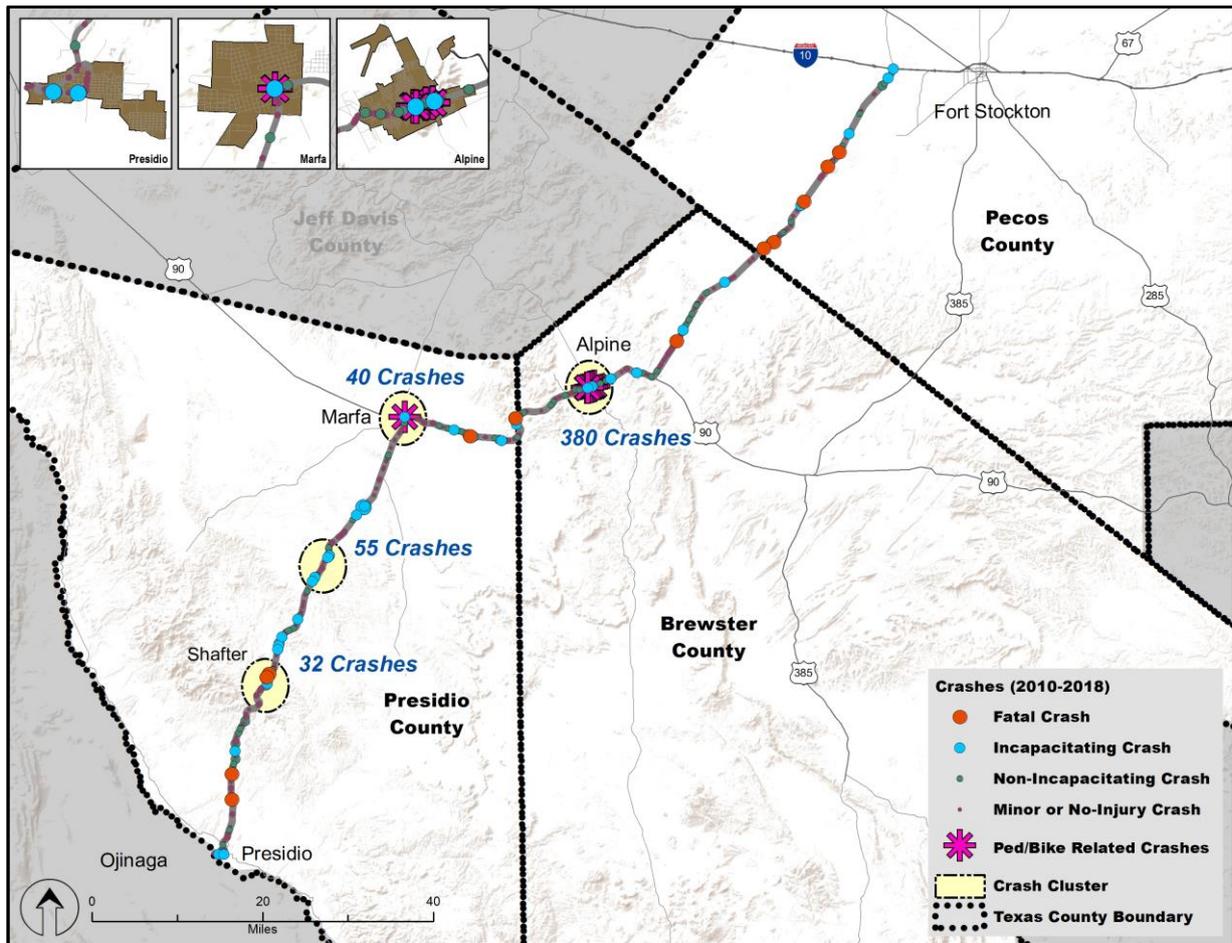
The crash data were processed and mapped using latitude and longitude coordinates. **Figure 46** illustrates the crash hot spots identified within the US 67 corridor.

As shown in the map, four locations were identified with a high frequency of crashes⁸:

- The Alpine cluster had 380 crashes, which was 43 percent of total crashes in the corridor. But noticeably, there were no fatal crashes in that crash cluster. Severe crashes consist of 32 (8 percent) of the total 380 crashes in the Alpine cluster. Of the 32 severe crashes, 23 occurred at intersections. Two out of the three incapacitating crashes in the Alpine cluster were pedestrian-related.
- The Marfa cluster had 40 crashes during the 9-year period. Of the 40 crashes, three were severe crashes with two of these crashes being non-incapacitating vehicular crashes and one was an incapacitating pedestrian crash.

⁸ Cluster of crashes at one location

- Fifty-five (6 percent) of the total crashes were concentrated on a section between Shafter and Marfa. Of the 55 crashes, 10 crashes (18 percent) were severe. Out of the 10 severe crashes, 5 (50 percent) happened on a curve.
- Near Shafter, 32 (4 percent) of the crashes occurred in the mountainous area. Among the 32 crashes recorded, two were fatal crashes involving head-on collisions.



Source: TxDOT Crash Records Information System, 2010 – 2018

Figure 46: Crash Hot Spots

6.4 Crash Rates

The crash rate is a calculated value that can be used to compare the crash data of similar locations in the jurisdiction, region, and state. The benefit of a crash rate analysis is that it provides a more effective comparison of similar locations with safety issues. This allows for the prioritization of these locations when considering safety improvements with limited resources.

In **Table 7**, the average crash rate for US 67 from 2010 to 2018 is displayed. This accounts for crashes within the towns of Presidio and Marfa but not Alpine. Alpine is a borderline rural/urban town with a population slightly over 5,000; hence, for the purpose of the crash rate analysis, crashes in Alpine are not taken into consideration as part of the rural crash rate calculation. Crash

rates were calculated for the study corridor based on the number of crashes per 100 million vehicle-miles traveled (MVMT) and compared to statewide averages of U.S. highways in urbanized areas for the Alpine segment and rural areas for other segments. The statewide crash rates were taken from TxDOT Statewide Traffic Crash Rates Report (2010-2018).

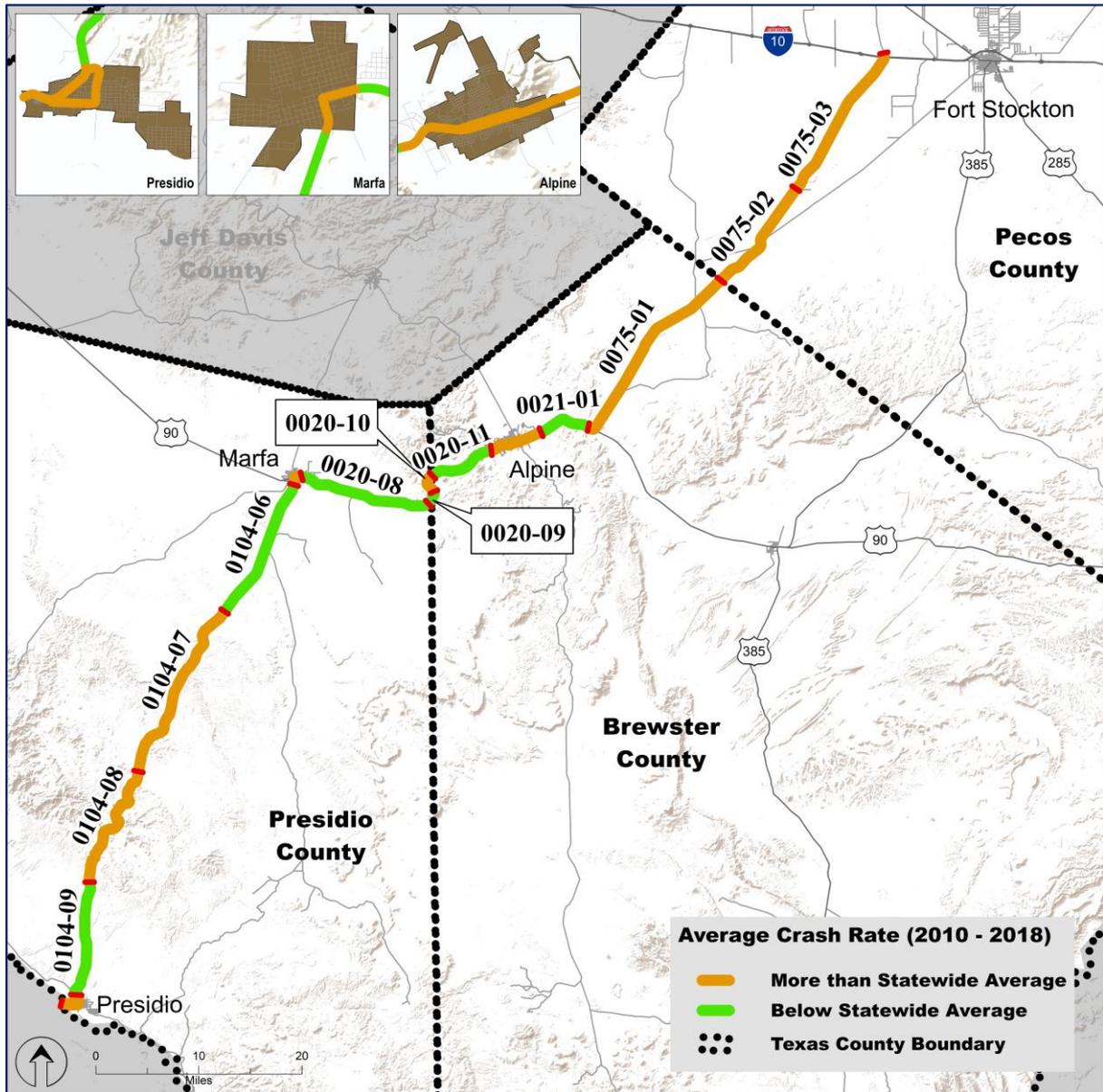
Table 7 compares the US 67 corridor crash rate with Texas statewide average rate for rural U.S. highways. Overall, the US 67 corridor crash rate was 6 percent higher than the statewide average from 2010 to 2018.

Table 7: Rural Crash Rates by Year

Year	Crashes	Daily Traffic Volume (vpd)	Crash Rate (Crashes per 100 MVMT)	Statewide Rural Crash Rate for U.S. Highways (Crashes per 100 MVMT)	Percentage of Statewide Average
2010	43	1529	55.42	65.95	84%
2011	52	1424	71.94	54.12	133%
2012	54	1575	67.54	61.26	110%
2013	58	1326	86.19	59.81	144%
2014	59	1326	87.68	66.6	132%
2015	58	1603	71.27	70.42	101%
2016	54	2018	52.72	66.35	79%
2017	57	1727	65.01	68.63	95%
2018	68	2133	62.82	72.08	87%
2010 to 2018	503	1629	68.95	65.02	106%

Source: Crash Records Information System, 2010 - 2018

Figure 47 depicts a comparison of the US 67 crash rate with the statewide average rate for rural and urban U.S. highways in Texas. Based on the crash data, sixty-one percent of the corridor was identified with a crash rate higher than the statewide average, including the three communities of Alpine, Marfa, and Presidio. Paisano Pass at the border between Presidio County and Brewster County also had a crash rate higher than the statewide average. During the public meetings, some members of the public raised concerns about visibility due to trapped fog at Paisano Pass. The middle section of the corridor between Presidio and Marfa also has a high crash rate. This section is mountainous and has a high number of curves compared to other parts of the corridor. The section north of the Brewster/Pecos County boundary is a straight stretch with a high-speed limit. Distracted drivers contributed to making the crash rate of this segment higher than the statewide average.



Source: TxDOT Crash Records Information System, 2010 – 2018

Figure 47: Crash Rates Comparison

6.5 Safety Concerns Identified

- Pedestrian and bicycle crashes in the corridor tend to concentrate at the three communities with high volumes of pedestrian activities. Field investigation revealed a lack of and/or poorly marked pedestrian and bicycle facilities resulting in pedestrians randomly crossing streets and cyclists traveling in the wrong direction in travel lanes. During the first round of public meetings, some residents of local communities also indicated the need to improve sidewalk and bicycle network connectivity near schools, churches, and community centers.

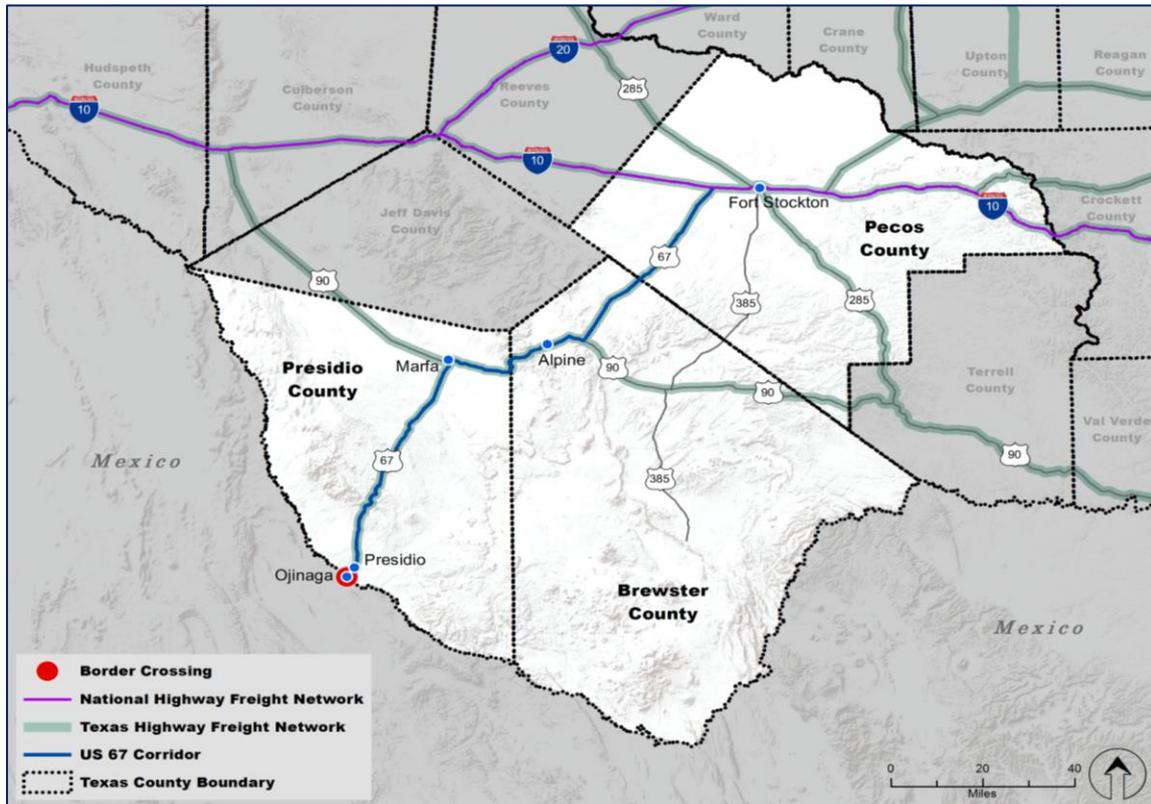
- Most crashes within Alpine and Marfa were intersection-related crashes. Currently, all intersections within the three communities are unsignalized with either stop control or no control. Intersection improvements, including intersection control and geometric design along with pedestrian level lighting, are recommended to improve safety at intersections.
- Roadway departure is the major crash type in the corridor, accounting for 54 percent (478) of total crashes and 68 percent of the severe crashes. From 2010 to 2018, all fatal crashes on US 67 were either roadway departure or head-on crashes and occurred in the rural sections of the corridor. Several improvements included in the **Appendix D – Safety Analysis**, such as installing rumble strips, preventing edge drop-offs, and providing skid-resistant pavement surfaces, are recommended to improve safety in the rural sections of the corridor.

7.0 Freight

7.1 Freight Infrastructure

Freight infrastructure in the US 67 corridor includes highway and rail components, as well as the Presidio/Ojinaga POE. US 67 itself is part of the Texas Highway Freight Network. This network was designated by TxDOT as part of the 2018 Texas Freight Mobility Plan⁹. **Figure 48** illustrates the highway freight network in the study area.

⁹ Texas DOT, *Texas Freight Mobility Plan 2018*, accessed April 16, 2018 at <https://www.dot.state.tx.us/move-texas-freight/studies/freight-plan.htm>



Source: USDOT and TxDOT

Figure 48: TxDOT Highway Freight Network and USDOT National Highway Freight Network in Proximity to US 67

Rail Freight

The US 67 corridor study area contains two railroad lines: The Union Pacific Railroad (UPRR) and the Texas-Pacifco Railroad (Texas-Pacifco). **Figure 49** depicts the freight rail lines in the study area. The UPRR line within the US 67 study area runs parallel to the US 90/US 67 concurrent segments and connects to El Paso in the west, which is the eastern terminus of the UPRR Sunset Route. To the east, the UPRR connects to San Antonio. According to UPRR, the railroad handles a wide range of commodities on its line through the study region, including consumer goods in intermodal containers, automobiles, steel, lumber, and other basic commodities.

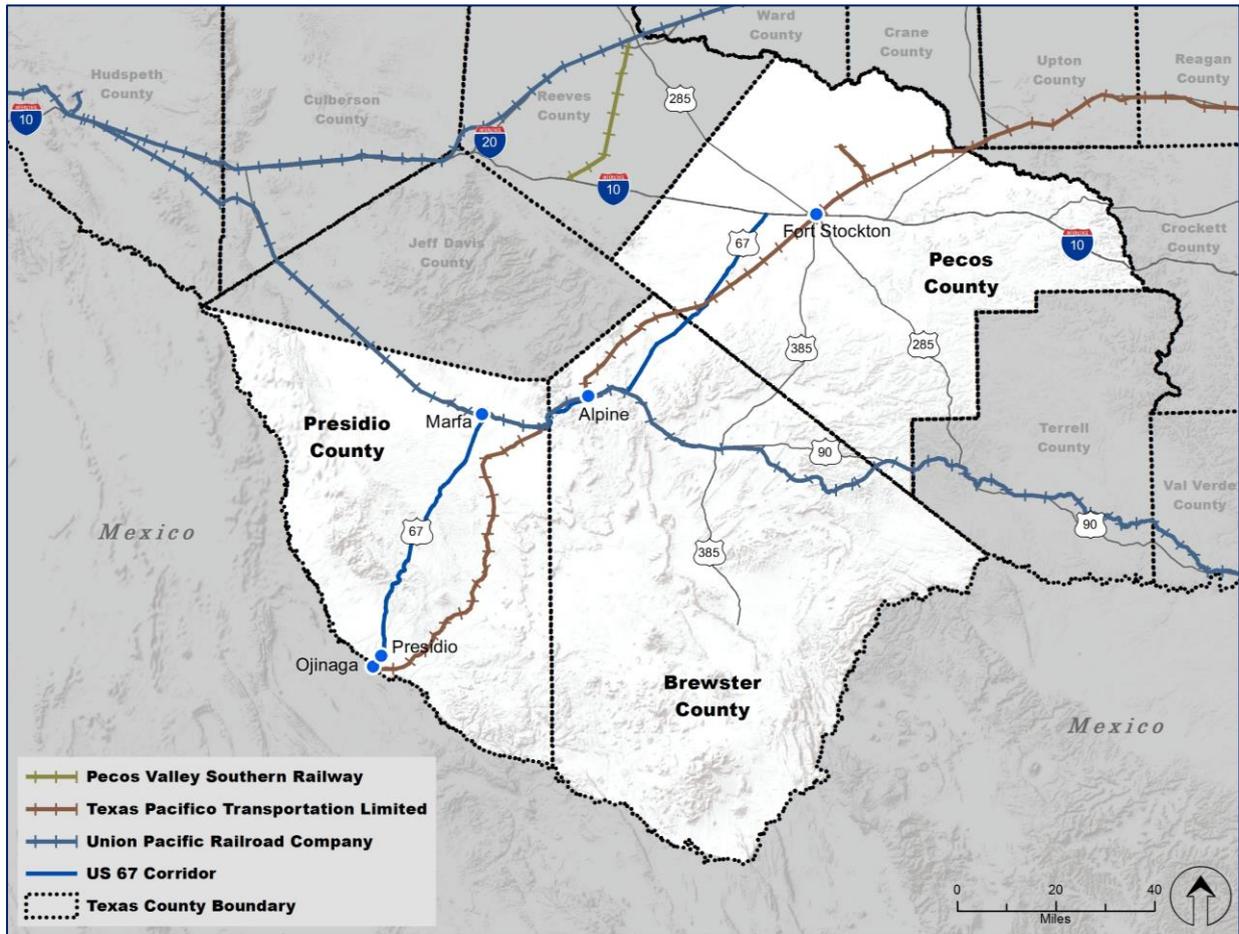


Figure 49: Existing Rail Freight Network

Within the US 67 study area, Texas-Pacifico operates over the South Orient Railroad, which is a state-owned facility that runs from San Angelo Junction (in Coleman County), through San Angelo and Fort Stockton and ends in Presidio. Texas-Pacifico operates the South Orient Railroad on a 40-year lease from TxDOT. Most of the Texas-Pacifico’s freight business comes from three key sectors: agriculture, sand, and industrial. Sand deliveries for hydraulic fracturing (fracking) have been growing rapidly in recent years due to Permian Basin oil and gas exploration activities.

Figure 50 displays the railroad service near the US 67 corridor.



Figure 50: Union Pacific Rail Service

Presidio/Ojinaga POE

The Presidio/Ojinaga POE is located near the U.S.-Mexico border in Presidio. Although it operates 24 hours a day, 7 days a week for passenger traffic, commercial (truck) operations only occur from 9:00 A.M. to 5:00 P.M., Monday through Friday. Currently, the POE has one 12-foot-wide lane in each direction and a 5-foot-wide sidewalk on each side. In 2017, the POE received a Presidential Permit to construct a new bridge with two lanes in each direction, build a new pedestrian sidewalk, and make other improvements to promote efficiency at the crossing. The bridge widening will allow continuous operations while oversize/overweight vehicles are using the bridge; previously, officials had to close the bridge temporarily to accommodate such loads. The POE is also a key entry point for oversize freight because it has the largest radiation portal monitor on the southern border. Incoming freight shipments are typically scanned at the border for illicit nuclear and radiological materials.

7.2 Key Freight Generators

Although the study corridor does not carry large volumes of freight, there are some key shippers in the region producing cargo that moves along US 67 or the regional rail network. These include traditional drivers of the regional economy such as agriculture and ranching, as well as new economic development and trade opportunities that have arisen in recent years, such as mobile home manufacturing and Permian Basin energy development. Based on input from stakeholders, some of the key freight generators along the US 67 corridor include the Biad Chili Company,

Solitaire Manufactured Homes, Tri-County Concrete and Steel, CSA Materials, and the Presidio Stockyards. **Figure 51** is a map showing the locations of these facilities relative to the study corridor.

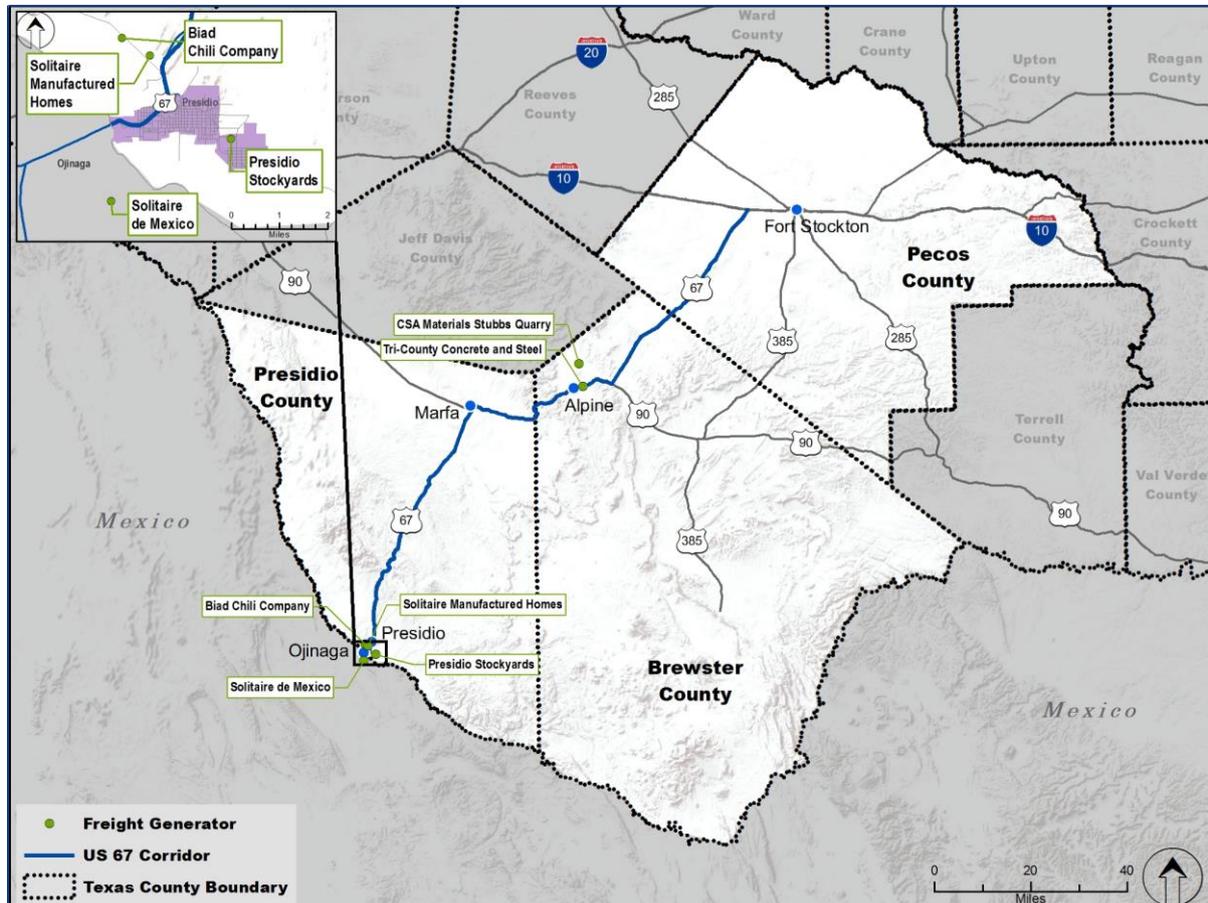


Figure 51: Key Freight Generators Near the US 67 Corridor

7.3 Freight Flow

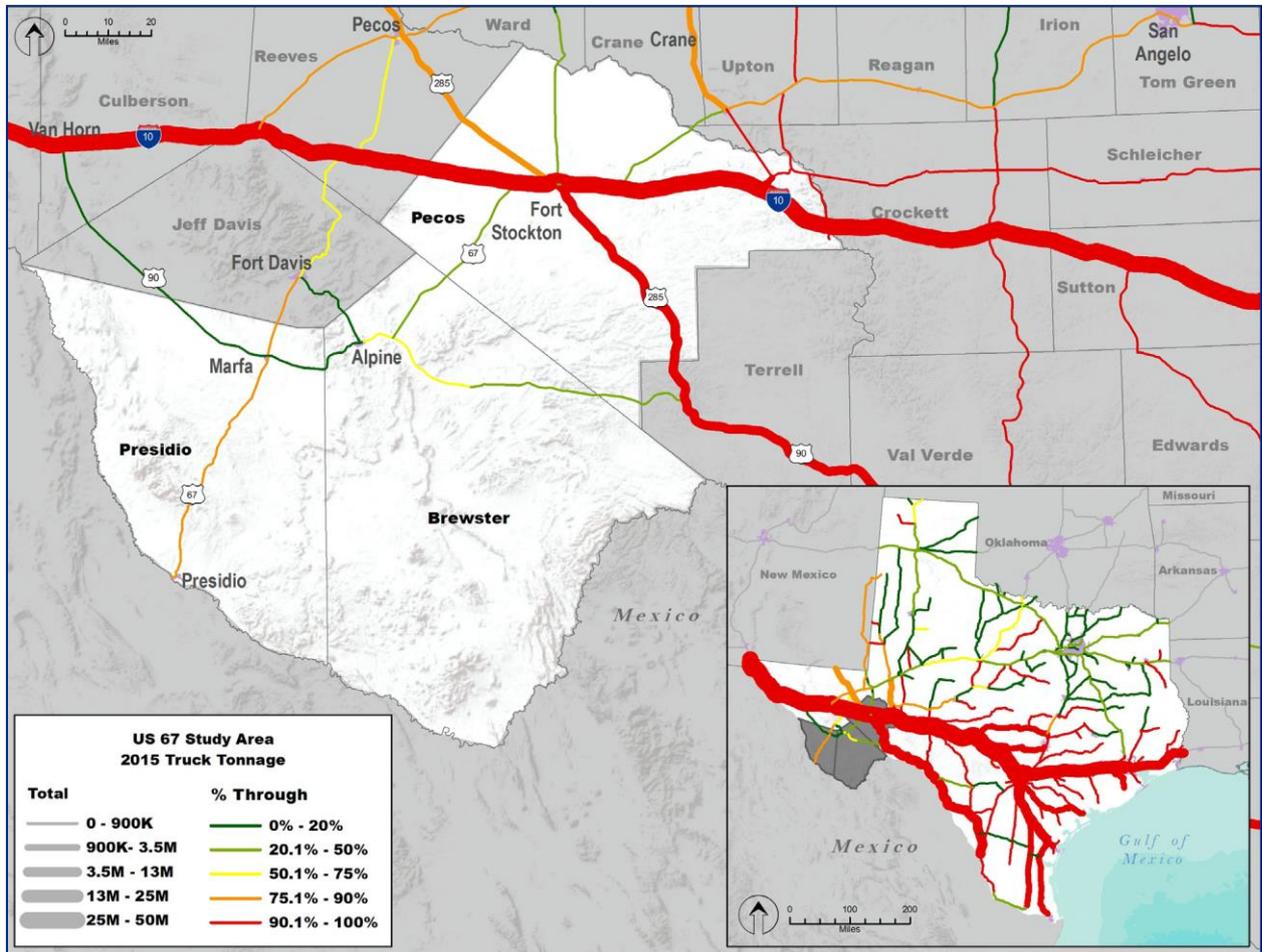
7.3.1 Regional Freight Flows

According to the TRANSEARCH database, in 2015, 62.1 million tons of freight worth \$150.7 billion dollars moved to, from, within, and through the tri-county region (Pecos, Brewster, and Presidio Counties). The vast majority (approximately 80 percent) of freight by weight and value was carried by trucks. However, these movements consist almost entirely of through shipments, which account for more than 95 percent of cargo weight, units, and value. These movements are, therefore, not directly related to economic activity in the study area or along the corridor. **Figure 52** depicts the 2015 truck tonnage.

7.3.2 US 67 Corridor Freight Flows

Compared with the tri-county region, the US 67 corridor carries much less truck freight. For example, the TRANSEARCH link with the highest truck volumes only carried approximately 99,000 tons in 2015. However, this freight is slightly more likely to be serving businesses in the

study area as shown in **Figure 52** The percentage of freight traffic consisting of through traffic varied from 20 percent or less between Marfa and Alpine to more than 75 percent from Presidio to Marfa.



Source: TRANSEARCH

Figure 52: 2015 Truck Tonnage

A significant share of truck freight in the US 67 corridor is related to commercial activity at the Presidio/Ojinaga POE. According to the TransBorder Freight Data¹⁰, in 2017 the Presidio/Ojinaga POE handled nearly \$209 million in trade, of which about \$109 million (52 percent) were exports and the remaining \$100 million (48 percent) were imports. Of these flows, all but about \$105,000 moved by truck.¹¹

¹⁰ TransBorder Freight Data, USDOT. <https://www.bts.gov/transborder>

¹¹ The small share of freight moved by non-truck modes consisted of shipments moving by 'Other' modes, a category that includes aircraft and vessels moving under their own power, powerhouse (electricity), pedestrians carrying freight, unknown and miscellaneous other modes.

7.4 Existing Truck Freight

The study team collected truck volume data across the study corridor. Currently, the truck volume along US 67 corridor does not exceed 200 trucks per day anywhere on the corridor, except at the I-10 interchange, where all the eastbound and westbound freight on that corridor was captured. This location has daily truck traffic of approximately 1,400 vpd. With the increase of commercial activity at the Presidio/Ojinaga POE, it is expected that truck movement along US 67 corridor will increase, but probably not out of proportion to overall traffic growth on the corridor.

7.5 Major Freight Concerns

In addition to the various sources of freight data analyzed, the study team interviewed freight stakeholders in the region to understand freight conditions along the corridor and gain valuable insight into new trends and developments. Shippers were asked about their inbound and outbound supply chains, how they expect these patterns to change over the next few years, any challenges to moving freight in the corridor, and how they would suggest addressing those challenges. Carriers were asked about key freight markets they serve, commodities hauled, how they expect the freight market to evolve in the future, and what bottlenecks exist for freight in the corridor. All interviewees were also asked about safety issues they have encountered, and potential solutions. Railroad officials were asked about the potential impacts of the Texas-Pacifico track rehabilitation project and reconstruction of the international rail crossing, as well as potential opportunities for mode shift from truck to rail.

