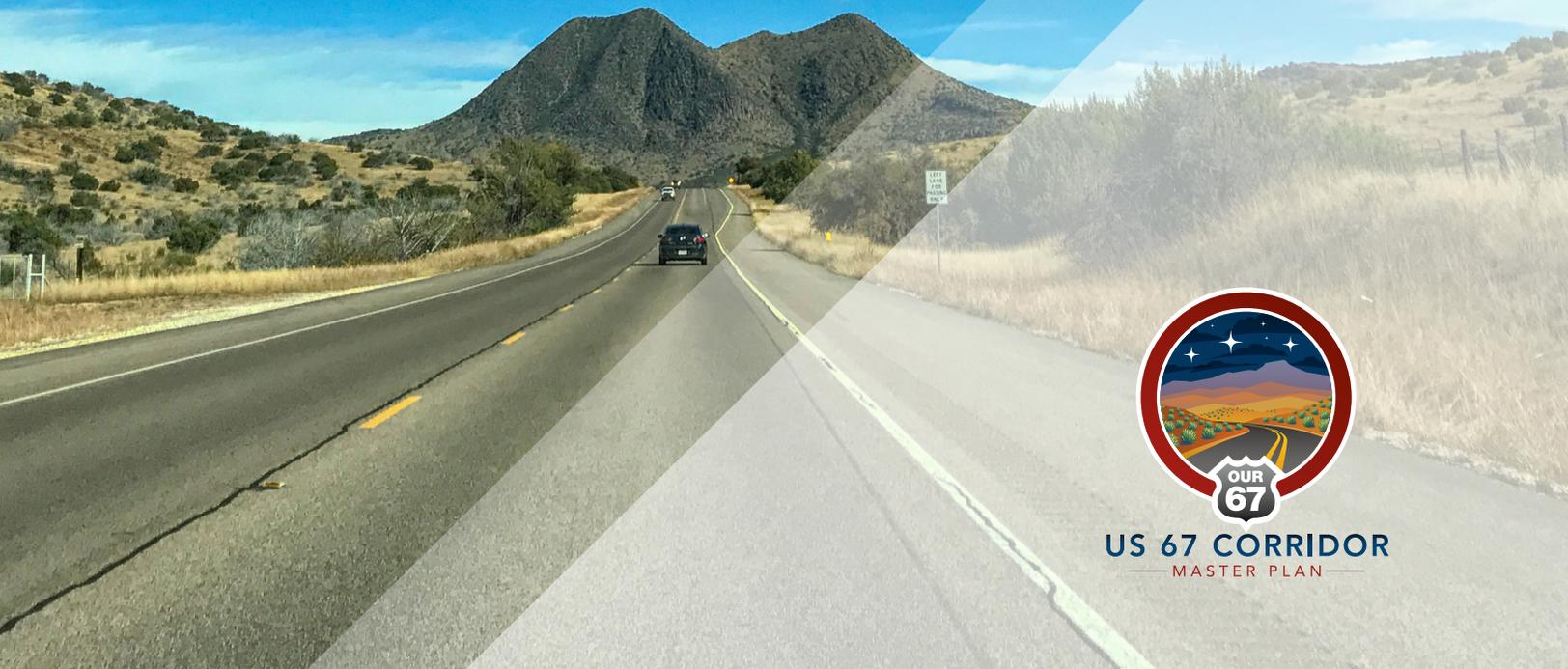
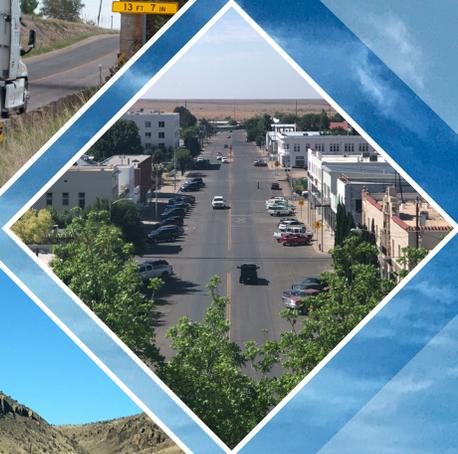




US 67 CORRIDOR MASTER PLAN

APPENDIX M

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 Study Corridor Master Plan Freight Conditions Technical Memorandum

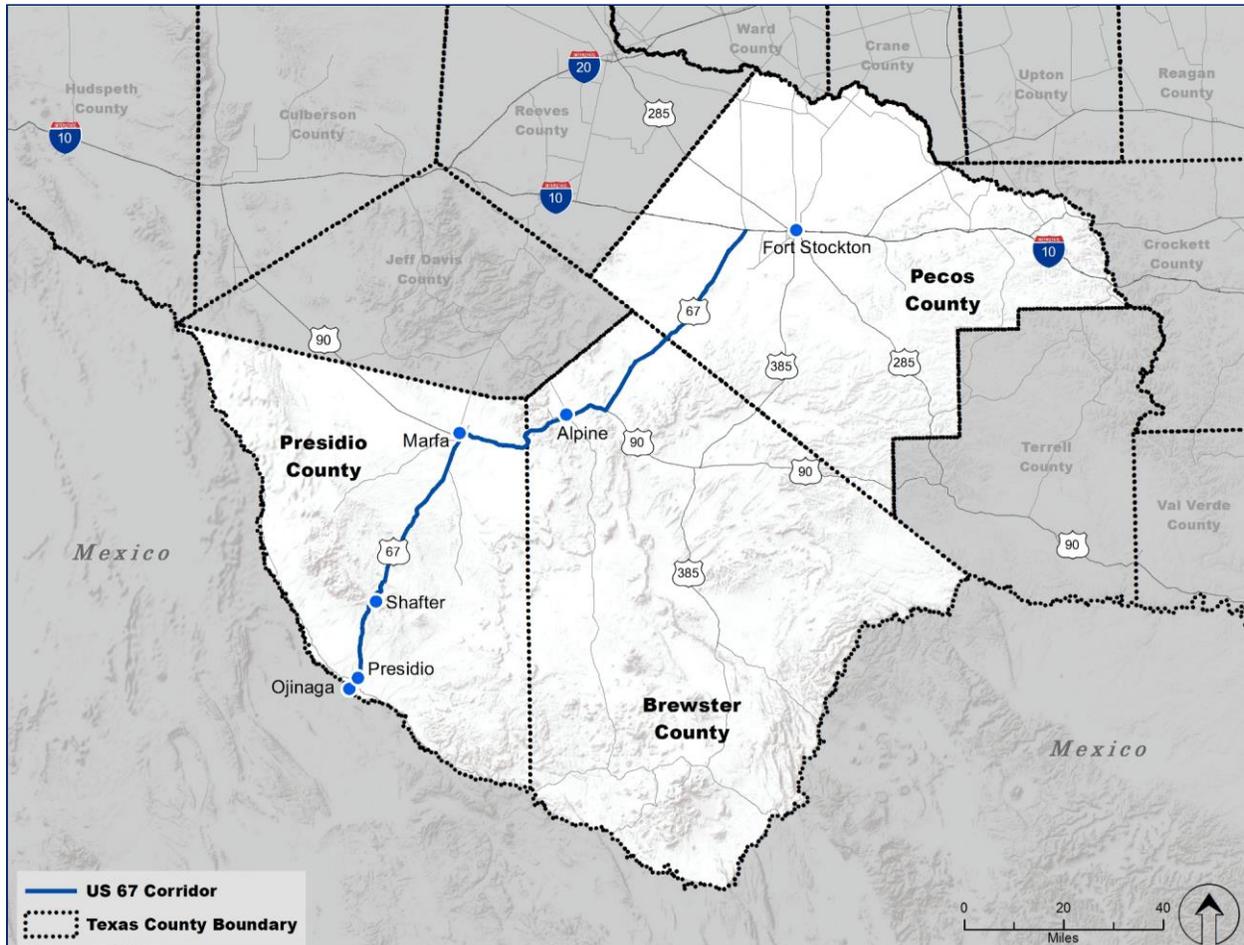
1.0 Introduction

The purpose of this technical memorandum is to describe the existing and future conditions for freight along the US 67 corridor. The memorandum includes an assessment of regional freight infrastructure, interviews with freight stakeholders along the corridor, and analysis of current and future total freight volumes for the three-county study area (Pecos, Brewster, and Presidio Counties). Freight travel patterns were assessed for origin-destination pairs that generate freight movements within and through the study corridor, and a planning level truck traffic forecast is provided for US 67.

The US 67 study corridor stretches 142 miles from Interstate 10 (I-10) west of Fort Stockton to the Presidio/Ojinaga Port of Entry (POE) on the 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. This rural 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 local and regional communities, is developing a corridor master plan to help determine the current and future transportation needs along US 67.

US 67 serves multiple communities and businesses with diverse needs and priorities. While US 67 is not a major freight corridor, it does support goods movement required to supply consumers and businesses in Alpine, Marfa, and Presidio, as well as freight that is simply moving through the area to reach other destinations outside of the corridor. In addition, the federal government plans to widen the bridge at the international POE from two lanes to three, while TxDOT and Texas-Pacifico Transportation Ltd (Texas-Pacifico) are partnering to rebuild the rail bridge in Presidio and repair the rail line from Presidio to Alpine. Meanwhile, regional, national, and global trends such as growth in oil and gas extraction and border trade activity may lead to increasing freight traffic on the corridor in the future. Communities on US 67 have expressed concern about the potential safety, operational,

and quality of life issues associated with such an increase in freight movement. **Figure 1** shows the study corridor.



Source: CDM Smith

Figure 1: US 67 Base Map

The remainder of this document is divided into seven sections:

- **Section 2 – Freight Infrastructure in the Study Corridor** provides a brief overview of the multimodal freight network in the study area and its relationship to designated state and national freight networks.
- **Section 3 – Stakeholder Interviews** briefly describes the freight stakeholder outreach process and results.
- **Section 4 – Key Freight Generators** describes some of the key producers of freight movements in the US 67 study corridor.

- **Section 5 – Regional Freight Flow Analysis** provides an overview of freight volumes by weight and by value in the region including key commodities shipped and overall travel patterns of cargo moving to, from, within, and through the region, using TxDOT’s TRANSEARCH database. TRANSEARCH provides origin-destination freight flow data by mode and commodity for North America, including the United States, Mexico, and Canada.
- **Section 6 – Current and Future Freight Volumes in the Corridor** describes current truck volumes on the US 67 study corridor; assesses truck volumes and key commodities moving through the Presidio/Ojinaga POE; develops a planning-level forecast of truck traffic in the study corridor; and assesses the adequacy of freight rail facilities in the corridor and the potential for truck to rail mode shift.
- **Section 7 – Freight Trends Impacting the Study Corridor** summarizes some of the key trends driving current and future freight volumes along US 67.
- **Section 8 – Summary and Key Findings** summarizes the major findings of the technical memorandum.

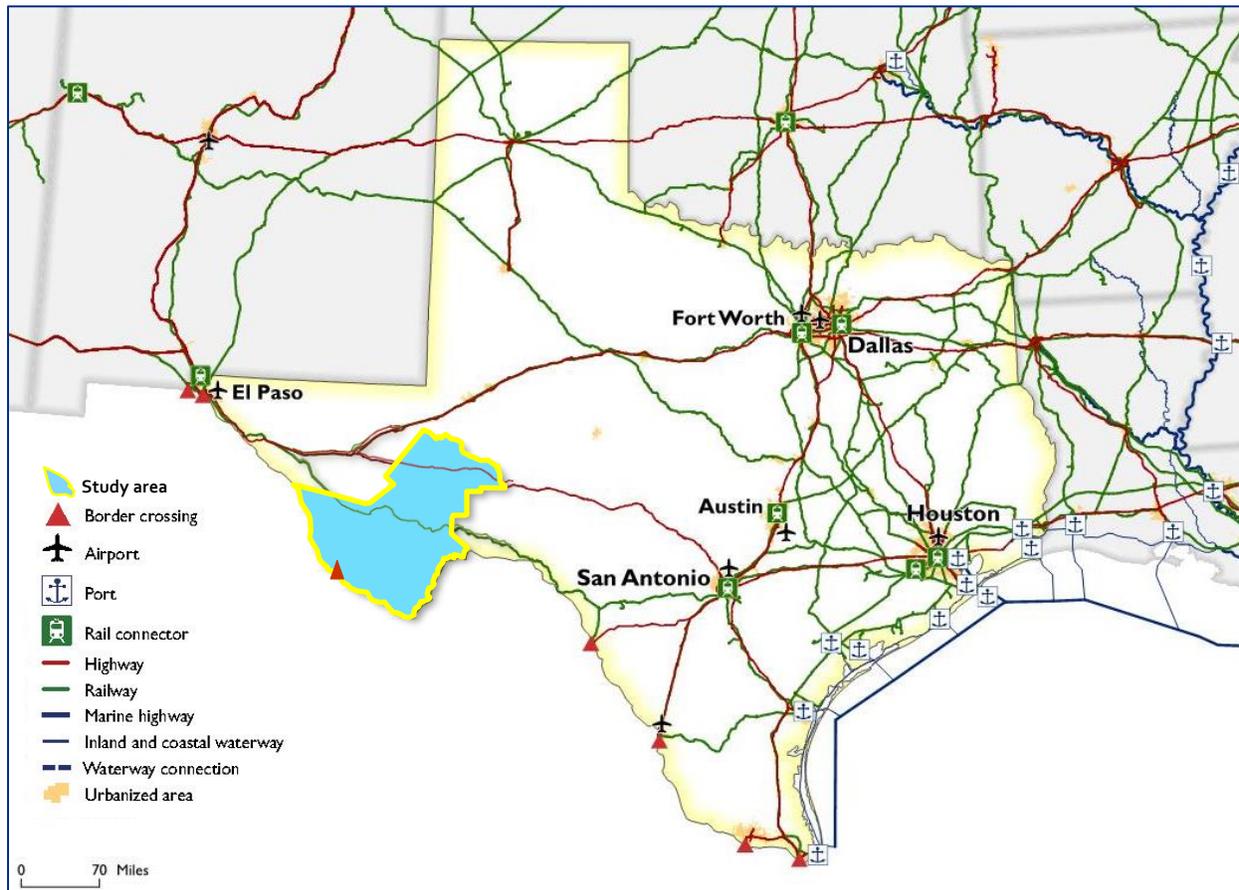
2.0 Freight Infrastructure in the Study Corridor

Freight infrastructure in the US 67 study corridor includes highway and rail components, as well as the Presidio POE. This section describes the key multimodal freight infrastructure in the study area, including recent state and national freight network designations and planned freight projects.

2.1 Federal Freight Network Designations

The Fixing America’s Surface Transportation Act (FAST Act) is the most recent federal transportation bill. Among other things, it directed the United States Department of Transportation (USDOT) to establish a national freight network and created the first freight-specific funding program. In response, USDOT created the National Multimodal Freight Network, which is the national system of freight infrastructure assets designed to help states in direct resources towards freight projects, inform freight planning efforts, and help prioritize federal freight investments. **Figure 2** depicts the Interim National Multimodal Freight Network in Texas. The Union Pacific Rail Line that runs through Marfa and Alpine and on to San Antonio is part of this network, as are I-10 and I-20 since they are part of the National Highway Freight Network. US 67 is not part of the National Multimodal Freight Network; nor is the border crossing at Presidio, or the Texas-Pacific Railroad. More information about the National Multimodal Freight Network can be found in the National Freight Strategic Plan¹.

¹United States Department of Transportation, *National Freight Strategic Plan*, accessed April 4, 2019 at https://www.transportation.gov/sites/dot.gov/files/docs/DRAFT_NFSP_for_Public_Comment_508_10%2015%2015%20v1.pdf



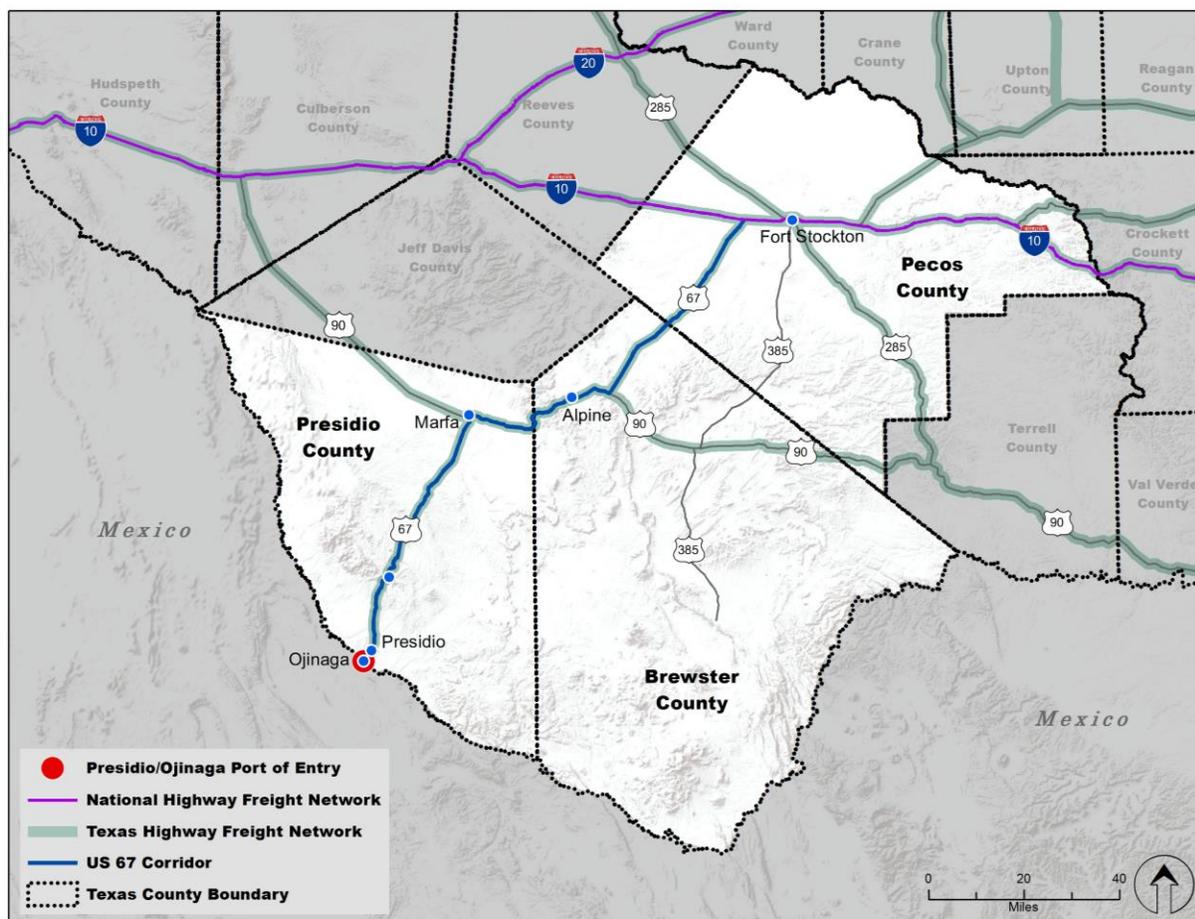
Source: USDOT

Figure 2: Interim National Multimodal Freight Network in Texas

2.2 Highway

The US 67 study corridor is part of the Texas Highway Freight Network. This network was designated by TxDOT as part of the 2017 Texas Freight Mobility Plan.² It is one component of the Texas Multimodal Freight Network, which defines the system of highway corridors, rail networks, ports and waterways, airports, and international POEs throughout the state that facilitate the safe and efficient movement of freight. **Figure 3** shows the highway network in the study area. **Figure 3** also shows the National Highway Freight Network. The National Highway Freight Network is the highway component of the National Multimodal Freight Network and is incorporated in the Texas Highway Freight Network by reference.

