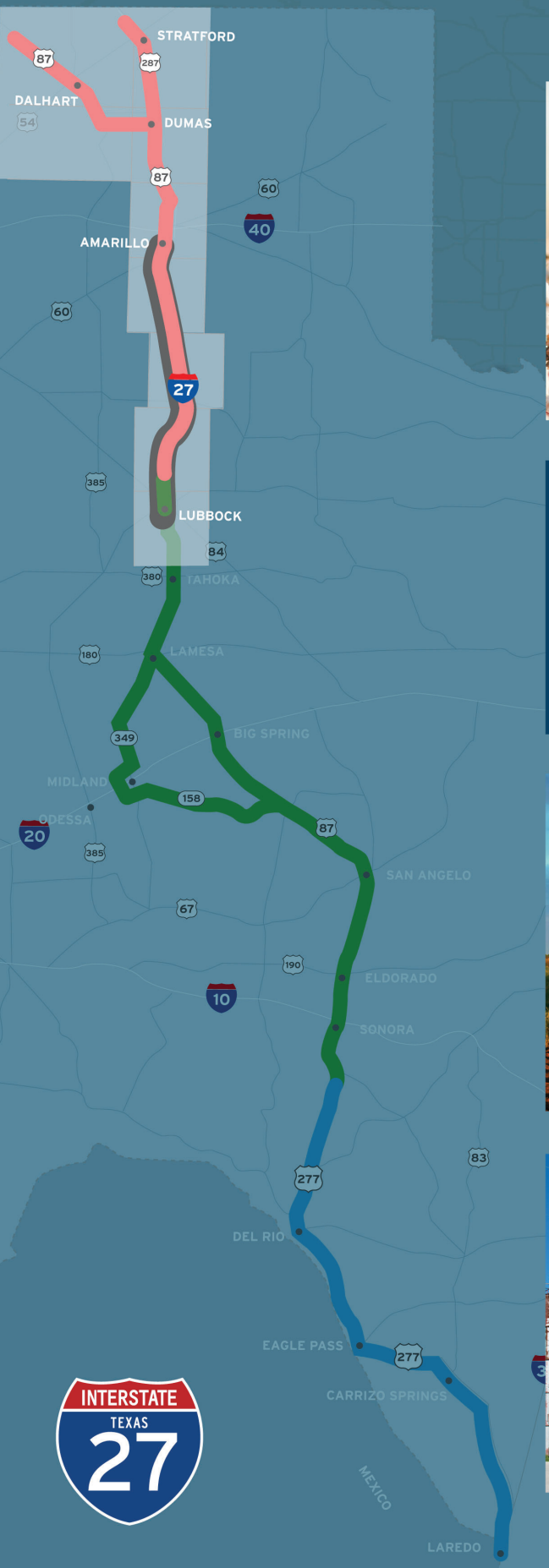
PORTS-TO-PLAINS CORRIDOR INTERSTATE FEASIBILITY STUDY

Texas Department of Transportation



SEGMENT 1 COMMITTEE REPORT

JUNE 30, 2020

INTERSTATE TEXAS 27

The Ports-to-Plains Corridor Interstate Feasibility Study Segment #1 Committee Report contains the ideas and recommendations of the Segment Committee members and does not contain proposals by the Texas Department of Transportation (TxDOT).

Letter from the Ports-to-Plains Corridor Interstate Feasibility Study Segment #1 Committee Chair

I would like to thank the Segment #1 Committee members and the citizens of Texas for participating in this very important interstate feasibility study for the Ports-to-Plains Corridor. Your commitment to this process was instrumental in developing the Segment #1 Committee's recommendations and priorities for the Ports-to-Plains Corridor Interstate Feasibility Study as prescribed in House Bill 1079.

This study is an important step in planning for the future upgrade of the Ports-to-Plains Corridor to an interstate facility and for the continued economic prosperity of South and West Texas, the state, and nation. The Ports-to-Plains Corridor is a significant international, national, state, regional, and local transportation corridor. It connects and integrates Texas' key economic sectors, international trade, energy production and agriculture, and supports our region's growing demographic and economic centers. As the only north-south corridor in South and West Texas, the Ports-to-Plains Corridor provides a critical link from our ports of entry to destinations in Texas and beyond.

In Segment #1, agriculture is a key economic driver and relies on the Ports-to-Plains Corridor for production and export of billions of dollars of quality agricultural products (crops, livestock, dairy). Three of the top agricultural commodities in Texas are cattle ($12.3 billion/year), cotton ($2.6 billion/year) and milk ($2.1 billion/year) and are produced in the Ports-to-Plains Corridor. The total agricultural product sales for the Ports-to-Plains corridor is approximately $11 billion, and Segment #1 alone contributes $9 billion to this total. Dairy is particularly prominent in Segment #1 with eight of the top 10 milk producing counties in the state located in this area. Segment #1 is also a top producer of cotton, grain, oilseed, and hay, exporting most of these products to other states and countries. Inbound products to the area consist of feed, fertilizer, and fuel. The transport of many of these products are time sensitive and delays may create health and safety issues for livestock and crops.

Using the data and analysis conducted during the study and the input from the public, the Segment #1 Committee recommends upgrading the Ports-to-Plains Corridor to an interstate facility. Upgrading the Corridor to an interstate will enhance safety and mobility for the traveling public; facilitate international trade and the movement of freight and energy products; and enhance the security of our country's food, fuel, and fiber supply chains. The Committee also lays out an implementation plan with prioritized short-term, mid-term, and long-term projects and policy recommendations for the Ports-to-Plains Corridor.

The Segment #1 Committee submits their Final Report to the Advisory Committee for consideration in developing its recommendations for the entire corridor to present to the Texas Department of Transportation (TxDOT).

On behalf of Vice-Chair Milton Pax, Vice Chairman of the Ports-to-Plains Alliance and the Segment #1 Committee, I want to thank Ports-to-Plains Advisory Committee Chair, City of Lubbock Mayor Dan Pope for his leadership and guidance through this process, and the TxDOT staff and consultant team for providing the data and analyses that informed our recommendations.

Sincerely,

Jared Miller, City Manager
City of Amarillo
Chair, Segment #1 Committee

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Abbreviations and Acronyms

AADT	Annual Average Daily Traffic
ACS	American Community Survey
BNSF	Burlington Northern Santa Fe
CDA	Comprehensive Development Agreement
CETRZ	County Energy Transportation Reinvestment Zone
CRIS	TxDOT's Crash Records Information Systems
EPA	Environmental Protection Agency
ESRI	Environmental Systems Research Institute
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
GDP	Gross Domestic Product
HB	House Bill
HSIP	Highway Safety Improvement Program
I	Interstate
INFRA	Infrastructure for Rebuilding America
LOS	Level of Service
MPH	Miles Per Hour
MPO	Metropolitan Planning Organization
MVMT	Million Vehicle Miles Traveled
NPMRDS	National Performance Management Research Data Set
NSFHP	Nationally Significant Freight and Highways Projects
NWI	National Wetlands Inventory
P3	Public-Private Partnerships
PMIS	TxDOT's Pavement Management System
PUF	Permanent University Fund
RID	TxDOT's Roadway Inventory Database
SAM	TxDOT's Statewide Analysis Model
SB	Senate Bill
SH	State Highway
SHF	State Highway Fund
SIB	State Infrastructure Bank
SL	State Loop
STARS II	Statewide Traffic Analysis and Reporting System

TARL	Texas Archeological Research Laboratory
TCEQ	Texas Commission on Environmental Quality
TDC	Texas Demographic Center
THC	Texas Historical Commission
TNRIS	Texas Natural Resources Information System
TPWD	Texas Parks and Wildlife Department
TREDIS	Transportation Economic Development Impacts System
TTC	Texas Transportation Commission
TxDOT	Texas Department of Transportation
UP	Union Pacific
US	United States
USC	United States Code
USCB	United States Census Bureau
USDOT	United States Department of Transportation
USEIA	United States Energy Information Administration
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
USMCA	United States-Mexico-Canada Agreement
UTP	Unified Transportation Program
VPD	Vehicles Per Day

CHAPTER 1

Introduction

1.0 Introduction

The Ports-to-Plains Corridor traverses approximately 963 miles of primarily rural area in South and West Texas. The Ports-to-Plains Corridor was designated by Congress as a High Priority Corridor on the National Highway System in 1998. In Texas, the Ports-to-Plains Corridor spans 26 counties and is comprised of sections of Interstate 20 (I-20), Interstate 27 (I-27), Interstate 35 (I-35), US 83, US 87, US 277, US 287, State Highway 158, and State Highway 349. The three interstate highways are also part of the National Highway Freight Network. **Figure 1.1** shows the entire Ports-to-Plains Corridor in Texas.

There are no north-south interstate connections in the southern and western part of Texas.

While Texas is served by several east-west interstate highways, there are few north-south interstate connections, particularly connecting the southern and western part of the state. The Ports-to-Plains Corridor is an international, national and state significant transportation corridor that connects and integrates Texas' key economic engine sectors, international trade, energy production and agriculture. The corridor also plays a vital role in supporting the growing demographic and economic centers of South and West Texas.

The corridor functions as the only north-south corridor facilitating the movement of people and goods in South and West Texas and beyond. As population, employment, international trade, energy production, and agriculture in the Ports-to-Plains Corridor continue to grow, it will become increasingly important to support the efficient and safe movement of people and goods.

The corridor plays a critical role in the nation's food security, energy security, and national security:

Food security – it supports the largest agricultural production in the country.

Energy security – it supports the Permian Basin and Eagle Ford Shale. The Permian Basin accounts for approximately 32 percent of the nation's crude oil production and 13 percent of the nations natural gas production. Forbes Magazine named the Permian Basin the "World's Top Oil Producer" replacing Saudi Arabia's Ghawar oilfield. In 2019, oil and gas producers contributed $13.4 billion to the state in the form of taxes and royalties, the Permian Basin accounted for $9 billion, or 67 percent of that total. The Eagle Ford Shale produced 5,528 million cubic feet of natural gas and 990,372 barrels of oil per day in 2019.

National security – it supports several national and strategic military installations and border enforcement facilities.

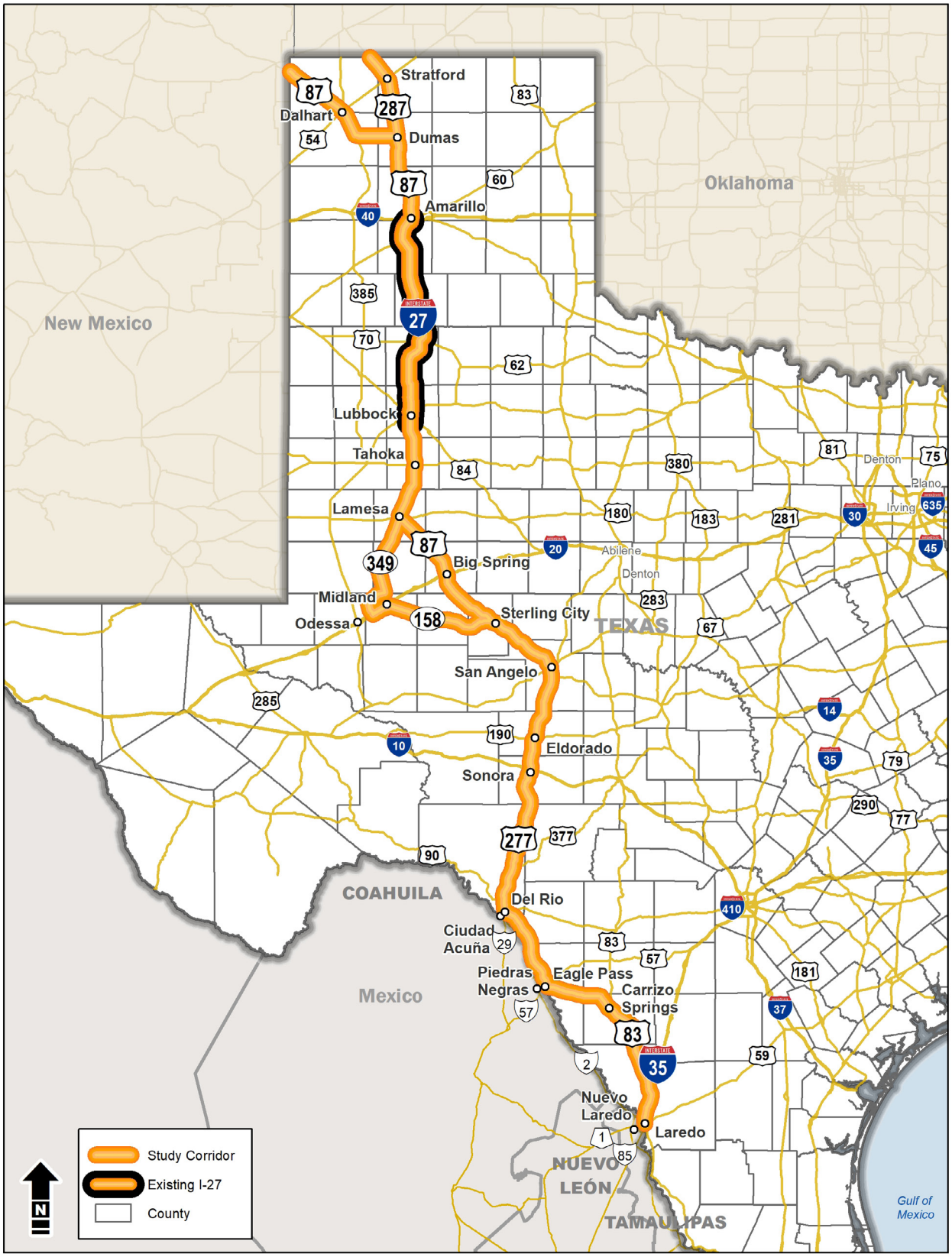


Figure 1.1: Ports-to-Plains Corridor

Agriculture

Agriculture is especially important in the northern section of the Ports-to-Plains Corridor and is a key driver of economic industry. The production and export of quality agricultural products (crops, livestock, dairy, etc.) generates billions of dollars and relies directly on highway networks for transport of products to market. The north section of the corridor includes strong production of livestock including dairy, cattle and calves, and goats. Dairy is particularly prominent with eight of the top 10 milk producing counties in the state located in this area.

Livestock is significant in Potter and Moore Counties. The northern section is also a top producer of cotton, grain, oilseed, and hay and exports most of these products to other states and countries. Inbound products such as feed, fertilizer, and fuel also rely on the Ports-to-Plains Corridor. The total agricultural product sales for the Ports-to-Plains Corridor is approximately $11 billion, and the northern section alone contributes $9 billion to this total.[1] Transporting these products requires a highway system that can provide an efficient, safe, and healthy way to transport livestock and crops.

Delays in the transport of livestock may create health and safety issues for the animals. The Texas High Plains is often referred to as the Cattle Feeding Capital of the World. Three of the top agricultural commodities in Texas are cattle ($12.3 billion/year), cotton ($2.6 billion/year) and milk ($2.1 billion/year) are produced in the Ports-to-Plains Corridor.[2]

Energy Production

The Ports-to-Plains Corridor is a vital energy trade corridor that connects the Permian Basin and Eagle Ford Shale production areas with refineries and seaports in the Texas Gulf Coast and land port of entries for export and imports of supplies.

Livestock is especially important in the northern section of the Ports-to-Plains Corridor.

According to the Permian Basin Energy Epicenter, the Permian Basin was responsible for 72 percent of Texas crude oil production, and 32 percent of U.S. crude oil production. The Permian Basin is also responsible for 35 percent of Texas natural gas production and 13 percent of U.S. natural gas production.[3]

The United States Energy Information Administration (USEIA) estimates that remaining proven reserves in the Permian Basin exceed 20 billion barrels of oil and 16 trillion cubic feet of natural gas, making it one of the largest hydrocarbon-producing basins in the United States and the world.[4] Forbes Magazine named the Permian Basin the "World's Top Oil Producer" replacing Saudi Arabia's Ghawar oilfield. In 2019, oil and gas producers contributed $13.4 billion to the state in the form of taxes and royalties, the Permian Basin accounted for $9 billion, or 67 percent of that total. According to the Texas Railroad Commission, the Eagle Ford Shale produced 5,528 million cubic feet of natural gas and 990,372 barrels of oil per day in 2019.[5] The Eagle Ford Shale extends over 26 counties, five of these are withn the Ports-to-Plains study area counties. It stretches from the Mexican border

[1]United States Department of Agriculture, Census of Agriculture 2017

[2]Texas Department of Agriculture, Texas Agriculture Statistics, Top 10 Commodities, 2017

[3]http://motran.org/wp-content/uploads/2019/11/19-MAI-12463-Energy-Epicenter-Fact-Brochure.pdf

[4]US Energy Information Administration (2017)

[5]Texas Railroad Commission (https://www.rrc.state.tx.us/oil-gas/major-oil-and-gas-formations/eagle-ford-shale-information/)

between Laredo and Eagle Pass up through counties east of Temple and Waco.

Importing materials and equipment for extraction relies on the Ports-to-Plains Corridor energy development to grow, therefore, the corridor will continue to play a critical role in the movement of energy products to markets and supplies to support the production.

Wind is also a critical component of the energy economy in West Texas. Texas leads the country in wind power additions representing record amount of 3,938 megawatts in 2019 alone. Texas represents more than 25 percent of U.S. 105 gigawatts per newly released Wind Powers America Annual Report 2019.[6] Much of the U.S. wind energy production comes from the counties along the Ports-to-Plains Corridor. Wind turbine equipment are generally large and requires specialized overweight/oversize transportation. The Ports-to-Plains Corridor serves as an important route for the movement of this equipment, including to other states such as Oklahoma and Colorado where wind energy is also growing. The corridor is also home to a growing number of wind component manufacturing facilities producing nacelles, towers and blades.

National Defense and Security

The Ports-to-Plains Corridor plays a key role in the nation's defense and security. There are several military installations and border enforcement facilities located along the corridor.
Existing I-27 in Segment #1, portions of Segment #2 and Segment #3 are on the Strategic Highway Network. Improvements to the corridor could result in additions to the Strategic Highway Network and improve mobility on all that is currently designated.

International Trade

The corridor connects to the state's and the nation's strategic trade gateways of Laredo, Eagle Pass, and Del Rio to destinations north, west and east. Therefore, the corridor is critical to the continued economic prosperity of South and West Texas and the viability of these international trade gateways, especially with the recent passage of the United States-Mexico-Canada Agreement (USMCA). The Port of Laredo is the largest port on the U.S.-Mexico border and one of the largest in the entire country.

In 2019, these three gateways handled over $262 billion or 62 percent of Texas-Mexico cross border trade, and handled over 2.6M northbound truck crossings.[7] In the Port of Laredo alone, this related to 474,000 net jobs in Texas and approximately $72 billion in gross domestic product.[8] Trucks carrying this freight rely on the Ports-to-Plains Corridor for direct access from the border to the north, northwest, and northeast. Currently, I-35 is the only interstate connection to and from Laredo, which does not efficiently serve trips headed northwest.

Population

The Ports-to-Plains Corridor traverses rapidly growing population centers. The entire corridor population grew from 980,870 in 1990 to 1,395,130 in 2017 with significant growth in Hartley, Midland, and Webb Counties.[9] The 56 counties in the Ports-to-Plains Corridor comprise of 6.6 percent of the total Texas population.

Employment

The Ports-to-Plains Corridor has experienced a significant increase in employment. From 1990 to 2017, there was a 78 percent increase in total employment along the entire corridor. The median household income is $50,786 which is above the 2017 Department of Health and Human Services poverty guideline of $24,600 for a family of four[10].

[6] American Wind Energy Association 2019 U.S. Wind Industry Market Reports

[7] US CBP Truck Volumes by Bridge, 2009-2018 and BTS Transborder Freight Data 2006-2019

[8] Texas Comptroller https://comptroller.texas.gov/economy/economic-data/ports/laredo.php#en1, accessed 20202-01-06

[9] United States Census Bureau 1990 and American Community Survey 2017

[10] American Community Survey 2017

Summary: With a span approaching 1,000 miles yet less than seven percent of the Texas population, the Ports-to-Plains Corridor is extraordinarily productive. The nation's largest port of entry by land, its largest agricultural production, and the primary source of its energy independence are all located in this single, substantially rural part of Texas.

- These critical industrial assets – trade, agriculture, energy – depend on a robust transportation system, but the vital link in America's system is an interstate highway which is limited in this corridor.
- Between I-35 in central Texas and I-25 in New Mexico is over 600 miles of territory – as far as a truck can drive in a full day's work – without a north-south interstate highway.
- This part of Texas is underserved given the national economic asset this corridor clearly is, and the financial benefits it generates for Texas.

1.1 House Bill 1079

On June 10, 2019, Governor Greg Abbott signed into law House Bill (HB) 1079, charging the Texas Department of Transportation (TxDOT) with conducting a feasibility study of the Ports-to-Plains Corridor, as defined by Section 225.069, Texas Transportation Code, from Laredo to the Oklahoma and New Mexico state lines in West Texas. A copy of House Bill 1079 is included in **Appendix A**.

With the guidance of a Ports-to-Plains Corridor Advisory Committee, three segment committees, and the public, TxDOT will evaluate the feasibility of, and costs and logistical matters associated with improvements that create a continuous flow, four-lane divided highway that meets interstate standards to the extent possible, including improvements that extend I-27 from its northern terminus at Amarillo north to the Oklahoma and New Mexico state lines, and the extension of I-27 south from its current southern terminus at Lubbock to Laredo.

HB 1079 requires:

- The Segment Committees to develop and submit reports to the Ports-to-Plains Advisory Committee providing input for the study conducted by TxDOT, including priority recommendations for improvement and expansion of the Ports-to-Plains Corridor, no later than June 30, 2020.
- The Ports-to-Plains Advisory Committee will make recommendations to TxDOT based on the Segment Committee reports not later than October 31, 2020.
- TxDOT submit a report on the results of the study to the governor, the lieutenant governor, the speaker of the House of Representatives, and the presiding office of each standing committee of the legislature with jurisdiction over transportation matters not later than January 1, 2021.
- The Ports-to-Plains Advisory Committee will be comprised of the county judge, or an elected county official or the administrator of the county's road department, as designated by the county judge, of each county along the Ports-to-Plains Corridor, including the counties along the possible extensions of I-27 and the mayor, or the city manager or assistant city manager, as designated by the mayor, of Amarillo, Big Spring, Carrizo Springs, Dalhart, Del Rio, Dumas, Eagle Pass, Eldorado, Lamesa, Laredo, Lubbock, Midland, Odessa, San Angelo, Sonora, Sterling City, Stratford, and Tahoka. The Ports-to-Plains Advisory Committee is required to meet at least twice each year on a rotational basis in Lubbock and San Angelo.
- Public meetings be held quarterly on a rotational basis in Amarillo, Laredo, Lubbock, and San Angelo during the study. Public meetings were held in additional locations each quarter beyond the locations required in HB 1079 to gather public feedback on improvements or expansions to the Ports-to-Plains Corridor.

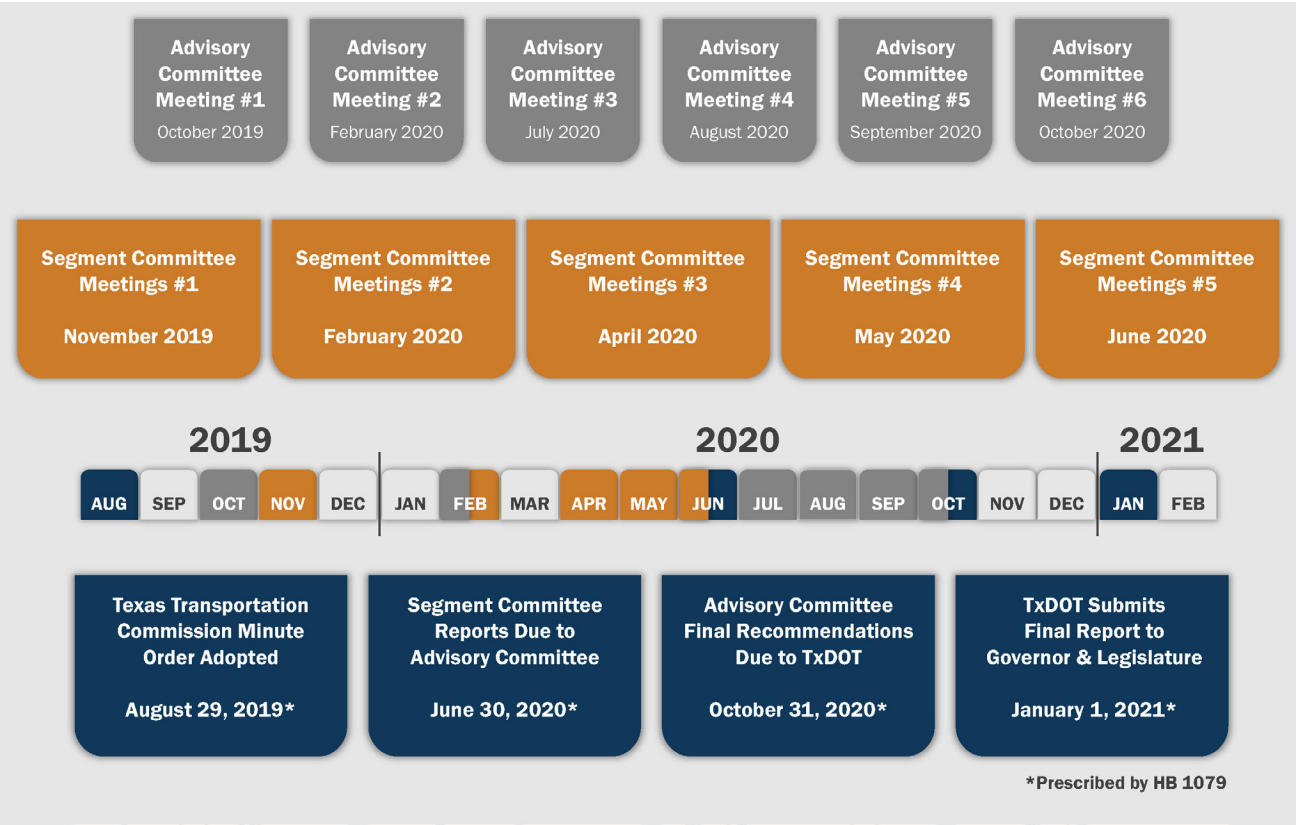


Figure 1.2: Ports-to-Plains Corridor Interstate Feasibility Study (HB 1079) Milestones

Figure 1.2 shows the Ports-to-Plains Corridor Interstate Feasibility Study milestones as outlined in HB 1079.

Per HB 1079, TxDOT, in conjunction with the Ports-to-Plains Advisory Committee, established three geographical segments for the Ports-to-Plains Corridor (Segment #1, Segment #2, and Segment #3). **Figure 1.3** contains a map showing the segments.

- Segment #1 starts at the New Mexico and Oklahoma borders and extends to the Hale/Lubbock County line.
- Segment #2 starts at the Hale/Lubbock County line and extends to the Sutton/Edwards County line.
- Segment #3 starts at the Sutton/Edwards County line and extends to I-35/Juarez-Lincoln Bridge in Laredo.

Segment #1 comprises 274 miles of the 963 miles of the Ports-to-Plains Corridor. Crossing eight counties and two TxDOT Districts, Segment #1 contains portions of I-27, US 87, and US 287. Major cities and towns located along Segment #1 include Abernathy, Amarillo, Cactus, Canyon, Dumas, Dalhart, Hale Center, Happy, Plainview, Stratford, and Tulia. A map of Segment #1 is shown in **Figure 1.4**.

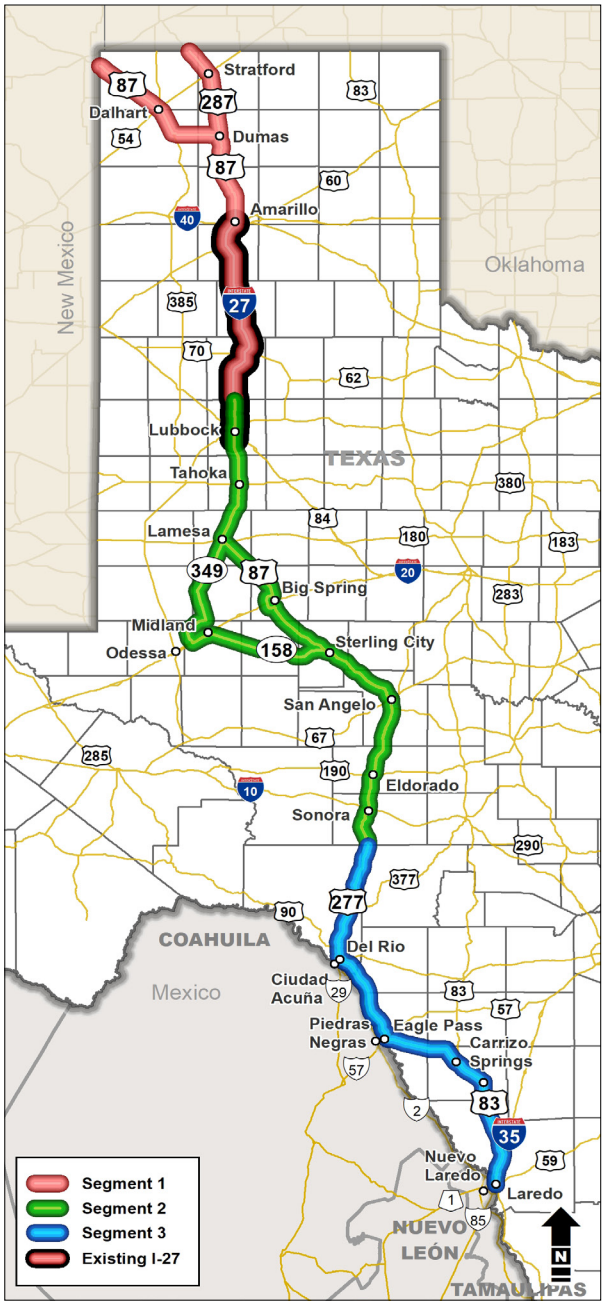


Figure 1.3: Segments Map

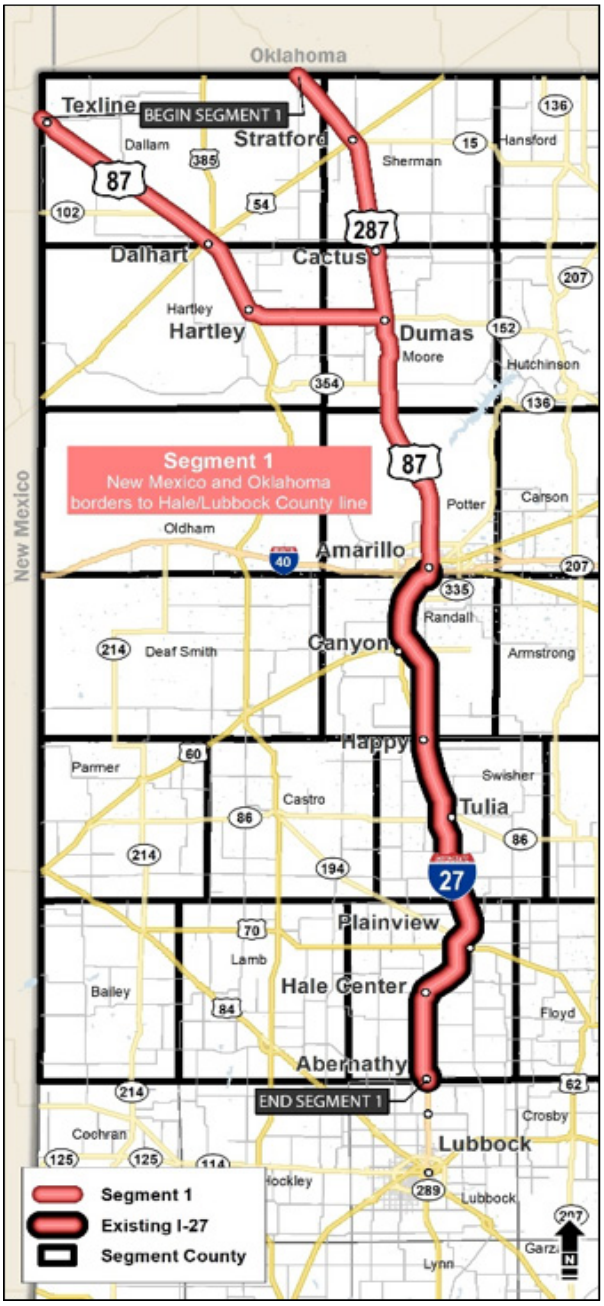


Figure 1.4: Segment #1 Map

1.2 Segment Committee Membership

HB 1079 describes the composition of the Segment Committees, consisting of volunteers who may represent municipalities, counties, metropolitan planning organizations, ports, chambers of commerce, and economic development organizations along the segment.

The membership of the Segment #1 Committee was established during the first meeting of the Ports-to-Plains Advisory Committee, held on October 1, 2019 in Lubbock, TX.

The list of Segment #1 Committee members is shown in **Table 1.1** below.

Table 1.1: Segment #1 Committee Members

Name	Affiliation
Ginger Nelson, Mayor Designee: Jared Miller, Committee Chair*	City of Amarillo Designee: City Manager
Milton Pax, Committee Vice-Chair*	Vice Chairman, Ports-to-Plains Alliance
Bob Brinkmann, Mayor	City of Dumas
Kevin Carter	President and CEO, Amarillo Economic Development Corporation
Terri Beth Carter, Judge	Sherman County
Kasey Coker	Executive Director, The High Ground of Texas
Ronnie Gordon, Judge	Hartley County
Phillip Hass, Mayor Designee: James Stroud	City of Dalhart Designee: City Manager
Ernie Houdashell, Judge	Randall County
Kyle Ingham Designee: Katie Perkins	Executive Director, Panhandle Regional Planning Commission Designee: Program Specialist
Tonya Keesee	Executive Director, Plainview Chamber of Commerce

Name	Affiliation
Harold Keeter, Judge Designee: Tyson Williams	Swisher County Designee: Director, Tulia Chamber of Commerce
Joe Kiely	Vice-President of Operations, Ports-to-Plains Alliance
Gary Molberg	President and CEO, Amarillo Chamber of Commerce
David B. Mull, Judge Designee: Harold King	Hale County Designee: County Commissioner
Travis Muno	Administrator, Amarillo Metropolitan Planning Organization
Ashley Posthumus	President, Dalhart Chamber of Commerce
Ricky Reed, Mayor	City of Stratford
Johnnie “Rowdy” Rhoades, Judge Designee: Dee Vaughan	Moore County Designee: County Commissioner Precinct 3
Wesley Ritchey, Judge	Dallam County
Nancy Tanner, Judge Designee: Sebastin Ysaguirre	Potter County Designee: Director, Road and Bridge Dept.
Carl Watson	Executive Director, Dumas Chamber of Commerce
Ross Wilson	President and CEO, Texas Cattle Feeders Association

*During the Segment #1 Committee Meeting on November 20, 2019 in Amarillo, Jared Miller and Milton Pax were elected by the Segment Committee members to serve as Chair and Vice-Chair of the Segment #1 Committee.

1.2.1 Study Purpose and Background

The purpose of the Ports-to-Plains Corridor Interstate Feasibility Study is to evaluate the feasibility of, and costs and logistical matters associated with improvements that create a continuous flow, four-lane divided highway that meets interstate standards to the extent possible, including improvements that extend I-27. The study evaluated those highways that comprise the Ports-to-Plains Corridor. The Ports-to-Plains Corridor Interstate Feasibility Study considered two scenarios. The baseline includes only those projects that are currently planned and programmed throughout the corridor. The interstate upgrade assumes an interstate facility for the entire corridor.

1.2.2 Goals of the Study

The goals of the Ports-to-Plains Corridor Interstate Feasibility Study include the following:

- An examination of freight movement along the Ports-to-Plains Corridor.
- An examination of the ability of the energy industry to transport products to market.
- An evaluation of the economic development impacts of the Ports-to-Plains Corridor, including whether the improvement or expansion of the Ports-to-Plains Corridor would create employment opportunities in Texas.
- A determination of whether improvements or expansion of the Ports-to-Plains Corridor would relieve traffic congestion in the segment.
- A determination and prioritization of improvements and expansion of the Ports-to-Plains Corridor that are warranted in order to promote safety and mobility, while maximizing the use of existing highways to the greatest extent possible and striving to protect private property as much as possible.
- A determination of the areas that are preferable and suitable for interstate designation.
- An examination of projects costs related to the improvement or expansion of the Ports-to-Plains Corridor.
- An assessment of federal, state, local, and private funding sources for a project improving or expanding the Ports-to-Plains Corridor.

1.3 Study Development Process

This Segment #1 Committee Report for the Ports-to-Plains Corridor Interstate Feasibility Study was developed in accordance with HB 1079. **Figure 1.5** shows the Ports-to-Plains Corridor Interstate Feasibility Study process.

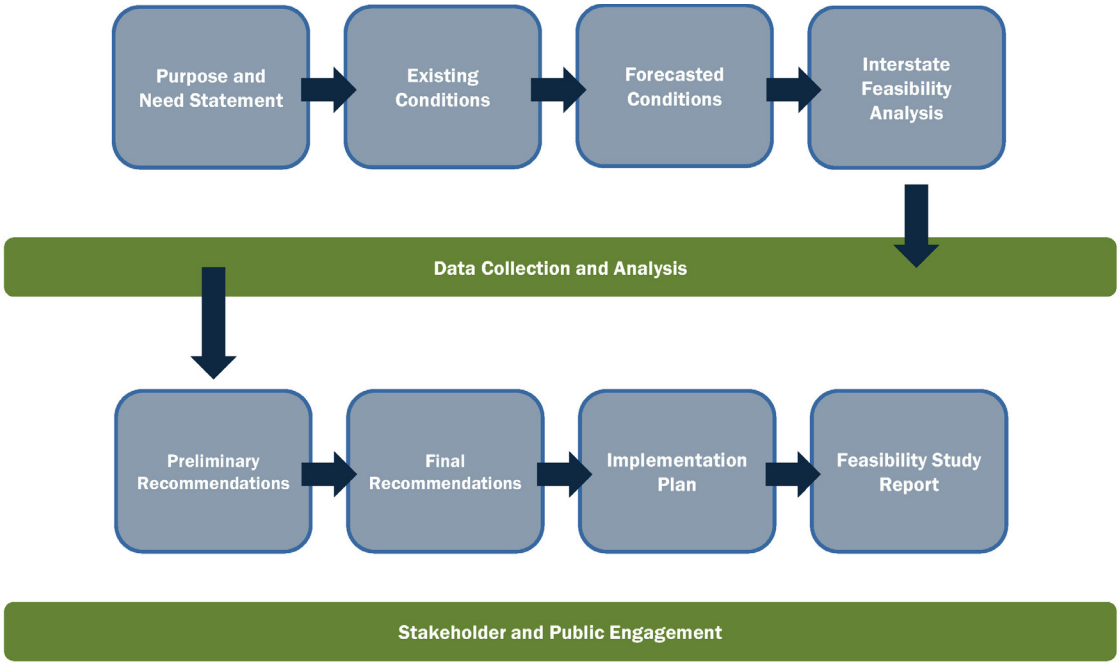


Figure 1.5: Ports-to-Plains Corridor Interstate Feasibility Study Segment Committee Process

1.4 Organization of the Report

This Segment #1 Committee Report addresses the requirements of HB 1079. It documents the study process, goals, stakeholder and public involvement, data collection, analysis, and findings. This report also provides the Segment #1 Committee recommendations to the Ports-to-Plains Advisory Committee. Report chapters include:

Chapter 1: Introduction

Chapter 2: Existing Conditions and Needs Assessment

- Land use characteristics
- Environmental conditions
- Population characteristics
- Economic characteristics
- Roadways and bridges
- Traffic conditions
- Truck traffic and freight flow
- Safety conditions

Chapter 3: Forecasted Conditions

- Projected population
- Projected economic development
- Projected land use
- Future programmed roadway and bridge projects
- Future traffic conditions
- Future truck traffic and freight flow

Chapter 4: Corridor Interstate Feasibility Analysis and Findings

- Describe the scenarios considered
- Describe the feasibility analysis process and criteria used to evaluate the scenarios
- Present the feasibility analysis findings

Chapter 5: Public Involvement and Stakeholder Engagement

Chapter 6: Recommendations and Implementation Plan

Appendices:

- **A** – House Bill 1079
- **B** – Key Study Maps
- **C** – Federal Highway Administration Guidance Criteria for Evaluating Requests for Interstate Designation
- **D** – Texas Department of Transportation Unified Transportation Program Funding Categories
- **E** – Segment #1 Committee Recommendations
- **F** – A Resolution Supporting the Designation of an Extension of Interstate 27 as a Future Interstate in Texas

CHAPTER 2

Existing Conditions and Needs Assessment

2.0 Existing Conditions and Needs Assessment

The Ports-to-Plains Corridor is 963 miles long, from the I-35/Juarez-Lincoln Bridge in Laredo to the Oklahoma and New Mexico state lines in the Panhandle. It includes the existing 124-mile long portion of I-27 between Lubbock and Amarillo but consists primarily of two or four-lane state and U.S. highways. The corridor passes through twenty-six (26) counties and six (6) TxDOT Districts.

Segment #1 is within the High Plains and Rolling Plains of the Texas Panhandle. It covers approximately 274 miles from the Hale/Lubbock County line north to the Oklahoma and New Mexico state lines. It encompasses the majority (103 miles) of the 124 miles of existing I-27. Segment #1 passes through eight (8) counties and two TxDOT Districts. Amarillo is the major city in the segment, serving as a population and employment center, as well as a major crossroads for freight traffic. Other smaller urban areas include Stratford, Dalhart, Cactus, Dumas, Canyon, Happy, Tulia, Plainview, Hale Center and Abernathy.

Existing highways in the corridor consist primarily of two-lane facilities south of San Angelo, and four-lane facilities to the north, as shown on **Figure 2.1**[11]. **Figure 2.2** shows the existing highway sections in Segment #1. Two hundred twenty-two of the 274 miles of highway (81 percent) in Segment #1 are currently 4 or 6-lane divided, with 103 of those miles consisting of existing I-27. Only 36 miles in Segment #1 are currently 2-lane, which are on US 287 north of Stratford. One hundred twenty-four miles have some form of access control (full or partial), with the remaining 150 miles having no access control. **Figure 2.3** shows transportation networks in Segment #1.

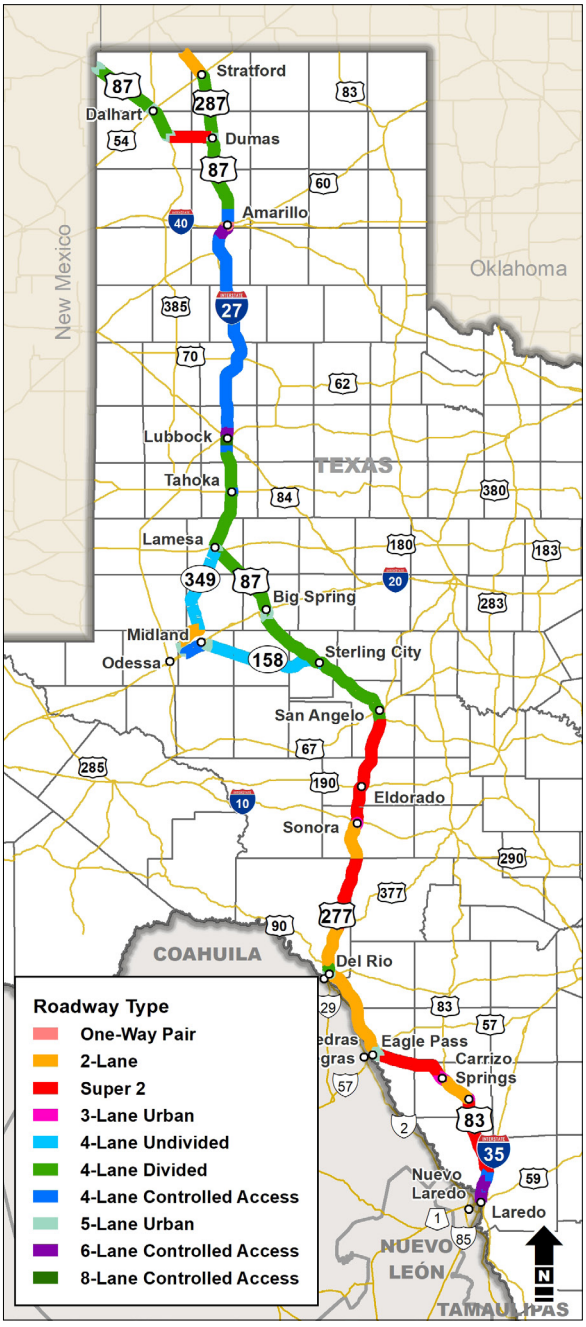


Figure 2.1: Corridor Existing Roadway Type
Source: TxDOT Roadway Inventory Database, 2017

[11]Existing conditions data reflect US 87 route designation through central Big Spring and not the under construction relief route, which will be designated as US 87 and considered part of the corridor when complete in 2020. This applies to all maps shown in Chapter 2 showing corridor data.

Figure 2.2: Segment #1 Existing Roadway Type
Source: TxDOT Roadway Inventory Database, 2017

Figure 2.3: Segment #1 Transportation Network
Source: TxDOT Open Data Portal, 2019

The entire Segment #1 corridor is on the Ports-to-Plains High Priority Corridor (#38) on the National Highway System, the Texas Highway Freight Network and the Texas Trunk Highway System. Existing I-27 is also on the Strategic Highway Network. None of the roadways on Segment #1 are Energy Sector corridors. Other transportation facilities in Segment #1 include railroads, airports, and intermodal freight facilities. There is a commercial airport in Amarillo; other airports consist of smaller, general aviation and private airfields in rural areas. Segment #1 has the most railroad infrastructure in the corridor, with several BNSF rail lines between Lubbock and the Oklahoma and New Mexico borders. BNSF also has an intermodal rail freight facility at Amarillo and a transload facility for wind turbine components at Plainview.

The Segment #1 Committee evaluated existing environmental, demographic, economic, pavement, bridge, traffic, freight flows, and safety conditions to assess the needs in Segment #1. Details of these studies are discussed in the following sections.

2.1 Environmental Characteristics

The Segment #1 Committee looked at a 1,000-foot wide area centered on the existing corridor to examine environmental data from existing published sources. The data is shown on **Figures 2.4 and 2.5**. Segment #1 crosses 15 major creeks and two major rivers.

