



- The meeting will start at 8:30 a.m. MST
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# Texas-Mexico Border Transportation Master Plan

Binational Regional Steering Committee  
El Paso/Santa Teresa/Chihuahua Region

July 2, 2020



- 1 Introduction/Opening Remarks
- 2 Activities since Previous Meeting (April 2020)
- 3 Introduction (Chapter 1)
- 4 Goals, Objectives, and Institutions (Chapter 2)
- 5 Texas-Mexico Border: Past and Present (Chapter 3)
- 6 Binational Multimodal Transportation Network Designation (Chapter 4)
- 7 Preliminary Future Forecasts for the Border Region (Chapter 6)
- 8 Preliminary Results on Economic Importance of the Border (Chapter 7)
- 9 Next Steps and Closing Remarks

# Recap of Previous BTAC Meeting (April 2020)



- Stakeholder outreach
  - BNRSC round 4 themes
- Refinements made to Chapters 1 (Introduction) and 2 (Goals, Objectives, and Institutions) based on BTAC/BNRSC member feedback
  - Update base year of data to 2018/2019
  - Update institutions and agencies involved in key aspects of the binational relation that impacts the U.S.-Mexico border
- Further development of Chapters 3 (Texas-Mexico Border: Past And Present), 4 (Binational Multimodal Transportation Network Designation), and 5 (Needs Assessment and System Performance)
  - Includes review of wait time versus crossing time



# Introduction

## Chapter 1



## Chapter Purpose

- Provide background information on the importance of the Texas-Mexico border
- Provide purpose of the BTMP
- Show BTMP development process
- Provide BTMP Final Report content

## Key Messages

- Texas-Mexico border connects people and commerce throughout U.S. and Mexico
- Blueprint for binational policy, program, and projects
- Identify transportation issues, needs, challenges, opportunities, and strategies
- Underpinned by data-driven analysis and binational stakeholder input

## Refinements/Changes

- In 2019, Mexico was the largest trading partner of the U.S.
- Addition of cultural/personal ties aspect
- Economic, demographic, and goods movement information updated to 2019



Chapter	Feedback	Response
1	Clarification for the use of 2017 as the base year for data	<i>Use more recent data for key border story elements; will maintain 2017 as study baseline</i>
	Include cultural ties	<i>Include reference using anecdotal information</i>
	Further explain and show demographic break down by location and type of crossing	<i>Provide details in Chapter 3</i>

- Mexico is the **largest trading partner** of the U.S.
  - 68% of trade between the two countries passes through the Texas-Mexico border
- U.S.-Mexico **trade has more than tripled** between 1994 and 2019
  - Increased from \$173 billion to \$615 billion
- Border region **population grew 70%** from 4.4 million in 1990 to 7.4 million in 2019
- In 2019, more than **32 million cars, 19 million pedestrians, and 90,000 passenger buses** crossed the Texas-Mexico border

# Goals, Objectives, and Institutions

Chapter 2



<b>Chapter Purpose</b>	<b>Key Messages</b>	<b>Refinements/Changes</b>
<ul style="list-style-type: none"><li>▪ Present BTMP vision and mission</li><li>▪ Present BTMP goals and objectives</li><li>▪ Identify the institutions and agencies that partner along the Texas-Mexico border and their roles</li></ul>	<ul style="list-style-type: none"><li>▪ Goals and objectives developed through consensus</li><li>▪ Joint management and collaborative efforts between binational partners allow border to function effectively</li></ul>	<ul style="list-style-type: none"><li>▪ Update institutions and agencies for border policy development, planning, and infrastructure development</li><li>▪ Differentiate border management process, roles, and procedures</li></ul>

# Refinements to Goals, Objectives, and Institutions (Chapter 2)



Chapter	Feedback	Response
2	Discuss the current coordination between local, state, and federal agencies and how collaboration can be improved and enhanced	<i>Include reference to coordination, plus added binational coordination for responses to border emergencies/ disruptions</i>
	Cover alternative sources of funding as an option for the border	<i>Include reference to Donation Acceptance Program (DAP) and role of private sector</i>
	Consider showing the process flows in a graphic way to simplify content	<i>Add visuals to chapter</i>

- Identified **opportunities for better coordination** along the border
  - Both between the two countries and between the agencies in each country
- Described **Resiliency Planning** and **Joint Incident Management and Emergency Response** along the border
  - Including Sister Cities agreement
- Identified agencies leading planning efforts **inside and outside border crossings**
- **Expanded list of agencies and stakeholders** of Texas-Mexico border

## Institutional Relations at the Border (2.3)



- A **large number of institutions and agencies** on both sides of the border involved in U.S.-Mexico border

TOPIC	BORDER POLICY DEVELOPMENT	BORDER PLANNING	BORDER MANAGEMENT & OPERATIONS	INFRASTRUCTURE AT BORDER CROSSINGS	INFRASTRUCTURE CONNECTING TO BORDER CROSSINGS
U.S. side	Federally-led (oversight by DOS)	Inside border crossings: led by CBP; outside border crossings: USDOT guidance, with active state DOT participation	Federally-led (CBP)	Federally-led (GSA), shared with states, counties, cities, or private sector	Based on ownership of infrastructure/network
Mexico side	Federally-led (oversight by SRE)	Federally-based process. Inside border crossings: led by Aduanas and SCT; outside border crossings: led by SCT	Federally-led (Aduanas)	Federally-led (INDAABIN), shared with states or private sector	Federally-led; small state, local, and private sector role
Binational coordination mechanisms	21 <sup>st</sup> Border Initiative, high economic dialogue	JWC, BBBXG, ad-hoc regional efforts	Ad-hoc groups at individual border crossings	Ad-hoc groups at individual border crossings	On a project-by-project basis

- Gaps in coordination** between levels of government within each country and lack of standardized mechanisms for local stakeholders to participate in border-related decisions



## U.S. Planning Process

### Federal

- CBP leads “inside border crossing” planning
  - 5-year planning document for land POE capital investments
- Guidance by USDOT on transportation planning process “outside border crossing”
  - FAST Act
  - Statewide planning requirements
  - Metropolitan planning requirements

### Texas

- Texas Transportation Plan (TTP) 2040
- TxDOT Strategic Plan
- Statewide Transportation Improvement Program (STIP)
- Texas-Mexico Border Transportation Master Plan
- Texas Freight Mobility Plan 2018
- Metropolitan Transportation Plans

## Mexico Planning Process

### “General Planning Law” (1985)

- Norms and principles (including National Development Plan)
- Basis for integration and functioning (National System of Democratic Planning)
- Basis of participation and coordination

### National Development Plan

- Describes programs that need to be developed including:
  - Sectorial plans (for key federal agencies)
  - Institutional (for quasi-governmental agencies)

### Other Plans

- Aduanas leads “inside border crossing” planning
  - Infrastructure Modernization Plan (IMP)
- SCT supports “inside border crossing” planning and leads transportation planning process “outside border crossing”
  - Sectorial Plan for Transportation and Communications

# BTAC Feedback

1. Did we adequately address your comments from the last BTAC meeting?
2. Are there other topics that need to be included in this chapter?