²Texas DOT, *Texas Freight Mobility Plan 2017*, accessed April 16, 2018 at <https://www.dot.state.tx.us/move-texas-freight/studies/freight-plan.htm>



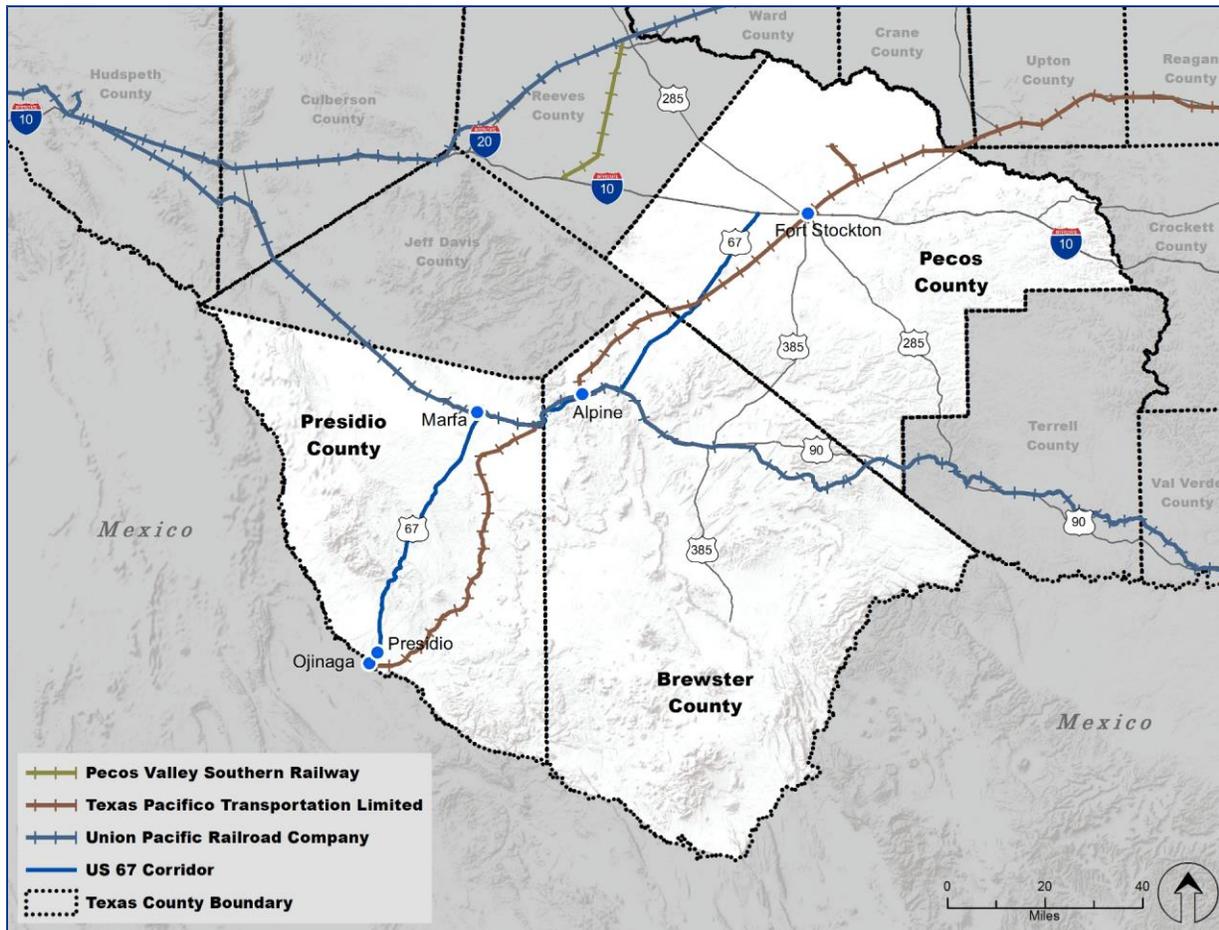
Source: CDM Smith

Figure 3: TxDOT Highway Freight Network and USDOT National Highway Freight Network in Proximity to US 67

2.3 Freight Rail

The US 67 Master Plan study area contains two railroad lines: the Union Pacific Railroad (UP) which is a Class I railroad³ and the Texas Pacific Railroad which is a regional railroad. **Figure 4** shows the freight rail lines in the study area. These facilities are described briefly below.

³The Surface Transportation Board categorizes railroads according to operating revenue. Class I railroads are the largest national railroads with annual operating revenue of at least \$447,621,226. The revenue thresholds are periodically updated to adjust for inflation, with the last update being in 2017.



Source: CDM Smith

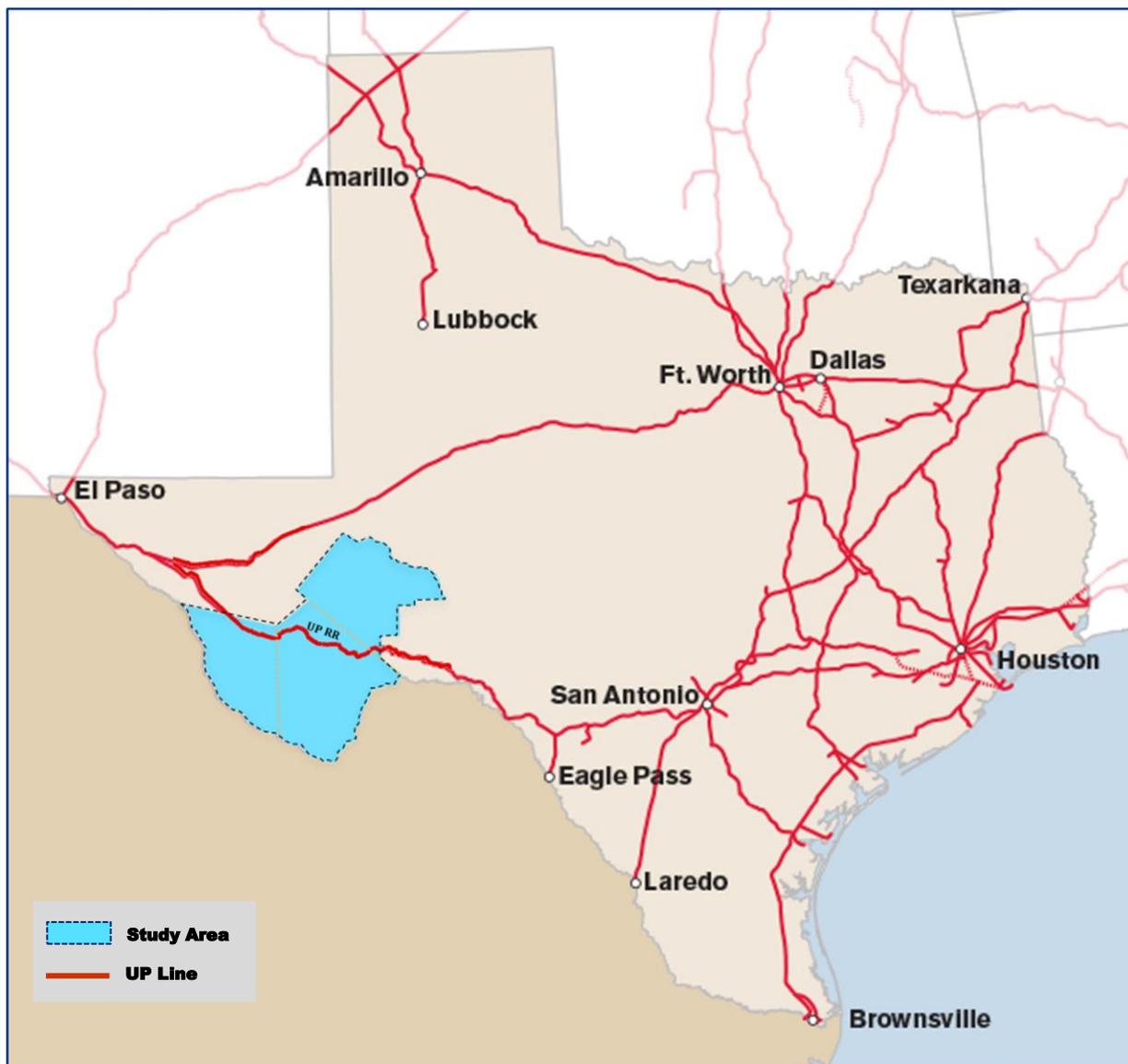
Figure 4: Freight Railroads in the Study Area

2.3.1 Union Pacific Railroad

Union Pacific is one of the largest railroads in the nation, operating more than 32,000 route miles in 23 states. **Figure 5** shows the UP Texas route map. The UP line within the US 67 study area connects to El Paso in the west, which is the eastern terminus of the UP Sunset Route. The Sunset Route runs from Southern California to El Paso and is a key corridor for port-generated intermodal rail traffic. To the east, the UP connects to San Antonio, which provides further connections to Laredo, Dallas-Fort Worth, and Houston. According to UP, 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.⁴ There is a small UP rail siding east of Marfa that serves Fowlkes Cattle Company. Alpine is served by a UP-owned station at 102 West Holland Avenue. The

⁴Ivan Jaime, Tyson Moeller, and Brandon Kasper, Union Pacific Railroad, personal communication, June 7, 2018.

Amtrak Sunset Limited and Texas Eagle routes stop at this station. UP also performs crew changes at the Alpine station.



Source: Union Pacific

Figure 5: Union Pacific Texas Route Map

2.3.2 Texas-Pacifico

Texas-Pacifico provides freight rail service from Alpine to San Angelo. The Texas-Pacifico network is shown in **Figure 6**. 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-Pacífico'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. For example, as of 2015, the three major Texas-Pacífico customers near the study area were all frac sand suppliers including Titan in Sulphur Junction and Vista and Texas Specialty in Fort Stockton.⁵ According to Texas-Pacífico, more than 90 percent of its current traffic is oil field related; the railroad moves pipe and frac sand in and crude oil out.⁶ However, this pattern will probably change in the next two years as new pipelines are built, which will reduce the market for crude by rail movements.



Source: Texas-Pacífico

Figure 6: Texas-Pacífico/South Orient Railroad Map

Texas-Pacífico interlines with the BNSF Railway and the Fort Worth and Western Railroad in San Angelo, and with UP in Alpine. Texas-Pacífico also has trackage rights over the UP line from Alpine Junction to Paisano Junction. Within the US 67 study area, Texas-Pacífico has stations at Alpine, Paisano, Tinaja, Plata, Casa Piedra, and Presidio. However, the section of the line from Fort Stockton to Presidio is not operated regularly and is classified by the Federal Railroad Administration (FRA) as Excepted Track.⁷

By the time TxDOT acquired the line in 2001, train speeds on the South Orient Railroad were restricted to 10 miles per hour (mph) due to a lack of routine maintenance by previous owners, which

⁵Texas DOT, Texas-Pacífico Operations Analysis, September 2016.

⁶Stan Meador, Texas-Pacífico Transportation, personal communication, June 18, 2018.

⁷Excepted Track is an FRA track standard that carries a 10-mph speed limit for freight and cannot be used for revenue passenger service. Such track is excepted from the normal FRA requirements for roadbed, track geometry, and track structure, provided certain other conditions are met.

led to infrastructure deterioration. In response, TxDOT began rehabilitating the line in 2009, starting with the 112-mile link from San Angelo Junction to Mertzon, which allowed for train speeds up to 25 mph. Texas-Pacífico has also been providing rehabilitation and routine maintenance separately from TxDOT. Improvements have focused on the segments northeast of Fort Stockton because they are the most heavily trafficked parts of the line. As a result, the track can now support 25 mph speeds from San Angelo Junction (near Coleman) to Sulphur Junction (11 miles east of Fort Stockton). Texas-Pacífico plans to make additional investments in the northern section of the line, with the goal of enabling 40 mph train speeds in the future.

Although the South Orient Railroad was built to interchange with Ferromex (a Mexican private rail consortium) at Presidio, the Presidio-Ojinaga International Rail Bridge is not currently operational, having burned down in 2008. However, in August 2017 TxDOT received a federal Fostering Advancements in Shipping and Transportation for the Long-term Achievement of National Efficiencies (FASTLANE) grant for \$7 million to rehabilitate 72 miles of track from the border to Alpine. Concurrently with this work, Texas-Pacífico will rebuild the Presidio-Ojinaga International Rail Bridge using mostly private funds. The rail bridge work let in early fall of 2018 and should be complete by the summer of 2019. Although these projects will provide much-needed upgrades to the southernmost portion of the line, according to TxDOT additional rehabilitation will be required to approximately 11 miles beyond Fort Stockton prior to establishing regular freight service on this segment.⁸

2.4 Presidio Port of Entry

The Presidio POE is located near the U.S. - Mexico border in the City of 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. A maximum of two lanes are provided for commercial vehicles, and four lanes for passenger vehicles (two lanes in each direction). 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. (Plans for the bridge widening have since been revised to only include one southbound lane rather than two.) The bridge widening will permit 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 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. Presidio POE freight volumes are discussed in detail in **Section 6.1**.

The Mexican government recently completed major renovations to the POE infrastructure on the Mexican side. The renovation included the construction of several new facilities for transit and light-duty vehicles, as well as additional capacity for cargo operations, including a new area for export inspections. These improvements have made the Mexican side of the POE into a state-of-the-art

⁸Texas DOT, 2016 South Orient Annual Inspection & Report, June 16-19, 2017.

facility, which may indicate that the Mexican authorities believe this location will experience growth in passenger and freight traffic in the future.

2.5 Recent and Planned Freight Improvements in the US 67 Study Corridor

In 2016, TxDOT completed its first statewide freight plan. In addition to outlining an overall policy framework for freight planning and programming, the Texas Freight Mobility Plan identified high-, mid-, and low-priority freight projects throughout the state. In 2017, TxDOT completed an update to the Texas Freight Mobility Plan to make it FAST Act-compliant. The freight investment plan contains nine projects on the study corridor, which are listed in **Table 1**. Two of these projects are in the five-year fiscally constrained freight investment plan: the reconstruction of the rail bridge at Presidio (which will be mostly privately funded, with a small local match) and the rehabilitation of the South Orient line from Presidio to Alpine (which received the FASTLANE grant mentioned above). The fiscally constrained plan only contains projects that are fully funded in the 2016 to 2020 timeframe.

All the remaining projects on US 67 are part of the unconstrained freight investment plan, which includes freight projects for longer-term investment on the Texas Multimodal Freight Network regardless of funding status. These projects are primarily focused on road widening, bridge replacement, safety, and routine maintenance. All of them fall under the Asset Preservation and Safety categories.

Table 1: 2017 Additional Texas Freight Mobility Plan Update Improvements Proposed for the US 67 Study Corridor

| District | Facility | Location | Project Description | Fiscal Year | Estimated Cost | Priority |
|---|-----------------------|--|--|-------------|----------------|----------|
| 5-Year Fiscally Constrained Freight Investment Plan | | | | | | |
| El Paso | South Orient Railroad | Presidio Bridge | Reconstruction of International Rail Bridge | 2019 | \$10,000,000 | High |
| El Paso | South Orient Railroad | Presidio County | Rehabilitation of the South Orient (FASTLANE Grant) | 2019 | \$7,000,000 | High |
| Unconstrained Freight Investment Plan | | | | | | |
| El Paso | US 67 | Junction of US 67/90 to 0.371 mi South of Junction US 67/90 | Mill and Inlay Existing Pavement and Upgrade Sidewalks to Meet ADA Standards | 2019 | \$900,000 | Medium |
| El Paso | US 67 | 15.15 mi South of Jct US 67/90 to 32.28 mi South of Jct US 67/90 | Seal Coat | n/a | \$1,100,000 | Low |
| El Paso | US 67 | Puerto Rico St to International Demarcation Line | New Two-Lane Twin Bridge Structure for Southbound Traffic into Mexico | N/A | \$6,409,000 | Medium |

Table 1: 2017 Additional Texas Freight Mobility Plan Update Improvements Proposed for the US 67 Study Corridor (continued)

| District | Facility | Location | Project Description | Fiscal Year | Estimated Cost | Priority |
|----------|----------|--|--|-------------|----------------|----------|
| El Paso | US 67 | Rio Grande River to 0.057 NE of Rio Grande River | Bridge Replacement | N/A | \$4,567,000 | Medium |
| Odessa | US 67 | 16.8 mi South of I-10 to Brewster County Line | Roadway Widening to a Modified Super 2 | 2021 | \$13,996,000 | Low |
| Odessa | US 67 | 9.249 mi South of I-10 to 9.449 mi South of I-10 | Safety Treat Fixed Objects | 2019 | \$151,000 | Low |
| Odessa | US 67 | I-10 to 16.8 mi South of I-10 | Roadway Widening to a Modified Super 2 | 2021 | \$18,997,000 | Low |

Source: Texas Freight Mobility Plan 2017

3.0 Stakeholder Interviews

In addition to the various sources of freight data analyzed for this report, the study team relied on interviews with freight stakeholders in the region to understand freight conditions along the corridor and gain valuable insight on new trends and developments. Freight stakeholders interviewed for the study are shown in **Table 2**. Interviews were conducted both in person and over the phone.

Table 2: Stakeholders Interviewed for the US 67 Corridor Master Plan

| Interviewees | Company | Interest in the Study |
|---|--|--|
| Chris Cornell | Reece Albert/CSA Materials, Alpine | Regional shipper |
| Dean Rodriguez | Biad Chili Company, Presidio | Regional shipper |
| Herman Acosta, Jr. | Tri-County Concrete and Steel, Alpine | Regional shipper |
| Isela Nunez | Pro Customs Brokerage, Presidio | Customs broker engaged in border trade |
| Jake Giesbrecht | Bullet Transport Services, Inc., Presidio | Regional truck carrier |
| Michael Neipert and Alex Leos | U.S. Customs and Border Protection, Presidio | Operation of Presidio POE |
| Theo Escontrias | Escontrias Brokerage, Presidio | Customs broker engaged in border trade |
| Fernando Sanchez | Presidio Stockyards, Presidio | Regional shipper |
| H. Cowan | Solitaire Manufactured Homes, Presidio | Regional shipper |
| Stan Meador | Texas-Pacifico, San Angelo | Regional rail carrier |
| Ivan Jaime, Tyson Moeller, and Brandon Kasper | Union Pacific Railroad, Omaha, NE | National rail carrier |

Source: CDM Smith

Key topic areas discussed in the interviews included:

- Inbound and outbound supply chain patterns and how they are expected to change
- Any challenges to moving freight in the corridor and suggestions for addressing them
- Commodities moved in the corridor
- Safety issues and potential solutions
- Impacts of the planned Texas-Pacifico rail improvements and opportunities for mode shift from truck to rail

The key findings from the interviews were:

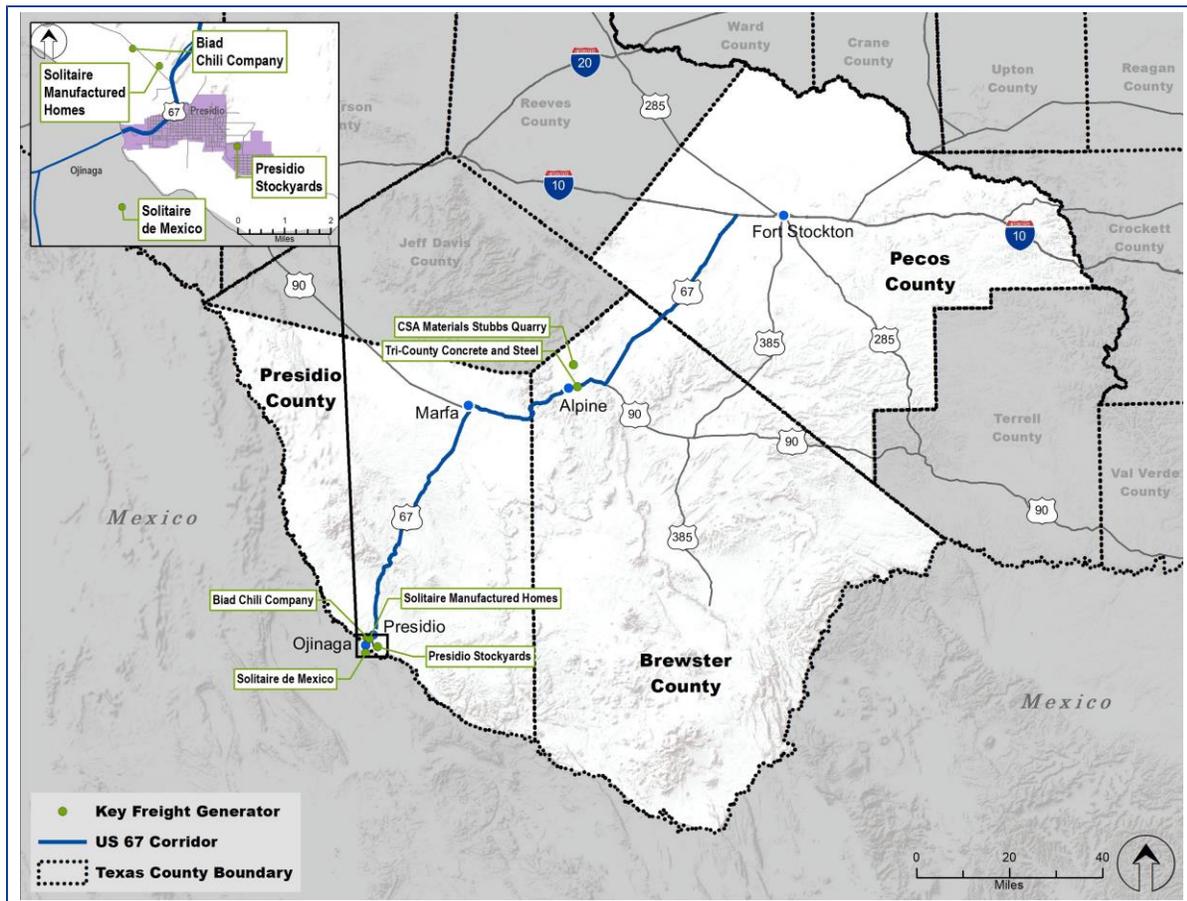
- The expansion of the international bridge at the Presidio/Ojinaga POE may make the area more attractive for industrial development, particularly increased shipments of agriculture from the producing regions around Ojinaga. However, additional POE infrastructure and operational improvements would be required to achieve significant growth. For instance, many types of fresh produce require an onsite U.S. 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 a truck), narrow shoulders, and the lack of designated pull-off areas both for tourists and for trucks that experience mechanical problems. The intersection of US 67 and FM 170 in Presidio was also perceived as a safety issue with poor sight distances for vehicles turning left from FM 170.
- Some stakeholders also expressed a desire for additional rest areas with basic services such as water. Alternate routes were suggested to reduce through trucks in communities, especially Presidio and Alpine.
- The UP rail bridge over US 67 in Alpine has limited vertical clearance of 13 feet 7 inches. Oversized loads that cannot get under the bridge 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).
- UP and Texas-Pacifico do not perceive any immediate opportunities to shift freight from trucks to rail. However, UP 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 consist of basic commodities and oil field traffic. With respect to the rail bridge reconstruction and track rehabilitation, Texas-Pacífico expects 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 may grow due to the Solitaire Manufactured Homes expansion, which will double production of mobile homes at its Ojinaga factory. In addition, the Presidio 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. According to U.S. Customs and Border Protection officials, 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 restricting trade development in the agricultural sector.