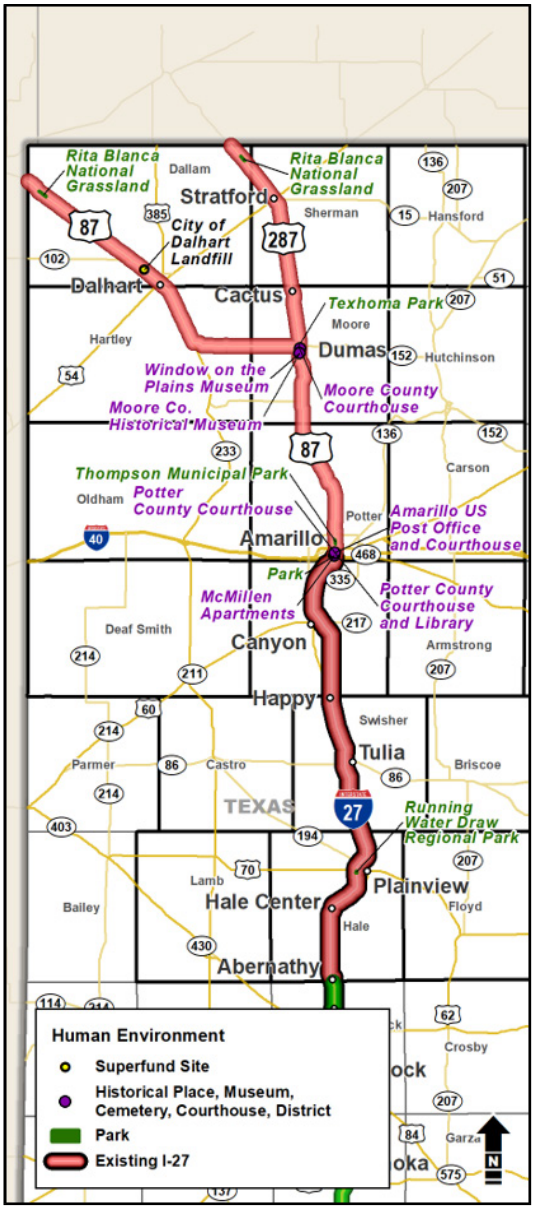


Figure 2.4: Segment #1 Environmental Constraints-Parks, Historic Sites and Hazardous Materials Sites
Sources: TPWD- TNRIS, 2019, TCEQ, EPA, 2019

Figure 2.5: Segment #1 Environmental Constraints-Wetlands, Floodplains, and 303(d) Waters
Sources: FEMA Map Service Center, 2019, USFWS 2018, USGS Hydrography Dataset, 2019, USFWS National Wetlands Inventory, 2019, TCEQ 303(d) list 2016

One of which, the Canadian River north of Amarillo, is 303(d) listed, meaning it is considered impaired for one or more contaminants. Larger floodplains of note that are crossed by Segment #1 are the Canadian River north of Amarillo, Tierra Blanca Creek which passes through the town of Canyon, and Running Water Draw in Plainview.

Segment #1 is in the High Plains ecoregion of the Texas Panhandle. The area generally does not contain habitat for federally listed species, but it does support patches of suitable habitat for a few state-listed threatened species such as Palo Duro mouse *(Peromyscus truei comanche)* or Texas horned lizard *(Phrynosoma cornutum)*. There is no critical habitat located within Segment #1.

One superfund site, the City of Dalhart Landfill, is within the Segment #1 corridor. These sites are known to contain hazardous materials and can pose increase risk to construction activities. No Brownfield sites are within the Segment #1 corridor.

US 287 north of Stratford passes through portions of the Rita Blanca National Grassland. Segment #1 is in proximity to four municipal parks in Dumas, Amarillo, and Plainview. Two National Register of Historic Places listed sites, two museums, one historic district and one County Courthouse are located within Segment #1. There was no archeological site location information available from the Texas Archeological Research Laboratory (TARL) for Segment #1. Two cemeteries are located within Segment #1: the LX Ranch cemetery in Potter County, and Memory Gardens in Randall County.

2.2 Population Characteristics

The Segment #1 Committee reviewed demographic data from the United States Census Bureau (USCB) and the American Community Survey (ACS). Segment #1 has the smallest population in the Ports-to-Plains Corridor. Segment #1 has grown by 18 percent from 356,644 in 1990 to 419,186 in 2017. Only two counties, Potter and Randall Counties (containing the City of Amarillo) have more than 100,000 people. From 1990 to 2017, population growth in Segment #1 has been positive with an 18 percent growth.

The entire corridor population growth is 33 percent for the same time period of 1990 to 2017. Six of the Segment #1 counties (Dallam, Hartley, Moore, Potter, Randall, and Sherman Counties) have gained population since 1990, all experiencing double digit growth. The remaining twelve counties in Segment #1 have lost population since 1990. Many counties experienced growth in the 1990s and then saw declines from 2010. Hartley County, for example, grew by 52 percent between 1990 to 2000, then by 9 percent between 2000 to 2010, and had no growth between 2000 to 2017. **Figure 2.6** and **Table 2.1** show the population from 1990 to 2017.

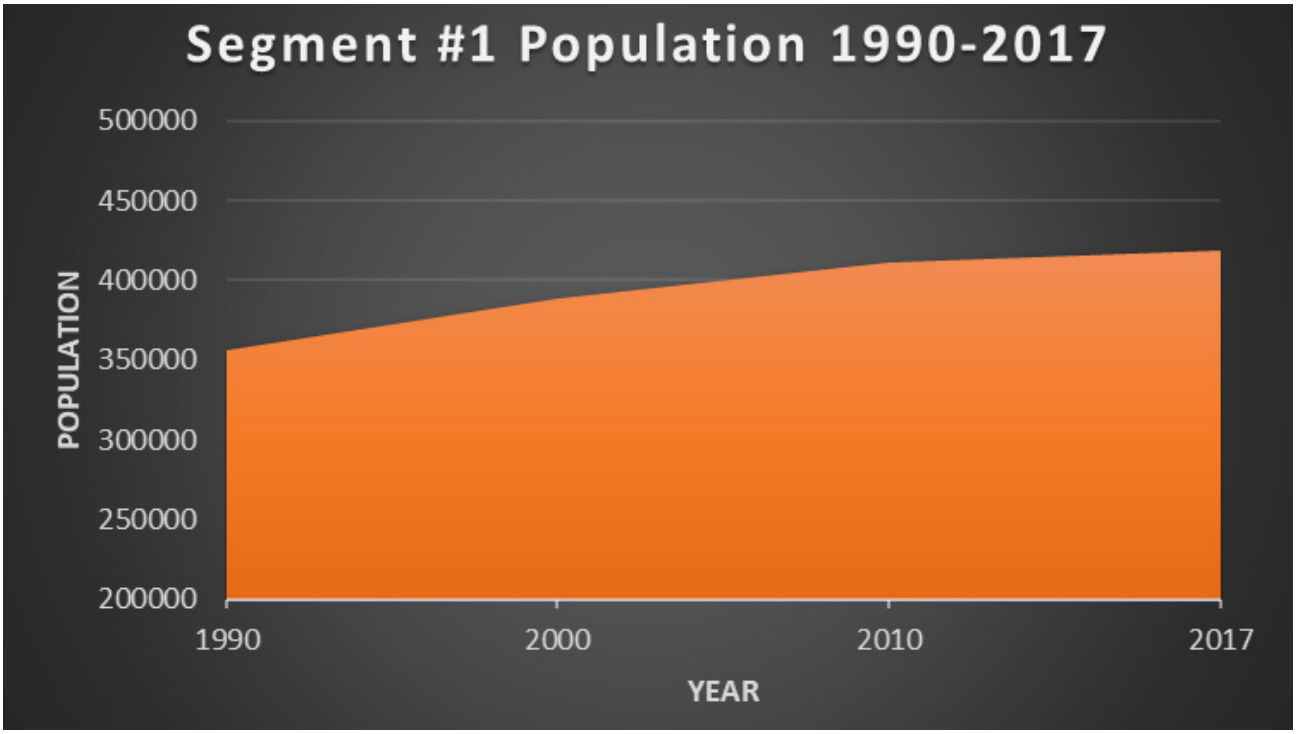


Figure 2.6: Segment #1 Population Growth, 1990 to 2017
Source: USCB, 1990, 2000, 2010, ACS, 2017

Table 2.1: Historic Population in the Corridor and Segment #1

	1990	2000	2010	2017
Segment #1 Population	356,644	389,095	410,770	419,186
Corridor Population	1,362,255	1,511,107	1,677,971	1,811,411

Source: USCB 1990, 2000, 2010, ACS 2017, Texas Demographic Center

2.3 Economic Conditions

The Segment #1 Committee reviewed data on median household incomes, employment, top industries, oil and gas, and agricultural production in Segment #1.

2.3.1 Median Household Income

From 1990 to 2017, median income in Segment #1 has grown significantly. **Figure 2.7** shows the growth in median household income in Segment #1. As shown in **Table 2.2**, Segment #1 currently has a greater median household income than Segment #3, but lower than Segment #2. The median household incomes in Segment #1 range from $37,883 in Swisher County to $68,750 in Armstrong County. No counties had median incomes below the 2017 Department of Health and Human Services poverty line of $24,600 for a family of four. Segment #1 had the smallest overall growth (123 percent) in income compared to the other segments in the corridor from 1990 to 2017.

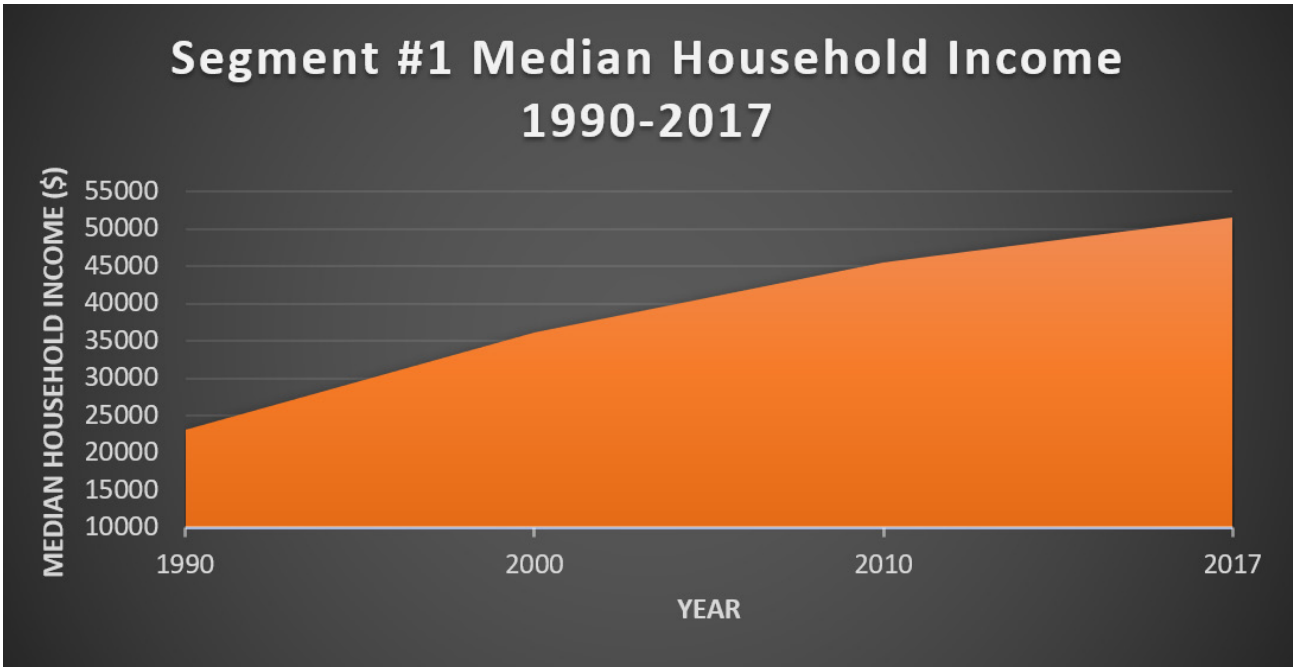


Figure 2.7: Segment #1 Median Household Income Growth, 1990 to 2017
Source: USCB 1990, 2000, 2010, ACS 2017, Texas Demographic Center

Table 2.2: Median Incomes in the Ports-to-Plains Corridor

	1990	2000	2010	2017
Segment #1 Median Household Income	$23,176	$36,106	$45,471	$51,601
Segment #2 Median Household Income	$22,135	$33,281	$45,361	$53,921
Segment #3 Median Household Income	$15,159	$26,002	$31,096	$38,770
Corridor Median Household Income	$21,396	$33,128	$43,249	$50,786

Source: USCB 1990, 2000, 2010, ACS 2017, Texas Demographic Center

2.3.2 Employment

As with population and income, employment in Segment #1 has seen growth from 1990 to 2017. Overall employment in Segment #1 grew by 20 percent, compared to the corridor growth rate of 78 percent.

Some counties in Segment #1 (e.g. Dallam and Randall) had growth rates higher than the average, while some counties (e.g. Floyd and Swisher) lost employment. **Table 2.3** shows the employment in Segment #1 as well as the corridor.

Table 2.3: Historic Employment in the Corridor and Segment #1

	1990	2000	2010	2017
Segment #1 Employment	167,608	181,691	199,767	201,916
Segment #1 Percentage of Corridor Employment	27	27	25	24
Corridor Employment	618,697	668,172	783,830	845,071

Source: USCB 1990, 2000, 2010, ACS 2017, Texas Demographic Center

Figure 2.8 shows the top five employment industries in Segment #1, which like most of the Ports-to-Plains Corridor, is dominated by health care, retail trade, and educational services[12]. Segment #1 is the only segment that has manufacturing in the top five industries. Beyond these basic sales and service industries, Segment #1 employment includes agricultural production and energy production. Walmart is a major employer, with a large distribution center location in Plainview. Other employers include agricultural related businesses such as meat processing, dairies, tanneries, and food production. Energy related businesses are also located in Segment #1.

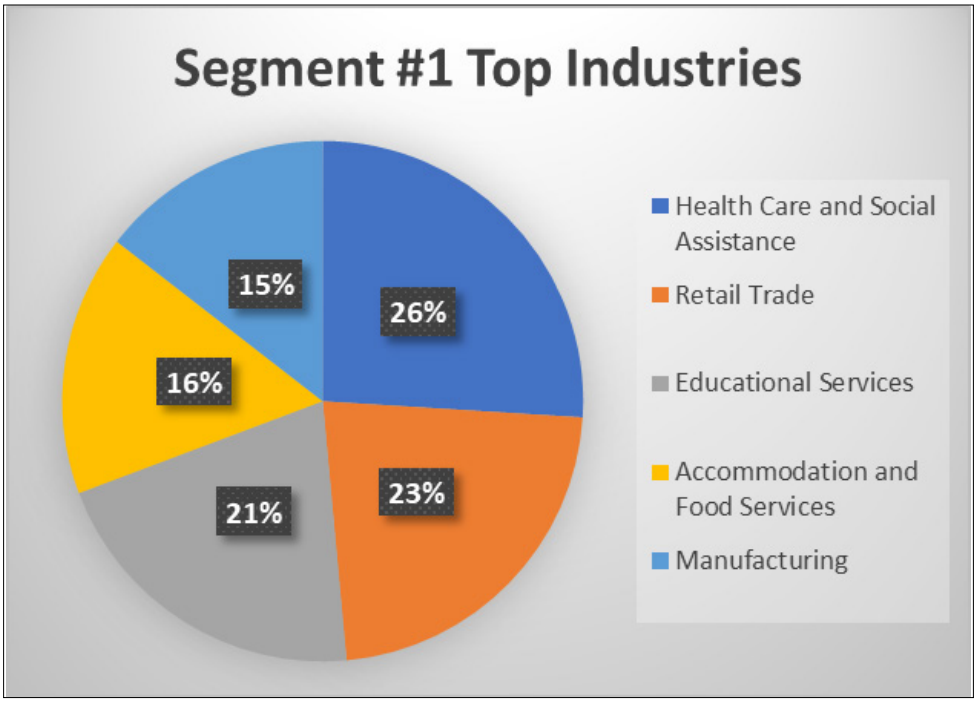


Figure 2.8: Segment #1 Top Five Industries, 2017
Source: ACS, 2017

[12]Note that the manufacturing industry includes food, leather, and petroleum product manufacturing.

2.3.3 Energy

Four geologic areas bearing oil and gas overlap the corridor: the Permian Basin encompassing Segment #2, the Eagle Ford Shale in Segment #3, and the Palo Duro and Anadarko Basins in Segment #1. **Figure 2.9** shows the distribution of oil and gas wells in the corridor, and **Figure 2.10** shows the oil and natural gas wells in Segment #1.

The Segment has 9,605 oil wells and 4,668 natural gas wells. Oil and gas production in Segment #1 comprise a small percentage of the corridor total: 4,156,527 barrels of oil in 2017, or less than one percent of the corridor total, and 65,041,281 million cubic feet of gas in 2017, or five percent of the corridor total. Wind production in Segment #1 is much more significant. **Figures 2.11 and 2.12** show the total number of wind turbines in the corridor, and the number of wind turbines in Segment #1.

- Texas leads the country in wind power additions representing record amount of 3.938 megawatts in 2019 alone.
- Texas represents more than 25 percent of the U.S. 105 gigawatts per newly released Wind Powers America Annual Report 2019.
- There were 2,623 wind turbines located in Segment #1 in 2019, accounting for 39 percent of the corridor total as shown in **Table 2.4**.
- The two highest producing counties for wind energy in the corridor are in Segment #1: Carson and Floyd Counties. These two counties each produce over 1 million megawatts of wind energy. Segment #1 has a significant concentration of wind energy due to its good to excellent conditions based on USEIA assessments of wind power potential. Segment #1 also has a growing wind component manufacturing and repair sector.

Table 2.4: Wind Production Capacity in the Ports-to-Plains Corridor (in megawatts)

	Segment #1	Segment #2	Segment #3	Corridor
Wind Energy Capacity	4,601,600	5,384,380	1,104,420	11,090,400

Source: Texas Railroad Commission, 2019

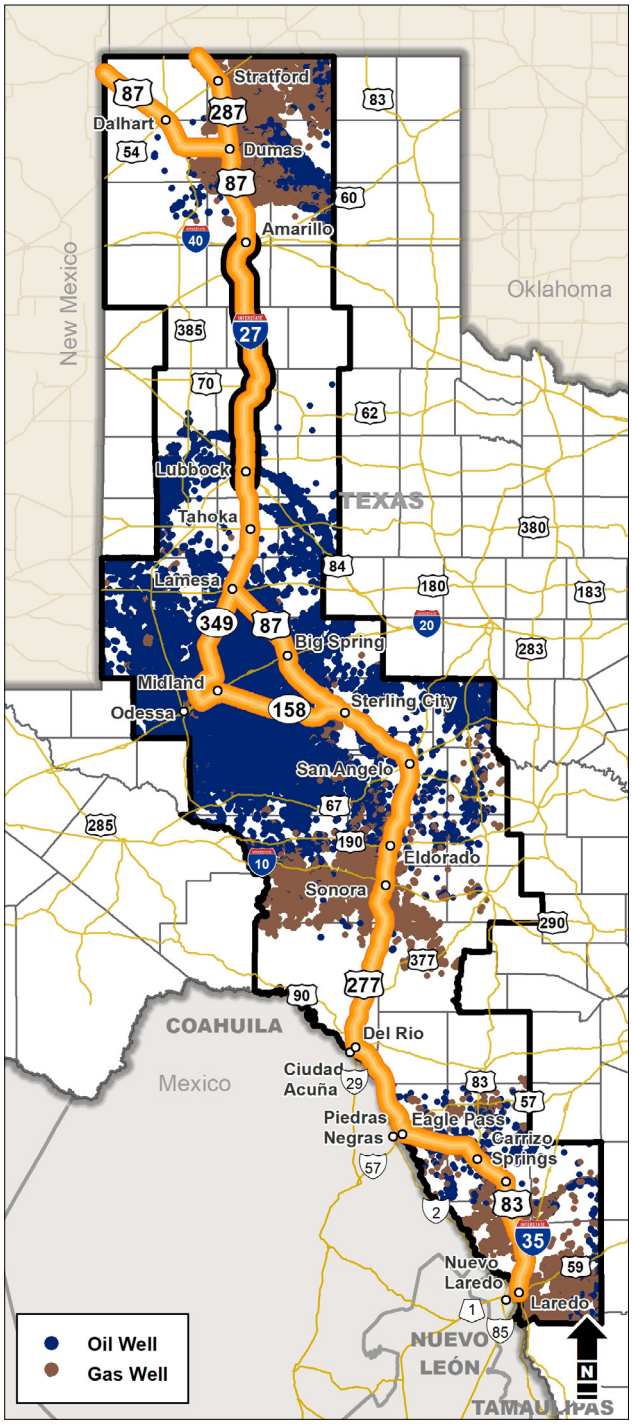


Figure 2.9: Corridor Oil and Gas Wells, 2019
Source: Texas Railroad Commission, 2019

Figure 2.10: Segment #1 Oil and Gas Wells, 2019
Source: Texas Railroad Commission, 2019

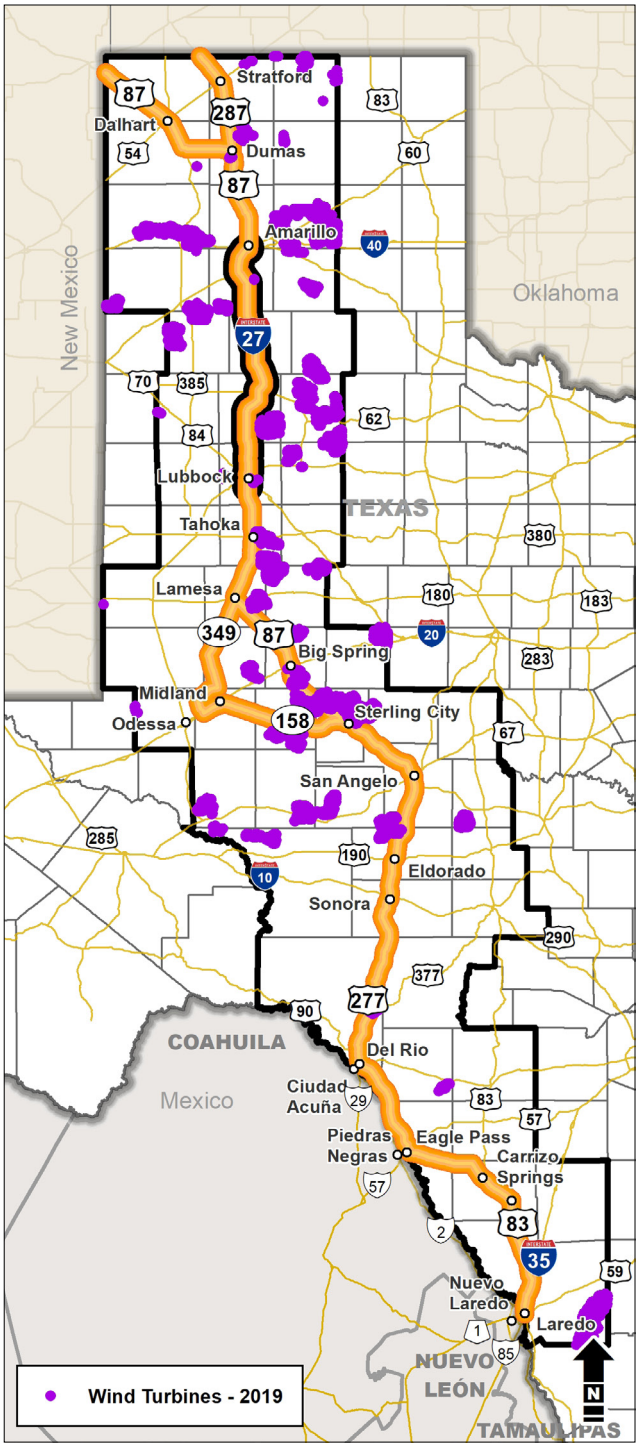


Figure 2.11: Corridor Wind Turbines, 2019
Source: Texas Railroad Commission, 2019

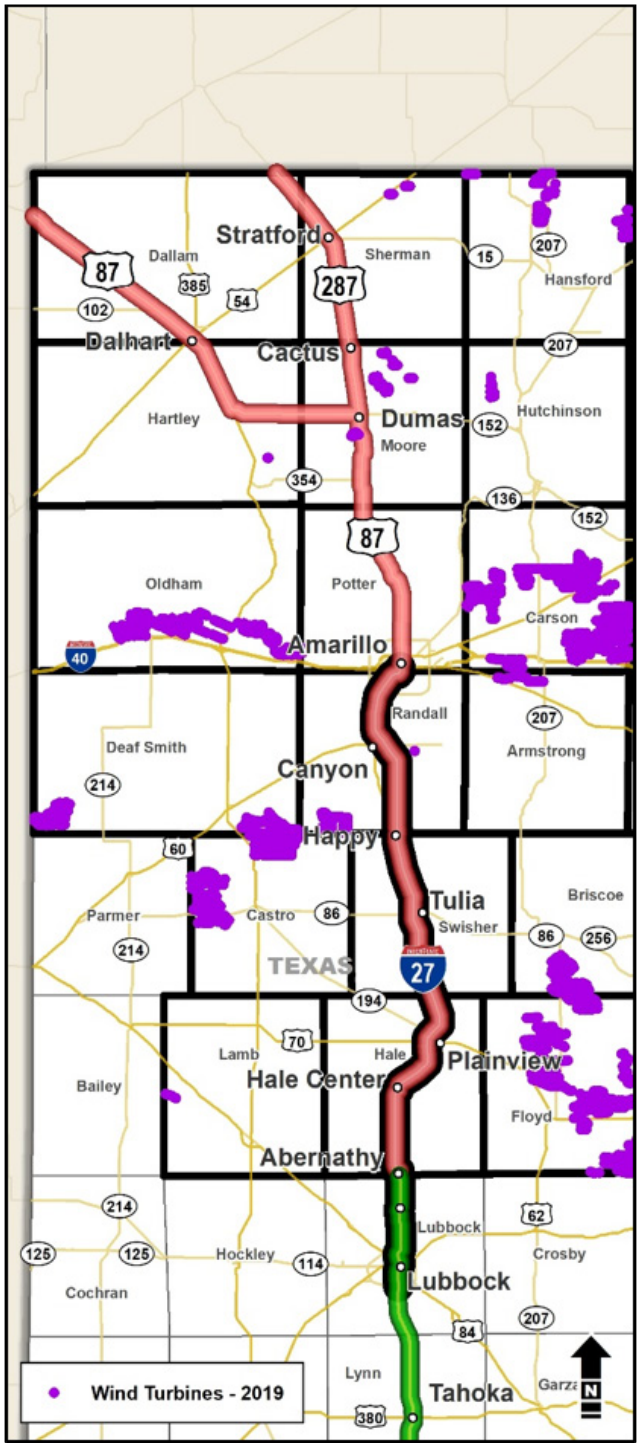


Figure 2.12: Segment #1 Wind Turbines, 2019
Source: Texas Railroad Commission, 2019

2.3.4 Agriculture

Segment #1 has the highest agricultural production among the three segments of the corridor, as shown in **Figures 2.13 and 2.14**.

- Approximately 62 percent of the land in Segment #1 is farmland.
- The total sales of agricultural products were over $9.3 billion in 2017 for the 18 counties within Segment #1, or 71 percent of the corridor total.
- The animal product sales, at $7.88 billion, make up 85 percent.
- Crop sales, at $1.24 billion, make up 15 percent of Segment #1's total agricultural sales. This is skewed higher towards animal products than the corridor as a whole.
- The counties with the highest total agricultural sales were Deaf Smith County ($1.6 billion), Dallam County ($1.2 billion) and Castro County ($1.1 billion).

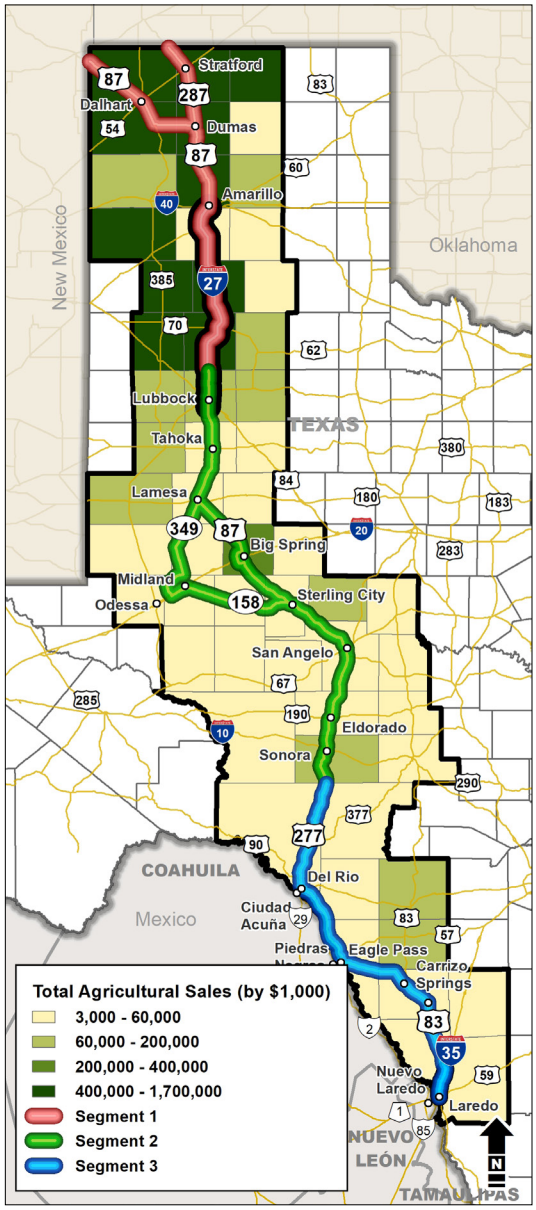


Figure 2.13: Corridor Total Agricultural Sales, 2017
Source: USDA Census of Agriculture, 2017

Figure 2.14: Segment #1 Total Agricultural Sales, 2017
Source: USDA Census of Agriculture, 2017

For Segment #1, the top crop is cotton for eight out of the 18 counties.

- The other top crops in this segment include wheat for grain in six counties and corn in four counties. While cotton is the top product in the most counties, Segment #1 is not as cotton dominant as Segment #2.
- The top livestock and animal products by inventory for Segment #1 are cattle and calves for 17 out of the 18 counties. Goats were the top animal product for one county in this segment. **Figures 2.15 and 2.16** show the top crops by acreage and the top animal products by inventory per county within Segment #1 respectively.

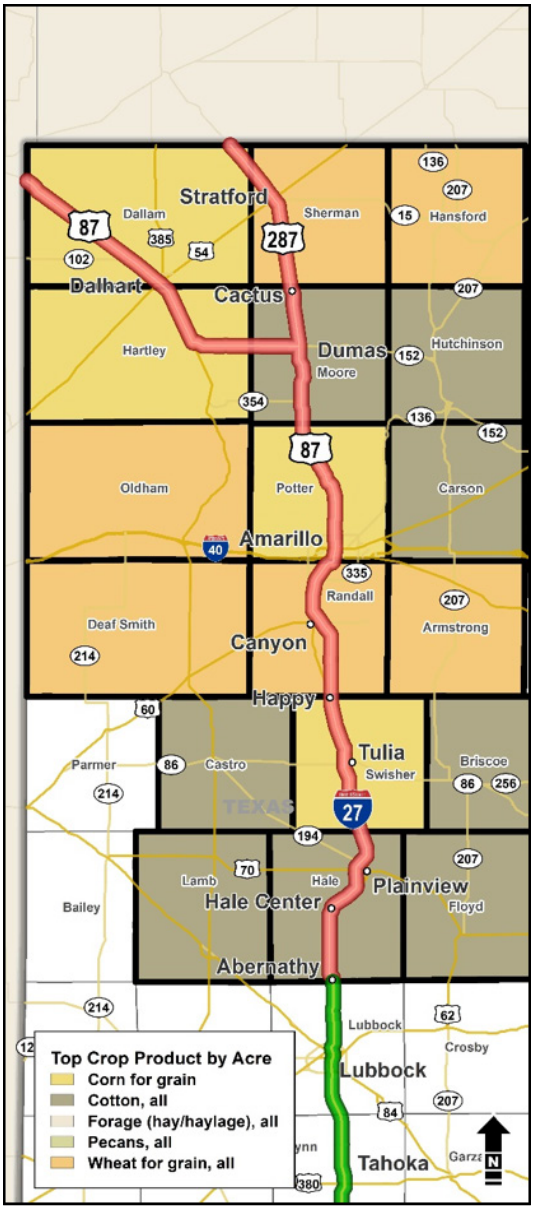


Figure 2.15: Segment #1
Top Crop Production, 2017
Source: USDA Census of Agriculture, 2017

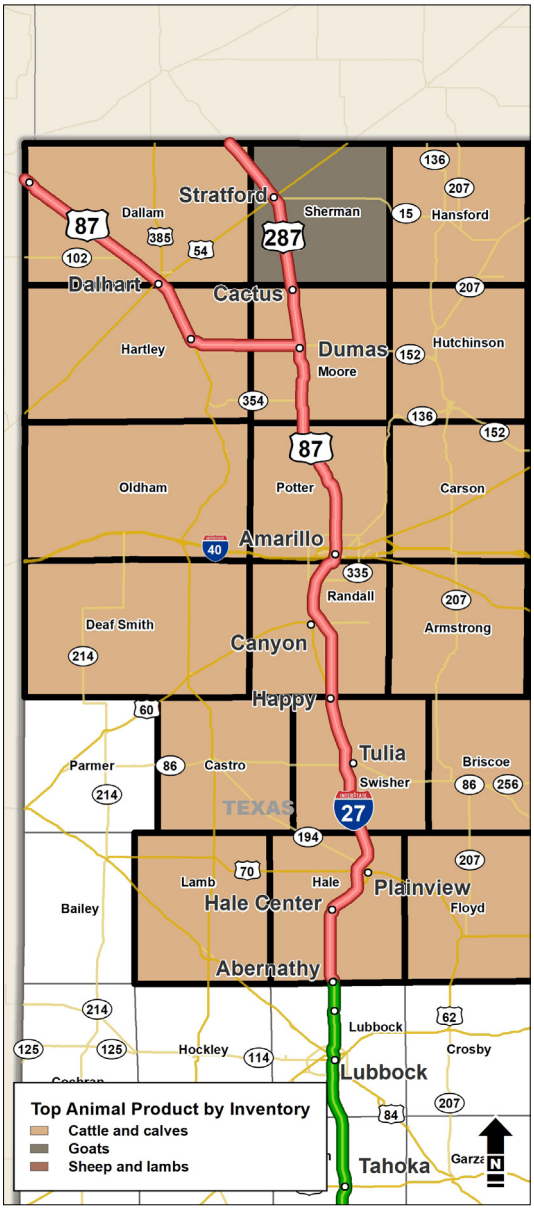


Figure 2.16: Segment #1
Top Animal Production, 2017
Source: USDA Census of Agriculture, 2017

2.4 Roadways and Bridges

The Segment #1 Committee reviewed data on pavement and bridge conditions from TxDOT's Pavement Management System (TxDOT PMIS) and TxDOT's Roadway Inventory Database (TxDOT RID). The pavement in Segment #1 is in generally the same condition as the rest of the corridor, with over 92 percent in good or very good condition, and less than 3 percent in poor or very poor condition. The poor and very poor sections are typically located near cities and towns, as well as stretches north of Dalhart, and between Lubbock and Amarillo. The pavement conditions for Segment #1 are shown on **Figure 2.17**.

There is a total of 143 bridges in Segment #1 out of 537 bridges for the entire corridor. Approximately 89 percent of the bridges in Segment #1 are in good condition and less than 1 percent are in poor condition. The bridge sufficiency ratings for Segment #1 are shown on **Figure 2.18**.

Of the 143 bridges in Segment #1, 89 have a vertical bridge clearance. TxDOT's recently updated the standard for bridge vertical clearance on freight corridors to 18' 6". Approximately 50 of the bridges in Segment #1 meet the previous standard of 16' 6" clearance, with 10 bridges exceeding the new 18' 6" clearance. Ten bridges with low clearances under 15 feet are north of Lubbock and near downtown Amarillo. The bridge clearances for Segment #1 are shown on **Figure 2.19**.

Figure 2.17: Segment #1 Pavement Conditions
Source: TxDOT RID, 2019

Figure 2.18: Segment #1 Bridge Conditions
Source: TxDOT RID, 2019

Figure 2.19: Segment #1 Bridge Clearances
Source: TxDOT RID, 2019

2.5 Traffic Conditions

The Segment #1 Committee reviewed traffic data from the TxDOT RID. Traffic volumes in the Ports-to-Plains Corridor and in Segment #1 vary considerably, as shown in **Figures 2.20 and 2.21**. Segment #1 has higher volumes (between 15,000 and 55,000 vehicles per day) along I-27 between Lubbock and Amarillo. US 87 and US 287 north of Amarillo carry less traffic, typically less than 9,000 vehicles per day. However, interstates can handle much larger volumes of traffic and still provide an adequate level of service. Level of Service (LOS) refers to the magnitude of congestion and delay, and is rated from A to F, with A being the best. For example, urban segments of I-27 near Amarillo operate at LOS A, indicating near free-flow conditions. The rural segments of US 87, US 287 and I-27 are also all at LOS A. Urban street segments in or around corridor cities operate at LOS B or C including segments of US 87 in Texline, Dalhart, Dumas and the downtown one-way street pairs in Amarillo, and segments of US 287 in Stratford and Dumas operate at LOS B and C.

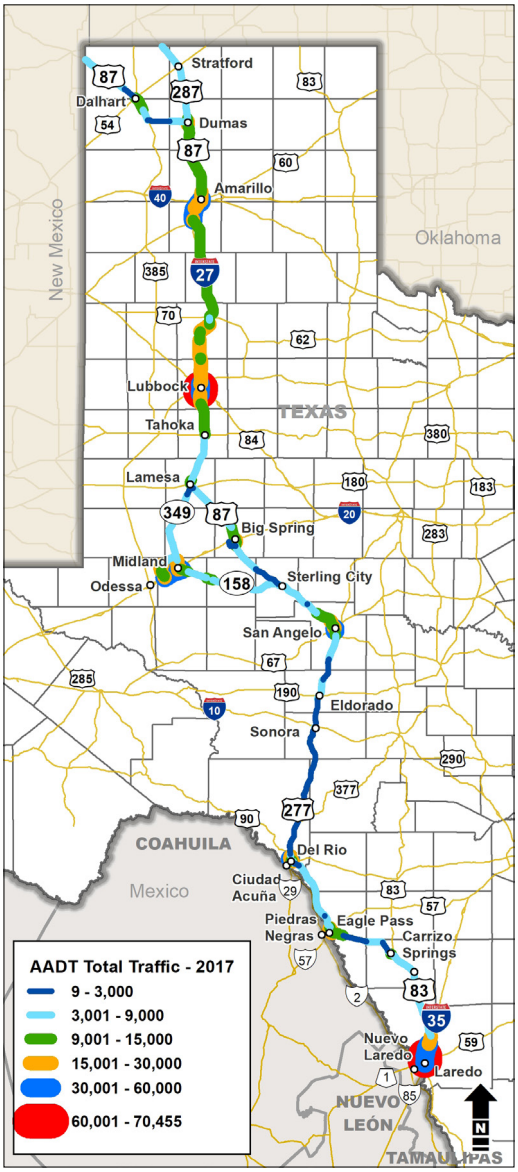


Figure 2.20: Corridor Average Daily Traffic Volumes
Source: TxDOT RID, 2017

Figure 2.21: Segment #1 Average Daily Traffic Volumes
Source: TxDOT RID, 2017

2.6 Truck Traffic and Freight Flow Conditions

The Segment #1 Committee reviewed data on truck traffic and freight flow conditions. Truck volumes are generally higher in Segment #1 than in other parts of the corridor. Truck traffic is particularly high in Moore, Potter, and Randall Counties. Truck traffic relative to overall AADT is generally between 5,000 to 9,000 trucks per day.

Truck traffic relative to overall AADT is notably high in Sherman County through Stratford to the Texas-Oklahoma state line where the truck percentage is over 50 percent. **Figures 2.22 and 2.23** show truck volumes, and **Figures 2.24 and 2.25** show truck percentages.

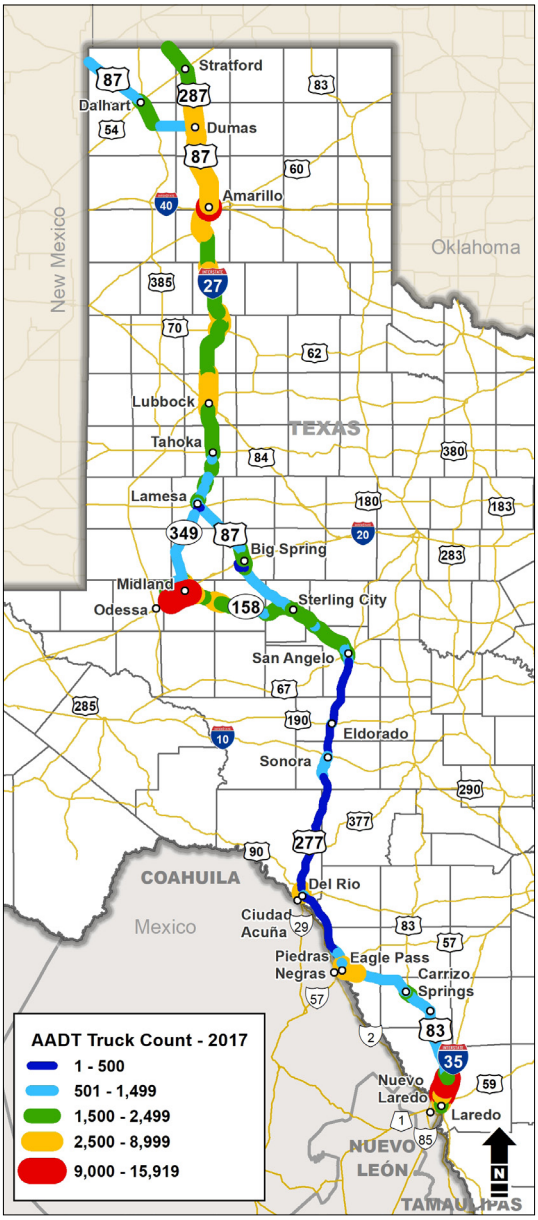


Figure 2.22: Corridor Truck Volumes
Source: TxDOT RID, 2017

Figure 2.23: Segment #1 Truck Volumes
Source: TxDOT RID, 2017

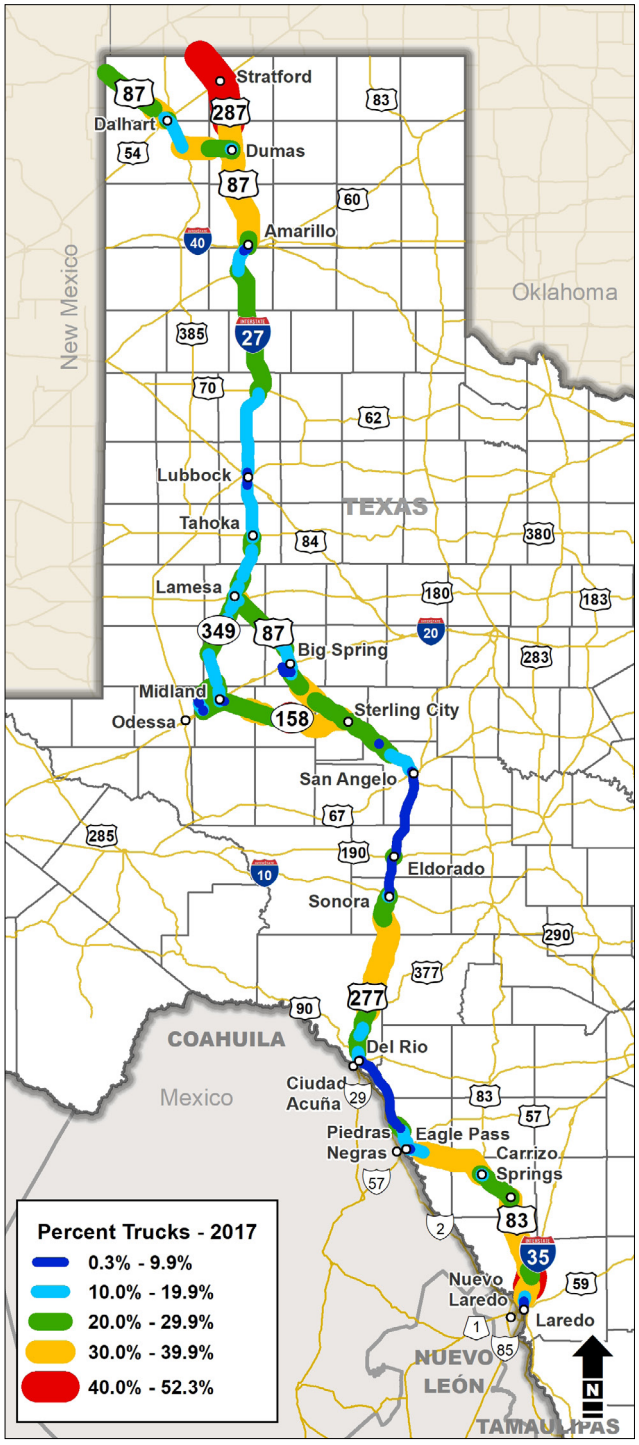


Figure 2.24: Corridor Truck Percentages
Source: TxDOT RID, 2017

Figure 2.25: Segment #1 Truck Percentages
Source: TxDOT RID, 2017

In terms of freight flow, food and agriculture and minerals and mineral products are the largest outbound commodity categories shipped from Segment #1. Food and agriculture are most frequently the top outbound commodity category, particularly for counties in rural areas, indicating high levels of agricultural production. Minerals and mineral products and energy products are the top outbound commodities for counties such as Potter, Oldham, Hutchinson, and Swisher. Within Segment #2, minerals and mineral products make up the majority of inbound commodities, which includes metals, chemicals, and fertilizers, followed by food and agriculture. Minerals and mineral products and food and agricultural products are in most cases the top commodities flowing within the segment, as shown in **Figures 2.26 and 2.27**.