The key findings from the interviews and data analysis are:

- From a freight standpoint, the three-county US 67 study area is mostly a “bridge” region; i.e., the vast majority of freight in the area is simply moving through it, mostly on I-10 and the UPRR rail line. Since these shipments neither originate nor terminate in the three study counties, they have no significant relationship to economic activity along the study corridor.
- The expansion of the international bridge at the Presidio/Ojinaga POE may make the area more attractive for industrial development, particularly increased shipments of agriculture from the producing regions around Ojinaga. However, additional POE infrastructure and operational improvements would be required to achieve significant growth. For instance, many types of fresh produce require an onsite United States Department of Agriculture (USDA) inspector, cold storage facilities, and phytosanitary labs, none of which currently exist in Presidio. In addition, the POE is only open to commercial traffic during the daytime from Monday to Friday, which limits its commercial capacity.
- Many of the truck operators and customs brokers expressed safety concerns along the corridor, especially in the mountains north of Presidio and near tourist attractions like Elephant Rock and the Profile of Lincoln. These concerns were mostly centered around inadequate passing and climbing lanes (which can create dangerous conditions when motorists do not want to wait to get around another vehicle), narrow shoulders, and the lack of designated pull-off areas both for tourists and for trucks that experience mechanical problems. Some stakeholders also expressed a desire for additional rest areas with basic services such as water. Alternate routes (also known as bypasses) were suggested by some to reduce through trucks in communities, especially Presidio and Alpine.

- Oversized loads that cannot get under the rail bridge in Alpine are forced to take more circuitous alternate routings. This introduces delay and adds cost for these trips. These loads also sometimes encounter delay while waiting for police escorts in Alpine (local police sometimes do not want to escort a single truck, electing instead to wait for other oversized loads to arrive).
- UPRR and Texas-Pacífico do not perceive any immediate opportunities to shift freight from trucks to rail. However, UPRR is willing to work with local businesses and officials, if a viable market that can be served by rail is identified. Texas-Pacífico expects to continue focusing on its core businesses, which mainly consists of basic commodities and oil-field traffic. With respect to the rail bridge reconstruction and track rehabilitation, they expect the improvements to divert existing rail traffic that is currently using other POEs, rather than attracting US 67 freight that currently moves by truck.
- Oversized shipments will continue to use US 67 and will grow due to the Solitaire expansion, which will double the production of mobile homes at its Ojinaga factory (**Figure 53**). In addition, the Presidio/Ojinaga POE has the largest radiation portal monitor on the southern U.S. border, which serves a niche market of oversized machinery and other over dimensional freight. Continued growth in Permian Basin energy exploration activities could drive more of these types of shipments as oil field equipment is often sent to Mexico for repairs via the Presidio/Ojinaga POE. Large pieces of farming equipment also cross at Presidio, headed for the agricultural areas near Ojinaga.
- The biggest delays for freight seem to occur at the border, not on the corridor itself. Cargo is sometimes delayed waiting to cross the bridge, especially when passenger traffic is high. The limited POE hours for commercial traffic were also cited as a constraint. As noted above, the lack of cold storage and USDA facilities is acting as a brake on trade development in the agricultural sector.



Figure 53: Solitaire Mobile Home Shipment on US67

8.0 Environmental Considerations

Environmental data were gathered from I-10 west of Fort Stockton to the Presidio/Ojinaga POE on the U.S./Mexico border to assist with determining the existing conditions within the study area. Identified environmental constraints help in determining potential corridor improvements by indicating which areas to avoid.

Environmental data were collected from various data sources and edited based on the Texas Ortho Imagery Program. Data sources included:

- Texas Natural Resources Information System
- U.S. Fish and Wildlife Service
- Texas Commission on Environmental Quality
- Federal Emergency Management Agency
- United States Environmental Protection Agency
- U.S. Geological Survey
- Texas Parks and Wildlife Department
- Texas Water Development Board

- Texas Historical Commission
- U.S. Department of Agriculture

Attachment B shows the identified environmental constraints within the study area.

8.1 Historical Resources

The US 67 corridor crosses two historical districts: Shafter Historic Mining District and Fort D. A. Russell Historic District. No listed National Register of Historic Places are located within the US 67 study area. There are four cemeteries close to the corridor, three are in Presidio and one is in Shafter.

Twenty-two historical markers are found close to the US 67 corridor, of which 18 are in Alpine, Marfa, and Shafter.

8.2 Topography

The study corridor is approximately 3,600 feet to 5,000 feet above sea level. The topography of the US 67 corridor area typically includes an undulated sloped terrain with lower elevations as the corridor nears Presidio. Geographically, this region is characterized by plateaus, basins, and deserts. The Trans-Pecos basins sit at an elevation of about 4,000 feet and are crossed by numerous widely spaced mountain ranges that rise an additional 2,000 to 3,000 feet. Significant portions of Segment 2 around Shafter are rugged mountainous terrain of the Trans-Pecos and the Diablo Plateau¹². The northern end (near I-10) and southern end (near Presidio) of the US 67 corridor have altitudes of about 2,500 feet. The middle portion of the corridor near Alpine and Marfa (Segments 3, 4, 5 and 6) rises to altitudes of about 4,500 to 5,000 feet. The topography of Segment 7 is best described as Toyah Basin which is a broad, flat remnant of an old seafloor. There are scattered fault-block mountains and outcrops of ancient volcanic rocks to the northwest of Segment 5 (Alpine).

8.3 Floodplain and Wetlands

Between 1985 and 1991, the Federal Emergency Management Agency developed 100-year floodplain delineations for some areas of the corridor; however, there is no digital mapping data available. The northern portion of the corridor in Pecos County, as well as the area within the city limits of Marfa and Presidio, are unmapped.

US 67 crosses the Rio Grande near Presidio and abuts many creeks along the route. Based on national wetland inventory data from the U.S. Fish and Wildlife Service, many potential water features are found along the US 67 corridor. The closest water feature is approximately 50 feet east of the corridor in Presidio County.

8.4 Parks and Recreational Areas

No parks are located along the study corridor. The closest park is Fort Leaton State Park, which is 3.3 miles southeast of the US 67 corridor near Presidio. Big Bend Ranch State Park is 35 miles

¹² Physical Regions of Texas, TSHA. <https://texasalmanac.com/topics/environment/physical-regions-texas>

away from Presidio and Big Bend National Park is 72 miles from Alpine. Marfa Lights Viewing Area is located nine miles east of Marfa.

8.5 Critical Habitat

Critical habitat is a term defined and used in the Endangered Species Act¹³. It refers to specific geographic areas that contain features essential to the conservation of an endangered or threatened species and that may require special management and protection. Critical habitat may also include areas that are not currently occupied by the species but will be needed for its recovery.

The ending portion of the US 67 corridor abuts the Rio Grande. The Rio Grande is currently designated and proposed as a candidate for the National Wild and Scenic River Program. The US 67 Corridor traverses the Trans-Pecos Ecoregion. Within this Ecoregion, the Texas Parks and Wildlife Department (TPWD) has developed a pronghorn translocation program, which moves pronghorn from the Texas Panhandle to areas within and adjacent to the US 67 corridor. On October 17, 2019, at US 67 Corridor Working Group Meeting #7, a representative from the TPWD gave a presentation on the pronghorn program. In addition, TPWD provided a similar presentation to the El Paso District and Environmental Affairs Division of TxDOT on August 28, 2019. During the presentations, and based on GPS data resulting from the program, TPWD noted that highways and fences act as barriers to pronghorn movement and requested the addition of fence modifications and wildlife crossings for projects resulting from the US 67 Corridor Master Plan. TPWD will provide pronghorn tracking data to determine the most appropriate locations for crossings based on pronghorn activity concentration. TxDOT will consider these additions on a project-by-project basis.

8.6 Schools

There are four schools within 1 mile of the US 67 corridor in Alpine, Marfa, and Presidio. Due to the number of schools on or near US 67, there is school bus traffic on the corridor near the town limits during weekdays.

8.7 Places of Worship

There are two places of worship abutting the US 67 corridor: Big Bend Tabernacle Church in Alpine and St. Paul's Episcopal Church in Marfa. Additionally, there are 11 places of worship within the US 67 study area.

8.8 Air Quality

According to the Texas Commission on Environmental Quality (TCEQ), the US 67 corridor is within the El Paso-Juarez Air Quality Control Region. Pecos, Brewster, and Presidio Counties along the study corridor are considered in attainment for all National Ambient Air Quality Standards.

8.9 Hazardous Material Sites

There are several sites noted by the United States Environmental Protection Agency (EPA) for various characteristics along the corridor, including regulated material sites. The EPA notes

¹³ Endangered Species Act of 1973. <https://www.fws.gov/endangered/esa-library/pdf/ESAall.pdf>

commercial sites that use and potentially dispose of flammable substances or hazardous chemicals, such as gas stations, cleaners, manufacturing, paint stores, etc. The Trans-Pecos Natural Gas pipeline crosses the corridor at three locations. There are eight sites with underground petroleum storage tanks. No EPA-listed brownfield site on the EPA registry is located along the US 67 corridor.

8.10 Other Development Activities

A 50-Megawatt solar project, Solaire Holman, is located on the west side of US 67, 12 miles northeast of Alpine. The project site is 360 acres and is the largest solar project in Texas.

A silver mine, La Mina Grande, is operated by Aurcana Corporation in the town of Shafter in Presidio County, within 750 feet of the study corridor.

9.0 Summary

The US 67 corridor presents both issues and opportunities that can guide planning efforts. Key issues found in this assessment as well as through public outreach include:

- Safety is the key issue in the corridor. Identifying strategies to reduce crashes as part of the Corridor Master Plan was the number one priority identified by the public in the first series of public meetings. Safety along rural segments is of particular concern since roadway departure crashes along the segments outside of city limits made up about half of the total crashes along the corridor from 2010 to 2018.
- In terms of vehicular mobility, the study area intersections along US 67 corridor are operating at Level of Service C or better in 2017 during both the morning and afternoon peak hours with no congestion issues identified. Truck traffic within the three communities was a concern recognized during the public meetings.
- There is a large percentage of households (7 to 10 percent) that do not own an automobile within the three communities. Currently, Marfa and Presidio have limited sidewalk connectivity, with sidewalks either missing or not continuous on crossing streets; and no designated bicycle facilities. Streets with inadequate or missing pedestrian/ bicycle facilities discourage or limit safe pedestrian/bicycle movement.
- Despite tourism being the major economic driver for the US 67 corridor study area, ALL ABOARD AMERICA! is the only transit provider that operates regular intercity bus service twice a day between Presidio and Midland International Air and Space Port with stops at all three communities. The Amtrak Sunset Limited route operates 3 days per week within the corridor as well, with a stop in Alpine.
- Pavement is mostly in good or fair condition, however there are several sections of the corridor with pavement in poor condition. These sections are concentrated in the three communities, major interchanges at US 90 and I-10, and the mountainous area near Shafter. Input from public involvement suggests a need to install shoulder rumble strips throughout the US 67 corridor to prevent future vehicle roadway departure crashes.

- Bridge and culvert structures are mostly in good or satisfactory condition. No bridges and culverts were found with major structure failures. However, two railroad bridges over the US 67 corridor near Alpine do not meet the minimum vertical clearance standard from FHWA. Truck traffic that cannot pass through under these rail bridges is forced to take more circuitous alternate routes.
- Approximately 13 percent of the US 67 corridor is not covered by cell phone service. These areas are mostly concentrated at the mountainous area near Shafter and the mountainous area west of Alpine near the Presidio County line. The lack of cell phone coverage prevents drivers from reporting roadway emergency situations. Public meeting comments also expressed emerging safety and security concerns due to insufficient cell phone service within the US 67 corridor study area.
- Freight stakeholders within the US 67 study area expressed safety concerns along the corridor. These concerns highlighted the lack of sufficient safety precautions such as passing and climbing lanes or available rest areas. This can result in dangerous situations between motorists and trucks. The vehicles also have no place to go if they experience mechanical problems, with the lack of pull-off areas. The stakeholders suggested the addition of rest areas with basic amenities and some alternate routes to reduce through trucks in communities. Any impacts on existing environmental constraints would be considered at the proposed project phase, if applicable.

With the identified issues and opportunities, the study team developed recommended alternatives for potential future projects to improve safety and mobility and ensure the long-term efficiency of the US 67 corridor. The development and analysis of these alternatives are described in the **Appendix N – Alternatives Analysis**.

Attachment A

US 67 Corridor Master Plan Traffic Data Collection Program

Location ID	Direction	Location Description	Duration	Data Collection Type	Data Collection Dates
1	EB/WB	O Reilly Street at US 67	6 hrs.	Turn Movement Count	3/26/2018
2	EB/WB	US 67 Bus at US 67	6 hrs.	Turn Movement Count	11/6/2017
3	EB/WB	Puerto Rico Street at US 67	6 hrs.	Turn Movement Count	11/6/2017
4	EB/WB	Howard Street at US 67	6 hrs.	Turn Movement Count	11/6/2017
5	EB/WB	El Campo Street at US 67	6 hrs.	Turn Movement Count	11/6/2017
6	EB/WB	Diaz Street at US 67	6 hrs.	Turn Movement Count	11/6/2017
7	EB/WB	Grand Street at US 67	6 hrs.	Turn Movement Count	11/6/2017
8	EB/WB	Harrington Street at US 67	6 hrs.	Turn Movement Count	11/6/2017
9	EB/WB	Lafayette Street/Belmont Street at US 67	6 hrs.	Turn Movement Count	11/6/2017
10	EB/WB	Lafayette Street at US 67	6 hrs.	Turn Movement Count	11/6/2017
11	EB/WB	Leaton Street at US 67	6 hrs.	Turn Movement Count	11/6/2017
12	EB/WB	Park Boulevard at US 67	6 hrs.	Turn Movement Count	11/6/2017
13	EB/WB	Rosendale Avenue/2nd Avenue at US 67	6 hrs.	Turn Movement Count	11/6/2017
14	NB/SB	US 67 Bus/FM 170 at US 67	6 hrs.	Turn Movement Count	11/6/2017
15	NB/SB	Old Road 170/Utopia Road/FM 170 at US 67	6 hrs.	Turn Movement Count	11/6/2017
16	NB/SB	Erma Avenue at US 67	6 hrs.	Turn Movement Count	11/15/2017
17	NB/SB	Driveway into Presidio Lely International Airport at US 67	6 hrs.	Turn Movement Count	11/6/2017
18	NB/SB	Driveway South of Garcia Road at US 67	6 hrs.	Turn Movement Count	11/6/2017
19	NB/SB	Driveway South of Upper Shafter Road at US 67	6 hrs.	Turn Movement Count	11/8/2017
20	NB/SB	Upper Shafter Road at US 67	6 hrs.	Turn Movement Count	11/6/2017
21	NB/SB	Driveway South of Cibolo Creek Road at US 67	6 hrs.	Turn Movement Count	11/6/2017
22	NB/SB	Cibolo Creek Road at US 67	6 hrs.	Turn Movement Count	11/6/2017

Location ID	Direction	Location Description	Duration	Data Collection Type	Data Collection Dates
23	NB/SB	Driveway into Airstrip at US 67	6 hrs.	Turn Movement Count	11/6/2017
24	NB/SB	FM 169 at US 67	6 hrs.	Turn Movement Count	11/6/2017
25	NB/SB	Madrid Street	6 hrs.	Turn Movement Count	11/6/2017
26	NB/SB	Driveway South of Waco Street at US 67	6 hrs.	Turn Movement Count	11/6/2017
27	NB/SB	Waco Street at US 67	6 hrs.	Turn Movement Count	11/6/2017
28	NB/SB	Galveston Street at US 67	6 hrs.	Turn Movement Count	11/6/2017
29	NB/SB	Dallas Street at US 67	6 hrs.	Turn Movement Count	11/6/2017
30	EB/WB/NB/SB	San Antonio Street at US 67	6 hrs./24hrs.*	Turn Movement Count	10/30/2017 11/1/2017 11/13/2017 11/22/2017 11/26/2017
31	EB/WB	Dean Street at US 67	6 hrs.	Turn Movement Count	11/6/2017
32	EB/WB	Russell Street at US 67	6 hrs.	Turn Movement Count	11/6/2017
33	EB/WB	Nevill Street at US 67	6 hrs.	Turn Movement Count	11/6/2017
34	EB/WB	Spring Street at US 67	6 hrs.	Turn Movement Count	11/6/2017
35	EB/WB	Driveway East of Spring Street at US 67	6 hrs.	Turn Movement Count	11/6/2017
36	EB/WB	Driveway South of Golf Course Road at US 67	6 hrs.	Turn Movement Count	11/6/2017
37	EB/WB	Marfa Lights rest stop at US 67	6 hrs./24hrs.*	Turn Movement Count	11/6/2017 11/22/2017 11/26/2017
38	NB/SB	Paisano Drive at US 67	6 hrs.	Turn Movement Count	11/6/2017
39	EB/WB	Driveway into US Border Patrol Alpine Station at US 67	6 hrs.	Turn Movement Count	11/6/2017
40	EB/WB	Duncans Lookout at US 67	6 hrs.	Turn Movement Count	11/6/2017
41	NB/SB	N Mosely Lane at US 67	6 hrs.	Turn Movement Count	11/6/2017
42	NB/SB	Coors Road at US 67	6 hrs.	Turn Movement Count	11/6/2017
43	EB/WB	FM 1703 at US 67	6 hrs.	Turn Movement Count	11/6/2017
44	EB/WB	Lemon Street at US 67	6 hrs.	Turn Movement Count	11/6/2017

Location ID	Direction	Location Description	Duration	Data Collection Type	Data Collection Dates
45	EB/WB	Plum Street at US 67	6 hrs.	Turn Movement Count	11/6/2017
46	EB/WB	Peach Street at US 67	6 hrs.	Turn Movement Count	11/6/2017
47	EB/WB	Orange Street at US 67	6 hrs.	Turn Movement Count	11/6/2017
48	EB/WB	Cherry Street at US 67	6 hrs.	Turn Movement Count	11/6/2017
49	EB/WB	W Avenue E/W Holland Avenue at US 67	6 hrs.	Turn Movement Count	11/6/2017
50	EB/WB	Apple Street at US 67	6 hrs.	Turn Movement Count	11/6/2017
51	WB	15th Street at W Avenue E	6 hrs.	Turn Movement Count	11/6/2017
52	EB	15th Street and Driveway across at Holland Avenue	6 hrs.	Turn Movement Count	11/6/2017
53	WB	14th Street at W Avenue E	6 hrs.	Turn Movement Count	11/6/2017
54	EB	14th Street at Holland Avenue	6 hrs.	Turn Movement Count	11/6/2017
55	WB	13th Street at W Avenue E	6 hrs.	Turn Movement Count	11/6/2017
56	EB	13th Street at Holland Avenue	6 hrs.	Turn Movement Count	11/6/2017
57	WB	12th Street at W Avenue E	6 hrs.	Turn Movement Count	11/6/2017
58	EB	12th Street at Holland Avenue	6 hrs.	Turn Movement Count	11/6/2017
59	WB	11th Street at W Avenue E	6 hrs.	Turn Movement Count	11/6/2017
60	EB	11th Street at Holland Avenue	6 hrs.	Turn Movement Count	11/6/2017
61	WB	10th Street at W Avenue E	6 hrs.	Turn Movement Count	11/6/2017
62	EB	10th Street at Holland Avenue	6 hrs.	Turn Movement Count	11/6/2017
63	WB	9th Street at W Avenue E	6 hrs.	Turn Movement Count	11/6/2017
64	WB	8th Street at W Avenue E	6 hrs.	Turn Movement Count	11/6/2017
65	EB	8th Street and Driveway across at Holland Avenue	6 hrs.	Turn Movement Count	11/6/2017
66	WB	7th Street at W Avenue E	6 hrs.	Turn Movement Count	11/6/2017
67	EB	7th Street at Holland Avenue	6 hrs.	Turn Movement Count	11/6/2017
68	WB	6th Street at W Avenue E	6 hrs.	Turn Movement Count	11/6/2017

Location ID	Direction	Location Description	Duration	Data Collection Type	Data Collection Dates
69	EB	6th Street and Driveway across at Holland Avenue	6 hrs.	Turn Movement Count	11/6/2017
70	WB	5th Street at E Avenue Street	6 hrs./24hrs.*	Turn Movement Count	11/1/2017 11/6/2017 11/22/2017 11/26/2017
71	EB	5th Street at Holland Avenue	6 hrs./24hrs.*	Turn Movement Count	10/30/2017 11/1/2017 11/6/2017 11/22/2017 11/26/2017
72	WB	4th Street at E Avenue East	6 hrs.	Turn Movement Count	11/6/2017
73	EB	4th Street and Driveway across at Holland Avenue	6 hrs.	Turn Movement Count	11/6/2017
74	WB	3rd Street at E Avenue East	6 hrs.	Turn Movement Count	11/6/2017
75	EB	3rd Street and Driveway Across at Holland Avenue	6 hrs.	Turn Movement Count	11/6/2017
76	WB	2nd Street at E Avenue East	6 hrs.	Turn Movement Count	11/6/2017
77	EB	2nd Street at Holland Avenue	6 hrs.	Turn Movement Count	11/6/2017
78	WB	1st Street and Driveway across at E Avenue East	6 hrs.	Turn Movement Count	11/6/2017
79	WB	Garnett Street at E Avenue East	6 hrs.	Turn Movement Count	11/6/2017
80	EB	Garnett Street at Holland Avenue	6 hrs.	Turn Movement Count	11/6/2017
81	WB	Phelps Street at E Avenue East	6 hrs.	Turn Movement Count	11/6/2017
82	EB	Phelps Street at Holland Avenue	6 hrs.	Turn Movement Count	11/6/2017
83	WB	Cockrell Street at E Avenue East	6 hrs.	Turn Movement Count	11/6/2017
84	EB	Cockrell Street at Holland Avenue	6 hrs.	Turn Movement Count	11/6/2017
85	WB	Walker Street at E Avenue East	6 hrs.	Turn Movement Count	11/6/2017
86	EB	Walker Street at Holland Avenue	6 hrs.	Turn Movement Count	11/6/2017
87	WB	Harrison Street at E Avenue East	6 hrs.	Turn Movement Count	11/6/2017
88	EB	Harrison Street at Holland Avenue	6 hrs.	Turn Movement Count	11/6/2017
89	WB	Bird Street at E Avenue East	6 hrs.	Turn Movement Count	3/26/2018
90	EB/WB	Lackey Street at US 67	6 hrs.	Turn Movement Count	11/8/2017

Location ID	Direction	Location Description	Duration	Data Collection Type	Data Collection Dates
91	EB/WB	Driveway to N Harmon Street/Old Marathon at US 67	6 hrs.	Turn Movement Count	11/6/2017
92	EB/WB	Old Marathon Road/Driveway into Pete P Gallego Center at US 67	6 hrs.	Turn Movement Count	3/26/2018
93	EB/WB	Country Club Estates Drive at US 67	6 hrs.	Turn Movement Count	11/8/2017
94	EB/WB	Old Marathon Road at US 67	6 hrs.	Turn Movement Count	11/6/2017
95	NB/SB	Hovey Road at US 67	6 hrs.	Turn Movement Count	11/6/2017
96	NB/SB	Old Alpine Highway at US 67	6 hrs./24hrs.*	Turn Movement Count	11/8/2017 11/22/2017 11/26/2017
97	NB/SB	Chancellor Road at US 67	6 hrs.	Turn Movement Count	11/6/2017
98	NB/SB	FM 1776 at US 67	6 hrs.	Turn Movement Count	11/6/2017
99	NB/SB	Eastbound I-10 Service Road at US 67	6 hrs.	Turn Movement Count	11/6/2017
100	NB/SB	Westbound I-10 Service Road at US 67	6 hrs./24hrs.*	Turn Movement Count	10/30/2017 11/1/2017 11/20/2017 11/22/2017 11/26/2017
101	EB/WB	US 67 West of O Reilly Street	24 hrs.	3-Class Count	10/30/2017 11/1/2017 11/5/2017 11/6/2017 11/22/2017 11/26/2017
102	EB/WB	US 67 between Puerto Rico Street and Howard Street	24 hrs.	Volume Count	03/25/2017 03/26/2017 11/05/2017 11/06/2017
103	EB/WB	O Reilly Street between Harrington Street and Lafayette Street	24 hrs.	Volume Count	11/05/2017 11/06/2017
104	EB/WB	US 67 between Harrington Street and Lafayette Street	24 hrs.	Volume Count	11/05/2017 11/06/2017
105	NB/SB	Erma Avenue between Cassell Street and Bledsoe Boulevard	24 hrs.	Volume Count	10/30/2017 11/1/2017 11/5/2017 11/6/2017
106	NB/SB	Leaton Street between Cassell Street and Bledsoe Boulevard	24 hrs.	Volume Count	11/05/2017 11/06/2017
107	EB/WB	Foothill Boulevard between Silver Avenue and Bagley Avenue	24 hrs.	Volume Count	11/05/2017 11/06/2017
108	EB/WB	US 67 Bus/FM 170 East of US 67	24 hrs.	Volume Count	11/05/2017 11/06/2017

Location ID	Direction	Location Description	Duration	Data Collection Type	Data Collection Dates
109	EB/WB	O Reilly Street between Wilkinson Avenue and Ojinaga Avenue	24 hrs.	Volume Count	11/05/2017 11/06/2017
110	NB/SB	FM 170/Millington Boulevard South of Wilson Street	24 hrs.	Volume Count	11/05/2017 11/06/2017
111	NB/SB	US 67 South of Utopia Road	24 hrs.	Volume Count	10/30/2017 11/1/2017 11/5/2017 11/6/2017 11/22/2017 11/26/2017 11/30/2017
112	EB/WB	FM 170 North of Utopia Road	24 hrs.	Volume Count	11/05/2017 11/06/2017
113	NB/SB	US 67 North of FM 170/Utopia Road	24 hrs.	Volume Count	11/05/2017 11/06/2017
114	NB/SB	US 67 South of Driveway into Presidio Lely International Airport	24 hrs.	Volume Count	11/5/2017 11/6/2017 11/22/2017 11/26/2017
115	NB/SB	US 67 South of Garcia Road	24 hrs.	Volume Count	11/05/2017 11/06/2017
116	NB/SB	US 67 South of Cibolo Creek Road	24 hrs.	Volume Count	11/5/2017 11/6/2017 11/22/2017 11/26/2017
117	NB/SB	US 67 South of Driveway into Airstrip	24 hrs.	Volume Count	11/1/2017 11/5/2017 11/6/2017 11/22/2017 11/26/2017
118	NB/SB	US 67 South of FM 169	24 hrs.	Volume Count	11/05/2017 11/06/2017
119	NB/SB	FM 169 East of US 67	24 hrs.	Volume Count	11/05/2017 11/06/2017
120	NB/SB	US 67 South of Madrid Street	24 hrs.	3-Class Count	11/1/2017 11/5/2017 11/6/2017 11/22/2017 11/26/2017
121	EB/WB	US 90 West of Tenison Street	24 hrs.	3-Class Count	03/25/2017 03/26/2017 11/22/2017 11/26/2017
122	NB/SB	SH 17 North of Idas Street	24 hrs.	3-Class Count	11/12/2017 11/13/2017 11/22/2017 11/26/2017
123	EB/WB	US 67 East of Aparejo Street	24 hrs.	3-Class Count	10/30/2017 11/1/2017

Location ID	Direction	Location Description	Duration	Data Collection Type	Data Collection Dates
					11/12/2017 11/13/2017 11/22/2017 11/26/2017
124	NB/SB	US 67 South of Paisano Drive	24 hrs.	Volume Count	10/30/2017 11/1/2017 11/5/2017 11/6/2017 11/22/2017 11/26/2017 11/30/2017
125	EB/WB	US 67 West of Driveway into US Border Patrol Alpine Station	24 hrs.	Volume Count	10/30/2017 11/1/2017 11/5/2017 11/6/2017 11/22/2017 11/26/2017 11/30/2017
126	NB/SB	Fort Davis Highway North of Alpine-Casparis Municipal Airport	24 hrs.	Volume Count	11/5/2017 11/6/2017 11/22/2017 11/26/2017
127	NB/SB	S Walker Street South of Lechuguilla	24 hrs.	Volume Count	11/5/2017 11/6/2017 11/22/2017 11/26/2017
128	EB/WB	US 67 West of Paso Del Norte Road	24 hrs.	Volume Count	10/30/2017 11/1/2017 11/5/2017 11/6/2017 11/22/2017 11/26/2017 11/30/2017
129	NB/SB	US 67 North of US 90 (Right Leg)	24 hrs.	3-Class Count	11/5/2017 11/6/2017 11/22/2017 11/26/2017
130	NB/SB	US 67 North of US 90 (Left Leg)	24 hrs.	3-Class Count	11/5/2017 11/6/2017 11/22/2017 11/26/2017
131	EB/WB	US 90 South of US 67	24 hrs.	3-Class Count	11/5/2017 11/6/2017 11/22/2017 11/26/2017
132	NB/SB	US 67 South of Hovey Road	24 hrs.	Volume Count	11/05/2017 11/06/2017
133	EB/WB	Hovey Road West of US 67	24 hrs.	Volume Count	11/05/2017 11/06/2017

Location ID	Direction	Location Description	Duration	Data Collection Type	Data Collection Dates
134	NB/SB	US 67 South of I-10	24 hrs.	3-Class Count	10/30/2017 11/1/2017 11/5/2017 11/6/2017 11/22/2017 11/26/2017
135	EB/WB	I-10 Westbound Service Road East of US 67	24 hrs.	Volume Count	11/05/2017 11/06/2017
136	WB	I-10 Westbound East of US 67	24 hrs.	3-Class Count	11/05/2017 11/06/2017
137	EB	I-10 Eastbound East of US 67	24 hrs.	3-Class Count	11/05/2017 11/06/2017
138	EB/WB	I-10 Eastbound Service Road East of US 67	24 hrs.	Volume Count	11/05/2017 11/06/2017
139	WB	I-10 Westbound to Service Road Connector East of US 67	24 hrs.	Volume Count	11/05/2017 11/06/2017
140	EB	Eastbound Service Road to I-10 Connector East of US 67	24 hrs.	Volume Count	11/05/2017 11/06/2017
141	WB	Westbound Service Road to I-10 Connector West of US 67	24 hrs.	Volume Count	11/05/2017 11/06/2017
142	EB	I-10 Eastbound to Service Road Connector West of US 67	24 hrs.	Volume Count	11/05/2017 11/06/2017
143	EB/WB	I-10 Westbound Service Road West of US 67	24 hrs.	Volume Count	11/05/2017 11/06/2017
144	EB/WB	I-10 Eastbound Service Road West of US 67	24 hrs.	Volume Count	11/05/2017 11/06/2017
159	EB/WB	FM 170 West of Casa Piedra	24 hrs.	Volume Count	10/30/2017 11/1/2017 11/5/2017 11/6/2017 11/22/2017 11/26/2017 11/30/2017
160	EB/WB	Old Alpine Highway East of US 67	24 hrs.	Volume Count	11/05/2017 11/06/2017

**Some turning movement counts were taken for 6 hours and 24 hours depending on the date taken.*

The following table summarizes the 2017 daily traffic volumes for each of the collection dates for volume, classification counts, and turning movement counts for which 24-hour data was obtained.