4.0 Key Freight Generators

Although the study corridor is not part of the National Highway Freight Network, there are some key shippers in the region generating cargo that moves along US 67 or the regional rail network. These include traditional drivers of the study area 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. This section briefly describes some of the key freight generators affecting goods movement in the study region. This information was drawn from market research combined with freight stakeholder interviews. The key facilities profiled include the Biad Chili Company, Solitaire Manufactured Homes, Tri-County Concrete and Steel, CSA Materials, and the Presidio Stockyards. **Figure 7** is a map showing the locations of these facilities relative to the study corridor.



Source: CDM Smith

Figure 7: Key Freight Generators Near the US 67 Study Corridor

The Biad Chili Company recently constructed a new chili processing plant on FM 170 west of Presidio. Biad is headquartered in New Mexico and ships chili products nationwide; the new plant is the company’s fourth location. Part of the reason Biad chose to locate the plant in Presidio was to access natural gas brought to the area by the new Trans-Pecos pipeline. Natural gas is used to dehydrate the chilis. Without the pipeline, Biad would be forced to use propane shipped to the factory by truck, which is not only three to four times more expensive than natural gas but would also generate shipments of hazardous materials on US 67.⁹ The chilis are sourced in Ojinaga and come across the border for processing. Previously, chilis had been shipped from Ojinaga to other Biad processing

⁹Von Oldershausen, Sasha, ‘Chili plant finalizes Presidio location,’ *Big Bend Now*, January 21, 2016.

facilities in New Mexico and Arizona. The new location reduces supply chain costs for the firm since it is adjacent to the source of the company's key raw material.¹⁰

4.1 Solitaire Manufactured Homes

In 2011, Elliott Manufactured Homes and Solitaire de Mexico began producing mobile homes at a factory in Ojinaga for their parent company, Solitaire Manufactured Homes. The homes are constructed in Ojinaga, then brought across the border for finishing at Elliott's Presidio location off FM 170 just west of US 67. This is a classic maquiladora or twin plant arrangement, whereby a foreign company sets up a manufacturing operation in Mexico and exports its products to the home country of the parent company. This arrangement gives Solitaire access to skilled labor in Ojinaga; the company previously manufactured its product in the U.S. but found that it could not compete with the oil fields for workers. In addition, under North American Free Trade Agreement (NAFTA) rules, raw materials for the homes can be imported into Mexico without paying any import duties since they will eventually be sent back to the U.S. in the form of mobile homes.¹¹

Solitaire produces three to four mobile homes per weekday in Ojinaga, which are moved across the border and brought to the Presidio lot for appliance installation and final inspections and testing. From there, the completed mobile homes are transported north on US 67 to retail outlets in Texas, New Mexico, and Oklahoma. This creates operational issues on US 67 and other hinterland routes due to the width of the mobile homes (see **Figure 8**). The width of these loads precludes safe passing except where designated passing or climbing lanes are present. Moreover, the weight of the trailers (which are up to 40,000 pounds heavier than a typical mobile home) means that the trucks must travel much slower than other traffic, leading to backups and delays for other corridor users. In addition, the mobile homes cannot clear the low bridge in Alpine under the UP tracks, forcing them to travel north on SH 17 to Fort Davis, then south on SH 118 to Alpine before getting back on US 67/US 90. Due to another low bridge near Van Horn, Solitaire trucks and other over-height loads must use the US 67 corridor even if they want to go west on I-10. This routing is more circuitous and mountainous than US 67 and adds about one hour to the trip which also increases transportation costs.

Solitaire also receives two to three tractor-trailers per day delivering supplies for use in its manufacturing operation. Typical inbound shipments on US 67 include lumber, steel, carpet, appliances, fixtures, and tubs/showers.

¹⁰Multimillion dollar chili plant opening in Presidio starts construction,' retrieved April 17 2018 from <http://www.newswest9.com/story/32732882/chili-plant-opening-in-presidio-starts-construction>.

¹¹Dodd, C., 'Solitaire Homes: Inside the growing, cross-border house manufacturing plant,' *Big Bend Now*, April 28, 2016.



Source: CDM Smith

Figure 8: Solitaire Mobile Home Shipment on US 67

4.2 Tri-County Concrete and Steel

Tri-County Concrete and Steel is located in Alpine and sells ready-mix concrete and aggregate to commercial and retail customers and steel to retail customers. The firm receives steel on an as-needed basis to fill customer orders. They also receive one concrete truck every other week, and two freight trucks per day loaded with aggregate. The company has been in Alpine for about 12 years. Shipments generally come from elsewhere in the Trans-Pecos region.¹² Outbound shipments mostly consist of cement and aggregate (typically one or two loads per day of each). Most of these shipments serve construction projects in the three-county area; some also go to homeowners in the region who are doing projects. Cement shipments tend to increase during the construction season. In addition, Tri-County is setting up a cement depot and quarry in Presidio to supply the construction of the new bridge at the POE.¹³

¹²The Trans-Pecos region is defined as the portion of Texas that lies west of the Pecos River.

¹³Herman Acosta, Jr., Tri-County Concrete and Steel, personal communication, May 15, 2018.

4.3 CSA Materials Quarry

CSA Materials is headquartered in San Angelo and has 12 quarries located throughout West Texas and one rail terminal located in Slaton. The Weyerts Quarry is located off US 67 about 20 miles northeast of Alpine, but this quarry is being idled according to CSA officials. However, the firm is retaining the rights to mine it in the future in case they want to restart operations. CSA has opened a new facility – the Stubbs Quarry – about eight miles north of Alpine off SR 118 (see **Figure 7**). This new quarry will produce aggregate and sand for the local and regional concrete market as well as ballast for use in railroad construction and maintenance projects. The quarry is served by a Texas-Pacifico rail spur. Texas-Pacifico recently delivered 100 rail cars to the site for loading. CSA plans to ship ballast from the quarry via the Texas-Pacifico and UP rail lines and expects to be generating two or three trains per month by the end of 2019. These trains will mostly be headed to Rankin, San Angelo, and Slaton and will, therefore, lead to increasing train volumes at the grade crossing northeast of Alpine. However, the bulk of the mine’s production will ship out by truck, mostly to Alpine concrete producers. CSA expects to generate 20-25 outbound truck loads per week from the new quarry.¹⁴

4.4 Presidio Stockyards

Livestock (mostly cattle) is a key import commodity at the Presidio POE. The Presidio Stockyards, located on Stockyard Road to the east of town, receives and ships cattle that enter the country from Mexico. The facility typically receives five or six trucks per day but can receive up to 16 trucks (roughly 1,600 head) in a day during the peak cattle season from September to February. The cattle are typically headed to feedlots and grazing ranches all over the U.S. Typical destinations include the Texas Panhandle, Nebraska, Kansas, Oklahoma, Colorado, and California. Outbound trucks are often loaded at night, so they can arrive at their destination during the day. Stockyard officials report that cattle shipments have doubled in the last three years (although this was partially just a recovery to previous levels as there was a sharp drop in imports in 2013).¹⁵

5.0 Regional Freight Flow Analysis

This section provides an overview of freight movement patterns in the three-county study region (Pecos, Brewster, and Presidio Counties). Commodity flow patterns in the study region were evaluated using the IHS Markit TRANSEARCH database, which was provided by TxDOT. TRANSEARCH is a commodity flow database that provides base year (2015) and future (2045) freight flows by county, commodity, and mode.¹⁶ More details about the structure and content of the TRANSEARCH data are provided in **Attachment A**. The purpose of this analysis is to summarize

¹⁴Chris Cornell, CSA Materials, personal communication, June 29, 2018.

¹⁵Fernando Sanchez, Presidio Stockyards, personal communication, June 20, 2018.

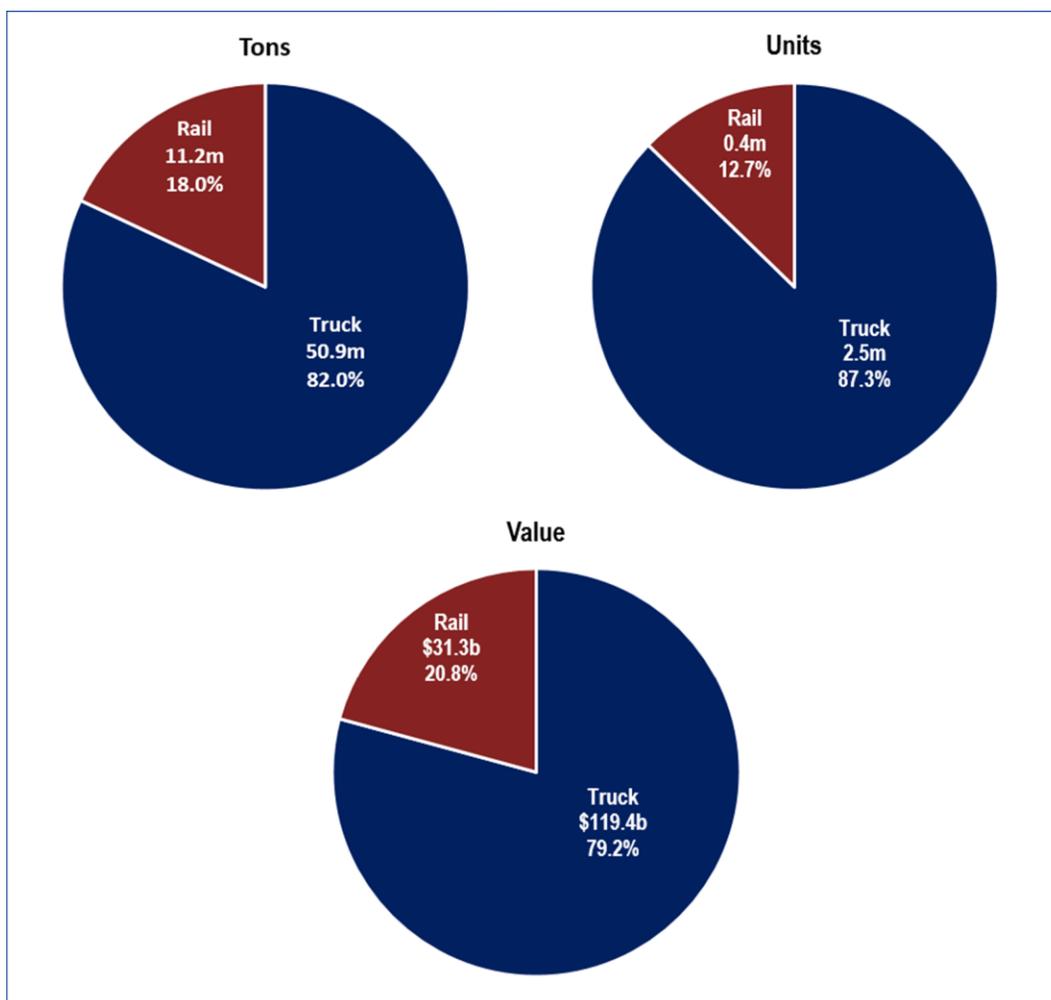
¹⁶TRANSEARCH uses data from various sources including rail and truck carriers, IHS’s Business Markets Insights database, trade associations, industry reports, and federal government data to establish production tonnages by industry and commodity, which are further transformed to estimate freight value and units (e.g., number of trucks).

commodity flow patterns in the three-county study region now and in the future, and to identify key freight origins and destinations for freight that uses the study corridor.

5.1 Total Flows

5.1.1 Current Flows

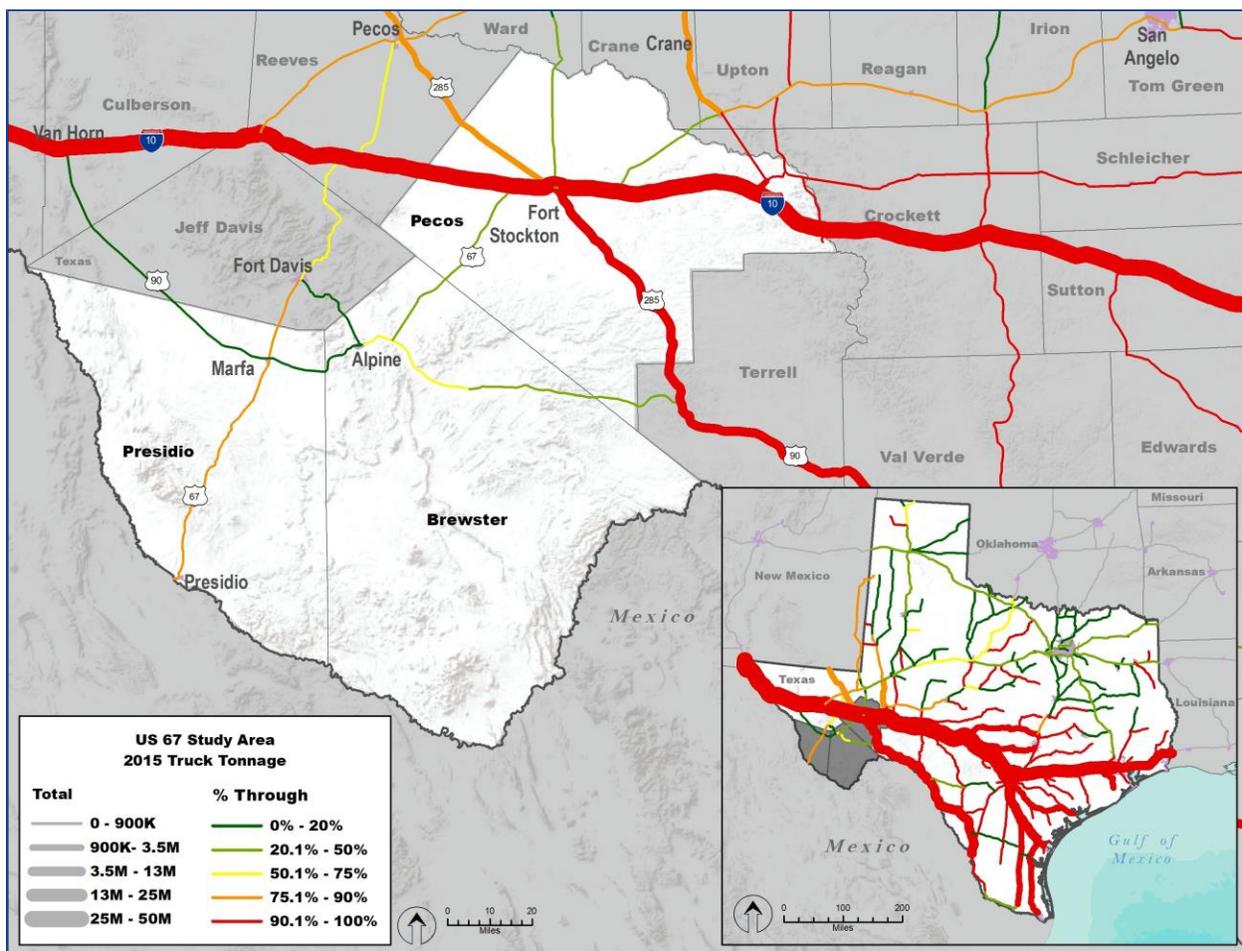
According to TRANSEARCH, in 2015, 62.1 million tons of freight worth \$150.7 billion dollars moved to, from, within, and through the three-county region. As shown in **Figure 9**, trucks carried the vast majority of this freight by weight, number of units (trucks or rail cars), and value. However, these 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.



Source: TRANSEARCH

Figure 9: 2015 Three-county Freight Mode Split by Weight, Units, and Value

Figure 10 shows 2015 truck tonnage on major highways in the study region. Note that the map only shows tonnage moving to, from, within, or through the three-county study region, which is why I-10 has more tonnage than other major trade corridors like I-35. The map demonstrates that regional truck flows are dominated by a few highways (mainly I-10 and, to a lesser extent, US 285), and that virtually all the tonnage is through shipments. The US 67 study corridor and other routes such as US 90, SH 17, and SH 118 handle much less freight, however, the freight on those routes is more likely to be serving businesses in the study area. The percentage of traffic consisting of through traffic varied from 20 percent or less between Marfa and Alpine to more than 75 percent from Presidio to Marfa.