# Texas-Mexico Border: Past and Present

Chapter 3



Chapter Purpose	Key Messages	Refinements/Changes
<ul style="list-style-type: none"><li>▪ Identify the trends and current conditions of the Texas-Mexico border</li><li>▪ Provide high-level socioeconomic and cross-border movements</li><li>▪ Describe binational multimodal transportation infrastructure</li><li>▪ Guide preliminary identification of issues and needs</li></ul>	<ul style="list-style-type: none"><li>▪ The border region population and employment is growing</li><li>▪ The border sustains trade between all Texas counties, all U.S. states, and all Mexican states</li><li>▪ Cross-border freight continues to grow, yet people crossings have declined</li><li>▪ Investments in border infrastructure and connecting infrastructure have not kept pace with population and trade growth</li></ul>	<ul style="list-style-type: none"><li>▪ Information data points updated to 2019</li><li>▪ Synthesized information about factors affecting travel demand</li><li>▪ Described history of border infrastructure</li><li>▪ Added description of current state of border transportation infrastructure</li></ul>



Chapter	Feedback	Response
3	Update current conditions data to 2019, where possible	<i>Updated socioeconomic, trade, and infrastructure data to 2019, where available</i>
	Provide additional information on border crossing wait times	<i>Amplified border wait time trends in chapter to illustrate trends</i>
	Consider ways to collect southbound movements more accurately	<i>Continued to work with SCT/SAT and examined other sources; there are no borderwide southbound data sources</i>
	Show data on commerce between ports and more details for the transportation of goods	<i>Added more detail on maritime; additional details are available in technical papers</i>
	Enhance the border story to weave in cultural and geographic ties	<i>Improved border story with specific language, examples, and bullets</i>

# Texas-Mexico Border Story: What's Been Covered (3.1 to 3.6)

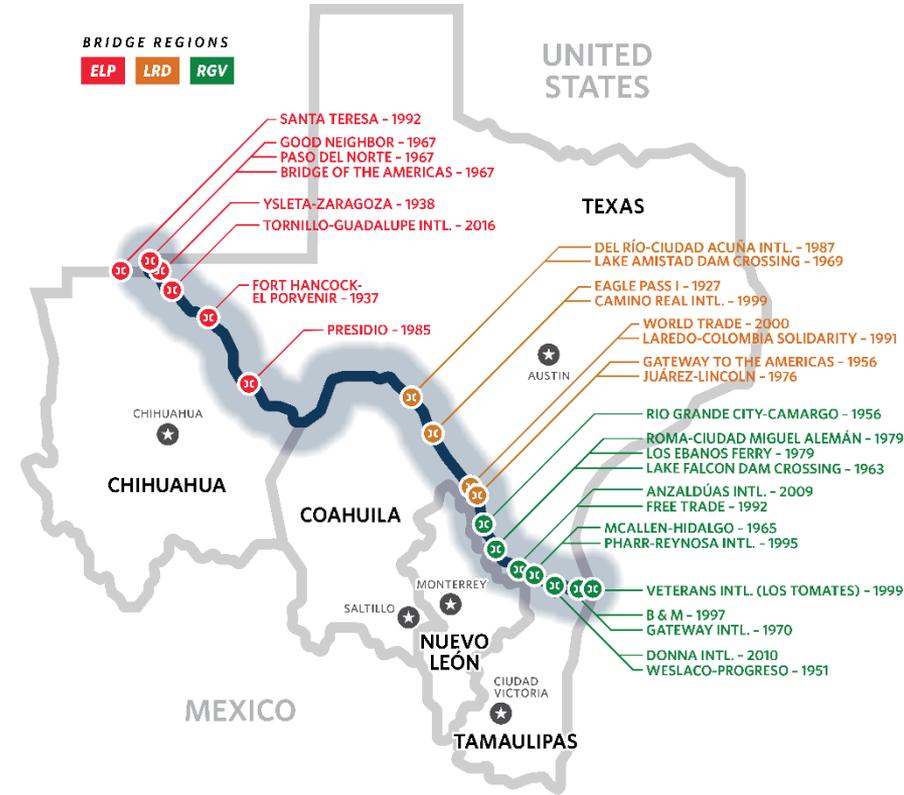


- Population**
  - **7.4 million** people live along the border (2019)
  - Borderwide population increased 70% from 1990 to 2019
- Employment**
  - **97% employment growth** from 1990 to 2019
    - Texas: 76% 
    - Mexico: 114% 
- Income**
  - **Incomes in Texas border counties increased** by 20%, outpacing U.S. growth rate (4%)
  - Texas border **poverty line declined**, from 36% in 1990 to 23% in 2018
  - **Incomes in Mexico border states grew** between 2010 and 2015
- Education**
  - An increase in federal education programs have led to **more Texas high school and college graduates**
  - Educación media superior obligatoria 2012 has driven **educational advancements in Mexico**
- History**
  - International bridge development began after the U.S.-Mexico Rio Grande Rectification Treaty of 1933
  - Although trade is growing, border crossing investments **have not kept pace**
- Trade**
  - Majority of U.S.-Mexico trade is handled by the border
  - Ratification of NAFTA has **tripled trade across the border** from 1994 to 2019

# Overview of Border Transportation Infrastructure History



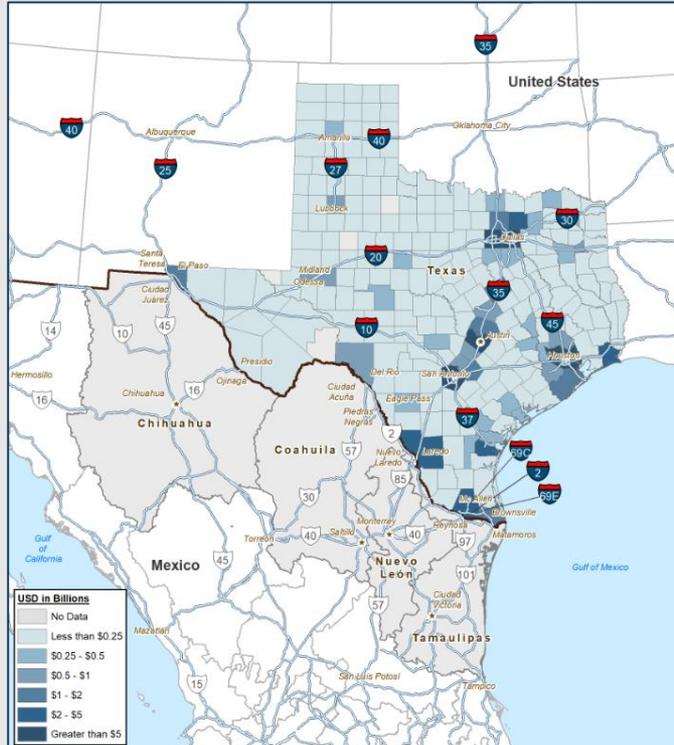
- Only 10 bridge crossings along the Texas-Mexico border were built or improved upon since 1994
- September 11<sup>th</sup> fundamentally altered border security and operating procedures
- Only one-third of border facilities constructed since 1980 have seen additional investment
- USMCA and continued population growth places additional pressure on the border



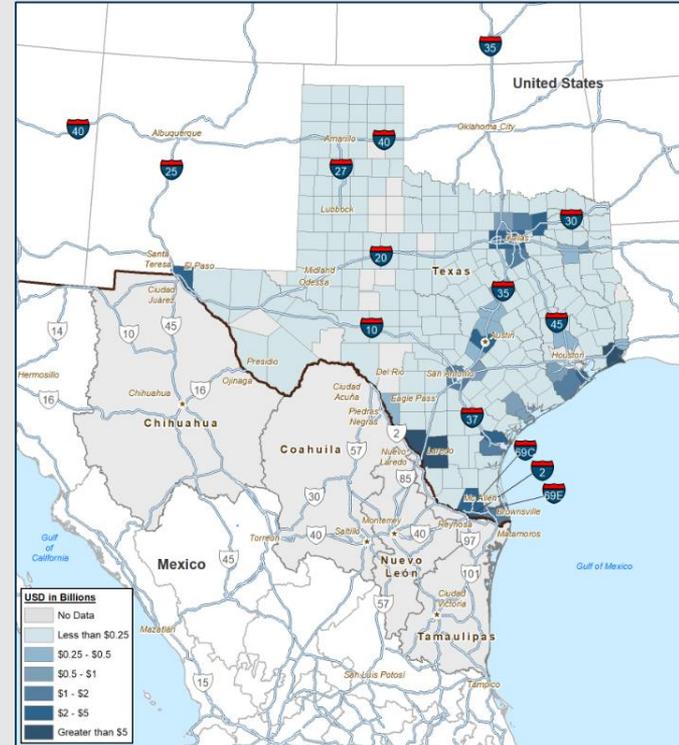
# Cross-Border Trade Connections to all Texas Counties (3.6)