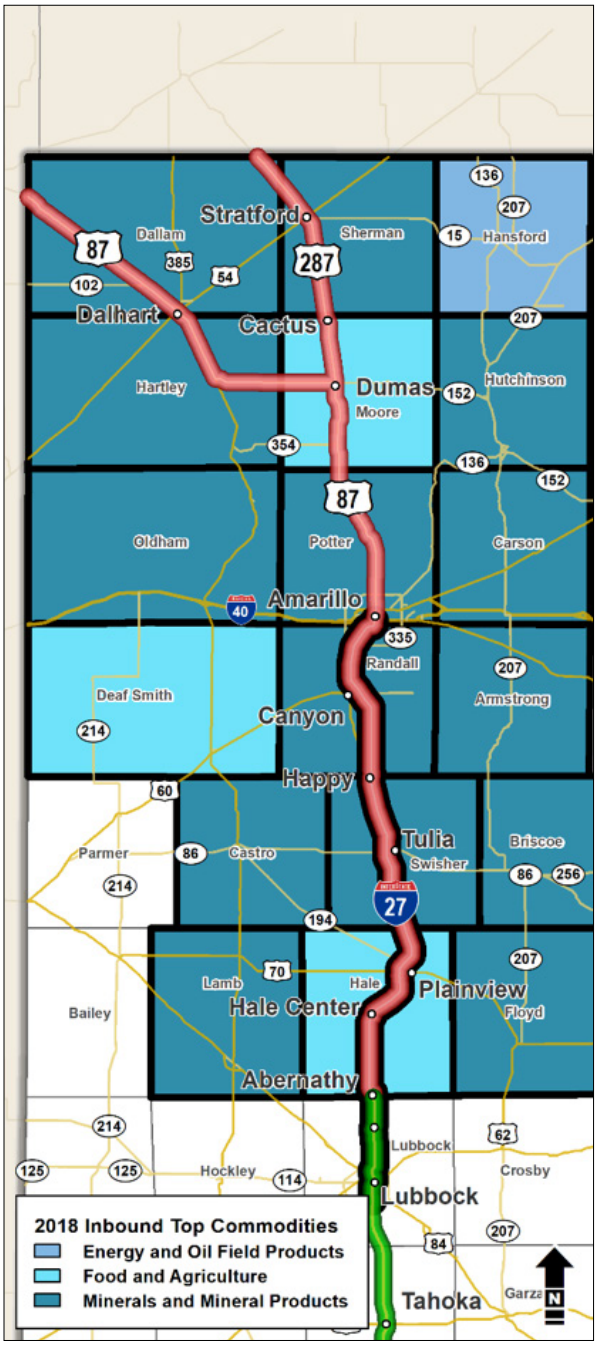


Figure 2.26: Segment #1 Inbound Freight Commodities
Source: TxDOT SAM and Transearch

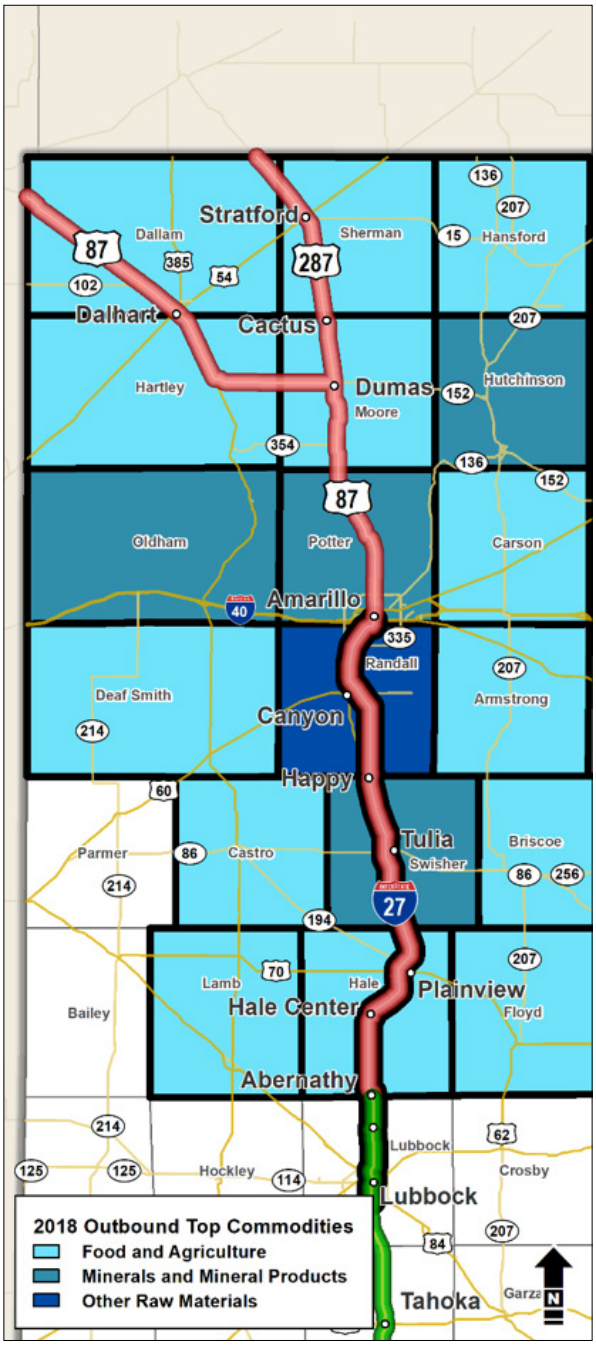


Figure 2.27: Segment #1 Outbound Freight Commodities
Source: TxDOT SAM and Transearch

Figures 2.28 thru 2.30 show outbound truck trips, originating in Laredo, Eagle Pass and Del Rio respectively, tracked for a 7-day period as compiled by the American Transportation Research Institute (ATRI). These figures illustrate the magnitude of truck traffic flowing from the International Ports along the corridor with thicker red lines indicated the heaviest flows. As shown in **Figure 2.28**, The strongest outbound truck demand from Laredo is along the I-35 corridor to the Dallas Fort Worth metropoloitan area with other strong flows throughout Texas using other interstates, us highways, and Texas state routes. The truck flows from Laredo reach all regions of the United States and into Canada. **Figures 2.29 and 2.30** show more moderate truck flows from the International Ports at Eagle Pass and Del Rio. Though truck trips from these communities do extend across the United States, the heavier flows are focused more in west and south Texas. Both Eagle Pass and Del Rio ports lack interstate connectivity, which limits demand.

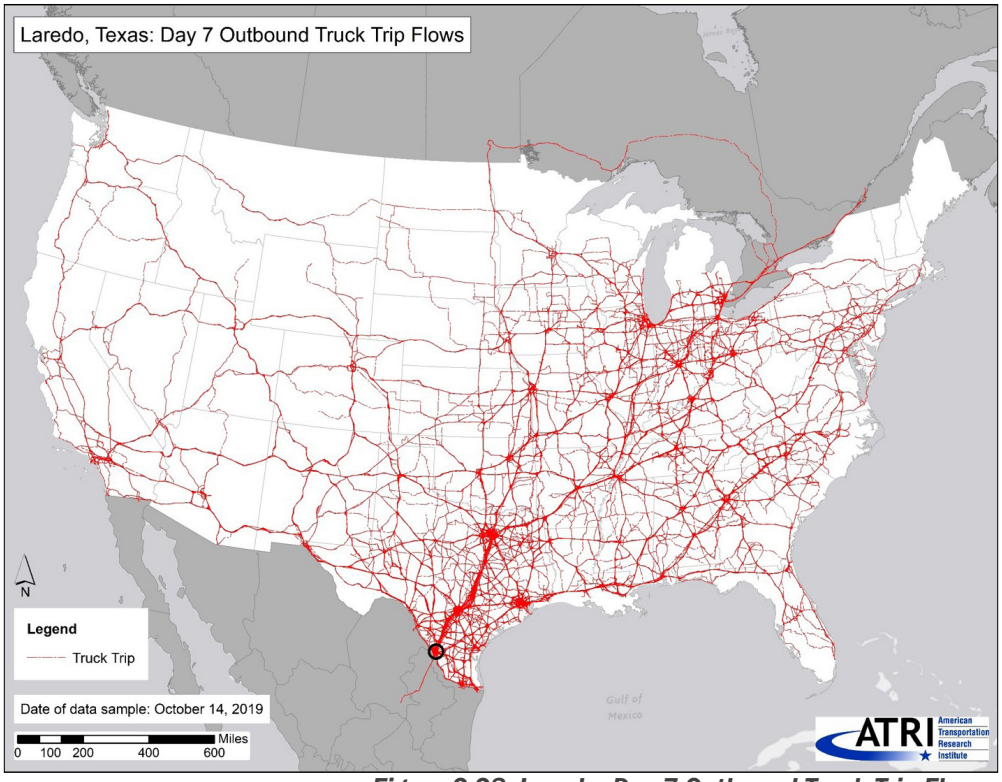


Figure 2.28: Laredo: Day 7 Outbound Truck Trip Flows
Source: ATRI, 2019

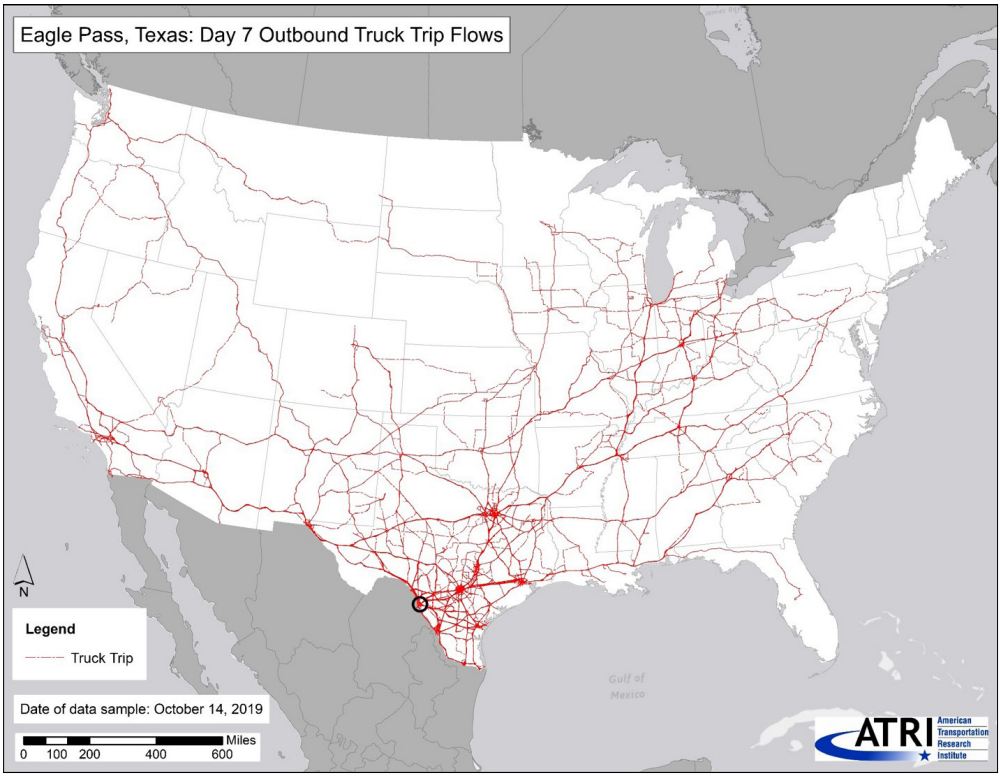


Figure 2.29: Eagle Pass: Day 7 Outbound Truck Trip Flows
Source: ATRI, 2019

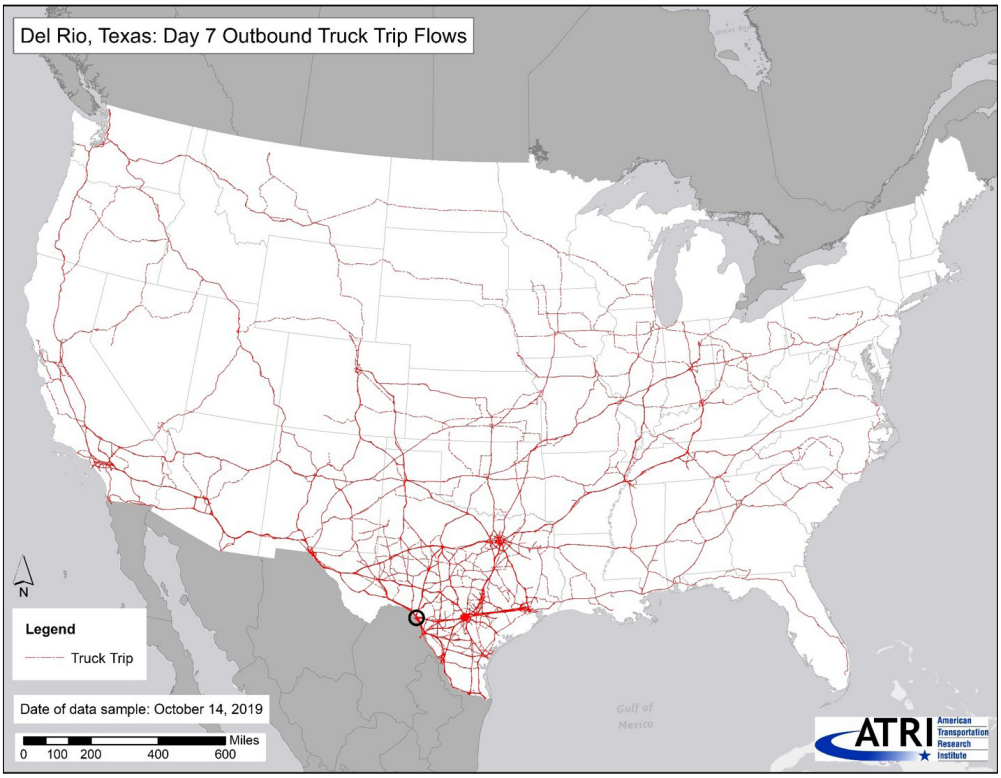


Figure 2.30: Del Rio: Day 7 Outbound Truck Trip Flows
Source: ATRI, 2019

2.7 Safety Conditions

The Segment #1 Committee reviewed crash data from TxDOT's Crash Records Information Systems (CRIS) database for a five-year period from 2014 to 2018[13].

2.7.1 Total Crashes between 2014 and 2018

- During the same period, 5,716 total crashes, or 33 percent of the total corridor crashes occurred in Segment #1. **Figure 2.31** shows total crash rates in Segment #1.
- The highest crash rate within Segment #1 occurred through downtown Amarillo, with a rate of 908 per 100 million vehicle miles traveled (MVMT), which is 4 times the statewide average for the route. I-27 terminates in a system-to-system interchange with I-40 and the corridor transitions into two sets of one-way streets through the central business district.
- Overall, Segment #1 experienced an average of 109 crashes per 100 MVMT, which is the lowest crash rate in the corridor. The rate in Segment #2 is 111 per 100 MVMT and the rate in Segment #3 is 133 per 100 MVMT.

From 2014 to 2018, 61 fatal crashes occurred in Segment #1, resulting in 71 fatalities, or 29 percent of the total corridor fatal crashes.

- The fatal crash rate in Segment #1 is the lowest in the corridor, at 1.0 per million MVMT. This compares to 1.62 in Segment #2, 1.15 in Segment #3, and 1.31 corridor wide.

The statewide fatality rate in Texas is 1.36 per MVMT, and nationwide the fatality rate is 1.17 (2017)[14]. A higher concentration of fatal crashes occurred near Amarillo, north of Dumas, and near the Lubbock county line, as shown in **Figure 2.32**.

There were no fatal crashes near Stratford. Within Amarillo city limits, 11 fatal crashes occurred over the five-year study period.

2.7.2 Total Truck Crashes between 2014 and 2018

- Between 2014 and 2018, there were 829 truck-related crashes representing 15 percent of total crashes in Segment #1, as shown in **Figure 2.33**.
- Higher truck crash rates were experienced in Cactus (97 crashes per 100 MVMT), Dumas (85 crashes per 100 MVMT), Dalhart (84 crashes per 100 MVMT), and central Amarillo (74 crashes per 100 MVMT). The higher rates in Cactus, in Sherman County, can be partially accredited to a high number of pedestrians crossing the existing 4-lane highway due to shift changes at a local meat processing facility.
- Similar to the total crashes within this segment, rural areas of I-27 experience low truck crash rates. The total truck crash rate in Segment #1 is 59 per 100 MVMT, compared to a rate of 88 in Segment #2, 81 in Segment #3, and 76 for the corridor[15]. Despite having the highest truck volumes, Segment #1 has the lowest truck crash rates.

[13] A 200-foot buffer was used to capture all crashes along and near the proposed corridor – including frontage roads, ramps, and intersections.

[14] All fatal crash rates expressed as per 100 million vehicle miles traveled. Source: Texas Motor Vehicle Traffic Crash Facts Calendar Year 2018, and USDOT National Highway Traffic Safety Administration Traffic Safety Facts Research Note DOT HS 812 826: 2018 Fatal Motor Vehicles Crashes: Overview.

[15] All truck crash rates expressed as per 100 million truck miles traveled.

Figure 2.31: Segment #1 Total Crashes
Source: TxDOT CRIS

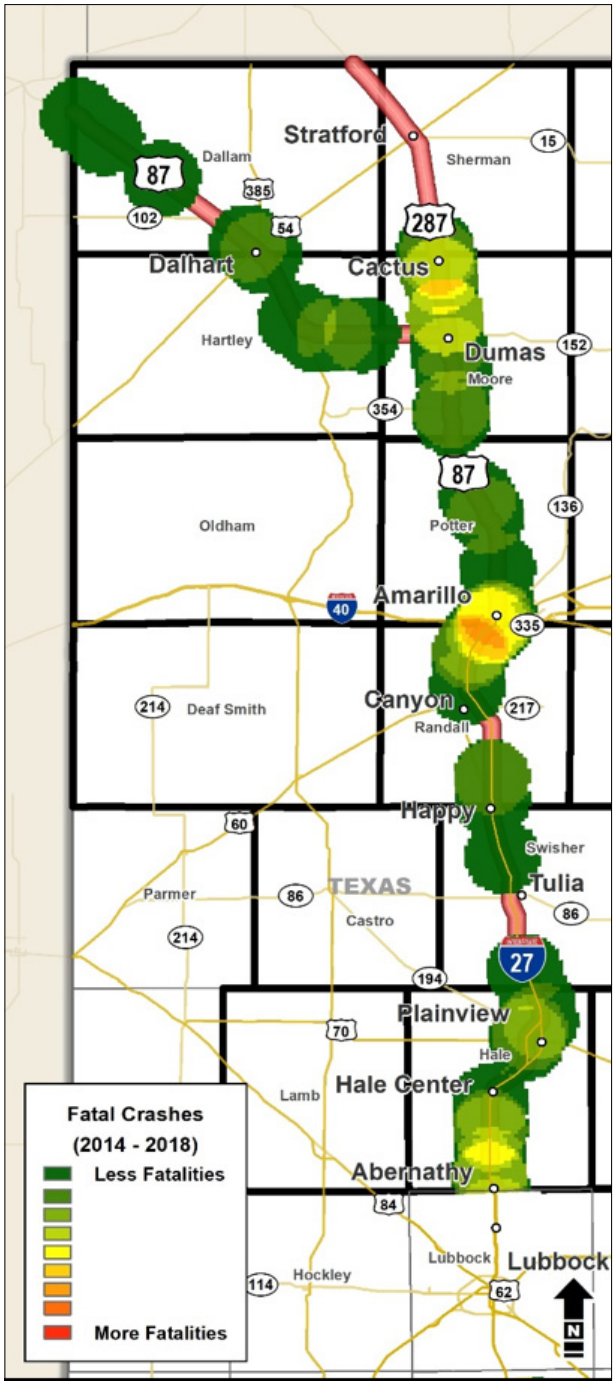


Figure 2.32: Segment #1 Fatal Crashes
Source: TxDOT CRIS

Figure 2.33: Segment #1 Truck Crashes
Source: TxDOT CRIS

CHAPTER 3

Forecasted Conditions

3.0 Forecasted Conditions

Forecasted corridor conditions including population characteristics, economic conditions (median incomes, employment, and gross domestic product), future land use, freight, agriculture, and energy production were analyzed for the future 2050 baseline, which included current TxDOT and Metropolitan Planning Organization (MPO) planned and programmed roadway projects. Forecasted 2050 traffic conditions were analyzed for the baseline and an interstate upgrade, which assumed the Ports-to-Plains Corridor would be fully upgraded to an interstate facility. Gaps where the existing roadway is not an interstate or where there are no planned projects that will upgrade the existing roadway to an interstate were also reviewed for Segment #1 to determine segment needs.

The Segment #1 Committee reviewed current and forecasted conditions for the Ports-to-Plains Corridor to determine future needs and challenges of the corridor between 2020 and 2050. The data is representative of the baseline and does not consider any changes that would be brought forward by an interstate upgrade.

3.1 2020 to 2050 Forecasted Population

The Segment #1 Committee reviewed baseline data from the Texas Demographic Center's (TDC) 2018 Forecasted Data for the 8 counties the corridor passes through and an additional 21 counties surrounding Segment #1 of the Ports-to-Plains Corridor.[16]

Figure 3.1 and **Table 3.1** show the future population data. The data shown in the table is reflective of the baseline condition from the TDC demographic-based projection and does not consider any impacts from the interstate upgrade.

- The total population in the Ports-to-Plains Corridor will increase by 61 percent from 1,996,680 to 3,207,968.
- The Segment #1 population is projected to grow by 21 percent from 499,624 in 2020 to 602,827 in 2050.
- Segment #1 will have a projected total population growth rate greater than Segment #3 (11 percent), but less than Segment #2 (101 percent) and corridor-wide (61 percent).

[16] The Segment #1 Committee decided to use 29 counties for the forcasted data collection and analysis to fully capture the area the corridor influences.

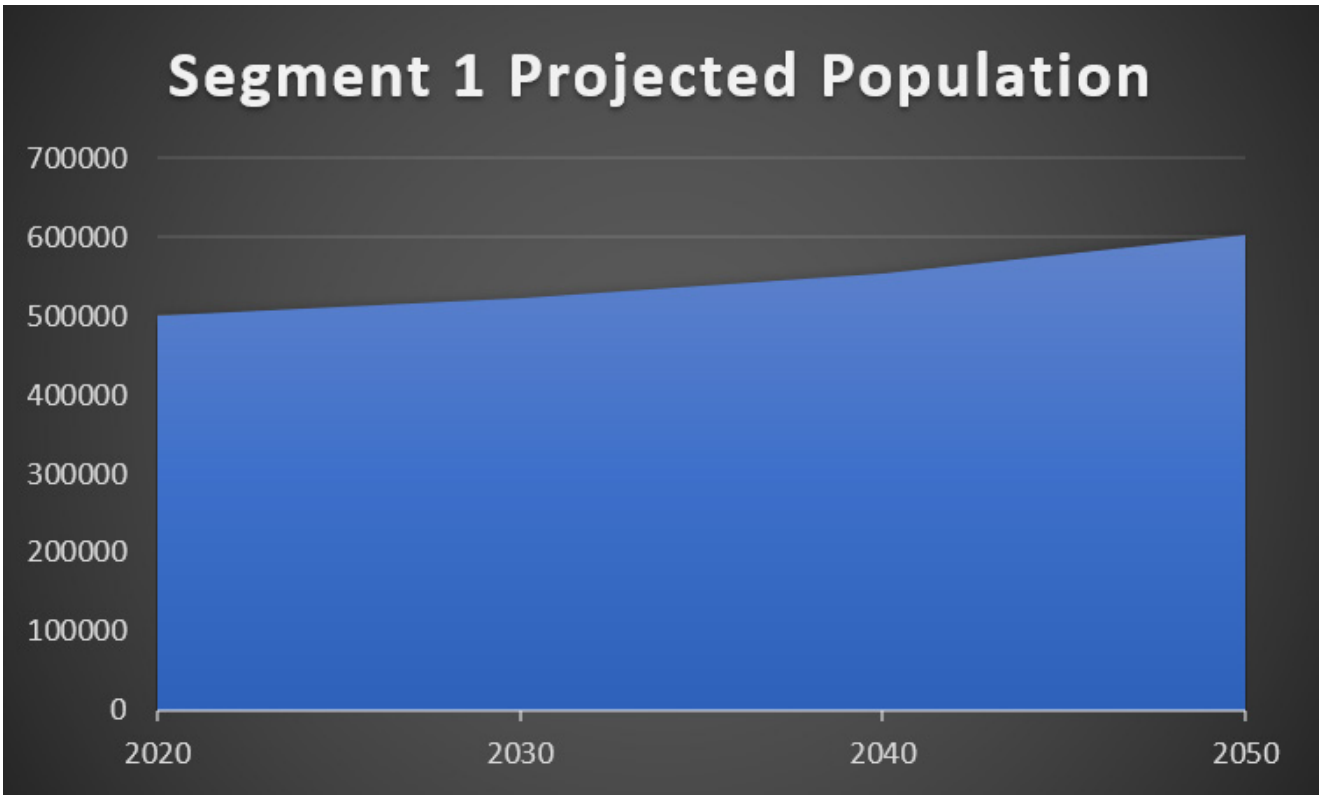


Figure 3.1: Segment #1 Projected Population for 2020 to 2050
Source: Texas Demographic Center, 2018 Projections

Table 3.1: Projected Population in the Corridor and Segment #1

	2020	2030	2040	2050
Segment #1 Projected Population	499,624	523,454	554,605	602,827
Corridor Projected Population	1,996,680	2,306,217	2,695,464	3,207,968

Source: USCB 1990, 2000, 2010, ACS 2017, Texas Demographic Center

Figures 3.2 and **3.3** show the projected population for 2020 and 2050 by county for comparison purposes.

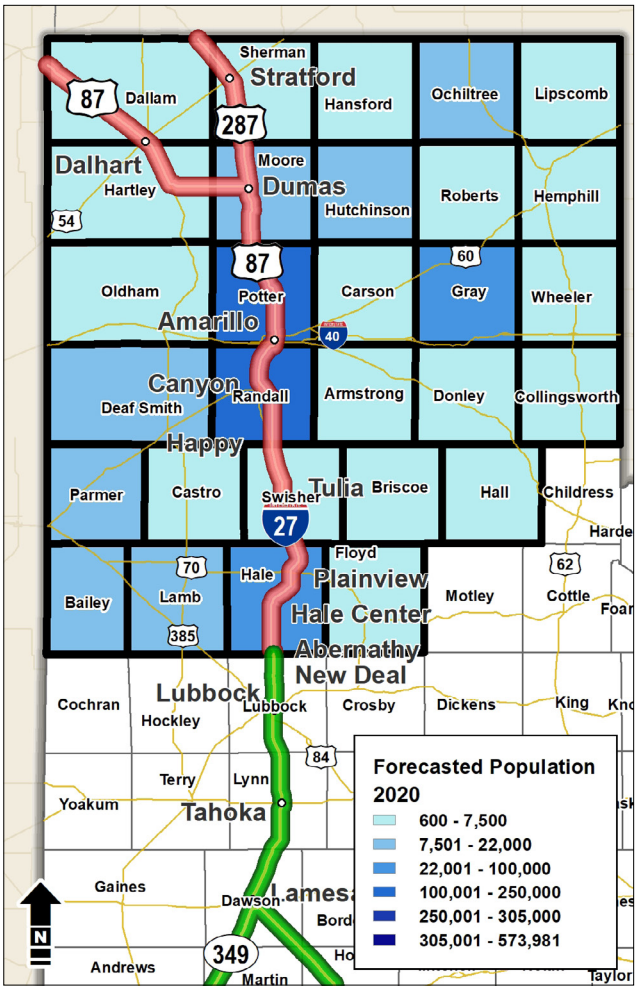


Figure 3.2: Segment #1 Projected Population for 2020
Source: Texas Demographic Center 2018 Forecast

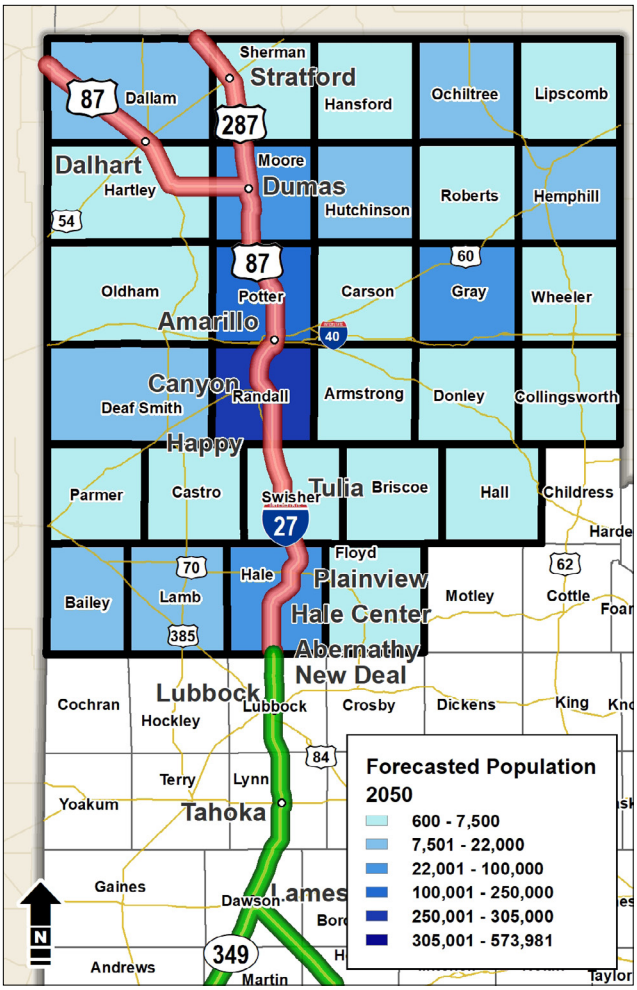


Figure 3.3: Segment #1 Projected Population for 2050
Source: Texas Demographic Center 2018 Forecast

3.2 Forecasted Economic Conditions

3.2.1 2020 to 2050 Forecasted Median Household Income

Figure 3.4 and **Table 3.2** show the future median household income baseline data across the thirty years between 2020 and 2050 for the overall corridor and Segment #1[17] and does not consider any impacts from the interstate upgrade.

- The total forecasted median household income in the Ports-to-Plains Corridor will rise 161 percent from $50,460 to $131,467.
- The Segment #1 forecasted median household incomes are projected to increase by 186 percent from $53,650 in 2020 to $153,632 in 2050.
- The Segment #1 projected percent growth in median household income at 186 percent is greater than Segment #2 at 137 percent and Segment #3 at 116 percent.

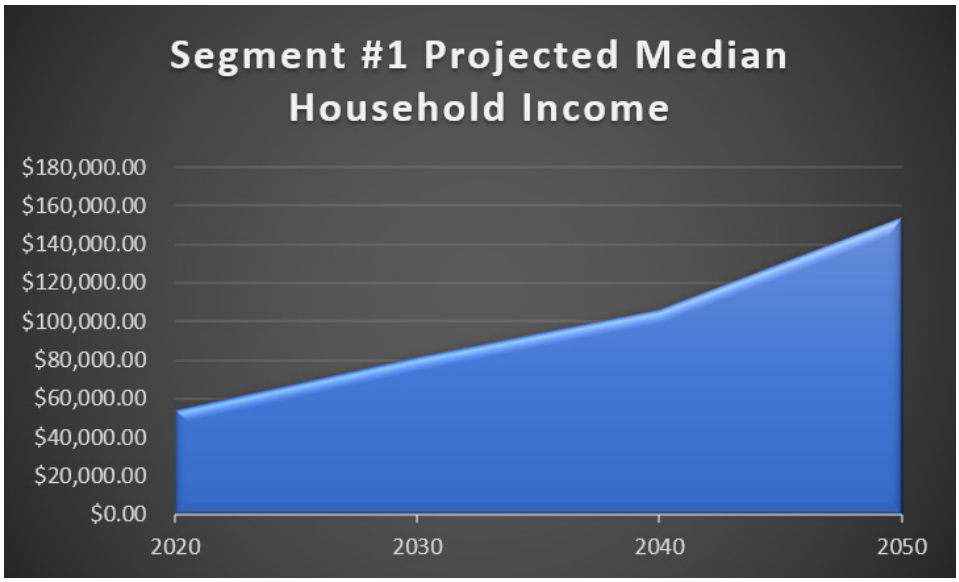


Figure 3.4: Segment #1 Projected Median Household Income for 2020 to 2050
Source: Moody's Analytics County Forecast, accessed January 2020

Table 3.2: Projected Median Household Income in the Corridor and Segment #1

	2020	2030	2040	2050
Segment #1 Projected Median Income	$53,650	$81,297	$105,693	$153,632
Corridor Projected Median Income	$50,460	$72,320	$99,419	$131,467

Source: Moody's Analytics County Forecast, accessed January 2020.

[17] Economic conditions data uses the Moody's Analytics Economic Forecast tool used commonly on large statewide studies. The Moody's data set showed lower projected population growth than the population forecast data source used in this chapter, the demographics-only based Texas Demographic Center (TDC). This resulted in disparities between projected population and projected economic factors such as employment. Other factors – such as growth in non-working age groups as well as increased automation could also help explain the differences between the datasets.

3.2.2 2020 to 2050 Forecasted Employment

Figure 3.5 and **Table 3.3** show the future employment baseline data across the thirty years between 2020 and 2050 for the overall corridor and Segment #1 and does not consider any impacts from the interstate upgrade.

- The total forecasted employment in the Ports-to-Plains Corridor will increase 17 percent from 894,768 to 1,044,139.
- The Segment #1 forecasted employment is projected to increase by 8 percent from 224,060 in 2020 to 241,547 in 2050.
- Segment #1 employment is projected to grow at a lower rate than Segment #2 at 22 percent and Segment #3 at 15 percent.

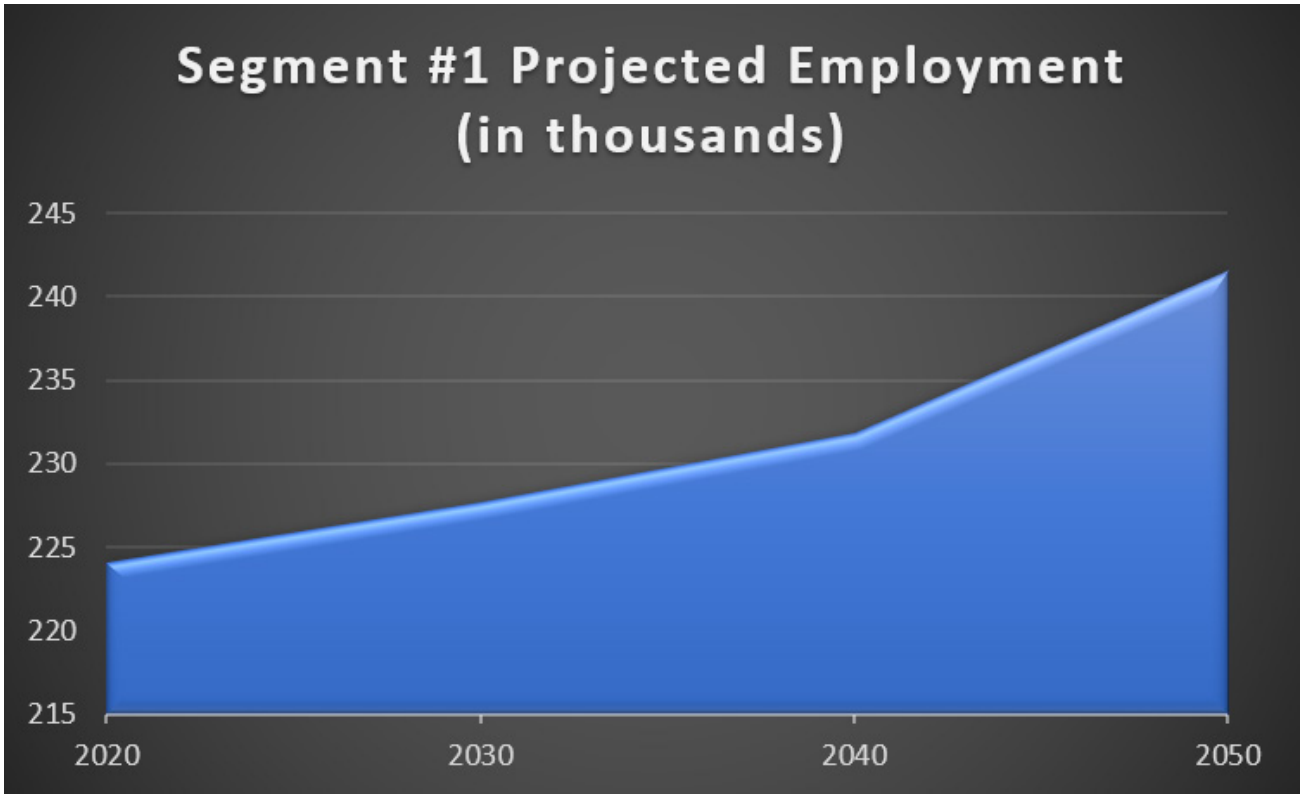


Figure 3.5: Segment #1 Projected Employment for 2020 to 2050
Source: Moody's Analytics County Forecast, accessed January 2020

Table 3.3: Projected Employment in the Corridor and Segment #1

	2020	2030	2040	2050
Segment #1 Projected Employment	224,060	227,668	231,842	241,547
Corridor Projected Employment	894,768	935,678	979,766	1,044,139

Source: Moody's Analytics County Forecast, accessed January 2020.

Figures 3.6 and 3.7 show the projected employment for 2020 and 2050 by county for comparison purposes.

Figures 3.8 and 3.9 show the projected top employment industries by county in Segment #1 for 2020 and 2050, respectively, which like most of the Ports-to-Plains Corridor, is dominated by government and trade, transportation and utilities.

Figure 3.6: Segment #1 Projected Employment for 2020
Source: Moody's Analytics County Forecast

Figure 3.7: Segment #1 Projected Employment for 2050
Source: Moody's Analytics County Forecast

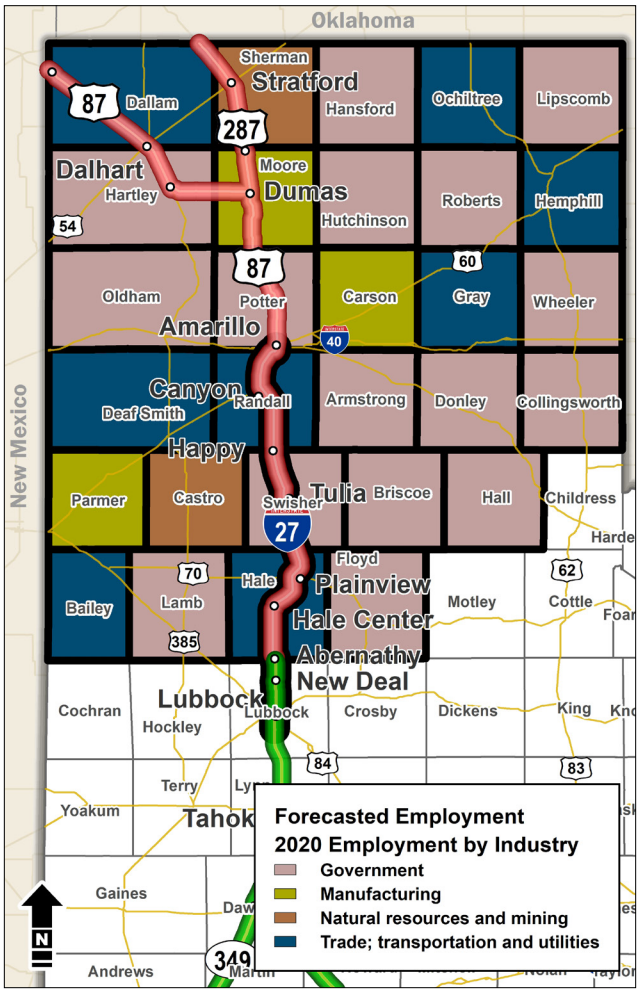


Figure 3.8: Segment #1 Projected Employment by Industry for 2020

Source: Moody's Analytics County Forecast

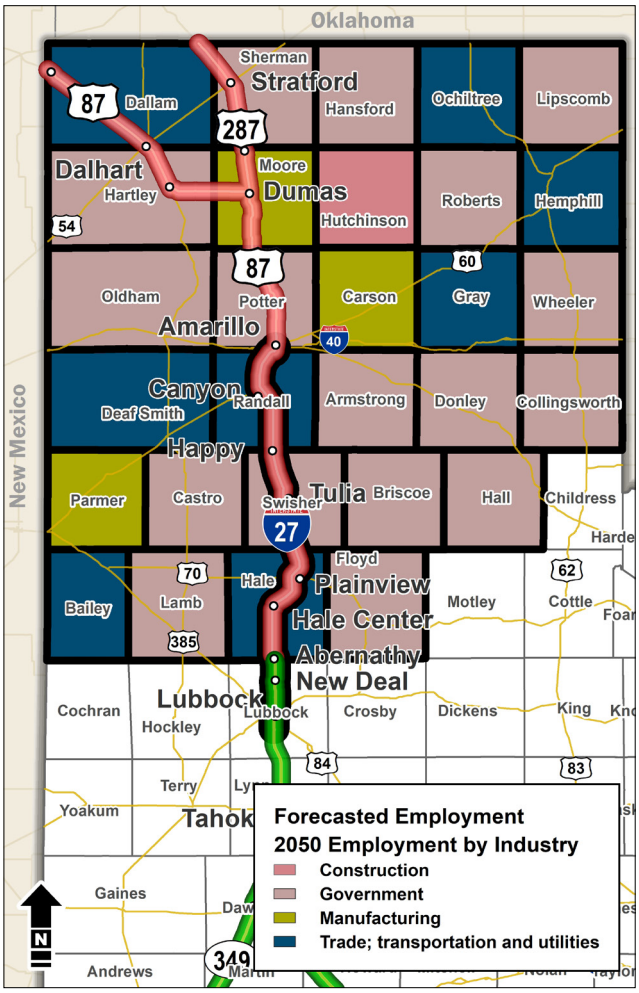


Figure 3.9: Segment #1Projected Employment by Industry for 2050

Source: Moody's Analytics County Forecast

- In 2020, the natural resources and mining industry is among the top projected employment industries for Segment #1; however, no counties will feature this trade as a projected top employment industry in 2050.
- The construction industry is one of the top projected employment industries for Segment #1 in 2050.
- Government, trade, transportation and utilities and manufacturing remain among the top projected employment industries from 2020 to 2050 for Segment #1.
- Segment #1 is the only segment that has manufacturing (food, leather and petroleum products) and construction in the top five projected employment industries.

3.2.3 2020 to 2050 Forecasted Gross Domestic Product (GDP)

Figure 3.10 and **Table 3.4** show the forecasted gross domestic product (GDP) baseline between 2020 and 2050 for the overall corridor and Segment #1[18] and does not consider any impacts from the interstate upgrade.

- The total forecasted GDP in the Ports-to-Plains Corridor will rise 69 percent from $155,377 million to $263,243 million.
- The Segment #1 forecasted GDP are projected to increase by 47 percent from $36,609 million in 2020 to $53,904 million in 2050.
- Segment #1 GDP is projected to grow at a lower rate than Segment #2 at 76 percent and Segment #3 at 80 percent.

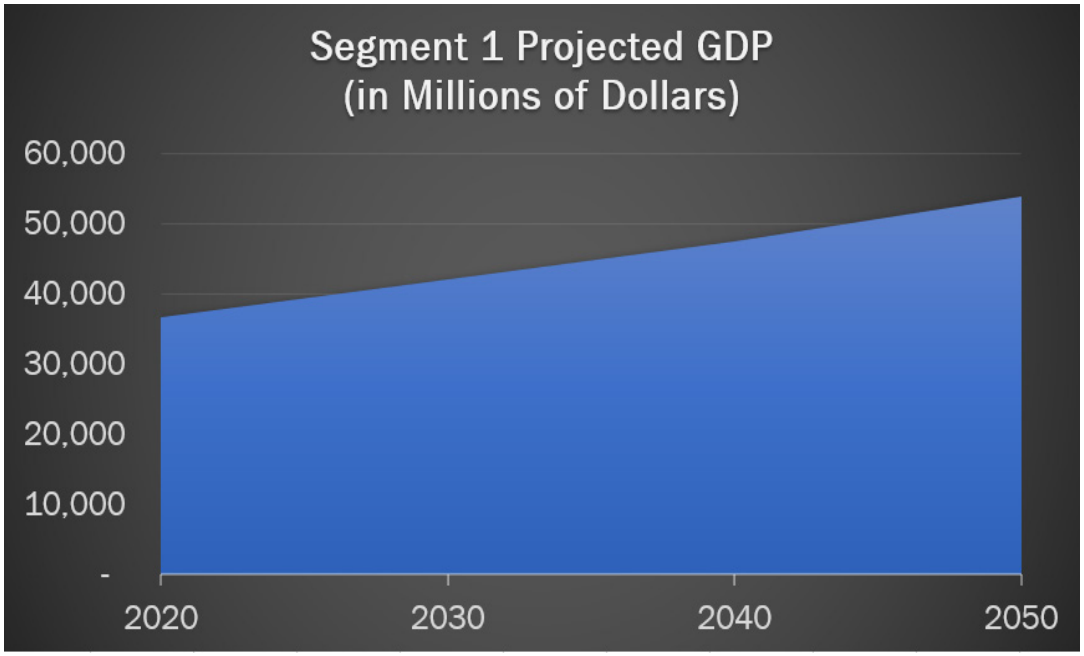


Figure 3.10: 2020 to 2050 Projected GDP for Segment #1
Source: Moody's Analytics County Forecast, accessed January 2020

Table 3.4: Projected GDP in the Corridor and Segment #1

	2020 (in millions)	2030 (in millions)	2040 (in millions)	2050 (in millions)
Segment #1 Projected GDP	$36,609	$42,143	$47,489	$53,904
Corridor Projected GDP	$155,377	$185,214	$220,731	$263,243

Source: Moody's Analytics County Forecast, accessed January 2020.

[18] Economic conditions data uses the Moody's Analytics Economic Forecast tool used commonly on large statewide studies. The Moody's data set showed lower projected population growth than the population forecast data source used in this chapter, the demographics-only based Texas Demographic Center (TDC). This resulted in disparities between projected population and projected economic factors such as employment. Other factors – such as growth in non-working age groups as well as increased automation could also help explain the differences between the datasets.

Figures 3.11 and **3.12** show the projected GDP for 2020 and 2050 by county for comparison purposes.

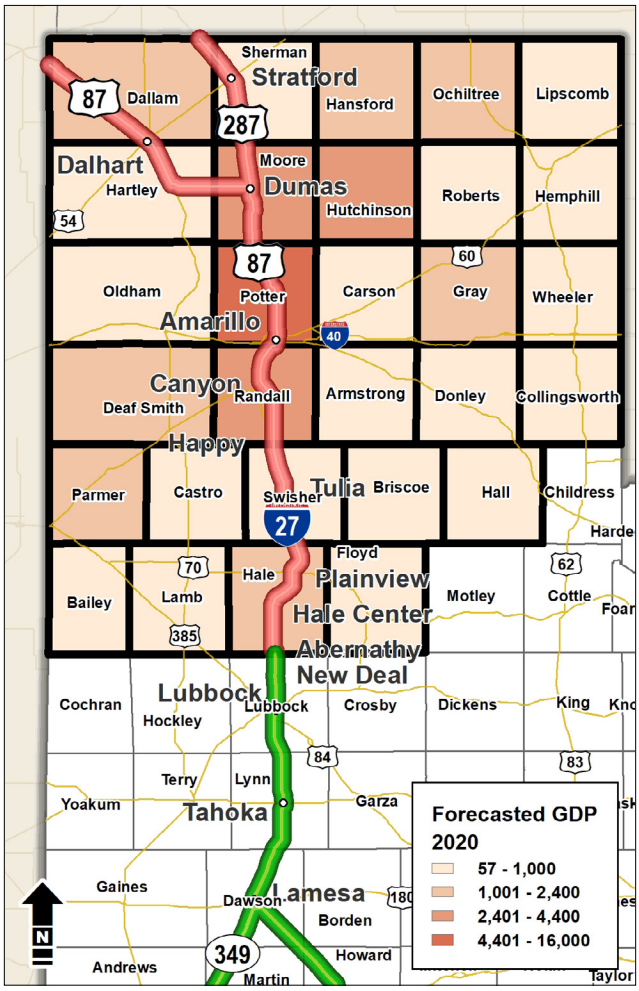


Figure 3.11: Segment #1 Projected GDP for 2020
Source: Moody's Analytics County Forecast

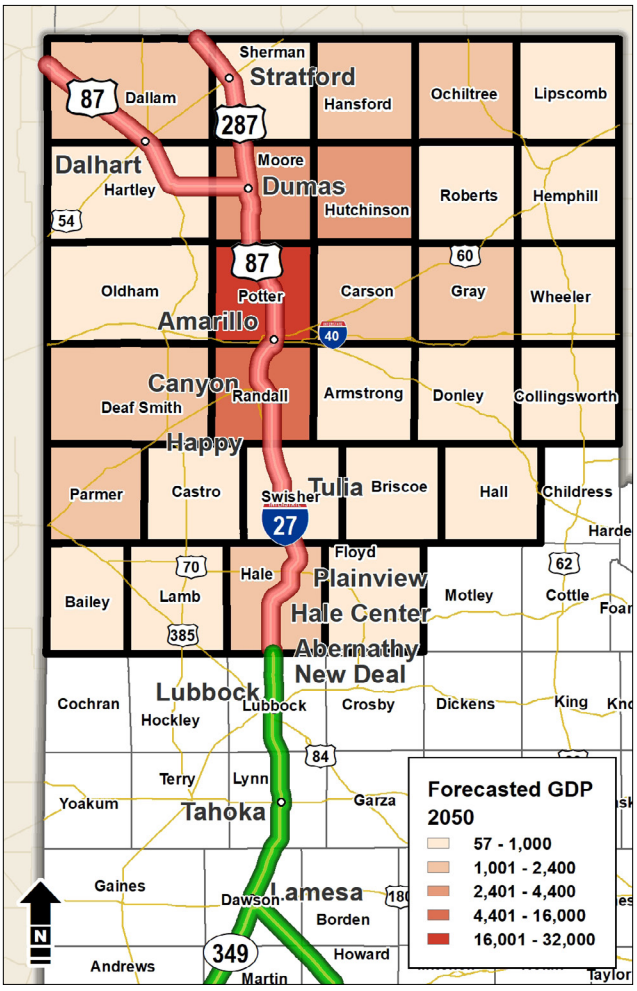


Figure 3.12: Segment #1 Projected GDP for 2050
Source: Moody's Analytics County Forecast

3.3 Forecasted Freight Tonnage

The forecasts presented in this section are based on models that project economic changes on global, national, and regional levels, integrate these forecasts, and then estimate the impact these changes will have on freight movement. These models assess shifts in market activity, the likely level of demand for goods, and volumes of freight needed to move goods from locations of production to areas of demand. Data presented in this section represent the baseline 2050 condition, which assumes a Ports-to-Plains Corridor with only the planned and programmed projects mentioned in Section 3.5 and not the interstate upgrade. The tonnages discussed below are also measured by truck mode and no other freight transport modes, such as rail. As indicated in **Figure 3.13** freight growth is strong generally along I-27 and near the Mexico border.