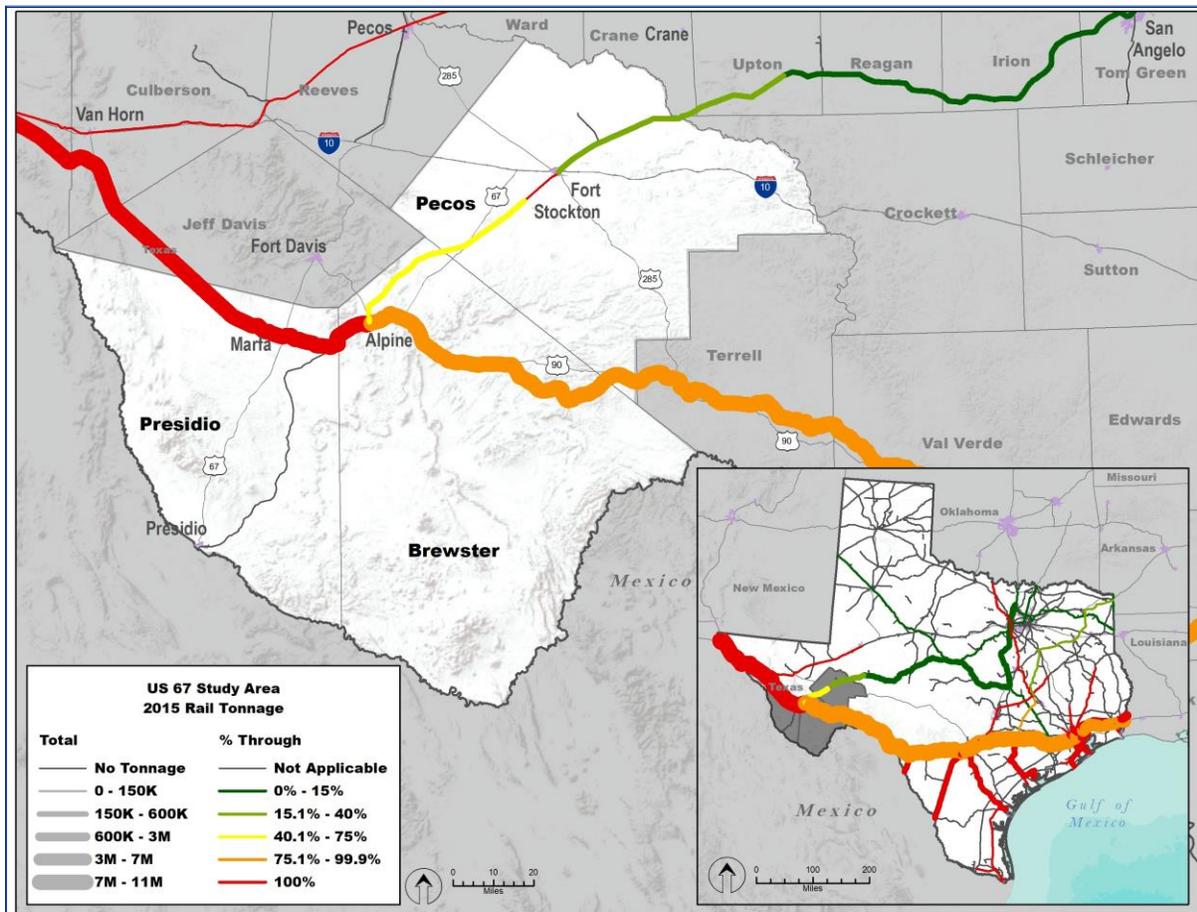
Source: TRANSEARCH

Figure 10: 2015 Truck Tonnage

Figure 11 provides comparable information for rail tonnage in the three-county area (again, with respect to the study area counties). Similar to the truck flows, almost all of the rail tonnage is moving on the UP mainline, which carried between 7 and 11 million tons of freight in 2015. More than three-

quarters of this cargo consisted of through freight; on some links, such as from El Paso to Alpine, through freight was 100 percent of rail volumes.

The Texas-Pacífico line from Alpine to Fort Stockton carried less than 600,000 tons in 2015. From the UP line to Presidio, the Texas-Pacífico carried no freight, which is consistent with its poor condition and the lack of an international rail bridge in Presidio.



Source: TRANSEARCH

Figure 11: 2015 Rail Tonnage

5.1.2 Future Flows

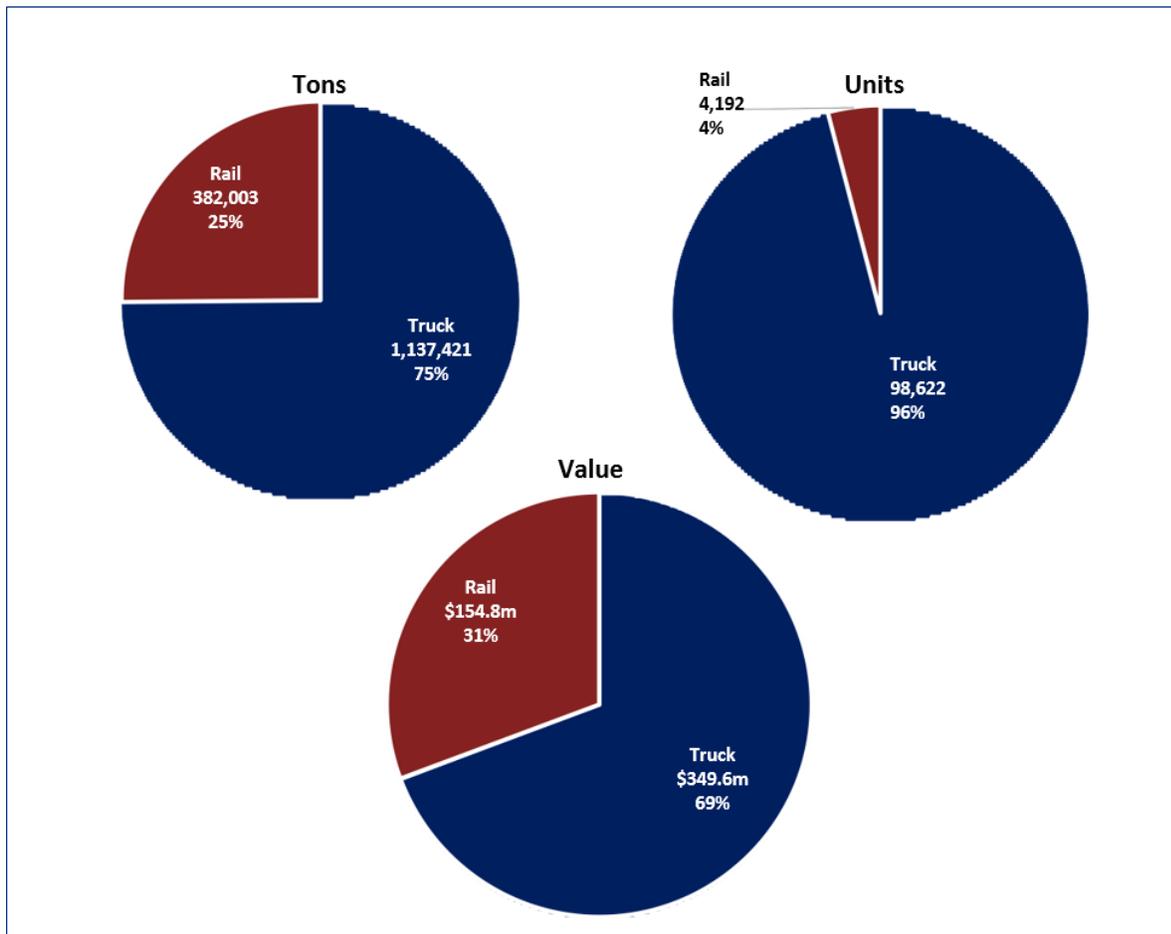
By 2045, total freight flows in the three-county region are expected to reach 141.5 million tons valued at \$390.4 billion. This represents growth of 128 percent by weight and 159 percent by value. The composition of this freight will remain relatively similar, with through shipments continuing to dominate and the truck share of the total increasing slightly over rail. Given the dominance of through freight, I-10 and the UP rail line should continue to carry most of the freight in the study area.

A summary of current and future freight tonnage, units, and value with absolute and percentage growth in the three-county region is provided in **Attachment B**.

Since such a large share of freight in the three-county region is through freight moving on I-10 or the UP mainline, it can be useful to assess freight flow patterns exclusive of through movements. This provides a clearer idea of commodity flows that are related to economic activity in the region and a better picture of the freight that is likely to be using the US 67 study corridor. Hence, the remainder of this section focuses on non-through freight movements in the three-county region.

5.1.3 Total Flows Excluding Through Movements

Excluding through movements, a total of 1.5 million tons of cargo valued at \$504 million moved to, from, and within the study region in 2015. From a modal standpoint, as shown in **Figure 12** trucks carried three-quarters of this freight by weight; 96 percent by units; and 69 percent by value.



Source: TRANSEARCH

Figure 12: 2015 Three-county Freight Mode Split by Weight, Units, and Value (Excluding through Movements)

By 2045, non-through freight in the three-county region will reach about 4.9 million tons valued at \$679 million. Due to an increase in nonmetallic minerals movements, outbound and intra-regional truck shipments are forecasted to grow faster than average. Outbound truck flows are expected to more than quadruple, from about 764,000 tons to 4.1 million tons, while intra-regional truck shipments are expected to grow from about 63,000 tons to 324,000 tons. Meanwhile, according to TRANSEARCH, rail movements other than through shipments are expected to decline by 98 percent (by weight) and 96 percent (by value).¹⁷

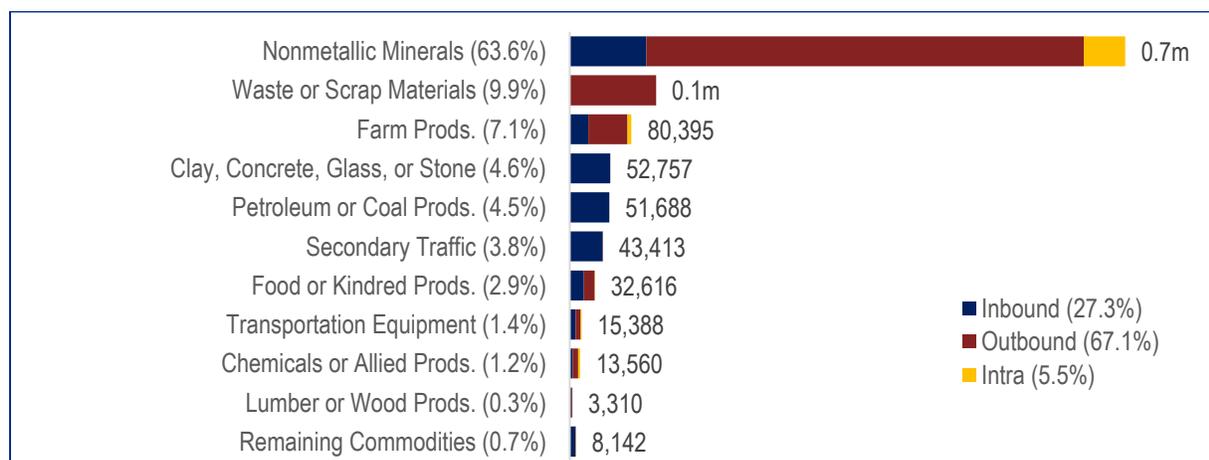
5.2 Top Commodities Excluding Through Movements

The following sections discuss key commodities moved in the study region by truck and rail, excluding through shipments. These shipments are referred to here as regional movements. Information is provided by both weight and value. Commodities are categorized using the Standard Transportation Commodity Code classification system. A list of two-digit Standard Transportation Commodity Code commodities and their descriptions is provided in **Attachment C**.

5.2.1 Top Truck Commodities

By Weight

Figure 13 shows the truck tonnage by commodity and direction in the three-county region for 2015, excluding through freight. This amounted to about 1.1 million tons of cargo. When measured by weight, the top truck commodities mostly consist of bulk commodities like nonmetallic minerals (by far the largest commodity group at about 700,000 tons), waste and scrap, and farm products. Most of these shipments are outbound from one of the three counties along the corridor, so they reflect production that is occurring in the region.

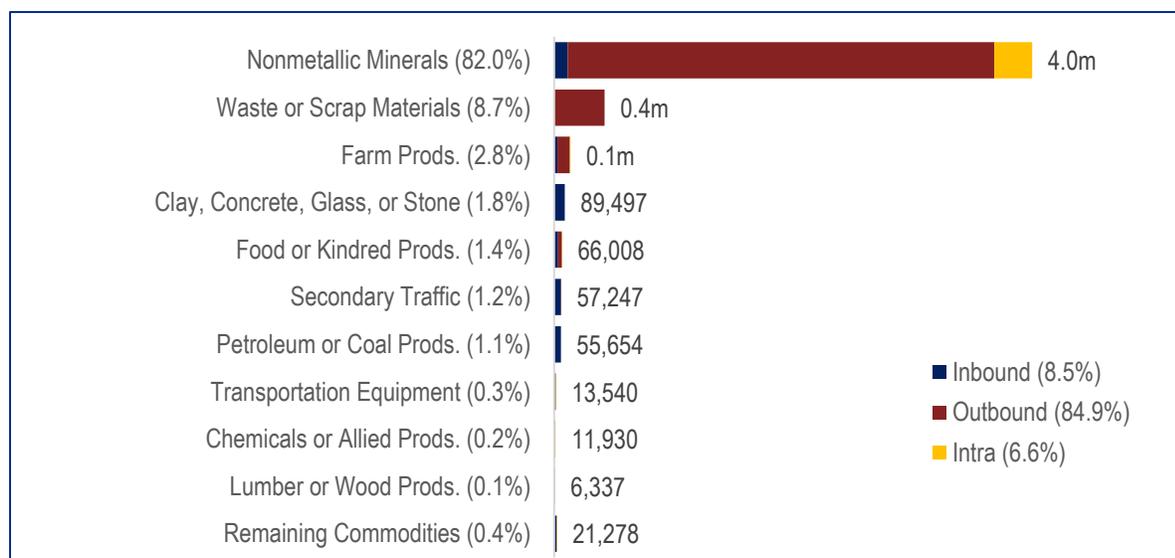


Source: TRANSEARCH

Figure 13: Top Ten Truck Commodities by Weight and Direction, 2015

¹⁷Notwithstanding the declines predicted by TRANSEARCH, the research conducted for this study including interviews with local rail stakeholders suggests that rail volumes of minerals will in fact grow in the future, while the reconstruction of the rail bridge and rehab of the Texas-Pacific could spur additional rail shipment growth.

Figure 14 shows truck tonnage by commodity and direction in 2045 in the three-county region excluding through freight. Total truck tonnage exclusive of through movements is expected to grow to about 4.9 million tons by 2045 (about 330 percent) according to TRANSEARCH, mostly driven by growth in outbound shipments of minerals, which will grow to four million tons. The overall commodity mix will stay mostly the same.

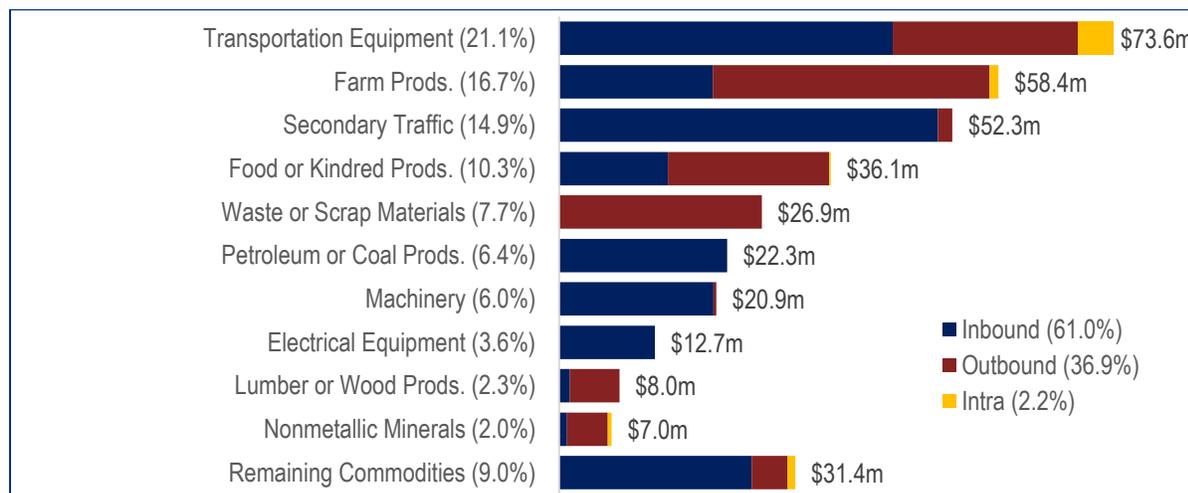


Source: TRANSEARCH

Figure 14: Top Ten Truck Commodities by Weight and Direction, 2045

By Value

Figure 15 shows the key truck-borne commodities moving to, from, and within the three-county region by value in 2015. The commodity mix is more diverse when measured by value, with higher-value products such as transportation equipment and farm products making up a larger share of the total. The third most common truck commodity by value in 2015 was secondary traffic, which represents empty containers.

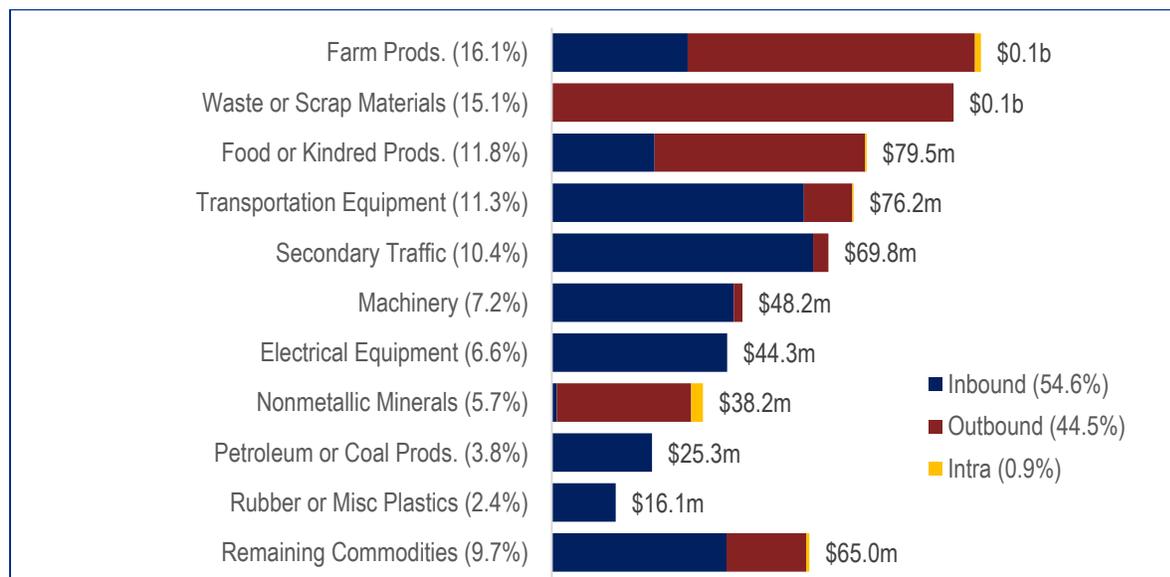


Note: Percentages do not sum to 100% due to rounding errors.

Source: TRANSEARCH

Figure 15: Top Ten Truck Commodities by Value and Direction, 2015

In the future, farm products are expected to become the top truck commodity by value with origins or destinations in the region, growing by 86 percent to about \$108 million in mostly outbound cargo by 2045 (**Figure 16**). Waste or scrap materials will become the second-largest truck commodity group by value at about \$101 million (approximately 277 percent growth), followed by food products at nearly \$80 million, or 120 percent growth. The overall commodity mix will remain about the same, with the exception of relatively minor growth in shipments of rubber or miscellaneous plastics, which will replace lumber and wood products in the top ten commodities by value.



Source: TRANSEARCH

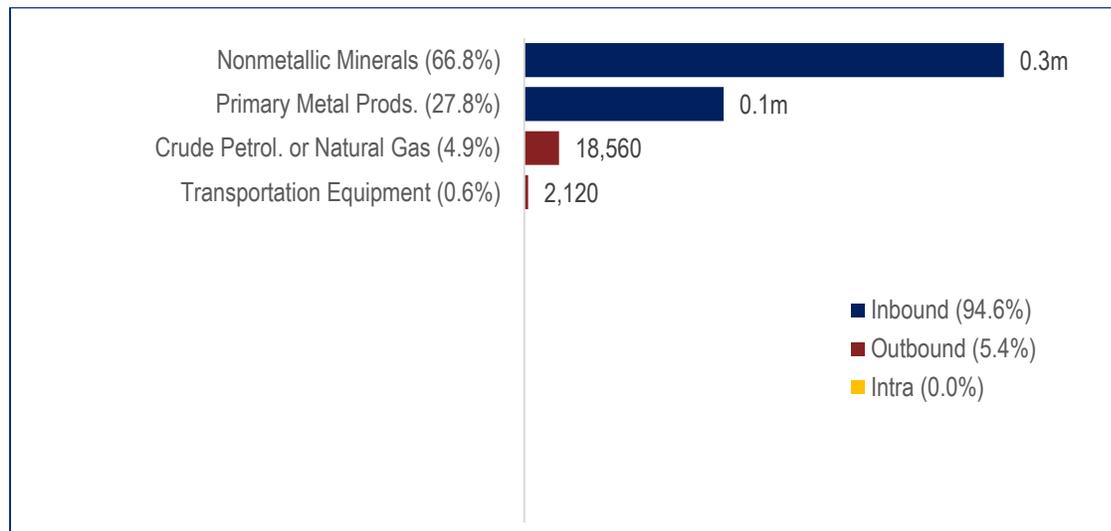
Figure 16: Top Ten Truck Commodities by Value and Direction, 2015

5.2.2 Top Rail Commodities

By Weight

According to TRANSEARCH, rail freight in the region totaled about 382,000 tons in 2015 exclusive of through shipments. As shown in **Figure 17**, rail shipments in the study area are much less diverse and are dominated by heavy commodities like minerals and metal products. Nonmetallic minerals, which made up about two-thirds of total non-through rail tonnage in 2015, include products like gravel, stone, and frac sand. Much of these volumes likely consist of inbound frac sand for use in the oil fields.