2017 Traffic Volumes

Location ID	Direction	Location Description	10/30/2017 Daily Traffic	11/1/2017 Daily Traffic	11/5/2017 Daily Traffic	11/6/2017 Daily Traffic	11/22/2017 Daily Traffic	11/26/2017 Daily Traffic
30	EB/WB	US 67 East of Highland Ave	4,510	4,660	-	-	6,390	6,250
37	EB/WB	US 67 west of Marfa Lights rest stop	-	-	-	-	4,060	4,140
70/71	EB/WB	US 67 East of N 5th St	-	15,870	-	-	15,070	10,890
96	NB/SB	Old Alpine Highway east of US 67	-	-	-	-	20	20
100	NB/SB	US 67 south of Westbound I-10 Service Road	1,130	1,110	-	-	2,200	2,520
101	EB/WB	US 67 West of O Reilly Street	4,120	4,400	4,060	4,190	5,730	4,650
102	EB/WB	US 67 between Puerto Rico Street and Howard Street	-	-	2,650	2,380	-	-
103	EB/WB	O Reilly Street between Harrington Street and Lafayette Street	-	-	3,060	3,450	-	-
104	EB/WB	US 67 between Harrington Street and Lafayette Street	-	-	2,960	2,500	-	-
105	NB/SB	Erma Avenue between Cassell Street and Bledsoe Boulevard	3,580	3,640	2,750	3,550	-	-
106	NB/SB	Leaton Street between Cassell Street and Bledsoe Boulevard	-	-	240	330	-	-
107	EB/WB	Foothill Boulevard between Silver Avenue and Bagley Avenue	-	-	610	1,360	-	-
108	EB/WB	US 67 Bus/FM 170 East of US 67	-	-	1,730	1,850	-	-
109	EB/WB	O Reilly Street between Wilkinson Avenue and Ojinaga Avenue	-	-	3,200	4,290	-	-
110	NB/SB	FM 170/Millington Boulevard South of Wilson Street	-	-	2,370	3,430	-	-
111	NB/SB	US 67 South of Utopia Road	2,420	2,660	3,130	2,700	3,920	4,330
112	EB/WB	FM 170 North of Utopia Road	-	-	200	490	-	-
113	NB/SB	US 67 North of FM 170/Utopia Road	-	-	2,930	2,190	-	-
114	NB/SB	US 67 South of Driveway into Presidio Lely International Airport	-	-	2,740	1,930	3,060	3,700
115	NB/SB	US 67 South of Garcia Road	-	-	2,710	1,880	-	-
116	NB/SB	US 67 South of Cibolo Creek Road	-	-	2,680	1,870	3,050	3,750

Location ID	Direction	Location Description	10/30/2017 Daily Traffic	11/1/2017 Daily Traffic	11/5/2017 Daily Traffic	11/6/2017 Daily Traffic	11/22/2017 Daily Traffic	11/26/2017 Daily Traffic
117	NB/SB	US 67 South of Driveway into Airstrip	-	1,730	2,700	1,860	2,920	3,350
118	NB/SB	US 67 South of FM 169	-	-	2,690	1,850	-	-
119	NB/SB	FM 169 East of US 67	-	-	50	90	-	-
120	NB/SB	US 67 South of Madrid Street	-	1,870	2,820	2,100	3,270	3,920
121	EB/WB	US 90 West of Tenison Street	-	-	1,090*	1,090*	1,250	1,160
122	NB/SB	SH 17 North of Idas Street	-	-	750**	1,020**	1,400	1,270
123	EB/WB	US 67 East of Aparejo Street	2,730	2,750	2,530**	2,520**	4,210	4,270
124	NB/SB	US 67 South of Paisano Drive	2,770	2,670	3,050	2,750	3,470	2,730
125	EB/WB	US 67 West of Driveway into US Border Patrol Alpine Station	2,840	2,880	3,230	2,980	4,220	4,070
126	NB/SB	Fort Davis Highway North of Alpine-Casparis Municipal Airport	-	-	1,000	1,570	1,500	860
127	NB/SB	S Walker Street South of Lechuguilla	-	-	2,010	1,590	1,800	1,300
128	EB/WB	US 67 West of Paso Del Norte Road	3,950	3,920	4,900	3,980	5,710	5,700
129	NB/SB	US 67 North of US 90 (Right Leg)	-	-	60	30	50	90
130	NB/SB	US 67 North of US 90 (Left Leg)	-	-	3,570	2,130	4,050	4,510
131	EB/WB	US 90 South of US 67	-	-	760	880	1,020	800
132	NB/SB	US 67 South of Hovey Road	-	-	3,010	1,740	-	-
133	EB/WB	Hovey Road West of US 67	-	-	100	160	-	-
134	NB/SB	US 67 South of I-10	2,070	2,020	3,620	2,160	4,080	4,530
135	EB/WB	I-10 Westbound Service Rd East of US 67	-	-	2,710	1,890	-	-
136/137	EB/WB	I-10 Mainlane East of US 67	-	-	8,000	6,910	-	-
138	EB/WB	I-10 Service Road East of US 67	-	-	680	560	-	-
139/140	EB/WB	I-10 Service Road Connector East of US 67	-	-	1,730	1,140	-	-
141/142	EB/WB	I-10 Service Road Connector West of US 67	-	-	90	140	-	-
143	EB/WB	I-10 Westbound Service Road West of US 67	-	-	110	140	-	-
144	EB/WB	I-10 Eastbound Service Road West of US 67	-	-	20	20	-	-

Location ID	Direction	Location Description	10/30/2017 Daily Traffic	11/1/2017 Daily Traffic	11/5/2017 Daily Traffic	11/6/2017 Daily Traffic	11/22/2017 Daily Traffic	11/26/2017 Daily Traffic
159	EB/WB	FM 170 West of Casa Piedra	240	300	320	260	350	260
160	EB/WB	Old Alpine Highway East of US 67	-	-	-	10	-	-

**Count collected on Sunday 3/25/2018 and Monday 3/26/2018*

***Count collected on Sunday 11/12/2017 and Monday 11/13/2017*

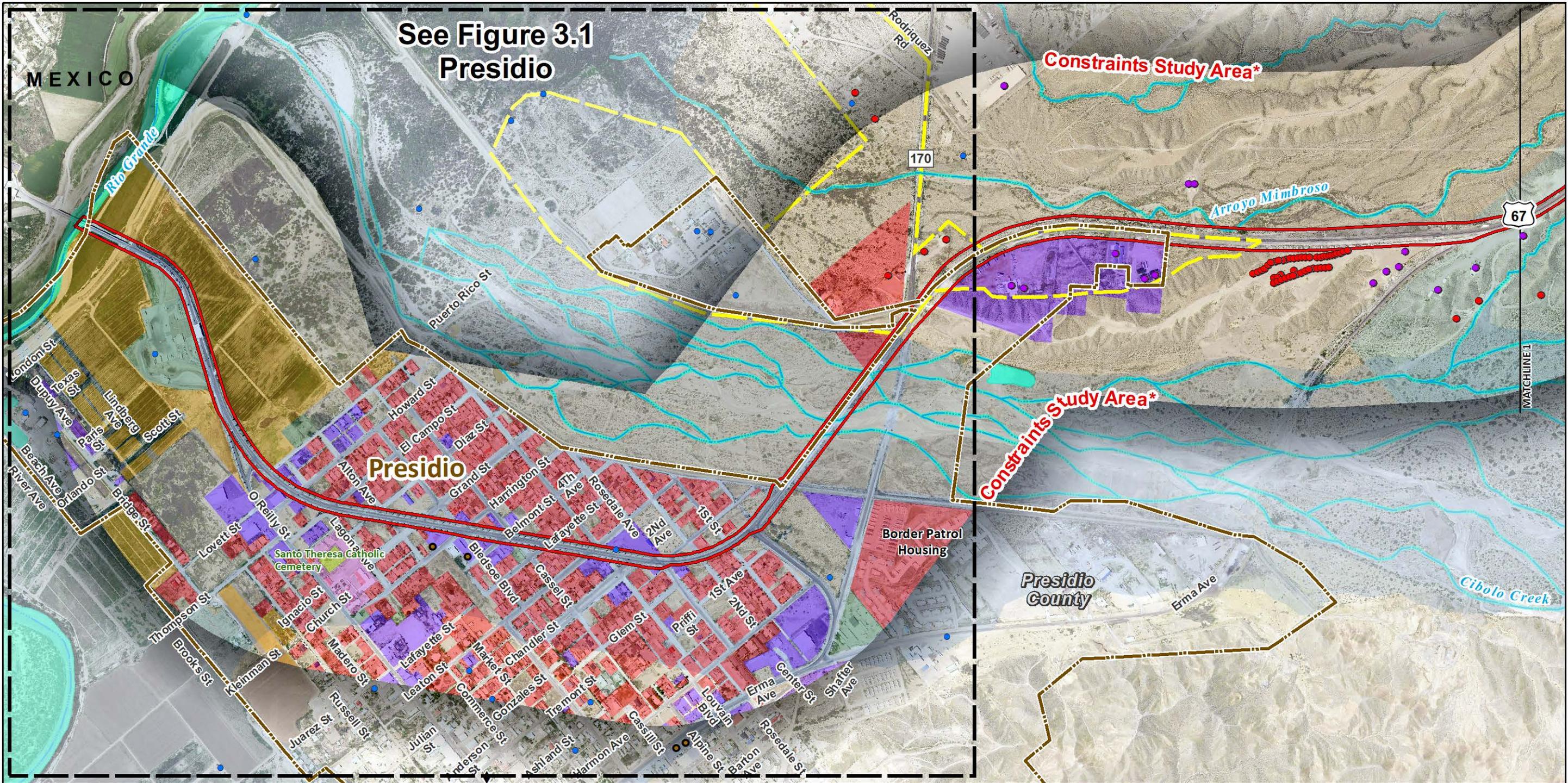


Attachment B

Environmental

Constraints Maps

February 2020



See Figure 3.1
Presidio

Constraints Study Area*

Presidio

Constraints Study Area*

Border Patrol
Housing

Presidio
County

- US 67 Existing Right-of-way
- City Limit
- 100-Year Floodplain
- National Wetland Inventory Feature
- Stream/Creek
- Pond

- Historical Marker
- Residential Structure
- Commercial Structure
- Well Water Intake
- Petroleum Storage Tank
- Colonias

- Land Use**
- Undeveloped
 - Residential
 - Commercial
 - Mixed Residential/Commercial
 - Agricultural

- Church
- Public
- Transportation
- Cemetery

* Constraints Study Area (not Right-of-way)

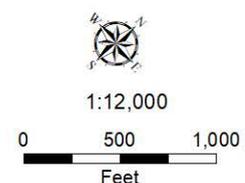
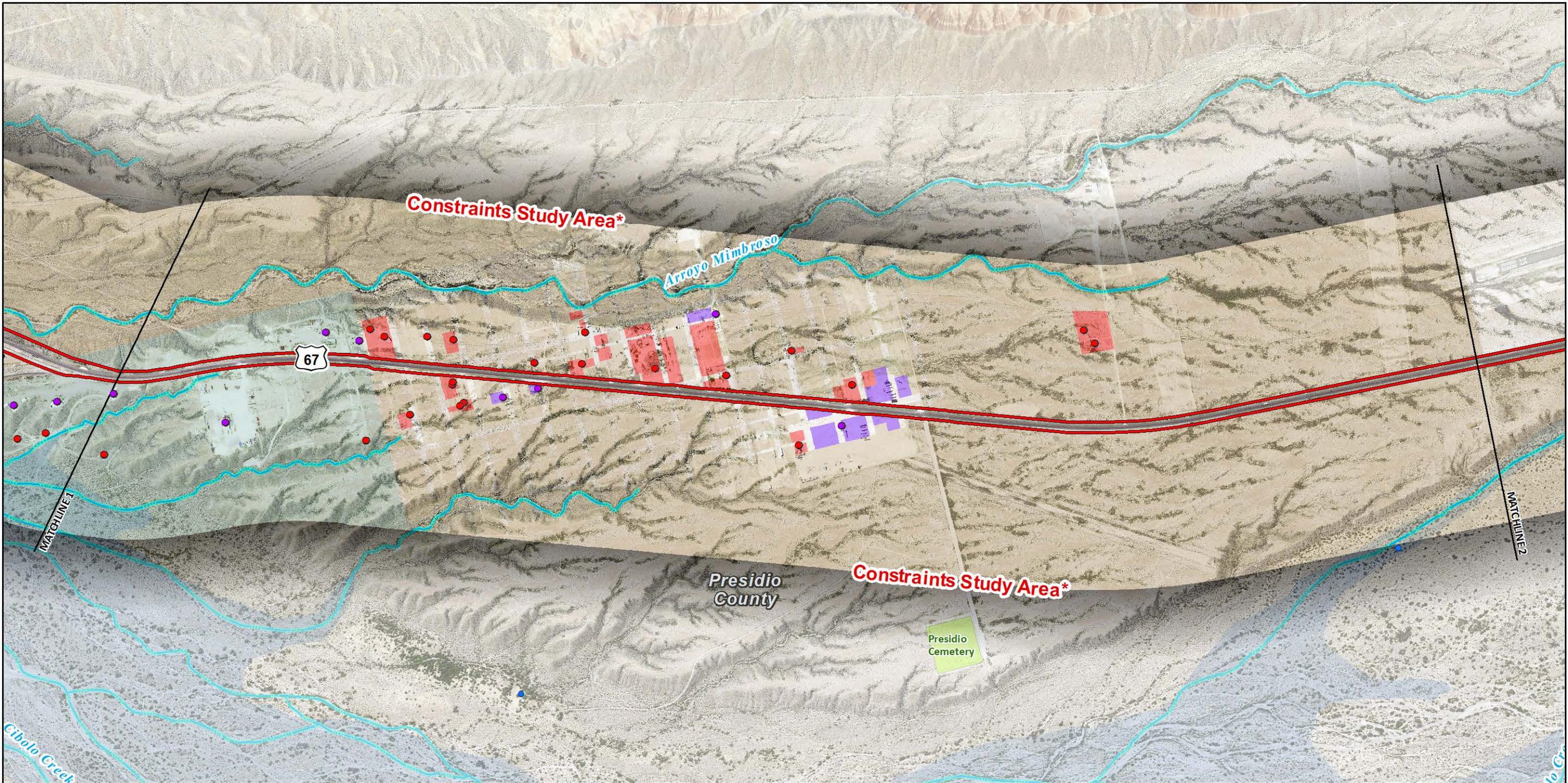


Figure 2.1
Environmental Constraints
US 67 Corridor Master Plan
Presidio, Brewster, and Pecos
Counties, Texas
CSJ: 5000-00-116



- US 67 Existing Right-of-way
 - 100-Year Floodplain
 - National Wetland Inventory Feature
 - Stream/Creek
 - Residential Structure
 - Commercial Structure
 - Well Water Intake
- Land Use**
- Undeveloped
 - Residential
 - Commercial
 - Mixed Residential/Commercial

- Transportation
- Cemetery

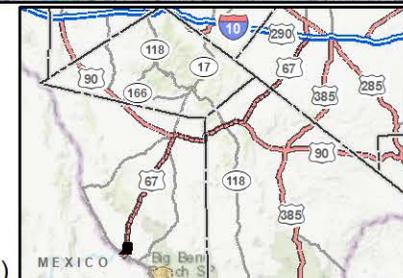
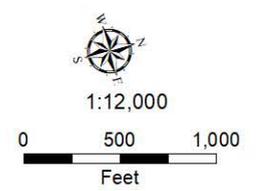


Figure 2.2
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)

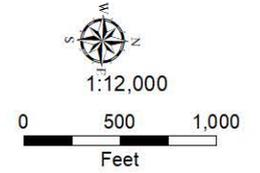
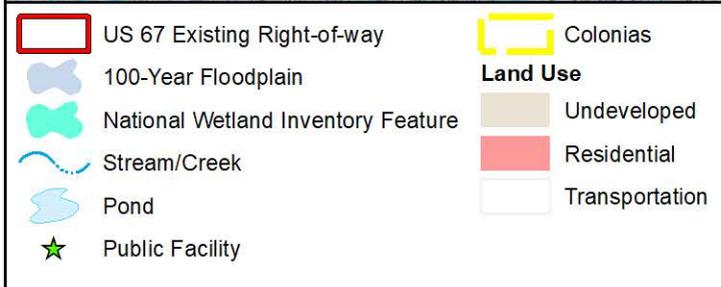
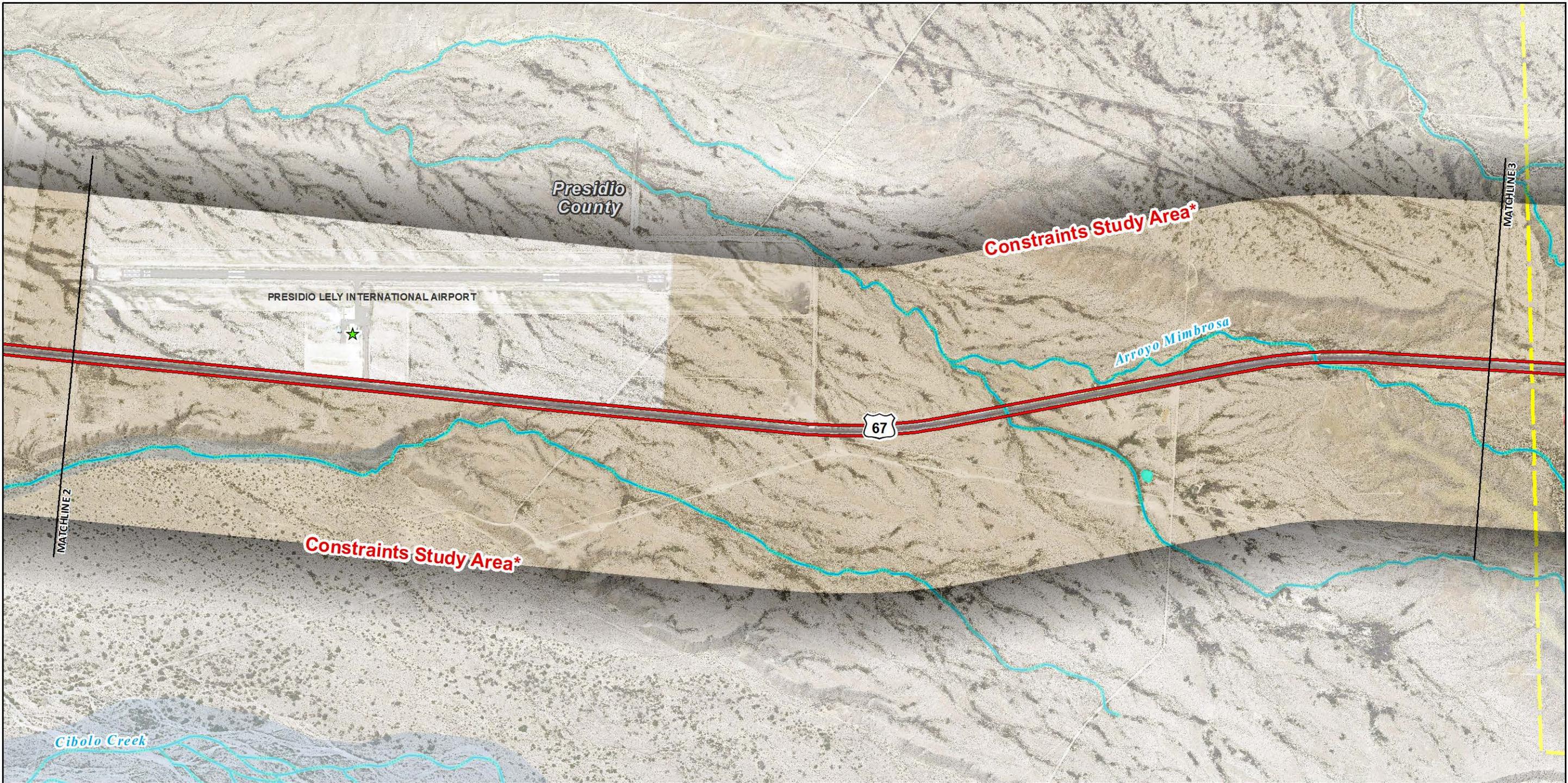


Figure 2.3
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)

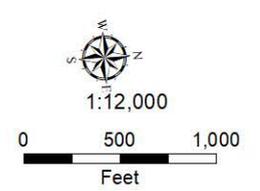
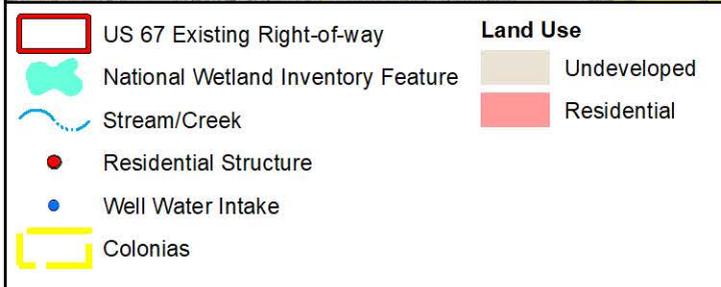
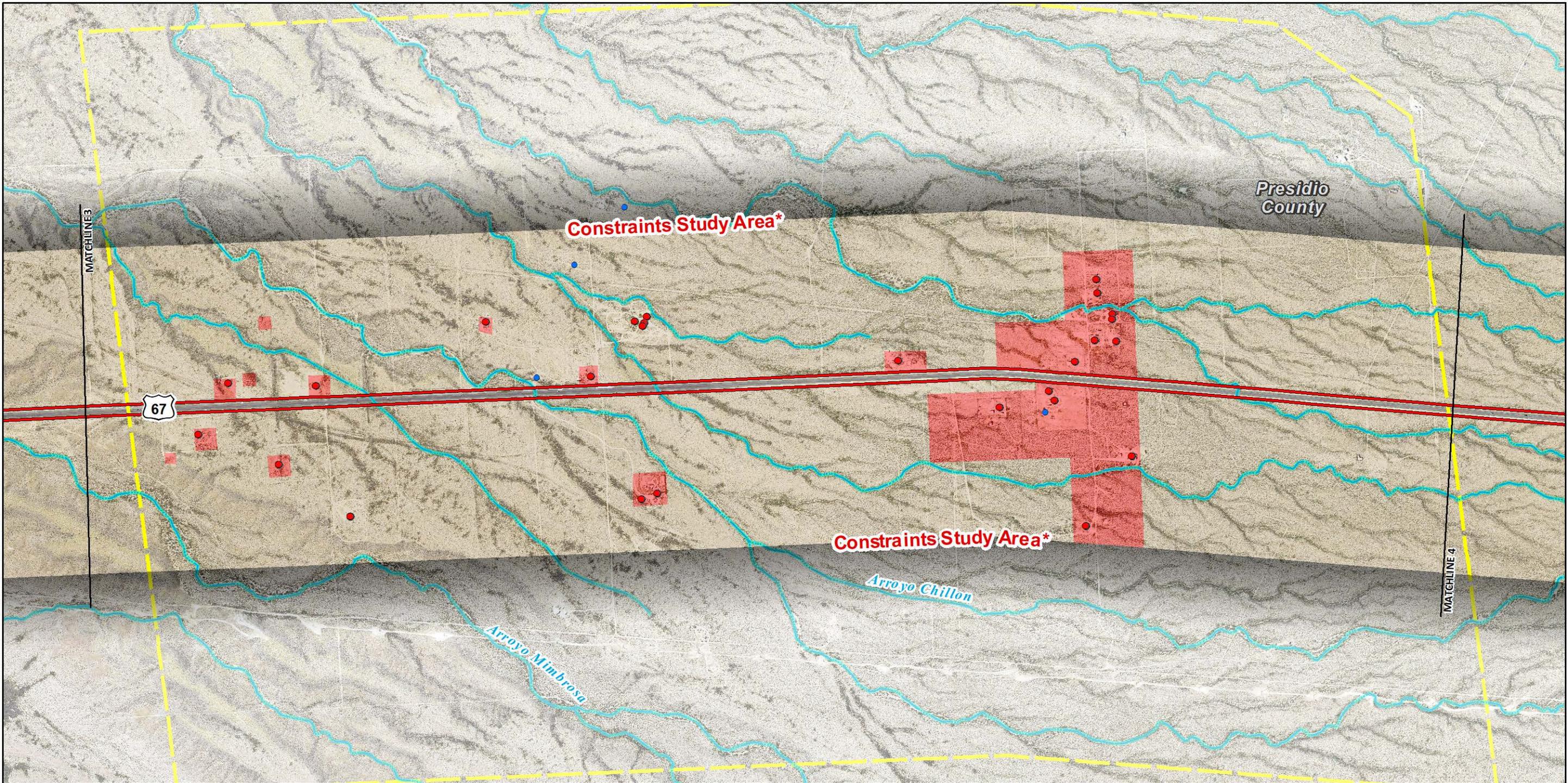


Figure 2.4
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)

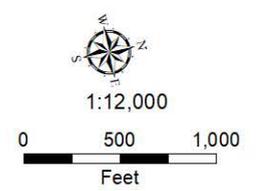


Figure 2.5
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)

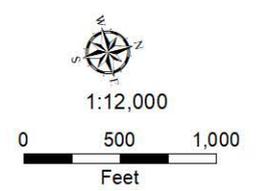
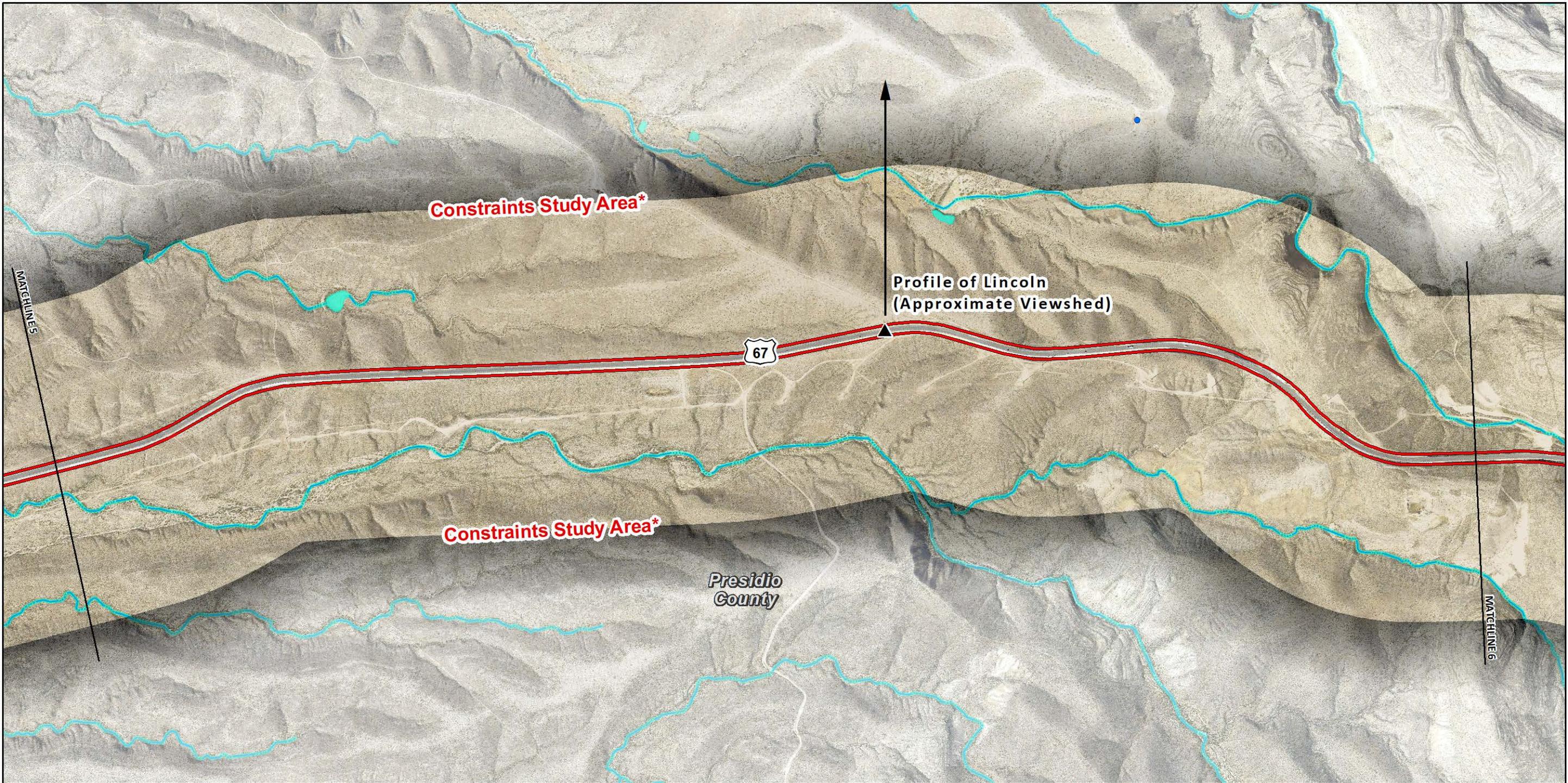
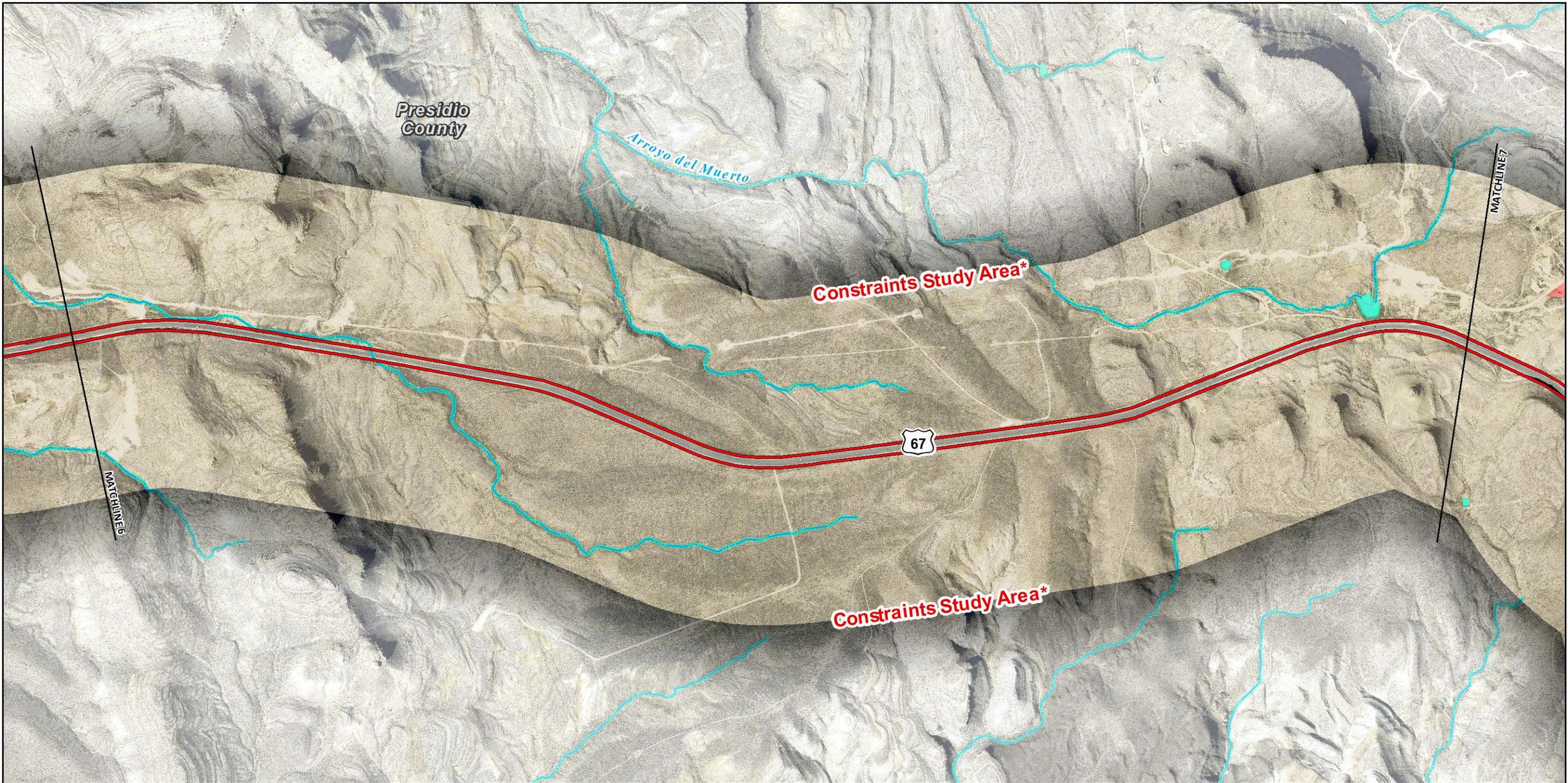


Figure 2.6
Environmental Constraints
US 67 Corridor Master Plan
Presidio, Brewster, and Pecos
Counties, Texas
CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)



Presidio
County

Arroyo del Muerto

Constraints Study Area*

67

Constraints Study Area*

MATCHLINE 7

MATCHLINE 6

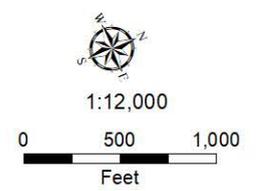
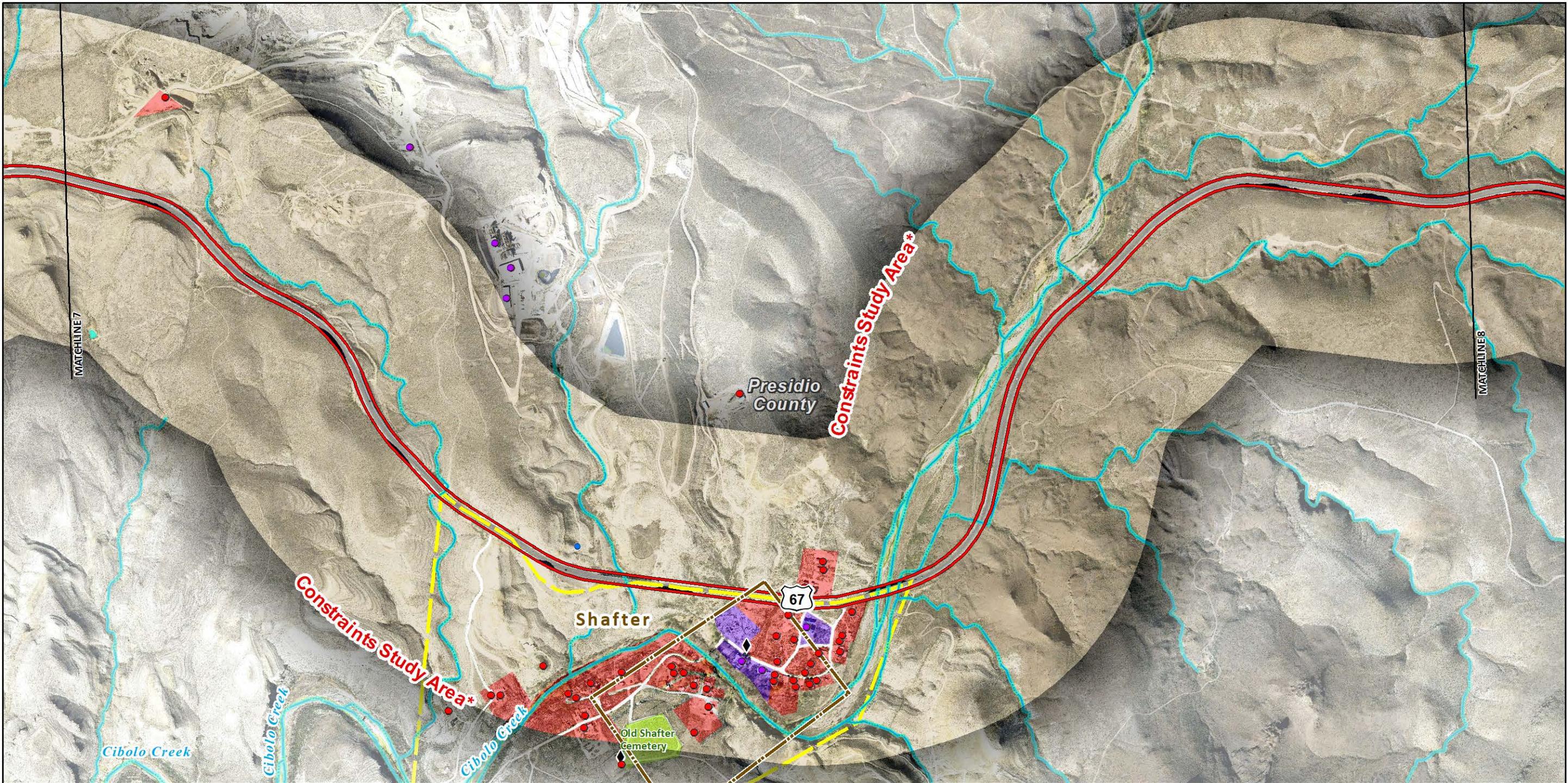