Northbound Movements: Trade Destinations by County



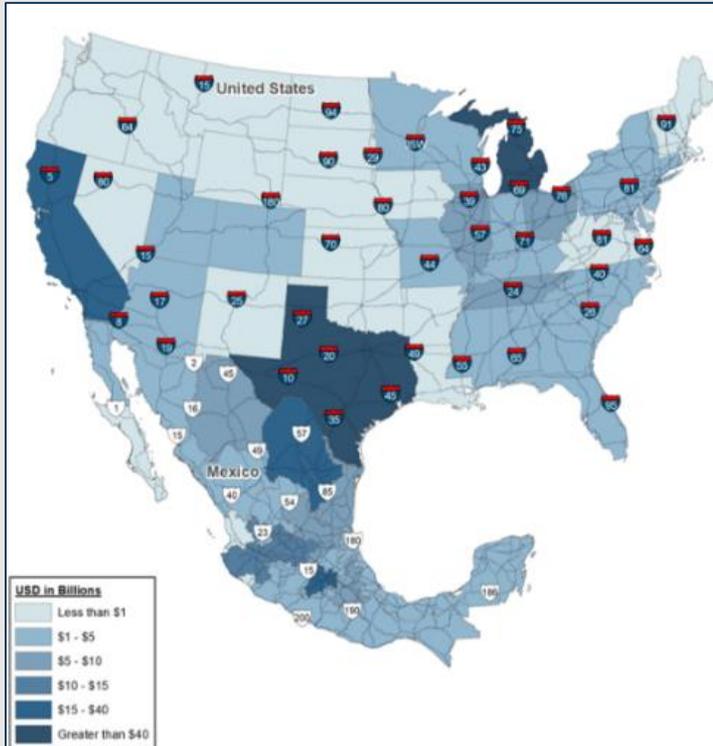
Southbound Movements: Trade Origins by County



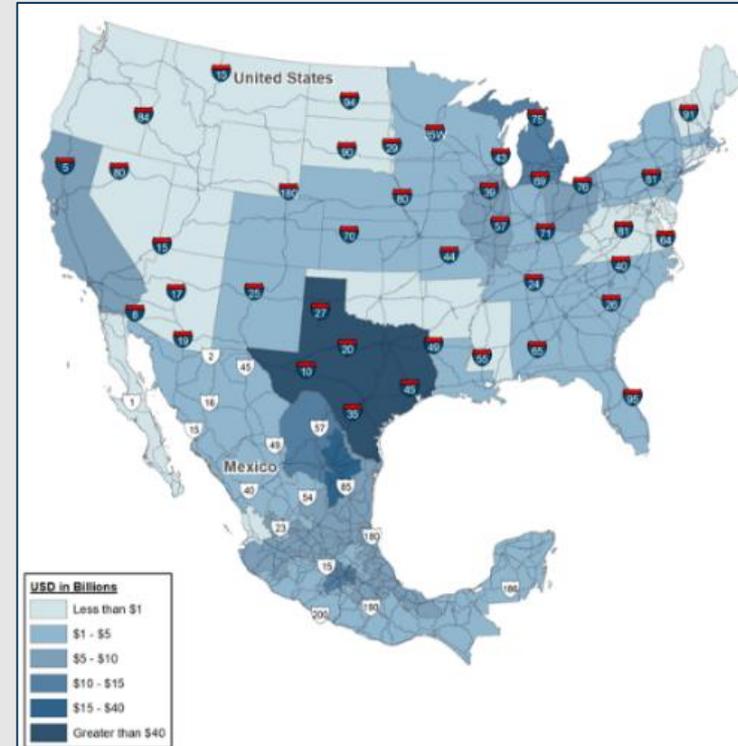
# Cross-Border Trade Connecting all U.S. and Mexican States (3.6)



Northbound Movements: Origins (MX) and Destinations (U.S.)



Southbound Movements: Origins (U.S.) and Destinations (MX)



# Current State of Border Transportation Infrastructure System



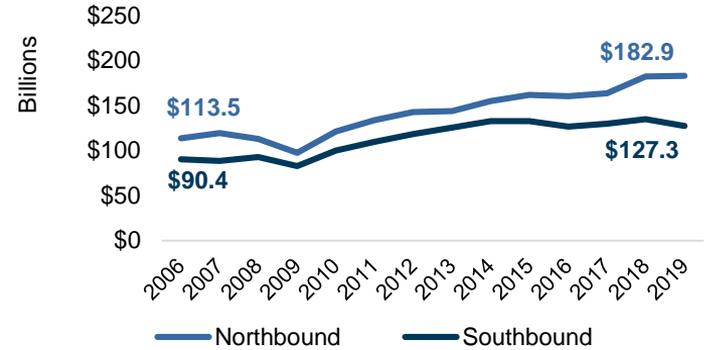
- Border Crossings**
  - Texas-Mexico border region **added seven new bridge crossings** right after NAFTA
  - Border activity is dynamic; border transportation infrastructure is not as adaptable
- Highway System**
  - Primary conduit for people and goods movement
  - Facilitates daily life for millions of residents and **sustains local and global trade**
- Freight Rail System**
  - Provides lower-cost shipping for bulk agricultural commodities, minerals and international shipping containers
  - **Unified cargo processing** in Laredo creates efficient cross-border rail trade
- Aviation**
  - Enables **business, personal travel, and cargo movements** on numerous U.S. and Mexican carriers
  - 15 airports in Texas have regularly scheduled flights to 31 airports throughout Mexico
- Seaports**
  - Short sea shipping across the Gulf of Mexico is competitive with truck and rail
  - **Seaport shipping alleviates congestion** at land border crossings
- Pipelines**
  - **Predominantly used for U.S. exports**, with vast majority of the total capacity used for outflows to Mexico
  - 13 import and export pipeline terminals exist along the border

# Highway and Roadway Network (3.7)

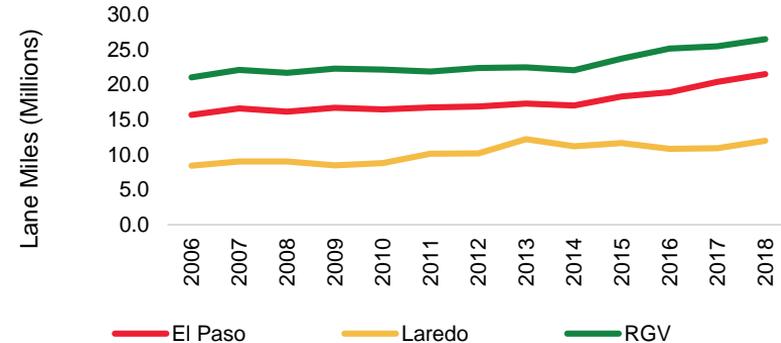


- 30,200 lane miles serve the border region
- Passenger vehicle miles traveled (VMT) in border region **increased 35%** and commercial VMT **increased 17%** from 2005 to 2018
- Cross-border truck trade **increased 52%** between 2006 and 2019
- Roadway capacity **increased 14%** between 2006 and 2019

### Texas-Mexico Cross-Border Truck Trade Value



### Texas Borderwide Lane Miles by Region



## Highway and Roadway Network (3.7)



- Highway and roadway infrastructure has not kept pace with passenger and freight growth in the border region