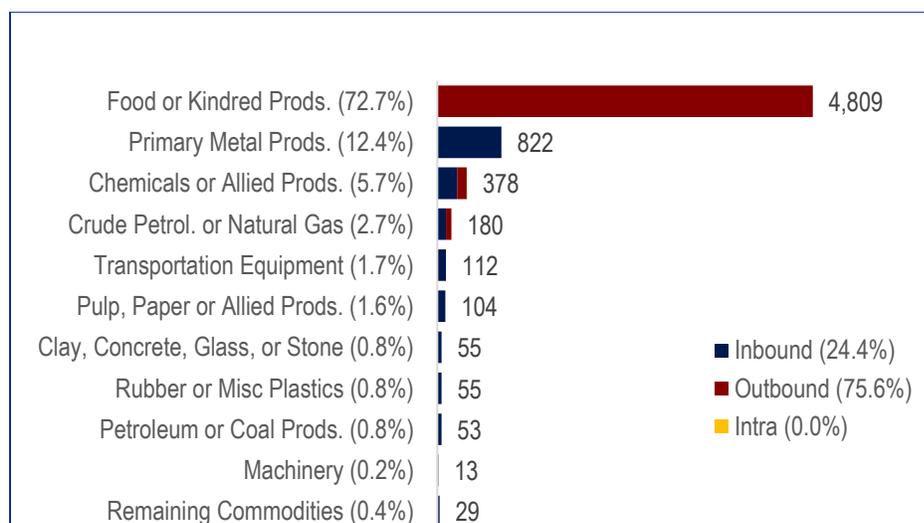
There were no rail shipments that both originated and terminated in the three-county region in 2015, since it is probably not economically viable to move relatively small quantities of freight a short distance via rail.



Source: TRANSEARCH

Figure 17: Top Rail Commodities by Weight and Direction, 2015

By 2045, food products are expected to become the top rail-borne commodity by weight with origin or destination in the region (**Figure 18**). However, TRANSEARCH forecasts regional rail movements to decline by 96 percent to just over 6,600 tons, driven by sharp drops in shipments of nonmetallic minerals and metal products. (Nonetheless, as noted previously there will probably be some growth in rail shipments as a result of the new CSA Materials quarry and infrastructure investments by TxDOT and Texas-Pacifico.) The projected displacement of minerals leads to the addition of seven new commodity types by 2045.

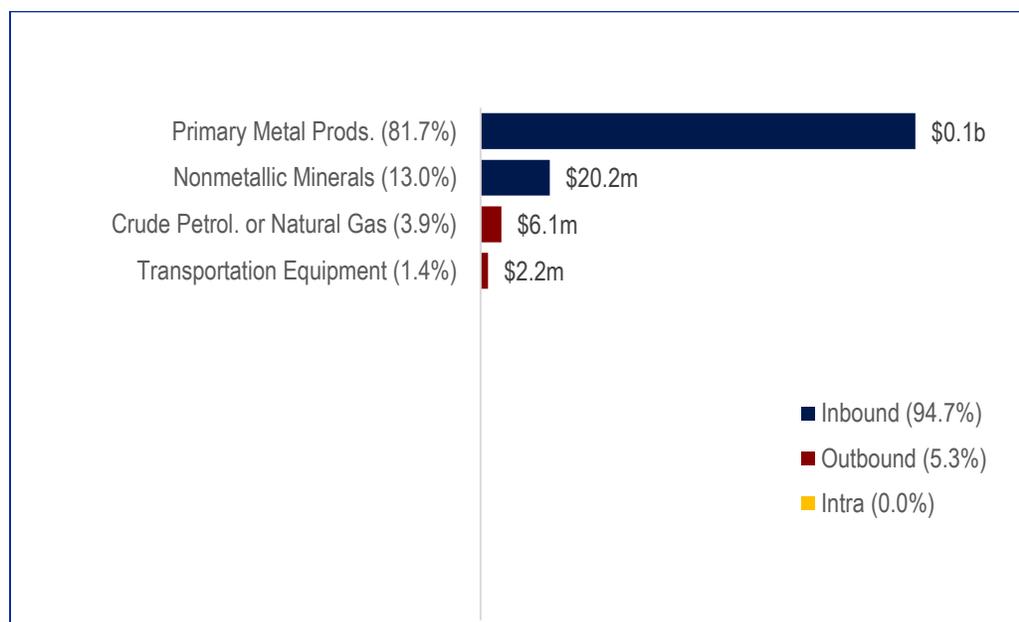


Source: TRANSEARCH

Figure 18: Top Ten Rail Commodities by Weight and Direction, 2045

By Value

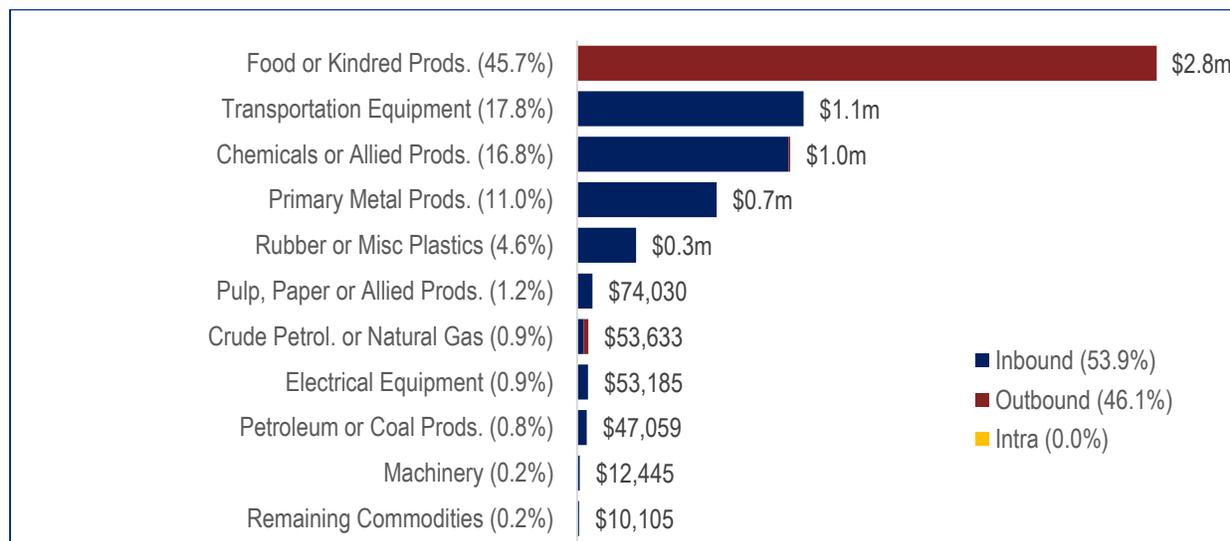
Figure 19 shows the top regional rail commodities by value in 2015. The commodity mix is roughly the same as it is by weight (**Figure 17**), except it is dominated by metal products, which are worth more than unprocessed minerals. In total, these regional rail shipments were worth about \$155 million in 2015.



Source: TRANSEARCH

Figure 19: Top Rail Commodities by Value and Direction, 2015

As shown in **Figure 20**, regional rail movements are expected to drop in value to just \$6.1 million by 2045, a decline of about 96 percent. Food or kindred products will become the number one commodity group (45.7 percent of the total, or \$2.8 million), all of which will be outbound. This will be followed by transportation equipment (17.8 percent of the total, or \$1.1 million) and chemicals (16.8 percent or \$1 million).

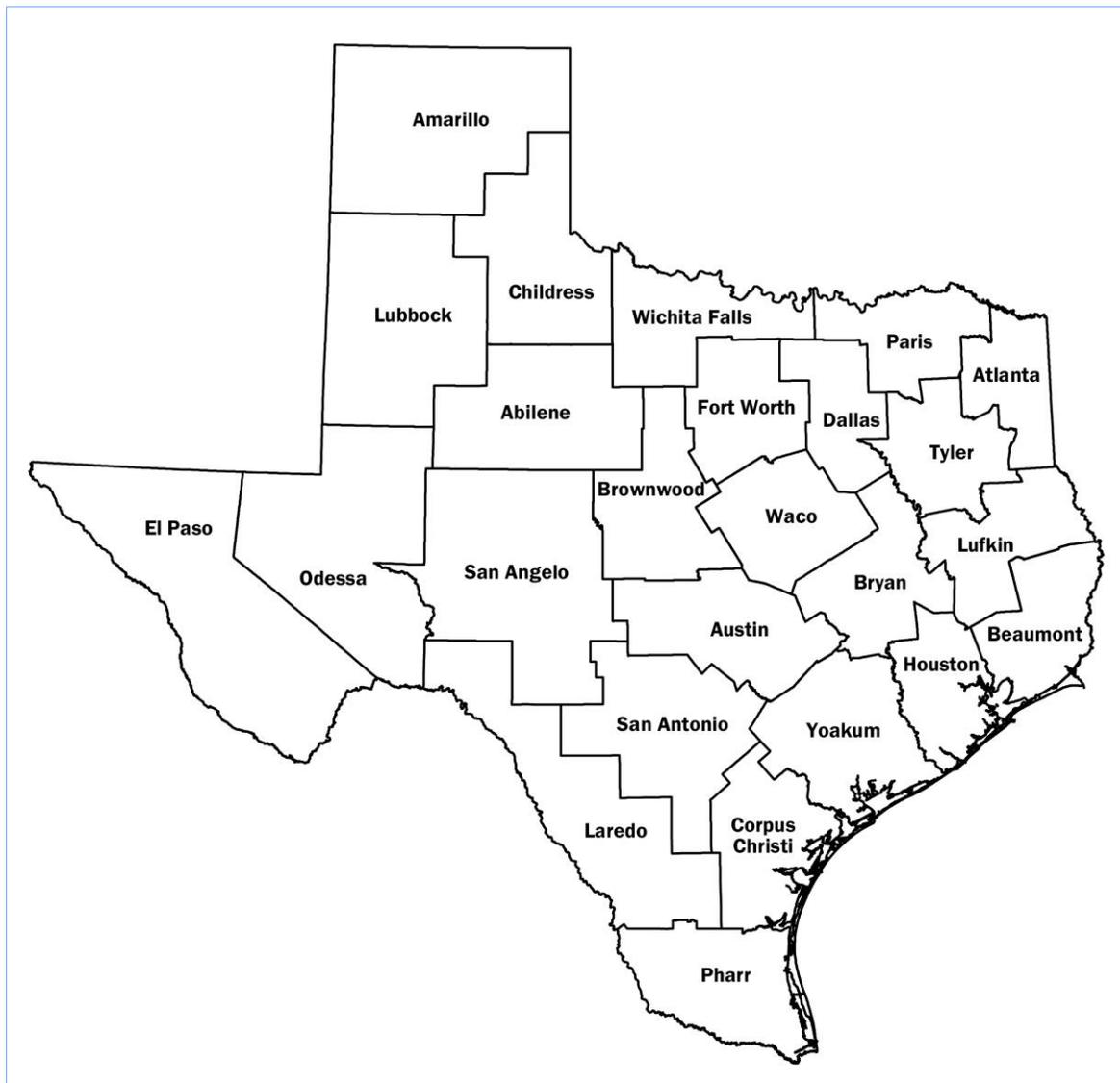


Source: TRANSEARCH

Figure 20: Top Ten Rail Commodities by Value and Direction, 2015

5.3 Top Origins and Destinations

To better understand truck flows in the three-county region and on US 67 itself, the team evaluated truck freight origin-destination patterns using the TRANSEARCH data. This provides insight into how regional, national, and global trade flows affect freight traffic in Presidio, Brewster, and Pecos Counties and on US 67 itself. The following sections briefly discuss the top origins and destinations (by weight) for truck freight in the three-county area, as well as on US 67. For ease of summary and presentation, the data are grouped by state and TxDOT Districts. A map of TxDOT Districts is provided in **Figure 21**.



Source: TxDOT

Figure 21: TxDOT Districts

5.3.1 Three-County Region

The TRANSEARCH truck tonnage data for the three-county region includes trucks moving on any road in Pecos, Brewster, or Presidio Counties (i.e., it is not specific to US 67). This includes traffic moving to, from, within, or through the region. As such, the volumes are dominated by through movements on I-10. **Table 3** shows the top ten origin states and TxDOT Districts for truck tonnage in the three-county region in 2015. Nearly 57 percent of this freight originated elsewhere in Texas,

primarily in the Houston, San Antonio, Beaumont, and Austin Districts. Other key origin states include California, Florida, and Louisiana (all of which are on the I-10 corridor), and various Mexican states.

Table 3: Top Ten State and TxDOT District Origins of Truck Freight in the Three-County Region (2015)

| Origin | | | |
|-------------------------------|-------------------------|----------------|----------------------|
| State | % of Total (all states) | TxDOT District | % of Total (TX only) |
| Texas, U.S. | 56.7% | Houston | 19.5% |
| California, U.S. | 11.4% | San Antonio | 7.8% |
| Florida, U.S. | 6.1% | Beaumont | 5.2% |
| Mexico Unknown State, Mexico* | 5.3% | Austin | 5.0% |
| Louisiana, U.S. | 4.5% | Corpus Christi | 4.5% |
| Arizona, U.S. | 2.7% | Yoakum | 3.7% |
| New Mexico, U.S. | 2.5% | Pharr | 3.0% |
| Mexico, Mexico | 1.4% | Laredo | 2.4% |
| Chihuahua, Mexico | 1.4% | Odessa | 1.7% |
| Distrito Federal, Mexico | 0.9% | El Paso | 1.5% |
| Remaining | 7.3% | Remaining | 2.3% |

**Due to source data limitations, some U.S.-Mexico trade cannot be allocated to specific Mexican states.*

Note: Percentages may not sum to respective state and national totals due to rounding errors.

Source: TRANSEARCH

Table 4 shows the top ten destinations for truck freight moving to, from, through, or within the three-county area. More than half of these shipments are going to California, followed by Texas (about one-quarter of the total) and Arizona (7.5 percent). Of the truck freight destined for other parts of Texas, the El Paso and Houston Districts are the most common destinations, followed by the San Antonio and Austin Districts. All four of these Districts contain large consuming markets which are mostly supplied by truck.

Table 4: Top Ten State and TxDOT Destinations of Truck Freight in the Three-County Region (2015)

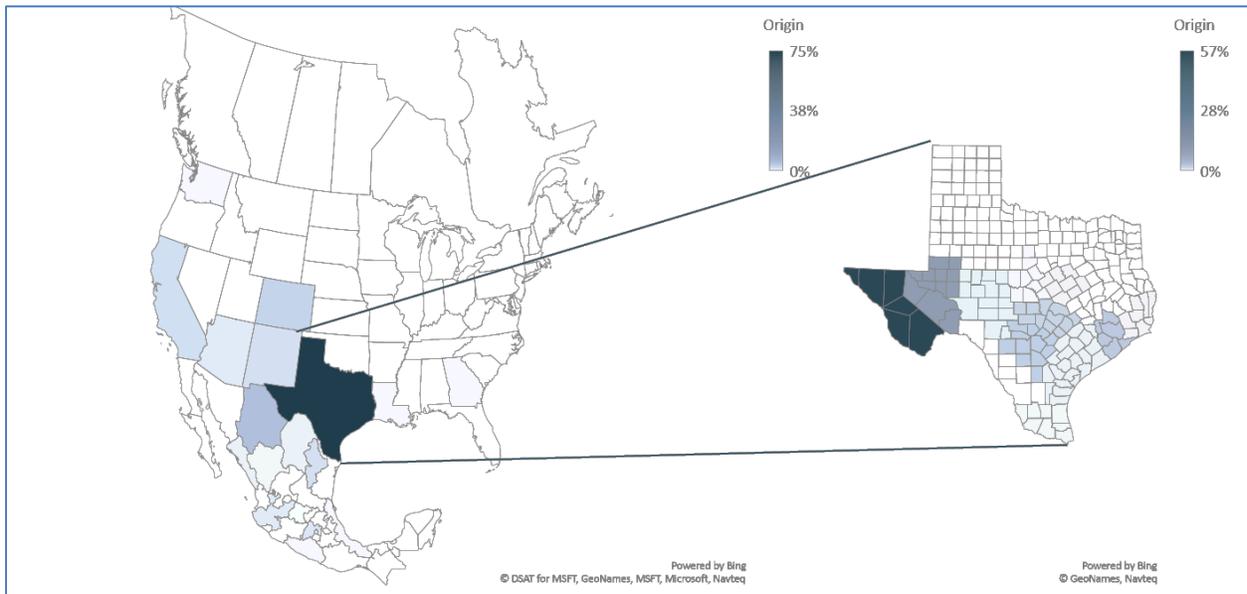
| Destination | | | |
|------------------|-------------------------|----------------|----------------------|
| State | % of Total (all states) | TxDOT District | % of Total (TX only) |
| California, U.S. | 52.1% | El Paso | 6.4% |
| Texas, U.S. | 25.3% | Houston | 6.3% |
| Arizona, U.S. | 7.5% | San Antonio | 3.5% |
| Florida, U.S. | 1.7% | Austin | 2.6% |
| New Mexico, U.S. | 1.3% | Odessa | 2.1% |
| Durango, Mexico | 1.2% | Beaumont | 1.3% |
| Oregon, U.S. | 1.1% | Pharr | 0.9% |
| Nevada, U.S. | 1.1% | Corpus Christi | 0.7% |
| Oaxaca, Mexico | 0.9% | Laredo | 0.4% |
| Louisiana, U.S. | 0.9% | Yoakum | 0.4% |
| Remaining | 7.0% | Remaining | 0.8% |

Note: Percentages may not sum to respective state and national totals due to rounding errors.

Source: TRANSEARCH

5.3.2 US 67 Study Corridor

To assess truck origin-destination patterns on US 67, the team selected the TRANSEARCH link on the study corridor that carried the most truck freight tonnage in 2015, according to TRANSEARCH. This link turned out to be in downtown Alpine, between North 5th Street and South Cockrell Street. This segment carried about 99,000 tons of truck freight in 2015 and can be considered representative of the whole corridor in terms of freight origin-destination patterns. **Figures 22** and **23** show maps of the top origins and destinations of truck freight by tons on this link in 2015 by U.S. and Mexican state and by TxDOT District. **Tables 5** and **6** provide the same data in tabular format. As shown in the maps and tables, US 67 truck freight is far more likely to be serving regional or local markets as compared to freight in the larger three-county region, most of which consists of through movements on I-10. More than three-quarters of the truck tonnage on US 67 originated elsewhere in Texas, mostly from the El Paso and Odessa Districts. Chihuahua, Mexico was the second most common origin state, consistent with the corridor’s linkage to the Presidio/Ojinaga POE. Other parts of Texas are also the dominant destinations for US 67 truck freight, making up more than 64 percent of the total as shown in **Table 6**. Most of that freight goes to other places within the El Paso District, followed distantly by the Houston and San Antonio Districts. California is the second most common destination for US 67 truck freight at slightly over 27 percent.