Figure 2.7
Environmental Constraints
US 67 Corridor Master Plan
Presidio, Brewster, and Pecos
Counties, Texas
CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)



- | | | |
|------------------------------------|-----------------------|-----------------|
| US 67 Existing Right-of-way | Residential Structure | Residential |
| City Limit | Commercial Structure | Commercial |
| National Wetland Inventory Feature | Well Water Intake | Cemetery |
| Stream/Creek | Colonias | Land Use |
| Pond | Undeveloped | |
| Historical Marker | | |

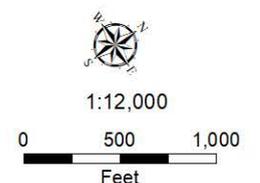


Figure 2.8
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)

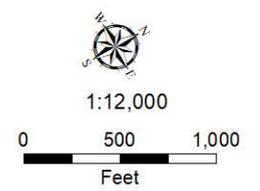
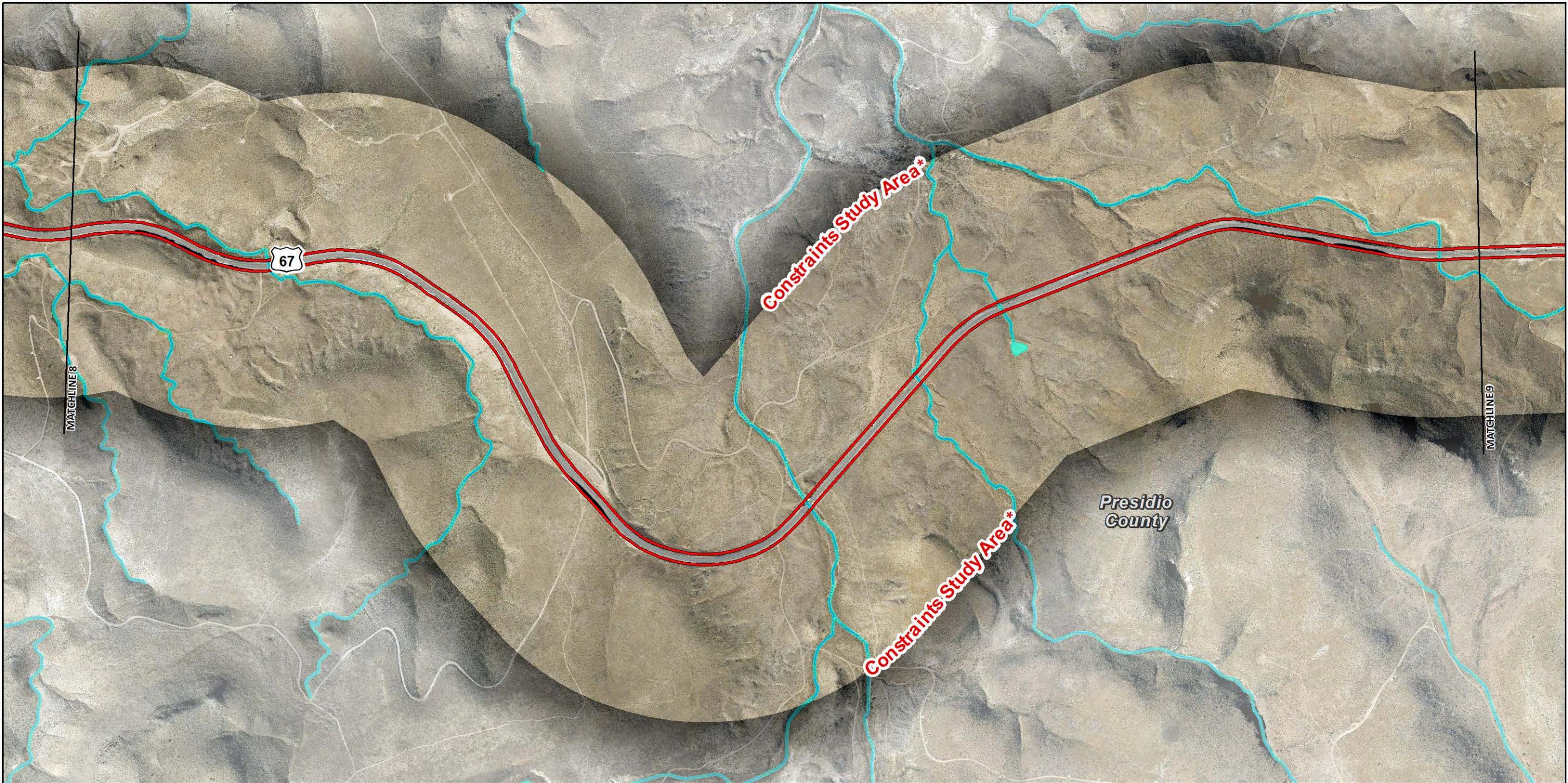
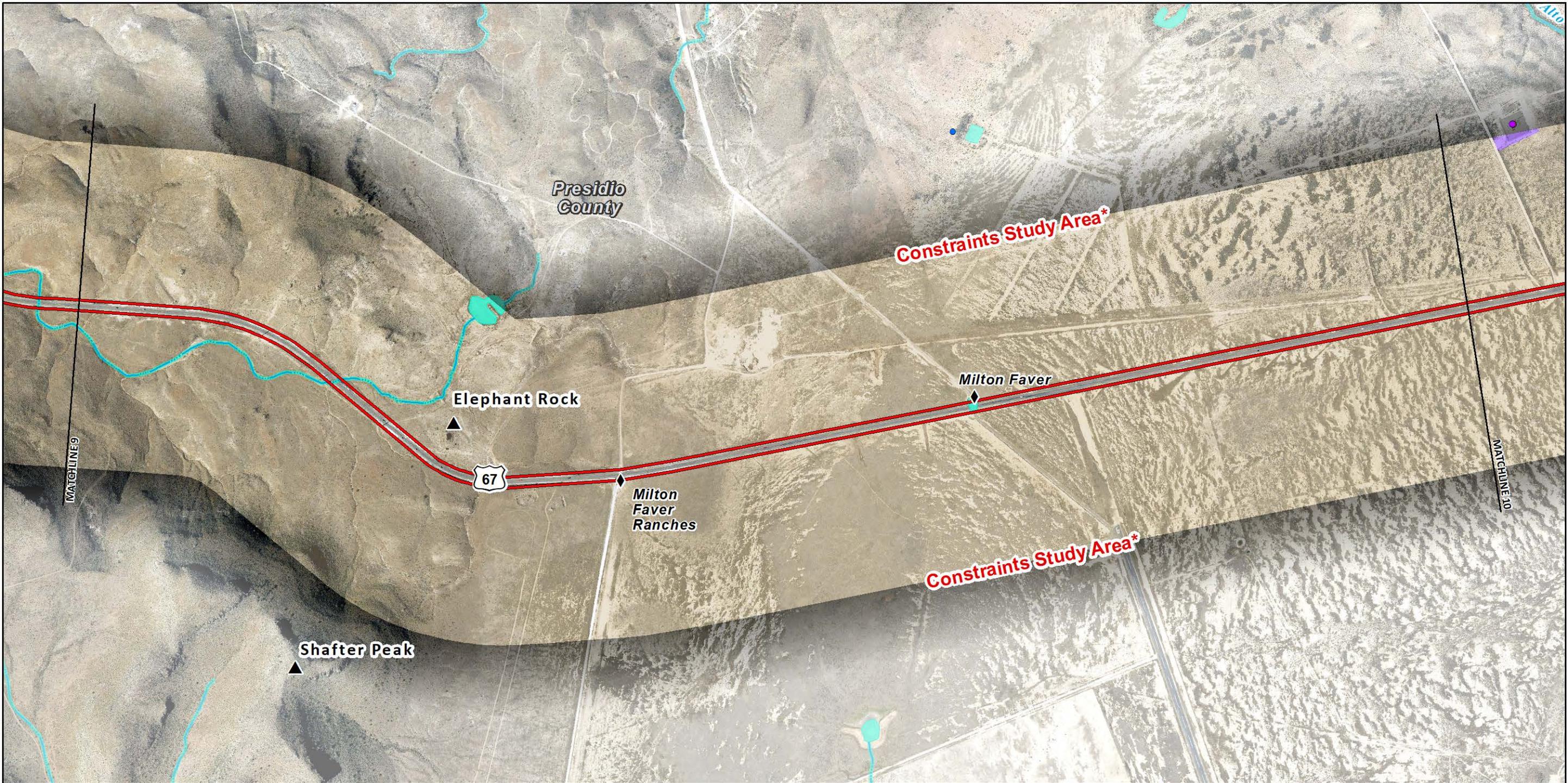


Figure 2.9
Environmental Constraints
US 67 Corridor Master Plan
Presidio, Brewster, and Pecos
Counties, Texas
CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)



- | | |
|------------------------------------|----------------------|
| US 67 Existing Right-of-way | Commercial Structure |
| National Wetland Inventory Feature | Well Water Intake |
| Stream/Creek | |
| Pond | Land Use |
| Landmark | Undeveloped |
| Historical Marker | Commercial |

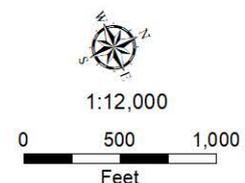


Figure 2.10
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)

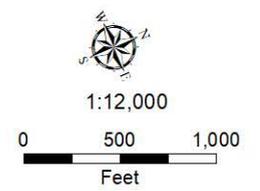
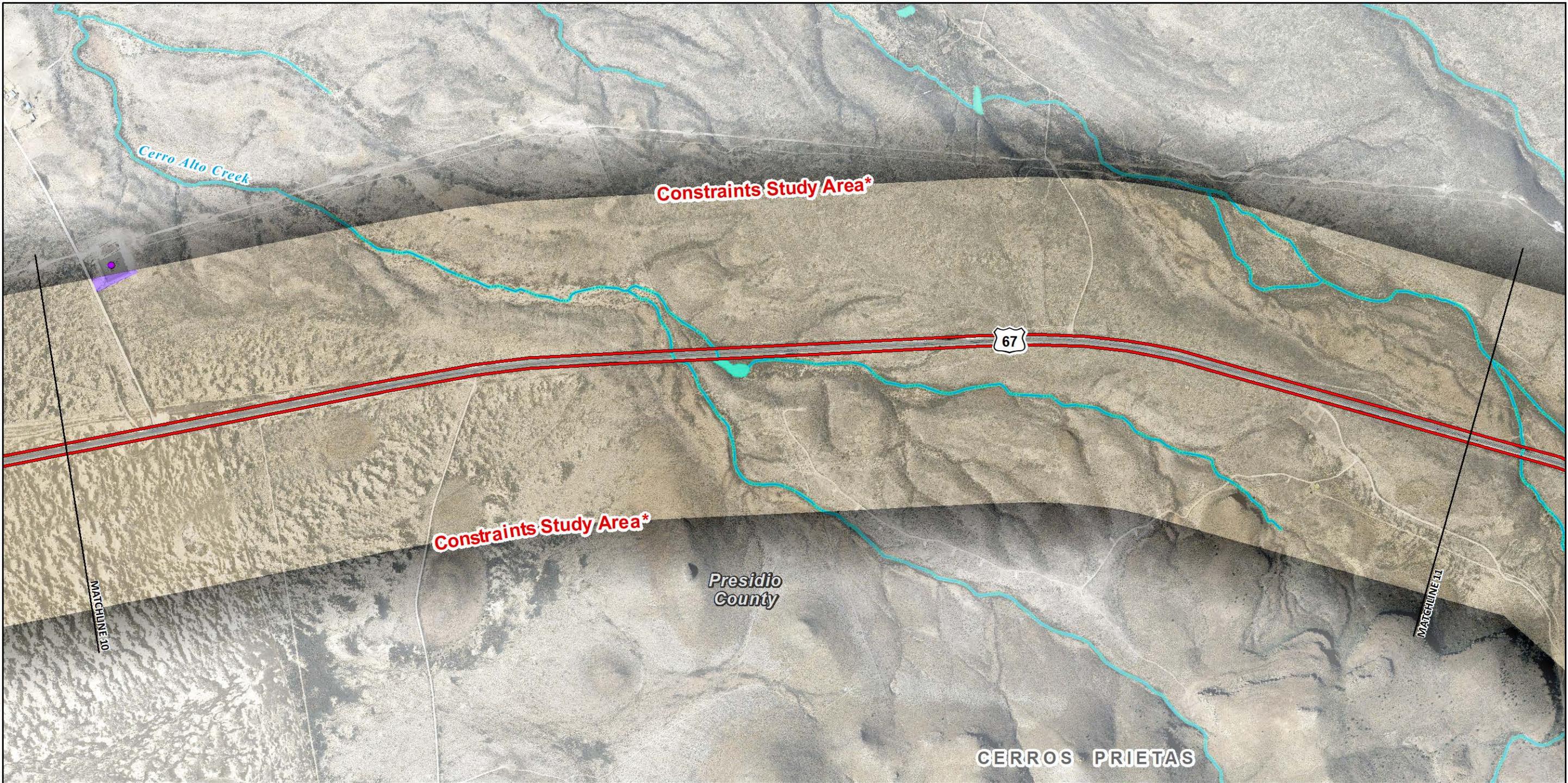


Figure 2.11
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)



 US 67 Existing Right-of-way	 National Wetland Inventory Feature
 Stream/Creek	 Pond
Land Use	
 Undeveloped	

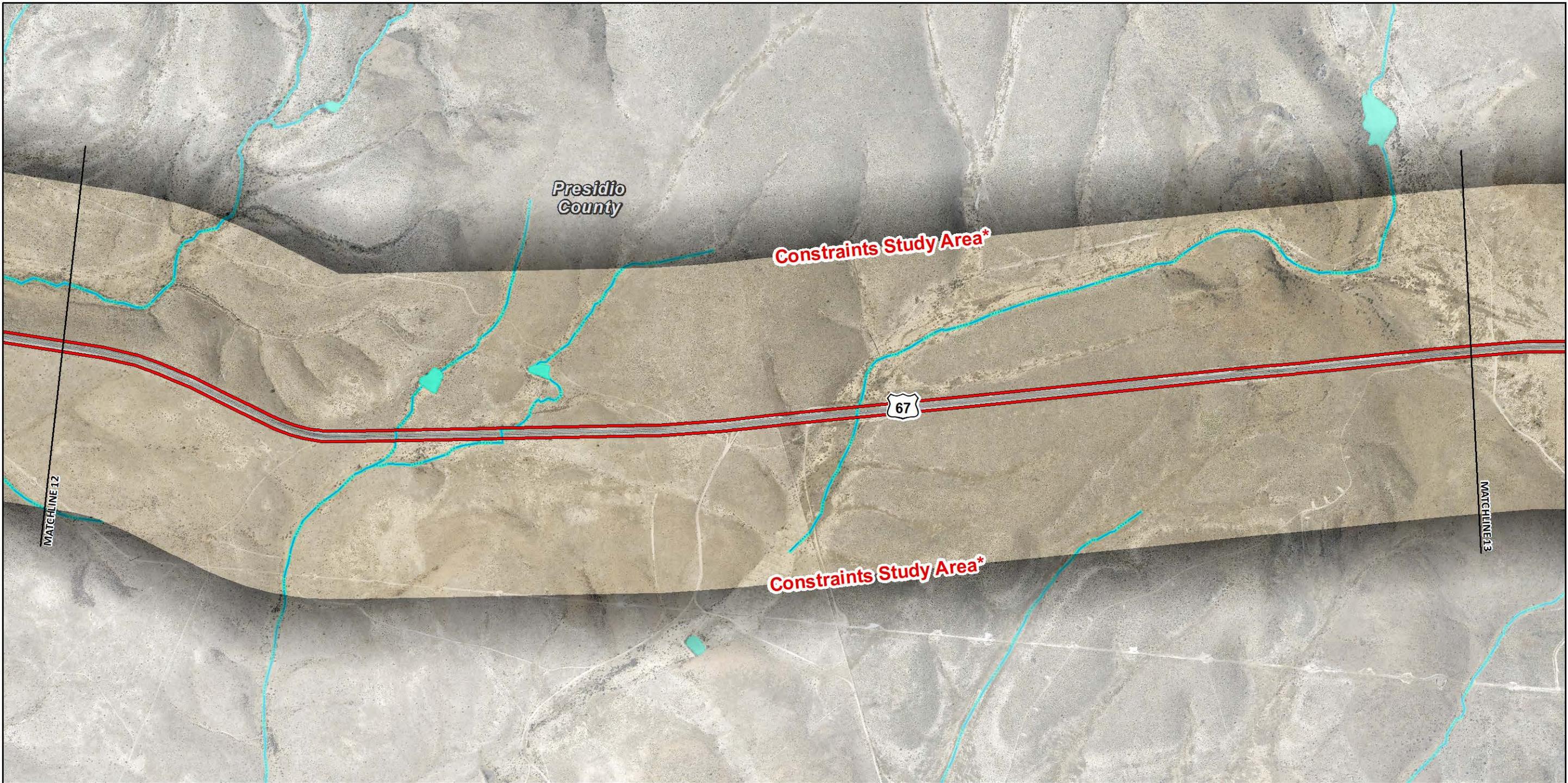

 1:12,000

 0 500 1,000
 Feet



Figure 2.12
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)



-  US 67 Existing Right-of-way
-  National Wetland Inventory Feature
-  Stream/Creek
-  Pond
- Land Use**
-  Undeveloped

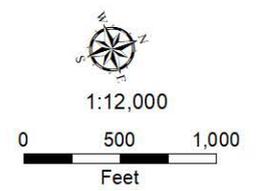


Figure 2.13
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)



Constraints Study Area*

67

Constraints Study Area*

Presidio
County

MATCHLINE 13

Cienega Creek

MATCHLINE 14

Creek



*Presidio
County*



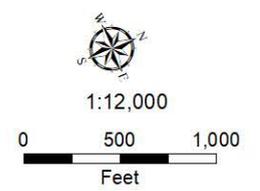
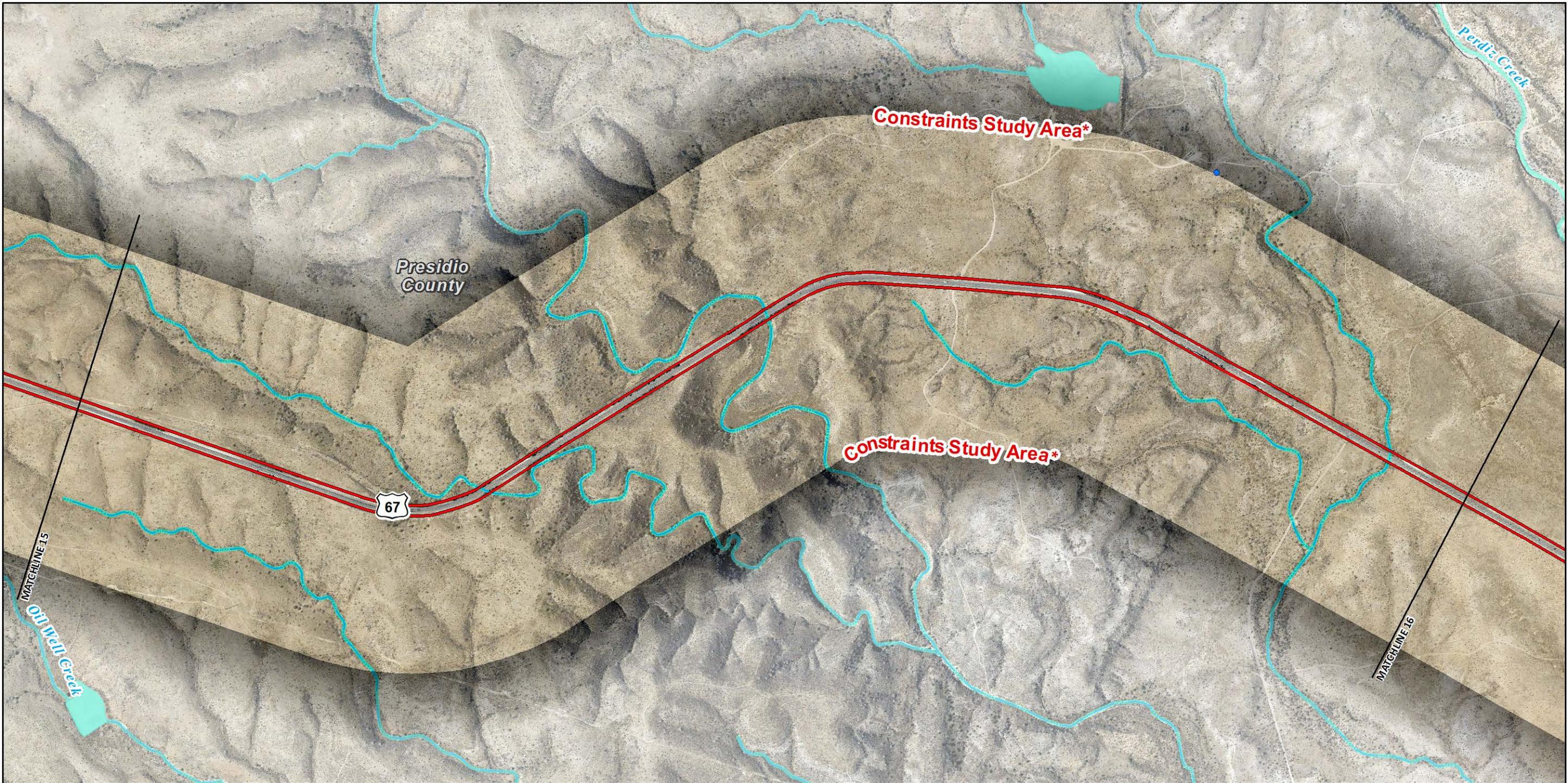


Figure 2.16
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)



- US 67 Existing Right-of-way
- National Wetland Inventory Feature
- Stream/Creek
- Pond
- Land Use**
- Undeveloped

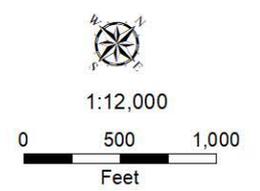


Figure 2.17
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)



- | | |
|--|---|
|  US 67 Existing Right-of-way | Land Use |
|  National Wetland Inventory Feature |  Undeveloped |
|  Stream/Creek | |
|  Pond | |
|  Well Water Intake | |

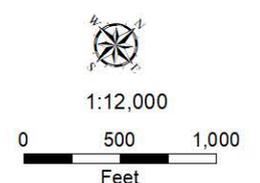
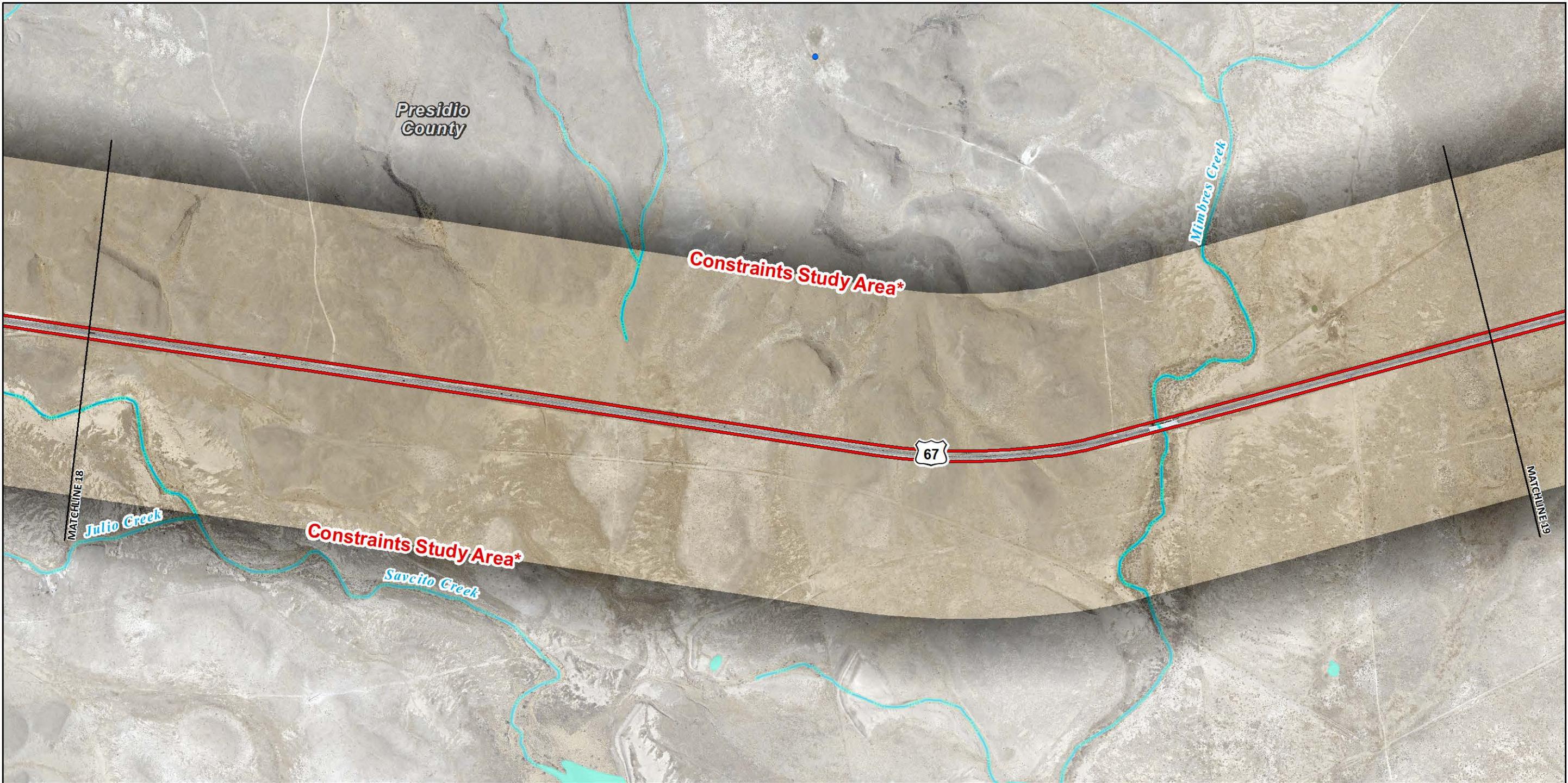


Figure 2.18
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)



- | | |
|--|---|
|  US 67 Existing Right-of-way | Land Use |
|  National Wetland Inventory Feature |  Undeveloped |
|  Stream/Creek | |
|  Pond | |
|  Well Water Intake | |

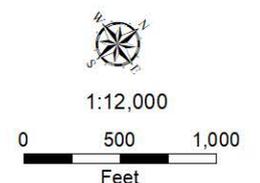
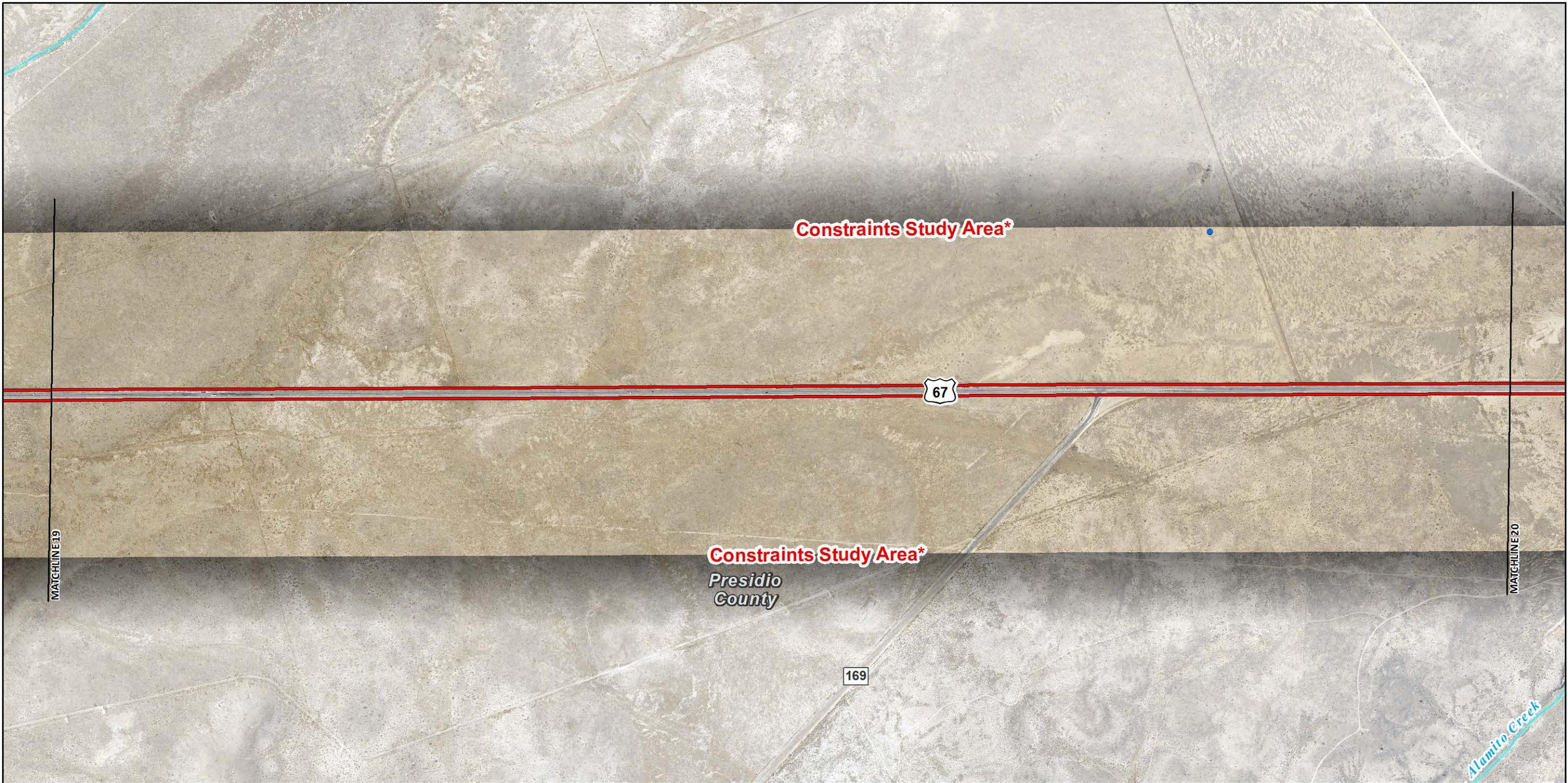


Figure 2.19
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)



-  US 67 Existing Right-of-way
-  National Wetland Inventory Feature
-  Stream/Creek
-  Well Water Intake
- Land Use**
-  Undeveloped

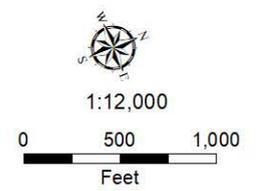
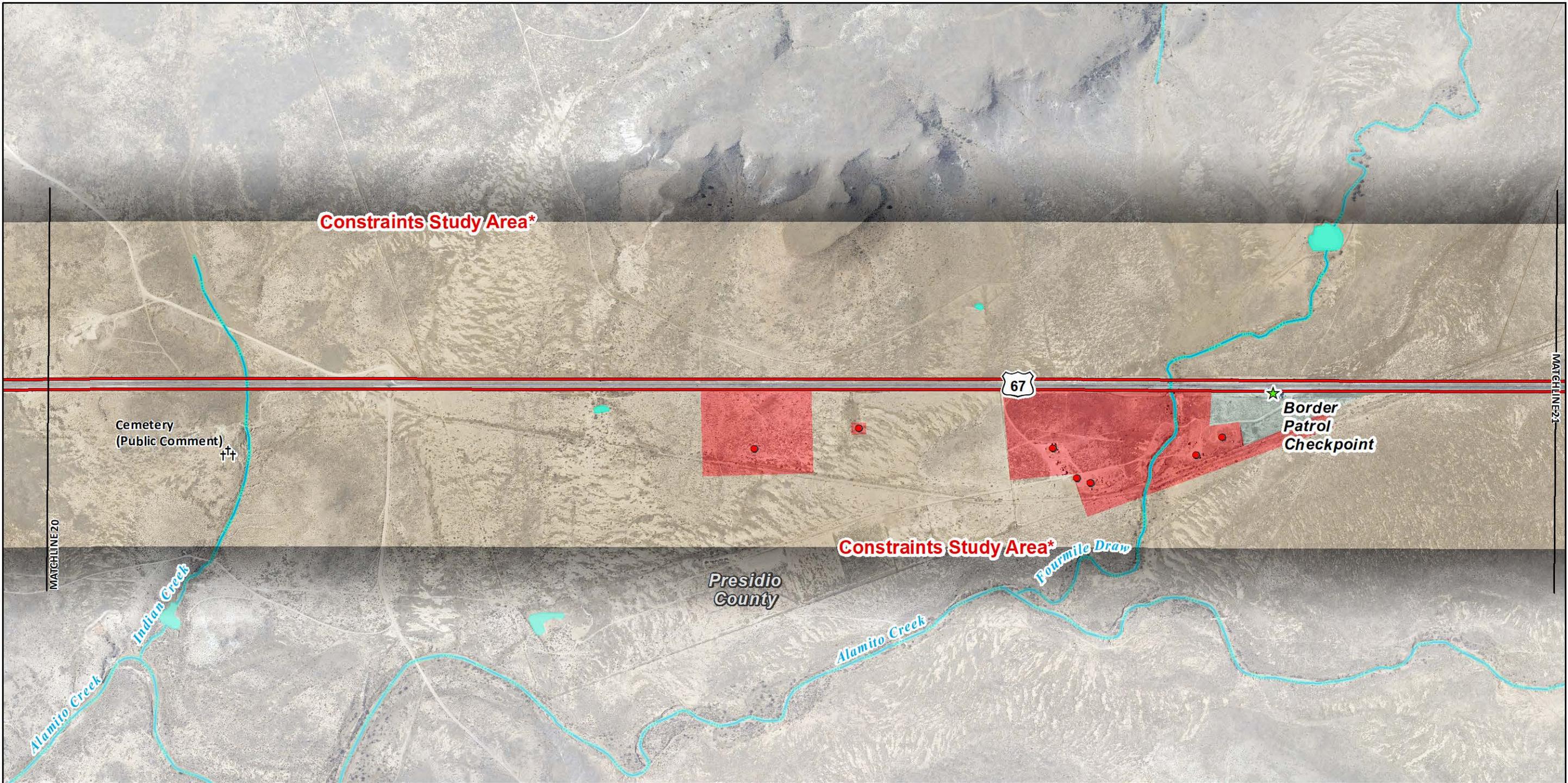