**The number of  
northbound trucks  
increased by  
2 million or 93%  
since 1996**

**2.2 Million  
(1996)**

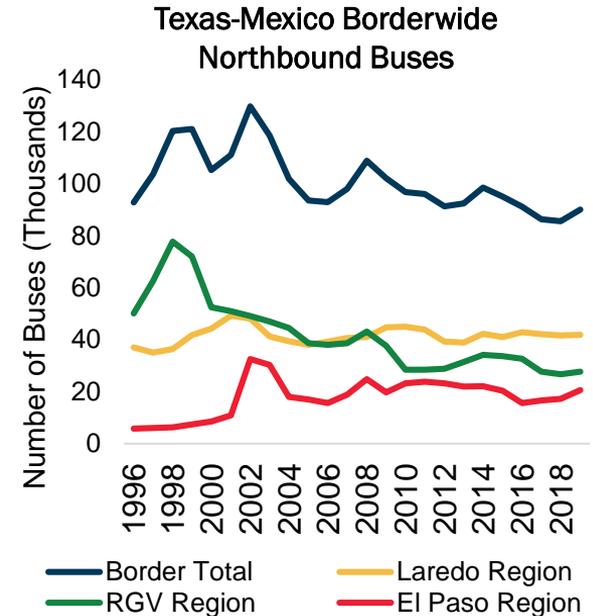
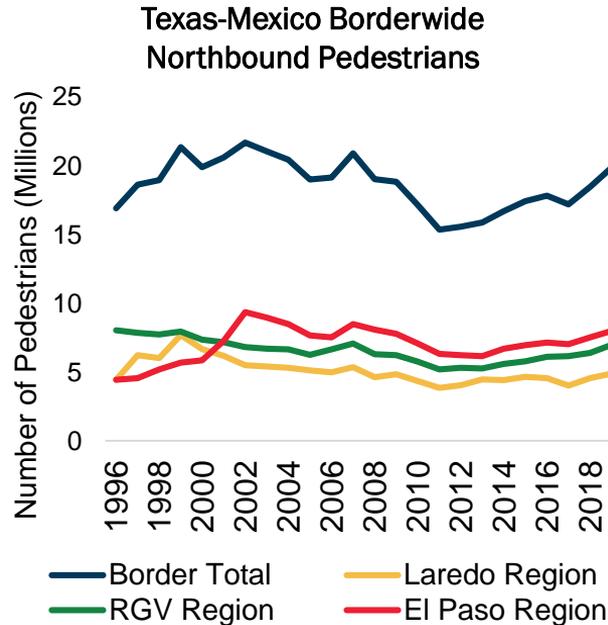
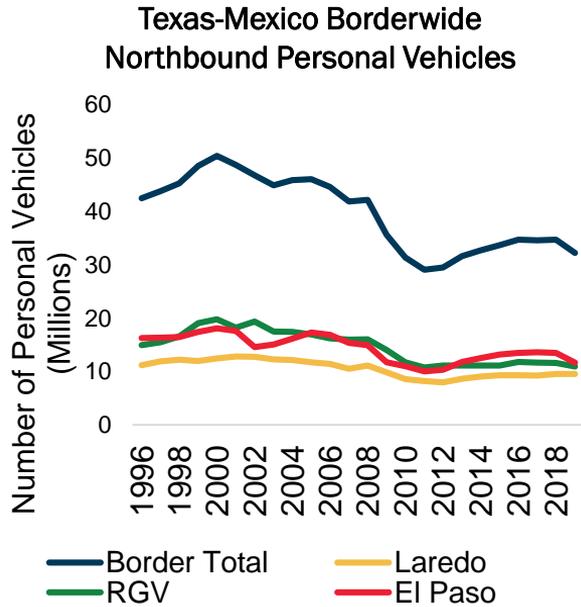
**4.2 Million  
(2017)**

BTS border crossing data only provides border entry information.

# The Texas-Mexico Border Story: Northbound Movement of People (3.7.5)



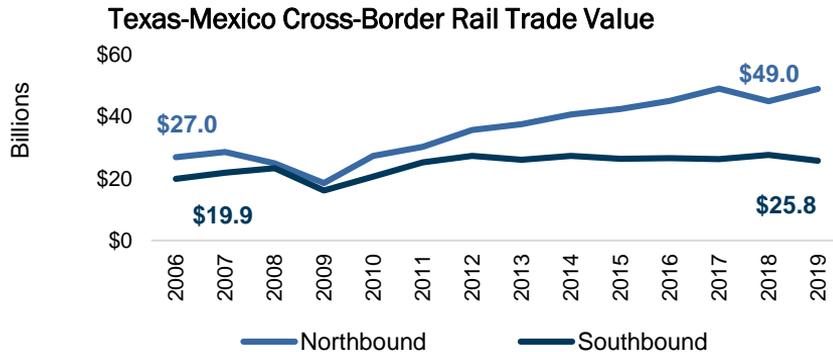
Each year, **84.8 million people** cross the Texas-Mexico border.\*



\* There is a lack of southbound data on the movement of people in the border region.



- Freight rail infrastructure has not grown at the same rate as rail trade and traffic



The number of northbound railcars increased by **769,152** or **305%** since 1996

251,769  
Railcars  
(1996)

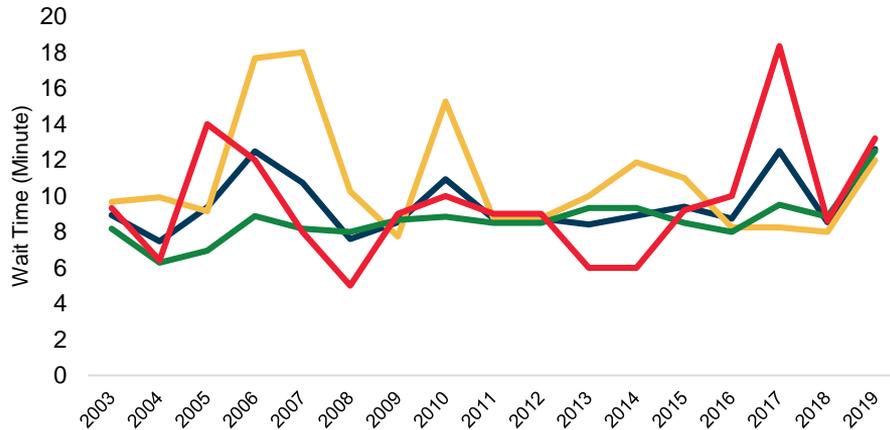
1.0 million  
Railcars  
(2019)

# Mobility and Reliability: Northbound Wait Times – Commercial Vehicles (3.12.2)

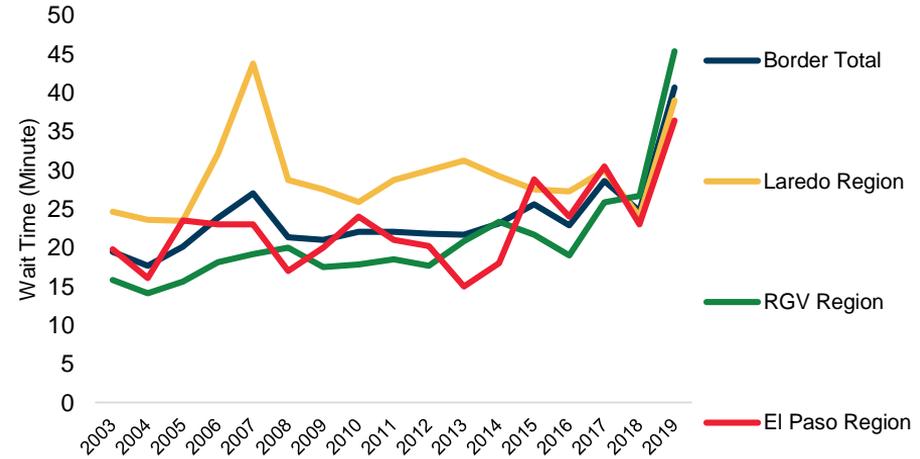


- Commercial vehicles: From 2003-2019, median wait times were relatively steady; **90<sup>th</sup> percentile wait times more than doubled** (over 21 minutes) across the entire border region

50<sup>th</sup> Percentile Border Wait Time: Commercial Vehicle (Standard)



90<sup>th</sup> Percentile Border Wait Time: Commercial Vehicle (Standard)