- Freight volumes in the Ports-to-Plains Corridor area (69 counties) are expected to grow by 78 percent between 2018 and 2050, resulting in 73 million tons of freight added.
- The total volume transported is anticipated to reach 167 million tons with the top locations generating new tonnage consisting of Laredo (Webb County), Midland/Odessa (Midland/Ector counties) and Lubbock (Lubbock County). These three areas represent industrial groups that drive the corridor economy: foreign trade, energy, and agriculture.

In Segment #1, total truck tonnage is projected to grow 59 percent through 2050 and is particularly concentrated along I-27. **Figure 3.14** shows total 2050 freight tonnage in Segment #1.

- Twenty-eight million additional tons of freight are expected to originate or terminate in the segment, accounting for 39 percent of the new tons on the corridor. The total volume of freight to/from Segment #1 reaches 77 million tons in 2050, the highest of the corridor's three segments.
- Potter County emerges with the greatest forecast increment in truck freight at 5.4 million new tons, followed by Moore and Castro counties at 3.1 million and 3.0 million new tons, respectively. These three counties, all on or adjacent to I-27, together account for 41 percent of the total incremental truck tonnage on Segment #1 through 2050.

The United States – Mexico – Canada Agreement (USMCA), which was signed in January 2020 is an indicator of a future level of trade with Mexico. The agreement:

- Provides greater certainty over trade terms making Mexico a more desirable place to do business relative to competing locations abroad.
- Removes uncertainty about cross-border business conditions and frees companies to invest.
- Causes companies to rethink their supply chains to reduce country-specific risks and lower logistics costs.

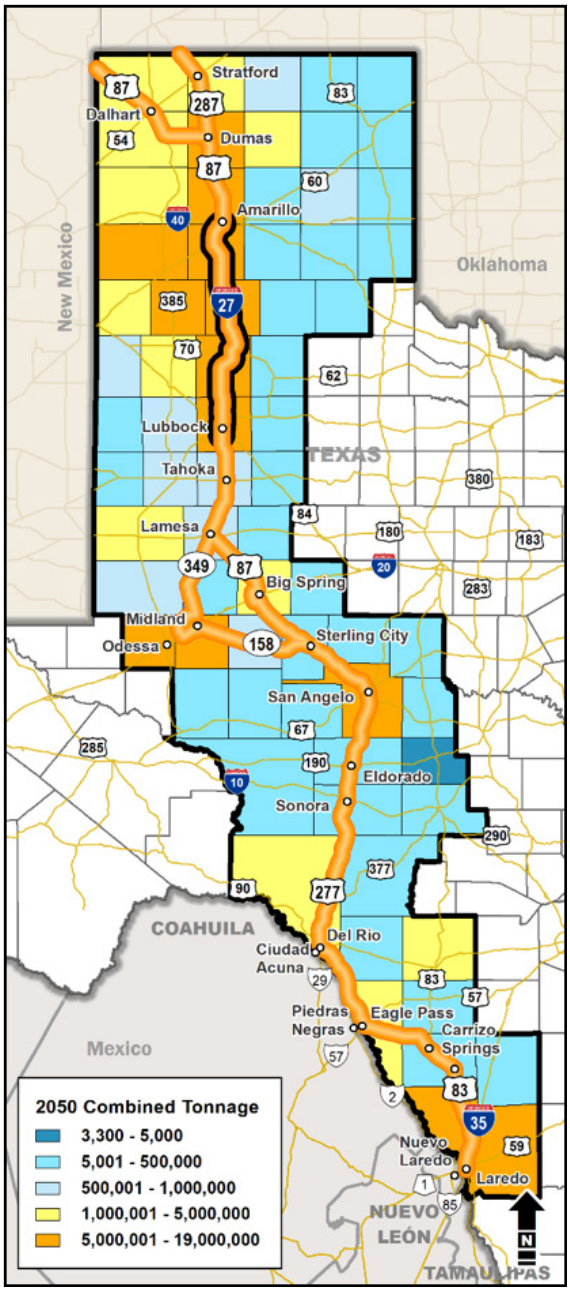


Figure 3.13: Corridor Total 2050

Baseline Freight Tonnage

Source: TxDOT SAM and Transearch

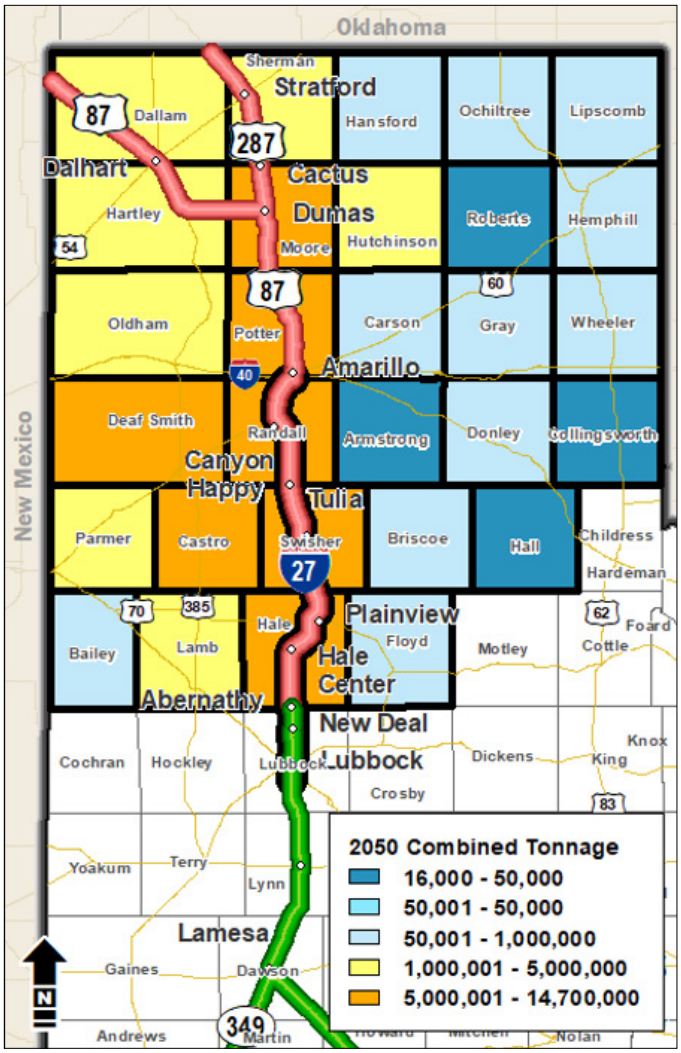


Figure 3.14: Segment #1 Total 2050

Baseline Freight Tonnage

Source: TxDOT SAM and Transearch

3.3.1 Forecasted International Trade

International trade imports and exports projected for 2050 for the baseline without the interstate upgrade are shown in **Figure 3.15** and **Figure 3.16** and include trade to all parts of the world, but they substantially consist of trade with Mexico.

- With an expected 135 percent increase or 1.3 million additional tons between 2018 and 2050, Segment #1 imports are projected to grow faster than exports.
- Half of the increase is in three counties clustered around the population center of Amarillo – Potter, Randall, and Carson counties.
- Export markets are vital to agriculture and exports from Segment #1 are forecasted to grow by 1.7 million tons (88 percent) between 2018 and 2050. Half of this export increase originates from the three top counties: Potter, Hutchinson, and Deaf Smith.

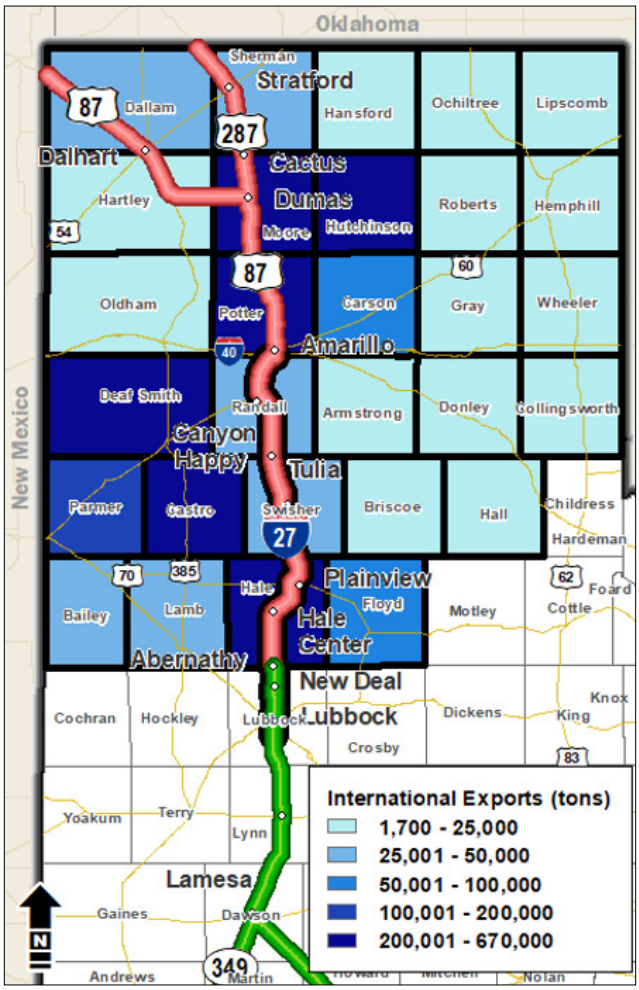


Figure 3.15: Segment #1 Import 2050 Baseline Freight Tonnage
Source: TxDOT SAM and Transearch

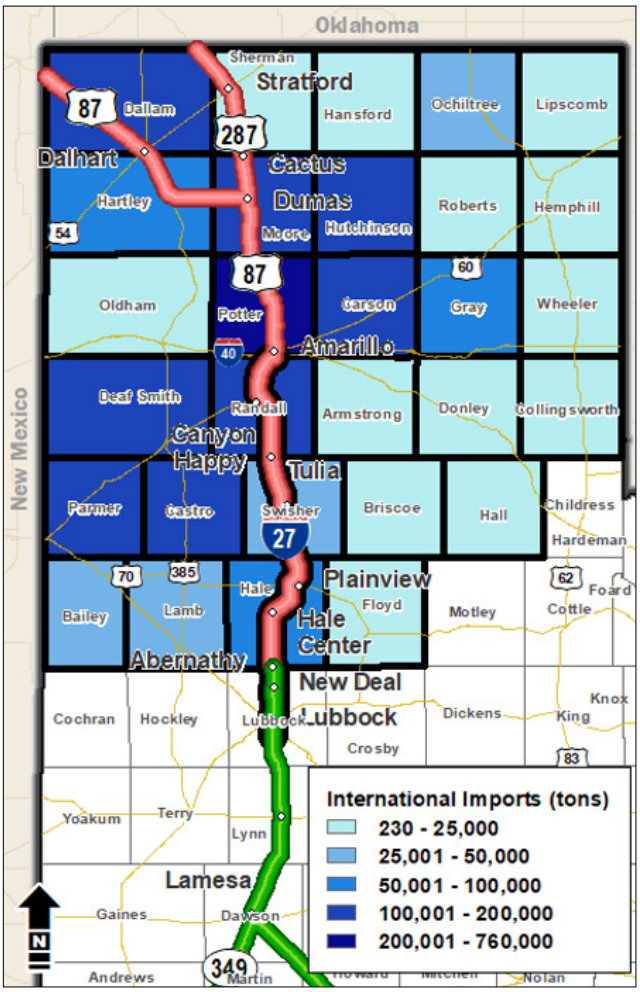


Figure 3.16: Segment #1 Export 2050 Baseline Freight Tonnage
Source: TxDOT SAM and Transearch

3.3.2 Forecasted Agriculture

Figure 3.17 depicts the top agricultural and energy products forecasted for each county for 2050 for the baseline without the interstate upgrade in Segment #1. For food/agricultural, the principal commodity types are grain and oilseeds, livestock and processed meat, and other farm products, which include cotton, forage and raw milk. The forecast showed the greatest growth in livestock and processed meat products in Moore, Potter, and Parmer Counties and the greatest growth in grain and oilseeds in Deaf Smith and Dallam Counties. For energy products, the forecast indicates petroleum will remain the top product. Chemicals (including fertilizers) are important in several Segment #1 counties, and the largest individual county growth projected is an additional half million tons of chemical products in Hutchinson County.

3.3.3 Forecasted Energy

Figure 3.18 depicts the top energy products forecasted for each county for 2050 for the baseline without the interstate upgrade in Segment #1. Though wind is a major energy source in Segment #1, the freight tonnage in wind energy generation equipment is not as great as other goods and the equipment is long lasting. Nevertheless, wind energy generation equipment can be expected to traverse the corridor for many years ahead.

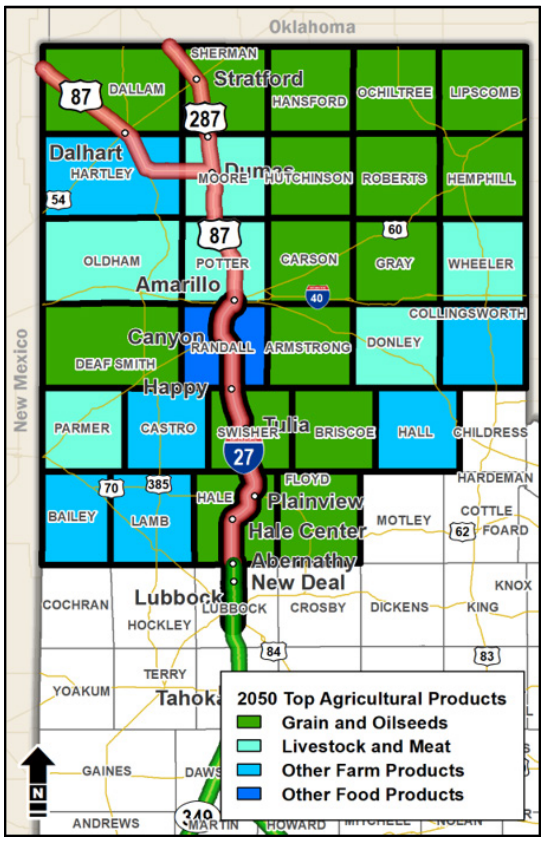


Figure 3.17: Segment #1 2050 Agriculture/Food Products
Source: Transearch Database

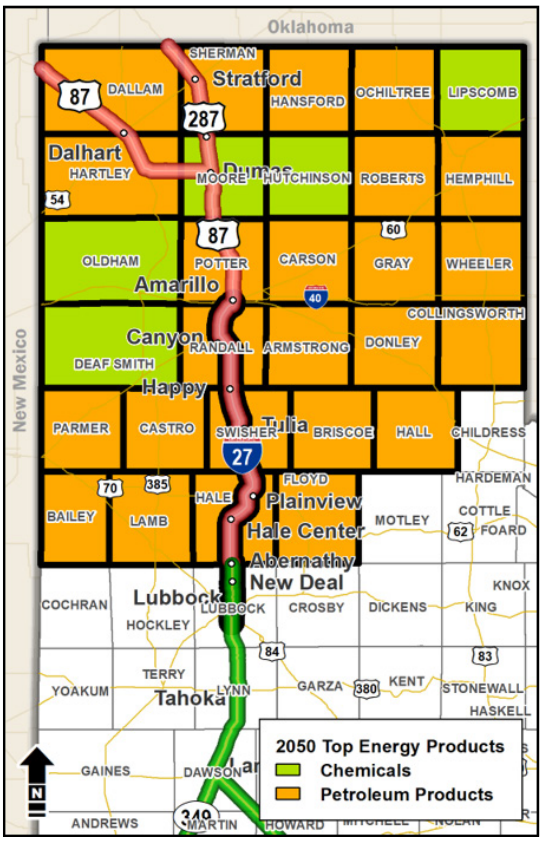


Figure 3.18: Segment #1 2050 Energy Products
Source: Transearch Database

3.4 Future Land Use Potential

Based on aerial imagery, an area of 1,000 feet on each side of the corridor within Segment #1 was assessed for future land use potential. The future land use potential for the corridor within Segment #1 was determined by evaluating existing developed and undeveloped land. Undeveloped land was further evaluated by its potential to be developed.

In Segment #1, 15 percent of the corridor is presently developed by cities and towns. Four percent of this is not developable due to constraints such as floodplains, wetlands, parks, and other sites (historic, cemeteries, and hazardous materials). Eighty-one percent of the corridor has development potential. **Table 3.5** compares the future land use potential of Segment #1 and the entire corridor.

Table 3.5: Future Land Use Potential in the Corridor and Segment #1

	Developable	Developed	Not Developable
Segment #1 Land Use Potential	81%	15%	4%
Corridor Land Use Potential	76%	19%	5%

Source: ESRI aerial imagery, NWI, FEMA, THC and EPA estimated data

3.5 Planned and Programmed Projects

The Segment #1 Committee reviewed planned and programmed projects within Segment #1 of the Ports-to-Plains Corridor. Completion of these planned and programmed projects were included in the baseline. For the purpose of this study, a planned project is a project identified in a TxDOT or MPO planning document. A programmed project is one of these planned projects that is either completely or partially funded. None of the planned and programmed projects upgrade the Corridor to interstate standards. Segment #1 consists of 274 total miles with approximately 103 miles of Interstate 27 (I-27) and another seven miles of non-Interstate, controlled access freeway that are not designed to interstate standards. **Figure 3.19** shows divided and controlled access roadway types in Segment #1.

Figure 3.20 provides an overview of planned and programmed projects in Segment #1. There are four fully funded projects that total 21 miles in Segment #1 that will upgrade the Ports-to-Plains Corridor to a 4-lane divided facility. Those projects have current total funding of $105,604,430. **Table 3.6** lists the limits, timeframe, and funding amount of planned and programmed projects in Segment #1. This list does not include planned/programmed projects that upgrade existing I-27 or projects that connect to the corridor on other routes such as the State Loop 335 westside project around Amarillo that would provide a freeway-class route.

Figure 3.19: Divided and Controlled Access in Segment #1

TxDOT Roadway Inventory supplemented by Google Maps Survey

Figure 3.20: Planned and Programmed Projects in Segment #1

Table 3.6: Planned and Programmed Projects in Segment #1

	Limits	Time Construction will Begin	Funding Amount
2-Lane to 4-lane divided on US-287	From 2 miles north of Purnell Street to Purnell Street in Stratford	Within 4 years	$3,127,540
Super 2 to 4-lane divided on US-87	From Hartley/Moore County line to FM 2589 West of Dumas	Within 4 years	$30,800,000
Super 2 to 4-lane divided on US-87	From east of US-385/US-87 interchange to Hartley/Moore County line	Within 4 years	$66,700,000
Replacement of bridge and approaches on US-87	Southbound lanes at Burlington Northern Santa Fe Railroad in Potter County	Started or begins soon	$4,976,890
Total Amount:			$105,604,430

Source: 2018 NPMRDS

3.5.1 Segment #1 Other Planned and Programmed Projects

There are several other non-widening projects along the corridor that are planned or programmed in Segment #1. In Segment #1, these projects include rehabilitation operations and safety projects. The total planned and programmed project amounts for these projects include approximately:

- $56.5 million for rehabilitation projects,
- $4.5 million for safety projects, and
- $580,000 for operational projects, which may include ramp modifications or traffic signals.

3.6 Gap Analysis

For the purpose of this study, a gap is noted as a location where the existing roadway is not an interstate or where there are no planned or programmed projects that will upgrade the existing roadway to an interstate standard. In Segment #1, existing I-27 accounts for 103 miles of interstate. The remaining 172 miles are considered gaps. **Figure 3.21** shows the gaps located in Segment #1.

3.7 Future Traffic Conditions

This section discusses future traffic conditions on Segment #1 for the baseline condition. It also provides future traffic conditions for the interstate upgrade.

The baseline includes existing roadways and corridor improvement projects that are currently planned and programmed by TxDOT districts and MPOs throughout the corridor as referenced in Section 3.5.

As required by House Bill 1079, the future traffic conditions analysis includes an interstate facility along the Ports-to-Plains Corridor. The interstate upgrade considers upgrading all non-interstate segments of the corridor to an interstate. This would include upgrading 172 miles of the 274 miles in Segment #1 that are not interstate.

Figure 3.21: Gaps Located in Segment #1

3.7.1 Baseline Forecast

Ports-to-Plains Corridor - Total Traffic

The entire Ports-to-Plains Corridor carried an average of 10,600 vehicles per day in 2018. This is projected to increase to 17,700 vehicles per day in 2050. Corridor volume increases by 53 percent to 16,200 vehicles per day due to population growth alone, and an additional 14 percent due to traffic diversion resulting from planned and programmed TxDOT projects for a total increase of 67 percent.

Ports-to-Plains Corridor - Truck Traffic

Truck volume on the corridor grows from 2,200 in 2018 to 3,800 trucks per day in 2050.

Segment #1 - Total Traffic

Volume in Segment #1 increases from an average of 12,200 vehicles per day in 2018 to 18,100 vehicles per day in 2050. Segment #1 volume are expected to increase 39 percent to 17,000 vehicles per day due to population growth alone, and an additional nine percent due to traffic diversion resulting from planned and programmed TxDOT projects for a total increase of 48 percent. **Figure 3.22** depicts the projected forecast in total traffic.

Segment #1 - Truck Traffic

The truck volumes on Segment #1 expected to grow from 2,800 in 2018 to 4,000 trucks per day in 2050.

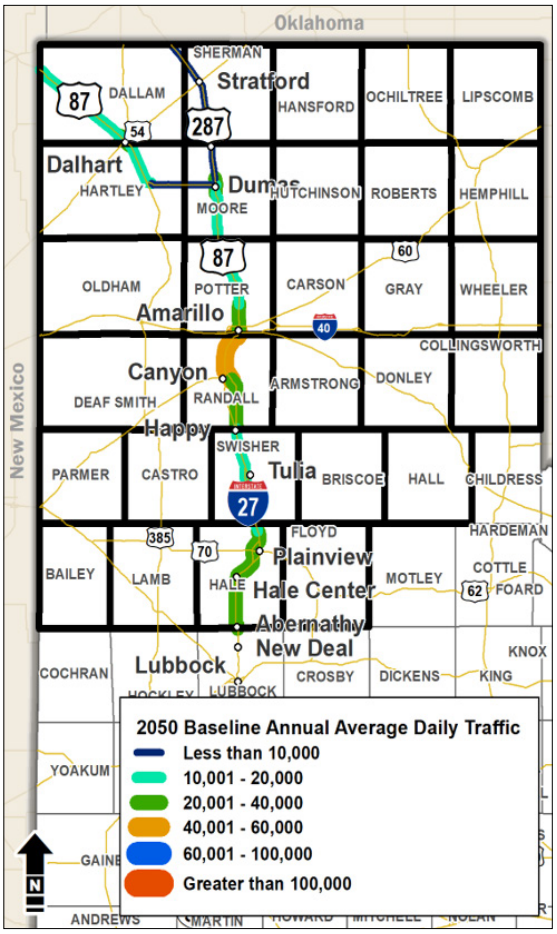


Figure 3.22: Baseline 2050 Traffic Volumes in Segment # 1

Source: TxDOT SAM and STARS2

3.7.2 Interstate Upgrade Forecast

Ports-to-Plains Corridor - Total Traffic

The entire Ports-to-Plains Corridor carried an average of 10,600 vehicles per day in 2018 with the interstate upgrade volumes expected to increase to 23,800 vehicles per day in 2050. Corridor volume are projected to expected to increase 53 percent due to demographic growth alone, and an additional 72 percent due to traffic diversion resulting from the interstate highway upgrade for a total increase of 125 percent over 2018 levels. The growth for the interstate upgrade represents a 34 percent increase over the 2050 baseline.

Ports-to-Plains Corridor - Truck Traffic

The corridor-wide truck volumes for the interstate upgrade more than doubles from 2,200 in 2018 to 5,100 trucks per day in 2050.

Segment #1 - Total Traffic

Overall traffic volume on Segment #1 more than doubles from an average of 12,200 vehicles per day in 2018 to 21,800 vehicles per day in 2050 under the interstate upgrade as shown in **Figure 3.23**. Corridor volume is expected to increase 39 percent due to demographic growth alone from 2018, and an additional 40 percent due to traffic diversion resulting from the Interstate upgrade for a total increase of 79 percent over 2018 levels. Segment #1 growth will increase by 20 percent over the 2050 baseline.

Segment #1 - Truck Traffic

The truck volume on Segment #1 for the interstate upgrade increases from 2,800 in 2018 to 4,900 trucks per day in 2050.

Table 3.7 shows the 2018 daily traffic volume for other West Texas interstates. The volume ranges between 10,000 to 30,000 vehicles per day with truck traffic accounting for 40 percent of the overall volume. Both the Segment #1 and corridor-wide traffic projections for the 2050 interstate upgrade would be comparable to the current volume level on interstates in South and West Texas.

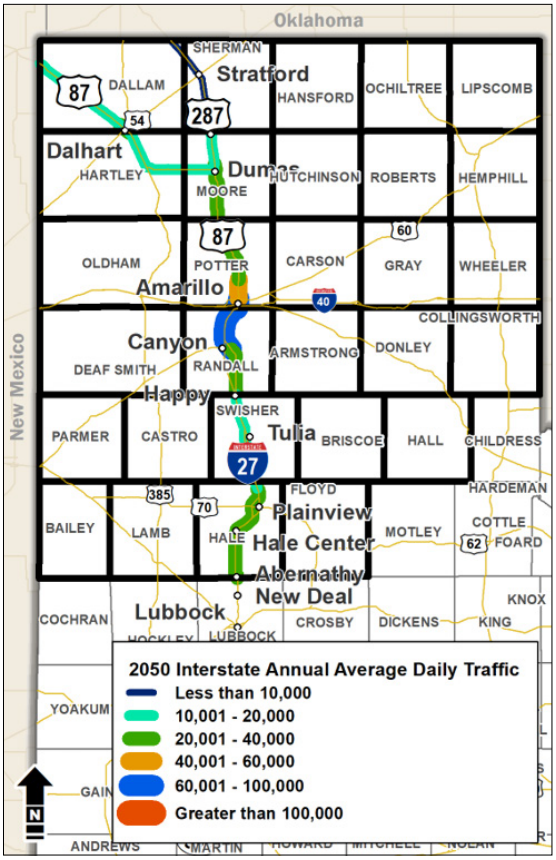


Figure 3.23: Interstate 2050 Traffic Volumes in Segment #1

Source: TxDOT SAM and STARS2

Table 3.7: Current Traffic Volumes (2018) on Rural Interstates in South and West Texas

Facility	Daily Total Traffic	Daily Truck Traffic
I-10: Junction to I-20	5,000 – 15,000	4,800
I-20: I-10 to Abilene	10,000 – 35,000	9,200
Rural Portions of I-27	10,000 – 15,000	2,800
Rural Portions of I-40	10,000 – 15,000	6,100
Rural I-35 (Laredo to San Antonio)	20,000 – 30,000	10,600

Source: TxDOT STARS II Data

3.7.3 Interstate Travel Time Comparison

Tables 3.8 and **3.9** show the benefits in mobility of the interstate upgrade under free-flow and peak traffic conditions as compared to 2018 conditions (refer to Chapter 4 for further comparisons between the 2050 baseline and 2050 interstate upgrade). The analysis shows the interstate upgrade is anticipated to reduce 2018 corridor-wide:

- Free flow travel time from 816 to 772 minutes (44 minutes of savings).
- Average travel time from 979 to 873 minutes (1 hour and 46 minutes of savings).
- Peak period travel time from 1,061 to 893 minutes (2 hours and 48 minutes of savings).
- The interstate upgrade could produce travel time reductions ranging from five to 16 percent and travel speed improvements ranging from six to 19 percent.

Table 3.8: Corridor Mobility Measures – Ports-to-Plains Corridor

Corridor Mobility Measure	Current 2018 Data		Interstate Upgrade		Percent Improvement	
	Travel Time (minutes)	Speed (mph)	Travel Time (minutes)	Speed (mph)	Travel Time	Speed
Free Flow Conditions	816	70	772	74	5%	6%
Average Conditions	979	59	873	66	11%	12%
Peak Conditions	1061	54	893	64	16%	19%

Source: 2018 NPMRDS Data

By comparison, the interstate upgrade is anticipated to reduce 2018 Segment #2:

- Free flow travel time from 240 to 225 minutes (15 minutes of savings).
- Average travel time from 285 to 254 minutes (31 minutes of savings).
- Peak period travel time from 301 to 260 minutes (41 minutes of savings).
- Travel time ranging from six to 14 percent and travel speed improvements ranging from seven to 15 percent.
- These travel time reductions due to the Interstate facility allows Segment #1 of the Ports-to-Plains Corridor to divert trips from slower routes.

Table 3.9: Corridor Mobility Measures – Segment #1

Corridor Mobility Measure	Current 2018 Data		Interstate Upgrade		Percent Improvement	
	Travel Time (minutes)	Speed (mph)	Travel Time (minutes)	Speed (mph)	Travel Time	Speed
Free Flow Conditions	240	69	225	74	6%	7%
Average Conditions	285	58	254	65	11%	12%
Peak Conditions	301	55	260	63	14%	15%

Source: 2018 NPMRDS Data

3.7.4 Interstate Safety Benefits

As discussed in Chapter 2 between 2014 and 2018, more than 3,500 total crashes and nearly 50 fatal crashes have occurred per year on the Ports-to-Plains Corridor. Statewide, more than half of the fatal crashes occur in rural areas like much of the Ports-to-Plains Corridor in West and South Texas. A reduction in crash rate is expected due to interstate upgrade. For example, crash rates generally improve if a two or four lane undivided highway is upgraded to a divided highway, and rates improve even more when a divided highway is upgraded to an interstate.

Applying TxDOT statewide average crash rates to the segments that will be upgraded in the entire Ports-to-Plains Corridor:

- Corridor-wide, the interstate upgrade is expected to reduce the 2018 average crash rate of 115 crashes per hundred million vehicle miles traveled (100 MVMT) to 68 crashes per 100 MVMT.
- In Segment #1, the 2018 crash rate is 109 crashes per 100 MVMT with higher crash rates experienced in downtown Amarillo, Dumas, Dalhart, and Cactus. The interstate upgrade is expected to reduce the 2018 crash rate by 28 percent to 78 crashes per 100 MVMT.

The interstate upgrade to the Ports-to-Plains Corridor would result in a yearly reduction of approximately 18 fatal collisions, 329 injury collisions, and 906 property damage collisions across the state by 2050.

3.8 Forecasted Freight Flow

The Segment #1 Committee reviewed baseline growth in freight traffic moving by truck on the Ports-to-Plains Corridor to assess the 2050 forecast.

The baseline forecasts presented in this section reflect freight growth without the diversion from other routes that would be associated with upgrading the Ports-to-Plains Corridor to an interstate. Projected freight diversion is covered in Chapter 4 of this report. The baseline does not account for the stimulating influence that corridor improvements would have on regional economies along the corridor and the promotion of new development. With improved transportation access, counties along the corridor would likely attract more business and generate more freight once the Ports-to-Plains Corridor is upgraded to interstate.

Figure 3.24 displays year 2050 baseline overall truck traffic demand that originates or terminates within Ports-to-Plains Counties. As shown, truck traffic using the corridor connects across Texas and is expected to grow broadly. Though much of the traffic is concentrated in West Texas, significant amounts connect to East Texas including Dallas and the Gulf Coast. In Segment #1, much of the truck traffic is concentrated on I-27 as well as I-40 and US-287 between Amarillo and Dallas-Fort Worth. Truck volume for the segment grows to 77 million tons in 2050, a 59 percent increase from 2018 representing 28 million tons of new freight added.

The most significant commodity growth occurs in farm and food products, which add nine million tons of new truck freight outbound and three million tons inbound by 2050, and in construction-related bulk materials such as sand, minerals and cement, which add eight million tons of new truck freight outbound and four million tons inbound by 2050. Together, these goods account for over 80 percent of outbound truck tonnage growth through 2050, and over 70 percent of inbound growth.

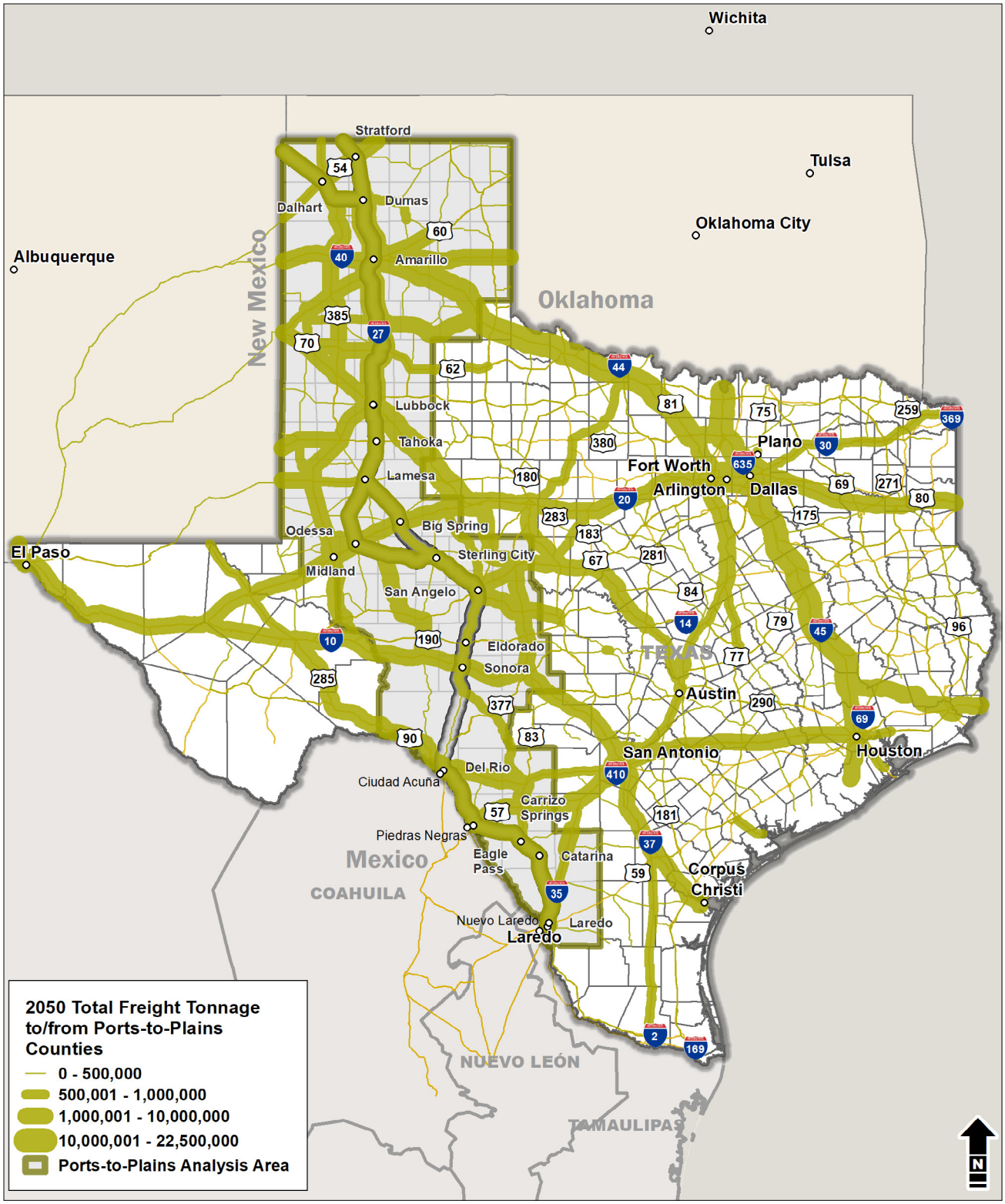


Figure 3.24: Corridor Total 2050 Tonnage Flows – Baseline
Source: TxDOT SAM and Transearch

3.8.1 Forecasted Agricultural Freight

The forecast movement of agricultural and food products by truck that originates or terminates within Ports-to-Plains Counties is captured in **Figure 3.25**. It shows robust growth, with activity stretching across the state. The trucked volume of inbound goods for consumption and processing in Segment #1 rises by 33 percent through 2050, but outbound production moving to markets everywhere grows more than twice as fast - by 75 percent. Agricultural and food products contribute 42 percent of the segment's total outbound truck tonnage, and Segment #1 is the corridor's largest source of traffic in this sector. Three features stand out in the figure:

- Substantial growth on and around the corridor within the Texas Panhandle. While some of this traffic will gravitate to improved facilities, a good portion of the Segment #1 corridor is an interstate today; thus, the connecting activity on other roads should continue and volumes are projected to climb.
- There is an important and growing connection along US-287 between Segment #1 and Dallas/Fort Worth, which is the southwest regional distribution hub for food and other consumer and industrial products. Dallas/Fort Worth also offers rail intermodal service to national ports that cotton is particularly reliant upon.
- A second significant and increasing connection occurs on I-40 between Segment #1 and markets to the east.

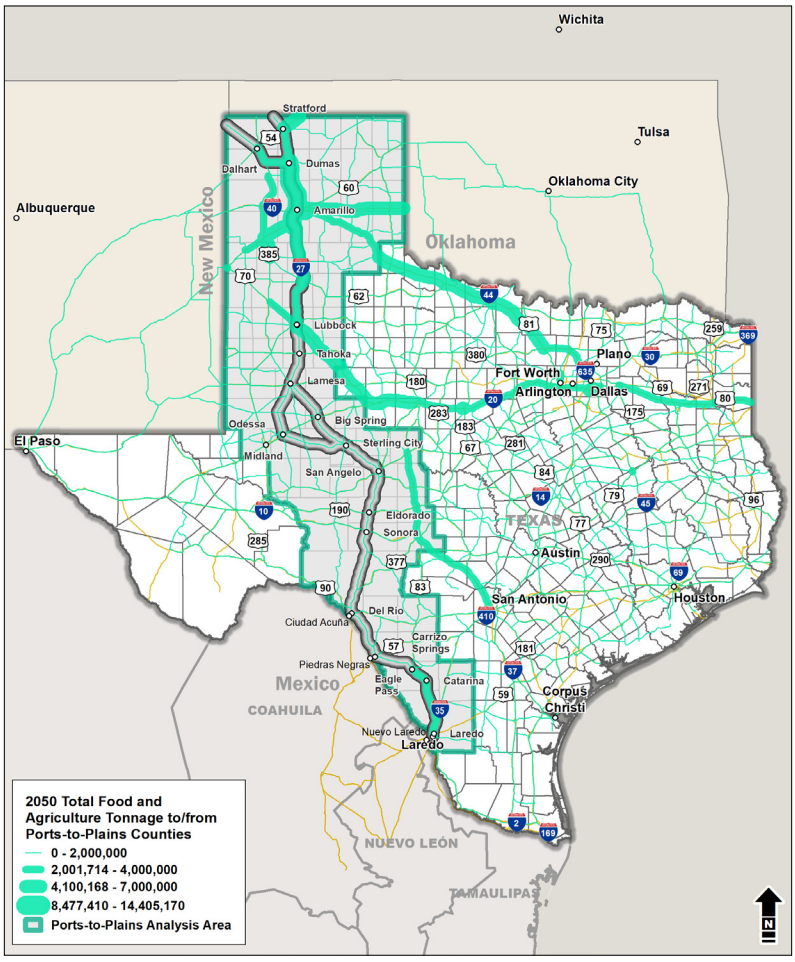


Figure 3.25: Agriculture/Food Total 2050 Tonnage Flows – Baseline

Source: TxDOT SAM and Transearch

3.8.2 Forecasted Energy Sector Freight

Figure 3.26 illustrates the forecasted 2050 petroleum product truck demand that originates or terminates within Ports-to-Plains counties. Petroleum product shipments by truck are largely local traffic, supplying the region's vehicles with fuel and connecting oil and natural gas production areas with pipelines. Segment #1 is not projected to be a major source of new product and the outbound truck tonnage grows just three percent; however, the forecast for the inbound side is greater, with tonnage growing 12 percent by 2050.

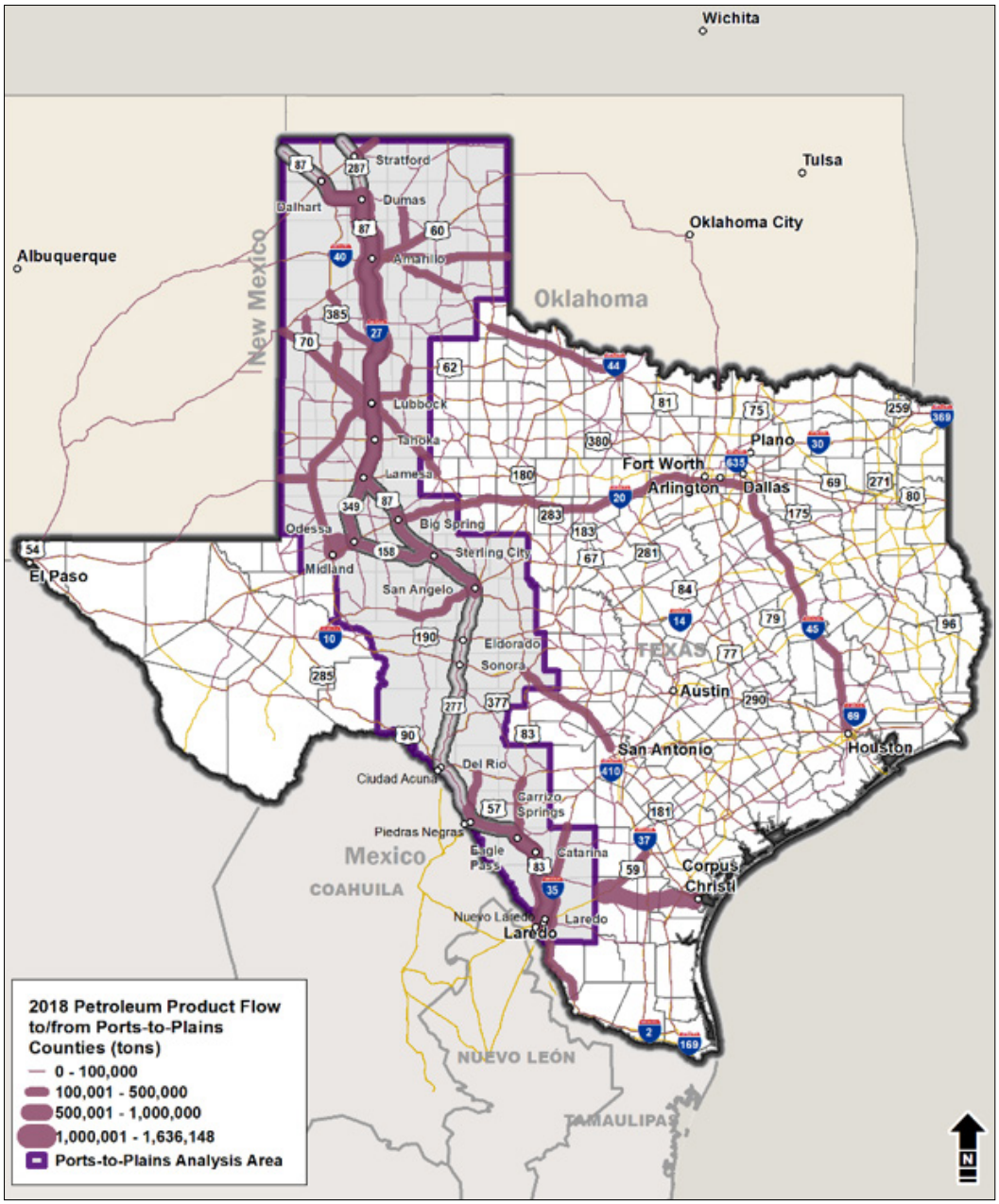


Figure 3.26: Corridor Petroleum Products 2050 Tonnage Flows – Baseline

Source: TxDOT SAM and Transearch

3.8.3 Forecasted International Trade Freight

Figure 3.27 illustrates the forecasted 2050 international trade truck demand that originates or terminates within Ports-to-Plains counties. It includes port traffic - such as with Texas ports or the Los Angeles ports - but most is trade with Mexico. Traffic flows originate or terminate at counties along the corridor, accounting for 28 million tons and 17 percent of total corridor truck traffic in 2050.

As shown, the foreign trade network is extensive and is forecast to grow comprehensively. In Segment #1, trade volume doubles to six million tons by truck in 2050, with 55 percent of the growth coming from exports. Strong flows are found on I-27 and I-40.

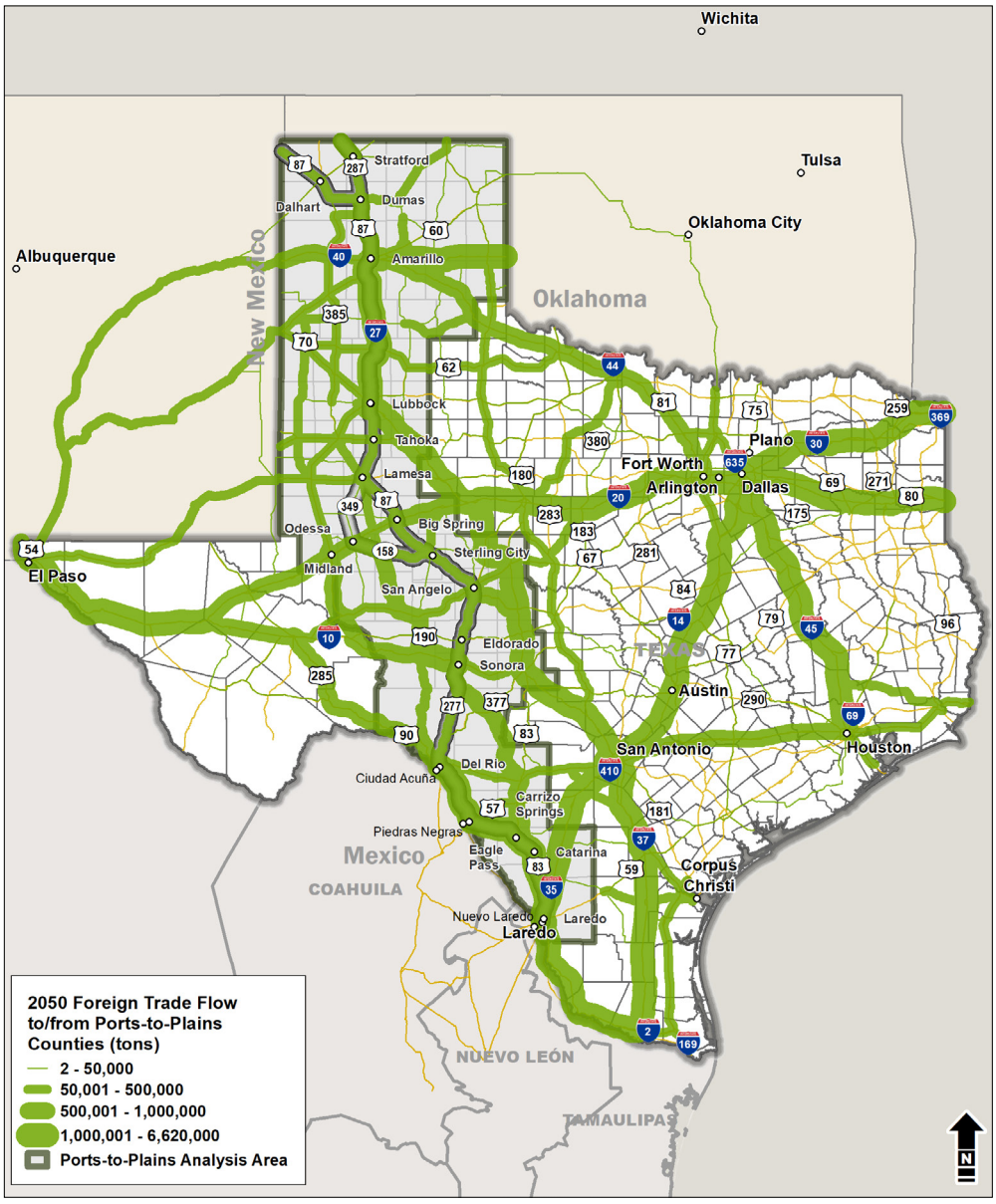


Figure 3.27: Corridor International Trade 2050 Tonnage Flows – Baseline

Source: TxDOT SAM and Transearch

CHAPTER 4

Corridor Interstate Feasibility Analysis and Findings

4.0 Corridor Interstate Feasibility Analysis and Findings

The Segment #1 Committee conducted an interstate feasibility analysis for the Ports-to-Plains Corridor to determine if upgrading the entire corridor to interstate standards, where feasible, would achieve the goals as outlined in HB 1079. The Segment #1 Committee considered two scenarios: the baseline and the interstate. The purpose of this chapter is to describe the two scenarios considered, the interstate feasibility analysis process and criteria used to evaluate the scenarios, and the findings.