Figure 2.20
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)



- | | |
|------------------------------------|------------------------------|
| US 67 Existing Right-of-way | Cemetery (Public Comment) |
| National Wetland Inventory Feature | Land Use |
| Stream/Creek | Undeveloped |
| Pond | Residential |
| Residential Structure | Mixed Residential/Commercial |
| Public Facility | |

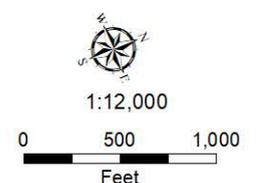
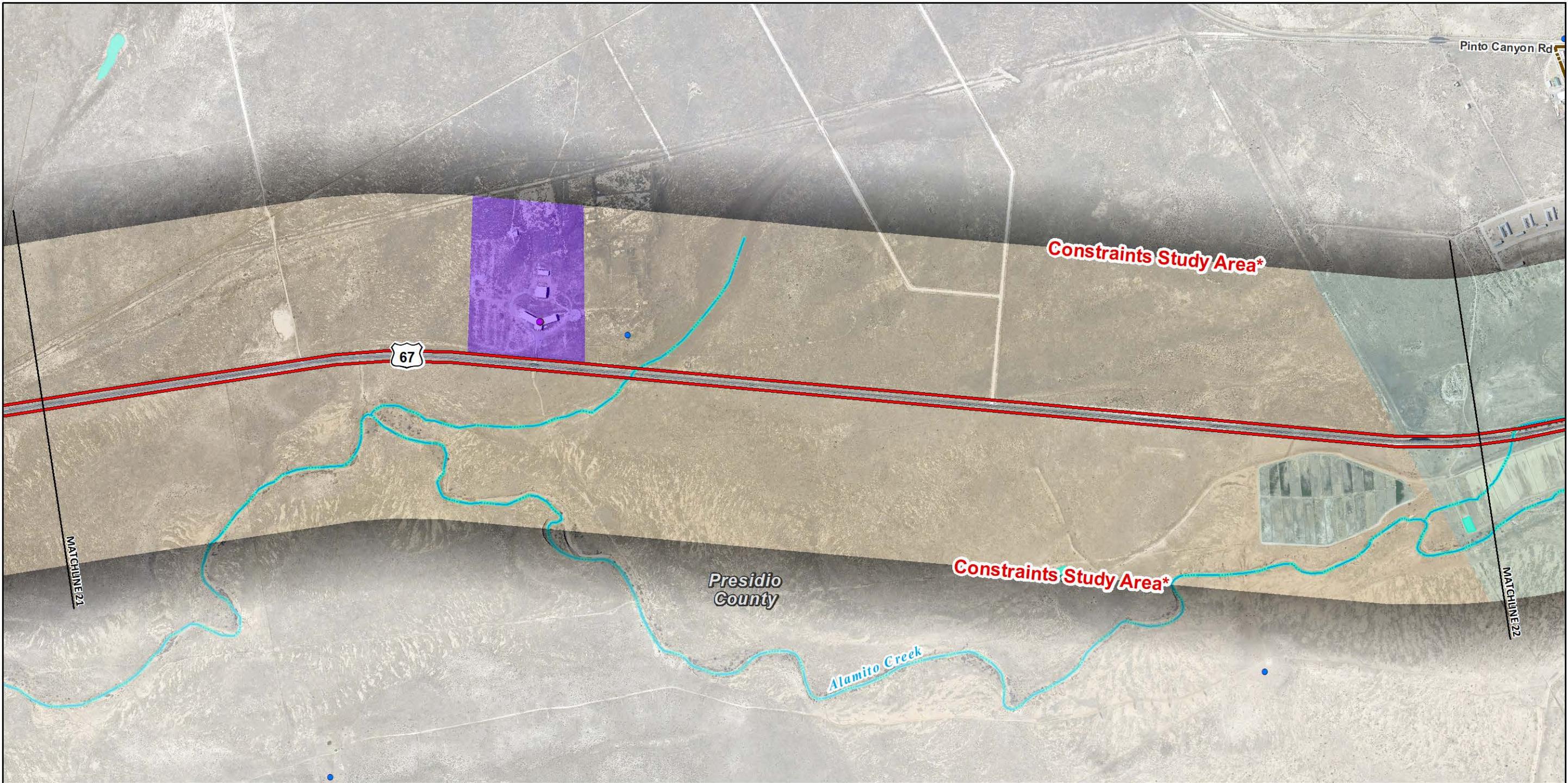


Figure 2.21
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)



 US 67 Existing Right-of-way	 Well Water Intake
 City Limit	Land Use
 National Wetland Inventory Feature	 Undeveloped
 Stream/Creek	 Commercial
 Pond	 Mixed Residential/Commercial
 Commercial Structure	

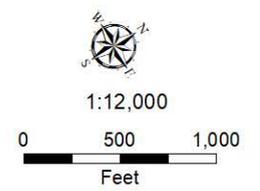
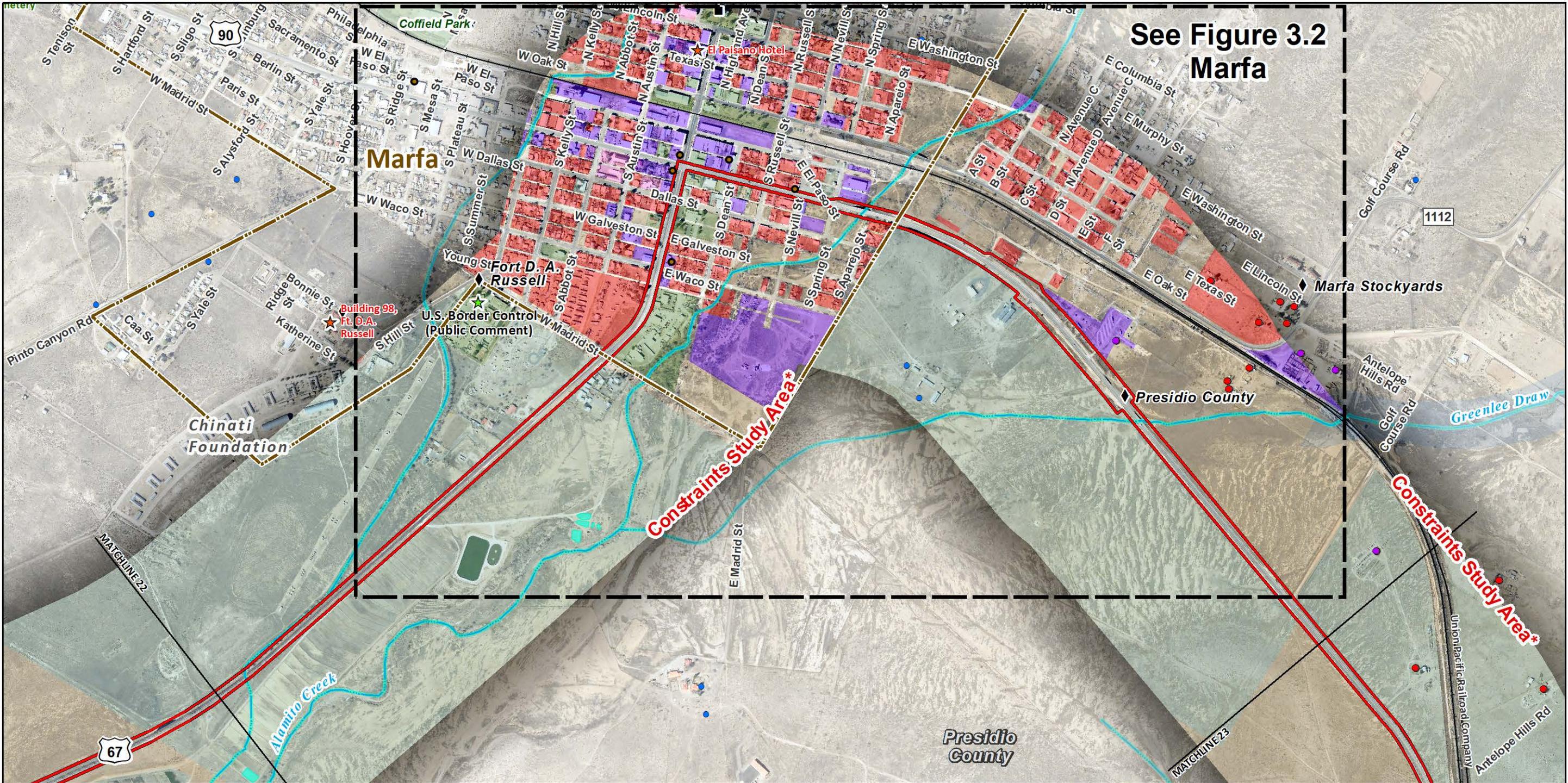


Figure 2.22
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)

See Figure 3.2
Marfa



US 67 Existing Right-of-way	Pond	Well Water Intake	Mixed Residential/Commercial	Cemetery
City Limit	National Register Property	Petroleum Storage Tank	School	
Railroad (TxDOT)	Historical Marker		Church	
100-Year Floodplain	Residential Structure	Land Use	Public	
National Wetland Inventory Feature	Commercial Structure	Undeveloped	Transportation	
Stream/Creek	Public Facility	Residential	Utility	
		Commercial		

* Constraints Study Area (not Right-of-way)

Figure 2.23
Environmental Constraints
US 67 Corridor Master Plan
Presidio, Brewster, and Pecos
Counties, Texas
CSJ: 5000-00-116

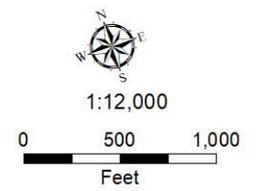
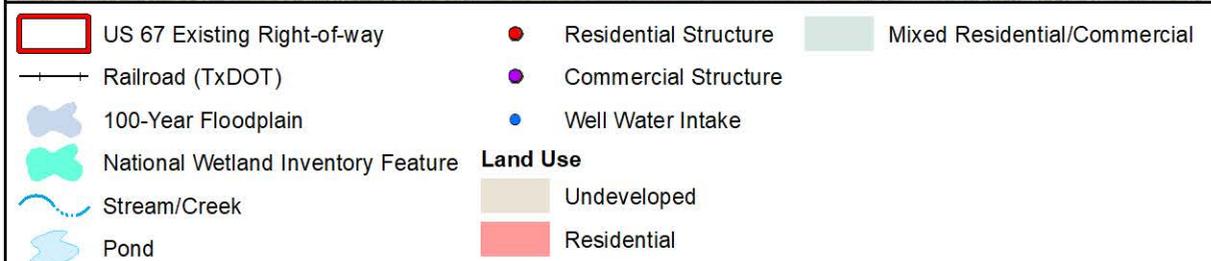
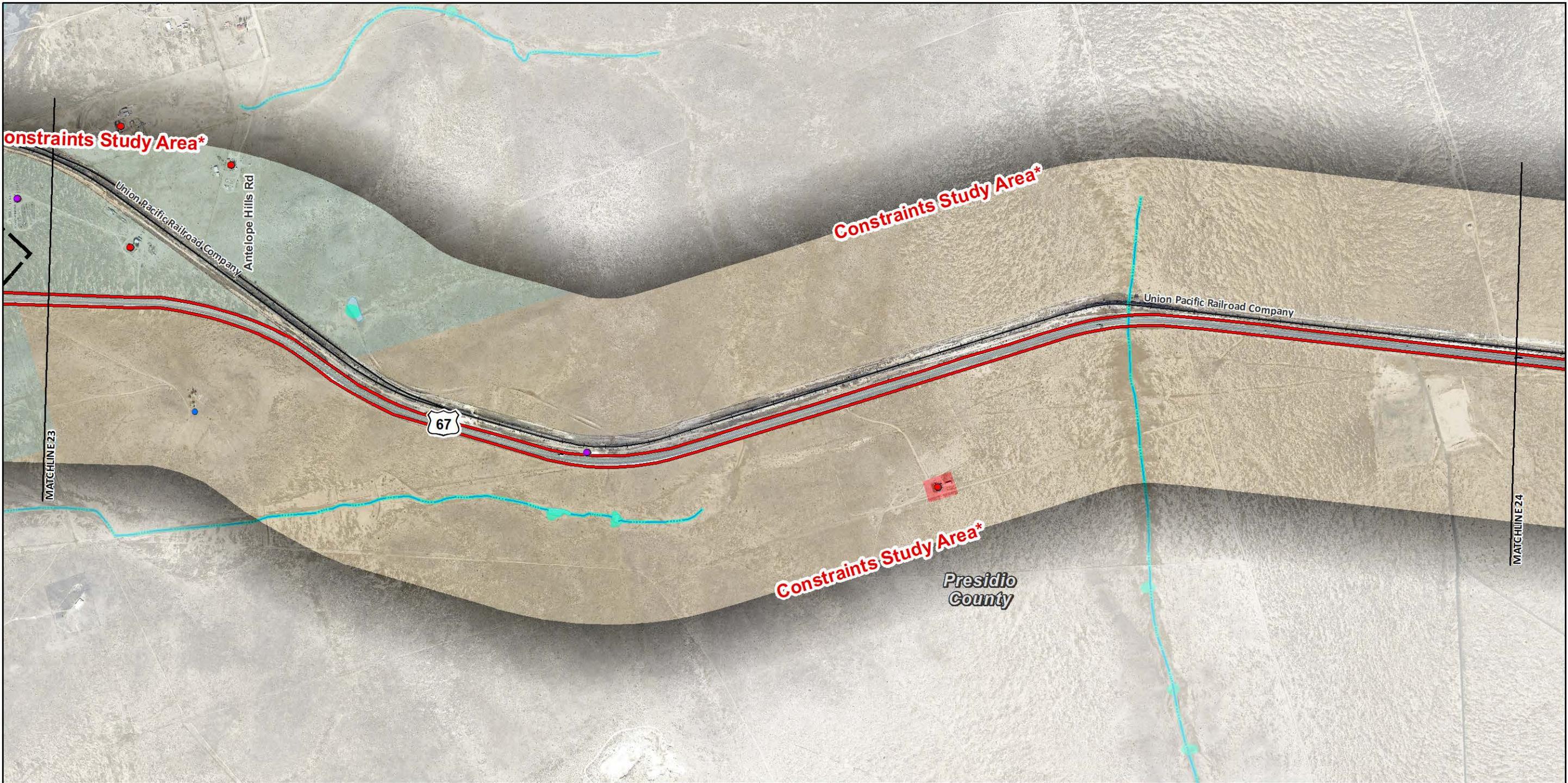


Figure 2.24
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)

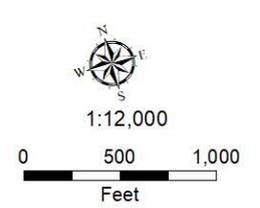
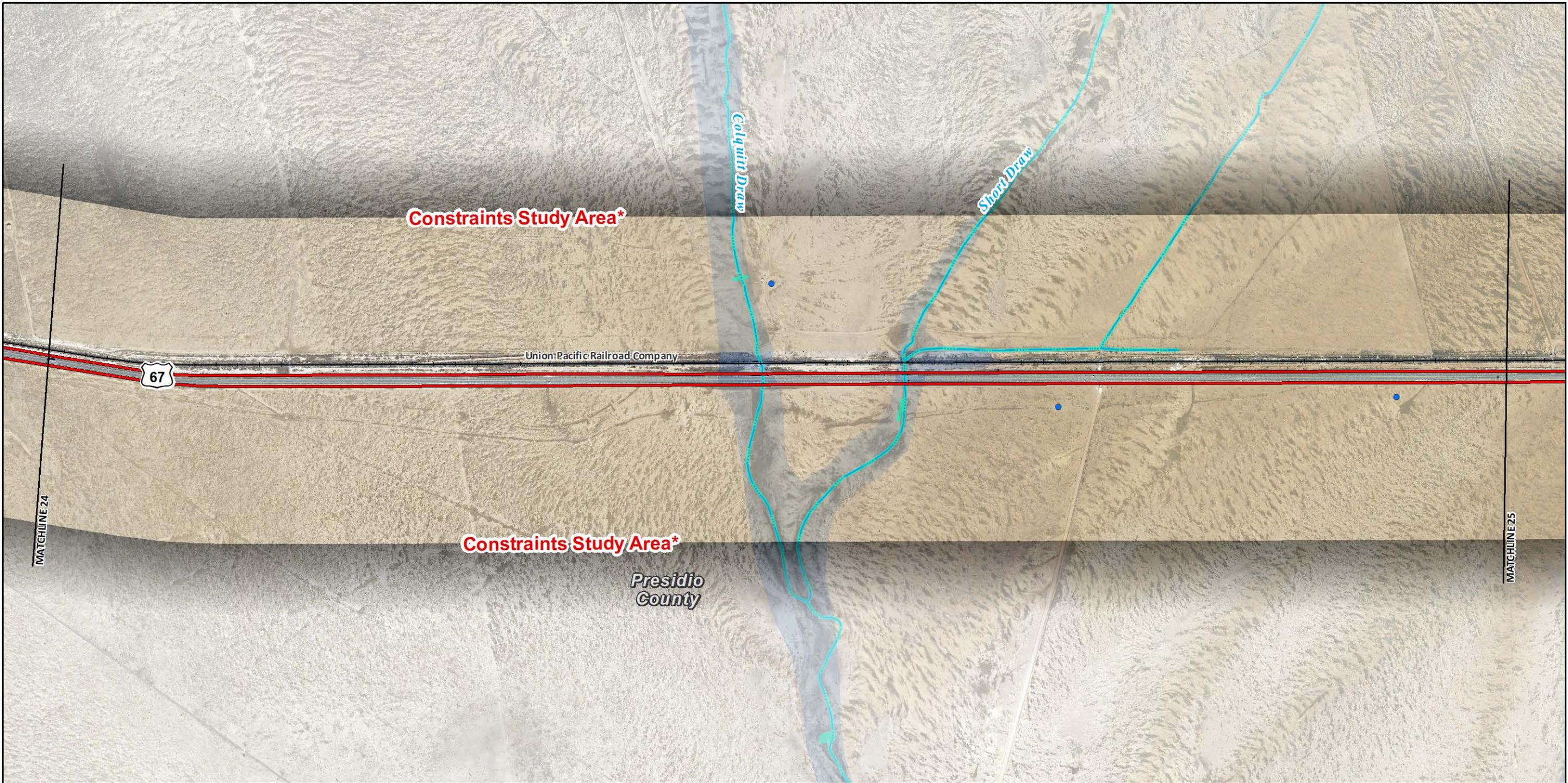
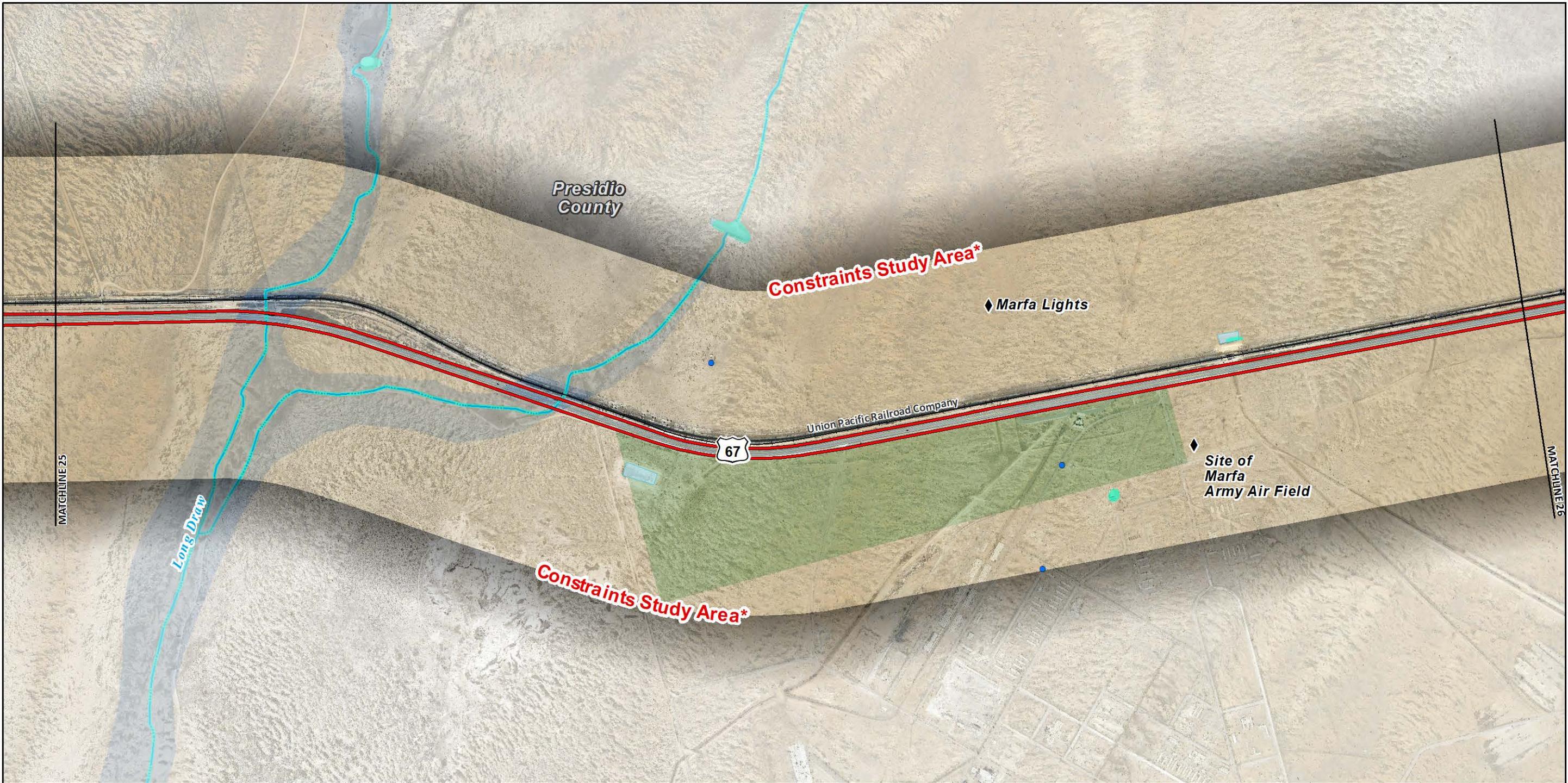


Figure 2.25
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)



- | | |
|------------------------------------|-------------------|
| US 67 Existing Right-of-way | Historical Marker |
| Railroad (TxDOT) | Well Water Intake |
| 100-Year Floodplain | Land Use |
| National Wetland Inventory Feature | Undeveloped |
| Stream/Creek | Public |
| Pond | |

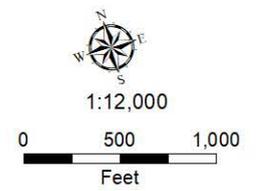


Figure 2.26
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)

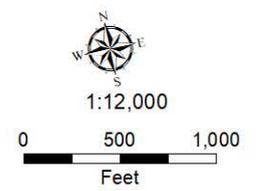
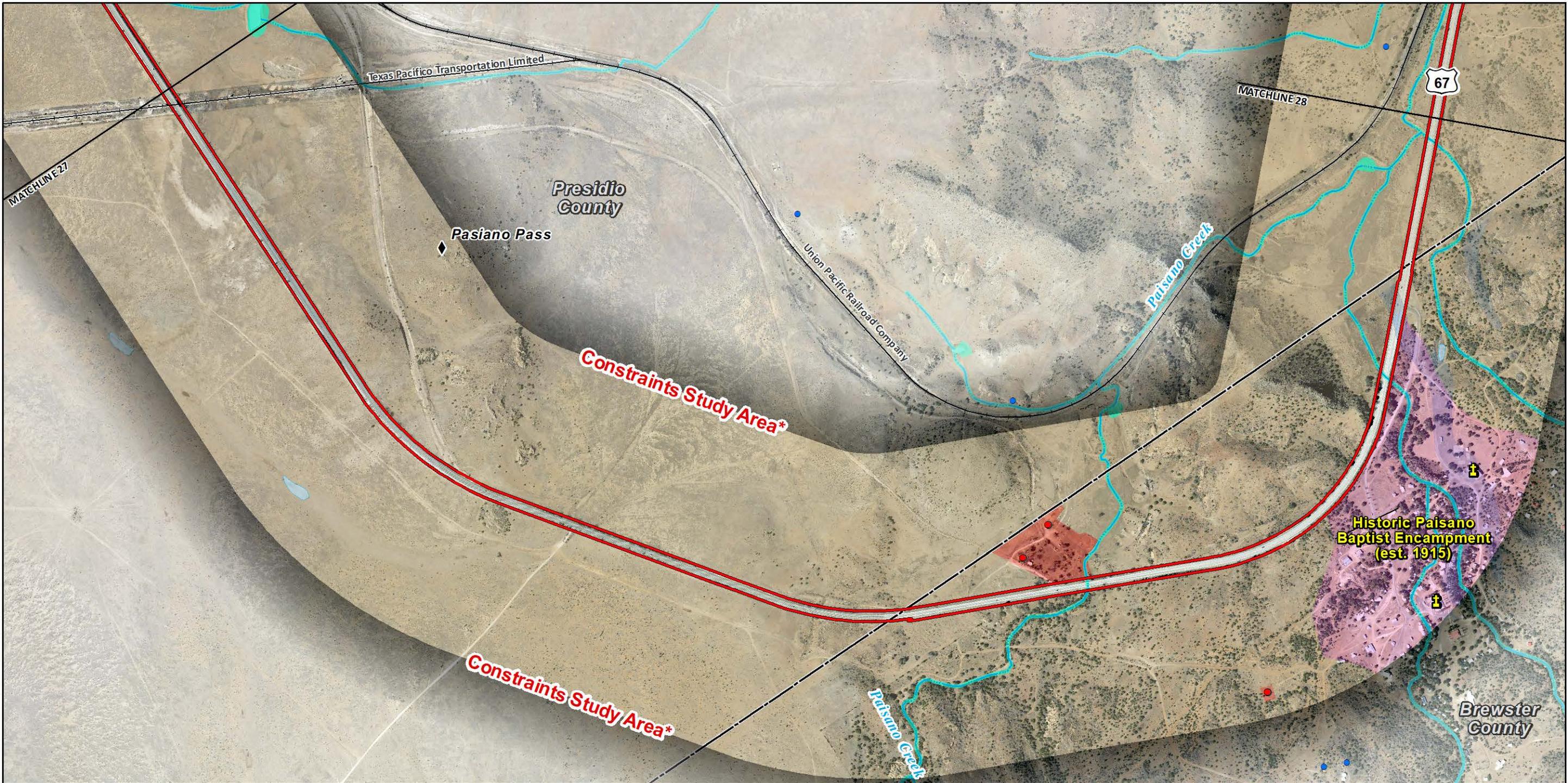


Figure 2.27
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)



US 67 Existing Right-of-way	Pond	Land Use
Railroad (TxDOT)	Historical Marker	Residential
County Boundary	Residential Structure	Church
100-Year Floodplain	Church	Undeveloped
National Wetland Inventory Feature	Well Water Intake	Land Use
Stream/Creek		Undeveloped

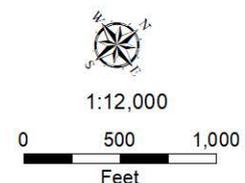


Figure 2.28
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)

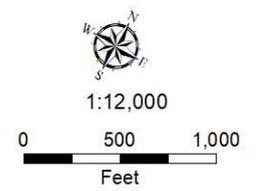
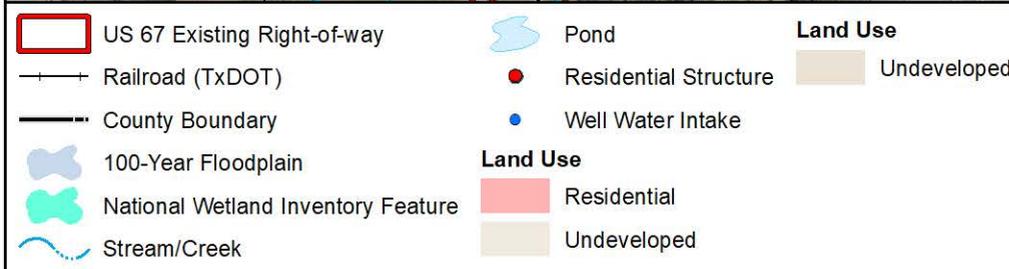
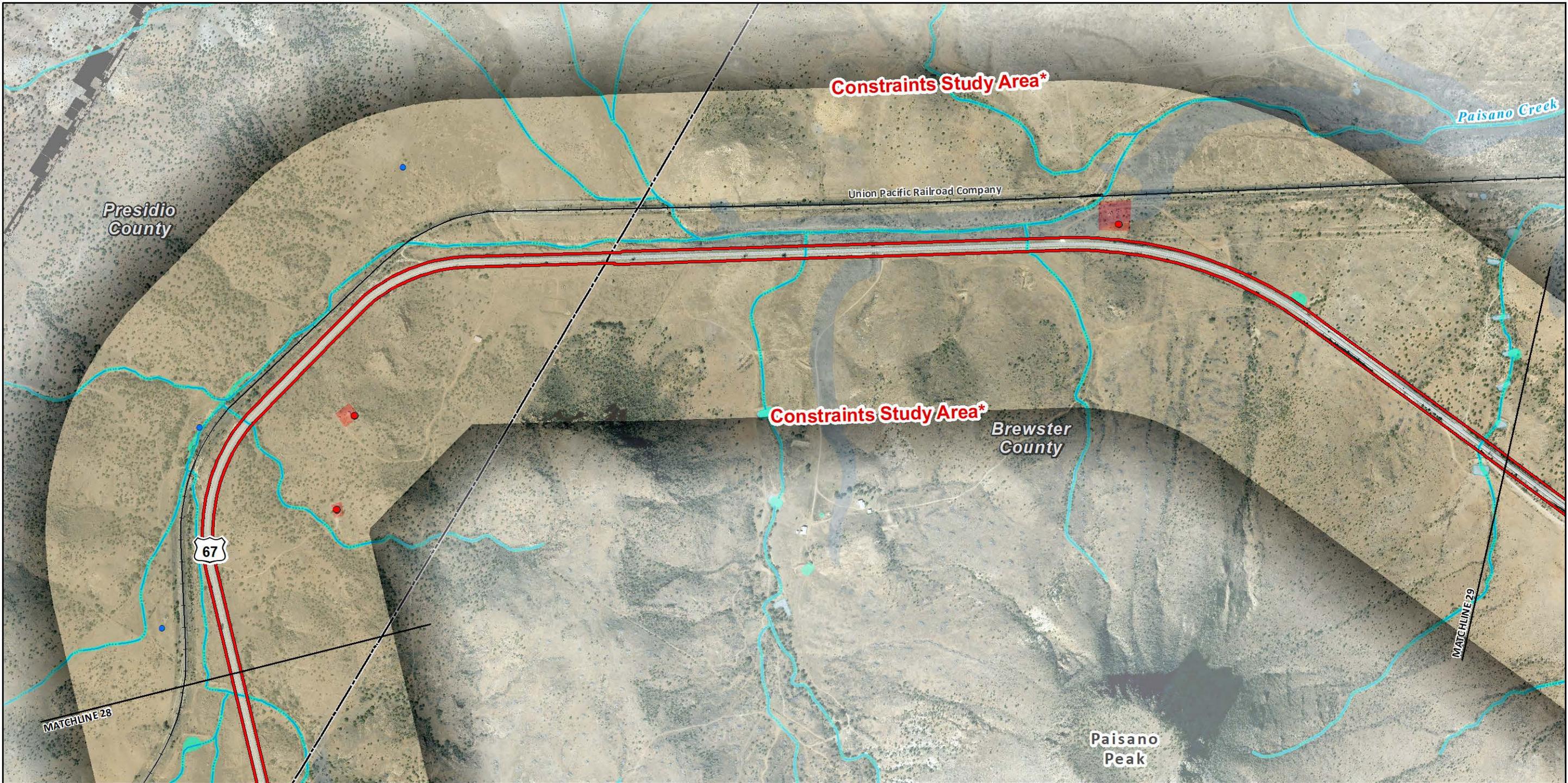