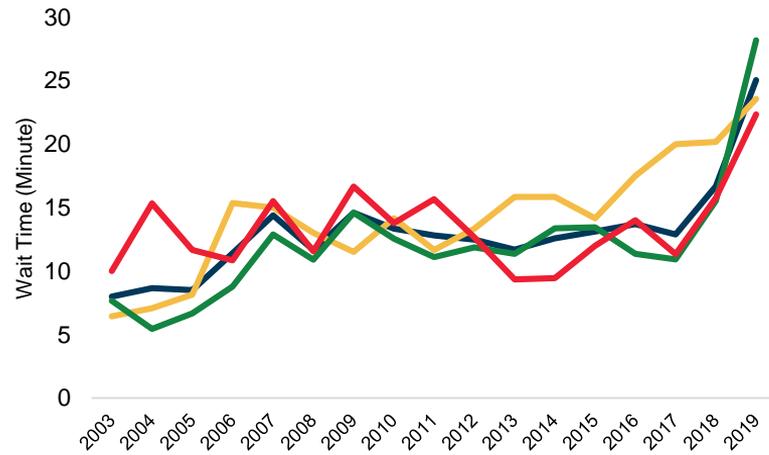


# Mobility and Reliability: Northbound Wait Times – Personal Vehicles (3.12.2)

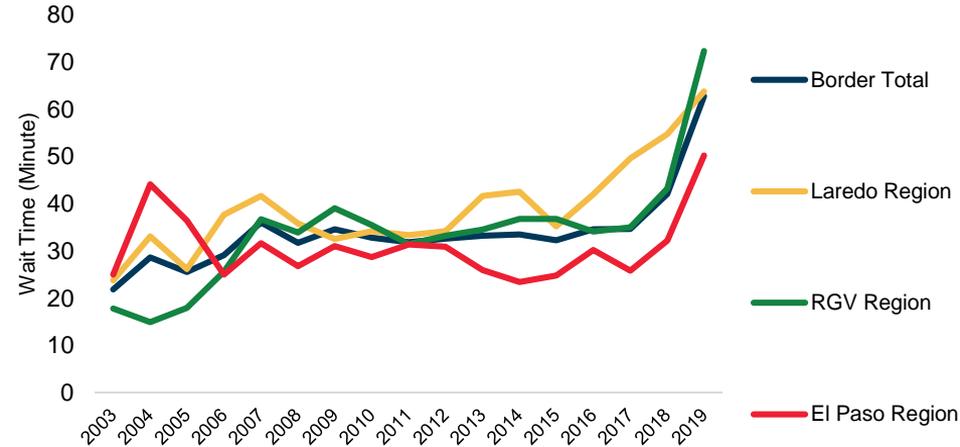


- Personal vehicles: **Median wait times increased 213%** (17 minutes) across the border between 2003-2019

50<sup>th</sup> Percentile Border Wait Time: Personal Vehicle (Standard)



90<sup>th</sup> Percentile Border Wait Time: Personal Vehicle (Standard)

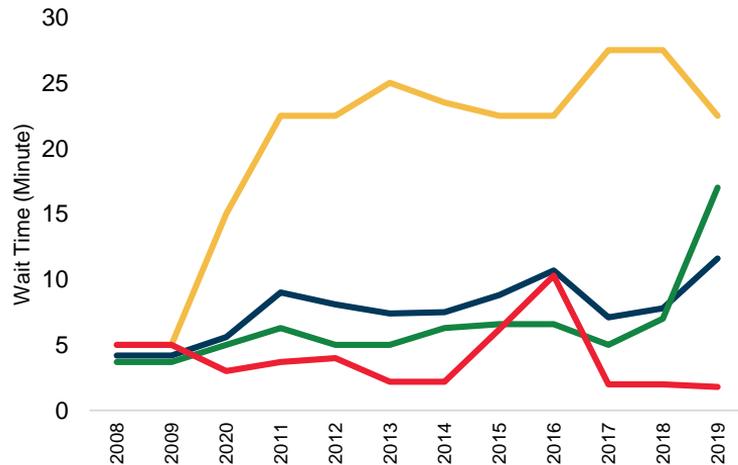


# Mobility and Reliability: Northbound Wait Times – Bicycles/Pedestrians (3.12.2)

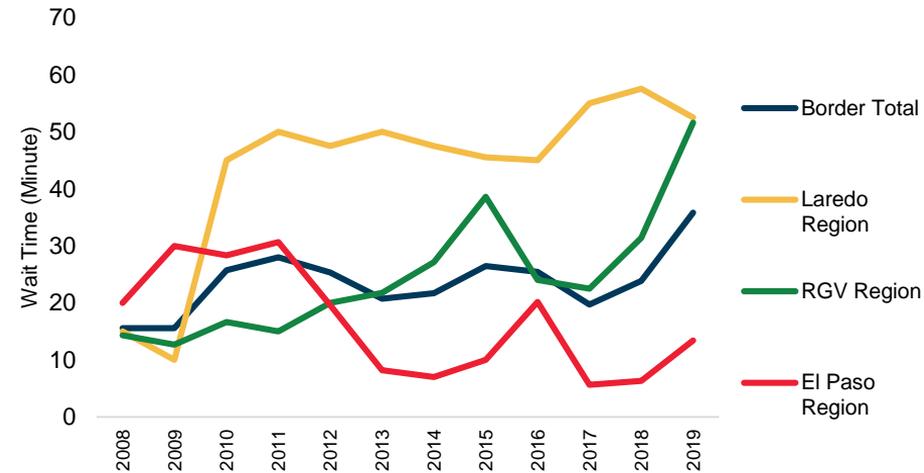


- **Bicycles/Pedestrians: Median wait times increased slightly** in the Laredo and RGV regions, while remaining stable in the El Paso region during the same time period

50<sup>th</sup> Percentile Border Wait Time: Pedestrians (Standard)



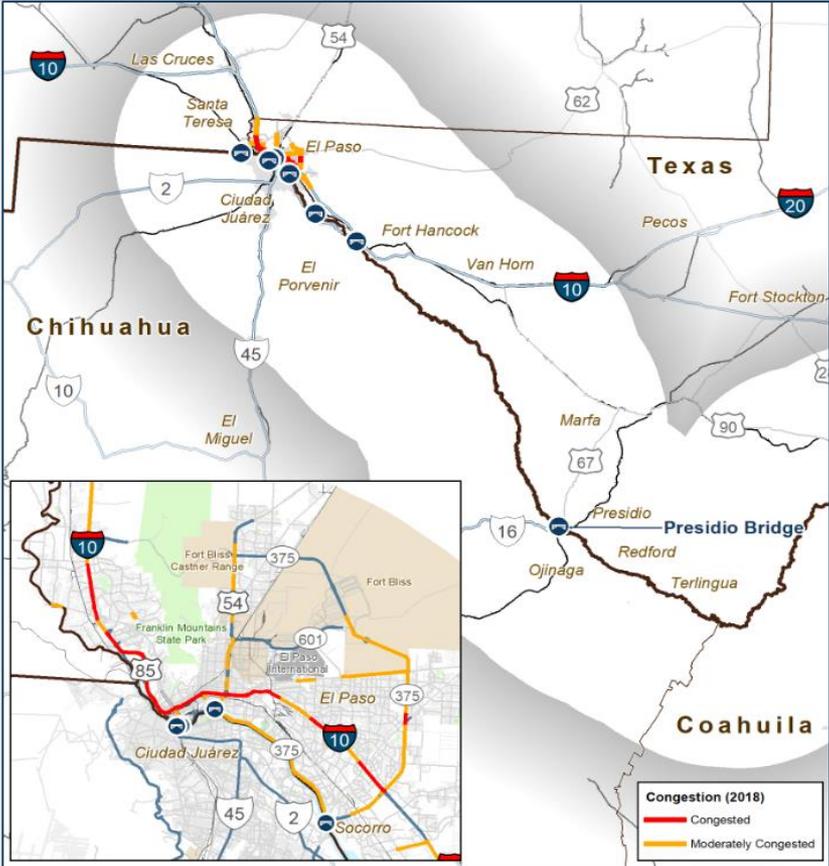
90<sup>th</sup> Percentile Border Wait Time: Pedestrians (Standard)





- **Roadway congestion in the Texas-Mexico border region is concentrated in urban areas and around border crossings**
- **El Paso Region:** most congestion occurs on the I-10 corridor and FH 45
- **Laredo Region:** congested corridors are north-south I-35, MEX 85, and I-69
- **Rio Grande Valley Region:** significant congestion occurs on I-69 C, I-69 E, and on I-2