4.1 Baseline

The Segment #1 Committee reviewed the analysis of the baseline. The baseline assumed only currently planned and programmed projects, as previously defined in Chapter 3, are implemented along the corridor by 2050.

4.2 Interstate

The interstate upgrade assumes:

- A continuous-flow, fully access-controlled facility with a minimum of two lanes in each direction separated by a median within a typical 300- to 500-foot right-of-way.
- Higher design speed than the baseline and uninterrupted traffic flow from one end of the corridor to the other with ramps and overpasses provided at major intersections.
- No driveway access to main lanes and no traffic signals on main lanes.

4.3 Corridor Interstate Feasibility Analysis Process and Results

The Ports-to-Plains Corridor Interstate Feasibility Analysis was performed to determine whether implementing a continuous four-lane interstate facility on the Ports-to-Plains Corridor would achieve the goals set out in HB 1079. The Segment #1 Committee measured and evaluated the performance of the interstate upgrade against each study goal outlined in Chapter 1.

The Committee used data collected during the existing conditions, forecasted conditions analysis and needs assessment results to evaluate the scenarios against the study goals. The Committee examined criteria that could measure the ability of each scenario to meet each goal. Below is a discussion of each HB 1079 goal and the measure(s) used to evaluate it.

4.3.1 Examination of Freight Movement

The Ports-to-Plains Corridor plays a critical role in freight movement at the local, corridor, regional, state, national, and binational levels as shown in **Figure 4.1**. The regional economy produces commodities and transportation demand related to agriculture, energy, and international trade, both inbound and outbound. Minerals and mineral products, food and agricultural products, and consumer products are all key commodities across the corridor.

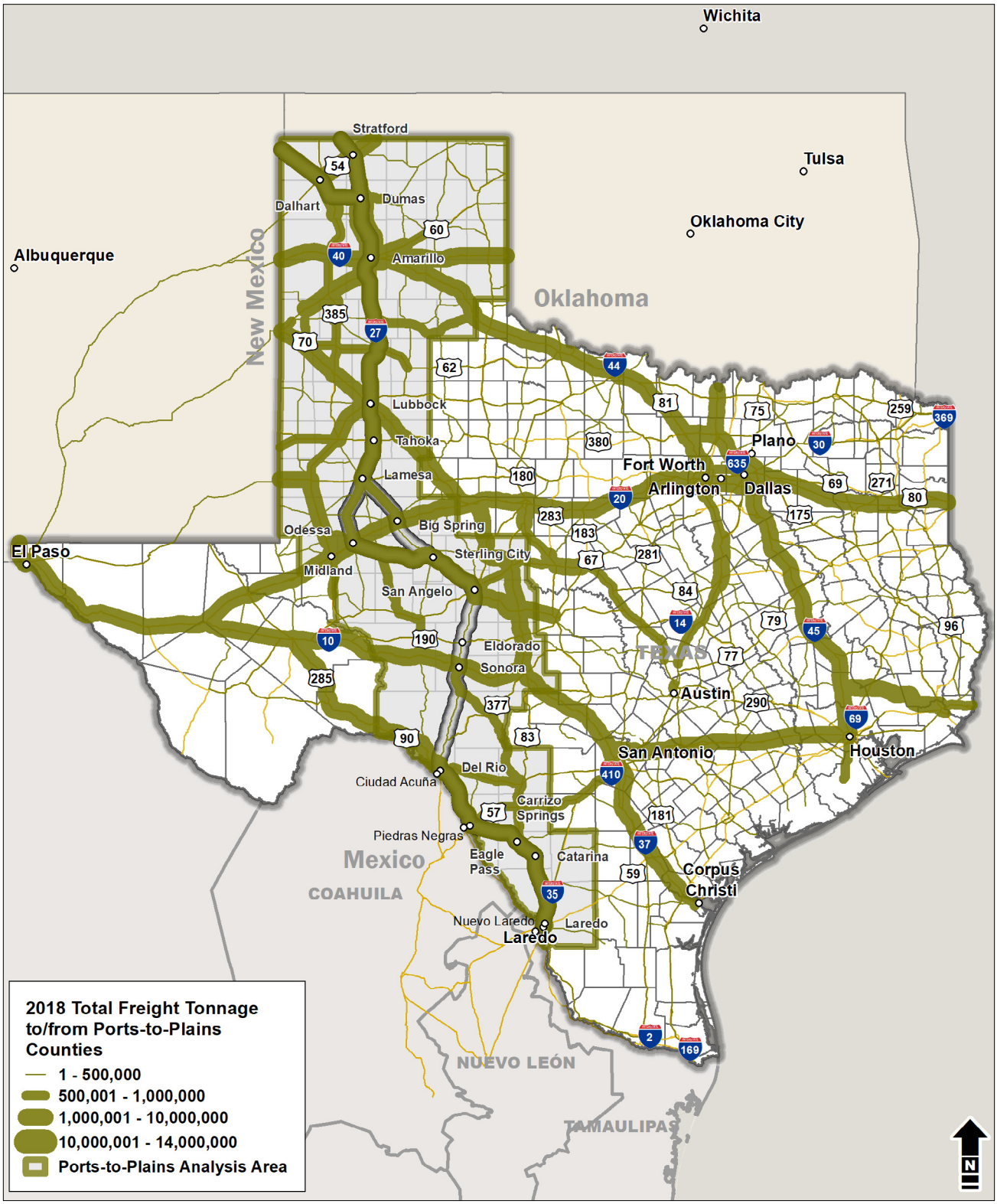


Figure 4.1: 2018 Freight Tonnage To/From Ports-to-Plains Corridor Counties
Source: TXDOT SAM and TRANSEARCH database

The Segment #1 Committee examined freight movement along the Ports-to-Plains Corridor by considering the benefits of improved travel time and market access and considering diversions of truck traffic from other corridors.

Baseline

Travel times will improve slightly due to planned and programmed projects in Segment #1.

Truck volume is anticipated to grow from 2,800 trucks per day in 2018 to 4,000 trucks per day in 2050, a 43 percent increase. This growth in the baseline is mostly attributable to changes in demographics and economic activity in the corridor related to energy and agriculture productions rather than drawing traffic diversions from other routes.

Interstate

The interstate upgrade would create a fully access controlled facility for the entire corridor with improved travel times and additional capacity for freight to address times of peak demand and better mitigate route reliability variances during incidents. The interstate upgrade would:

- Reduce travel times 24 to 32 minutes in Segment #1 and 89 to 146 minutes across the entire corridor over the baseline.
- Increase truck traffic by 23 percent over the baseline in Segment #1. This faster travel times from interstate upgrade would divert truck traffic from nearby parallel routes, as well as national routes like I-10, I-35 from Laredo to San Antonio, and I-35 to I-70 from Dallas to Denver.
- Increase corridor truck traffic from 2,200 in 2018 to 5,100 in 2050, an increase of 132 percent and 34 percent over the 2050 baseline.
- Provide improved access for petroleum products as well as imports from International Gateways to the south.

This diversion indicates that the interstate upgrade would provide greater mobility benefit for freight over the baseline in Segment #1. **Figure 4.2** illustrates the differences between projected truck traffic under the baseline and interstate upgrade in Segment #1. Green lines show where truck traffic is expected to increase over the baseline, and red lines show where truck traffic is expected to decrease from the baseline. The darker colors indicate greater change in projections.

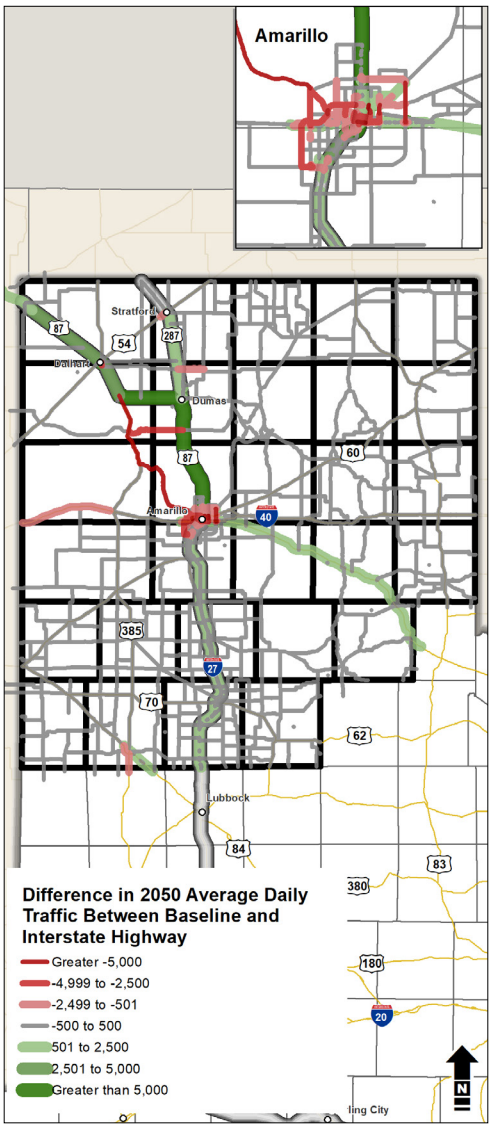


Figure 4.2: 2050 Interstate vs. Baseline Truck Traffic
Source: TxDOT SAM

4.3.2 Ability of Energy Industry to Transport Products to Market

As discussed in Chapter 2, the ability of the energy industry to transport products to markets and refineries along the Gulf Coast using the Ports-to-Plains Corridor is critical to the economy of the region, state, and the nation. In 2019, Texas accounted for 41 percent of the nation's crude oil production and 25 percent of its marketed natural gas production[19].

There are 30 petroleum refineries in Texas able to process about 5.8 million barrels of crude oil per day – accounting for 31 percent of the nation's refining capacity. Much of Texas' energy production occurs in the oil fields and wind farms on the Ports-to-Plains Corridor. Four geologic areas bearing oil and gas overlap the corridor: the Permian Basin encompassing Segment #2, the Eagle Ford Shale in Segment #3, and the Palo Duro and Anadarko Basins in Segment #1.

The 2050 energy sector tonnage in the entire corridor is projected to be approximately 19 million compared to approximately 14 million in 2018. In Segment #1, the energy sector tonnage is projected to be approximately 8 million total tons in 2050 compared to 6 million total tons in 2018. While natural gas moves primarily by pipeline, energy-related materials such as sand and water as well as wind turbine components are still moving primarily by truck.

Baseline

The existing energy product tonnage using the corridor and adjacent roadways is shown in **Figure 4.3** and the forecast energy tonnage flow in 2050 is shown in **Figure 4.4** for the baseline. The maps show heavy energy production flows connecting Segment #1 to the Lubbock and Permian Basin area.

The baseline does not provide significant travel time advantages to create meaningful truck traffic diversion within the corridor. The current facility has 2-lane routes with limited passing opportunities and traverses through communities not designed for trucks resulting in slower speeds. This leads to trucks having travel time reliability issues and seeking alternative routes to transport energy products to market.

Interstate

The movement of energy products within Segment #1 is significant. Energy products make up 15 percent of the existing freight tonnage in Segment #1. Minerals and mineral products make up an additional 36 percent.

As described in 4.3.1, the interstate upgrade would create a fully access controlled facility for the entire corridor with improved travel times and reliability for freight, including trucks transporting energy products to market. The interstate upgrade would reduce travel times 89 to 146 minutes across the entire corridor and 24 to 32 minutes in Segment #1 over the baseline. In addition, the interstate upgrade would provide a safer and more reliable route when traveling through cities and small towns. This reduction in travel time, increased market access radius, and increase in route reliability (smaller differences between average and worst-case travel times) will be attractive features in helping the energy industry transport products to market.

[19] U.S. Energy Information Administration, https://www.eia.gov/state/?sid=TX. Accessed March 20, 2020.

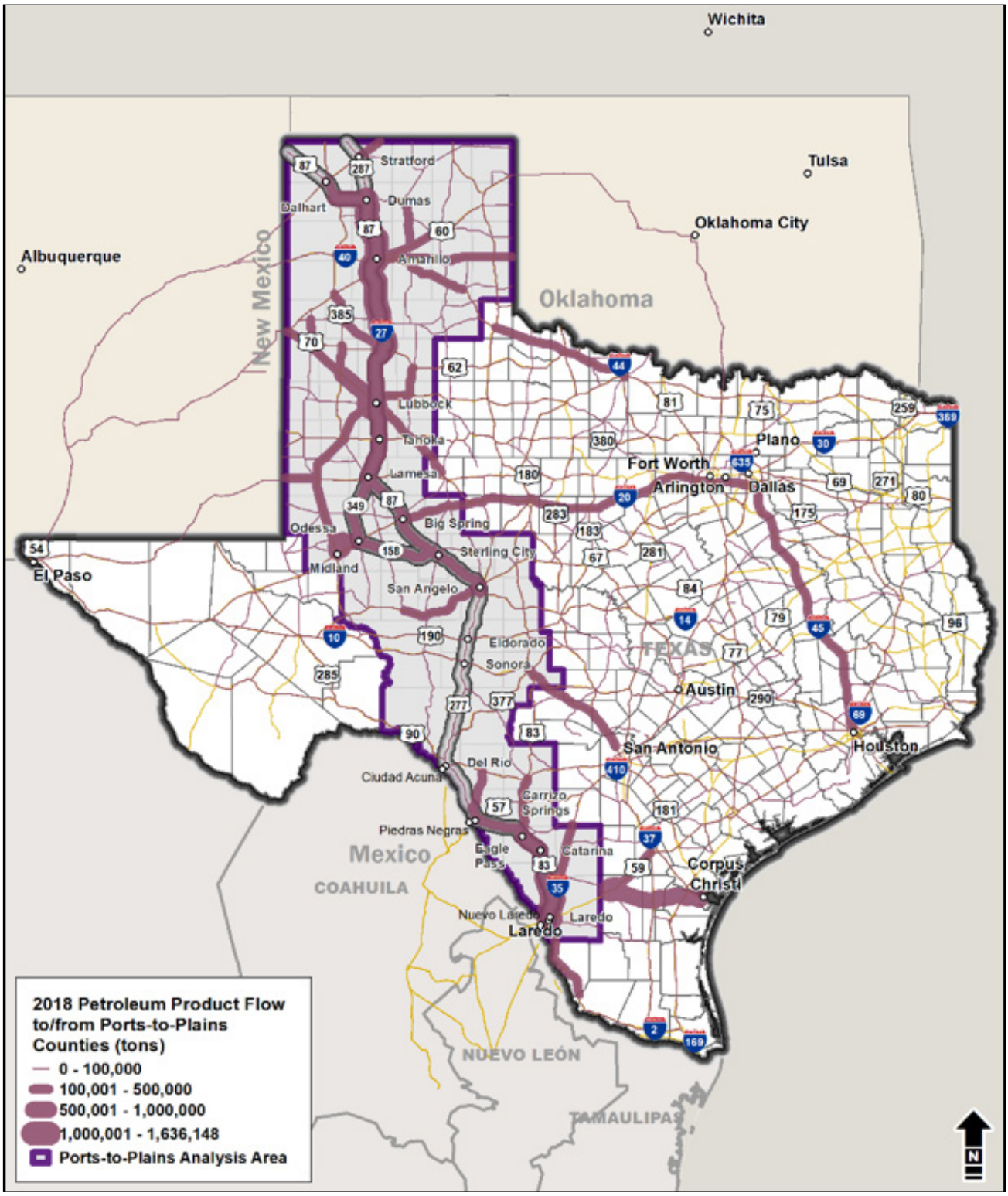


Figure 4.3: 2018 Petroleum Product Tonnage (Baseline) Flows
Source: TXDOT SAM and TRANSEARCH database

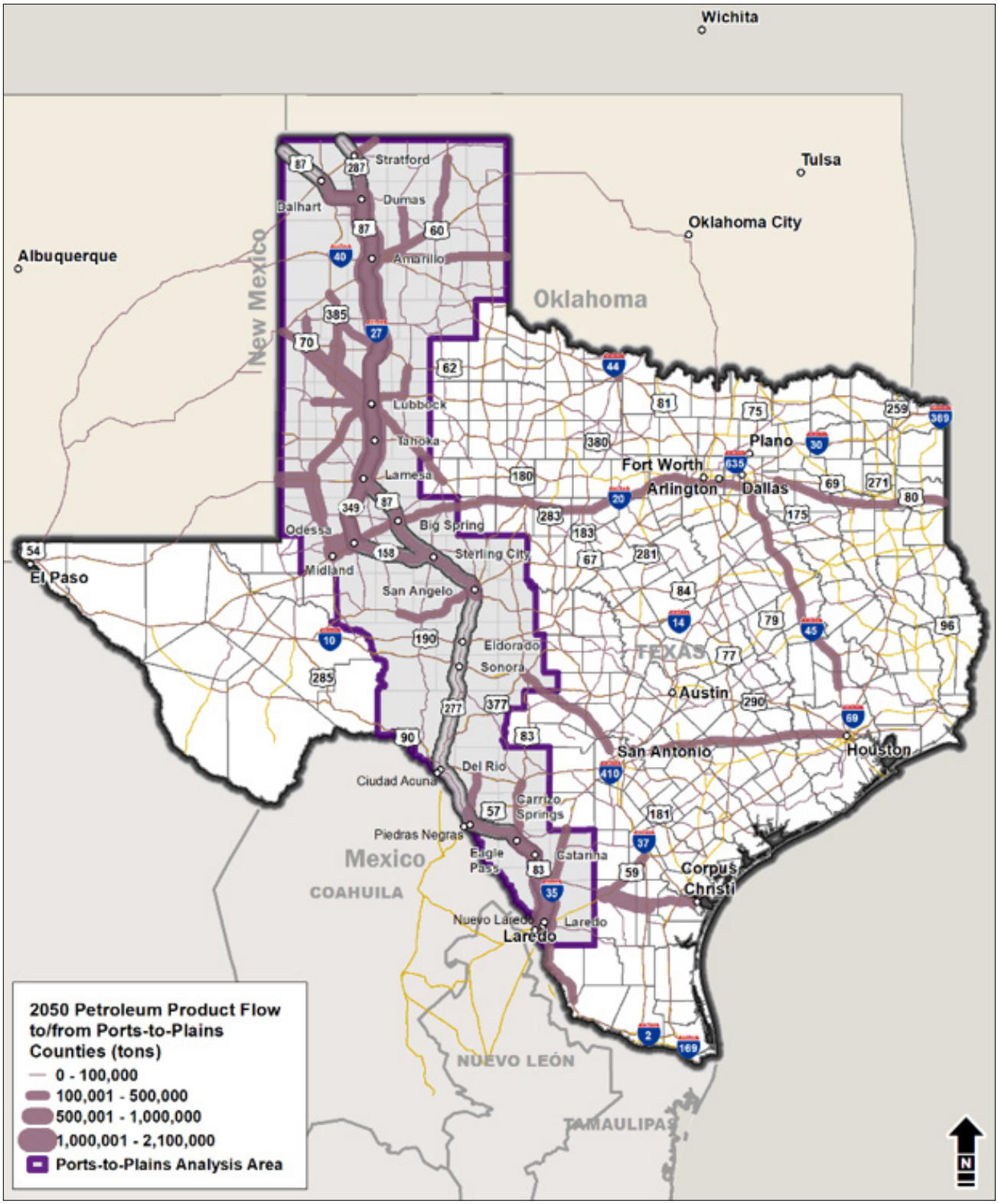


Figure 4.4: 2050 Petroleum Product Tonnage (Baseline) Flows
Source: TXDOT SAM and TRANSEARCH database

4.3.3 Determination of Traffic Congestion Relief

The Segment #1 Committee evaluated measures such as total volume and traffic diversion versus available and planned capacity to determine which scenario would best meet the goal of relieving traffic congestion along the corridor by the 2050 planning horizon. Traffic diversion is defined as an increase in traffic volume on the Ports-to-Plains Corridor over and above the 2050 forecast, and corresponding decrease in total traffic volume on other corridors as a result of the interstate upgrade. Congestion is prevented by expanding capacity by one or more of these means to accommodate growth in traffic due to both population/employment growth and diversion of traffic to the corridor.

Baseline

The baseline analysis showed corridor traffic growth throughout for 2050 with an average growth rate of 67 percent projected for the entire Ports-to-Plains Corridor and 48 percent projected in Segment #1 when compared to 2018 conditions. Higher traffic growth areas are projected on US 83 north of Laredo (163 percent) and on SH 158 near Midland (124 percent). Congestion would increase with the increase in traffic volume under the baseline.

Interstate

Under the interstate upgrade:

- The Ports-to-Plains Corridor is projected to grow by an average of 125 percent and Segment #1 is projected to grow by an average of 79 percent by 2050 when compared to 2018 conditions.
- Strong growth is projected in many portions of the Ports-to-Plains Corridor; in Segment #1, US 87 in Dumas is projected to grow by more than 200 percent by 2050 when compared to 2018 conditions.
- The interstate upgrade projects increase lane miles by 24 percent in the entire Ports-to-Plains Corridor and seven percent in Segment #1.

Because the interstate upgrade results in relatively higher speeds throughout the corridor, patterns of traffic are diverted from parallel and intersecting roadways to take advantage of the improved travel time.

Regional:

- Most diversion to the Ports-to-Plains Corridor comes from highways within 100 miles of the corridor.
- The interstate upgrade shows a stronger traffic diversion capability over the baseline indicating the ability to reduce traffic congestion from nearby corridors in Segment #1 and from other corridors in the state.
- In Segment #1, the interstate upgrade diverts east/west trips from the US 57 (Eagle Pass to San Antonio) and US 90 (Del Rio to San Antonio) corridors. The interstate upgrade also attracts north/south trips from US 83, SH 55, and I-35 between Laredo and San Antonio.

Statewide:

- The interstate upgrade also diverts traffic from other corridors state-wide, as shown in **Figure 4.5**. The data showed significant traffic diversion of more than 5,000 vehicles per day from US 385 south of Hartley, US 385 to US 62 between Odessa and Lubbock, and US 84 between Lubbock and I-20. Moderate diversion was shown from I-35 from Laredo to San Antonio.
- In Segment #1, the interstate upgrade also shows a significant forecasted traffic diversion north of Amarillo on US 87 toward New Mexico and I-25. The interstate upgrade attracts trips to US 287 southeast of Amarillo towards Dallas/Fort Worth and diverts trips from I-40 west of Amarillo and into New Mexico. The interstate upgrade shows a stronger traffic diversion capability over the baseline indicating the ability to reduce traffic congestion from nearby corridors in Segment #1 and from other corridors in the state.

National:

- The conversion of the Ports-to-Plains Corridor to an interstate would also create shifts in national travel patterns.
- The Ports-to-Plains Corridor would attract trips to I-44 from St Louis, Missouri to Wichita Falls and continuing towards the corridor while diverting trips away from other east-west routes east of Texas, such as I-10.
- An interstate upgrade would also divert traffic from the I-70/I-135/I-35 route from Denver to Dallas and instead using I-25 through New Mexico and connecting to US 87 in Texas.
- Moderate national diversions – such as trips from the Pacific Northwest being attracted across the Rockies towards Denver and southward to the Ports-to-Plains Corridor – were traced with diversions from I-10 and I-40 to the west.

Binational:

- Key diversion patterns include trips between the Mexican states of Coahuila, Nuevo Leon, and Tamaulipas south of Texas, the Rocky Mountain and Midwestern states of New Mexico, Colorado, Kansas, Oklahoma, and Missouri, and trips between the Gulf of Mexico coast toward the north Mountain and Pacific Northwest states. The magnitude of diversion and growth are also a response from increases in foreign trade via land ports with industrial areas of Mexico, and international seaport trade that can more easily reach Gulf of Mexico ports due to the Panama Canal expansion.

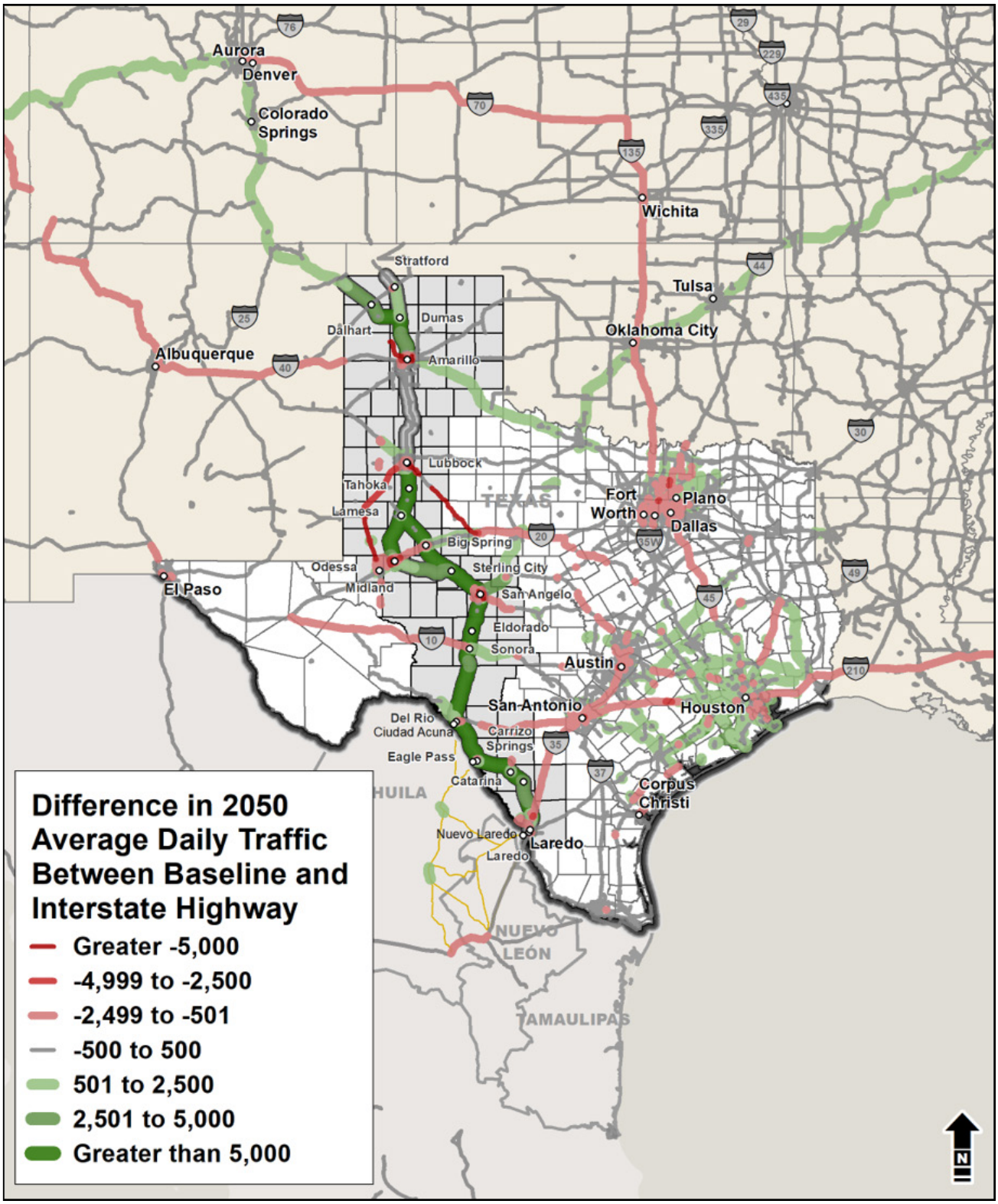


Figure 4.5: 2050 Total Traffic Diversions
Source: TXDOT SAM and TxDOT 2018 RID

4.3.4 Determination of Ability to Promote Safety and Mobility

The Segment #1 Committee evaluated whether the baseline and interstate upgrade promoted safety and mobility, while maximizing the use of existing highways to the greatest extent possible and striving to protect private property as much as possible. To make this determination, the Committee reviewed crash rates and travel time savings described in Chapter 3.

Table 4.1 depicts TxDOT's state-wide average crash rates and are provided by highway system (Interstate, US Highway, etc.) and road cross-section type (2-lane undivided, 4 or more lanes divided and 4 or more lanes undivided):

- Interstates are the safest of all systems in both urban and rural areas because they include design features known to be safest: divided medians, multiple lanes per direction for passing, and full control of access with no side-street intersections.
- Divided highways are always safer than undivided highways, and
- Multilane highways are safer than two lane highways in rural areas.

The existing Ports-to-Plains Corridor currently contains a combination of the cross section and highway system types, as well as urban and rural conditions. Thus, the current crash experience is influenced by the degree to which the different system and cross section types exist among the three segments.

Baseline

Safety: The baseline would improve safety in the Ports-to-Plains Corridor due to the planned and programmed projects expected to be in place by 2050. These projects include upgrades of current two-lane segments to four lane divided segments or Super 2 segments, new interchanges that replace at-grade intersections, and specific safety projects such as cable median barrier, rumble strips, and turn lane improvements. These changes to the network will increase safety over the current configuration. In Segment #1, the establishment of the State Loop (SL) 335 as a freeway class route around western Amarillo will provide a safety benefit for through traffic.

By Highway System

Highway System	Traffic Crashes per 100 million vehicle miles	
	Rural	Urban
Interstate	62.08	144.32
US Highway	72.08	177.84
State Highway	94.10	217.69
Farm-to-Market	118.18	225.28

By Road Type

Road Type	Traffic Crashes per 100 million vehicle miles	
	Rural	Urban
2 lane, 2 way	102.13	213.77
4 or more lanes, divided	62.95	158.28
4 or more lanes, undivided	97.61	283.09

Table 4.1: Texas State Crash Rates, 2018
Source: TxDOT Crash Statistics, 2018

Most of Segment #1 already contains interstate and multilane divided highway configurations. Given that completion of SL 335 west is a planned project - as is expansion to the last section of US 87 with two lanes to four-lane divided - the 2050 baseline is expected to achieve a reduction in the overall Segment #1 crash rate of 26 percent over the 2018 rates. For the entire Ports-to-Plains Corridor, the 2050 baseline is expected to reduce crash rates by 25 percent over the 2018 rates.

Mobility: The baseline improves mobility by reducing delay on segments in which improvements occur. For the entire Ports-to-Plains Corridor, these figures are the free flow travel time savings is nine minutes, the average travel time savings is 17 minutes and the peak period travel time savings is 22 minutes, respectively. In Segment #1, the free flow travel time savings is three minutes, the average travel time savings is seven minutes, and the peak period time savings is nine minutes.

Interstate

Safety: The Segment #1 Committee reviewed the Texas state crash rates shown in **Table 4.1** (TxDOT Crash Statistics, 2018) which indicate the interstate upgrade would have 15 to 25 percent fewer crashes compared to typical US Highway and 35 percent fewer crashes than a typical State Highway. These rates indicate the interstate upgrade would lower crashes over the baseline.

Based on the state crash rates and the number of existing miles of US Highway and State Highway in the Ports-to-Plains Corridor that would be converted to interstate, the interstate upgrade is estimated to:

- Reduce the Ports-to-Plains Corridor crash rate by 41 percent and reduce the Segment #1 crash rate by approximately 28 percent over 2018 conditions.

- Reduce crashes by an additional 21 percent across the Ports-to-Plains Corridor and an additional 4 percent in Segment #1 when compared to the 2050 baseline.

Mobility: The Segment #1 Committee examined travel times and delays along the corridor to evaluate the mobility benefit of each scenario[20]. The interstate upgrade will provide a travel time benefit over the baseline due to greater travel speed provided by full access control.

Figure 4.6 provides a high-level estimate of where average travel delays in Segment #1 presently occur versus what could be provided by an interstate with an anticipated speed limit of 75 mph. As shown, the most significant travel time savings in Segment #1 are west of Dumas and west of Dalhart.

- When compared to 2018 conditions, the interstate upgrade would bring a free flow travel time savings of 44 minutes, an average travel time savings of 106 minutes, and a peak travel time savings of 168 minutes.
- When compared to 2018 conditions, the Segment #1 interstate upgrade would bring a free-flow travel time savings of 15 minutes, an average travel time savings of 31 minutes, and peak period travel time savings of 40 minutes.
- When compared to the 2050 baseline, the interstate upgrade reduces average delay more than the baseline by 89 minutes over the entire Ports-to-Plains Corridor and by 24 minutes along Segment #1.

[20] Average travel speed is the rate at which a vehicle can drive through the corridor (expressed in miles per hour), average delay is how much time that vehicle is slowed down or stopped by corridor conditions (expressed in minutes). Delay is measured relative to travel time at an ideal speed of 75 miles per hour. Free flow delay measures effects of things that slow all vehicles down, sharp curves, lower speed limits and traffic signals. Average delay is the typical delay experience which includes the overall effects of congestion and incidents including weather. Peak period delay focuses on the worst congestion experienced regardless of cause.

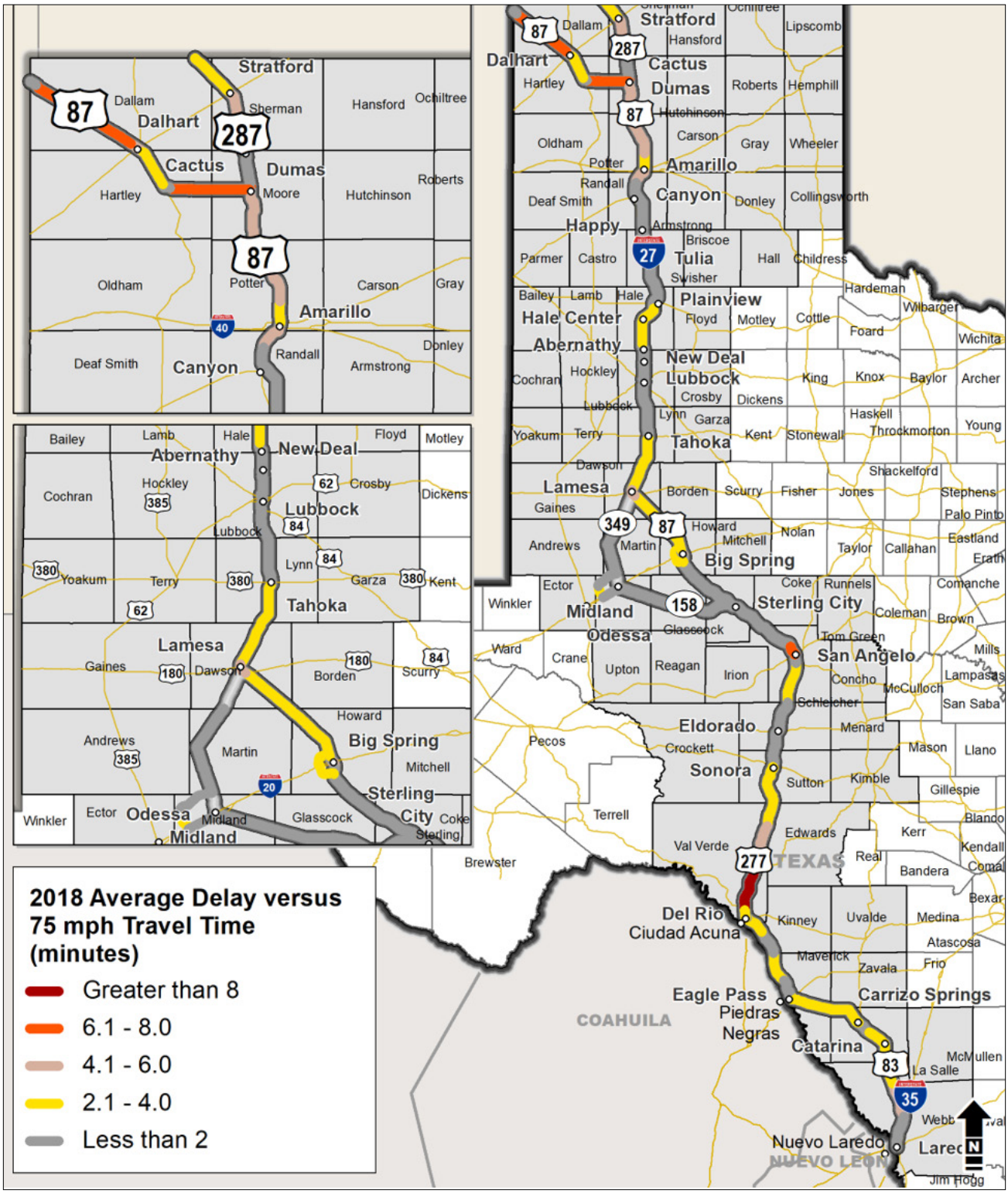


Figure 4.6: 2018 Average Travel Time Delay
Source: NPMRDS Data 2018

4.3.5 Determination of Areas Preferable and Suitable for Interstate Designation

The Ports-to-Plains Corridor is currently designated as a High Priority Corridor by a congressional act, but the route is not currently designated as interstate under a congressional act.

There are three ways to obtain interstate designation.

- Method 1: If the corridor currently meets interstate standards, the US DOT Secretary may designate as an interstate under 23 USC 103(c)(4)(A),
- Method 2: If the corridor does not currently meet interstate standards, TxDOT may submit a proposal to FHWA requesting designation as future interstate under 23 USC 103(c)(4)(B), or
- Method 3: The corridor may be designated as a future part of the interstate system by a congressional act.

Method 1

Process: The Segment #1 Committee evaluated their segment to determine whether any portions of the existing corridor meet current interstate design criteria and if a proposal to FHWA could be made under 23 USC 103(c)(4)(A). The Segment #1 Committee examined horizontal and vertical sight distances, right of way widths, number of existing lanes, and median widths.

Findings: The southern 103 miles of Segment #1 is already designated I-27. The remaining 172 miles of Segment #1 is on U.S. highways, consisting of generally 2 to 4 lanes, and have lower design speeds with smaller right-of-way widths, including 7 miles of controlled-access freeway. Therefore, the Segment #1 corridor—with the exception of I-27—does not currently meet interstate standards and is not currently suitable for interstate designation under 23 USC 103(c)(4)(A).

Method 2

Process: The Segment #1 Committee then evaluated their segment to determine whether any portions of the corridor could be proposed to FHWA to be designated a future interstate under 23 USC 103(c)(4)(B).

Proposals under 23 USC 103(c)(4)(B) must be submitted by the state transportation agency, i.e. TxDOT in coordination with neighboring state agencies. The route must be evaluated against several criteria including being designed to interstate standards, be a logical addition or connection, and coordinated with affected jurisdictions. If the route is not yet complete, TxDOT may request designation as a future part of the Interstate System.

The Segment #1 Committee considered the evaluation criteria contained in Appendix A of 23 U.S.C. 139. This evaluation is shown in **Appendix C - Federal Highway Administration Guidance Criteria for Evaluating Requests for Interstate Designation**.

Findings: As discussed under Method 1, the existing 274-mile corridor does not currently meet interstate standards except for I-27 from Amarillo to Lubbock. The Segment #1 Committee then looked at whether the corridor could be designated as future interstate under Method 2. This analysis is shown in **Appendix C - Federal Highway Administration Guidance Criteria for Evaluating Requests for Interstate Designation**. Based on the assessment of interstate eligibility requirements, the Segment #1 Committee determined that TxDOT could submit for interstate designation under Method 2.

Method 3

Process: Under Method 3, a congressional act is required to designate the corridor as a future part to the interstate system.

Findings: Since congressional action is a political process outside of feasibility, the Segment #1 Committee can pursue congressional designation.

4.3.6 Examination of Costs to Upgrade the Corridor to Interstate Standards

The Segment #1 Committee examined a planning level cost estimate for the Segment #1 portion of the corridor based on a methodology typically used to develop costs during the corridor interstate feasibility stage.[21] The methodology used planning-level software with available mapping data for the corridor and assumptions developed in consultation with the TxDOT Amarillo District. The cost estimate was adjusted to account for planned and programmed projects in Segment #1 and used 2020 dollars. The planning level cost estimate included the following inputs and assumptions:

- A 75-mile per hour design speed and interstate standards for curves and grades.
- 2019 TxDOT District bid tabs to calculate prices for pavement, earthwork, and bridges for the TxDOT Amarillo District.
- Major utility relocations based on available mapping data, and minor utilities as a percentage of costs.
- Seeding, mulching, lighting, and traffic control as a percentage of costs based on similar projects.
- Frontage roads in all urban areas.
- Frontage roads for approximately 157 miles[22] in rural areas.
- Right-of-way costs as ten percent of the construction costs.
- Major utility relocation costs such as parallel pipelines, oil and gas wells, water wells, and parallel railroads.
- Full reconstruction of the corridor.

The planning level cost estimates for the corridor and for Segment #1 is shown in **Table 4.2**. The cost estimate for the entire corridor is $23.5 billion and the cost estimate for Segment #1 for approximately 171 miles is $4.8 billion. This cost estimate is for planning purposes only and is subject to change based on more detailed right-of-way and design information during future stages of each project development.

Table 4.2: Planning Level Cost Estimate

Description	Corridor Cost (Billions)	Segment #1 Cost (Billions)
Construction	$20.5	$4.2
Right of Way	$2.1	$0.4
Utilities	$0.9	$0.1
Total	$23.5	$4.8

[21] Costs are preliminary for planning purposes only, subject to change. Costs are in 2020 dollars.

[22] The 157 miles was determined based on the Segment #1 consulting with the TxDOT Amarillo District on where frontage roads may be warranted in rural portions of the corridor.

4.3.7 Evaluation of Economic Development Impacts and Return on Investment

The Segment #1 Committee reviewed an evaluation of the economic development impacts of the Ports-to-Plains Corridor within this segment. These included examination of whether upgrading the Ports-to-Plains Corridor to an interstate would create employment opportunities in the state. The analysis compared the interstate and baseline described in Section 4.2 using the horizon year of 2050.

Interstate highways offer speed, safety, and reliability - fundamental virtues in transportation that are central to any form of economic development for which transportation matters. Access to interstates is an important factor in manufacturing and a prerequisite in the warehouse and distribution sector site selection. For agriculture, energy, and any sector that depends on national and global markets, interstates help keep American products competitive. With the USMCA taking effect in July 2020, north-south trade is going to expand and a second north-south corridor along the nation's longest border with Mexico answers need and opportunity. These are among the influences enabling strong, positive economic impacts and an attractive return from the upgrading of the Ports-to-Plains Corridor to an interstate.

The economic analysis comprise of the economic development impacts resulting from upgrading the Ports-to-Plains Corridor to interstate and the economic return on investment of upgrading the corridor to interstate.

The Transportation Economic Development Impacts System (TREDIS) model was used to estimate the economic impacts of upgrading the Ports-to-Plains Corridor to an interstate facility compared to the baseline. TREDIS is an economic model regularly used by TxDOT and other transportation departments in the United States to evaluate the role of transportation investment in facilitating economic activity and competitiveness.

TREDIS model inputs included information described in Chapter 3, such as the forecasted travel times, freight volumes, and crash rates. The key elements discussed in the economic analysis section include:

- Travel Cost Savings
- Expansion of Regional Truck Delivery Market
- Expansion of Job Opportunities
- Safety Benefits
- Total Corridor and Segment Economic Impacts
- Rest-of-State Economic Impacts
- Economic Impacts by Industry (Energy; Food and Agriculture; Warehousing Distribution)
- Economic Impacts of Construction and Maintenance Spending
- Long-term Economic Returns for Upgrading Corridor to Interstate (Return on Investment and Cost Benefit Ratio)

Travel Cost Savings

As described in Chapter 3, the interstate upgrade is anticipated to reduce average travel times relative to 2018 conditions by 11 percent on Segment #1 and across the Ports-to-Plains Corridor. In addition, the interstate is anticipated to improve the reliability of travel times for trips along the corridor, reducing the variability between the "worst-case" travel time and the average travel time. These travel time savings and reliability improvements translate directly into cost savings for businesses transporting goods along the Ports-to-Plains Corridor allowing them deliver to customers and access international gateways more quickly.

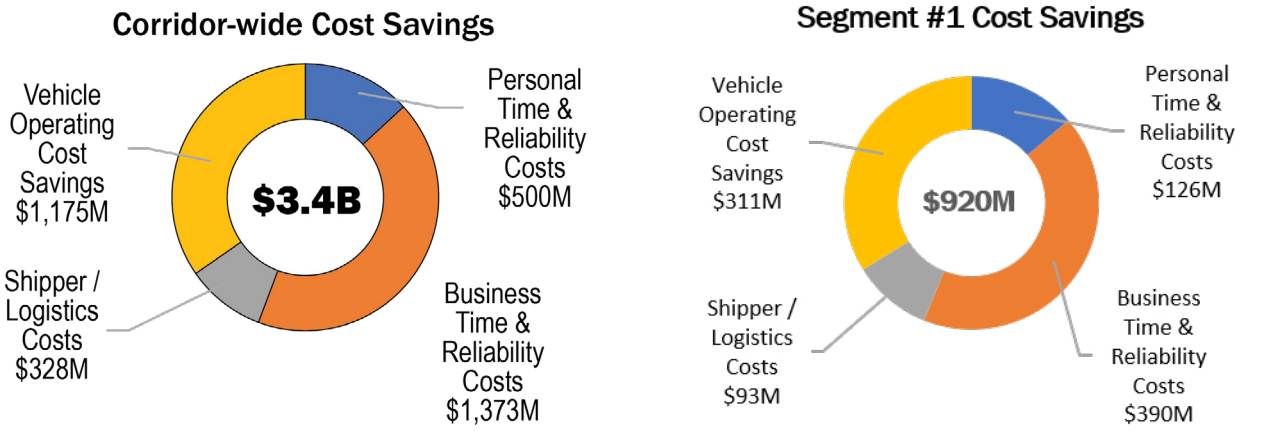


Figure 4.7: Travel Cost Savings
Source: Analysis using TREDIS

As **Figure 4.7** shows, total corridor-wide cost savings with the interstate upgrade are calculated to be $3.4 billion per year, $920 million of which comes from cost savings in Segment #1. These savings include the value of both personal and business travel time and reliability, costs to logistics/shipping companies, and reduction in vehicle operating costs.

Expansion of Regional Truck Delivery Market

By increasing speeds on the Ports-to-Plains Corridor, the interstate reduces travel time and expands the regional truck delivery market, or the area reachable within one day assuming an eight-hour operation window, three hours of travel each way, and one hour on either end for loading and unloading. This leads to efficiencies for shippers and makes the Ports-to-Plains Corridor a more attractive business location. For example, the western alignment of the interstate upgrade would make it possible for a truck to make a round trip from Tulia to Midland, that cannot reliably be completed in one day currently. Similar advantages arise for companies doing business or seeking to do business across the border through Eagle Pass and Laredo, and any company siting warehouse and distribution centers can count on a larger same day service territory and more customers for its facility.