Source: TRANSEARCH

Figure 22: Origins of Truck Freight on the US 67 Study Corridor

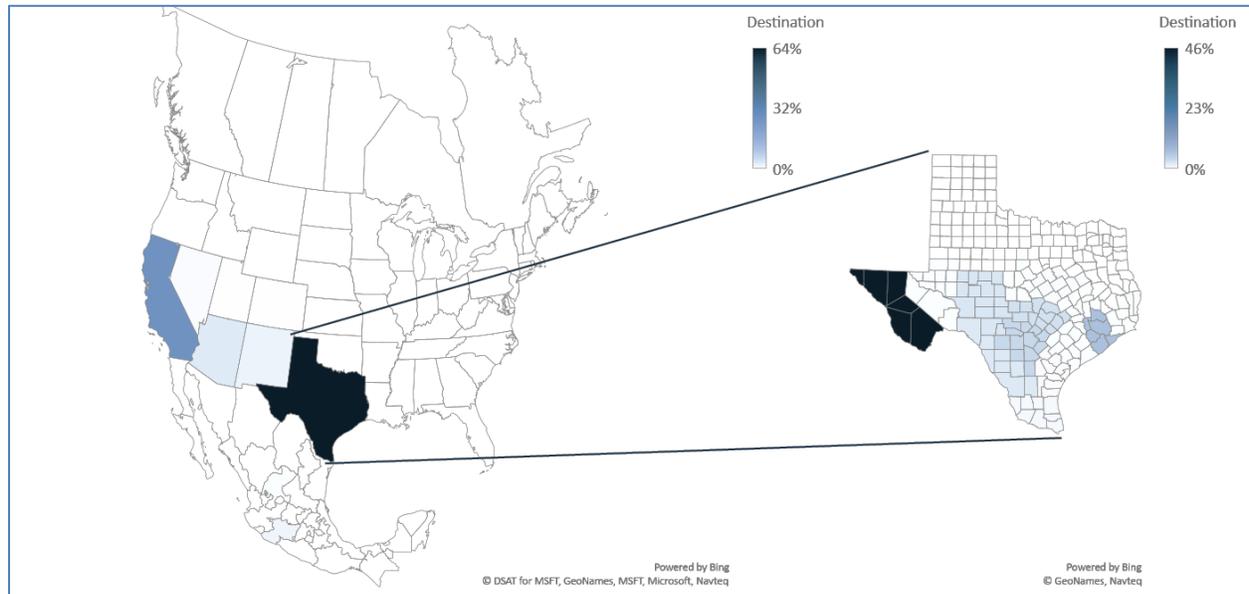
Table 5: Top Ten Origins of Truck Freight on the US 67 Study Corridor

| Origin | | | |
|-------------------------------|-------------------------|----------------|----------------------|
| State | % of Total (all states) | TxDOT District | % of Total (TX only) |
| Texas, U.S. | 75.5% | El Paso | 56.7% |
| Chihuahua, Mexico | 5.1% | Odessa | 10.5% |
| Mexico Unknown State, Mexico* | 4.3% | Houston | 2.2% |
| Colorado, U.S. | 2.7% | San Antonio | 2.0% |
| California, U.S. | 1.7% | Austin | 1.7% |
| Nuevo Leon, Mexico | 1.6% | San Angelo | 0.5% |
| New Mexico, U.S. | 1.6% | Corpus Christi | 0.4% |
| Mexico, Mexico | 1.3% | Yoakum | 0.4% |
| Arizona, U.S. | 1.0% | Waco | 0.3% |
| Jalisco, Mexico | 0.9% | Beaumont | 0.3% |
| Remaining | 4.3% | Remaining | 0.4% |

*Due to source data limitations, some U.S.-Mexico trade cannot be allocated to specific Mexican states.

Note: Percentages may not sum to respective state and national totals due to rounding errors.

Source: TRANSEARCH



Source: TRANSEARCH

Figure 23: Destinations of Truck Freight on the US 67 Study Corridor

Table 6: Top Ten Destinations of Truck Freight on the US 67 Study Corridor

| Destination | | | |
|--------------------------|-------------------------|----------------|----------------------|
| State | % of Total (all states) | TxDOT District | % of Total (TX only) |
| Texas, U.S. | 64.3% | El Paso | 45.6% |
| California, U.S. | 27.3% | Houston | 6.4% |
| Arizona, U.S. | 3.0% | San Antonio | 3.5% |
| New Mexico, U.S. | 1.8% | Austin | 2.8% |
| Michoacán, Mexico | 1.4% | San Angelo | 2.1% |
| Distrito Federal, Mexico | 0.6% | Laredo | 1.9% |
| Nevada, U.S. | 0.5% | Pharr | 0.5% |
| Zacatecas, Mexico | 0.3% | Waco | 0.3% |
| Colorado, U.S. | 0.2% | Corpus Christi | 0.3% |
| Nuevo Leon, Mexico | 0.2% | Bryan | 0.2% |
| Remaining | 0.4% | Remaining | 0.7% |

Source: TRANSEARCH

5.4 Key TRANSEARCH Findings

The key points from the TRANSEARCH analysis are:

- Although there is a considerable amount of freight moving in the three-county area, most of it is through traffic on I-10 and UP railroad. This is not unusual, as many regions (and even some states) have higher through freight volumes compared to originating or terminating cargo. When through traffic is excluded, freight volumes in the three-county area are much lower, which is consistent with the region's rural nature.
- The major commodities moved in the region also reflect its economic makeup, with a heavy focus on agricultural products and materials such as minerals.
- Notwithstanding the low volumes of cargo associated with study region economic activity, TRANSEARCH suggests that growth in freight flows is forecasted in the three-county area, especially for the truck mode. According to TRANSEARCH, total truck tonnage excluding through movements in the three-county area is forecasted to grow by almost 330 percent by 2045.
- The assessment of top truck freight origins and destinations suggests that much of the freight in the three-county study area is originating and/or terminating elsewhere in Texas. For example, more than half of the freight that touches the three-county region originated in Texas, much of it from TxDOT Houston and San Antonio Districts. This pattern is even more pronounced when looking at cargo on the US 67 study corridor itself; for instance, more than three-quarters of the truck freight on US 67 in 2015 originated elsewhere in Texas, primarily in the El Paso District.

6.0 Current and Future Freight Volumes in the Corridor

While TRANSEARCH is useful for evaluating regional commodity flows for states and regions, it is not ideal for assessing freight volumes and trends on an individual corridor due to its geographic structure and underlying macroeconomic models, which are designed to describe freight flows between major regional and international markets rather than on a single corridor. This report, therefore, included analysis of other data sources to evaluate freight activity on the US 67 study corridor itself, including truck volume data collected by the study team, truck crossing and import/export statistics from the Presidio POE, and the results of the freight stakeholder interviews. This section also assesses the potential of a market shift of more corridor truck freight to rail.

6.1 Presidio POE Commercial Border Crossing Activity

As the only land POE between Fabens (east of El Paso) and Del Rio, the Presidio/Ojinaga POE serves as a crossing point for regional trade as well as some longer distance shipments. Moreover, since there is no viable alternative truck route between Presidio and Marfa, it is reasonable to expect that much of the truck freight at Presidio uses the US 67 study corridor. It is therefore important to assess freight trends at the POE. Two data sources were used to evaluate freight activity at the Presidio POE, both provided by the USDOT Bureau of Transportation Statistics:

- **TransBorder Freight Data** – These data include freight weight (for imports only) and value for land modes of transportation for each U.S. land POE by commodity. The data are extracted and tabulated by the Census Bureau using required import and export trade filings.¹⁸
- **Border Crossing/Entry Data** – These data are collected by U.S. Customs and Border Protection at each POE and reflect the number of vehicles, containers, passengers, and pedestrians entering the U.S. Only inbound crossings are available as Customs and Border Protection does not collect comparable data for people or vehicles leaving the U.S.¹⁹

According to the TransBorder Freight Data, in 2017 the Presidio 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.²⁰ (By way of comparison, the Laredo POE handled more than \$208 billion worth of trade in 2017.) Given the dominance of the truck mode at Presidio and the fact that the rail crossing has been closed for a decade, the rest of this assessment focuses on truck traffic.

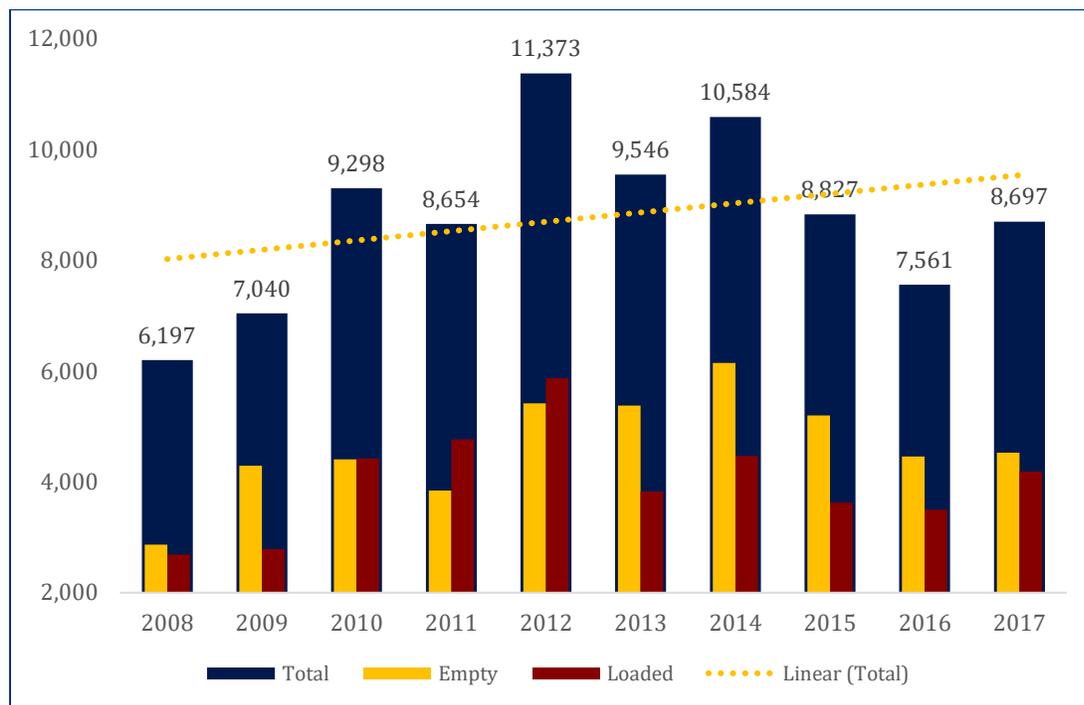
6.1.1 Inbound Trucks

As noted above, U.S. Customs and Border Protection tracks the number of loaded and empty trucks entering the country at all commercial POEs (outbound trucks are not counted). **Figure 24** shows the inbound loaded and empty trucks entering the U.S. at Presidio from 2008 to 2017. The number of inbound trucks has ebbed and flowed over the years but shows an overall upward trend, increasing by 40 percent during that period to just over 10,000 trucks. Surprisingly, volumes grew during the Great Recession from 2008 to 2010 (since freight activity is an economic bellwether, volumes usually drop during recessionary periods). Inbound volumes dipped slightly in 2011 before peaking at 11,373 in 2012. After that, truck volumes mostly trended downwards until 2017, when they grew by about 15 percent, to 8,700 trucks. An average of nearly 8,800 trucks crossed the border in Presidio each year during this period. In the last five years, more empty trucks entered the country at the POE than loaded ones.

¹⁸Bureau of Transportation Statistics, TransBorder Freight Data, accessed April 4, 2019 at <https://www.bts.gov/transborder>

¹⁹Bureau of Transportation Statistics, Border Crossing/Entry Data, accessed April 4, 2019 at <https://www.bts.gov/content/border-crossingentry-data>

²⁰The 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.



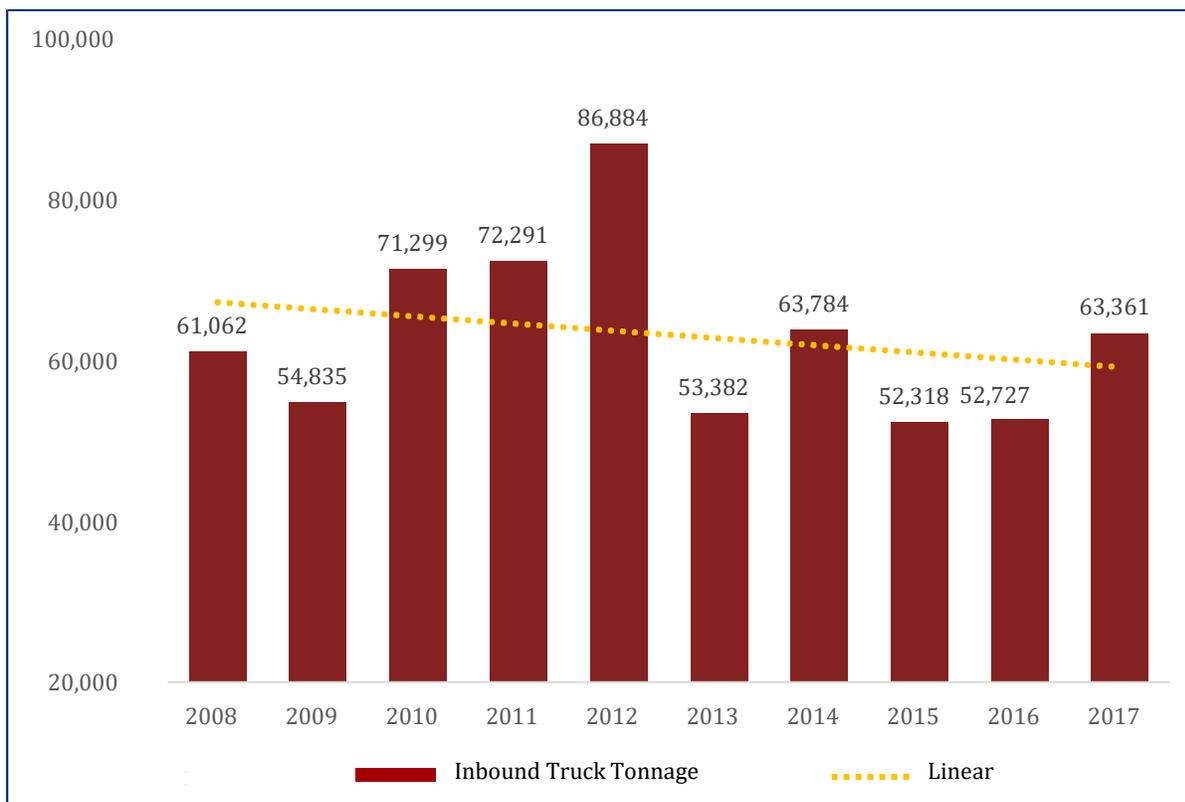
Source: BTS Border Crossing/Entry Data, 2018

Figure 24: Inbound Trucks at the Presidio POE (2008-2017)

6.1.2 Truck Shipment Tonnage

The TransBorder Freight Data also contains inbound tonnage by POE (export tonnage is only available for the air and marine modes). **Figure 25** shows the historical trend of inbound truck tonnage at Presidio from 2008 to 2017. Despite some growth from 2008 to 2012, inbound tonnage has been declining overall during this time. This may be partly reflective of the higher volumes of empty trucks crossing the border in certain years. Tonnage peaked in 2012 (the same year that inbound truck volumes peaked), driven mostly by increases in shipments of animals and animal products, vegetable products, machinery/electrical products, and ‘miscellaneous’ goods.²¹ However, import tonnage dropped sharply in 2013 by about 39 percent, mostly because of a decline in shipments of animals and animal products, which up to that point had been the largest single inbound commodity by weight at the POE. Tonnage grew by nearly 20 percent in 2014 before falling back again in 2015 and 2016, but it expanded by about 20 percent again in 2017, mostly from growth in animals and animal products and miscellaneous goods.

²¹The Miscellaneous category includes clocks, optics, photographic, and other precision instruments; arms and ammunition; miscellaneous manufactured articles; and works of art and collector’s items.



Source: BTS Transborder Freight Data, 2018

Figure 25: Inbound Truck Tonnage at the Presidio POE (2008-2017)

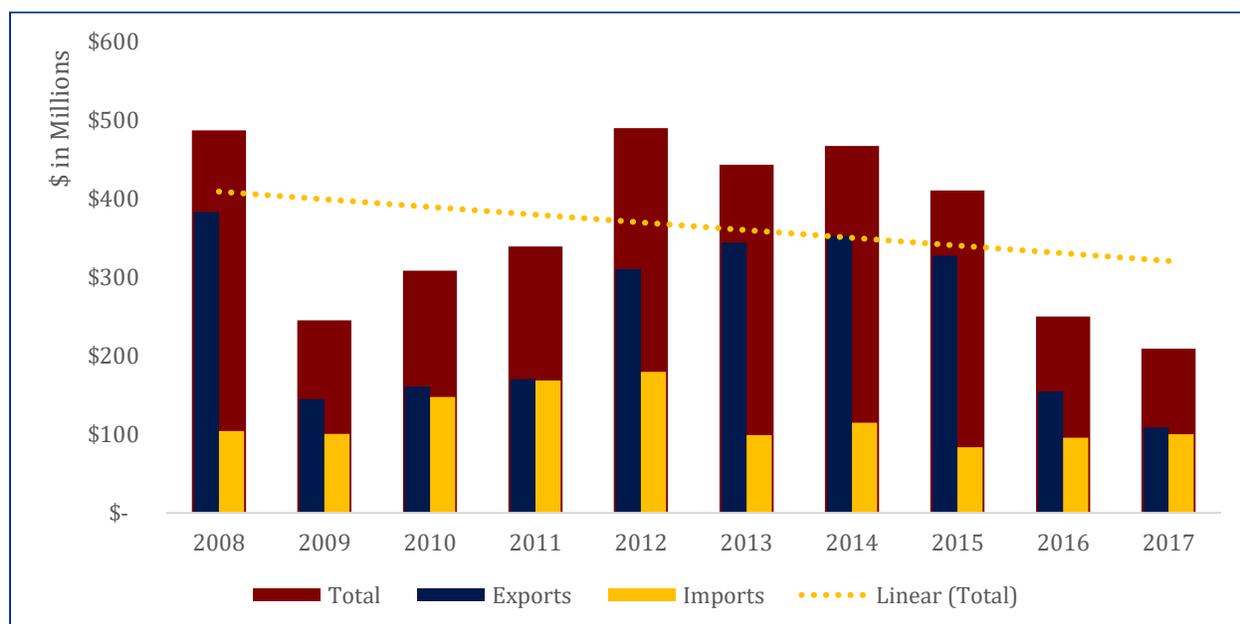
6.1.3 Truck Shipment Value

The TransBorder data includes freight value by commodity for both inbound and outbound cargo. This report includes an analysis of this information to assess trends in cross-border trade value at the Presidio POE. Since it includes inbound as well as outbound flows, these data were also used to evaluate top commodities crossing the border.²²

Figure 26 shows the yearly value of imports, exports, and total trade by truck through the POE for the last 10 years. The overall trend has been downwards, with total trade falling by 62 percent (\$339 million) from 2008 to 2017. However, there has been variation within this period, with the drop seen in 2009 (probably driven by the recession) followed by three years of steady growth. Also notable is the fact that exports are the dominant trade type at Presidio, accounting for two-thirds of all trade through the POE during the last decade. Most POEs on the southern border are import gateways.

²²The TransBorder cargo value data presented here are not adjusted for inflation due to the relatively short time period analyzed, which featured generally low inflation as well as a severe recession; hence, an inflation adjustment would not have changed the overall trends or conclusions.

The decline in value in 2009 (-51 percent, or about \$280 million) was caused by sharp drops in exports of chemicals, plastics and rubber products, metals, machinery and electrical products, transportation equipment, and miscellaneous goods. The 2016 drop in value (-39 percent, or about \$166 million) was driven mostly by shrinking exports of foodstuffs, chemicals, plastics and rubber products, vegetable products, metals, machinery and electrical products, and transportation equipment. In general, export volumes were more volatile than imports over the last decade and are mostly responsible for the overall decline in trade at the Presidio POE.