Figure 2.29
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)

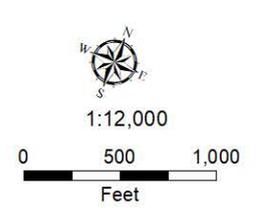
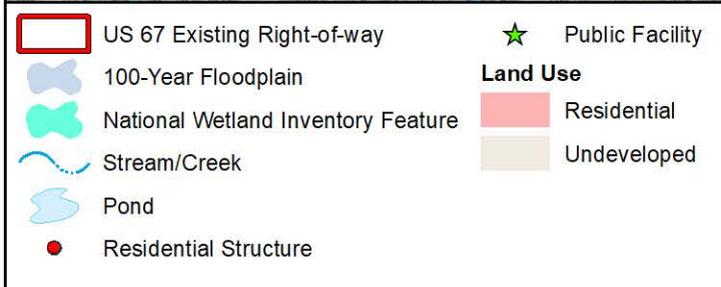


Figure 2.30
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)

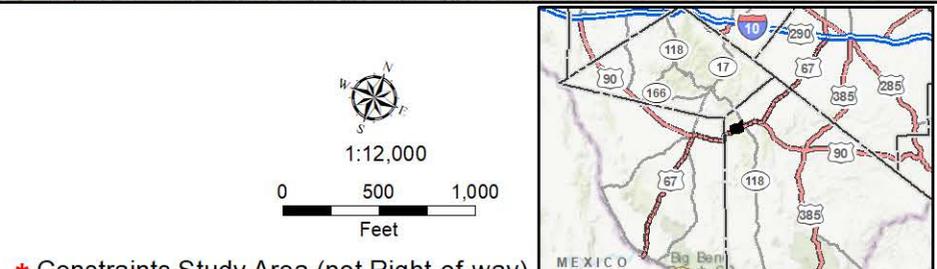
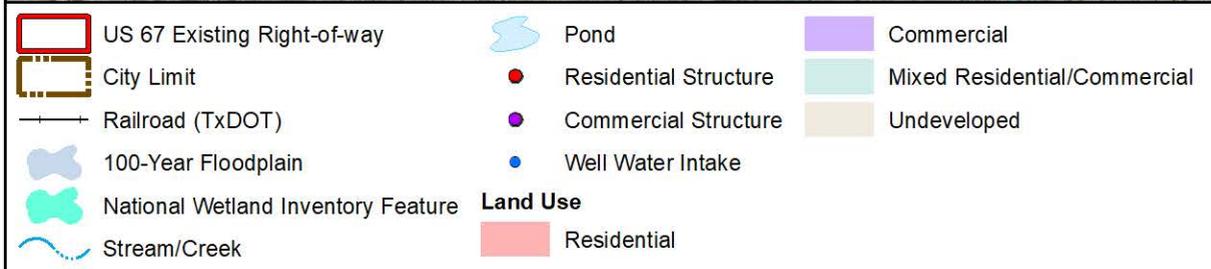
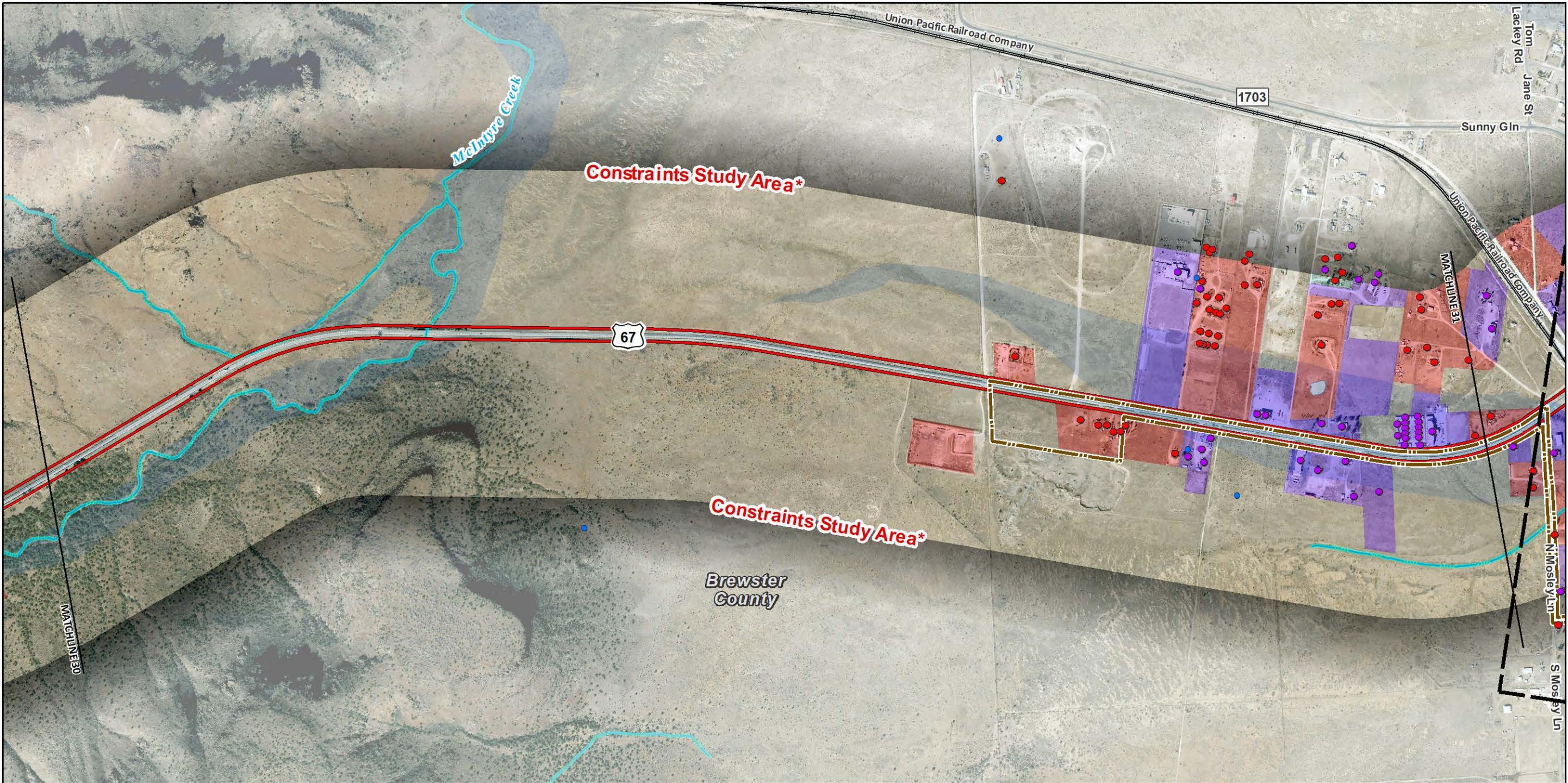
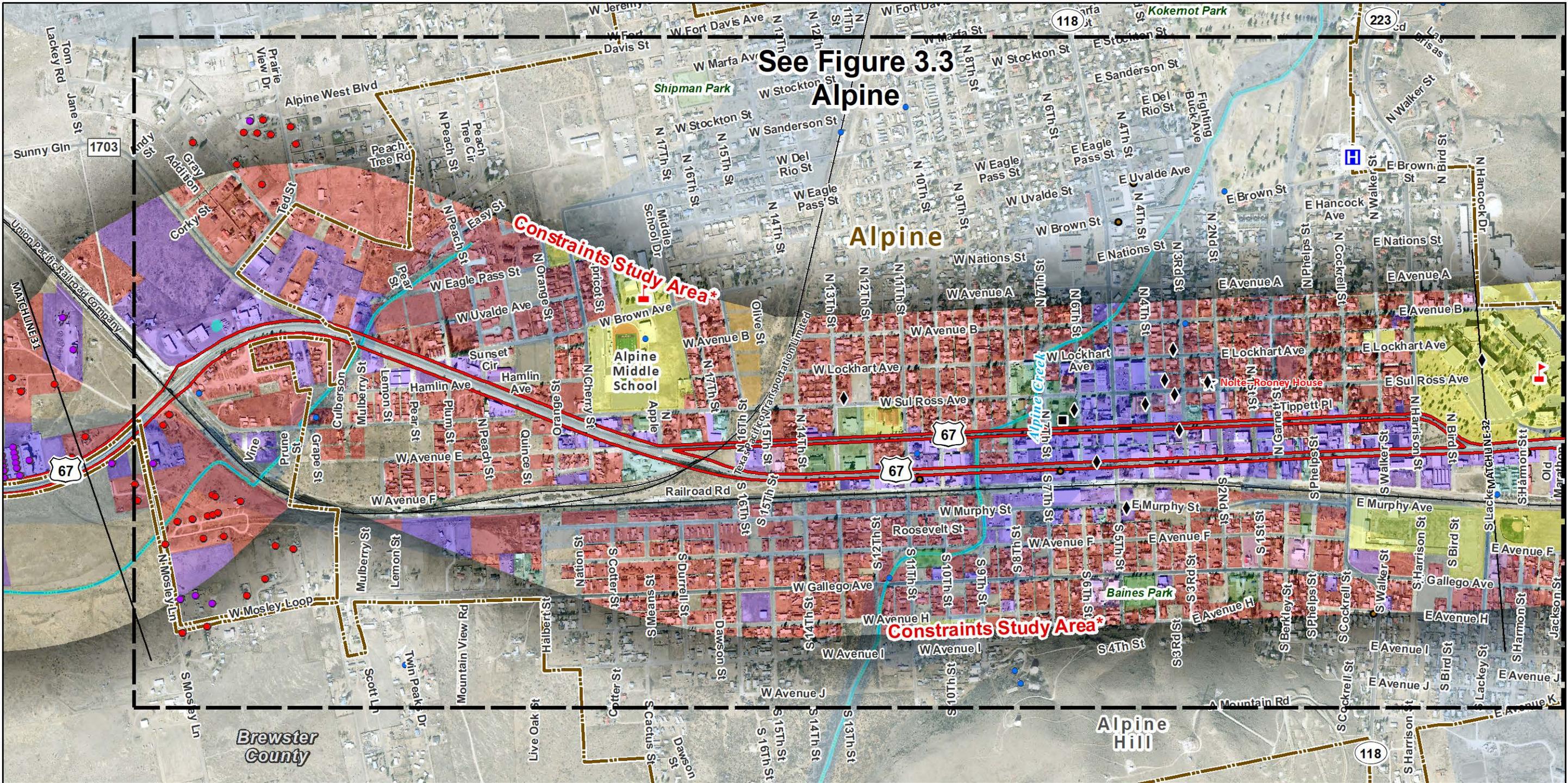


Figure 2.31
Environmental Constraints
US 67 Corridor Master Plan
Presidio, Brewster, and Pecos
Counties, Texas
CSJ: 5000-00-116



See Figure 3.3
Alpine

Constraints Study Area*

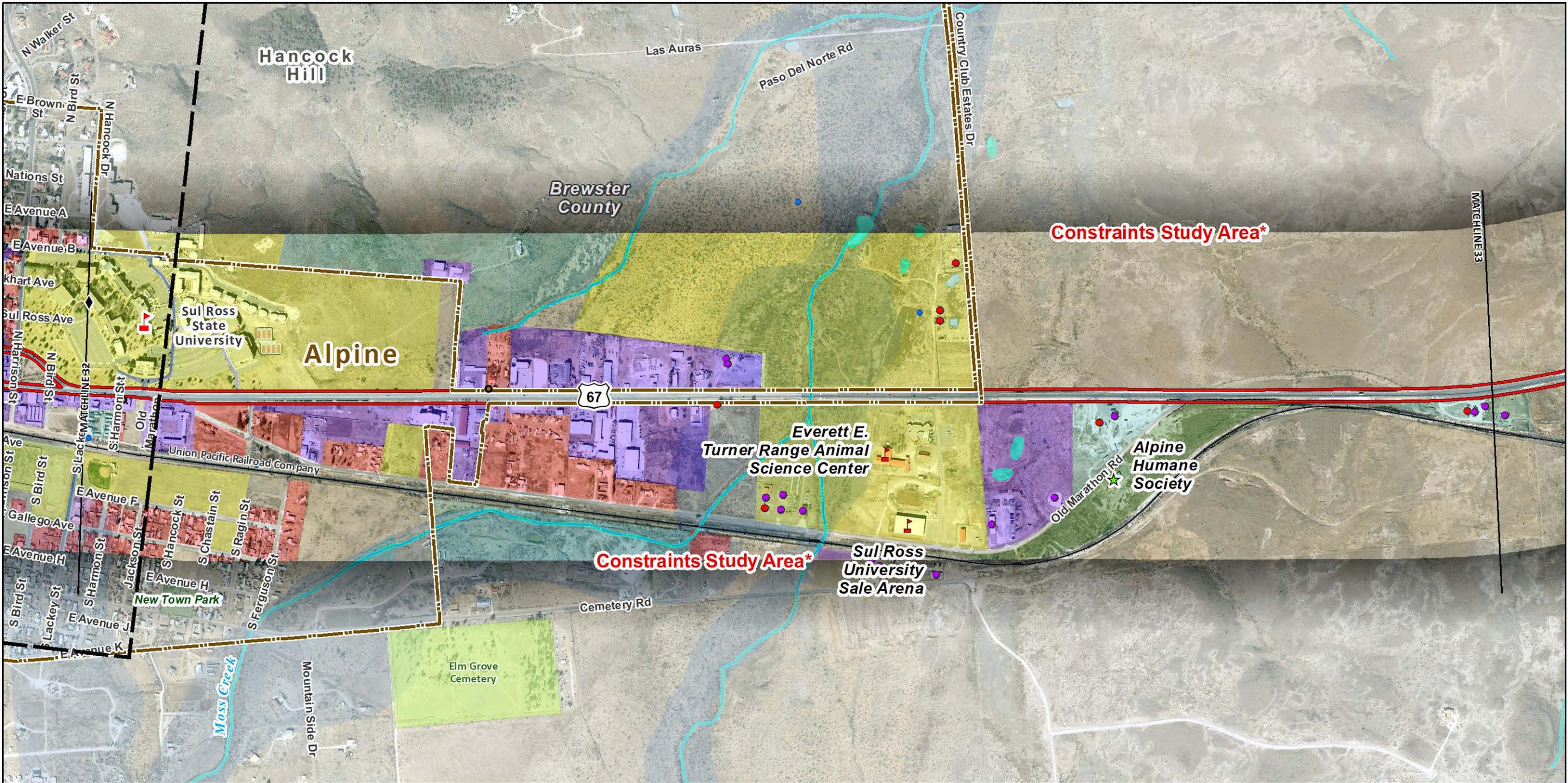
Constraints Study Area*

US 67 Existing Right-of-way	Pond	Petroleum Storage Tank	School
City Limit	National Register Property	Land Use	Church
Railroad (TxDOT)	Historical Marker	Residential	Public
100-Year Floodplain	Residential Structure	Commercial	Transportation
National Wetland Inventory Feature	Commercial Structure	Mixed Residential/Commercial	Utility
Stream/Creek	Well Water Intake	Agricultural	Undeveloped

* Constraints Study Area (not Right-of-way)

1:12,000
0 500 1,000
Feet

Figure 2.32
Environmental Constraints
US 67 Corridor Master Plan
Presidio, Brewster, and Pecos
Counties, Texas
CSJ: 5000-00-116



US 67 Existing Right-of-way	Pond	Well Water Intake	School
City Limit	Historical Marker	Petroleum Storage Tank	Church
Railroad (TxDOT)	Residential Structure	Land Use	
100-Year Floodplain	Commercial Structure	Residential	Public
National Wetland Inventory Feature	School	Commercial	Utility
Stream/Creek	Public Facility	Mixed Residential/Commercial	Cemetery

1:12,000
0 500 1,000
Feet

* Constraints Study Area (not Right-of-way)

Figure 2.33
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

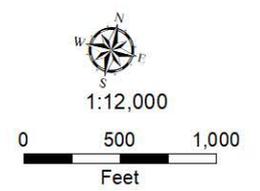
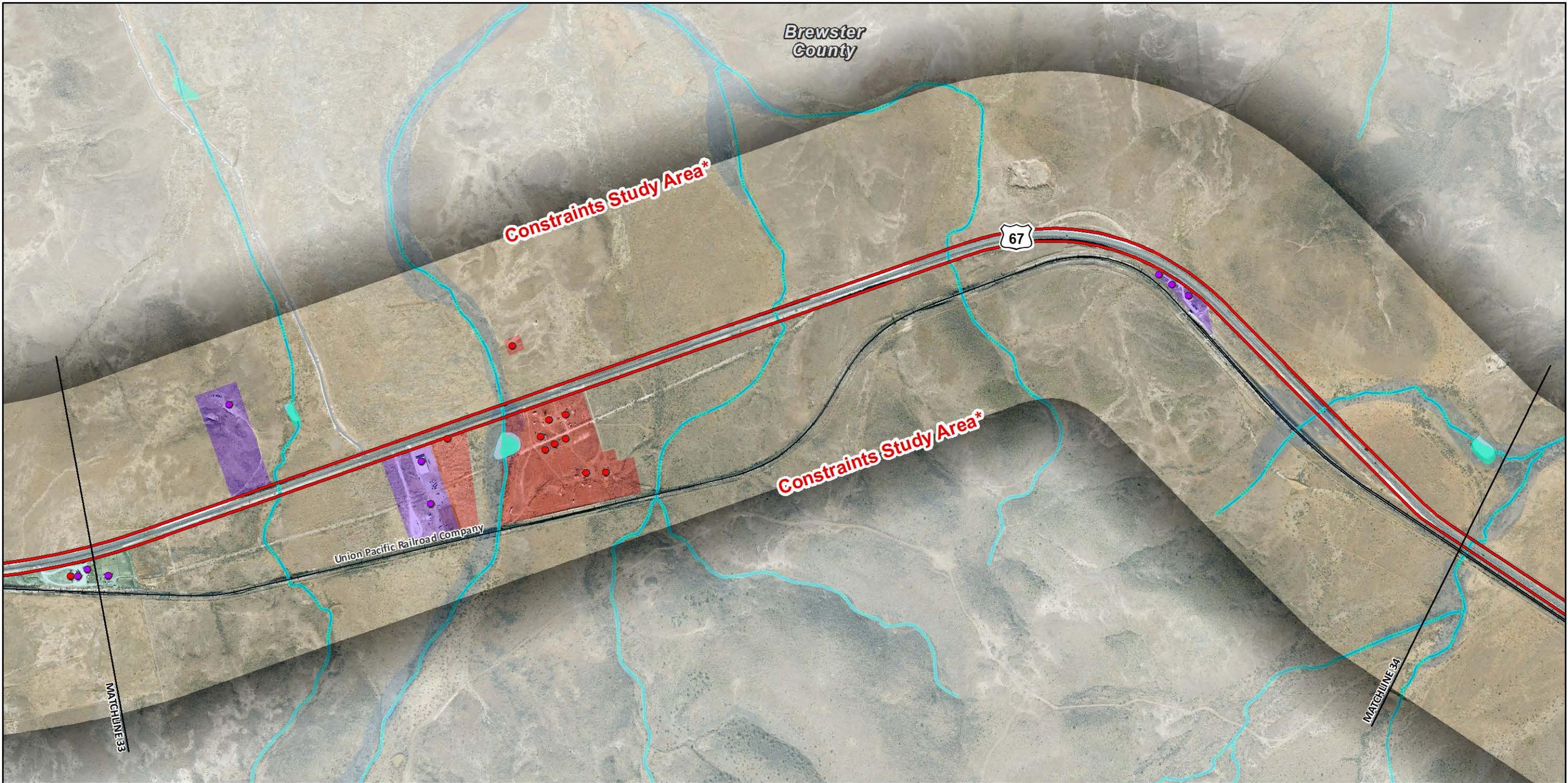


Figure 2.34
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)

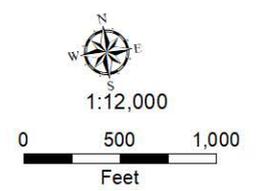
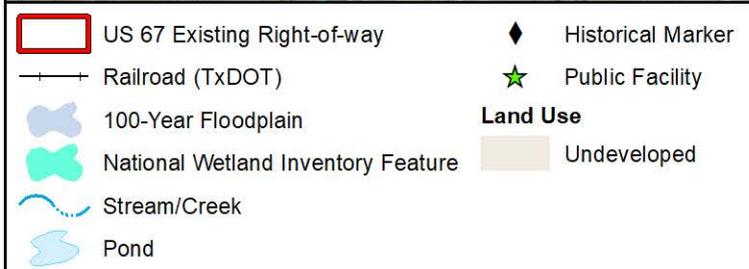
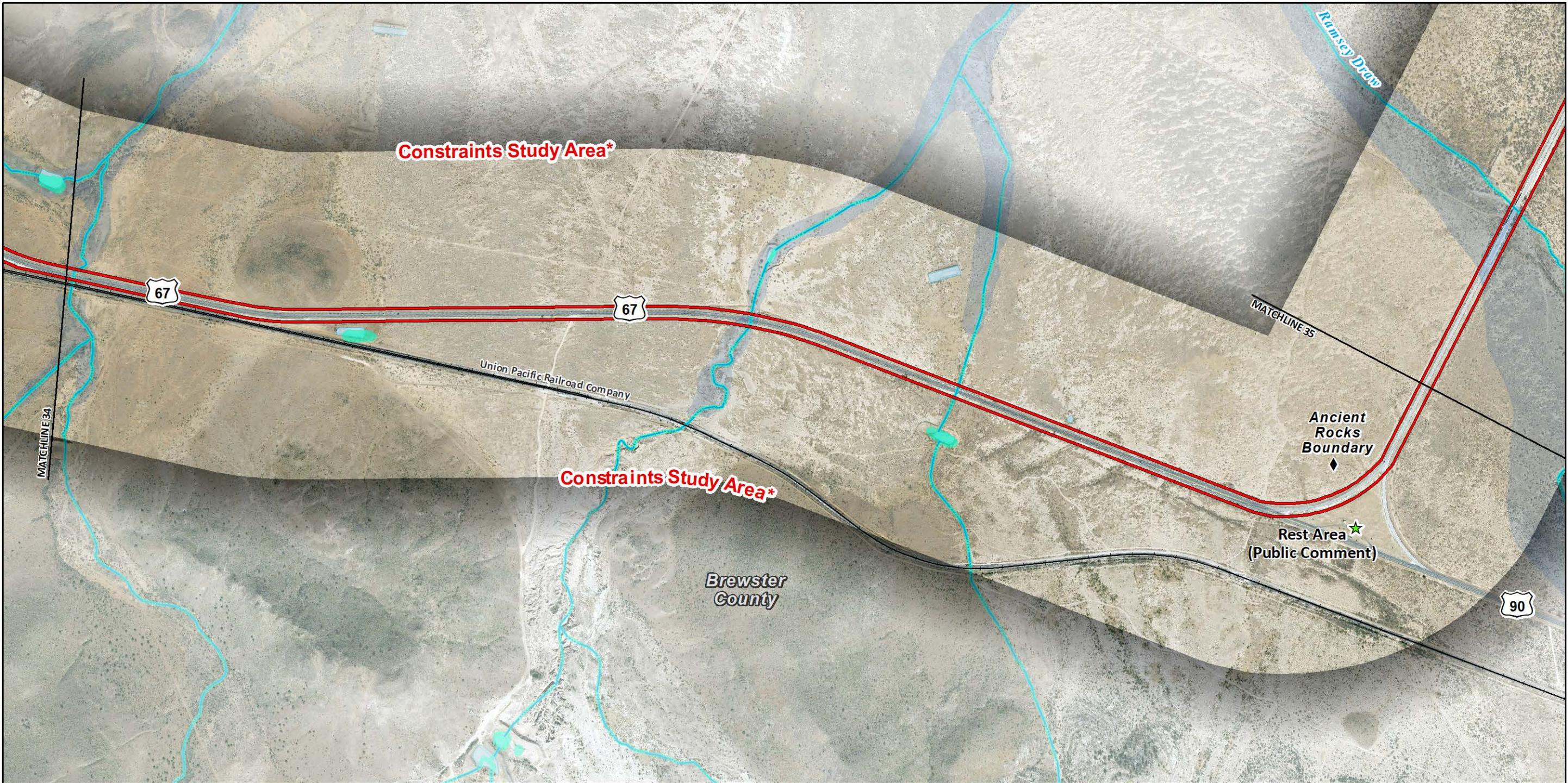


Figure 2.35
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)

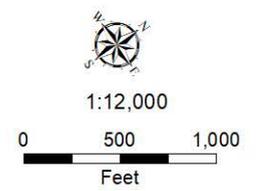
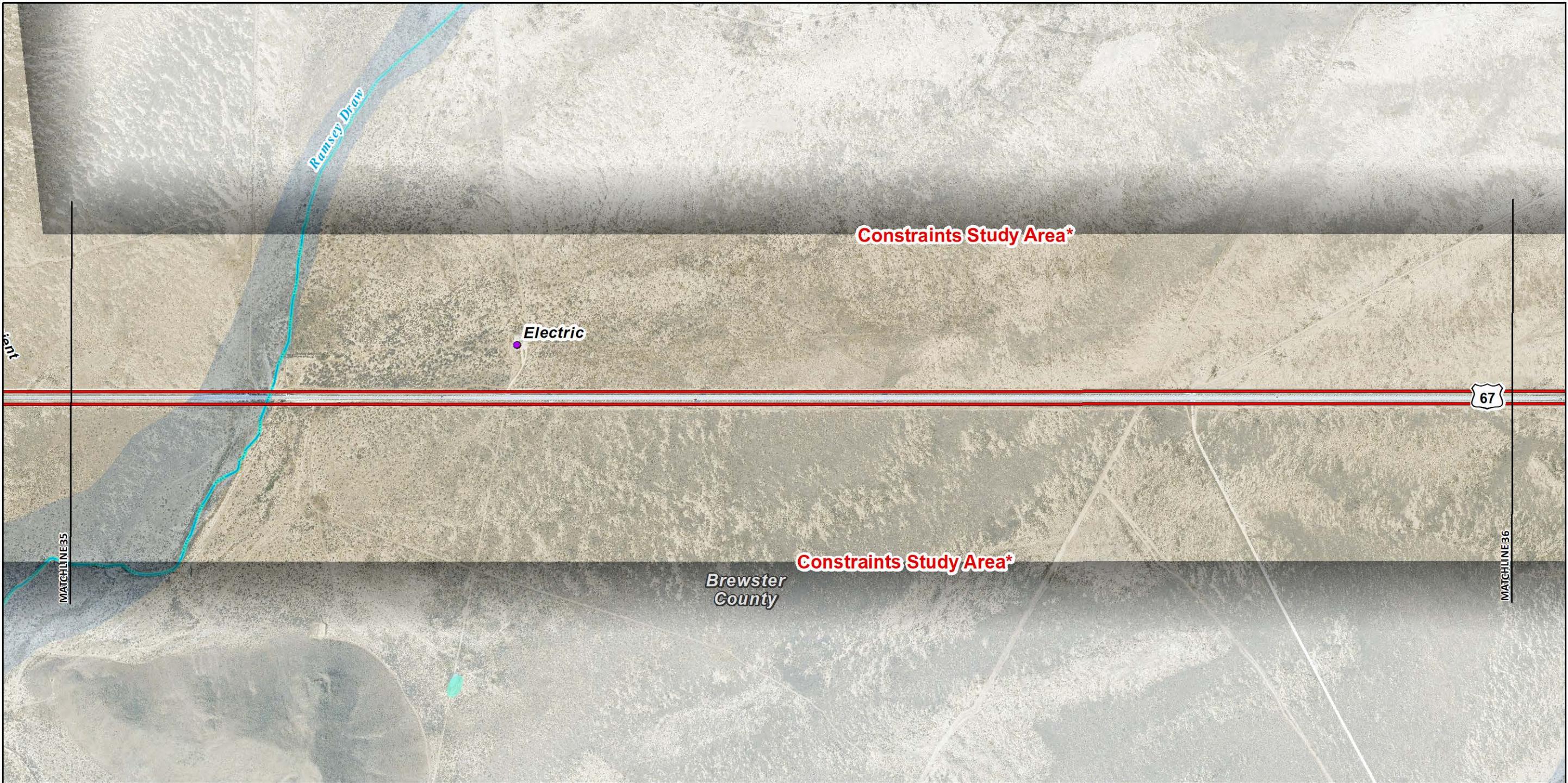


Figure 2.36
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)

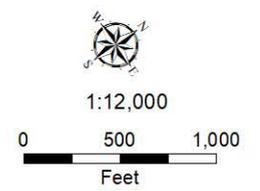
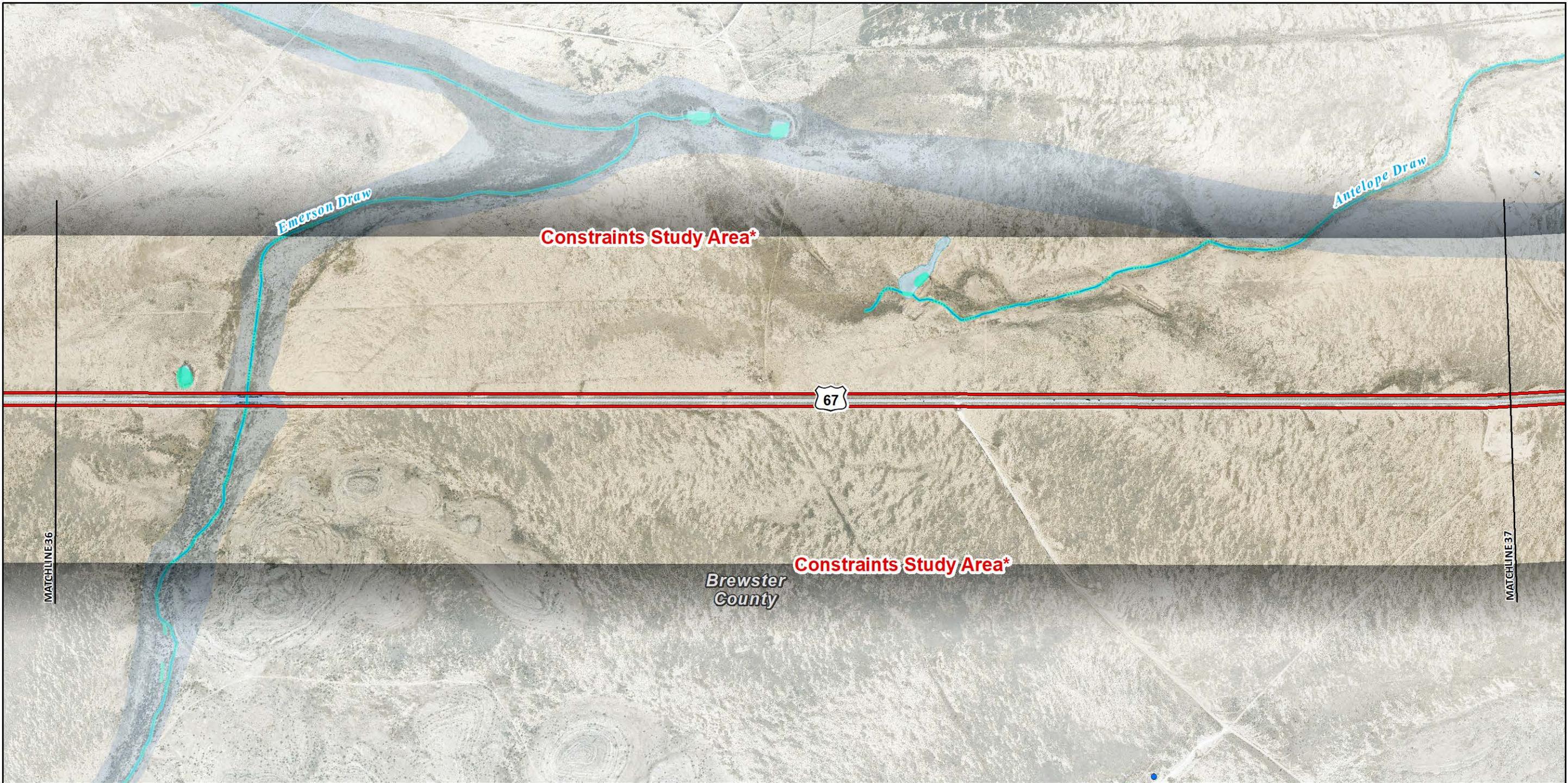


Figure 2.37
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)