Expansion of Job Opportunities

Corridor travel time improvements would also expand the job opportunities available to residents in counties along and adjacent to the Ports-to-Plains Corridor allowing them to reach a wider array of jobs within a one-hour commute, while expanding the labor pool available to businesses. This enhanced market access enables better job matches and higher businesses productivity, growing the economy. The faster speeds associated with the interstate upgrade also improve access to international gateways, increasing the ability of companies located along the Ports-to-Plains Corridor to export their goods to Mexico and beyond, and to import critical components and supplies as well as retail goods for household consumption.

Economic Impacts to Small and Medium Communities

The economic impacts of the interstate upgrade of the Ports-to-Plains corridor, will not only benefit large communities but also small and medium communities. The interstate upgrade would improve access to jobs, education, and create jobs within the small and medium communities and retain populations and jobs already there, expand access to recreational activities.

With an interstate upgrade, there is a greater demand for gas stations, truck stops, restaurants, lodging, and other businesses serving passenger and commercial travelers. This provides opportunities for development and expansion of roadside businesses in communities across the corridor. The economic benefits to small and

medium communities also include the safety and mobility benefits. The interstate upgrade will reduce crash rates and improve travel times around bottlenecks that typically occur in urban areas and small communities.

Safety Benefits

The Segment #1 Committee also considered the economic benefits associated with the safety improvements along the Ports-to-Plains corridor. As described in Section 3.7.4, crash rates throughout the Ports-to-Plains corridor are anticipated to be lower with the Interstate than under the Baseline Scenario in 2050. Per USDOT guidelines, these crash reductions are considered in economic terms using standardized values, resulting in a corridor-wide economic benefit of approximately $450 million each year.

Total Corridor and Segment Impacts

The upgrade of the Ports-to-Plains Corridor to an interstate will improve travel and in turn is expected to increase employment, gross domestic product (GDP), labor income, and population across the corridor and within Segment #1, compared to the current facility.

Table 4.3 and **Table 4.4** summarize these impacts for the entire corridor and for Segment #1. The interstate is anticipated to increase:

- Employment by 17,710 jobs in the corridor and by 2,650 jobs in Segment #1.
- GDP by $2.2 billion and by $0.4 billion in Segment #1 over the baseline.
- Income by $1.4 billion in the corridor and by $0.2 billion in Segment #1.

The change in economic outcomes reflects direct, indirect and induced economic impacts.

Table 4.3: Corridor-wide Economic Impacts Summary

Metric	2020 Baseline	2050 Baseline	2050 Interstate	Change
Employment	894,770	1,044,140	1,061,850	17,710
Employment Growth	N/A	16.7%	18.7%	2.0%
GDP ($B)	$155.4	$263.2	$265.4	$2.2
GDP Growth	N/A	69.4%	70.8%	1.4%
Labor Income ($B)	$95.0	$161.8	$163.1	$1.4
Labor Income Growth	N/A	70.2%	71.6%	1.4%
Population	1,996,680	3,207,970	3,236,280	28,310
Population Growth	N/A	60.7%	62.1%	1.4%

Source: Moody's Analytics (Baseline Employment and GDP values), Texas Demographic Center (Baseline Population values), Analysis using TREDIS (All Interstate and Change values and Baseline Labor Income values)

Table 4.4: Segment #1 Economic Impacts Summary

Metric	Baseline 2020	Baseline 2050	2050 Interstate	Change
Employment	224,060	241,550	244,200	2,650
Employment Growth	N/A	7.8%	9.0%	1.2%
GDP ($B)	$36.6	$53.9	$54.3	$0.4
GDP Growth	N/A	47.3%	48.3%	1.0%
Labor Income ($B)	$21.2	$31.4	$31.6	$0.2
Labor Income Growth	N/A	47.9%	48.9%	1.0%
Population	499,620	602,830	606,340	3,510
Population Growth	N/A	20.7%	21.4%	0.7%

Source: Moody's Analytics (Baseline Employment and GDP values), Texas Demographic Center (Baseline Population values), Analysis using TREDIS (All Interstate and Change values and Baseline Labor Income values)

Rest-of-State Economic Impacts

Beyond the benefits to Segment #1 and the entire Ports-to-Plains Corridor, the State of Texas as a whole is also expected to see positive economic impacts from building the interstate. Many trucks drive on the Ports-to-Plains Corridor to deliver goods and to visit clients and customers. Passenger vehicles from the rest of Texas and outside the corridor drive on the Ports-to-Plains Corridor to visit family and friends.

As a result of the interstate upgrade, trucks and passenger vehicles would save $690 million per year. In addition, the interconnected nature of the economy means that there are spillover or multiplier effects across regions, such that increased economic activity in one area creates more economic activity in others area nearby (and to a lesser extent far away).

The interstate projected economic impacts for the rest of Texas is estimated to:

- Save $690 million per year in travel costs.
- Increase jobs by approximately 4,400 jobs.
- Increase GDP by $640 million.

Economic Impacts by Industry

The industries most expected to experience economic impacts as a result of the interstate include those that make up a significant portion of the Ports-to-Plains economy today, such as energy and food and agriculture, as well as other industries that depend heavily on goods transportation, like warehousing and manufacturing **Figure 4.8** shows projected employment growth by industry for the corridor and Segment #1 with the interstate improvement.

Energy Industry Economic Impacts

As discussed earlier in this chapter and in Chapter 2, the Ports-to-Plains Corridor plays a critical role in transporting energy products to markets and refineries and will continue to do so for decades after the interstate is complete. The interstate will save energy companies approximately $505 million in time and money, across the corridor, and making it easier to access workers and customers.

As compared to the baseline and shown in **Figure 4.9**, upgrading the corridor to an interstate is anticipated to make it a more attractive place to do business, thereby:

- Increasing the number of corridor wide jobs in the energy industry by approximately 3,120, including 500 within Segment #1, and
- Growing the energy sector GDP by nearly $400 million, with $90 million in Segment #1.

These improvements would ease the process for trade patterns already known to occur within the corridor such as the shipment of steel tanks from Mexico through the Port of Del Rio to the Palo Duro and Anadarko oil fields, where they are needed for oil extraction.

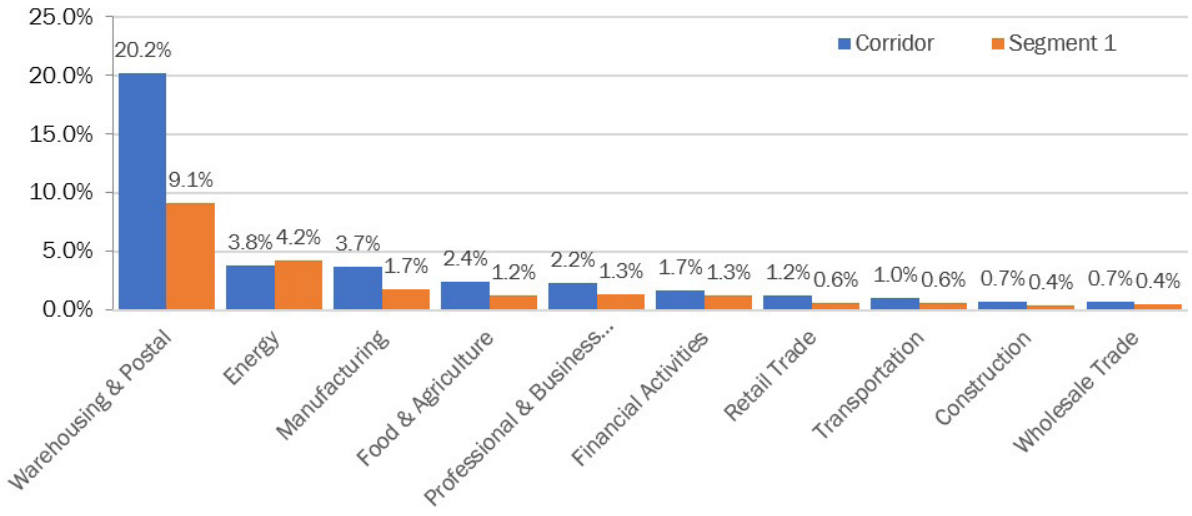


Figure 4.8: Employment Growth by Industry, Baseline 2050 vs. Interstate 2050
Source: Analysis using TREDIS

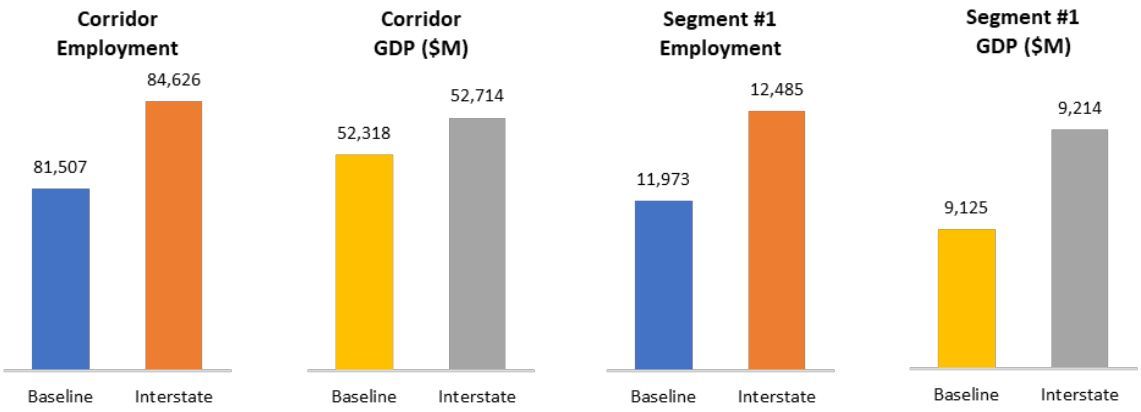


Figure 4.9: Energy Industry Employment and GDP Impacts
Source: Analysis using TREDIS

Food and Agriculture Industry Impacts

As the largest industry in Segment #1, the food and agriculture industry is expected to experience significant benefits from the interstate due to reduced annual travel costs of $295 million across the corridor. The food and agriculture industry has among the lowest margins across all products, making cost saving opportunities especially critical to compete in the global market. Cost savings would support and enhance export activity, easing the movement of commodities like cattle feed from Hartley County to trade partners in Mexico through the Port of Eagle Pass. As shown in **Figure 4.10**, the interstate is projected to create in food and agriculture industry:

- Nearly 1,050 jobs across the corridor and 290 jobs in Segment #1,
- $80 million in GDP in the food and agriculture industry across the corridor and $34 million in GDP within Segment #1.

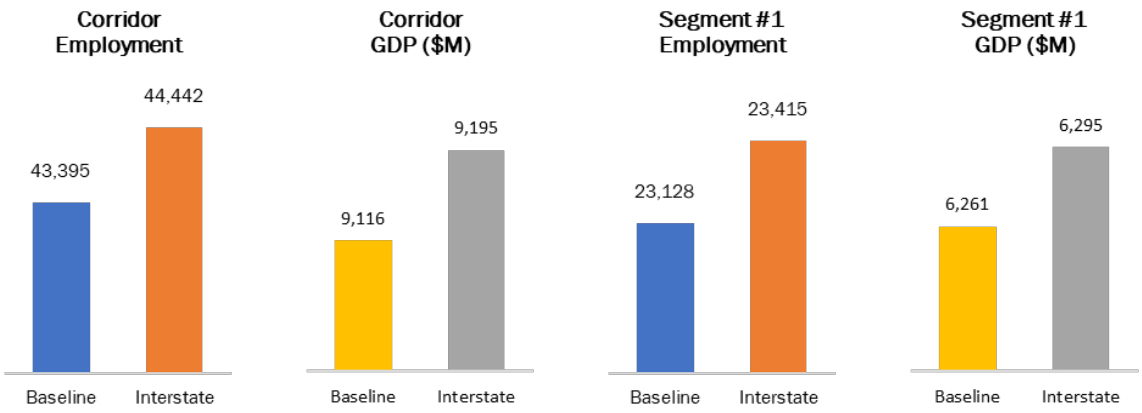


Figure 4.10: Food and Agriculture Employment and GDP Impacts
Source: Analysis using TREDIS

Warehousing and Distribution Economic Impacts

According to research from the National Academy of Sciences (National Cooperative Freight Research Program Report[23], "Freight Facility Site Selection: A Guide for Public Officials"), the two most important criteria in logistics facility site selection are access to key markets and interaction with the transportation network, which for highway transportation specifically means proximity to interstates and freeways. A key insight from the research is that site selectors conduct an initial round of high-level screening for locations that satisfy their top criteria before other factors are brought into account. This means that sites lacking access to interstates and freeways are dropped by the screening before any local advantages such as property costs and financial incentives ever receive consideration.

As shown in **Figure 4.12** and supported by this research by NCFRP, warehouse & distribution sector development in Texas is driven by access to interstate highways. Corridor improvements thus have the potential for opening doors to economic development that today remain closed. An evaluation of growth patterns in areas before and after an interstate was built relative to areas in which no interstate was added, suggests that growth in areas with an interstate is likely to be approximately 10 percent higher after 15 years (e.g., by 2050, assuming key components of interstate in operation by 2035).[24] Using this assumption,

- Upgrading the Ports-to-Plains Corridor to an interstate facility is projected to generate $365 million more direct warehousing output across the corridor with the interstate and $80 million more in Segment #1 compared to the non-interstate.[15]
- These impacts, combined with general productivity improvements from reduced travel costs of approximately $197 corridor-wide and improved access due to the interstate are projected to lead to growth in economic activity, as shown in **Figure 4.11**
- Upgrading the corridor to an interstate is estimated to add 2,550 more warehousing and distribution jobs, including 500 additional jobs within Segment #1.
- An interstate facility in the Ports-to-Plains Corridor is projected to generate $450 million more in GDP compared to the current across the corridor, and $60 million in GDP in Segment #1.

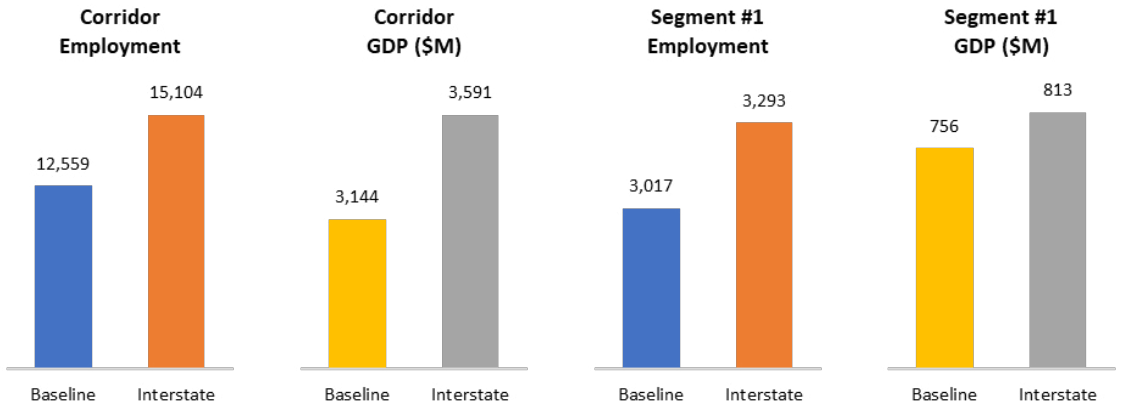


Figure 4.11: Warehousing and Distribution Employment and GDP Impacts

Source: Analysis using TREDIS

[23] Analysis involved a comparison of Moody's Analytics data on warehouse employment in Lubbock County before and after I-27 was completed, with Tom Green County used as a comparison county without an interstate.

[24] Growth rates applied to TRANSEARCH estimates of the value of outbound volumes from warehouses in the year 2050.

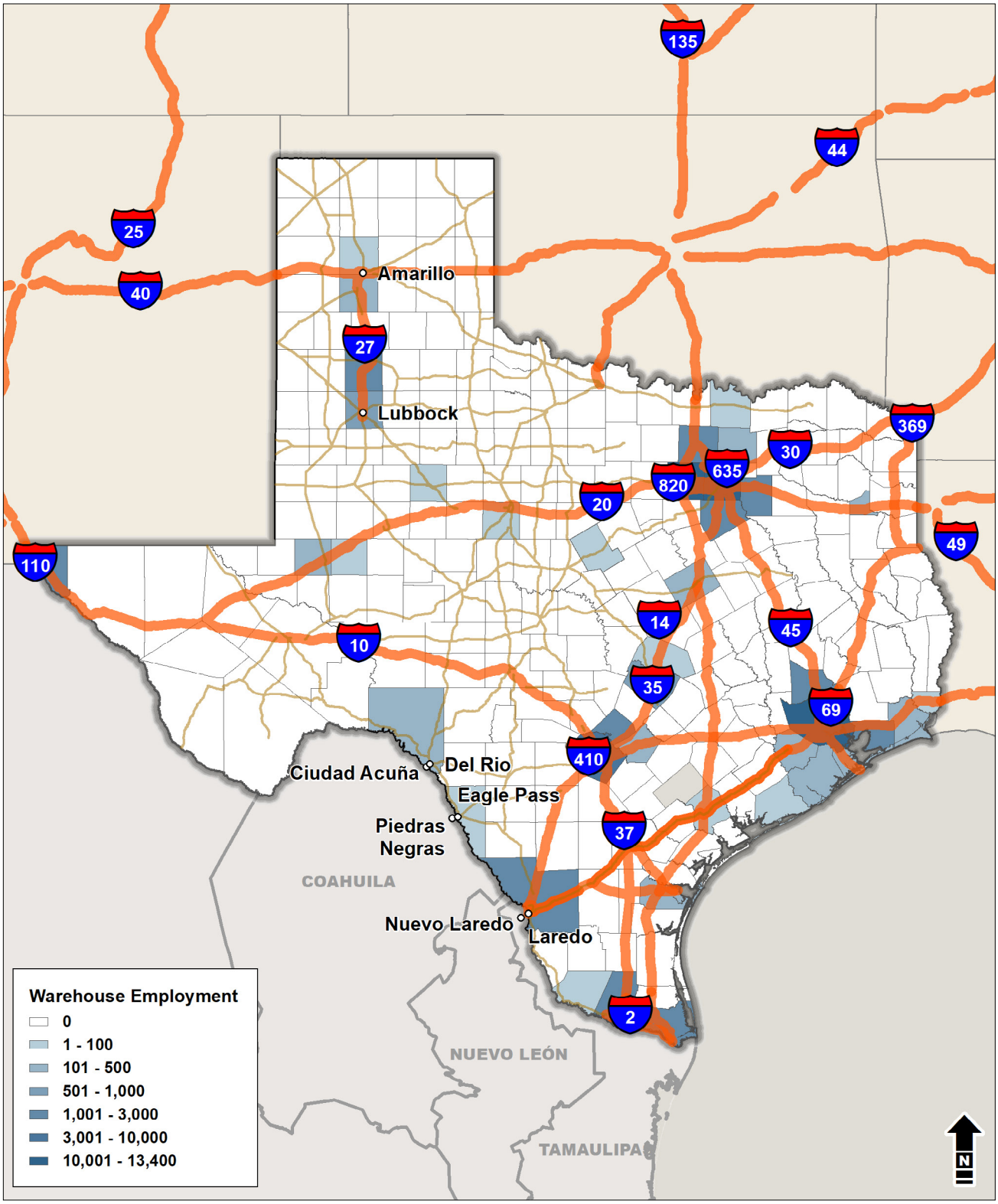


Figure 4.12: Warehouse and Distribution Sector Development by Access to Interstate Highways in Texas
Source: National Cooperative Freight Research Program Report 13

In addition, the growth in warehousing output would have multiplier effects, leading to increased employment and GDP across many other industries. Warehousing and distribution is a vital capability in international trade, supporting logistics functions, customs processing, and the back-and-forth activity characteristic of Maquiladora operations (paired plants in U.S. and Mexico).

- From the arrival of NAFTA in 1993 through 2019, Laredo's Webb County situated on I-35 added over 300 jobs per year in the warehouse and distribution sector, and trade was booming.
- By contrast, Del Rio's Val Verde County and Eagle Pass' Maverick County with no interstate highways added one-tenth of Laredo's warehouse and distribution jobs over the same period, and they saw less trade. While Laredo has significant additional advantages such as proximity to major Mexican manufacturing centers, its interstate highway service is a catalyst that Del Rio and Eagle Pass have not enjoyed.
- Creating the catalyst of interstate highway service – and adding an alternative route at Laredo – is beneficial to trade, and the benefit extends beyond the local facilities around Del Rio and Eagle Pass to companies up and down the corridor that also do business across the border.
- Support to cross-border trade is doubly important in 2020 when the Covid-19 pandemic is encouraging American industries to reconsider global supply chains in favor of domestic and continental locations. This was already an emerging trend because of rising costs and other influences, but the pandemic is accelerating it, and the arrival of the USMCA is further reason for the eyes of supply chain managers to turn to Mexico.

Changing that profile – and adding an alternative route at Laredo – is beneficial to trade, and the benefit extends beyond the local facilities to companies up and down the corridor that also do business across the border.

Economic Impacts of Construction and Maintenance Spending

Capital costs for upgrading the entire corridor to an interstate is estimated at $23.5 billion over the next 25 to 30 years. In addition, once open, annual operations and maintenance are anticipated to cost approximately $260 million per year. These impacts are considered separately from the permanent economic benefits from the interstate's enhancement of travel, but also results in significant economic gains:

- Construction of the interstate will create temporary statewide economic impacts totaling $17.2 billion in cumulative GDP and 178,600 job-years[25], spread out across the duration of the design and construction period.
- Ongoing maintenance of the interstate will also support 2,090 long-term jobs and $185 million in annual GDP statewide.
- These jobs would primarily support the construction industry, but through multiplier effects would also provide opportunities in countless other industries.

[25] One job year = one job held for one year = 2 jobs held for ½ year, etc.

Long-Term Economic Returns for Upgrading the Corridor to Interstate

Thus far this report has expressed economic outcomes based on the 2050 horizon year, comparing the interstate upgrade to the baseline in that year. However, the impacts of the interstate will extend well beyond a single year, providing ongoing economic gains. There are two primary ways of considering these long-term economic impacts, relative to the costs:

- **Return on Investment:** Return on Investment (ROI) is a common measure for determining whether an investment is worthwhile. In this case, it is calculated as the gain in GDP relative to the upfront capital investment.
- Capital costs for upgrading the entire corridor is $23.5 billion.
- Over the first 20 years of interstate operations, statewide GDP gains total $55.6 billion, or $41.3 billion in new GDP once the time value of money (using a 3 percent discount rate) is taken into account.
- Compared to the capital costs of $23.5 billion, this represents a return on investment of $17.8 billion or 76 percent.

- **Benefit Cost Ratio:** Another way of looking at whether a project is worth pursuing is the benefit-cost ratio (BCR), which compares economic benefits—such as travel cost savings and crash reductions—to capital and operating & maintenance (O&M) costs.
- Statewide economic benefits of the interstate accumulate to $90.3 billion over 20 years of operations, which translates to $66.6 billion when discounted using a 3 percent rate.
- When compared to total discounted costs of $27.4 billion, including capital and O&M, this reflects a benefit-cost ratio of 2.4. A benefit-cost ratio above 1 is considered a worthwhile investment.

On both the ROI and BCR measures, converting the Ports-to-Plains Corridor to an interstate performs very well, indicating that the investment will generate economic benefits that far outweigh the costs.

A Critical Economic Opportunity

Many of the counties and cities as well as the international ports of entry at Eagle Pass and Del Rio along the Ports-to-Plains Corridor lack access to an interstate and this is a major barrier to economic development opportunities. Upgrading the Ports-to-Plains Corridor to an interstate facility is critically important to the economic prosperity and future growth of the counties along the corridor, and of west and south Texas and the state. As Texas and the nation look for remedies to the economic reversals brought on by the 2020 pandemic, capitalizing on the needs of business for lower risk locations through domestic and continental sites is a timely opportunity. Meeting those needs competitively requires interstate-class transportation that connects sites and gateways to the expansive markets that companies want to reach. **Table 4.5** provides a summary of the benefits of the upgrading the Ports-to-Plains Corridor to an interstate.

Table 4.5: Summary of Corridor Benefits

Total Annual Travel Cost Savings		**$4.1B**	
Corridor Annual Travel Cost Savings		$3.4B	
Food & Agriculture	$295M (7.2%)		
Energy & Extraction	$505M (12.3%)		
Warehousing & Distribution	$197M (4.8%)		
Rest of Texas Travel Annual Cost Savings		$690M	
Total Annual Increase in GDP		**$2.84B**	
Corridor Annual Increase in GDP		$2.2B	
Food & Agriculture	$80M (3.6%)		
Energy & Extraction	$400M (18.2%)		
Warehousing & Distribution	$450M (20.5%)		
Rest of Texas Annual Increase in GDP		$640M	
Total Increase in Employment		**22,110**	
Corridor Annual Increase in Employment		17,710	
Food & Agriculture	1,050 (5.9%)		
Energy & Extraction	3,120 (17.5%)		
Warehousing & Distribution	2,550 (14.4%)		
Rest of Texas Annual Increase in Employment		4,400	
Total Capital Costs		**$23.5B**	
Return on Investment		**76%**	**$17.8B**
Benefit-Cost Ratio / Net Present Value		**2.4**	**$39.2B**

Source: TREDIS

The interstate upgrade is essential to:

- Improve connectivity, safety, and mobility, including improving access to market for energy and agricultural products, and facilitating the efficient flow of goods and international trade;
- Reduce travel time and costs along the corridor;
- Create jobs, new warehouses and distribution facilities, and other new businesses; and
- Expand the local tax base.

As detailed above, upgrading this corridor to interstate will result in much needed economic growth and opportunity, resulting in nearly 18,000 more jobs and $2.2 billion more in annual GDP.

4.3.8 Assessment of Federal, State, Local and Private Funding Sources

Various funding sources would need to be explored from the local, state and federal perspective to construct an interstate highway. While there are financial caps to many of the grants and/or funding opportunities, various projects could be developed so they each have independent utility and could subsequently be eligible for multiple sources of funding. Below is an overview of public funding sources at the federal, state, and local levels and private sources. **Figure 4.13** shows the sources of public funding.

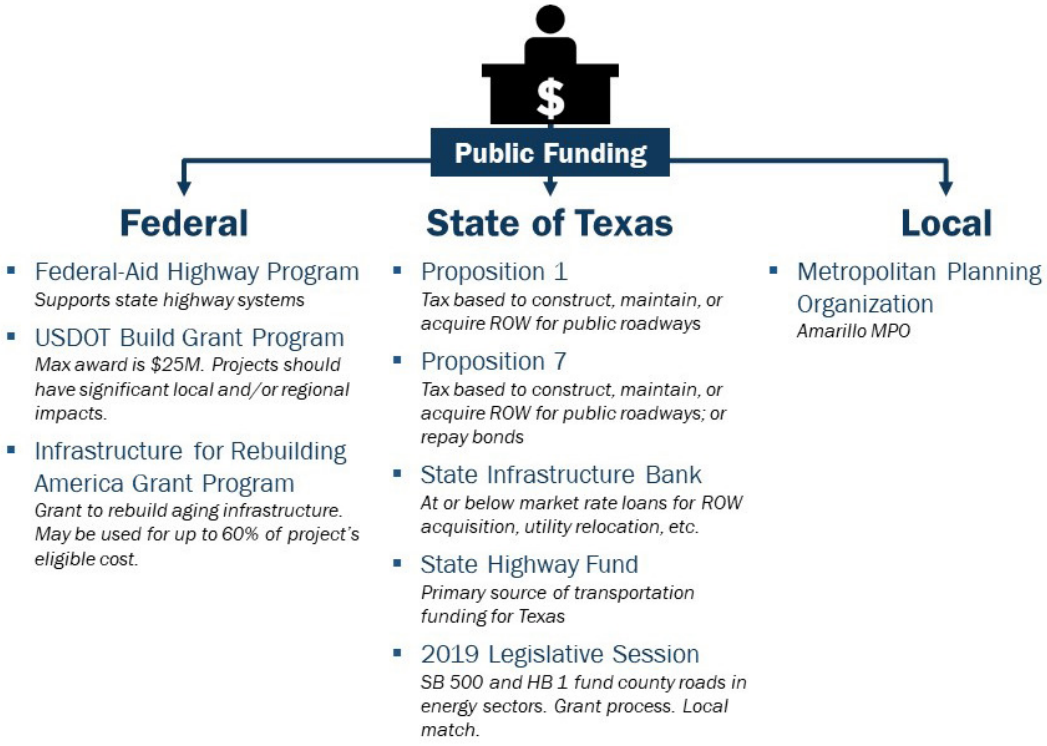


Figure 4.13: Public Funding Sources

Public Funding Sources -Federal Funding

Federal-Aid Highway Program

The Federal-Aid Highway Program supports State highway systems by providing financial assistance for the construction, maintenance and operations of the Nation's 3.9 million-mile highway network, including the Interstate Highway System, primary highways and secondary local roads. The FHWA is charged with implementing the Federal-aid Highway Program in cooperation with the States and local government.

The Highway Safety Improvement Program (HSIP) is a core Federal-aid program with the purpose to achieve a significant reduction in traffic fatalities and serious injuries on all public roads, including non-State-owned roads and roads on tribal land. The HSIP requires a data-driven, strategic approach to improving highway safety on all public roads with a focus on performance. The program is implemented in cooperation with the States and local government.

USDOT Build Program (Better Utilizing Investments to Leverage Development)

The United States Department of Transportation (USDOT) BUILD Transportation Discretionary Grant Program provides competitive grants that can be used in road, rail, transit, and port projects. The maximum award amount in recent years has been $25 million with no state receiving more than $100 million per fiscal year. Criteria also specify that awards are evenly split between rural and urban projects. It is important to note that the project should have significant local and/or regional impacts and it supports roads, bridges, transit, rail, ports or intermodal transportation.

Infrastructure for Rebuilding America (INFRA) Discretionary Grant Program

The INFRA grant program is part of the overall grant program established under the FAST Act of 2015 to assist in the rebuilding of America's aging infrastructure.

INFRA grants may be used for up to 60 percent of a project's eligible cost, with other federal money allowed to cover non-Federal share requirements. The Federal assistance share may not exceed 80 percent of the project's eligible costs. Project money may be used for project construction, reconstruction, rehabilitation, right-of-way acquisition, environmental mitigation, construction contingencies, equipment acquisition, and operational improvements that are directly related to system performance. While the money may be used for planning, feasibility studies, revenue forecasting, preliminary engineering and design, and other preconstruction activities, the goal is that the fund results in the project's construction.

State of Texas Funding

The Texas Department of Transportation (TxDOT), through the State of Texas and the Texas Transportation Commission (TTC), has a variety of roadway funding resources that have been used in the past and/or are currently available to help fund the construction of all or part of the Ports-to-Plains Corridor. The funds, typically in form of statewide bond Propositions, have been authorized by the Texas Legislature with final approval by the Texas residents. Below is a description of these funding sources. TxDOT programs their funds in the Unified Transportation Program (UTP) which lays out planning, development, and construction of projects over the next ten years. **Appendix D - Texas Department of Transportation Unified Transportation Program Funding Categories** describes the funding categories from the UTP.

Proposition 1

Proposition 1 was a result of the 2013 legislative session and approved by the voters in November 2014. Unlike the previous funding sources, this proposition was funded by a portion of the existing oil and natural gas production taxes and that portion is deposited into the State Highway Fund (SHF). The funds from "Prop 1" can only be used for constructing, maintaining, and acquiring rights-of-way for public roadways other than toll roads.

Proposition 7

Voted on and approved by the Texas voters on November 5, 2015, Proposition 7 authorized a constitutional amendment for transportation funding. Like Proposition 1, this amendment provided a scenario funding source that could be used for transportation needs in one of two ways. The amendment allocated a portion of sales and use taxes as well as a smaller portion of motor vehicle sales and rental taxes to (1), construct, maintain or acquire rights-of-way for public roadways other than toll roads, or (2) repay the principal of and interest on general obligation bonds issued as authorized by Section 49-p, Article III of the State constitution. In other words, the "Prop 7" funds may be used to pay debt service on Proposition 12 bonds, which were guaranteed by state general revenue.

State Infrastructure Bank

The State Infrastructure Bank (SIB) offers financial assistance to public or private entities who are authorized to construct, maintain or finance public highway projects. The financial mechanism is in the form of at or below market rate loans and can be used for a variety of projects that are associated with highway construction, such as right-of-way acquisition, utility relocation, and monetary contribution to a project.

State Highway Fund (SHF)

The State Highway Fund is the primary source of transportation funding for the State of Texas. Most of the funds that were legislatively defined are deposited into the SHF – Proposition 1 and Proposition 7, SIB loans, repayments and interest, and toll revenue and revenue from Comprehensive Development Agreements (CDAs). In addition, portions of the State Motor Vehicles Fuels Fax, vehicles registration fees, local project participation fees, agency reimbursements, as well as smaller revenues, are included.

2019 Legislative Session

During the summer of 2019, Governor Abbott signed two pieces of one-time legislation from the 2019 legislative session – Senate Bill 500 (SB 500) and House Bill 1 (HB 1). Each of the bills allocated moneys to help fund county roads in the energy corridors.

- SB 500 included $125 million from the state's Economic Stabilization Fund (Rainy Day Fund) for counties in the State's energy sector to address roadway infrastructure needs.
- HB 1 included $125 million in funding to TxDOT appropriation funding.

In total, the $250 million will be funneled through a grant process utilizing the County Transportation Infrastructure Fund, which is administered by TxDOT, and requires a match from local funds to participate.

Local Funding

Metropolitan Planning Organization

A metropolitan planning organization (MPO) is a local decision-making body that is responsible for overseeing the metropolitan transportation planning process. An MPO is required for each urban area with a population of more than 50,000 people and gives local input into the planning and implementation of federal transportation funds for the region it serves. Federal legislation governing transportation funds requires metropolitan area transportation plans and programs to be developed through a continuing, cooperative, and comprehensive planning process. MPOs identify projects and set regional transportation priorities through their Metropolitan Transportation Plans which are coordinated with the State or local governments for funding. Amarillo MPO is the only MPO in Segment #1 and serves the city of Amarillo and parts of Potter and Randall Counties.

Private Funding Sources

Within the Permian Basin region (Texas Energy Sector portion), local organizations are taking an active role in moving the Ports-to-Plains conversations forward by continuing to press for roadway construction and economic development money. These groups are focused not only on roadway construction but economic development as well as community development.

County Energy Transportation Reinvestment Zone

A County Energy Transportation Reinvestment Zone (CETRZ) is a specific zone that all lies within one contiguous area that is within a county that has been determined to be affected by oil and gas exploration. A CERTZ is a quasi-governmental entity and must be approved and set up by the County in which the zone lies. The purpose of the zone is to garner the increase in property taxes that may be generated by the planned oil and gas project. This money may be used to pay for transportation projects, including matching funds for infrastructure projects and/or fund transportation infrastructure projects.

Public-Private Partnership

Public-Private Partnerships (P3s) are a contractual agreement between both a public and private entity. P3s allow for greater private participation in the financing, design, construction and maintenance of transportation facilities. The USDOT encourages the use of P3s and that through the involvement of the private sector, project innovation, efficiency and capital can be better used to address complex transportation problems. While the federal government encourages the use of P3s, the State of Texas has legislatively acted to prohibit the creation of new P3s. Until the legislature allows for P3s, this funding source not available for roadways in the State.

CHAPTER 5

Public Involvement and Stakeholder Engagement

5.0 Public Involvement and Stakeholder Engagement

The development of the Ports-to-Plains Corridor Interstate Feasibility Study was guided and informed by the Segment Committees and an extensive stakeholder and public engagement process that included the establishment of three Segment Committees as outlined in HB 1079, as well as consultation with the TxDOT Districts along the corridor. In addition, quarterly public meetings were held in accordance with HB 1079.

The purpose of the public and stakeholder engagement was to gather input from the public about the study needs assessment, existing and forecasted conditions along the corridor, and to provide the public an opportunity to comment on the Segment Committee's preliminary recommendations on improvements to the Ports-to-Plains Corridor and expansion of the existing I-27 Corridor to create a continuous flow, four-lane divided highway that meets interstate highway standards to the extent possible.

5.1 Segment Committee Meetings

The first step in the stakeholder engagement was the creation of three Segment Committees. As described in Chapter 1, the Segment #1 Committee members were selected by the Ports-to-Plains Corridor Interstate Feasibility Study Advisory Committee based on the requirements outlined in HB 1079. The Segment Committee's roles and responsibilities included electing a Chairperson and Vice Chairperson to assist in the development of meeting materials, attending Segment Committee meetings, providing feedback on corridor data and analysis presented by TxDOT, and providing segment-specific study recommendations for consideration by the Advisory Committee.

The Segment #1 Committee met five times throughout the Ports-to-Plains Corridor Interstate Feasibility Study. Some meetings were held in-person while the others were conducted virtually due to inclement weather and the COVID-19 crisis. During the first meeting, the Segment Committee elected Amarillo City Manager, Jared Miller, as the Committee Chair and Vice President of Ports-to-Plans Alliance, Milton Pax, as the Committee Vice Chair.

- A presentation was given at each meeting and handouts were provided to the Segment Committee.
- An online interactive engagement tool called Mentimeter was used to facilitate committee discussion and gather input.
- Electronic interactive and hardcopy maps were provided at meetings for committee members to provide input and develop recommendations.
- Meetings were open to the public, but only committee members participated in the discussions, questions, the map exercises, and made committee recommendations.

5.2 Public Involvement

The second key component of the stakeholder engagement for the Ports-to-Plains Corridor Interstate Feasibility Study was a robust public engagement process in accordance with requirements of HB 1079. The purpose of the outreach was to establish early and continuous public participation opportunities that provided information about transportation issues and decision-making processes to all interested parties, provide access to information about the study to enhance the public's knowledge and ability to participate in the development of the study, and to receive feedback on preliminary recommendations made by the committees before submitting reports.

A variety of strategies and tools were used to gather meaningful input from the public throughout the Ports-to-Plains Corridor Interstate Feasibility Study. This included a project mailing list, website, fact sheets, frequently asked questions, meeting notifications, study-specific email (portstoplains@txdot.gov), and in-person and online public meetings held throughout the Ports-to-Plains Corridor.

TxDOT developed and maintained a project webpage that was continually updated throughout the Ports-to-Plains Corridor Interstate Feasibility Study at www.txdot.gov (Keyword search "Ports-to-Plains"). The webpage provided information about the study and allowed the public to download project materials including maps, fact sheets, and frequently asked questions. The site also provided information about Segment Committees and public meetings including dates, times, agendas, summaries, handouts, and presentations from each meeting.

A project mailing list was developed for the Ports-to-Plains Corridor Interstate Feasibility Study. The mailing list included elected officials, chambers of commerce, school districts, airports, economic development corporations, metropolitan planning organizations, municipalities, tribal groups, ports, airports, major employers, colleges, national and state parks, federal lands, utility companies, groundwater conservation districts, civic groups, counties, business leagues, transit agencies, media groups, and real estate companies. The mailing list was used to send postcard notifications prior to the public meetings. A public officials' mailing list was used to send an email notification to public officials prior to the public meetings.

Amarillo Public Meeting

Eight public meetings were held between November 2019 and May 2020 on a quarterly basis at key study milestones as per HB 1079 requirements. Public meetings were advertised through www.txdot.gov, mailing postcards, an email notification and advertising in local newspapers along the corridor.

Meeting materials were available online to view and to provide comments. Opportunities were provided to the public to submit comments online or printing the comment form and mailing it to TxDOT. The public was given 15 days to submit comments following each meeting. A meeting summary with responses to any comments received was developed for each meeting and posted on www.txdot.gov within 15 days of the close of the comment period.

The public meetings in November and February were held in-person and began with an open house where the public could view informational boards and exhibits and ask questions of TxDOT. Materials were provided in English and Spanish.

TxDOT gave a formal presentation and used the Mentimeter online engagement tool and electronic and hardcopy maps to gather the public input in an interactive engagement format. The public could write comments on the hardcopy maps, provide them electronically on a computer or submit a comment form at the meeting or through the mail.

Due to the COVID-19 virus pandemic and stay-at-home directives, on-line public meetings were held in May 2020 to present the Segment Committee's preliminary recommendations and to gather feedback from the public on them. A live presentation was given, and the public was given the opportunity to ask questions during and after the presentation. The live online meeting was recorded and available online for the public to view and comment for 15 days.

Amarillo Public Meeting

5.3 TxDOT District Consultation

The Ports-to-Plains Corridor crosses six TxDOT Districts: Amarillo, Lubbock, Odessa, Abilene, San Angelo, and Laredo. Coordination with District leadership occurred throughout the Ports-to-Plains Corridor Interstate Feasibility Study. During the data collection phase, the Districts provided information regarding current studies and roadway construction projects in the corridor.

Meetings were held with the Districts to verify the planned and programmed projects in the corridor and to review the cost estimate methodology and the cost estimates. At the request of the Segment Committee, the Districts provided their insights on where frontage roads may be needed in the rural areas. TxDOT District leadership also participated in the Segment Committee meetings and the public meetings.

Segment #1 Committee Meeting November 2019

CHAPTER 6

Recommendations and Implementation Plan

6.0 Recommendations and Implementation Plan

The recommendations were developed based on a comprehensive data-driven and technical analysis and stakeholder informed process. The analysis included data collection, corridor existing conditions, forecasted conditions, and Corridor Interstate Feasibility analysis that covered freight and traffic flow, cost estimates, and economic analysis. As outlined in HB 1079, the Segment #1 Committee guided the development of study within their Segment. Extensive public engagement was also conducted throughout the study to gather input on the Ports-to-Plains Corridor Interstate Feasibility Study. In addition, consultation was conducted with six TxDOT Districts along the corridor.

The data gathered and analyzed and input provided during the Ports-to-Plains Corridor Interstate Feasibility Study justified an interstate upgrade that would extend I-27 in the Segment #1 portion of the corridor. HB 1079 requires each Segment Committee to prioritize their recommendations for improvement and expansion of the Ports-to-Plains Corridor. In developing and prioritizing their recommendations for improving the corridor to interstate, the Segment #1 Committee considered several factors important to their Segment as well as key challenges and findings. These included international trade and freight movement, economic development, energy impacts, congestion relief, and safety and mobility and cost of upgrading the corridor to interstate.

Importance of the Corridor

The Ports-to-Plains Corridor is an international, national and state significant transportation corridor that connects and integrates Texas' key economic engines, international trade, energy production and agriculture. It plays a vital role in supporting the growing demographic and economic centers of south and west Texas functioning as the only north-south corridor facilitating the movement of people and goods in south and west Texas. The economic benefits listed in this report come by fulfilling the implementation plan fully for the entire corridor. The economic benefits of the development of the corridor is important to each segment, but do not accrue to any individual segment without completing the entire corridor.

- Upgrading the Ports-to-Plains Corridor to an interstate would reduce travel times and travel costs, saving businesses and individuals $4.1 billion per year statewide.
- Travel-cost savings of $3.4 billion corridor-wide and $690 million in the state.
- The interstate would enhance access to markets for businesses across the Ports-to-Plains Corridor.
- The interstate would attract new business in the corridor, particularly in the food and agriculture, energy and extractions, warehousing and distribution industries.
- Economic gains in annual GDP of more than $2.2 billion corridor-wide and an additional $640 million for the state.
- Job increases of 17,710 jobs corridor-wide and 4,400 for the state.
- The interstate would result in a return on investment of $17.8 billion, representing a 76 percent return statewide.

International Trade and Freight Movement

With agriculture as a major industry within the Ports-to-Plains Corridor, export markets are vital, making the connection to border crossings of critical importance. As major livestock producers, it is vital to the Segment #1 cattle, hog, dairy, and other providers to be able to safely and efficiently transport their goods across the region and country.

According to the 2012 Census of Agriculture, over 600,000 head of hogs are raised annually, making the Panhandle region the top hog producer in the state. The October 2011 issue of The Texas Association of Dairymen acknowledged Castro County, located within the Texas Panhandle, for becoming the number one milk producer in the

State. The Ports-to-Plains Corridor provides access to three international land ports of entry, Del Rio, Eagle Pass, and Laredo, on the US-Mexico border. The interstate upgrade would provide improved access to markets for agricultural products, which is critical considering the anticipated 88 percent growth in agricultural exports.

The Segment #1 portion of the Ports-to-Plains Corridor also serves as a key connection between Dallas/Fort Worth and markets to the north, including Denver, Colorado, as well as on to the Pacific Northwest giving Texas an interstate connection that does not currently exist.

Energy Development

Energy development is critical to the economy of the region and the state. Both petroleum and chemical products are important sectors in Segment #1. The baseline would not address existing and future challenges with moving energy products to markets and freight movement. With the upgrade to interstate, another 99 percent in diverted truck tons is added above the 2050 baseline forecast of 59 percent growth. The extension of I-27 corridor by upgrading the corridor within Segment #1 will enhance the ability of the energy industry to transport products to local, regional, state, and international markets and support the state's continued economic competitiveness.

Agriculture

Agriculture in the Ports-to-Plains Corridor is the other key economic industry. The production and export of quality agricultural products (crops, livestock, dairy, etc.) generates billions of dollars and relies directly on highway networks for transport of products to market. West Texas is a top producer of cotton, hay, and cattle, and exports most of these products to other states and countries. Inbound products such as feed, fertilizer, and fuel also rely on the Ports-to-Plains Corridor. The total agricultural product sales for the Ports-to-Plains Corridor is approximately $11 billion, and the northern section alone contributes $9 billion to this total. Transporting these products requires a highway system that can provide an efficient, safe, and healthy way to transport livestock and crops.

Key Issues and Challenges

Although Segment #1 includes the existing I-27 and 222 miles of 4-or 6-lane divided roadways, only 36 miles in Segment #1 are currently 2-lane, which are on US 287 north of Stratford and US 87 between Hartley and Dumas. One hundred twenty-five miles have some form of access control (full or partial), with the remaining 150 miles having no access control. Segment #1 has the most railroad infrastructure in the corridor, with several BNSF rail lines between Lubbock and the Oklahoma and New Mexico borders. BNSF also has an intermodal rail freight facility at Amarillo and a transload facility for wind turbine components at Plainview. Other congestion, safety and mobility challenges within Segment #1 are discussed in more detail below.

Congestion Relief

Specifically, current significant congestion in the corridor through downtown Amarillo and Dumas would be relieved with an interstate upgrade. Additionally, in cities like Stratford, with its current intersection with US 54 and rail crossings, and Dalhart would be improved by an interstate upgrade. The interstate upgrade shows a stronger traffic diversion capability over the current highway indicating the ability to reduce traffic congestion from nearby corridors in Segment #1 and from other corridors, including I- 35, in the state.

Safety and Mobility

Safety in Segment #1, especially related to interactions with pedestrians in the current two-way corridor through downtown Amarillo, through Dumas and even in smaller areas such as Cactus, will be significantly improved. Due to the lack of access control, safety in the existing corridor would not be substantially improved even with the planned and programmed projects, as compared to upgrading the corridor to an interstate. The interstate upgrade is estimated to reduce the current Segment #1 crash rate by approximately 28 percent. The interstate upgrade will provide

a travel time benefit due to greater travel speed provided by full access control. In Segment #1, this analysis indicated a free-flow travel time savings of 15 minutes, an average travel time savings of 31 minutes, and peak period travel time savings of 41 minutes.

6.1 Recommendations

As previously mentioned, the Segment #1 Committee's recommendations were developed based on a comprehensive data-driven and technical analysis and stakeholder informed process. A detailed description of the Segment #1 Committee's recommendations is included in **Appendix E - Segment #1 Committee Recommendations**. The Segment #1 Committee recommends a full upgrade of the corridor to an interstate throughout Segment #1.