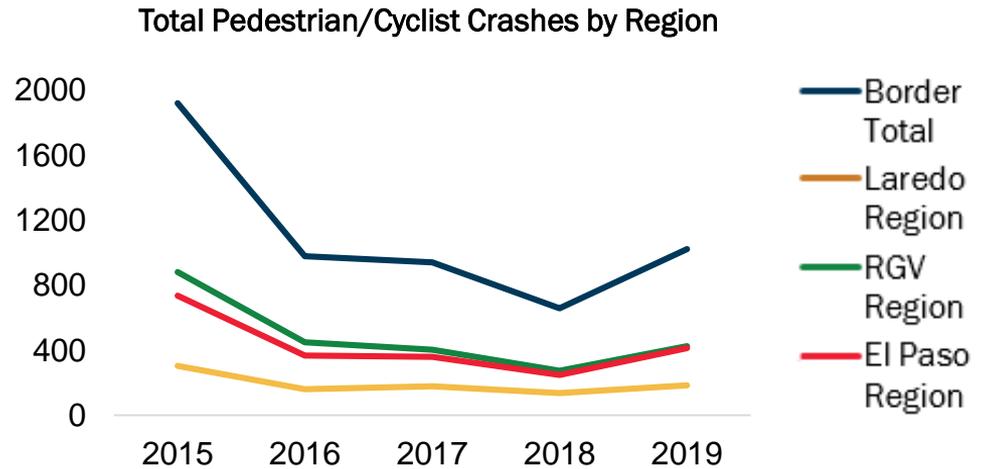
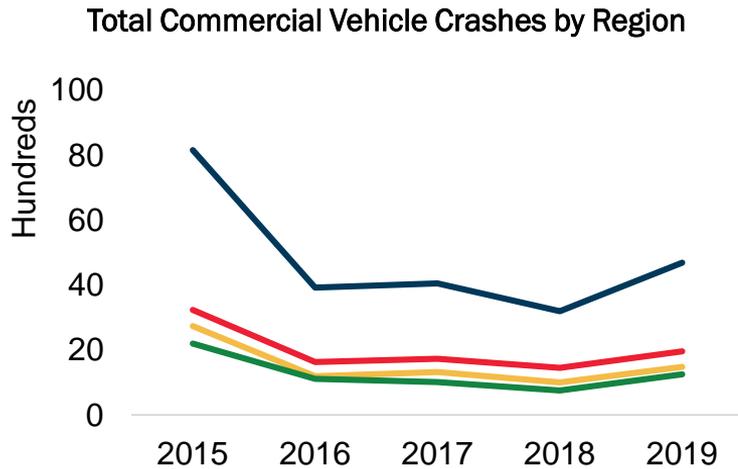
# El Paso Region Congestion



# Safety and Security: Roadway Incidents (3.12.4)



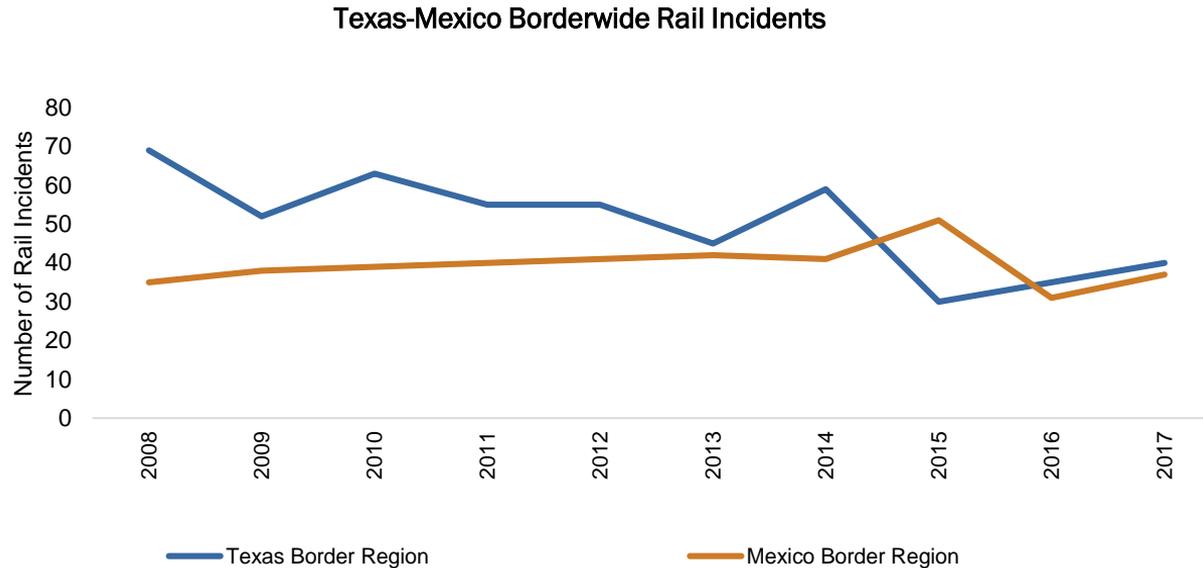
- Commercial vehicle and pedestrian/cyclist **crashes in the border region have steadily declined** since 2015
- Crashes in Mexico declined significantly over the past few years



## Safety and Security: Rail Incidents (3.12.4)



- Between 2008 and 2017, **rail incidents declined 78%** on the Texas side and remained constant on the Mexico side of the borderwide region

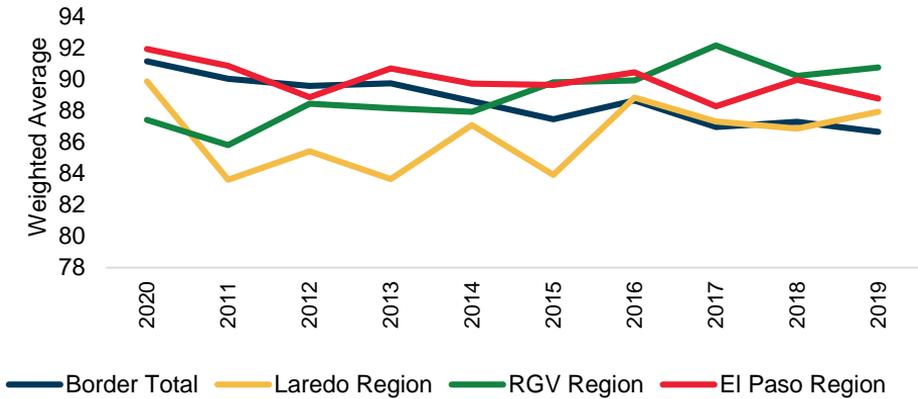


# Asset Preservation: Pavement Conditions (3.12.5)



- Between 2010 and 2019, Texas-side border pavement conditions stayed **relatively consistent**
- Within the Mexico border states, pavement conditions are of **higher quality than the national averages**

### Texas Borderwide Pavement Conditions



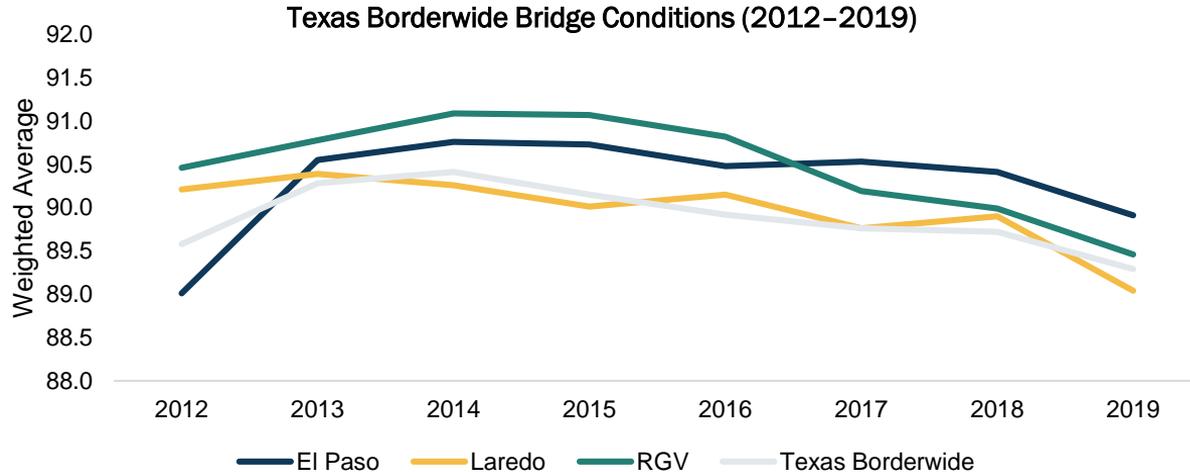
### Mexico Border States – Percent of Pavements Deficient