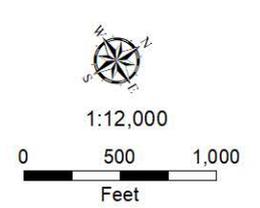
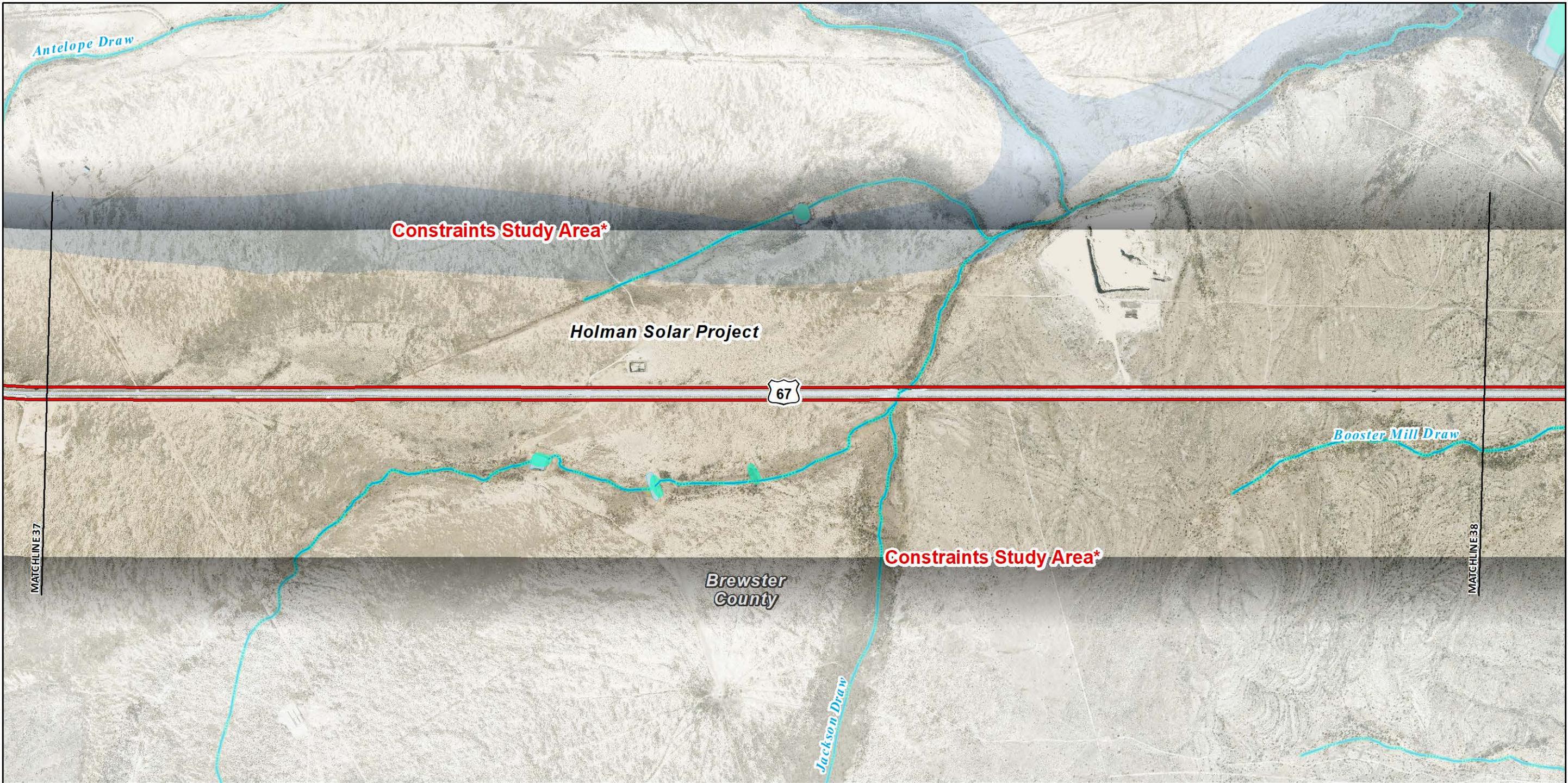


Figure 2.38
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)

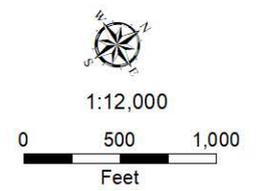
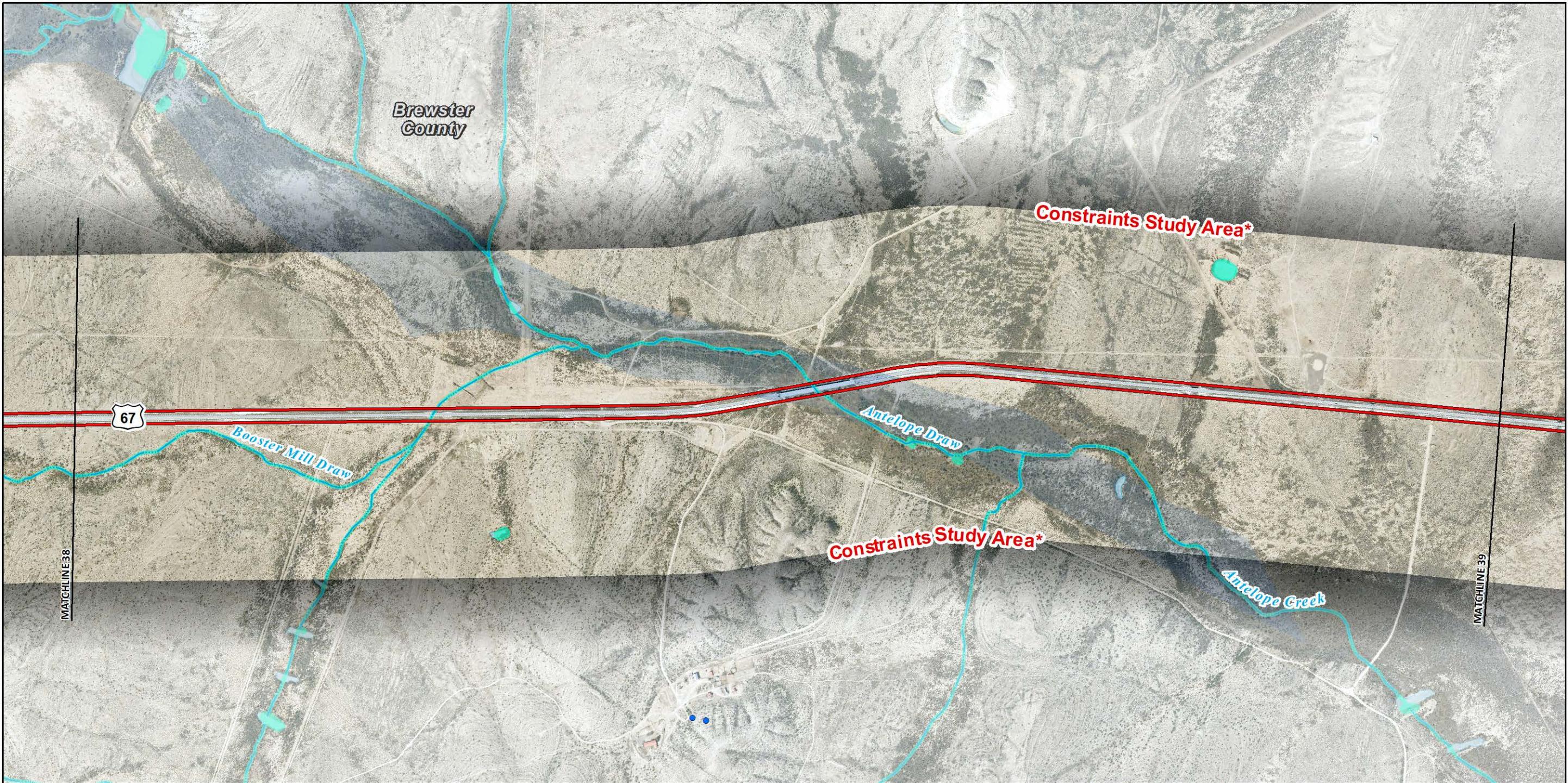


Figure 2.39
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)

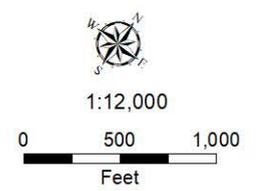
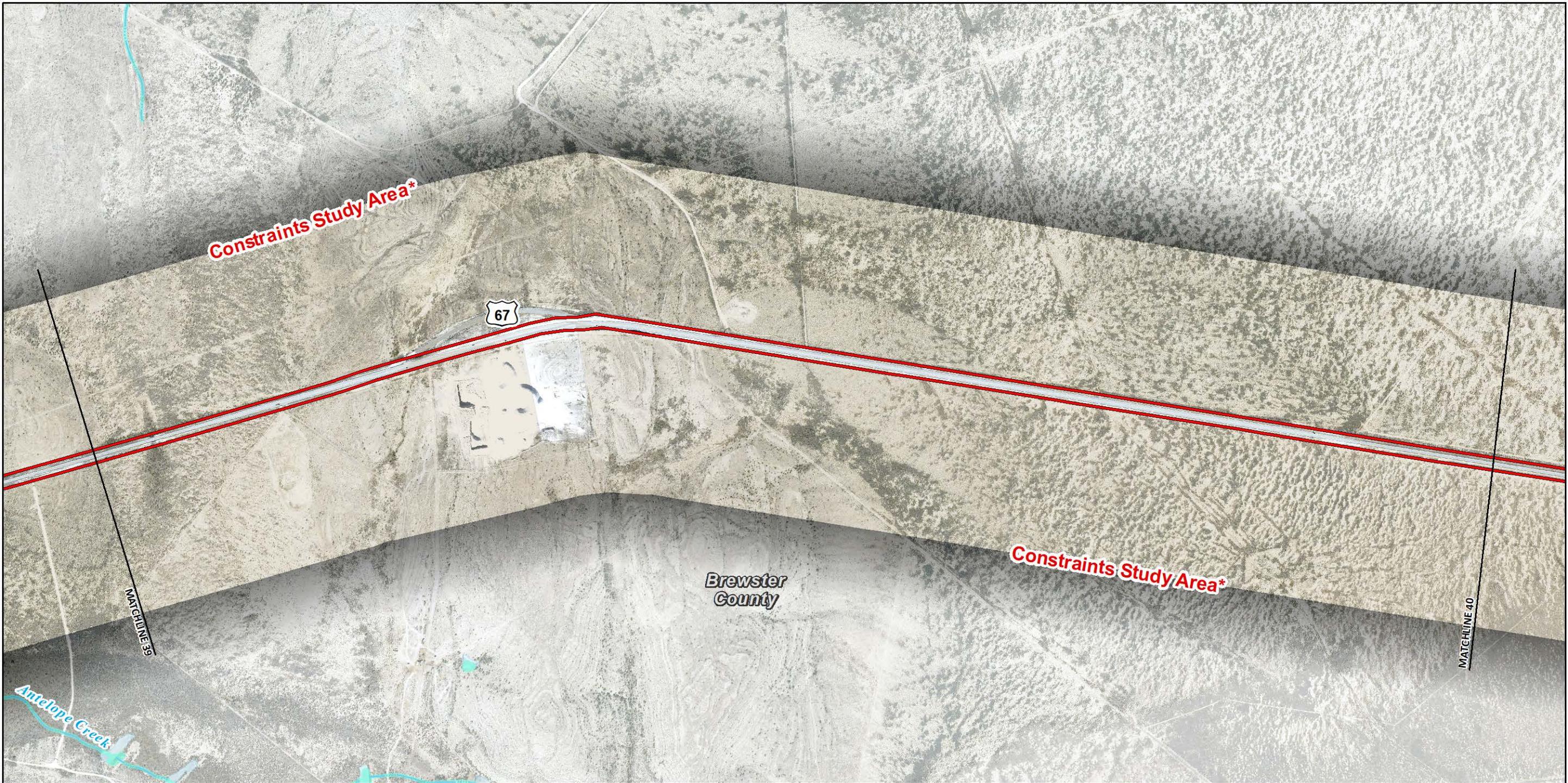
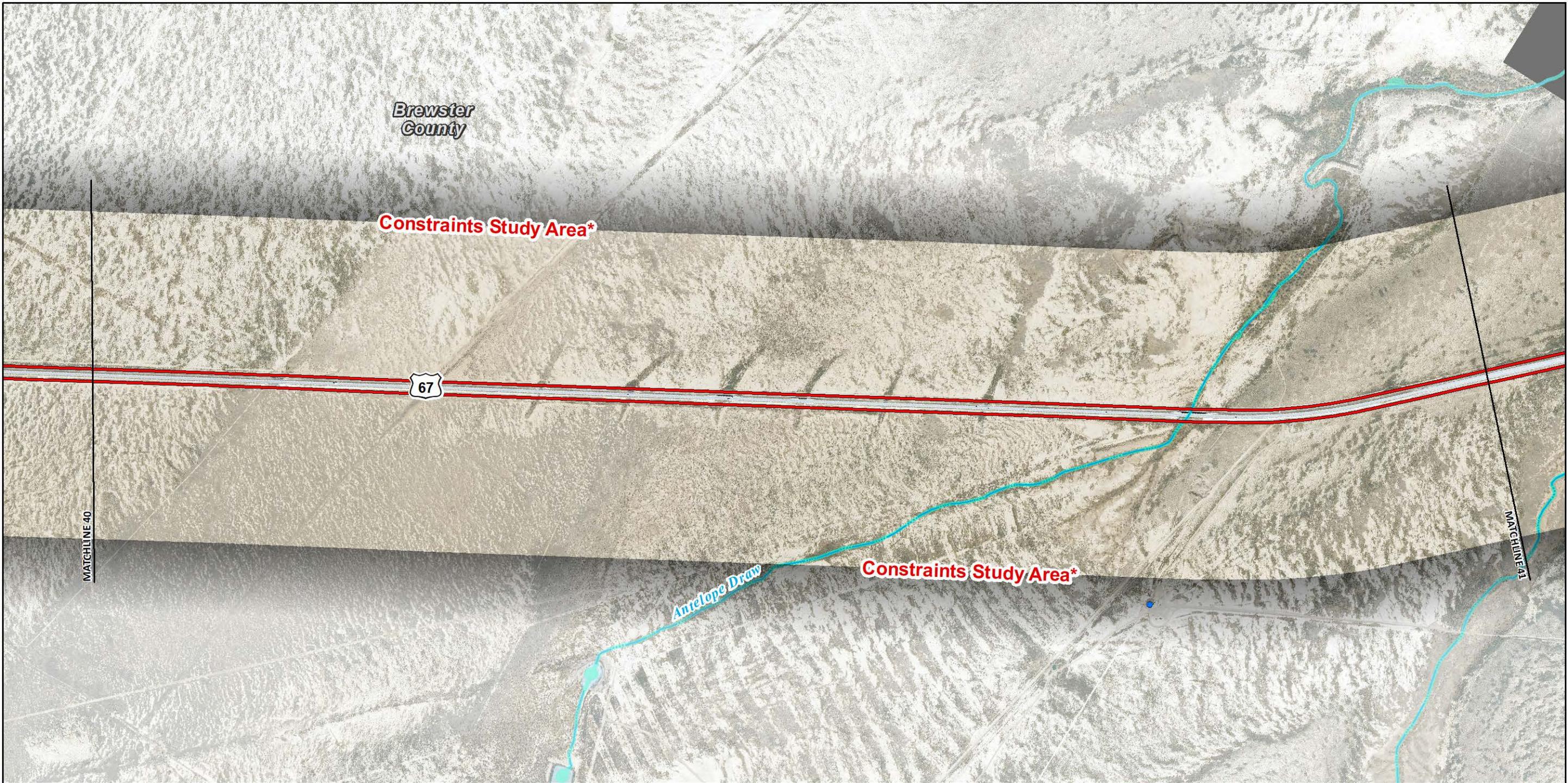


Figure 2.40
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)



- | | |
|--|---|
|  US 67 Existing Right-of-way | Land Use |
|  National Wetland Inventory Feature |  Undeveloped |
|  Stream/Creek | |
|  Pond | |
|  Well Water Intake | |

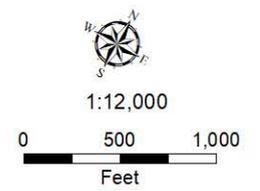
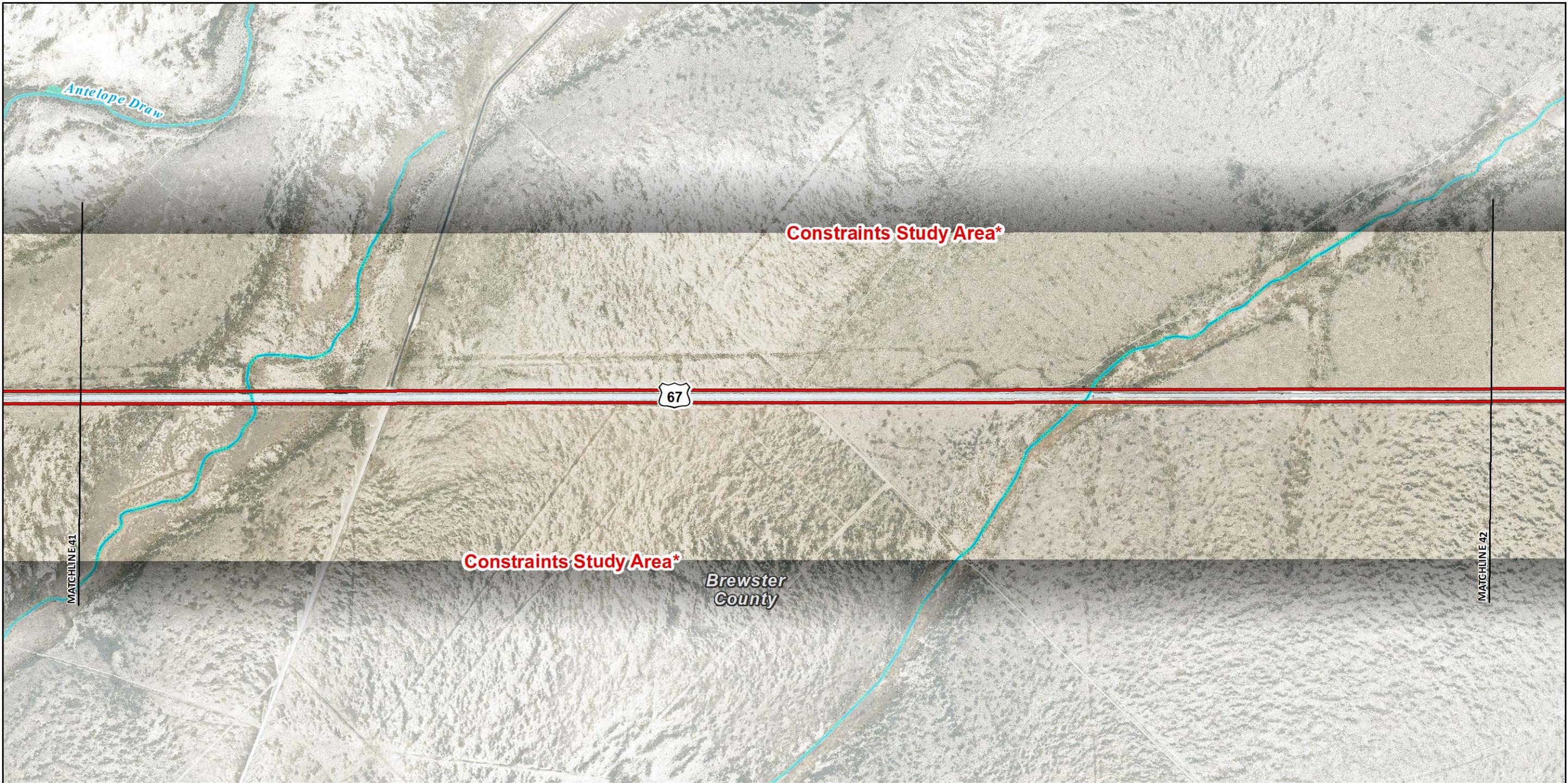


Figure 2.41
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)



-  US 67 Existing Right-of-way
-  National Wetland Inventory Feature
-  Stream/Creek
- Land Use**
-  Undeveloped

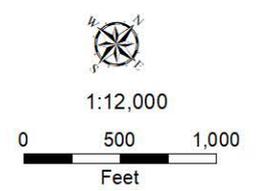
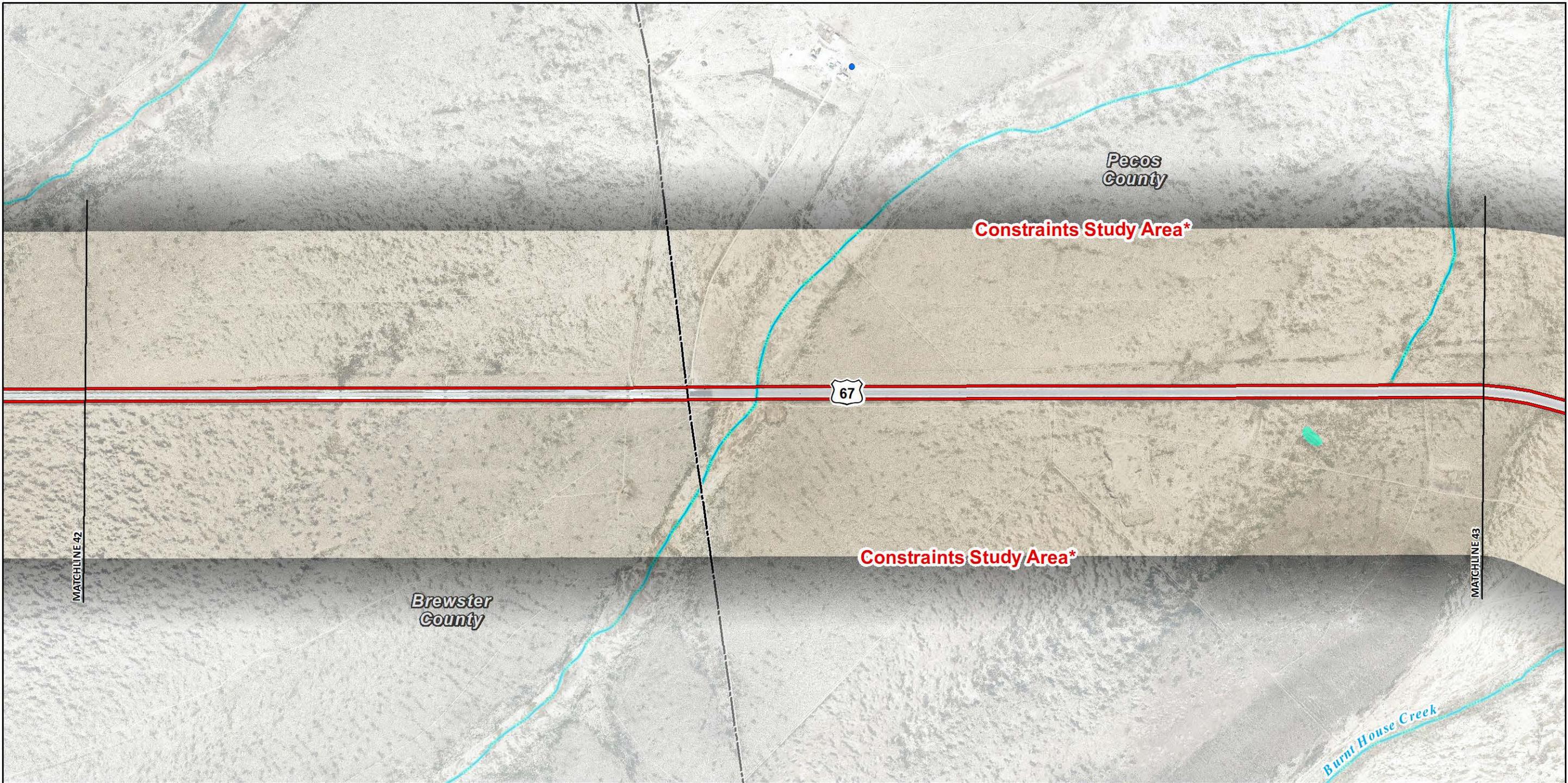


Figure 2.42
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)



- | | | | |
|--|------------------------------------|-----------------|----------------|
| | US 67 Existing Right-of-way | Land Use | |
| | County Boundary | | Undeveloped |
| | National Wetland Inventory Feature | Land Use | |
| | Stream/Creek | | Transportation |
| | Well Water Intake | | Undeveloped |

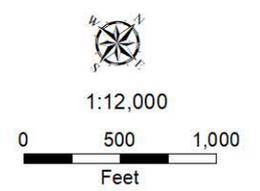
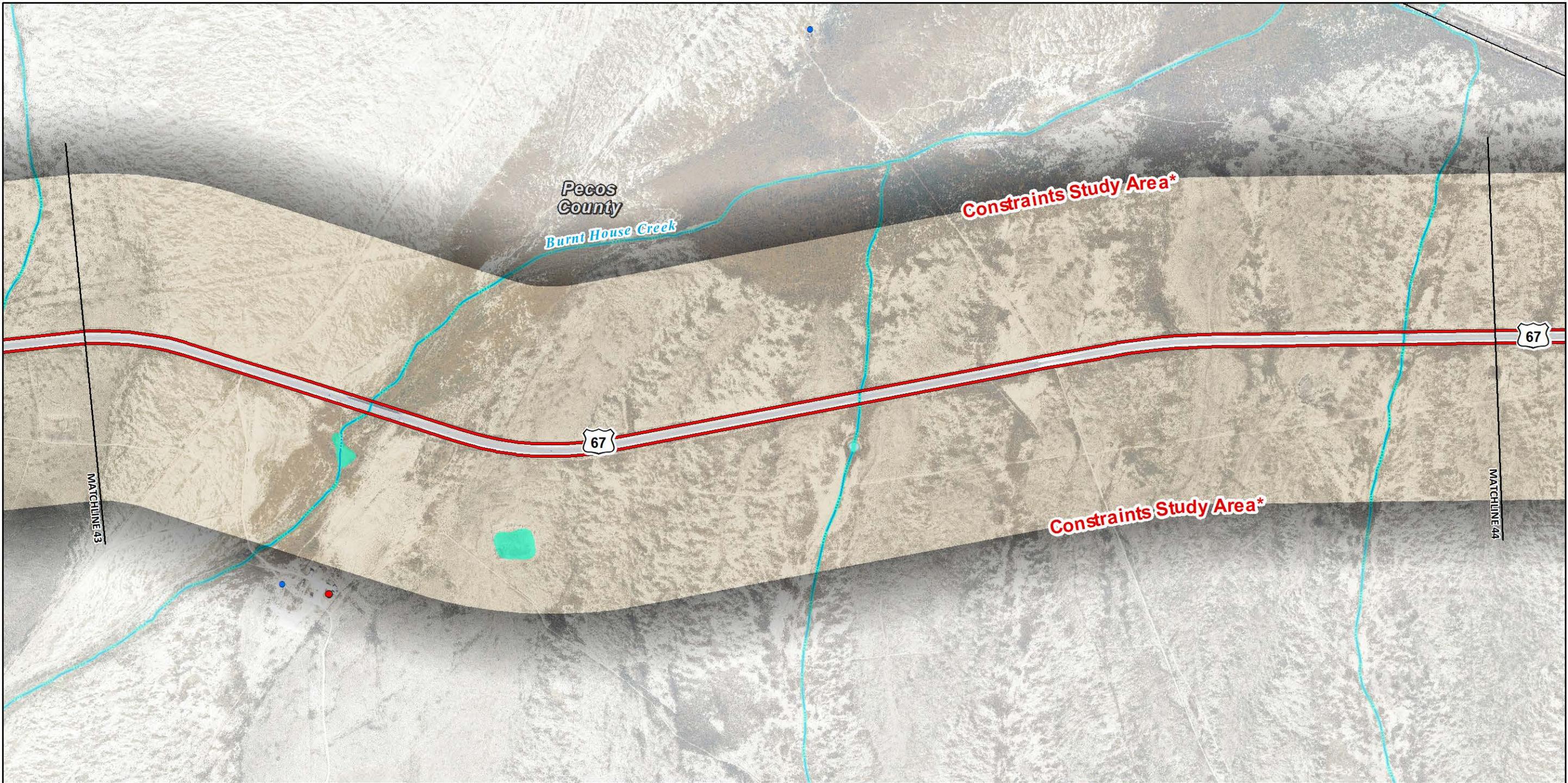


Figure 2.43
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)



- | | |
|------------------------------------|-------------------|
| US 67 Existing Right-of-way | Well Water Intake |
| Railroad (TxDOT) | Land Use |
| National Wetland Inventory Feature | Transportation |
| Stream/Creek | Undeveloped |
| Pond | |
| Residential Structure | |

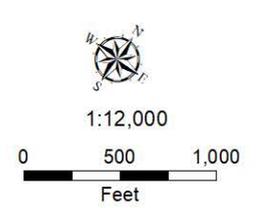


Figure 2.44
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)

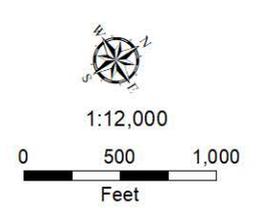
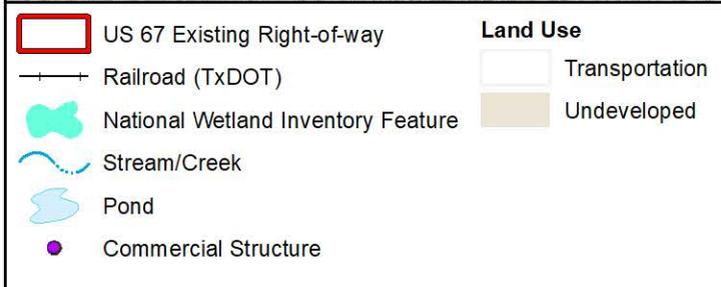
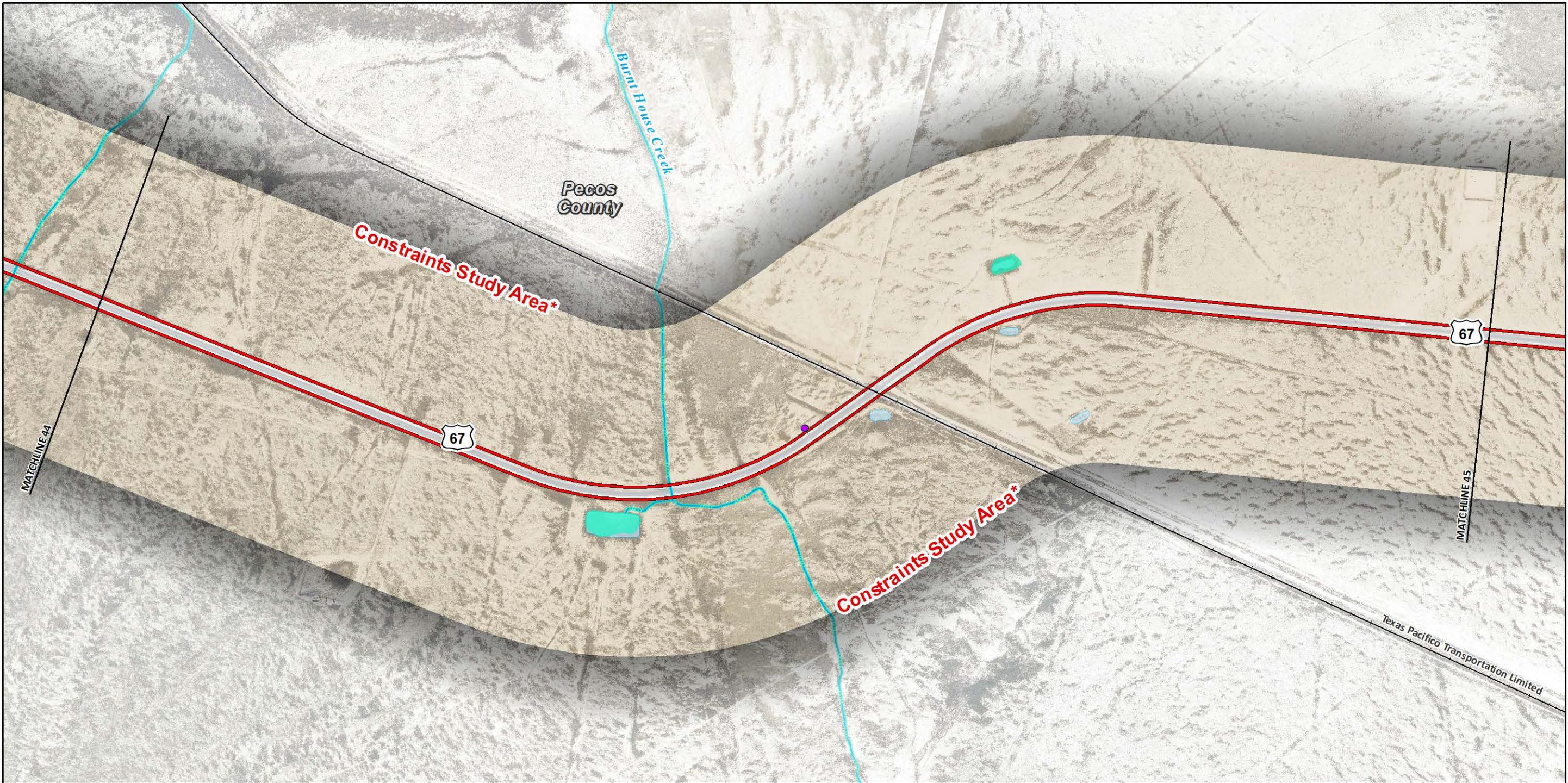
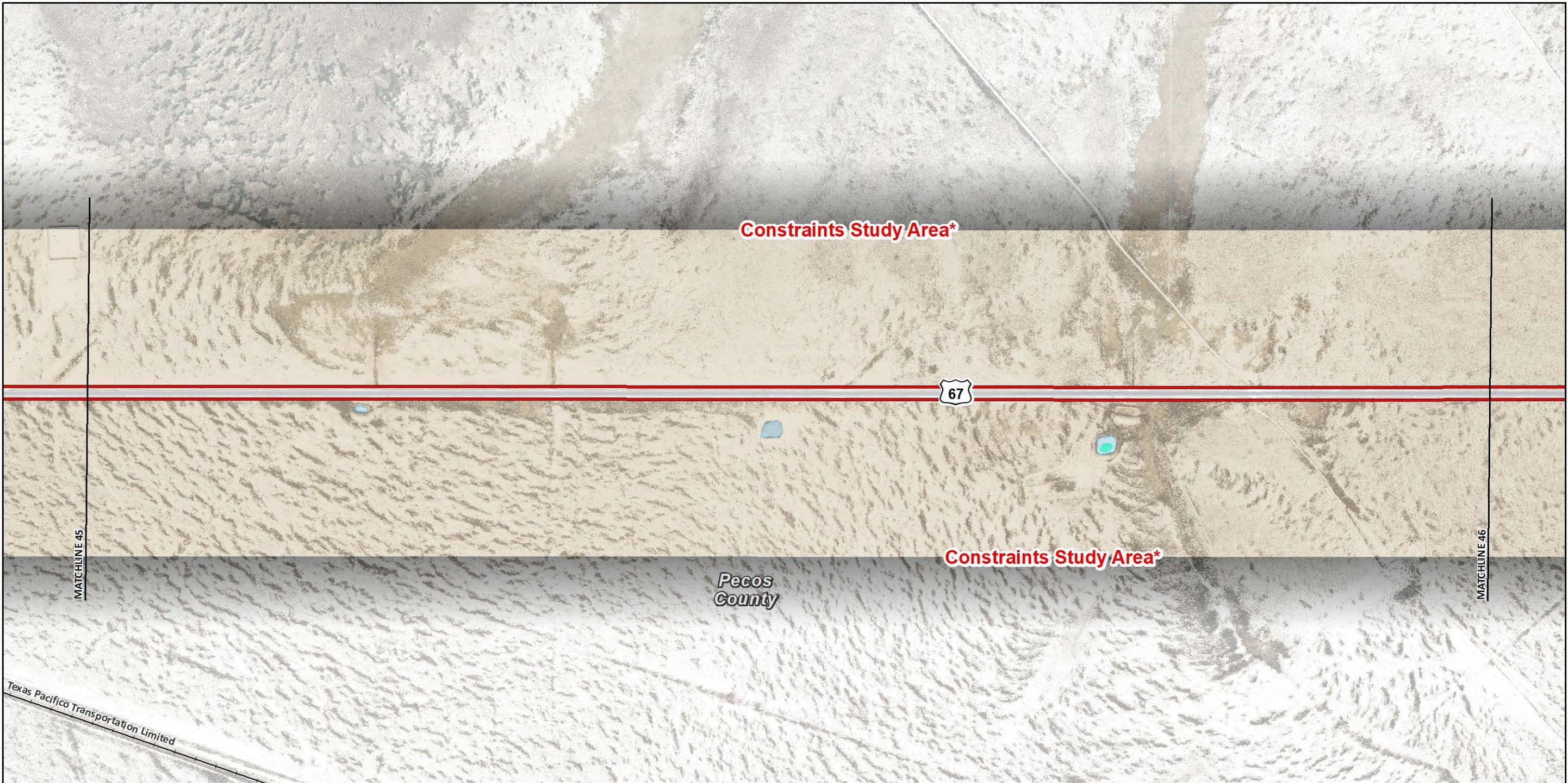