In addition, the Committee recommends relief route projects, safety and operational improvements, and policy recommendations to address the key issues along the corridor. The recommended improvements are discussed in the following sections.

This list of projects is not financially constrained. Further planning, project development, and programming will be needed before any of these projects could be constructed.

6.1.1 Recommended Interstate Upgrade Projects

The Segment #1 Committee recommends seven projects that would extend I-27 by upgrading the existing primarily two-lane corridor to an interstate. These projects are listed in **Table 6.1** and shown in **Figure 6.1**. These interstate upgrade projects identified would have to go through the project planning and development, and programming process required before any construction to upgrade the corridor to interstate standards.

Table 6.1: Recommended Interstate Upgrade Projects in Segment #1[26]

Roadway	From	To	Description of Work
US 287	Kerrick	Stratford	Upgrade to interstate (approximately 12 miles)
US 287	Stratford	Cactus	Upgrade to interstate (approximately 14 miles)
US 287	Cactus	Dumas	Upgrade to interstate (approximately 7 miles)
US 87	TX/New Mexico State Line	Dalhart	Upgrade to interstate (approximately 28 miles)
US 87	Dalhart	Hartley	Upgrade to interstate (approximately 7 miles)
US 87	Hartley	Dumas	Upgrade to interstate (approximately 18 miles)
US 87	Dumas	Amarillo	Upgrade to interstate (approximately 38 miles)

[26] The mileage included in the table are approximations and do not include miles along the corridor covered by relief route project recommendations. The Segment #1 Committee also supports the widening of thirteen miles of existing I-27 from four to six lanes from Canyon to Amarillo.

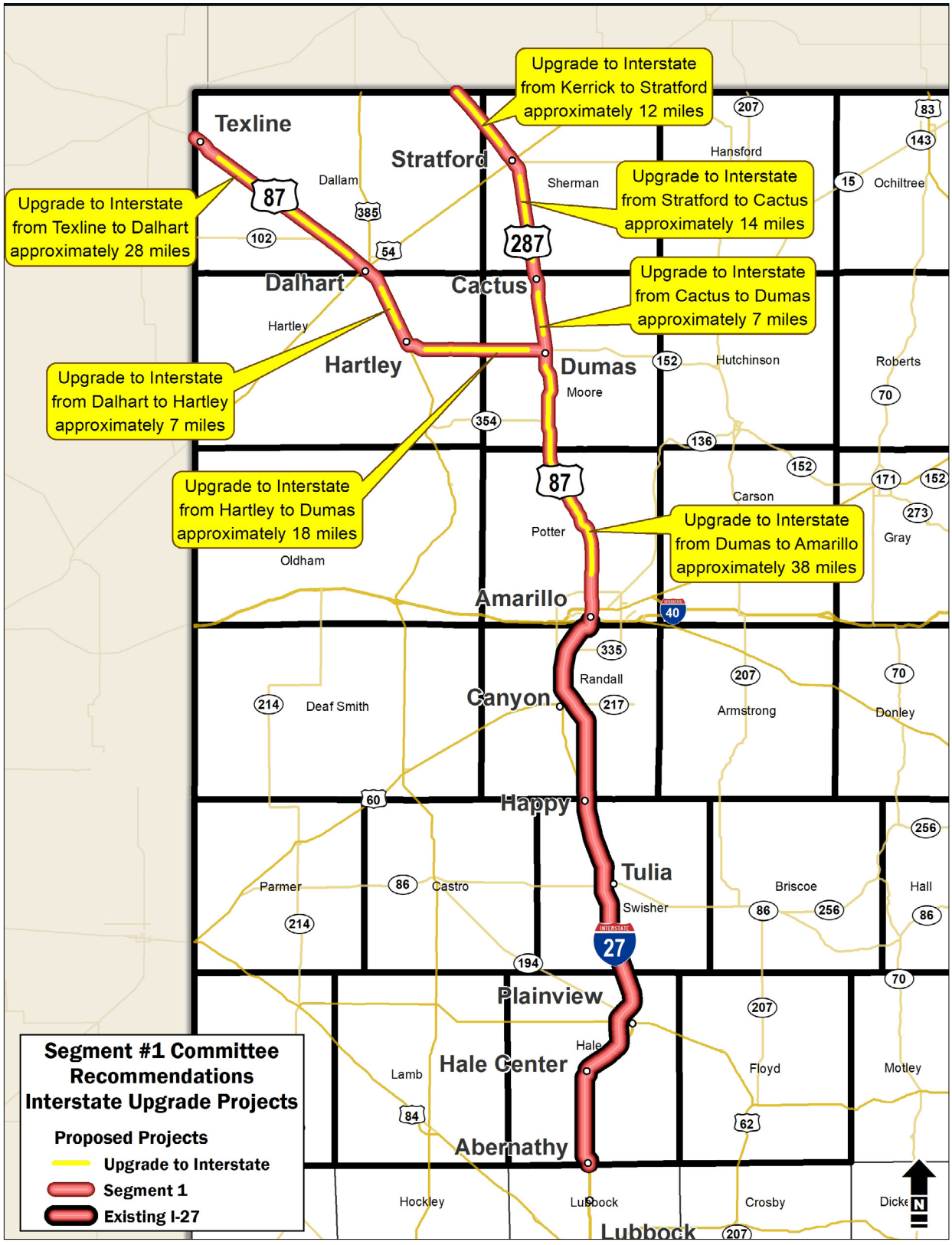


Figure 6.1: Recommended Interstate Upgrade Projects in Segment #1

6.1.2 Recommended Relief Route Projects

The Segment #1 Committee recommends seven relief route projects for cities along the corridor. These projects are listed in **Table 6.2** and shown in **Figure 6.2**. The Committee is recommending relief route projects around communities where upgrading the existing facility to interstate standards would create significant adverse impacts.

The Segment #1 Committee supports making State Loop (SL) 335 in Amarillo the relief route for an interstate upgrade for Amarillo because of the planning and investment already made in the route. SL 335 can be dually designated as SL 335 and US 87 with the existing US 87 being redesignated by TxDOT as Business US 87.

Table 6.2: Recommended Relief Route Projects in Segment #1

Description	Location
Texline Relief Route	Around City of Texline
Dalhart Relief Route	Around City of Dalhart
Hartley Relief Route	Around City of Hartley
Stratford Relief Route	Around City of Stratford
Cactus Relief Route	Around City of Cactus
Dumas Relief Route	Around City of Dumas
State Loop 335 Relief Route	Off US 87, extends along west side of Amarillo (under construction/partially funded)

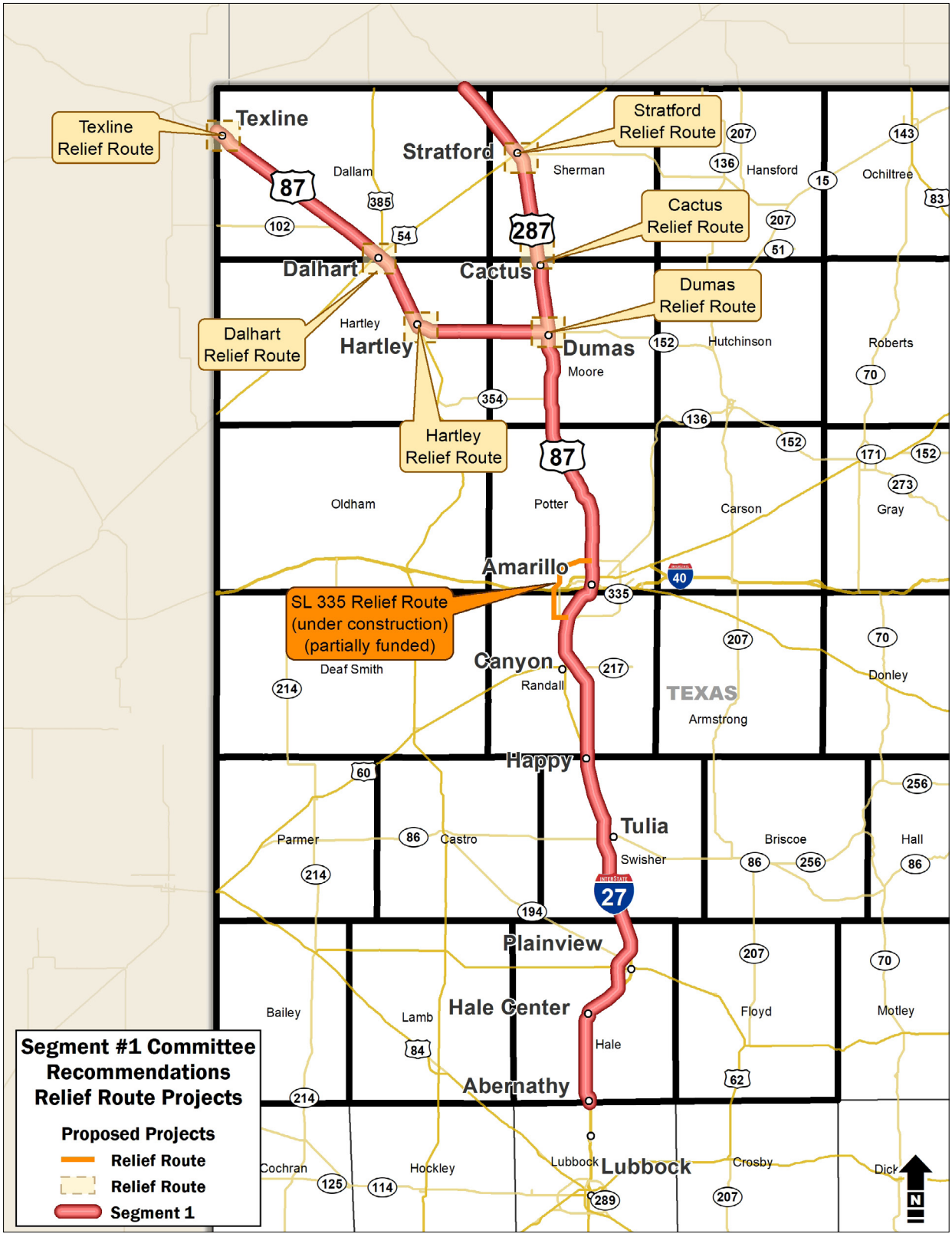


Figure 6.2: Recommended Relief Route Projects in Segment #1

6.1.3 Recommended Safety and Operational Improvements

The Segment #1 Committee recommends four safety and operational improvements along the corridor. Safety and operational improvements compliment the interstate upgrade and are effective and low-cost strategies to improve safety on the existing corridor. These improvements are listed in **Table 6.3** and shown in **Figure 6.3**.

Table 6.3: Recommended Safety and Operational Improvements in Segment #1

Roadway	Description of Work
US 287 at US 54	Improve intersection in Stratford
US 87 at US 54	Improve intersection in Dalhart
I-27	Improve curves within Hale County (near Hale Center)
I-27	Improve roadway drainage between Hale Center and Abernathy

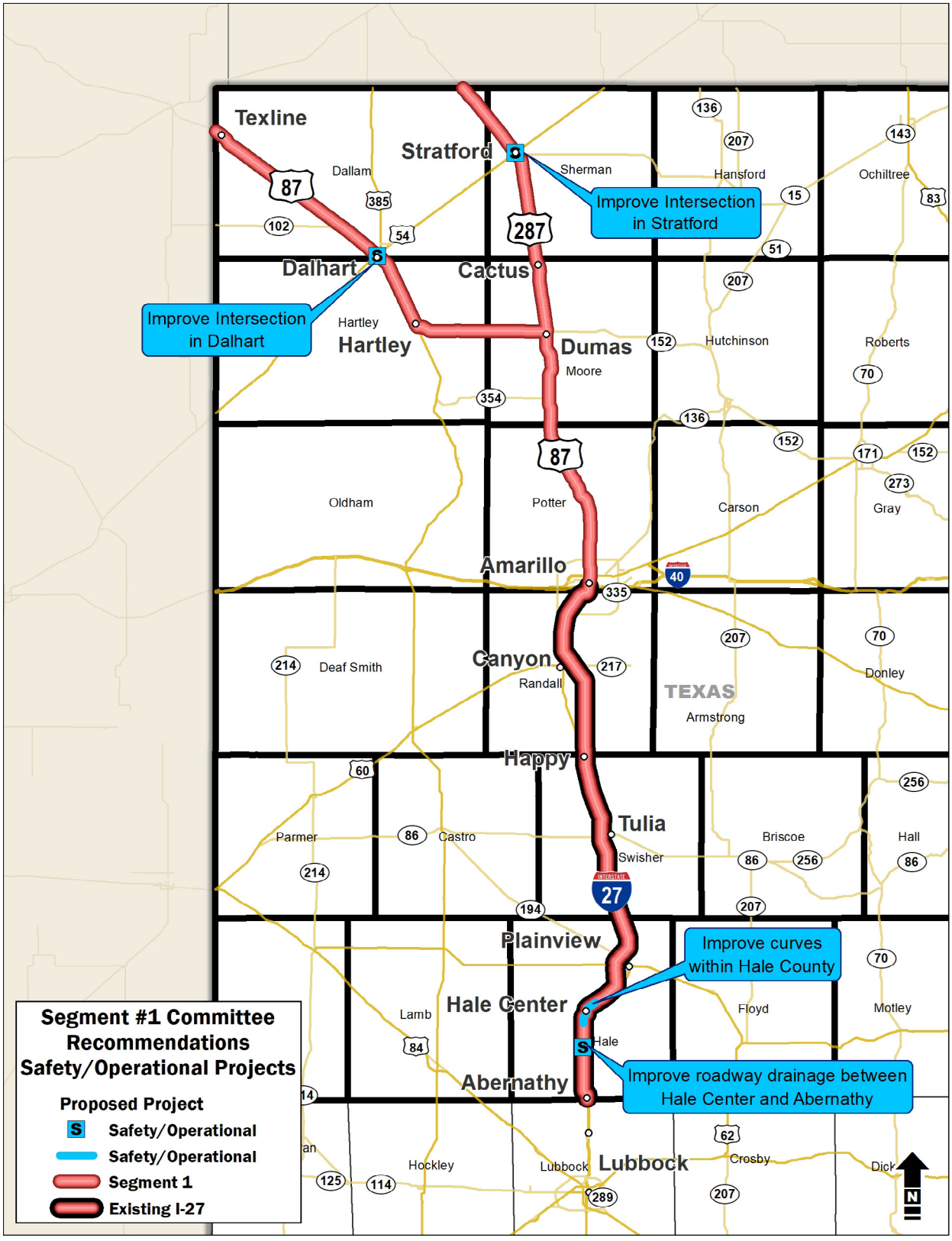


Figure 6.3: Recommended Safety and Operational Improvements in Segment #1

6.1.4 Committee Policy and General Recommendations

In addition to the specific project recommendations, the Segment #1 Committee has several policy and general recommendations to help advance the implementation plan for the improvement to the Ports-to-Plains Corridor to an interstate facility.

Complete Planned and Programmed Projects

The Segment #1 Committee recognizes TxDOT has already begun the process of funding projects that will improve highways by enhancing safety and serving traffic along the Ports-to-Plains Corridor. The Committee endorses efforts to complete the projects already planned and programmed by TxDOT and Amarillo Metropolitan Planning Organization described in Chapter 3.

Detailed Project-Level Planning and Development Process

The Segment #1 Committee recommends that TxDOT continues to further detailed project-level planning and development to implement the project recommendations outlined in the Plan to upgrade the Ports-to-Plains Corridor to an interstate facility. The activities should include the following:

- Develop detailed district-level implementation plan outlining project development process for each of the projects included in the recommendations of this plan.
- Specific location of items like frontage roads, bridges and grade separations (overpasses and underpasses) as the planning and development processes continue, and,
- Future connections and interchanges with the proposed interstate to other regional highways that serve the region.

Environment Review and Public Input

The Segment #1 Committee recommends construction of any relief route undergo an extensive environmental process and require public input and comment.

Importance of Community Support

The Segment #1 Committee recognizes the importance of community support including resolutions for supporting future interstate designation adopted by communities, counties, organizations and businesses within Segment #1 and has included a signed resolution in **Appendix F - A Resolution Supporting the Designation of an Extension of Interstate 27 as a Future Interstate in Texas**.

Proposal Requesting Interstate Designation

As part of the ultimate upgrade of the Ports-to-Plains Corridor to an interstate, the Segment #1 Committee recommends TxDOT submit a proposal requesting designation as a future interstate by FHWA that includes developing agreements with the New Mexico Department of Transportation, Oklahoma Department of Transportation, and Colorado Department of Transportation committing to construction of the corridor within 25 years that includes the following sections:

- Extending US 287 for 190 miles through Oklahoma and Colorado and terminate at I-70 in Limon, Colorado, and
- Extending US 87 for 90 miles through New Mexico and terminate at I-25 in Raton, New Mexico.

Continued Role of the Advisory Committee

Once this Ports-to-Plains Corridor Interstate Feasibility Study is complete, the Segment #1 Committee recommends the Advisory Committee continue to guide the Implementation Strategy to manage the continued development and designation of the interstate upgrade in Texas.

6.2 Segment #1 Implementation Plan

As outlined in HB 1079, the Committee prioritized their recommendations for improvement and expansion of the Ports-to-Plains Corridor. Upon identifying their recommendations, the Segment #1 Committee members conducted a survey to prioritize their projects into short-term, mid-term and long-term categories for implementation.

- The short-term projects are recommended for implementation within one to five years.
- The mid-term projects are recommended for implementation within six to ten years.
- The long-term projects are recommended for implementation for 11 or more years.

These implementation phases are planning recommendations made by the Segment #1 Committee; however, these identified projects may be accelerated or decelerated based on opportunities and reallocation of resources needed for construction and implementation.

Table 6.4 lists the recommended projects and implementation phasing for each project. **Figure 6.4** (short-term), **Figure 6.5** (mid-term) and **Figure 6.6** (long-term) includes maps showing the location of each project in Segment #1.

6.3 Next Steps

As required by HB 1079, the Segment #1 Committee will submit this final report to the Ports-to-Plains Advisory Committee. The Advisory Committee will consider the recommendations of the Segment #1 as well as those of Segments #2 and #3 Committees and make final corridor-wide project recommendations and priorities to TxDOT by October 31, 2020.

Table 6.4: Implementation Plan for Recommended Projects in Segment #1

Description	Location	Short-Term (0-5 years)	Mid-Term (6-10 years)	Long-Term (11+ years)
Upgrade to interstate (approximately 12 miles) [a]	US 287 (from Kerrick to Stratford)	-	-	Project Feasibility [c] / Preliminary Design / Environmental / Final Design / ROW Acquisition / Construction
Upgrade to interstate (approximately 14 miles) [a]	US 287 (from Stratford to Cactus)	-	Project Feasibility [c] / Preliminary Design / Environmental / Final Design	ROW Acquisition [b] / Construction
Upgrade to interstate (approximately 7 miles) [a]	US 287 (from Cactus to Dumas)	-	Project Feasibility [c] / Preliminary Design / Environmental / Final Design	ROW Acquisition [b] / Construction
Upgrade to interstate (approximately 28 miles) [a]	US 87 (from TX/ NM State Line to Dalhart)	-	-	Project Feasibility [c] / Preliminary Design / Environmental / Final Design / ROW Acquisition / Construction

Description	Location	Short-Term (0-5 years)	Mid-Term (6-10 years)	Long-Term (11+ years)
Upgrade to interstate (approximately 7 miles) [a]	US 87 (from Dalhart to Hartley)	-	Project Feasibility [c] / Preliminary Design / Environmental / Final Design	ROW Acquisition [b] / Construction
Upgrade to interstate (approximately 18 miles) [a]	US 87 (from Hartley to Dumas)	-	Project Feasibility [c] / Preliminary Design / Environmental / Final Design	ROW Acquisition [b] / Construction
Upgrade to interstate (approximately 38 miles) [a]	US 87 (from Dumas to Amarillo)	Project Feasibility [c] / Preliminary Design / Environmental	Final Design, ROW Acquisition, Construction	Wrap up Construction
Texline Relief Route [d]	Around City of Texline	-	-	Project Feasibility [c] / Preliminary Design / Environmental / Final Design / ROW Acquisition / Construction
Dalhart Relief Route [d]	Around City of Dalhart	Project Feasibility [c]	Preliminary Design / Environmental / Final Design	ROW Acquisition [b] / Construction
Hartley Relief Route [e]	Around City of Hartley	Project Feasibility [c]	Preliminary Design / Environmental / Final Design	ROW Acquisition [b] / Construction
Stratford Relief Route [f]	Around City of Stratford	Project Feasibility [c]	Preliminary Design / Environmental / Final Design	ROW Acquisition [b] / Construction
Cactus Relief Route [f]	Around City of Cactus	Project Feasibility [c]	Preliminary Design / Environmental / Final Design	ROW Acquisition [b] / Construction

Description	Location	Short-Term (0-5 years)	Mid-Term (6-10 years)	Long-Term (11+ years)
Dumas Relief Route [e]	Around City of Dumas	Project Feasibility [c] / Preliminary Design / Environmental	Final Design / ROW Acquisition b / Construction	Continuation of Construction
State Loop 335 Relief Route	Off US 87, extends along west side of Amarillo (under construction/ partially funded)	Project Feasibility & NEPA nearly complete as of Spring 2020 Final Design, ROW Acquisition; Utility Relocation, Construction	Continuation of Construction	-
Safety/Operational Improvement	US 287 at US 54 intersection improvement in Stratford	Completed as part of interstate development	-	-
Safety/Operational Improvement	US 87 at US 54 intersection improvement in Dalhart	Completed as part of interstate development	Construction	-
Safety/Operational Improvement	I-27 Improvement to Curves within Hale County (near Hale Center)	Project Feasibility [c]	Preliminary Design / Environmental	Final Design / ROW Acquisition / Construction
Safety/Operational Improvement	I-27 Improvement to Roadway Drainage between Hale Center and Abernathy	Project Feasibility [c]	Preliminary Design / Environmental	Final Design / ROW Acquisition / Construction

Notes: [a] The mileage included in the table are approximations and do not include miles along the corridor covered by relief route recommendations.

[b] Coordination with Railroad would be required.

[c] This report is a Feasibility Study of the entire Ports-to-Plains Corridor. Project Feasibility listed in this table are project specific feasibility studies required before Preliminary Design.

[d] Environmental to be completed with US 87 TX/NM State Line to Dalhart interstate upgrade.

[e] Environmental to be completed with US 87 Hartley to Dumas interstate upgrade.

[f] Environmental to be completed with US 287 Stratford to Cactus interstate upgrade.

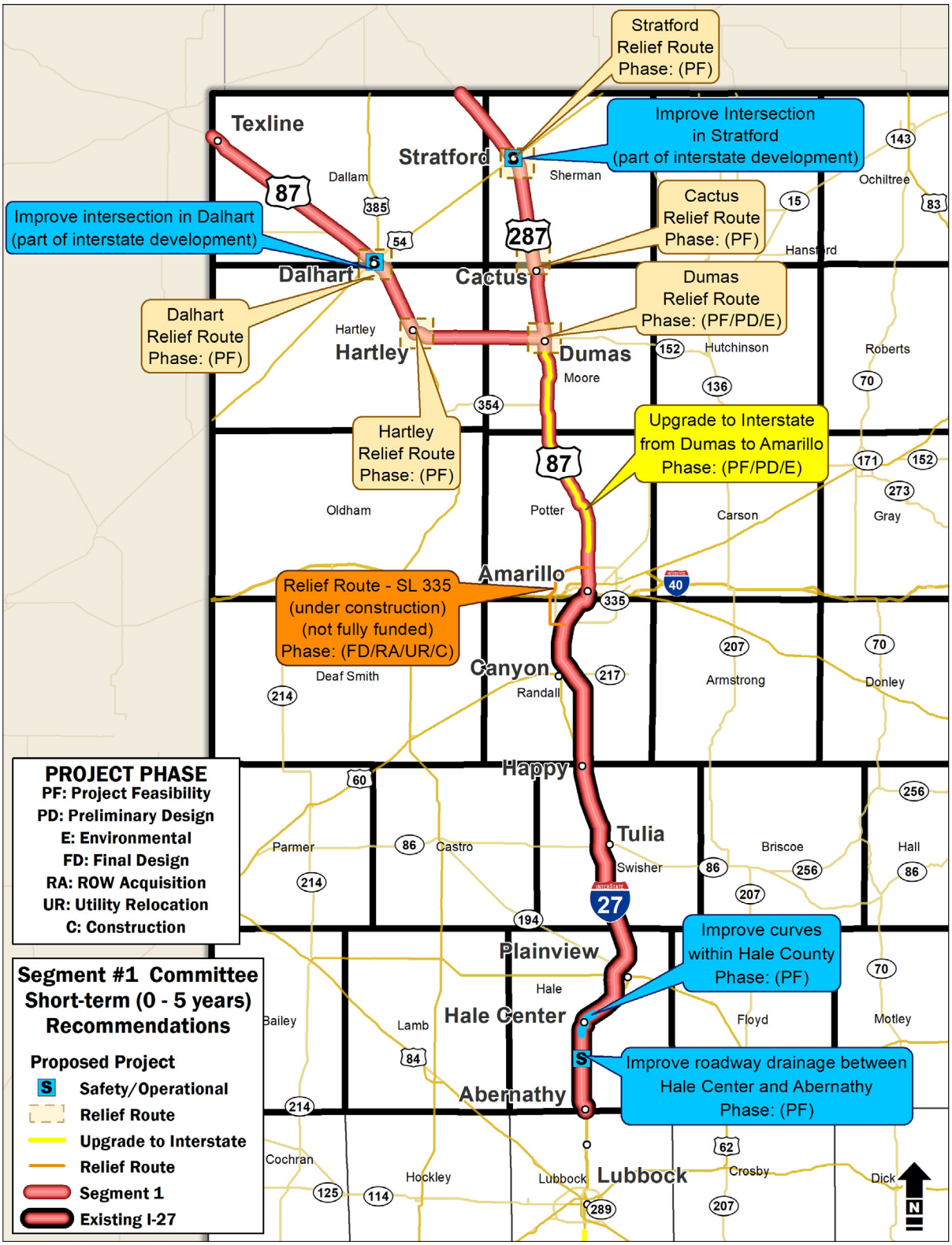


Figure 6.4: Short-Term Projects in Segment #1

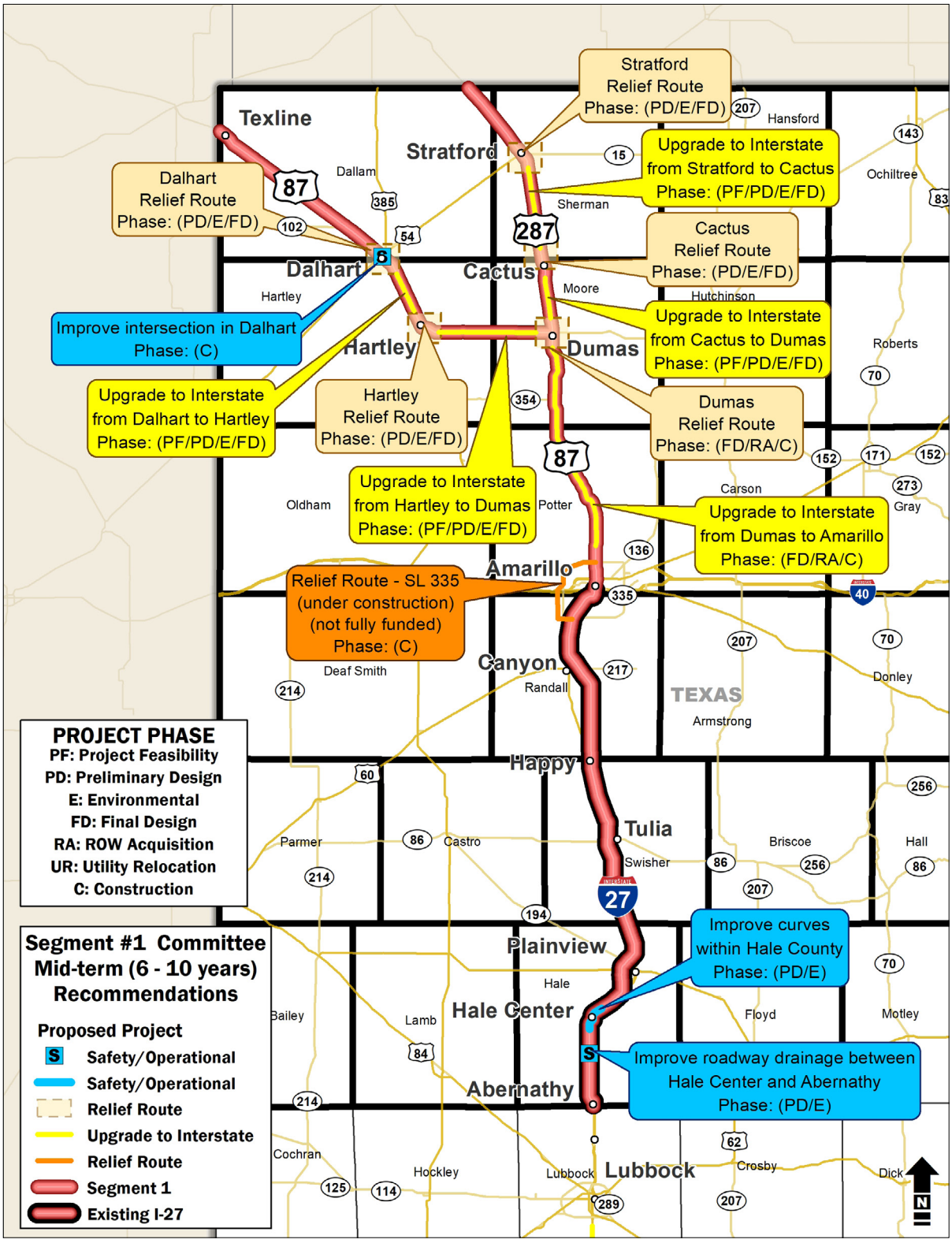


Figure 6.5: Mid-Term Projects in Segment #1

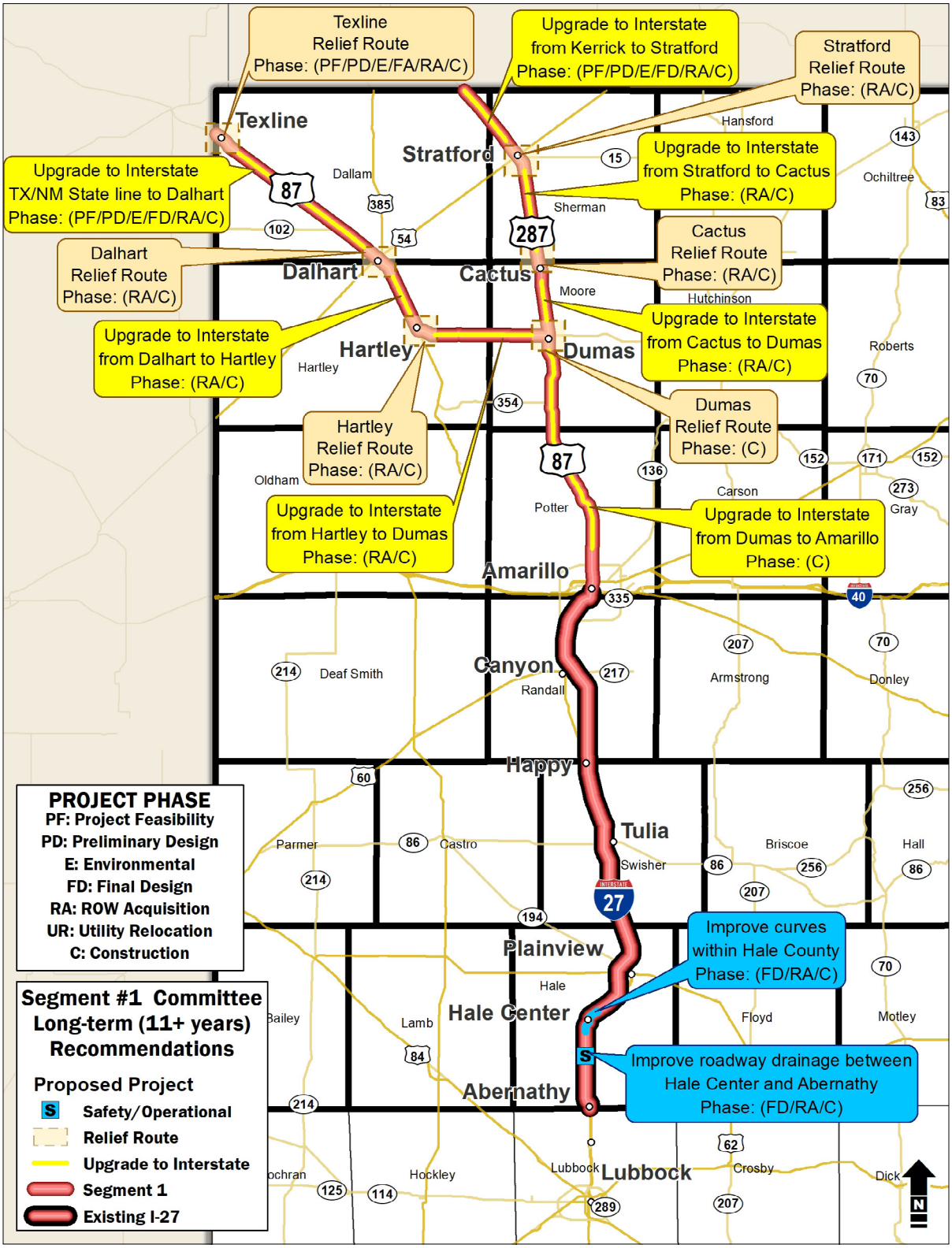


Figure 6.6: Long-Term Projects in Segment #1

APPENDIX A

House Bill 1079

Chapter 756

H.B. No. 1079

AN ACT

relating to a study by the Texas Department of Transportation of the Ports-to-Plains Corridor, including an evaluation of the feasibility of certain improvements to Interstate Highway 27.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF TEXAS:

SECTION 1. (a) In this Act:

(1) "Advisory committee" means the Ports-to-Plains Advisory Committee established under this section.

(2) "Department" means the Texas Department of Transportation.

(3) "Improvement" has the meaning assigned by Section 221.001, Transportation Code.

(4) "Port of entry" has the meaning assigned by Section 621.001, Transportation Code.

(5) "Ports-to-Plains Corridor" means the highways designated as the Ports-to-Plains Corridor under Section 225.069, Transportation Code.

(b) The department shall conduct a comprehensive study of the Ports-to-Plains Corridor. The study must evaluate the feasibility of, and the costs and logistical matters associated with, improvements that create a continuous flow, four-lane divided highway that meets interstate highway standards to the extent possible, including improvements that:

(1) extend Interstate Highway 27:

(A) from its southern terminus to Interstate Highway 20;

(B) from Interstate Highway 20 to Interstate Highway 10; and

(C) from Interstate Highway 10 to the port of entry located in Laredo;

(2) extend Interstate Highway 27:

(A) from its northern terminus to Dumas;

(B) from Dumas to Stratford; and

(C) from Stratford to the Oklahoma state border; and

(3) extend Interstate Highway 27:

(A) from its northern terminus to Dumas;

(B) from Dumas to Dalhart; and

(C) from Dalhart to the New Mexico state border.

(c) In conducting the study under Subsection (b) of this section, the department shall:

(1) use the reports submitted to the department by the advisory committee under Subsection (j) of this section; and

(2) hold quarterly public meetings on a rotational basis in Amarillo, Laredo, Lubbock, and San Angelo to gather public feedback on improvements or expansions to the Ports-to-Plains Corridor.

(d) The department shall establish a Ports-to-Plains Advisory Committee to assist the department in conducting the study under Subsection (b) of this section.

(e) The advisory committee is composed of:

(1) the county judge, or an elected county official or the administrator of the county's road department, as designated by the county judge, of each county along the Ports-to-Plains Corridor, including the counties along the possible extensions of Interstate Highway 27 described by Subsection (b) of this section; and

(2) the mayor, or the city manager or assistant city manager, as designated by the mayor, of Amarillo, Big Spring, Carrizo Springs, Dalhart, Del Rio, Dumas, Eagle Pass, Eldorado, Lamesa, Laredo, Lubbock, Midland, Odessa, San Angelo, Sonora, Sterling City, Stratford, and Tahoka.

(f) The advisory committee shall meet at least twice each year on a rotational basis in Lubbock and San Angelo.

(g) The department, in conjunction with the advisory committee, shall establish segment committees for each geographic segment along the Ports-to-Plains Corridor as determined by the department. The segment committees are composed of:

(1) volunteers who may represent:

(A) municipalities, counties, metropolitan planning organizations, ports, chambers of commerce, and economic development organizations along that segment of the Ports-to-Plains Corridor;

(B) the oil and gas industry; and

(C) the trucking industry;

(2) department representatives; and

(3) any other interested parties.

(h) A segment committee established under Subsection (g) of

this section for a segment along the Ports-to-Plains Corridor shall submit a report to the advisory committee providing input for the study conducted by the department under Subsection (b) of this section. The report must include:

(1) an examination of the ability of the energy industry to transport products to market;

(2) an evaluation of the economic development impacts of the Ports-to-Plains Corridor, including whether the improvement or expansion of the Ports-to-Plains Corridor would create employment opportunities in this state;

(3) a determination of whether improvements or expansion of the Ports-to-Plains Corridor would relieve traffic congestion in the segment;

(4) an examination of freight movement along the Ports-to-Plains Corridor;

(5) a determination and prioritization of improvements and expansion of the Ports-to-Plains Corridor that are warranted in order to promote safety and mobility, while maximizing the use of existing highways to the greatest extent possible and striving to protect private property as much as possible;

(6) a determination of the areas that are preferable and suitable for interstate designation;

(7) an examination of project costs related to the improvement or expansion of the Ports-to-Plains Corridor; and

(8) an assessment of federal, state, local, and private funding sources for a project improving or expanding the Ports-to-Plains Corridor.

(i) Not later than June 30, 2020, each segment committee established under Subsection (g) of this section shall submit to the advisory committee the report described by Subsection (h) of this section, including priority recommendations for improvement and expansion of the Ports-to-Plains Corridor.

(j) Not later than October 31, 2020, the advisory committee shall review and compile the reports submitted by each segment committee under Subsection (i) of this section and submit to the department:

(1) the reports submitted by each segment committee; and

(2) a summary and any recommendations based on those reports.

(k) The advisory committee and each segment committee shall conduct extensive public involvement campaigns for feedback on preliminary recommendations made by the committees before submitting the reports under Subsections (i) and (j) of this section.

(l) Not later than January 1, 2021, the department shall submit a report on the results of the study conducted under Subsection (b) of this section to the governor, the lieutenant governor, the speaker of the house of representatives, and the presiding officer of each standing committee of the legislature with jurisdiction over transportation matters.

(m) This Act expires August 31, 2021.

SECTION 2. This Act takes effect immediately if it receives a vote of two-thirds of all the members elected to each house, as

provided by Section 39, Article III, Texas Constitution. If this Act does not receive the vote necessary for immediate effect, this Act takes effect September 1, 2019.

H.B. No. 1079

President of the Senate

Speaker of the House

I certify that H.B. No. 1079 was passed by the House on April 24, 2019, by the following vote: Yeas 143, Nays 1, 2 present, not voting; and that the House concurred in Senate amendments to H.B. No. 1079 on May 22, 2019, by the following vote: Yeas 126, Nays 16, 2 present, not voting.

Chief Clerk of the House

I certify that H.B. No. 1079 was passed by the Senate, with amendments, on May 15, 2019, by the following vote: Yeas 30, Nays 1.

Secretary of the Senate

APPROVED: 6-8-2019

Date

Governor

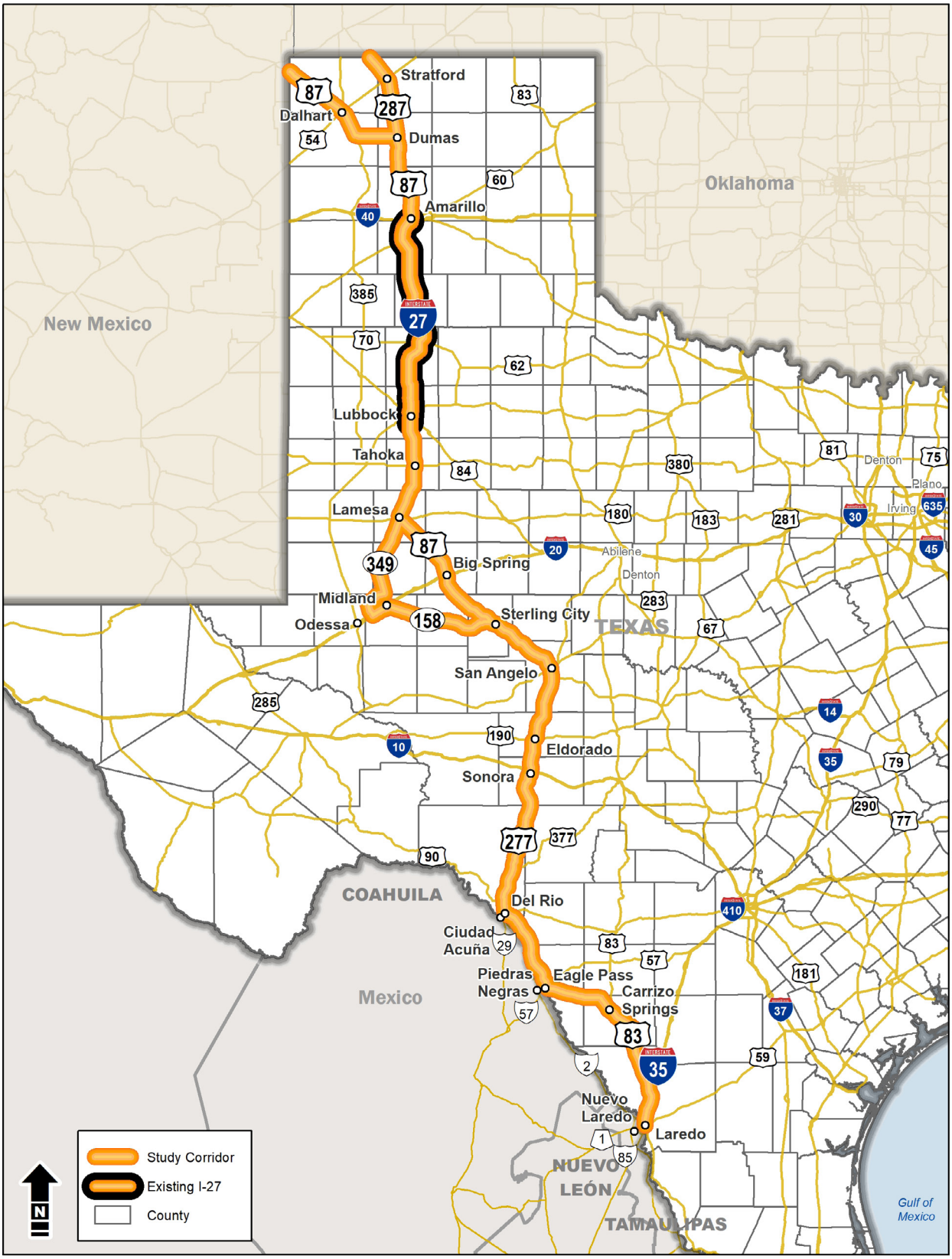
FILED IN THE OFFICE OF THE SECRETARY OF STATE
7:00 pm O'CLOCK
JUN 10 2019
Secretary of State

APPENDIX B

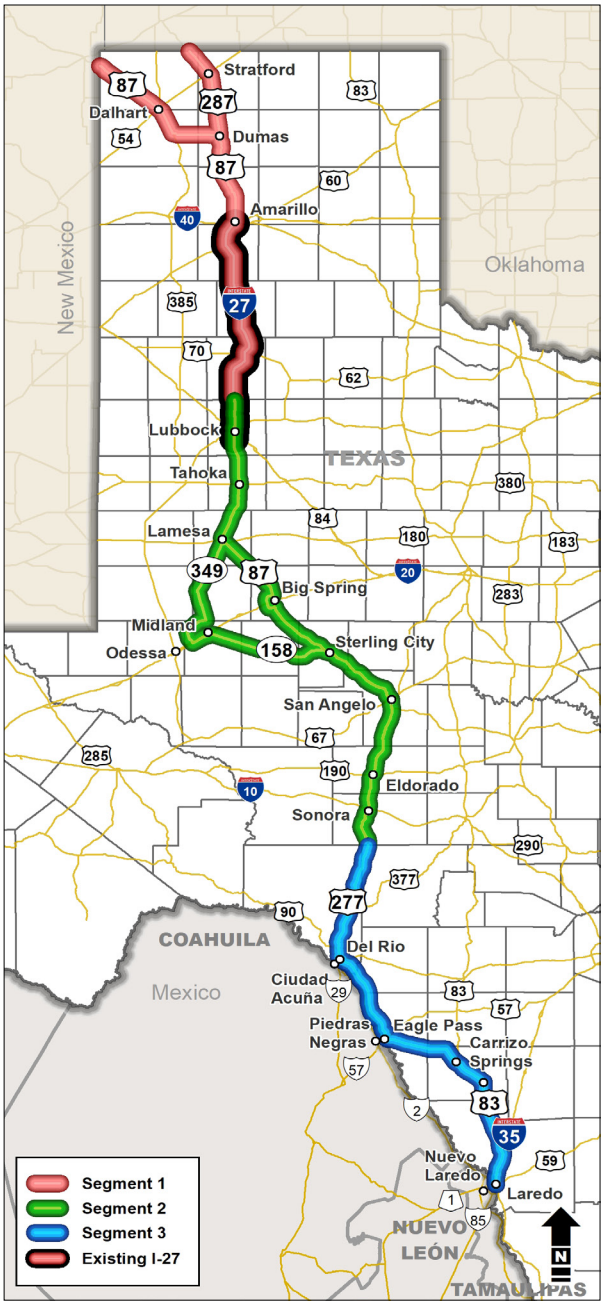
Key Study Maps

Key Study Maps

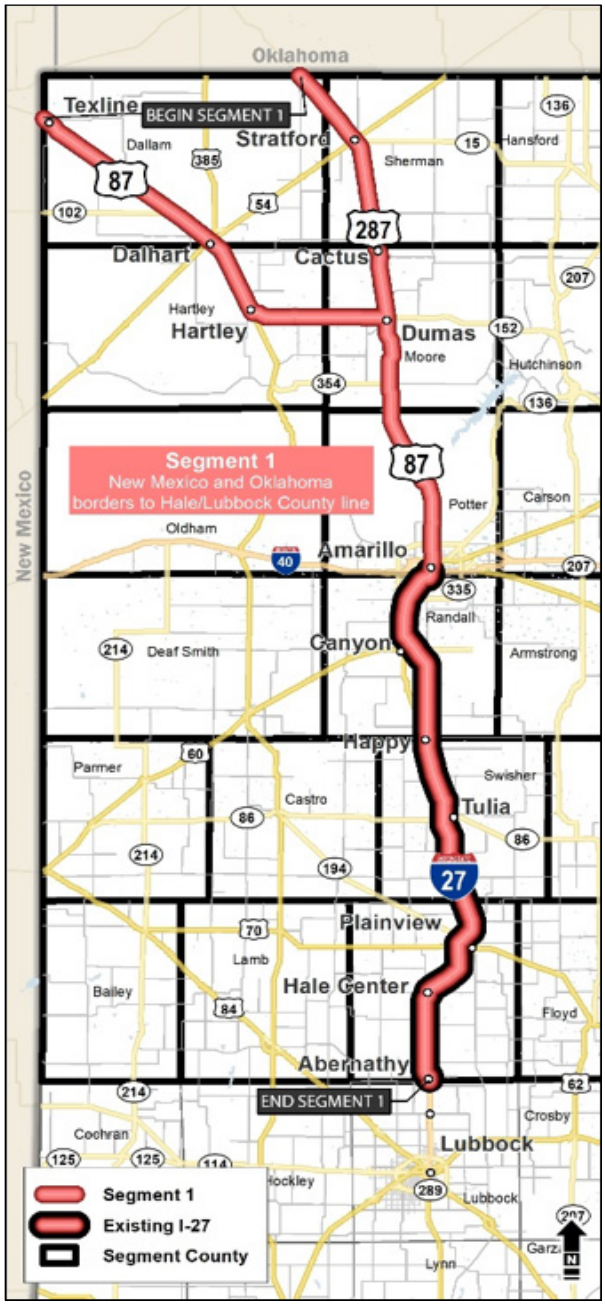
- Ports-to-Plains Corridor
- Segment Map and Segment #1 Map
- Corridor Existing Roadway Type
- Laredo Day 7 Outbound Truck Trip Flows
- Baseline 2050 Traffic Volumes in Segment #1 and Interstate 2050 Traffic Volumes in Segment #1
- 2050 Total Traffic Diversion
- Warehouse Distribution Sector Development by Access to Interstate Highways in Texas