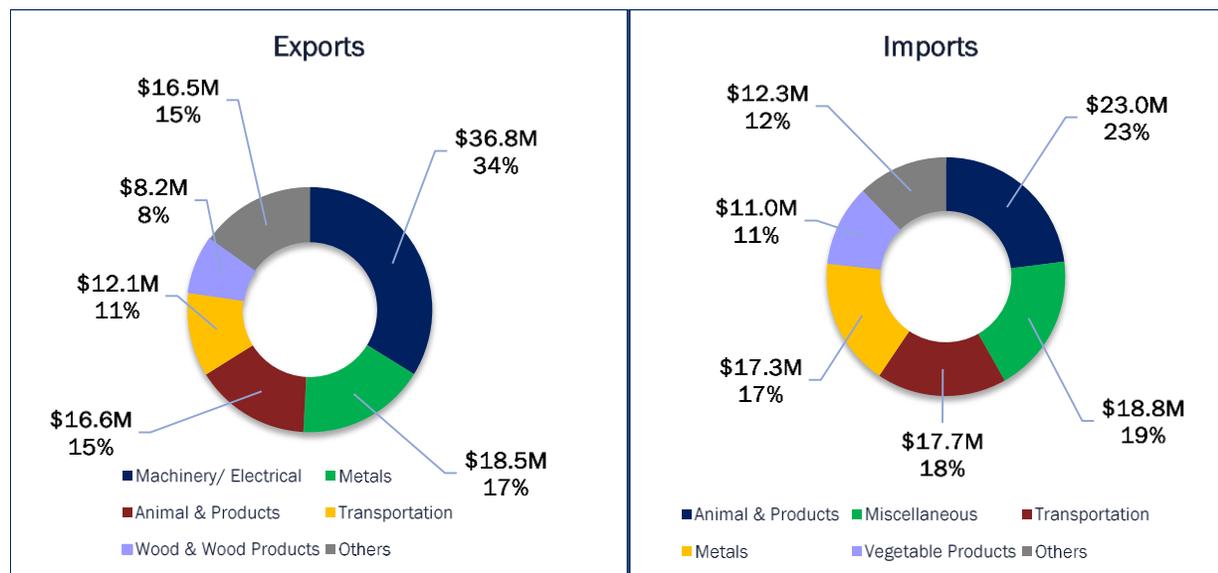


Source: BTS TransBorder Freight Data, 2018

Figure 26: Presidio POE Import and Export Value in Millions, 2008-2017

6.1.4 Top Truck Commodities

Figure 27 shows the top five import and export truck-borne commodities by value at Presidio for 2017. In terms of exports, more than one-third of the trade through Presidio consisted of machinery and electrical products (nearly \$37 million), followed by metals (\$18.5 million, or 17 percent of the total) and animals and animal products (\$16.6 million, or 15 percent). Other key export commodities were transportation equipment and wood and wood products. On the import side, the number one commodity in 2017 was animals and animal products at \$23 million, followed by miscellaneous goods (\$18.8 million, or 19 percent), transportation equipment (\$17.7 million, or 18 percent of the total), metals (\$17.3 million, or 17 percent), and vegetable products (\$11 million, or 11 percent).

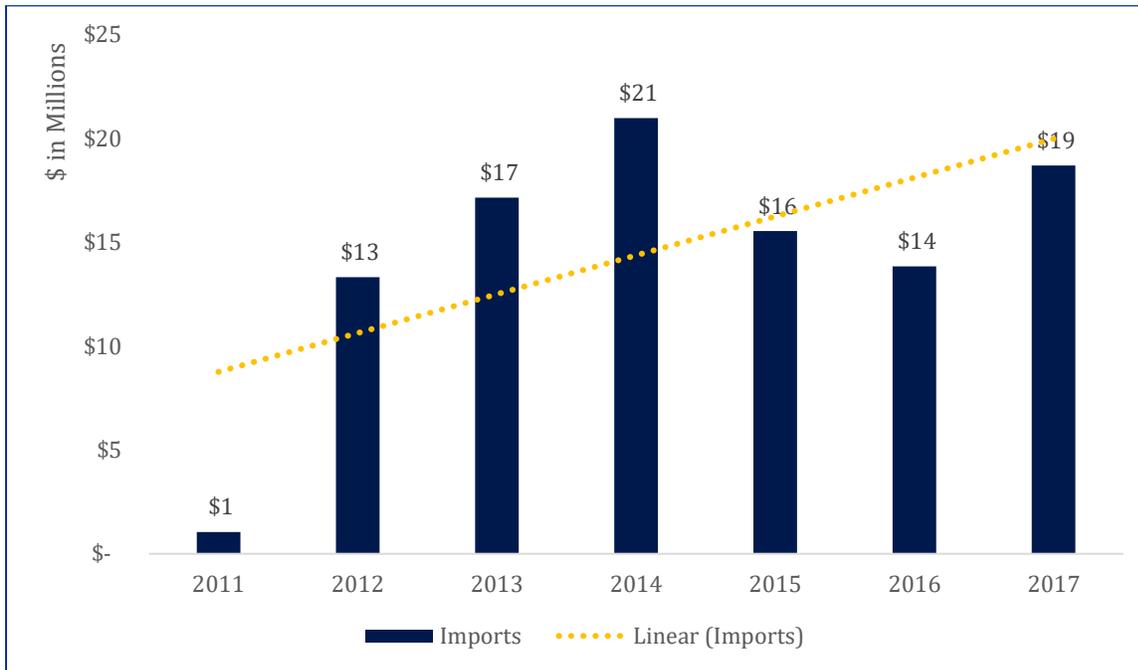


Source: BTS TransBorder Freight Data, 2018

Figure 27 Top 5 Truck-borne Export and Import Commodities at the Presidio POE by Value, 2017

The miscellaneous category of import traffic bears additional scrutiny due to its tremendous growth over the last several years. According to the Bureau of Transportation Statistics data, imports of miscellaneous goods by truck at the Presidio POE have increased by \$18.7 million since 2008, which is more than 11,000 percent. Inbound truck tons in this category grew in similar fashion, from virtually nothing in 2008 to more than 15,000 tons in 2017. This trend made the miscellaneous category the second largest inbound truck commodity at Presidio by weight and value by 2017.

Closer inspection of the TransBorder data for Presidio reveals that this commodity group is almost entirely composed of the furniture, lamps, and prefabricated buildings subcategory, which would include Solitaire mobile homes. As shown below in **Figure 28**, imports of this commodity grew from just over \$1 million in 2011 (when Solitaire began operations in Presidio/Ojinaga) to about \$19 million by 2017. It is likely that this growth has been driving increasing exports of raw materials used in Solitaire’s manufacturing process as well, such as lumber, drywall, and fixtures.



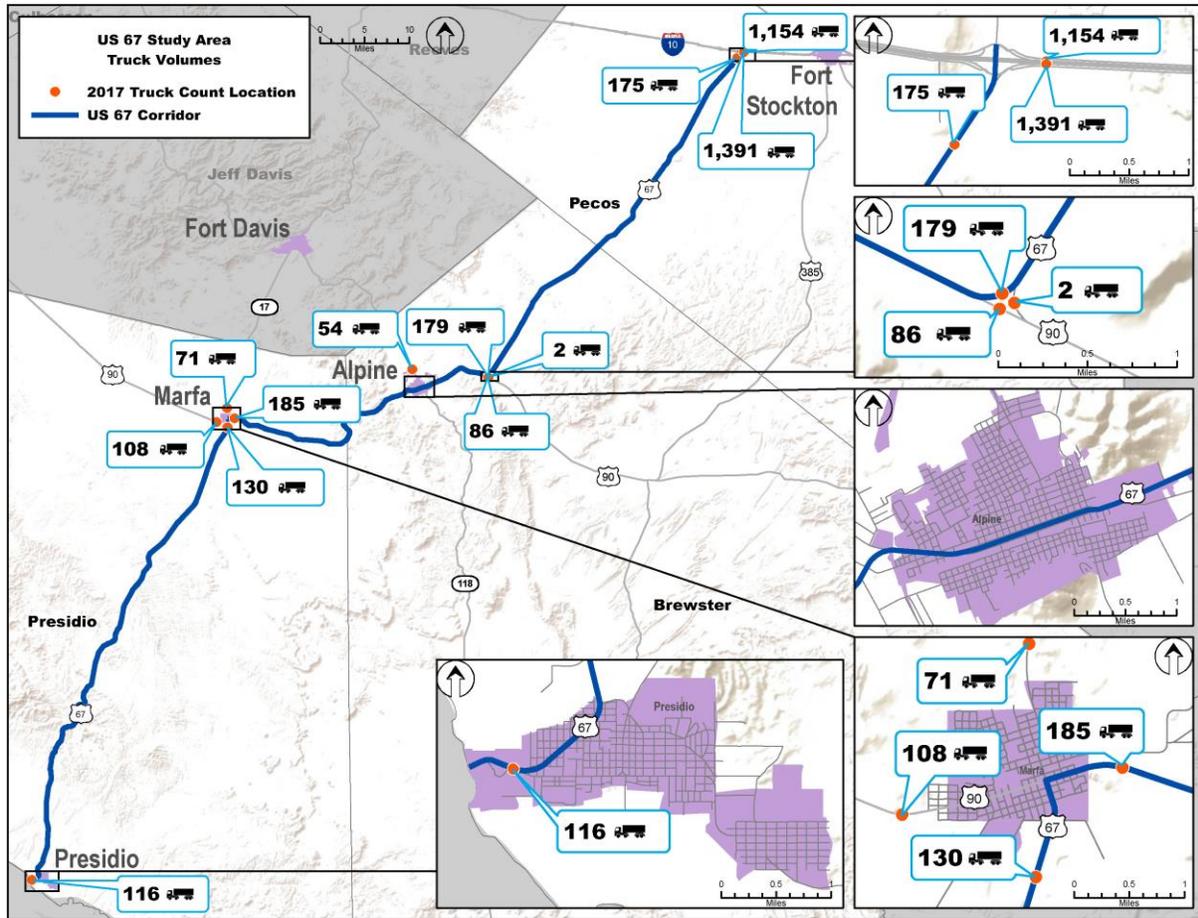
Source: BTS TransBorder Freight Data, 2018

Figure 28: Imports of Furniture, Lamps, and Prefabricated Buildings at the Presidio POE by Value

6.2 Current Truck Counts and Forecasted Truck Volumes

6.2.1 Current Truck Volumes

US 67 Corridor Master Plan development included the collection of truck volume data at 11 locations across the study corridor. Data collected included a.m. peak and p.m. peak volumes, daily total volume, and truck percentages for each location. **Figure 29** shows the weekday truck volumes collected for the US 67 Corridor Master Plan in November 2017. Note that these volumes include straight (non-articulated) trucks and tractor-trailers, but not small trucks used in commercial applications. Truck volumes collected for the plan do not exceed 200 trucks per day anywhere on the corridor, except at the I-10 interchange since this would capture all the eastbound and westbound freight on that corridor. The highest volumes other than the I-10 frontage roads are found east of Aparejo Street in Marfa (185 trucks per day) and at the Y-intersection of US 67 and US 90 (179 trucks per day), followed by US 67 south of Madrid Street in Marfa (130 trucks per day) and US 67 west of O'Reilly Street in Presidio (116 trucks per day).

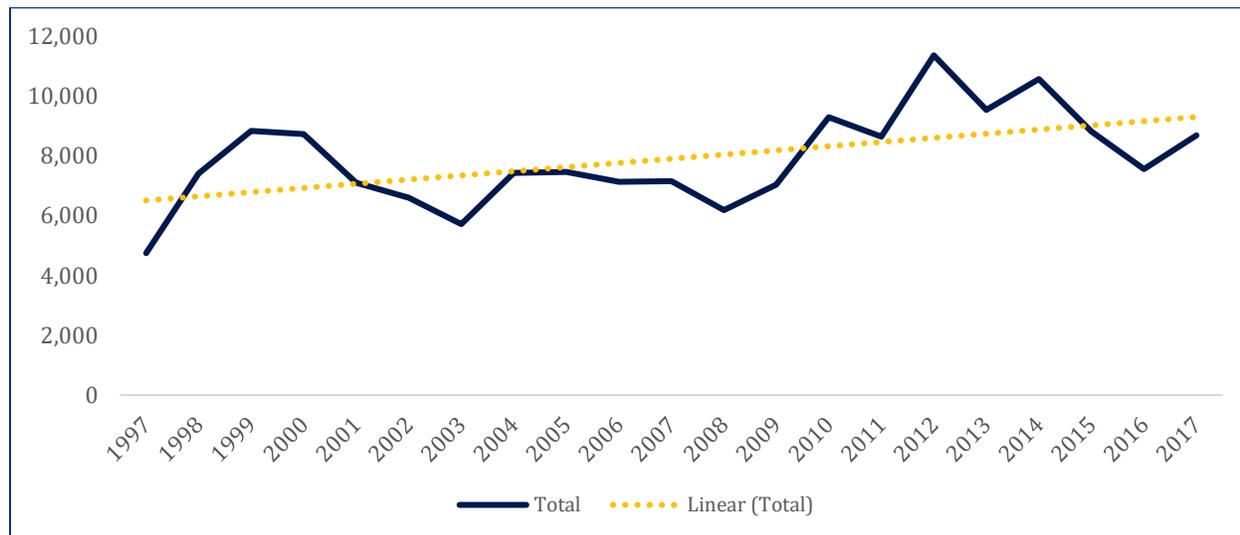


Source: CDM Smith

Figure 29: 2017 Truck Counts on and near US 67

6.2.2 Future Truck Volumes

As noted in **Section 6.1.1**, U.S. Customs and Border Protection tracks the number of inbound trucks entering the country. A linear regression analysis was performed on annual inbound truck counts for 20 years of data from 1997 to 2017 as an indication of truck traffic growth in the area. As seen below in **Figure 30**, the number of inbound trucks has grown throughout the past 20 years at a growth rate of 1.6 percent.



Source: BTS Border Crossing/Entry Data, 2018

Figure 30: Presidio POE Inbound Truck Growth Trend, 1997-2017

Based on the inbound truck data and discussions through stakeholder interviews, it is reasonable to expect some growth in corridor truck traffic due to general economic growth, as well as expected developments such as the new CSA Materials quarry and Solitaire expansion, and Permian Basin oil and gas exploration (more information on trends affecting freight flows in the corridor is provided in **Section 7.0**). However, large-scale increases in truck flows are not expected even with the international bridge expansion since significant POE upgrades would be required to attract cargo that currently crosses elsewhere. Thus, truck volumes are likely to continue to grow along with overall traffic volumes. Therefore, forecasts for truck volumes on the US 67 study corridor were developed using growth rates presented in the US 67 Traffic Projections Methodology Memorandum (**Appendix E - Traffic Projections**). In that memorandum, a growth rate of two percent (for all traffic, not just trucks) is recommended which is similar to that of inbound trucks at the POE. Hence, the team used a general growth rate of two percent annually to derive corridor truck traffic forecasts.

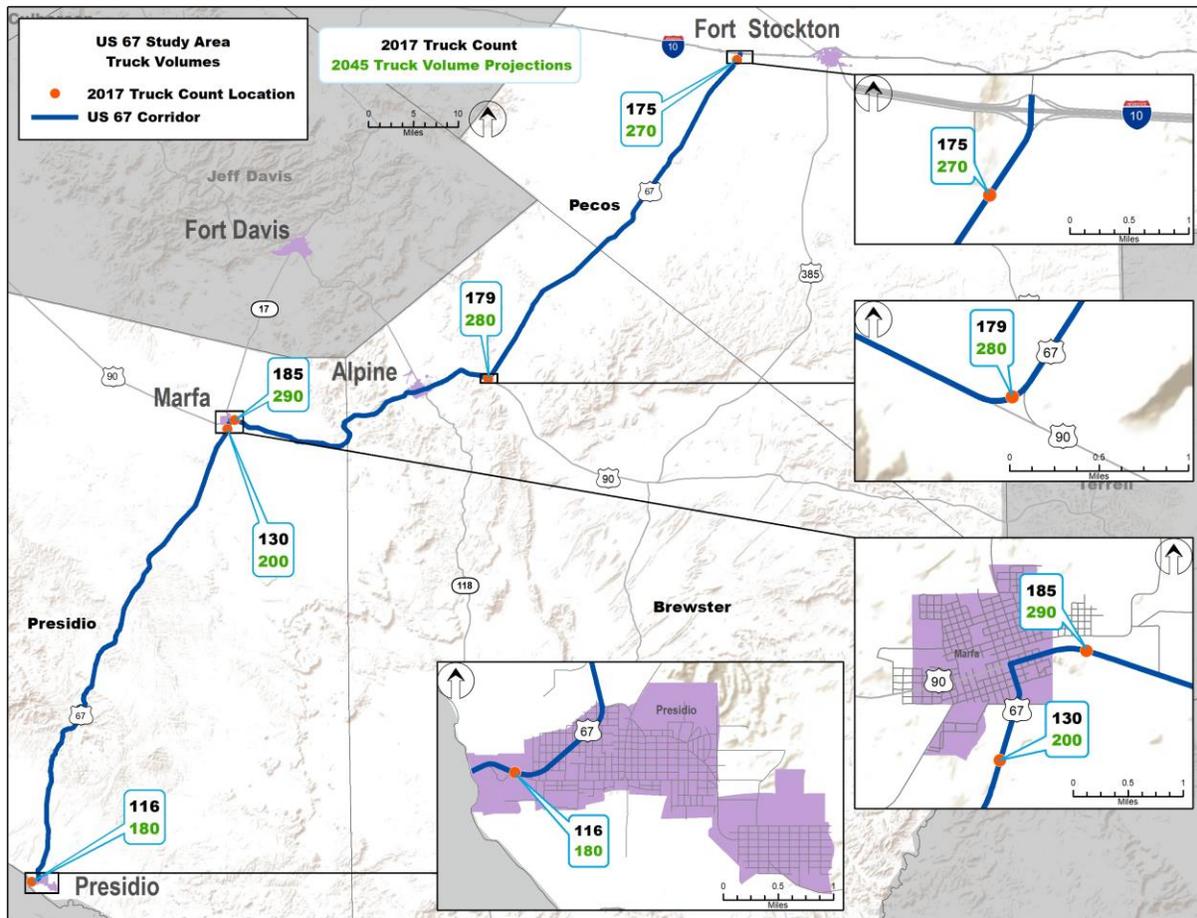
Table 7 presents future year 2045 truck forecasts when applying the two percent growth rate to the collected 2017 counts. Note that truck forecasts were only developed for count locations on US 67.

Table 7: 2045 US 67 Truck Traffic Forecasts

| ID | Location | 2017 Weekday Count | 2045 Projection |
|-----|---|--------------------|-----------------|
| 101 | US 67 West of O Reilly Street, Presidio | 116 | 180 |
| 120 | US 67 South of Madrid Street, Marfa | 130 | 200 |
| 123 | US 67 East of Aparejo Street, Marfa | 185 | 290 |
| 130 | US 67 North of US 90 (left leg), east of Alpine | 179 | 280 |
| 134 | US 67 South of I-10, west of Fort Stockton | 175 | 270 |

Sources: CDM Smith analysis of US 67 Corridor Master Plan truck counts.

The forecasts are mapped in **Figure 31**, which shows the 2017 base year counts in black and the 2045 forecast volumes in green for each location. Truck traffic is expected to approach 300 daily trucks east of Aparejo Street in Marfa and on the left leg of the US 67/US 90 Y-intersection. Other locations are expected to see between 180 and 270 trucks per day. These results suggest that most trucks will continue to use the study corridor to get to and from I-10.



Source: CDM Smith

Figure 31: 2017 Base Year Truck Counts and 2045 Truck Volume Forecast

6.2.3 Key Truck Forecast Findings

The key conclusions from the truck forecast analysis are:

- Although some truck traffic growth is to be expected from known developments like the Solitaire expansion, this growth will likely be in line with general traffic growth in the corridor, so trucks are not anticipated to become a larger share of overall traffic in the future.
- Nonetheless, it seems likely that most trucks will continue to use the study corridor to get to and from I-10 and/or access businesses in corridor communities that rely on truck shipments. This is particularly true for trucks going to or coming from points east or northeast of the study region since truck drivers are unlikely to take US 90 to I-10 at Van Horn unless they are heading west anyway. Some trucks may take SH 17 through Fort Davis, but this route is more

mountainous and truck drivers generally prefer to stay on higher classification roads such as U.S. highways and Interstates.