## Asset Preservation: Bridge Conditions (3.12.5)



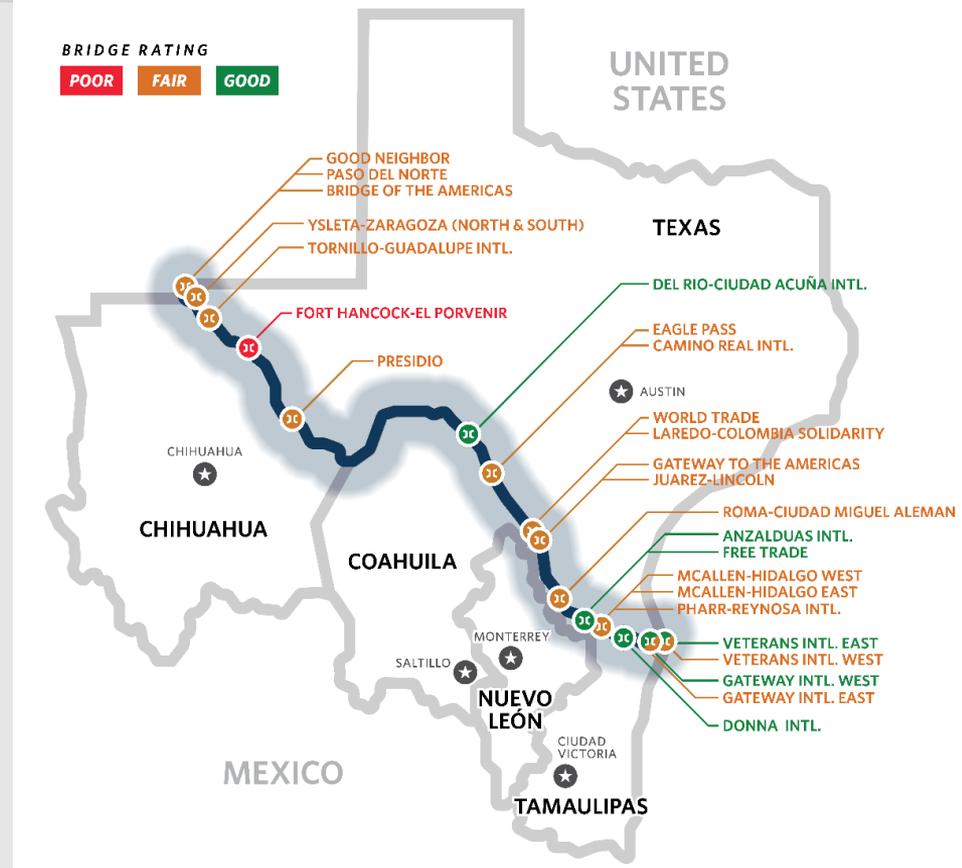
- **Bridge conditions in the Texas border counties improved** between 2012 and 2014, but have been declining since 2014
- As of 2019, **bridge conditions in the El Paso and RGV Regions are higher than the average score** in the Texas borderwide region, while bridge condition scores in the Laredo Region are lower



# Asset Preservation: Border Crossing Conditions (3.12.5)



- All Texas-Mexico border crossings are in *good or fair* condition—with the exception of Fort Hancock-El Porvenir
- Many structures may **require future investments** to ensure infrastructure is able to **meet transportation demands**



# BTAC Feedback

1. Did we adequately address your comments from the last BTAC meeting?
2. Are there other topics that need to be included in this chapter?

# **Binational Multimodal Transportation Network Designation**

Chapter 4

# Designation Process for Binational Multimodal Transportation Corridors Overview



Chapter Purpose	Key Messages	Refinements/Changes
<ul style="list-style-type: none"><li>Summarize the binational multimodal transportation network designation process for:<ul style="list-style-type: none"><li>Texas and local regions</li><li>Mexico's four border states</li><li>U.S. and Mexico</li></ul></li></ul>	<ul style="list-style-type: none"><li>Three border regions were identified, consistent with previous efforts</li><li>5-sphere planning analysis structure</li><li>Developed designation criteria</li><li>11 multimodal transportation corridors are designated</li></ul>	<ul style="list-style-type: none"><li>Provides a consistent framework for ongoing transportation planning in the region</li><li>Integration, accessibility, and connectivity are key criteria used in designation</li><li>Process for designation began at border crossings and expanded geographically and by mode</li><li>Six designated corridors serve north-south movements and five serve east-west movements</li></ul>



Chapter	Feedback	Response
4	Include Mazatlán-Durango-Monterrey-Reynosa corridor	<i>Added Mazatlán-Durango-Monterrey-Reynosa corridor</i>
	Include Port of Brownsville	<i>Added Port of Brownsville</i>
	Include Port of Matamoros	<i>The Port of Matamoros could not be added because it was not finished by 2017 (baseline year), but it will be considered for Chapter 8 – Identification of Future Needs and Strategies</i>

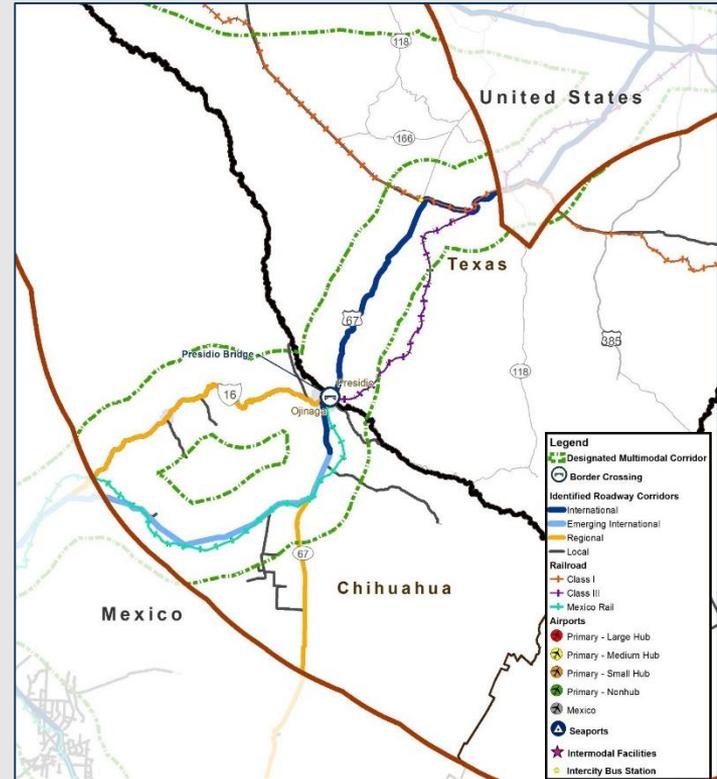
# Binational Multimodal Network Designation (4.1.4)



## El Paso



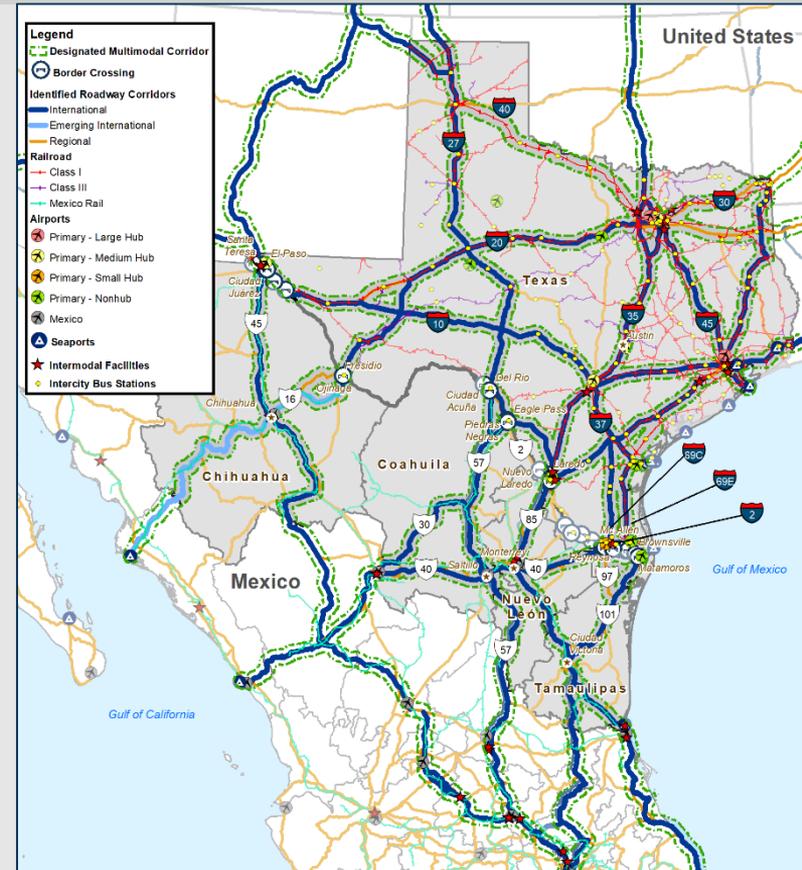
## Presidio



# Binational Networks Supporting the Texas-Mexico Border (4.4)



- Integrates the 29 border crossings with the multimodal transportation networks
- Identifies binational trade corridors from existing planning documents and stakeholder input
- Identifies multimodal systems supporting these trade corridors
- Designates multimodal, cross-border corridors based on integration, connectivity and accessibility criteria