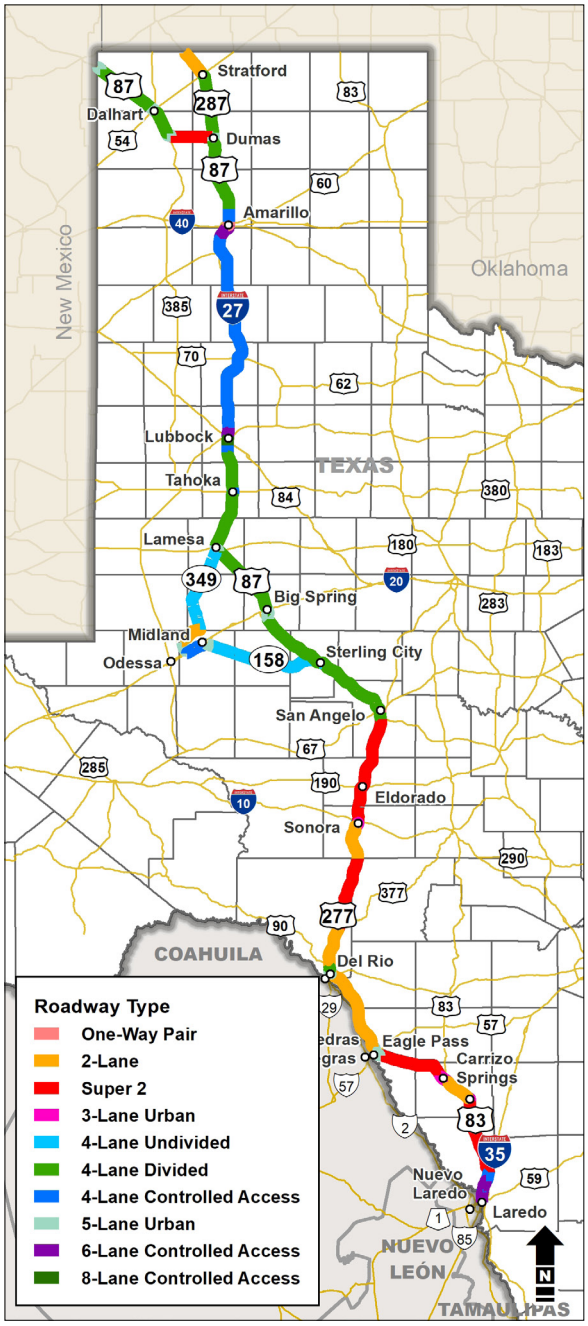
Ports-to-Plains Corridor



Segments Map

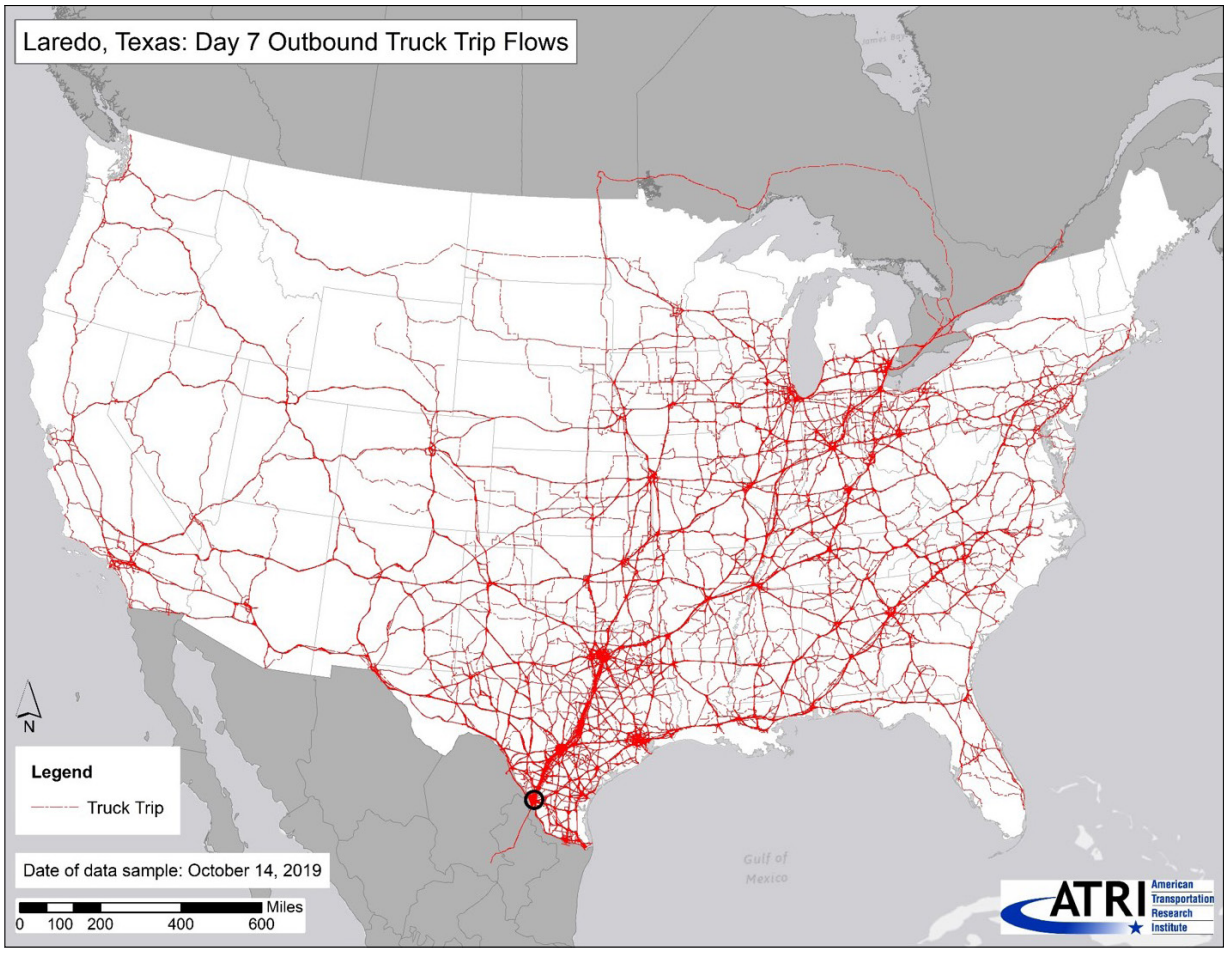


Segment #1 Map

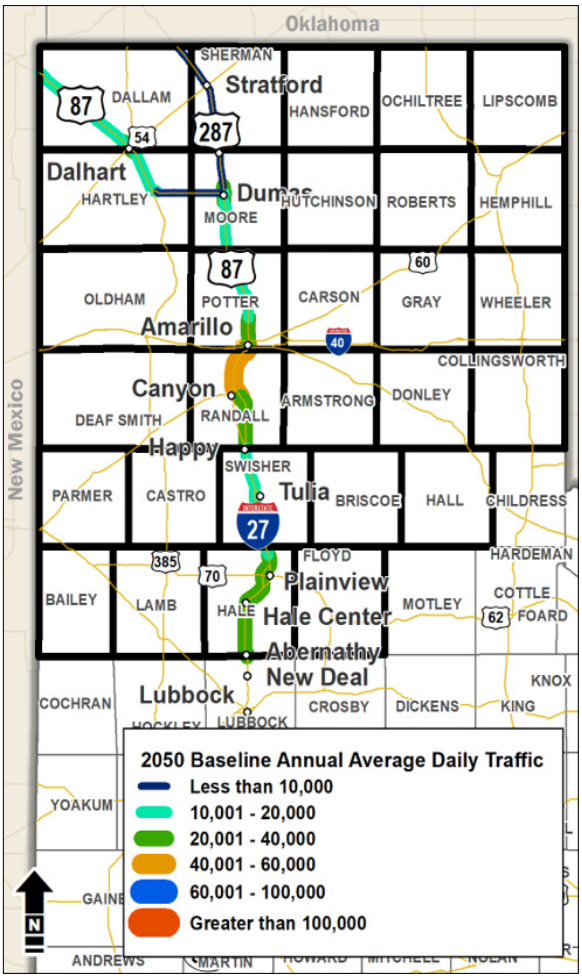


Corridor Existing Roadway Type
Source: TxDOT Roadway Inventory Database, 2017

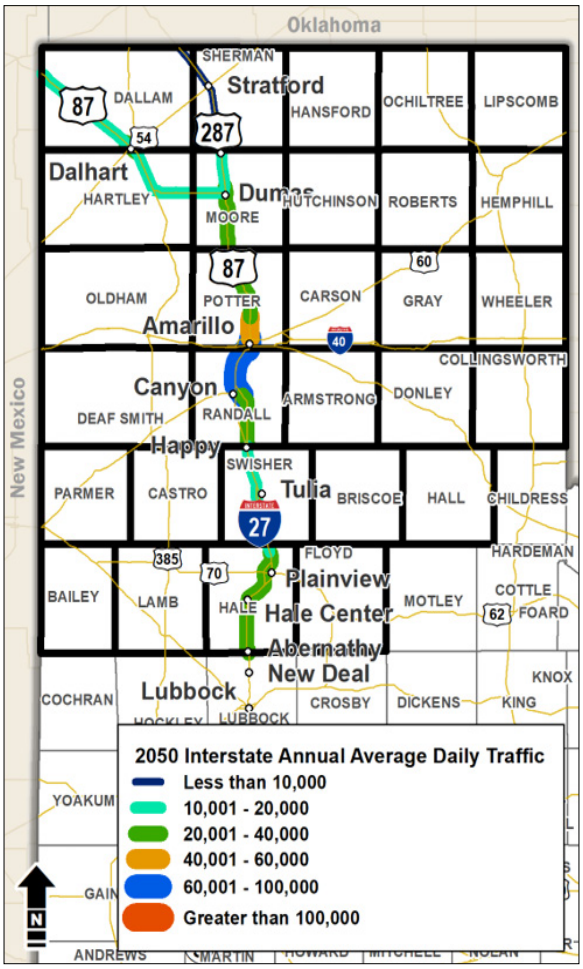
Segment #1 Existing Roadway Type
Source: TxDOT Roadway Inventory Database, 2017



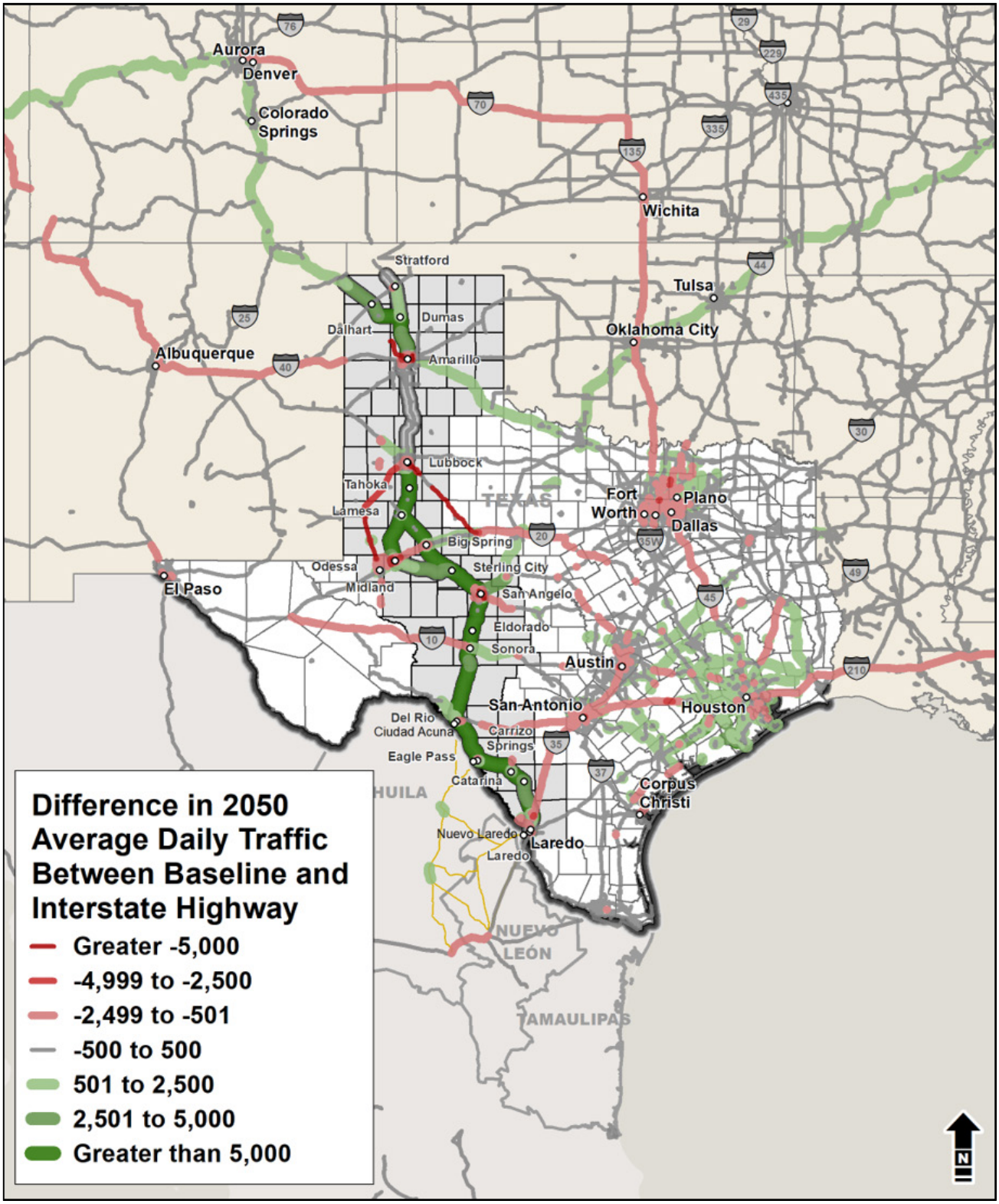
Laredo: Day 7 Outbound Truck Trip Flows
Source: ATRI, 2019



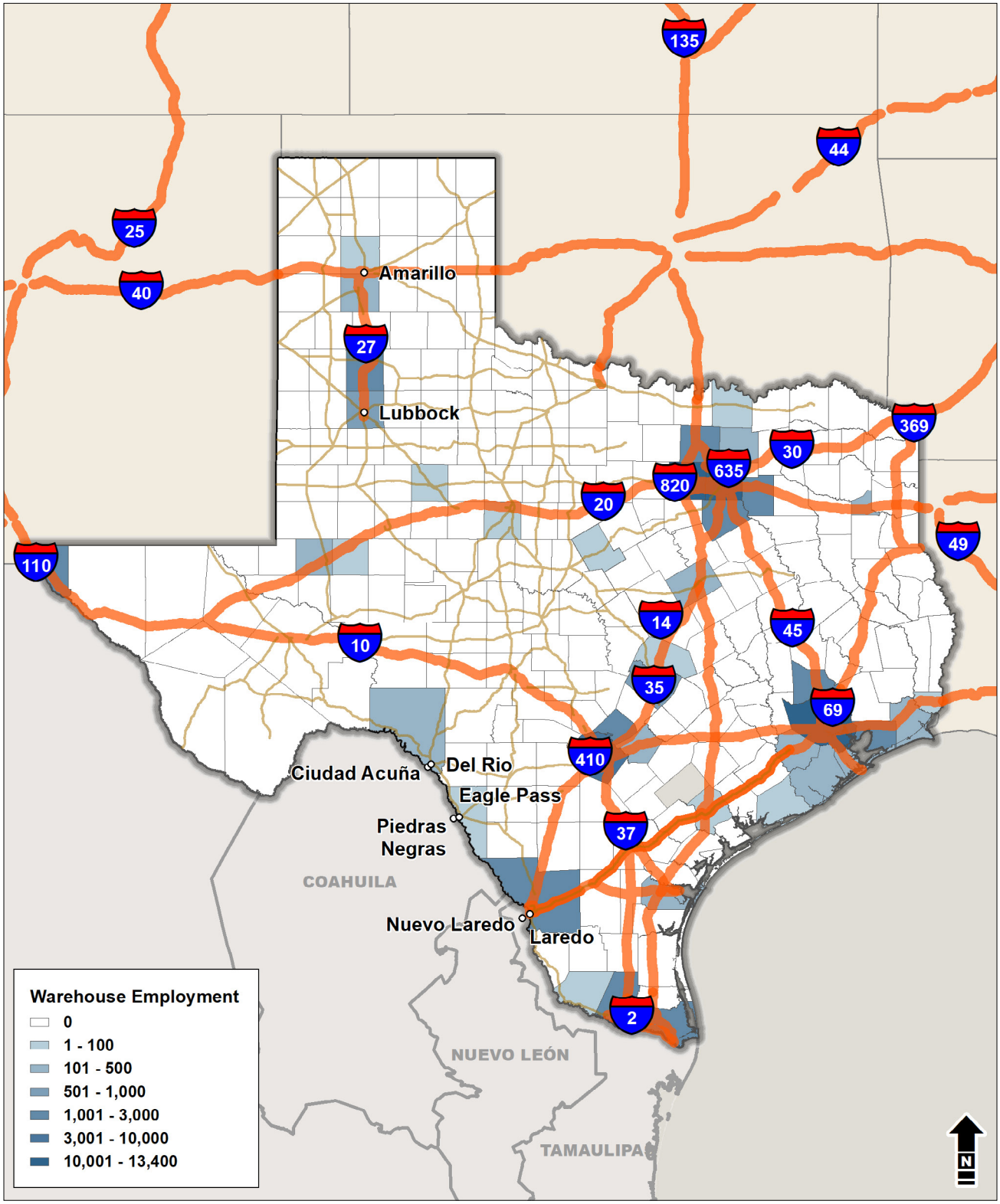
Baseline 2050 Traffic Volumes
Source: TxDOT SAM and STARS2



Interstate 2050 Traffic Volumes
Source: TxDOT SAM and STARS2



2050 Total Traffic Diversions
Source: TXDOT SAM and TxDOT 2018 RID



Warehouse and Distribution Sector Development by Access to Interstate Highways in Texas
Source: National Cooperative Freight Research Program Report 13

APPENDIX C

Federal Highway Administration Guidance Criteria for Evaluating Requests for Interstate Designation

Federal Highway Administration Guidance Criteria for Evaluating Requests for Interstate Designation

Method 2

Guidance	Evaluation
1. The proposed route should be of sufficient length to serve long-distance interstate travel, such as connecting routes between principal metropolitan cities or industrial centers important to national defense and economic development.	A portion of Segment #1, 103 miles, is already designated as interstate; I-27 from Amarillo, Texas to Lubbock, Texas. The remaining 172 miles of Segment #1 connects to a principal metropolitan city in Amarillo to the south. However, the remaining 172 miles of Segment#1 do not connect to a major metropolitan city or industrial centers. Consider extending Segment #1 190 miles through Oklahoma and Colorado and terminate at I-70 in Limon, Colorado, or extending 90 miles through New Mexico and terminate at I-25 in Raton, New Mexico, or both. Coordination required with the Departments of Transportation in New Mexico, Colorado, and Oklahoma.
2. The proposed route should not duplicate other interstate routes. It should serve interstate traffic movement not provided by another interstate route.	The proposed route would not duplicate other interstate routes as there are no existing north-south interstate highways serving west Texas other than existing I-27.
3. The proposed route should directly serve major highway traffic generators. The term “major highway traffic generator” means either an urbanized area with a population over 100,000 or a similar major concentrated land use activity that produces and attracts long-distance interstate and statewide travel of persons and goods. Typical examples of similar major concentrated land use activities would include a principal industrial complex, government center, military installation, or transportation terminal.	A portion of Segment #1, 103 miles, is already designated as interstate; I-27 from Amarillo to Lubbock. The remaining 172 miles of Segment #1 connects to a major highway traffic generator in Amarillo. However, the other cities and towns along the corridor for the rest of Segment #1 currently have populations of less than 100,000 and are not projected to meet populations of over 100,000 within the next 30 years. Consider extending 190 miles through Oklahoma and Colorado and terminate at I-70 in Limon, Colorado, or extending 90 miles through New Mexico and terminating at I-25 in Raton, New Mexico, or both. Coordination with the Departments of Transportation in New Mexico, Colorado, and Oklahoma will be needed.

Guidance	Evaluation
4. The proposed route should connect to the interstate System at each end, with the exception of interstate routes that connect with continental routes at an international border or terminate in a “major highway traffic generator” that is not served by another interstate route. In the latter case, the terminus of the interstate route should connect to routes of the National Highway System that will adequately handle the traffic. The proposed route also must be functionally classified as a principal arterial and be a part of the National Highway System.	A portion of Segment #1, 103 miles, is already designated as interstate; I-27 from Amarillo, Texas to Lubbock, Texas. Consider extending 190 miles through Oklahoma and Colorado and terminating at I-70 in Limon, Colorado, or extending 90 miles through New Mexico and terminating at I-25 in Raton, New Mexico, or both. Concurrence and coordination with the Departments of Transportation in New Mexico, Colorado, and Oklahoma will be needed.
5. The proposed route must meet all the current geometric and safety standards criteria as set forth in 23 CFR part 625 for highways on the interstate system, or a formal agreement to construct the route to such standards within 25 years must be executed between the State(s) and the Federal Highway Administration. Any proposed exceptions to the standards shall be approved at the time of designation.	FHWA and TxDOT would have to enter into a formal agreement with the Departments of Transportation in New Mexico, Colorado, and Oklahoma to construct to interstate standards within 25 years.
6. A route being proposed for designation under 23 U.S.C. 103(c)(4)(B) must have an approved final environmental document (including, if required, a 49 U.S.C. 303(c) [Section 4(f)] approval) covering the route and project action must be ready to proceed with design at the time of designation. Routes constructed to interstate standards are not necessarily logical additions to the interstate system unless they clearly meet all the above criteria.	TxDOT and the Departments of Transportation in New Mexico, Colorado, and Oklahoma would have to perform an environmental study and complete an environmental documentation and clearance process.

APPENDIX D

Texas Department of Transportation Unified Transportation Program Funding Categories

Texas Department of Transportation Twelve Unified Transportation Program Funding Categories

Category	Common Project Types
Category 1 Preventative Maintenance and Rehabilitation	Roadway surfacing and rehabilitation
Category 2 Metropolitan and Urban Area Corridor Projects	Urban road capacity, interchanges
Category 3 Non-Traditionally Funded Transportation Projects	Various
Category 4 Statewide Connectivity Corridor Projects	Regional corridor capacity
Category 5 Congestion Mitigation and Air Quality Improvement	Intersection and interchange improvements
Category 6 Structure Replacement and Rehabilitation (Bridge)	Bridge replacement and repair
Category 7 Metropolitan Mobility and Rehabilitation	Urban transportation improvements
Category 8 Safety	Medians, shoulders, signals, guard rails, rumble strips, grade separation, etc.
Category 9 Transportation Alternatives Set-Aside Program	Bike and pedestrian infrastructure
Category 10 Supplemental Transportation Programs	Border infrastructure, state park roads
Category 11 District Discretionary	Roadway resurfacing, passing lanes
Category 12 Strategic Priority	Urban and rural road capacity

APPENDIX E

Segment #1 Committee Recommendations

Segment Committee #1
Recommendations

General Recommendations

- Recommend that the entire Segment #1 Corridor should upgrade to interstate. Including
  - US 287 north of Dumas to the Texas/Oklahoma Border
  - US 87 west of Dumas to the Texas/New Mexico Border
  - US 87/287 between Dumas and the northern terminus of I-27 in Amarillo
- Recommend that TxDOT submit a proposal requesting designation as a future interstate by FHWA including:
  - Extending US 287 for 190 miles through Oklahoma and Colorado and terminate at I-70 in Limon, CO, and
  - Extending US 87 for 90 miles through New Mexico and terminate at I-25 in Raton, New Mexico
  - This would include developing an agreement with NMDOT, ODOT, and CDOT committing to construction within 25 years.
- Dual Designation
  - The report should reflect that Loop 335 in Amarillo should be the relief route for Amarillo because of the planning and investment already made in the route. Loop 335 can be dually designated as Loop 335 and US 87 with the existing US 87 being redesigned by TxDOT as Business US 87.
- Other Regional Highways
  - Committee members recognized the region is served by a number of other regional highways where future connections and interchanges with the proposed interstate are needed.
- Relief Routes
  - Construction of any relief route would go through local leadership review, public input and comment, and an extensive environmental process.
- Additional Planning
  - The Committee recognizes that, as the planning and development processes continue, additional decisions will be made regarding specific location of items like frontage roads, bridges, and grade separations (overpasses).
- Continue Construction of Currently Planned and Programmed Projects
  - The committee recognized that TxDOT has already begun the process of funding projects that will improve highways by enhancing safety and serving traffic along the Corridor. The committee endorsed efforts to complete the projects already planned and programmed by TxDOT and Amarillo MPO.
- Community Support
  - The Committee support including Resolutions that support Future Interstate Designation adopted by communities, counties, organizations, and businesses in the Appendix of the Segment Committee Report for Segment #1.
- Ongoing Coordination on Interstate Development
  - Once this Feasibility Study is complete, the Segment Committee recommends that the Advisory Committee continues to guide the Implementation Strategy to manage the continued development and designation of the Interstate Upgrade in Texas.

Segment Committee #1
Recommendations
Page 2

Infrastructure Improvements

The Subcommittee recommends that the following Safety and Capacity Improvements already presented to the Segment #1 Committee be included in the Report

- **Safety Projects**
  - Improve intersection US 287/ US 54 in Stratford
  - Improve intersection US 54 in Dalhart
  - Straighten curves through Hale Center
- **Capacity improvements**
  - Expand US 287 from 2 lanes to 4 lanes from Stratford to the TX/OK State line
  - Expand US 87 from 2 lanes to 4 lanes Dumas to Hartley
  - Expand I-27 from 4 lanes to 6 lanes between Canyon and Amarillo

Segment #1 Committee Preliminary Recommended Projects Map

The Subcommittee requests that one amendment to the Preliminary Recommended Projects Map be made:

- Please redirect the pointer for *Amarillo Locally Preferred Route Study* from the east side of Amarillo to the same route *Relief Route – Amarillo (under construction) (not fully funded)*. With Loop 335 already under construction to the west, the interstate would not also run to the east.

Key Messages

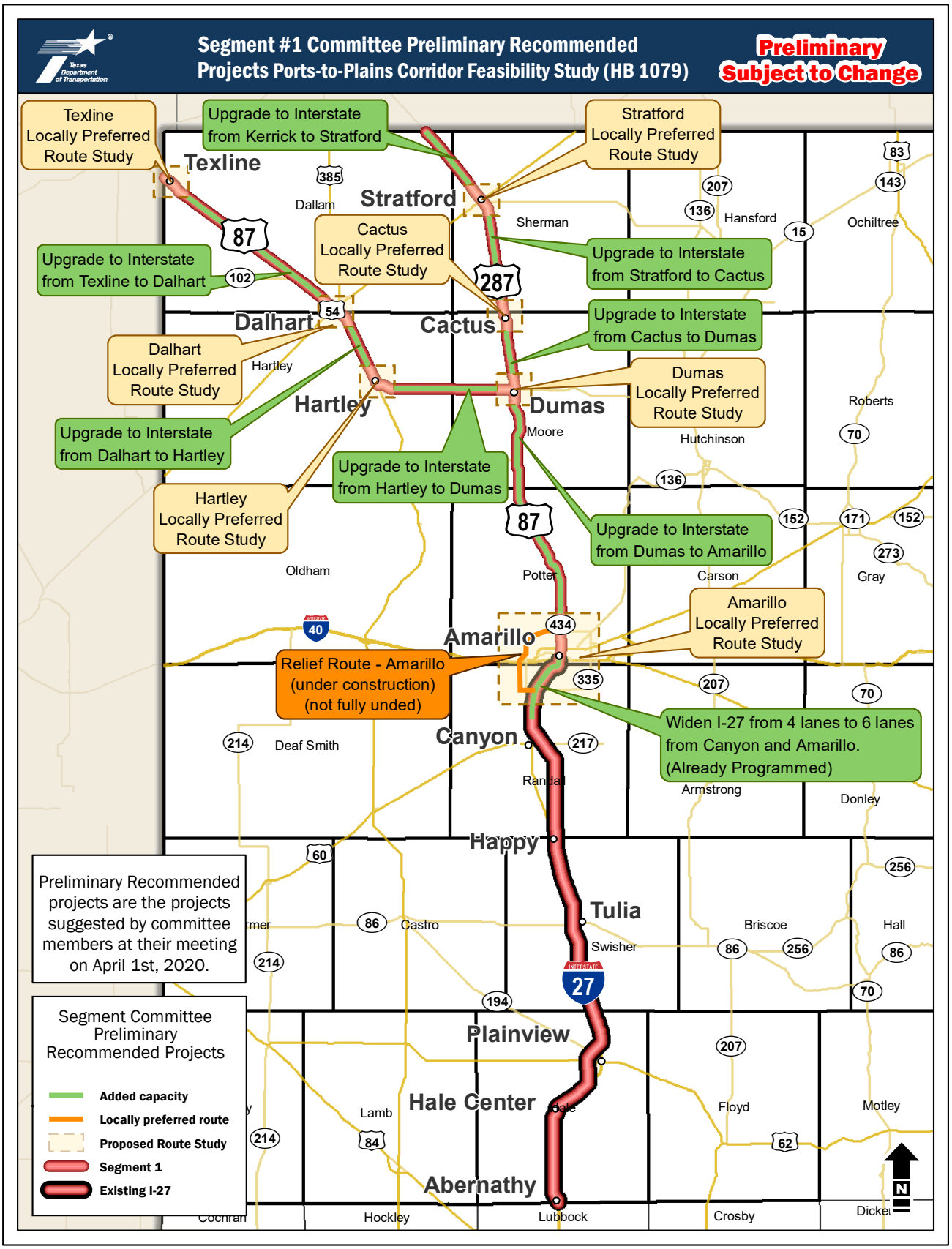
Petroleum and agricultural products such as livestock, dairy, and cotton are strong industry sectors in Segment #1. The Panhandle and South Plains area are one of the largest cotton-producing areas in the world. Both these economic sectors as well as others will benefit from an Interstate upgrade.

- Energy Impacts
  - Both Petroleum and Chemical Products are important sectors in Segment #1. The Baseline would not address existing and future challenges with moving energy products to markets and freight movement. With the upgrade to Interstate, another 99 percent in diverted truck tons is added above the 2050 Baseline forecast of 78 percent growth.
- Freight Movement
  - With Agriculture as a major industry, export markets are vital, making the connection to border crossings of critical importance. As major livestock producers, it is vital to the Segment #1 cattle, hog, dairy, and other providers that they are able to safely and efficiently transport their goods across the region and country. The Texas High Plains is often referred to as the Cattle Feeding Capital of the World. During the 2009-2012 time period, fed cattle marketed in the area averaged just under 5 million head, which corresponded to 78.5 percent of the states' total. According to the 2012 Census of Agriculture, over 600,000 head of hogs are raised annually, making the Panhandle region the top hog producer in the state. The October 2011 issue of The Texas Association of Dairymen acknowledged Castro County, located within the Texas Panhandle, for becoming the number one milk producer in the State. The Ports-to-Plains Corridor provides access to three international land ports of entry, Del Rio, Eagle Pass,

Segment Committee #1
Recommendations
Page 3

and Laredo, on the US-Mexico border. The Interstate upgrade would provide improved access to markets for agricultural products, which is critical considering the anticipated 88 percent growth in agricultural exports. The Segment #1 corridor also serves as a key connection between Dallas/Fort Worth and markets to the north, including Denver, CO, as well as on to the Pacific Northwest giving Texas the interstate connection that does not currently exist.

- Congestion Relief
    - Specifically, current significant congestion in the corridor through downtown Amarillo and Dumas would be relieved with an interstate upgrade. Additionally, in cities like Stratford, with its current intersection with US 54 and rail crossings, and Dalhart would be improved by an interstate upgrade. The Interstate upgrade shows a stronger traffic diversion capability over the current highway indicating the ability to reduce traffic congestion from nearby corridors in Segment #1 and from other corridors, including I-35, in the state.
- Safety and Mobility
    - Safety in Segment #1, especially related to interactions with pedestrians in the current two-way corridor through downtown Amarillo, through Dumas and even in smaller areas such as Cactus, will be significantly improved. The existing corridor would not improve safety in the Ports-to-Plains Corridor over the improvements that are already programmed. However, with the Interstate upgrade, it is estimated to reduce the current Segment #1 crash rate by approximately 28 percent. The Interstate upgrade will provide a travel time benefit due to greater travel speed provided by full access control. In Segment #1, this analysis indicated a free-flow travel time savings of 15 minutes, an average travel time savings of 31 minutes, and peak period travel time savings of 41 minutes.


Segment #1 Committee Preliminary Recommended Projects Ports-to-Plains Corridor Feasibility Study (HB 1079)
Preliminary Subject to Change
Texline Locally Preferred Route Study
Upgrade to Interstate from Kerrick to Stratford
Stratford Locally Preferred Route Study
Upgrade to Interstate from Texline to Dalhart
Cactus Locally Preferred Route Study
Upgrade to Interstate from Stratford to Cactus
Upgrade to Interstate from Cactus to Dumas
Dalhart Locally Preferred Route Study
Dumas Locally Preferred Route Study
Upgrade to Interstate from Dalhart to Hartley
Upgrade to Interstate from Hartley to Dumas
Hartley Locally Preferred Route Study
Upgrade to Interstate from Dumas to Amarillo
Amarillo Locally Preferred Route Study
Relief Route - Amarillo (under construction) (not fully unded)
Widen I-27 from 4 lanes to 6 lanes from Canyon and Amarillo. (Already Programmed)
Texline
Dalhart
Stratford
Cactus
Hartley
Dumas
Amarillo
Canyon
Happy
Tulia
Plainview
Hale Center
Abernathy
Dallam
Sherman
Hansford
Ochiltree
Hartley
Moore
Hutchinson
Roberts
Oldham
Potter
Carson
Gray
Deaf Smith
Randall
Armstrong
Donley
Castro
Swisher
Briscoe
Hall
Lamb
Floyd
Motley
Cochran
Hockley
Lubbock
Crosby
Dickens
Preliminary Recommended projects are the projects suggested by committee members at their meeting on April 1st, 2020.
Segment Committee Preliminary Recommended Projects
Added capacity
Locally preferred route
Proposed Route Study
Segment 1
Existing I-27

APPENDIX F

A Resolution Supporting the Designation of an Extension of Interstate 27 as a Future Interstate in Texas

Segment #1 Resolutions of Support for Future Interstate 27 Designation in Texas
Page 1

A RESOLUTION SUPPORTING THE DESIGNATION OF AN EXTENSION OF INTERSTATE 27 AS A FUTURE INTERSTATE IN TEXAS.

WHEREAS, Congress has already designated the Ports-to-Plains Corridor in Texas as a High Priority Corridor on the National Highway System; and

WHEREAS, the Texas Department of Transportation published an *Initial Assessment Report on the Extension of I-27/Ports to Plains Corridor* in November, 2015 which stated: "The corridor will continue to be a critical link to state, national and international trade, growing population centers and critical energy and agricultural business sectors"; and

WHEREAS, according to the *Texas Freight Mobility Plan*, "By 2040 over 73 percent of Texas' population and 82 percent of the state's employment is projected to be located within five miles of an interstate"; and

WHEREAS, Texas has no major north-south interstate west of Interstate 35; and

WHEREAS, the *Texas Freight Mobility Plan* notes that further investment alone on I-35 will not fix the problem saying, "The state must focus not only on improving existing facilities, but also on developing future freight corridors to move products to markets and exports"; and

WHEREAS, the *Texas Freight Mobility Plan* goes on to recommend that TxDOT, "give additional consideration to the extension or designation of other interstate routes. Examples include I-27 and upgrades to portions of US Highway 190 to interstate standards"; and

WHEREAS, the proposed extension of Interstate 27 connects major West Texas population and economic centers including Amarillo, Lubbock, Midland-Odessa and San Angelo in addition to numerous smaller communities; and

WHEREAS, the proposed extension of Interstate 27 intersects with Interstate 40, Interstate 20 and Interstate 10; and

WHEREAS, the proposed extension of Interstate 27 will serve three border crossings with Mexico at Laredo, Eagle Pass and Del Rio; and

WHEREAS, the proposed extension of Interstate 27 will be a major backbone for the energy industry in Texas serving top oil and gas producing counties as well as the growing wind energy industry; and

WHEREAS, the proposed extension of Interstate 27 will also serve the agriculture industry including many of Texas top counties for the production of cotton, cattle, sheep and goats and other commodities; and

Segment #1 Resolutions of Support for Future Interstate 27 Designation in Texas
Page 2

WHEREAS, extending Interstate 27 in Texas is also a cost-effective option. The Texas Department of Transportation's *Initial Assessment Report on the Extension of I-27/Ports to Plains Corridor* estimated that it would cost about $7 billion to upgrade the nearly 1,000 miles of the Ports-to-Plains Corridor from the northern tip of Texas to Laredo. To extend Interstate-27 approximately 500 miles from Lubbock to Laredo is projected to cost $5.2 billion. Compare that to the $4.8 billion it cost to rebuild 28 mile section of Interstate 35 east from Interstate 635 to U.S. Highway 380 in Dallas County; and

WHEREAS, an additional cost saving option is associated with the primarily east-west, recently designated, Interstate 14 which includes a proposed segment that overlaps the Ports-to-Plains Corridor between Midland-Odessa and San Angelo, presenting an opportunity for that segment to be jointly designated as Interstate 14 and Interstate 27; and

WHEREAS, a future Interstate designation will be a significant new economic development tool for communities along the corridor. Site selectors for manufacturers, warehousing and distribution recommend sites along an interstate highway and travel services businesses such as hotels, truck stops, convenience stores and restaurants, which can have a dramatic impact on small communities will also expand. This will create much needed new jobs and expanded tax base in rural West Texas; and

WHEREAS, while designation as a future interstate is the first step in a very long process before the completion of an interstate highway, that does not lessen the importance of extending Interstate 27.

NOW THEREFORE, BE IT RESOLVED BY THE _____ OF THE _____, _____

Section I. That the _____ supports the designation of the extension of Interstate 27 as a Future Interstate by Congress and urges the Texas Department of Transportation to support such designation.

Section 2. This resolution to be in full force and effect from and after its passage and approval.

Section 3. If any portion or provision of this resolution shall for any reason be held to be invalid or unenforceable, the invalidity or unenforceability of such portion or provision shall not affect any of the remaining provisions of this Resolution, the intention being that the same are severable.

ADOPTED AND APPROVED this _____ day of _____, 2019.

_____
Title

(S E A L)

ATTEST

_____
Title

Segment #1 Resolutions of Support for Future Interstate 27 Designation in Texas
Page 3

The following organizations in Segment #1 have approved Resolutions Supporting Future Interstate Designation in Texas.

Amarillo Chamber of Commerce
Dated: June 20, 2019
Executed by: Executive Vice President, Business Development and Governmental Affairs, Jason Harrison

Amarillo College
Dated: July 2, 2019
Executed by: President Russell Lowery-Hart

Amarillo Economic Development Corporation
Dated: April 16, 2019
Executed by: Chairwomen Laura Street

Amarillo Metropolitan Planning Organization
Dated: July 18, 2019
Executed by: Vice Chairman, MPO Policy Committee Jared Miller

City of Amarillo
Dated: April 18, 2019
Executed by: Mayor Ginger Nelson

City of Canyon
Dated: September 9, 2019
Executed by: Mayor Gary Hinders

City of Dalhart
Dated: March 12, 2019
Executed by: Mayor Phil Hass

City of Dumas
Dated: March 18, 2019
Executed by: Mayor Pat L. Sims

City of Hale Center
Dated: March 19, 2019
Executed by: Mayor W.H. Johnson

City of Happy
Dated: May 21, 2019
Executed by: Mayor Sara Tirey

City of Plainview
Dated: April 4, 2019
Executed by: Mayor Wendell Dunlap

City of Tulia
Dated: March 19, 2019
Executed by: Mayor Russell Procter

Dalhart Area Chamber of Commerce
Dated: July 5, 2019
Executed by: Chairman Tim Yee

Dumas Economic Development Corporation
Dated: April 8, 2019
Executed by: Board President Shawn Frische

Dumas / Moore County Chamber of Commerce
Dated: June 17, 2019
Executed by: President Carl Watson

Hale County
Dated: March 25, 2019 0020
Executed by: County Judge David B. Mull

High Ground of Texas
Dated: July 18, 2019
Executed by: Executive Director Kasey Coker

Moore County
Dated: March 25, 2019
Executed by: County Judge Rowdy Rhoades

Panhandle Regional Planning Commission
Dated: July 25, 2019
Executed by: Chairman Ricky White

Plainview Chamber of Commerce
Dated: July 12, 2019
Executed by Executive Director Tonya Keesee

Plainview Convention & Visitor Bureau
Dated: August 5, 2019
Executed by: President Ranada Jack

Plainview Hale County Economic Development Corp
Dated: March 28, 2019
Executed by: Executive Director Michael Fox

Segment #1 Resolutions of Support for Future Interstate 27 Designation in Texas
Page 4

Sherman County
Dated: September 11, 2019
Executed by: County Judge Terri Beth Carter

Stratford Grain Company
Dated: May 13, 2019
Executed by: President Donald K. Riffe

Swisher County
Dated: March 25, 2019
Executed by: County Judge Harold Keeter

Valero Energy
Dated: July 10, 2019
Executed by: Refinery Controller Benton Murphy

Wayland Baptist University
Dated: August 21, 2019
Executed by: Chair David Foote

●●●

Segment #1 Committee Members

Jared Miller
City Manager, Committee Chair
City of Amarillo

Milton Pax
Committee Vice Chair
Ports-to-Plains Alliance

Kevin Carter
President and CEO
Amarillo Economic Development Corporation

Joe Kiely
Vice-President of Operations
Ports-to-Plains Alliance

Kasey Coker
Executive Director
The High Ground of Texas

Bob Brinkman
Mayor
City of Dumas

Ronnie Gordon
Judge
Hartley County

Phillip Hass
Mayor
City of Dalhart

Kyle Ingham
Executive Director
Panhandle Regional Planning Commission

Tonya Keesee
Executive Director
Plainview Chamber of Commerce

Harold Keeter
Judge
Swisher County

Terri Beth Carter
Judge
Sherman County

David B. Mull
Judge
Hale County

Ernie Houdashell
Judge
Randall County

Ashley Posthumus
President
Dalhart Chamber of Commerce

Travis Muno
Administrator
Amarillo Metropolitan Planning Organization

Ricky Reed
Mayor
City of Stratford

Wesley Ritchey
Judge
Dallam County

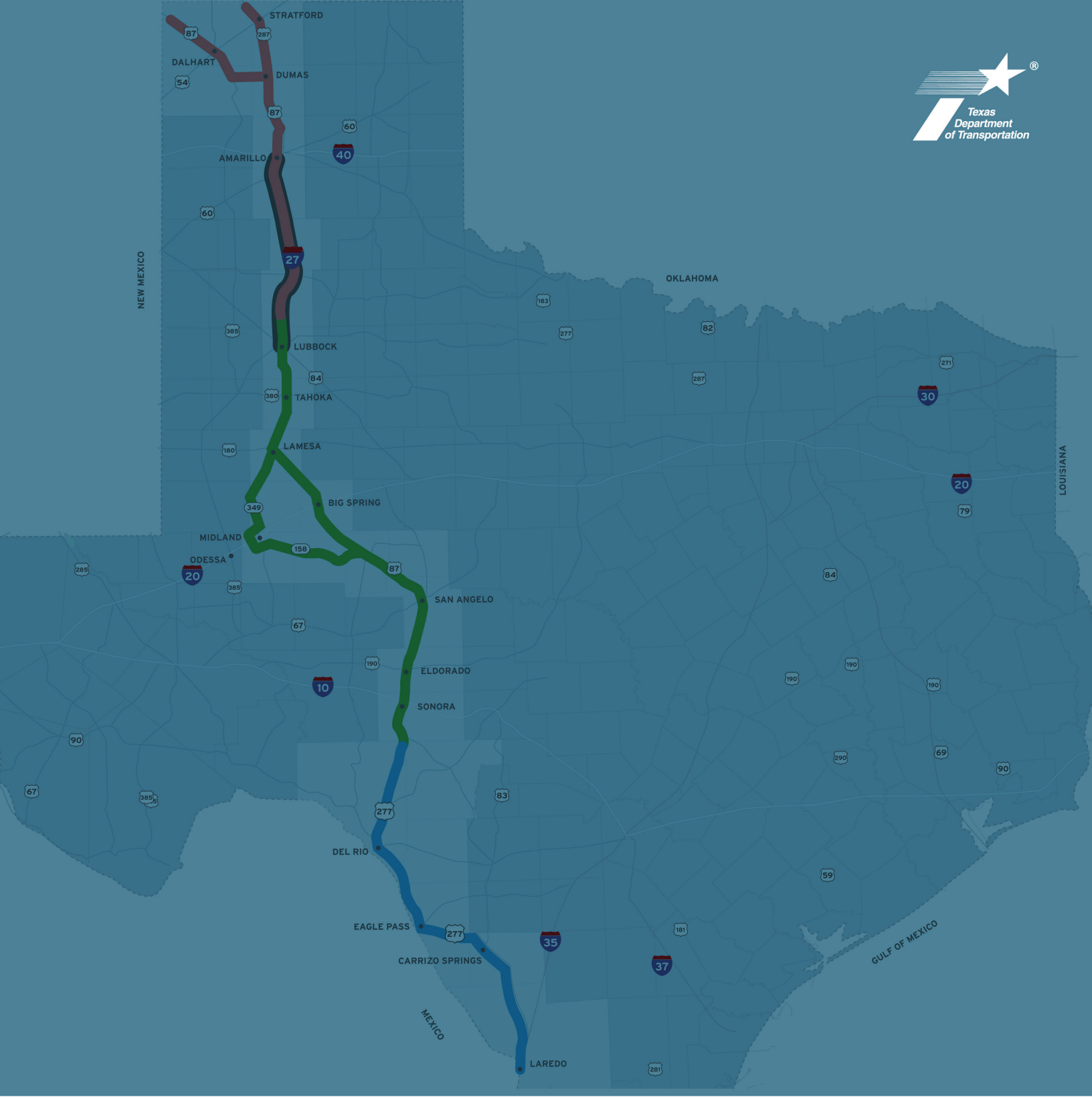
Nancy Tanner
Judge
Potter County

Johnnie "Rowdy" Rhoades
Judge
Moore County

Ross Wilson
President and CEO
Texas Cattle Feeders Association

Carl Watson
Executive Director
Dumas Chamber of Commerce

Gary Molberg
President and CEO
Amarillo Chamber of Commerce



For more information:
Caroline A. Mays, AICP
Director, Freight, Trade, and Connectivity Section
Transportation Planning and Programming Division
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Austin, TX 78701