- This suggests that communities along the corridor may want to consider ways to mitigate the impacts of truck traffic in towns. More passing and climbing lanes outside of communities would improve traffic flows and safety along the corridor. Feasibility studies may need to be conducted to study potential options.

6.3 Potential for Truck to Rail Mode Shift

Given that trucks move roughly 80 percent of the freight in the three-county study region, it is important to assess regional rail infrastructure and shipping patterns to understand the potential for moving additional freight by rail. Such mode shifting would help alleviate the operational concerns created by truck traffic in the corridor. However, freight mode choice is a complicated decision driven by many factors including shipment distance, the commodity being carried, the time sensitivity of the product, intermediate handling charges, and freight service frequency and reliability, among other things. Considerations and constraints for shipping by rail in the US 67 study corridor include:

- **Texas-Pacifico track condition.** As noted previously, the South Orient Railroad line between Presidio and Fort Stockton is classified as Excepted Track by the FRA. As such, freight speeds are limited to 10 mph; consequently, it takes more than four hours for a train to get from Fort Stockton to Alpine. Texas-Pacifico and TxDOT plan to rehabilitate the line and are rebuilding the rail bridge at Presidio. While the rail bridge project is planned to be complete by the fall of 2019, the timing of the track rehabilitation is less certain. In any event, Texas-Pacifico expects initial rail shipments across the new bridge to consist of rail freight that is currently using more congested rail crossings at El Paso or Eagle Pass. Such shifts in rail crossing points will likely have minimal impact on truck traffic in the US 67 study corridor. Moreover, even though CSA Materials is already using the line to ship some of its outbound product from the new Stubbs Quarry, most of the mine's production will ship by truck on US 67.
- **Commodity characteristics.** Many commodities that move on US 67 are not amenable to rail shipment. For example, certain products are time-sensitive or have a limited shelf life. Fresh produce often requires cold storage at the point of origin and in transit. Food products often must be delivered to retail outlets within a tight time window. These considerations favor the speed and service reliability offered by trucks. Other commodities are not suitable for shipment by rail. Mobile homes, for instance, are too wide to enable trains to meet and pass on adjacent tracks. Outbound cattle are sold by the truckload, and there are too many destinations for rail shipping to be cost-effective.
- **Handling charges.** Most rail shipments require a truck handoff on at least one end of the shipment, so the rail cost savings need to overcome this additional cost. Truck shipments greater than 500 miles are more amenable to mode shift than truck trips of less than 500 miles,

provided other conditions are met such as service frequency and reliability.²³ Three-quarters of the truck freight in the US 67 study corridor originates elsewhere in Texas, most of it from the TxDOT El Paso and Odessa Districts. Similarly, about two-thirds of the truck freight in the corridor is destined for other places in Texas, primarily in the El Paso District. This limits the viable market for truck to rail mode shift.

- **Railroad infrastructure investment strategies.** Railroads typically do not make speculative investments in their track and terminal infrastructure. Rather, they prefer to work with shippers and government entities to identify viable markets that can be served by rail. This typically requires identifying a shipper (or shippers) that can provide enough volume to justify any required infrastructure investments, as well as railroad operating costs (e.g., fuel and train crew time) incurred in providing freight service.

Overall, these considerations suggest that rail infrastructure improvements in this corridor are unlikely to shift much US 67 truck freight to rail. Texas-Pacifico officials interviewed for this study suggested that the new rail bridge and track improvements will mostly attract existing rail freight currently using other international border crossings. However, given the relatively short distances that most freight on the US 67 study corridor travels and the speed and route flexibility provided by trucks, it is unlikely that rail will take significant market share from trucks on the US 67 study corridor.

7.0 Freight Trends Impacting the Study Corridor

There are several trends and developments that may impact corridor freight volumes in the future. These are outlined below.

- ‘Transmigrantes’ are people from Central America who travel to the U.S., purchase several used vehicles, and tow them back to the southern border and through Mexico for resale in Central America. Most transmigrantes are currently using the Brownsville POE to cross back into Mexico. However, the Mexican government is considering rerouting them through a different POE due to security concerns in Tamaulipas. Right now, there are about 10,000 southbound transmigrantes-related export vehicles per month crossing the border at Brownsville. Presidio POE officials report they have been planning for transmigrantes activity possibly rerouting through Presidio and/or Del Rio, but this additional traffic would impact US 67 since all of it would end up on the corridor at some point. It may also create a bottleneck for freight and passenger traffic in Presidio. These movements do not represent freight moving in large trucks since used vehicles are typically towed behind other light vehicles, but they would be an additional southbound commodity moving on the study corridor. A potential side effect of this

²³Brogan, J.J.; Aeppli, A.E.; Beagan, D.F.; Brown, A.; Fischer, M.J.; Grenzeback, L.R.; McKenzie, E.; Vimmerstedt, L.; Vyas, A.D.; Witzke, E.; (March 2013). Freight Transportation Modal Shares: Scenarios for a Low-Carbon Future. Transportation Energy Futures Series. Prepared by Cambridge Systematics, Inc. (Cambridge, MA), and the National Renewable Energy Laboratory (Golden, CO) for the U.S. Department of Energy, Washington, DC. DOE/GO-102013-3705. 80 pp.

development would be additional business for Presidio since there is a 72-hour export process for vehicles and transmigrantes would require services while they are waiting.

- Solitaire currently ships about four mobile homes per weekday across the international bridge at Presidio, which are then distributed to retail centers and corporate customers. However, according to Solitaire, production will double to eight homes per day by the end of 2019, which will double the number of mobile homes moving on the US 67 study corridor. It will also double inbound shipments of lumber, steel, and other supplies that go into manufactured home production to approximately seven to nine trucks per day, all of which will use US 67. Although some truckers delivering supplies to the Presidio yard will drive at night to arrive in Presidio when the gates open, all the finished homes must travel by day per the requirements of the oversized load permit. In addition, Solitaire is exploring opportunities to supply houses for the Permian Basin oil fields. If that becomes a growth market, it may contribute to additional freight movements on US 67.
- In December of 2015, the longstanding ban on most U.S. exports of crude oil was lifted. Since then, crude oil exports have more than doubled, reaching 2 million barrels per day in 2018.²⁴ Crude oil supply growth is mostly being met by output from the Permian Basin in Texas and New Mexico, where the International Energy Agency expects output to double by 2023.²⁵ The net effect of all this is that the U.S. is expected to meet about 80 percent of the global growth in demand for crude oil over the next several years. New investments in pipeline capacity will facilitate the movement of Permian Basin oil to Gulf Coast ports for export. Natural gas extraction is also expanding. This has two potential implications for the US 67 study corridor. First, in terms of freight the current shipments of heavy equipment through the Presidio POE, some of which consist of oil field equipment heading to Mexico for repairs, is likely to continue and may grow. Secondly, although not related to freight volumes, a considerable share of passenger traffic on US 67 consists of oil field workers from Mexico heading to and from jobs in the Permian, and growth in oil field production will probably lead to more such traffic in the future.
- On October 1, 2018, the U.S., Mexico, and Canada agreed to a revised version of NAFTA known as the U.S.-Mexico-Canada Agreement, or USMCA. The USMCA makes key changes to policies governing auto manufacturing, environmental standards, and intellectual property while addressing new developments in the digital economy that were not applicable when the original deal was enacted 25 years ago. Specifically, the new deal requires automobile makers to source 75 percent of vehicle components from Canada, the U.S., or Mexico to qualify for zero tariffs (up from 62.5 percent under NAFTA), and that 40 to 45 percent of auto parts are made by workers making at least \$16 per hour by 2023. It also includes a “sunset clause” whereby

²⁴ U.S. Energy Information Administration, ‘U.S. Exports of Crude Oil,’ accessed April 15, 2019 at <https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=MCREXUS2&f=M>

²⁵ Davis, C. ‘Permian-Led U.S. Oil to Satisfy 80% of Global Demand for Next Three Years, Says IEA,’ Natural Gas Intelligence, March 5, 2018.

the terms of the agreement would expire after 16 years unless extended by the U.S., Mexico, and Canada. With respect to U.S.-Mexico trade, the largest effects of the USMCA are likely to be felt in the automotive sector, since many of the deal's provisions are intended to shift automobile and component manufacturing to the U.S. However, it is unclear how the changes might affect the Presidio POE specifically. In any event, the deal still requires ratification by all three countries, followed by several years of implementation.

8.0 Summary and Key Findings

Overall, the freight analysis suggests that US 67 is not currently a major freight corridor, although it is poised for moderate freight growth in line with overall traffic growth and new trade and industrial development. This suggests that TxDOT should continue to plan for improvements that enhance the travel experience for all users while preserving regional quality of life.

The key conclusions of this assessment 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 UP rail line. Since these shipments neither originate nor terminate in the three-county study area, they have no significant relationship to economic activity along the study corridor. The remaining regional freight is mostly minerals, metals, farm products, transportation equipment, and empty containers. Freight is therefore not the primary regional economic driver for this area, but it does support some industries in the area such as agriculture, mining, and wholesale/retail trade.
- The assessment of freight activity at the Presidio POE supports the notion that the US 67 study corridor is not a major freight artery, given the low volumes compared to other POEs on the southern border. However, inbound truck volumes have been rising, even though inbound tonnage has been falling. This could suggest that the commodity mix at the POE is shifting towards lighter but higher-value goods, at least for imports. Moreover, growth in certain truck-borne commodities, such as prefabricated buildings, is contributing directly to operational issues along the corridor. Solitaire production will double by the end of 2019, which will also double the truck shipments of inbound supplies and outbound deliveries of mobile homes, all of which will use the US 67 study corridor.
- There is nothing to suggest that the Presidio POE bridge expansion in and of itself will lead to significant new truck traffic on the US 67 study corridor. It may make Presidio and Ojinaga more attractive for commercial activity in the future, but significant upgrades to POE infrastructure and operations including additional truck lanes, longer hours for commercial crossings, USDA inspection facilities, and cold storage would be required to attract larger volumes of commercial traffic from other POEs.
- Most freight on the US 67 study corridor is likely to continue moving by truck despite the expected rail infrastructure improvements. The new rail bridge, combined with planned

upgrades to the Texas-Pacífico line, will probably attract existing international rail traffic that currently crosses elsewhere and facilitate limited shipments of aggregate and other basic materials. Neither of these developments will impact the overall share of freight that moves by truck. Truck to rail transload facilities could be considered, particularly if the Presidio POE acquires the necessary services and infrastructure to become a bigger produce port, but this would primarily be driven by private sector actors.

- Since trucks will likely remain the dominant mode for goods movement in the corridor, truck volumes are likely to continue to grow along with overall traffic volumes. Using a two percent annual growth rate consistent with the methodology used to project total traffic volumes for the corridor, projected truck volumes are not expected to exceed 300 trucks per day in 2045 anywhere in the corridor. Therefore, trucks should remain a minor part of the overall traffic stream in the future. However, most trucks will continue to use the study corridor to get to and from I-10 unless they are heading west, in which case they would probably take US 90 towards Van Horn.
- Some stakeholders suggested alternate routes, particularly around Presidio and Alpine, to mitigate through truck traffic in communities. However, the need for an alternate route must be balanced with community concerns about other (non-freight) traffic bypassing towns, and the potential for undesirable development patterns along the route. Any proposed alternate route would also require careful coordination with affected landowners. Planning or constructing an alternate route would, therefore, require a feasibility study with local input separate from the US 67 Corridor Master Plan study. Pursuing such a solution is, therefore, a policy decision for consideration starting with individual communities.
- Many freight stakeholders expressed a desire for more passing and climbing lanes in the corridor (especially between Presidio and Marfa), wider shoulders with safer places for trucks to pull over in case of mechanical issues, rest areas with some services such as water, and designated places for tourists to pull over at attractions such as Elephant Rock and the Profile of Lincoln. Such improvements would benefit both passenger and freight traffic flows and safety with minimal increase to the corridor footprint.

Attachment A

TRANSEARCH Database Structure and Contents

TRANSEARCH data entails various dimensions:

- *Geography* – For the purposes of this assessment, the freight data presented are for the three-county study area (Pecos, Presidio, and Brewster Counties). Summary origin and destination data also include TxDOT Districts, other U.S. states, and Mexican states.
- *Direction* – Four directional movements include: intra-regional within the three-county study region, outbound from the region to other regions, inbound to the three-county region from other regions, and through the three-county study region as originating and terminating from and to other regions.
- *Modes* – Freight data are evaluated for the truck and rail modes. The rail mode includes intermodal rail. No data are provided for air or pipeline movements. TRANSEARCH includes data for the marine mode, but that mode is not applicable to the US 67 corridor.
- *Year* – Two years available include a base year (2015) and forecast year (2045).
- *Terms* – Three terms evaluated include weight (short tons), physical volume (truckload and rail carload-equivalent units), and trade value (dollars).
- *Commodity Convention* – TRANSEARCH uses the Standard Transportation Commodity Code classification system. Standard Transportation Commodity Codes can have up to seven digits; the TxDOT TRANSEARCH database contains four-digit commodity detail, which has been collapsed into 40 aggregated two-digit commodity groupings for ease of analysis and presentation. A list of two-digit Standard Transportation Commodity Code commodities and their descriptions is provided in **Attachment C**.

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Attachment B

Summary 2015 and 2045 Three-county Freight Flows

| | | Tons | | | Units | | | Value | | |
|-----------------------------|-----------------|-------------|------------|--------------|-----------|---------|--------------|-------------------|------------------|-------------------|
| | | Truck | Rail | Truck + Rail | Truck | Rail | Truck + Rail | Truck | Rail | Truck + Rail |
| 2015 | Inbound | 311,002 | 361,323 | 672,325 | 45,048 | 3,912 | 48,960 | \$213,125,150 | \$146,522,927 | \$359,648,078 |
| | Outbound | 763,565 | 20,680 | 784,245 | 46,326 | 280 | 46,606 | \$128,875,317 | \$8,248,073 | \$137,123,391 |
| | Intra-TriCounty | 62,854 | 0 | 62,854 | 7,248 | 0 | 7,248 | \$7,552,990 | \$0 | \$7,552,990 |
| | Through | 49,790,301 | 10,819,084 | 60,609,385 | 2,433,563 | 365,652 | 2,799,215 | \$119,002,662,319 | \$31,159,011,994 | \$150,161,674,313 |
| | Total | 50,927,722 | 11,201,087 | 62,128,810 | 2,532,184 | 369,844 | 2,902,028 | \$119,352,215,777 | \$31,313,782,995 | \$150,665,998,771 |
| 2045 | Inbound | 412,977 | 1,612 | 414,588 | 184,791 | 41 | 184,831 | \$367,008,576 | \$3,298,084 | \$370,306,660 |
| | Outbound | 4,149,747 | 4,999 | 4,154,745 | 198,714 | 105 | 198,820 | \$299,337,447 | \$2,826,403 | \$302,163,850 |
| | Intra-TriCounty | 324,486 | 0 | 324,486 | 33,001 | 0 | 33,001 | \$6,089,919 | \$0 | \$6,089,919 |
| | Through | 116,710,852 | 19,852,866 | 136,563,718 | 5,701,925 | 724,626 | 6,426,551 | \$329,146,688,556 | \$60,575,980,610 | \$389,722,669,167 |
| | Total | 121,598,062 | 19,859,476 | 141,457,538 | 6,118,431 | 724,772 | 6,843,203 | \$329,819,124,498 | \$60,582,105,097 | \$390,401,229,595 |
| Absolute Δ | Inbound | 101,974 | -359,711 | -257,737 | 139,743 | -3,871 | 135,872 | \$153,883,426 | -\$143,224,844 | \$10,658,582 |
| | Outbound | 3,386,182 | -15,681 | 3,370,501 | 152,388 | -175 | 152,214 | \$170,462,130 | -\$5,421,671 | \$165,040,459 |
| | Intra-TriCounty | 261,632 | 0 | 261,632 | 25,753 | 0 | 25,753 | -\$1,463,071 | \$0 | -\$1,463,071 |
| | Through | 66,920,551 | 9,033,782 | 75,954,333 | 3,268,363 | 358,974 | 3,627,337 | \$210,144,026,237 | \$29,416,968,616 | \$239,560,994,853 |
| | Total | 70,670,340 | 8,658,389 | 79,328,729 | 3,586,247 | 354,928 | 3,941,175 | \$210,466,908,722 | \$29,268,322,102 | \$239,735,230,824 |
| Total % Δ | Inbound | 32.8% | -99.6% | -38.3% | 310.2% | -99.0% | 277.5% | 72.2% | -97.7% | 3.0% |
| | Outbound | 443.5% | -75.8% | 429.8% | 328.9% | -62.3% | 326.6% | 132.3% | -65.7% | 120.4% |
| | Intra-TriCounty | 416.3% | N/A* | 416.3% | 355.3% | N/A* | 355.3% | -19.4% | N/A* | -19.4% |
| | Through | 134.4% | 83.5% | 125.3% | 134.3% | 98.2% | 129.6% | 176.6% | 94.4% | 159.5% |
| | Total | 138.8% | 77.3% | 127.7% | 141.6% | 96.0% | 135.8% | 176.3% | 93.5% | 159.1% |
| Compound Annual Growth Rate | Inbound | 0.9% | -16.5% | -1.6% | 4.8% | -14.1% | 4.5% | 1.8% | -11.9% | 0.1% |
| | Outbound | 5.8% | -4.6% | 5.7% | 5.0% | -3.2% | 5.0% | 2.8% | -3.5% | 2.7% |
| | Intra-TriCounty | 5.6% | N/A* | 5.6% | 5.2% | N/A* | 5.2% | -0.7% | N/A* | -0.7% |
| | Through | 2.9% | 2.0% | 2.7% | 2.9% | 2.3% | 2.8% | 3.4% | 2.2% | 3.2% |
| | Total | 2.9% | 1.9% | 2.8% | 3.0% | 2.3% | 2.9% | 3.4% | 2.2% | 3.2% |

*N/A – Not applicable.

Source: TRANSEARCH

Attachment C

List of Standard Transportation Commodity Codes and Descriptions

| STCC2 | Commodity |
|-------|----------------------------------|
| 01 | Farm Prods. |
| 08 | Forest Prods. |
| 09 | Fresh Fish or Marine Prods. |
| 10 | Metallic Ores |
| 11 | Coal |
| 13 | Crude Petrol. or Natural Gas |
| 14 | Nonmetallic Minerals |
| 19 | Ordnance or Accessories |
| 20 | Food or Kindred Prods. |
| 21 | Tobacco Prods. |
| 22 | Textile Mill Prods. |
| 23 | Apparel or Related Prods. |
| 24 | Lumber or Wood Prods. |
| 25 | Furniture or Fixtures |
| 26 | Pulp, Paper or Allied Prods. |
| 27 | Printed Matter |
| 28 | Chemicals or Allied Prods. |
| 29 | Petroleum or Coal Prods. |
| 30 | Rubber or Misc Plastics |
| 31 | Leather or Leather Prods. |
| 32 | Clay, Concrete, Glass, or Stone |
| 33 | Primary Metal Prods. |
| 34 | Fabricated Metal Prods. |
| 35 | Machinery |
| 36 | Electrical Equipment |
| 37 | Transportation Equipment |
| 38 | Instrum., Photo Eq., Optical Eq. |
| 39 | Misc Manufacturing Prods. |
| 40 | Waste or Scrap Materials |
| 41 | Misc Freight Shipments |
| 42 | Shipping Containers |
| 43 | Mail or Contract Traffic |
| 44 | Freight Forwarder Traffic |
| 45 | Shipper Association Traffic |
| 46 | Misc Mixed Shipments |
| 47 | Small Packaged Shipments |
| 48 | Waste |
| 49 | Hazardous Materials |
| 50 | Secondary Traffic |
| 60 | Unclassified |

Source: *TRANSEARCH*



US 67 CORRIDOR
MASTER PLAN