Figure 2.45
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)



Constraints Study Area*

67

Constraints Study Area*

*Pecos
County*

MATCHLINE 45

MATCHLINE 46

Texas Pacific Transportation Limited

-  US 67 Existing Right-of-way
-  Undeveloped
-  Railroad (TxDOT)
-  National Wetland Inventory Feature
-  Pond
- Land Use**
-  Transportation

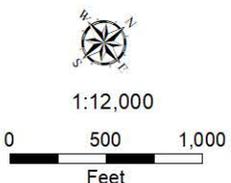


Figure 2.46
Environmental Constraints
US 67 Corridor Master Plan
Presidio, Brewster, and Pecos
Counties, Texas
CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)

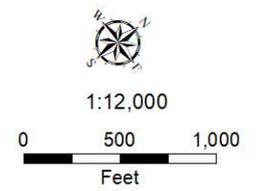
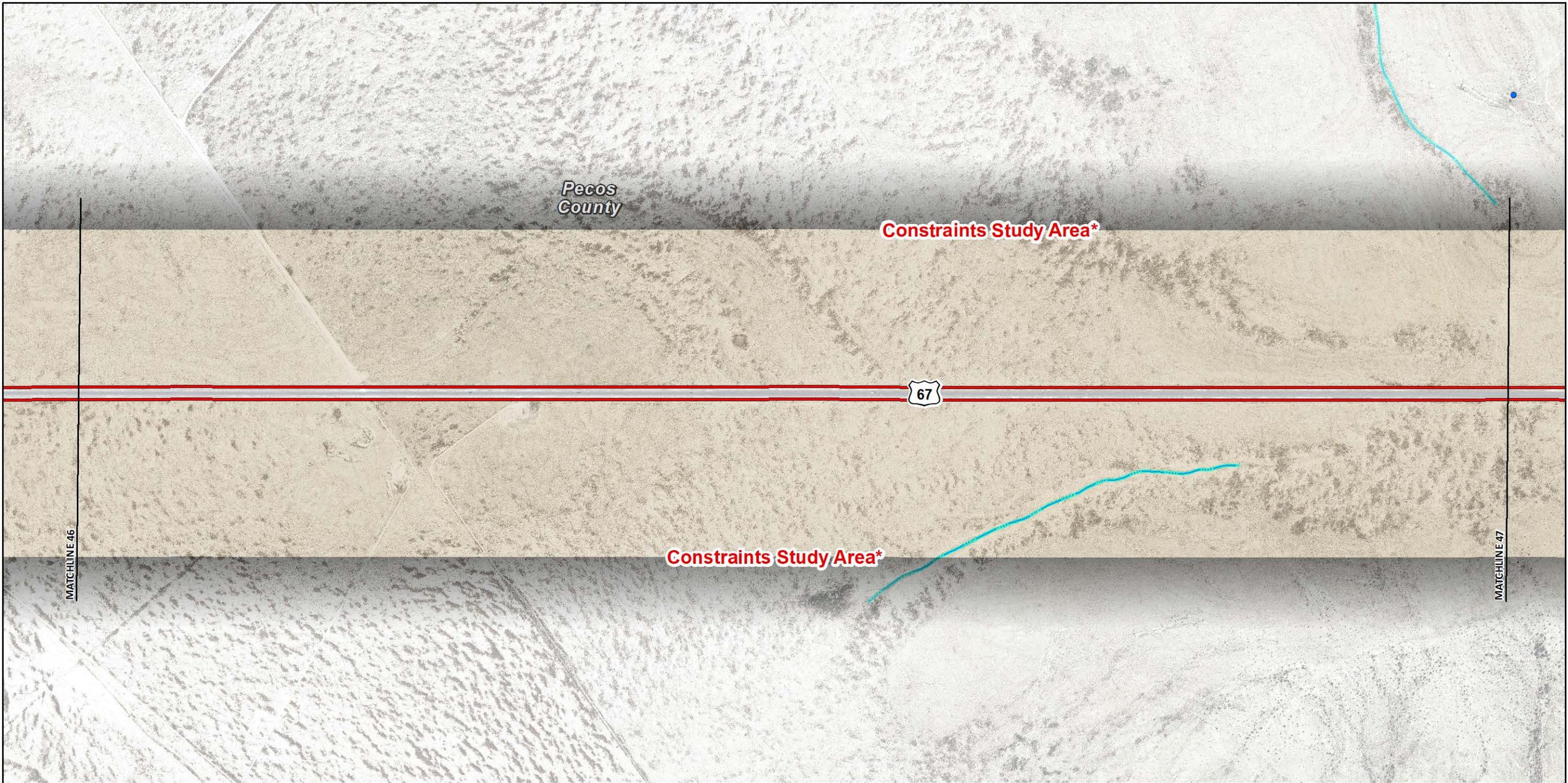


Figure 2.47
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)

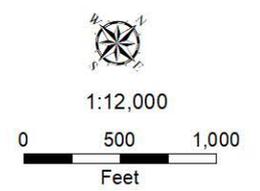
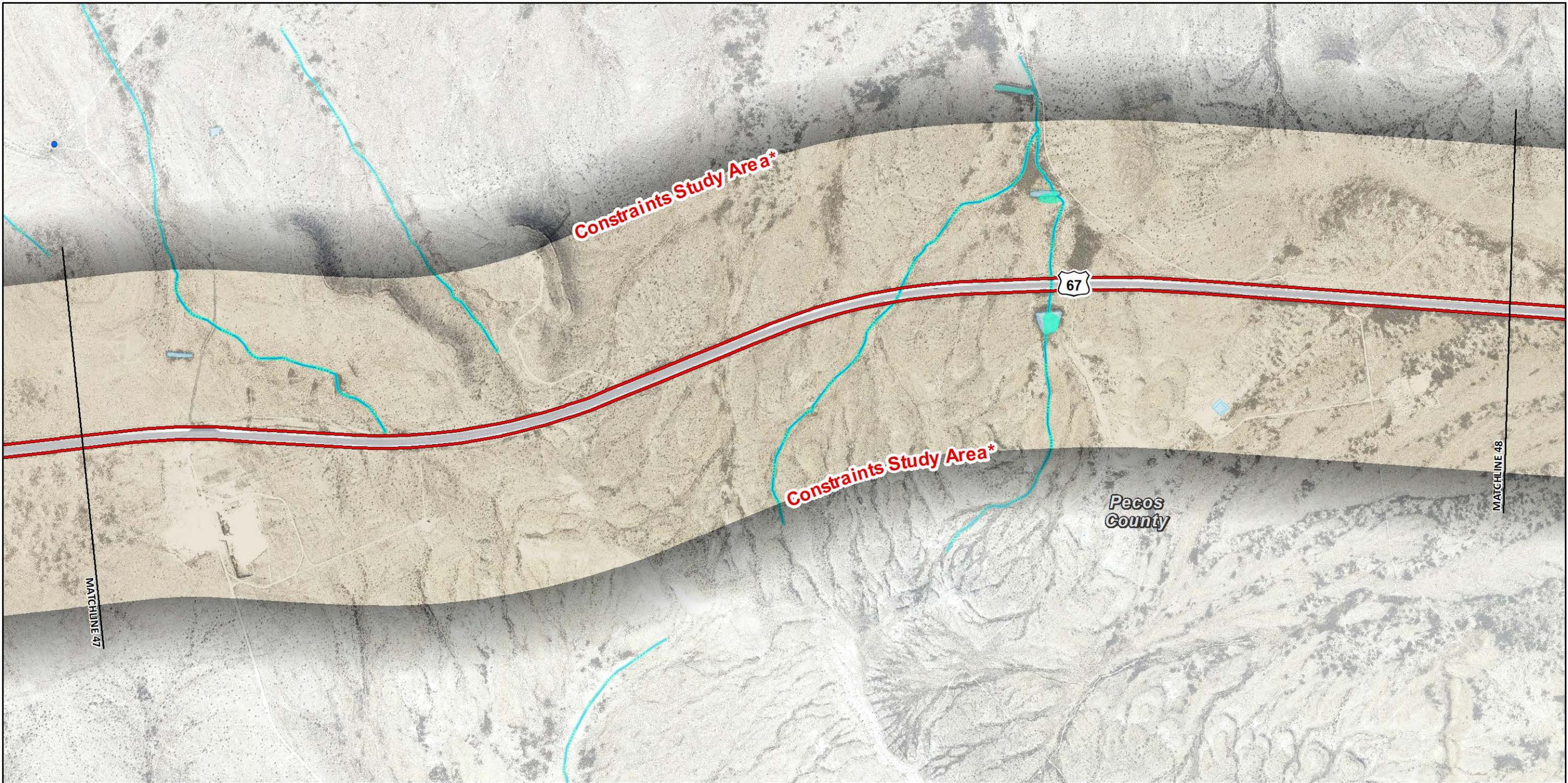
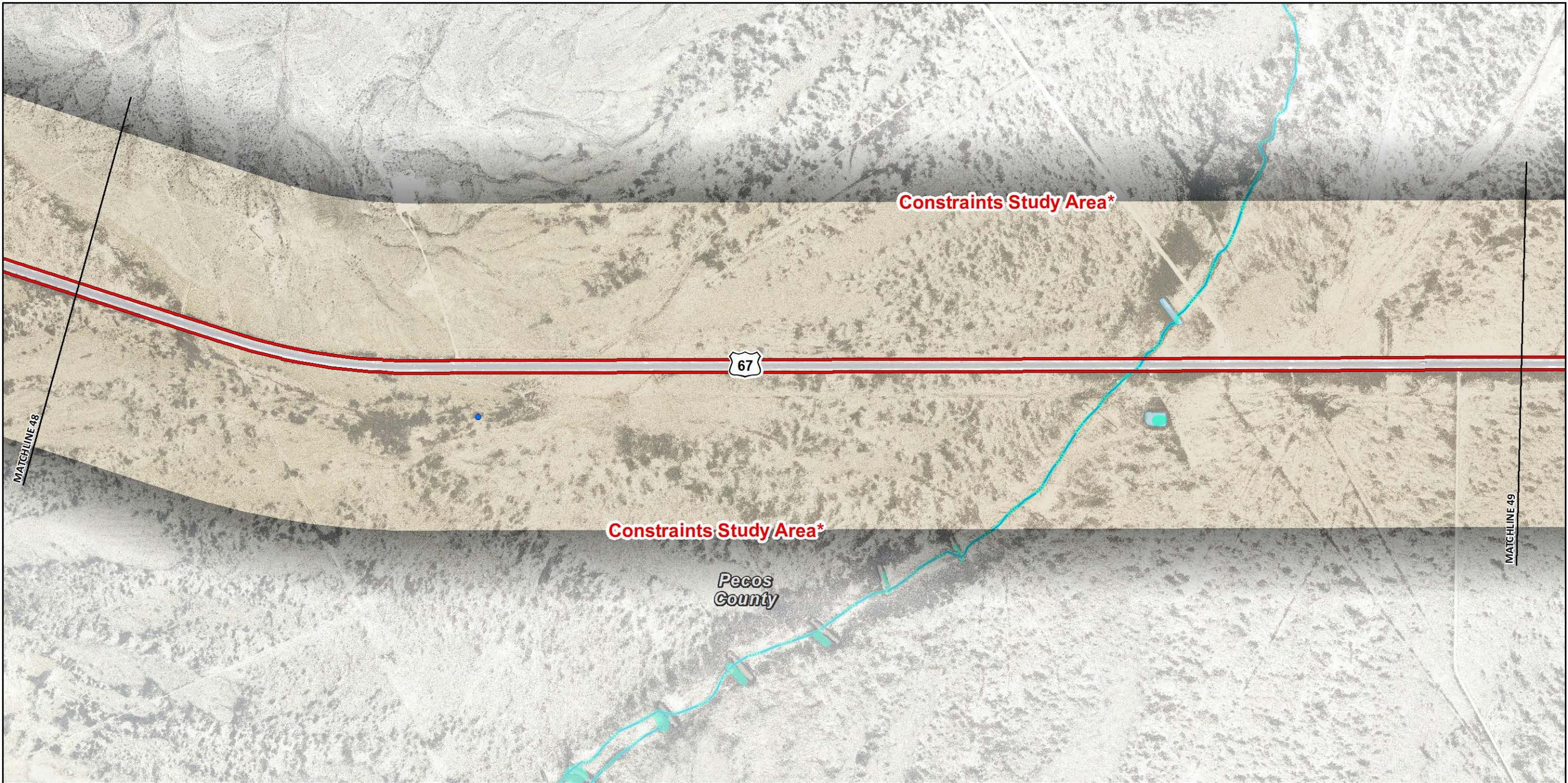


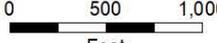
Figure 2.48
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)



 US 67 Existing Right-of-way	Land Use
 National Wetland Inventory Feature	 Transportation
 Stream/Creek	 Undeveloped
 Pond	
 Well Water Intake	

1:12,000



0 500 1,000
Feet



Figure 2.49
Environmental Constraints
US 67 Corridor Master Plan
Presidio, Brewster, and Pecos
Counties, Texas
CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)

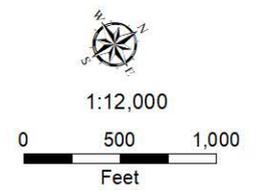
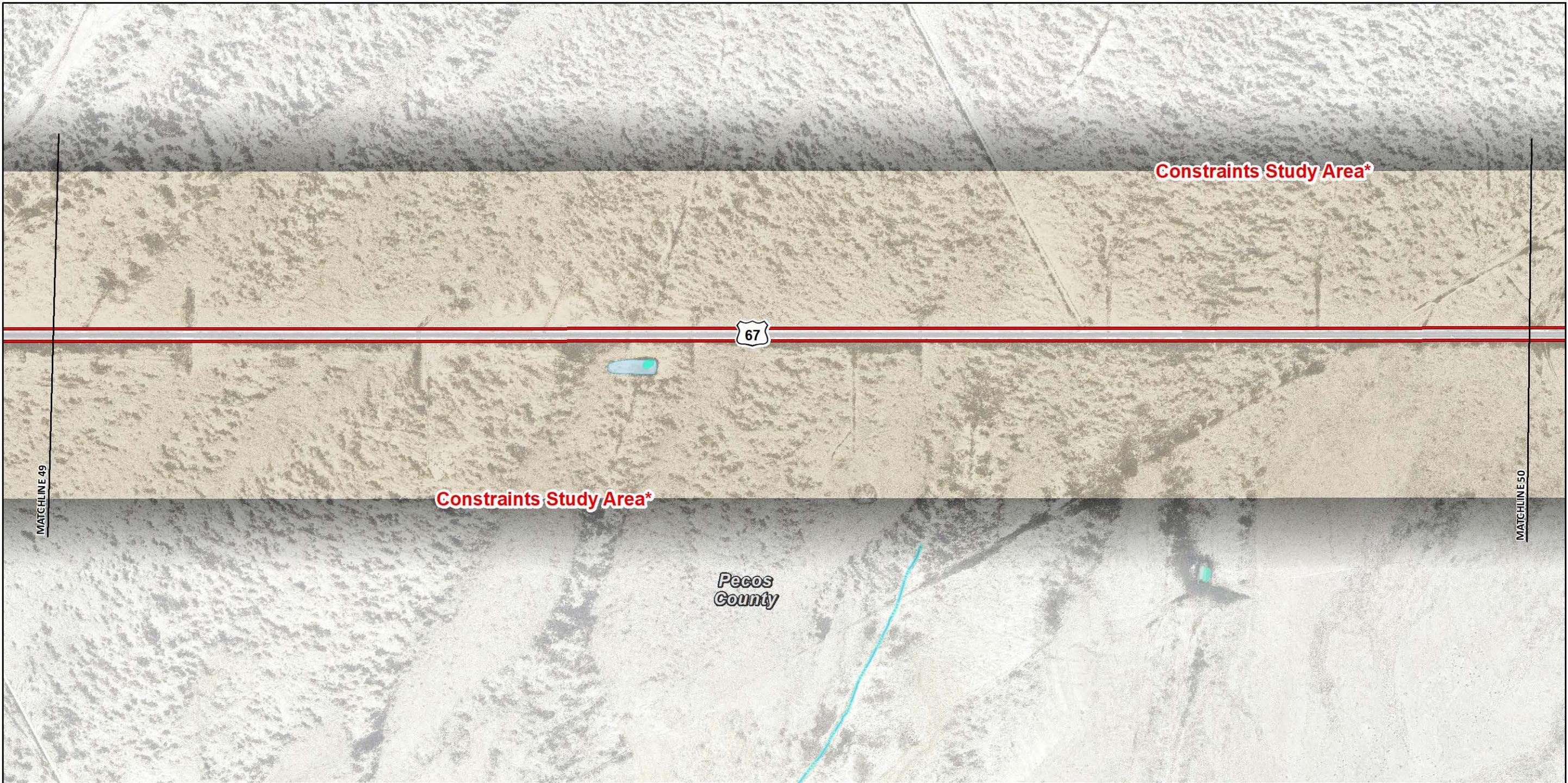
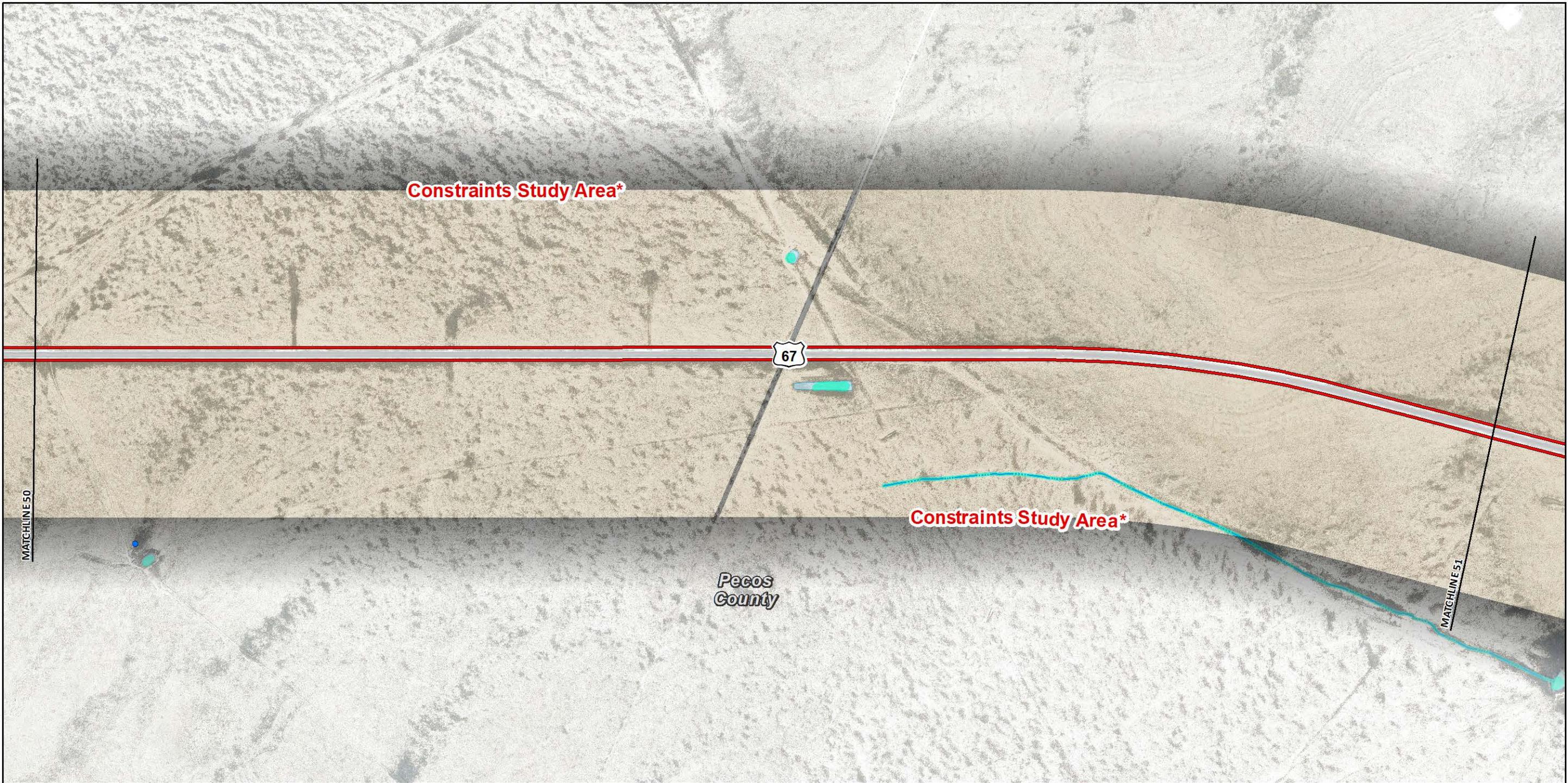


Figure 2.50
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)



- | | |
|--|--|
|  US 67 Existing Right-of-way | Land Use |
|  National Wetland Inventory Feature |  Transportation |
|  Stream/Creek |  Utility |
|  Pond |  Undeveloped |
|  Well Water Intake | |

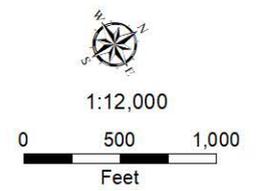
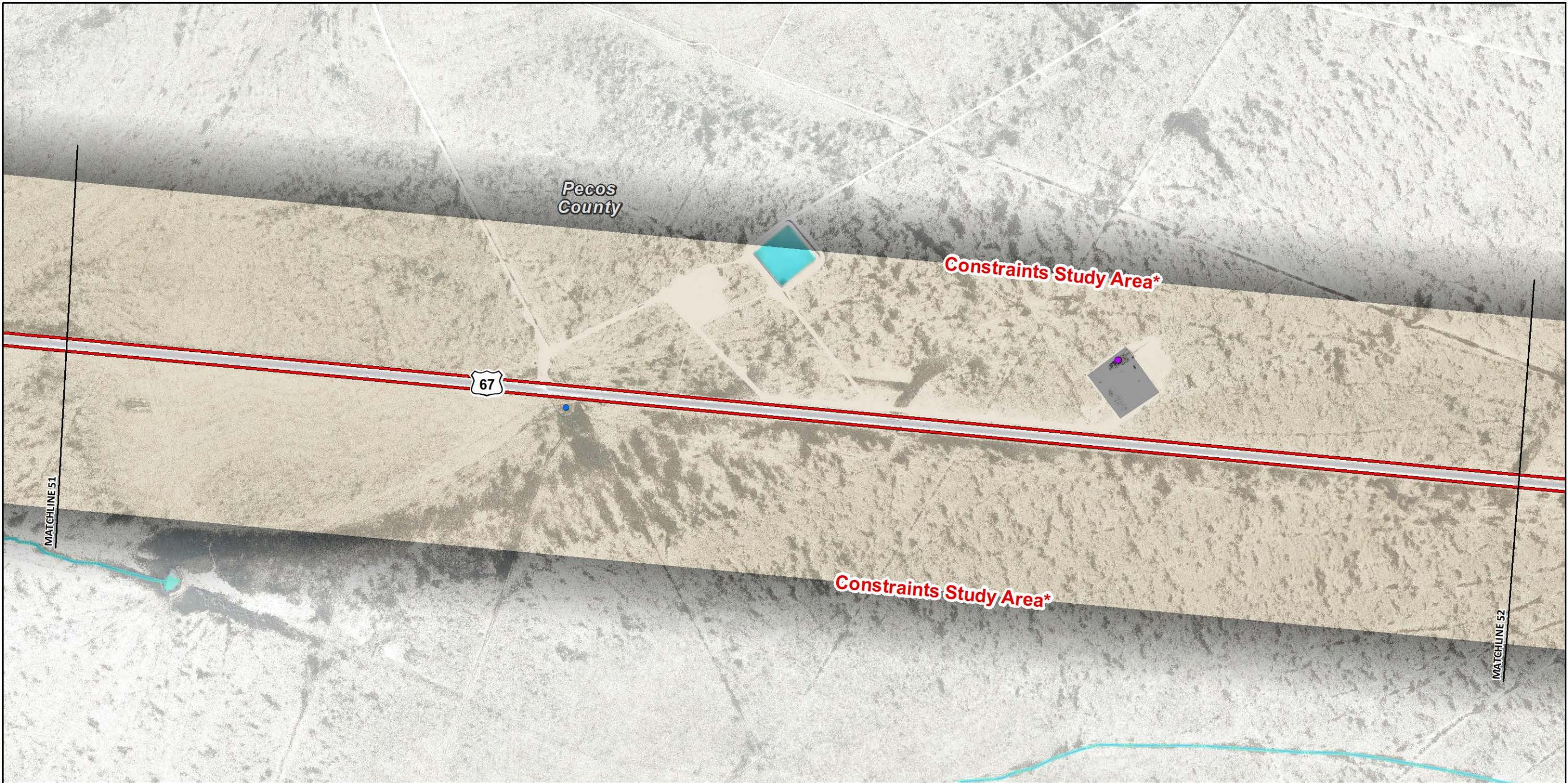


Figure 2.51
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)



 US 67 Existing Right-of-way	Land Use
 National Wetland Inventory Feature	 Transportation
 Stream/Creek	 Utility
 Pond	 Undeveloped
 Commercial Structure	
 Well Water Intake	

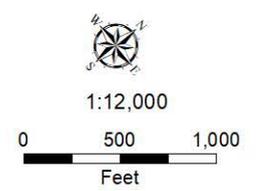


Figure 2.52
 Environmental Constraints
 US 67 Corridor Master Plan
 Presidio, Brewster, and Pecos
 Counties, Texas
 CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)

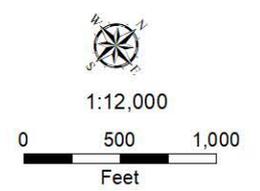
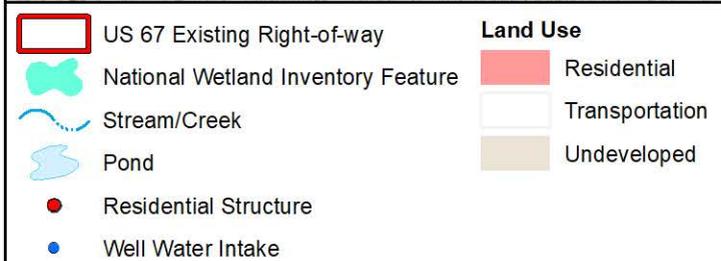
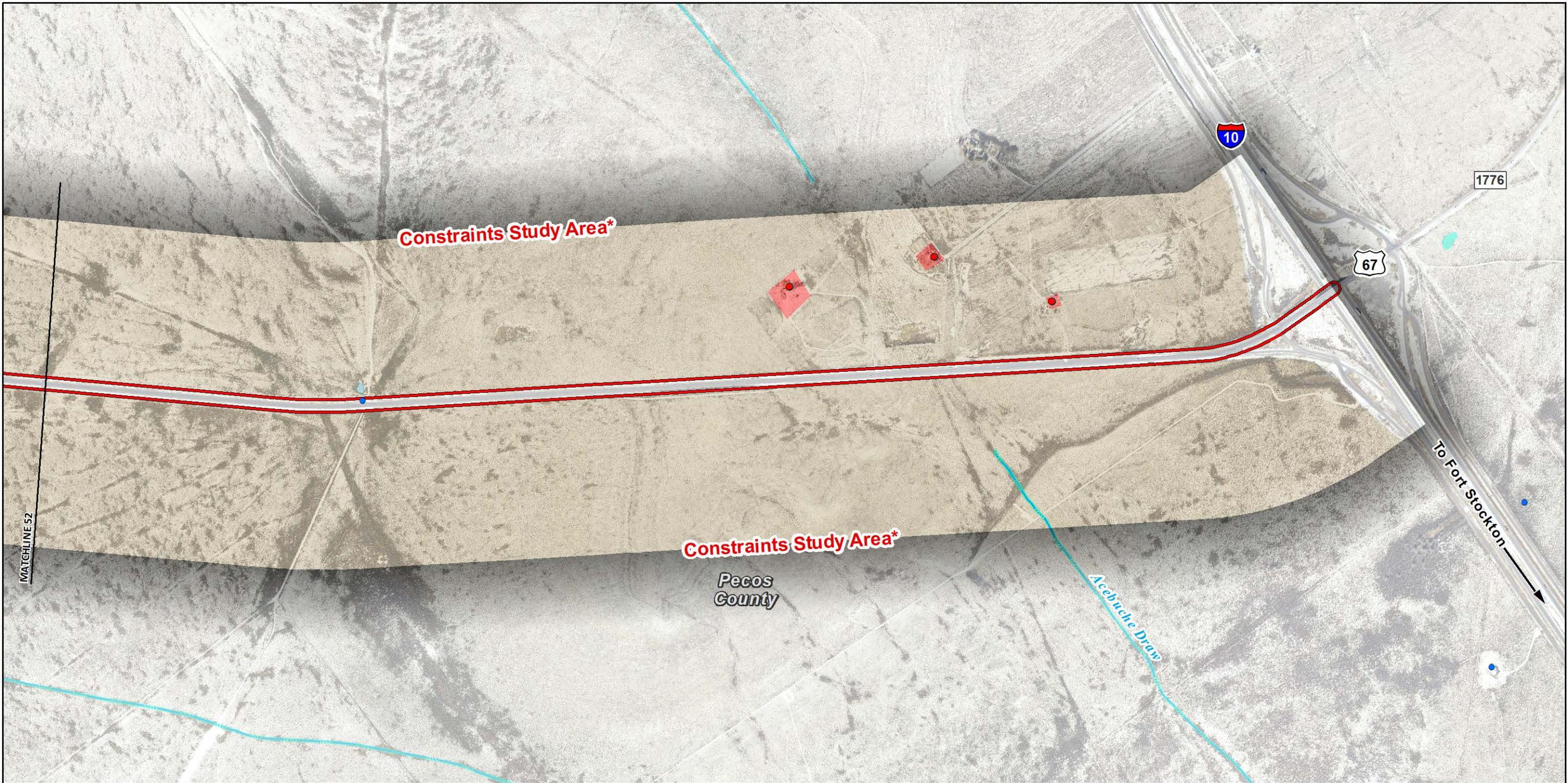


Figure 2.53
Environmental Constraints
US 67 Corridor Master Plan
Presidio, Brewster, and Pecos
Counties, Texas
CSJ: 5000-00-116

* Constraints Study Area (not Right-of-way)



US 67 CORRIDOR
MASTER PLAN