# BTAC Feedback

1. Please identify any missing corridors.
2. What other elements should we consider in this chapter?

# Chapter 6: Future Forecasts for the Border Region

Preliminary Analysis and Findings



Chapter Purpose	Key Messages	Preliminary Findings
<ul style="list-style-type: none"><li>▪ Provide future forecasts to 2050 of the movements of people and goods</li><li>▪ Assess future demand for the binational transportation systems serving the Texas-Mexico border</li></ul>	<ul style="list-style-type: none"><li>▪ Forecast methodology accounts for historical trends and future factors</li><li>▪ Future factors include social, technical, environmental, economic, and political considerations</li><li>▪ Movement of people and goods are forecasted by mode, POE, geography</li><li>▪ Future scenarios will assess:<ul style="list-style-type: none"><li>– Employment</li><li>– National economic activity (GDP)</li><li>– Exchange rate</li><li>– Border policies</li></ul></li></ul>	<ul style="list-style-type: none"><li>▪ An additional 30 million people will cross the border – most by personal vehicle</li><li>▪ Truck and train movements almost triple – stressing border infrastructure capacity</li><li>▪ The value of trade crossing the border more than triples – making an effective border critical for the U.S. and Mexican economies</li></ul>

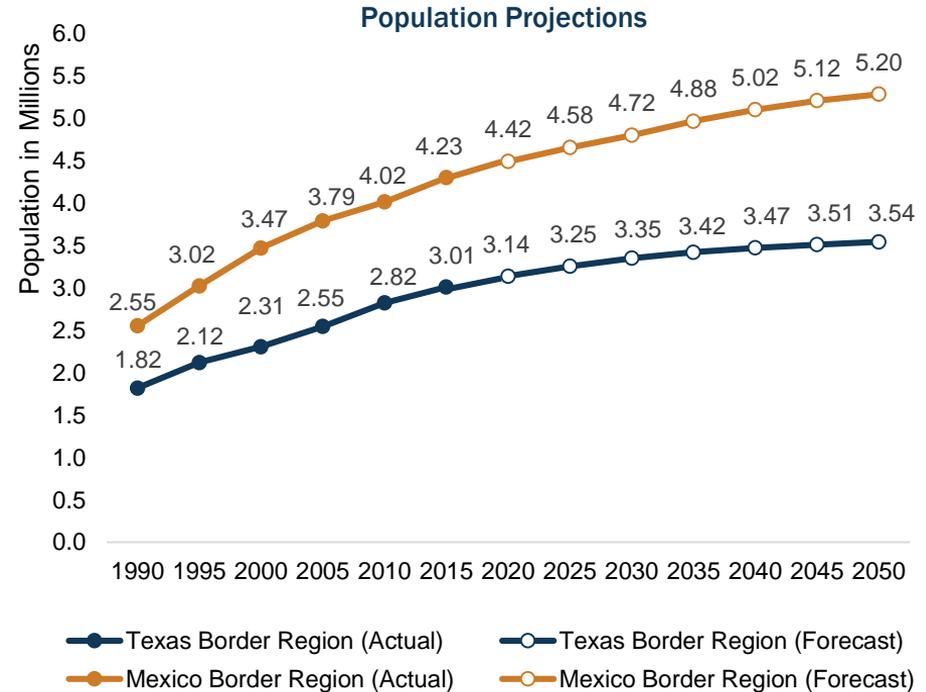


- Population**
  - **8.8 million** people live along the border (2050)
  - Borderwide population increases another 18% (1.3 million) from 2017 to 2050
- Employment**
  - Continued employment growth in border region from 2017 to 2050
  - Texas: 2.1%  growth per year
  - Mexico: continued growth
- Income**
  - Incomes in Texas border counties expected to grow 0.5% per year
  - Texas border **poverty expected to continue declining** between 2017 and 2050
  - **Incomes in Mexico border states expected to grow** between 2017 and 2050
- Education**
  - Texas border region high school and college/technical school graduation rates continue to increase between 2017 and 2050
  - More Mexico border residents are expected to complete secondary and upper education due to compulsory upper secondary education policies
- Trade**
  - Ratification of USMCA continue the economic competitiveness developed under NAFTA
  - COVID-19 may result in short-term trade decline/longer-term near-shoring of manufacturing

# The Future of the Border Region: Population



- Population in the border region is projected to grow annually by:
  - Texas: 0.44%** from 2017 to 2050
  - Mexico: 0.52%** from 2017 to 2050
- Population has not been a good predictor of the cross-border movement of people
  - While the border region population grew through 2019, the movement of people through the border declined more than 50 million

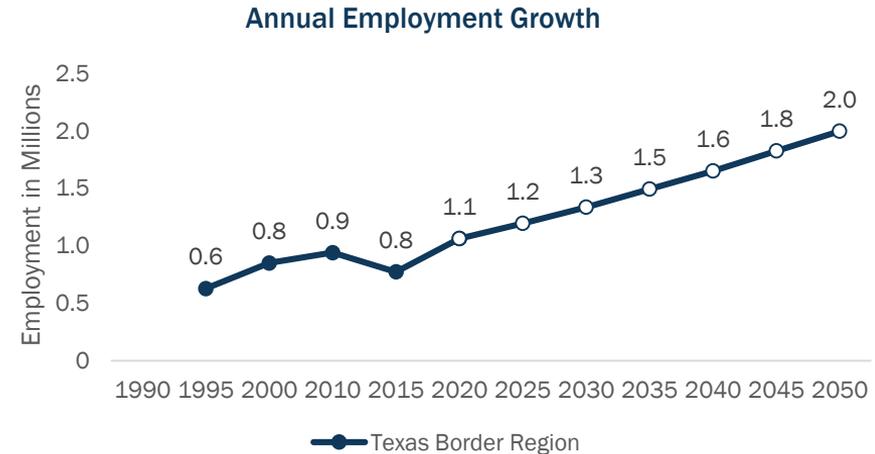


Source: Texas Demographic Center, 2018 Population Projections (2010-2050); CONAPO, Projections of the Population of the Municipalities of Mexico (2015-2030), UN World Population Prospects 2019

# The Future of the Border Region: Employment



- The cross-border movement of people is influenced by local factors
  - Employment
  - Exchange rates
  - Gasoline prices
  - Border policies
- Employment in the border region is expected to grow annually by:
  - **Texas: 2.1% annual growth** from 2017 to 2050
  - Employment forecasts are not available for Mexico



Source: Statewide Analysis Model V4

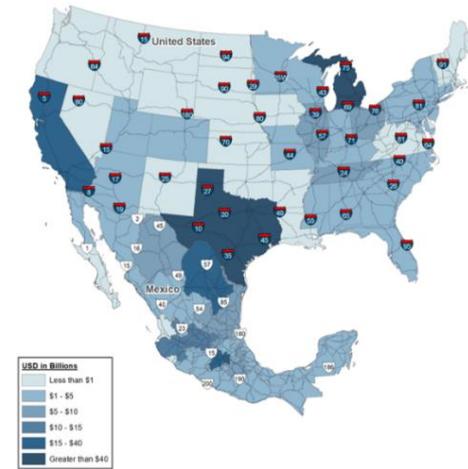
**More than 99% of the movement of people starts and ends within 60 miles of the border**

# The Future of the National Economies



- The cross-border movement of goods are influenced by national and international economic trends, particularly the U.S. economy
- Truck and rail border crossings tend to be longer distance
- Mexico was the U.S.' largest trading partner in goods (2019)
- U.S. trade is forecast to outpace economic growth annually from 2017 to 2030 (per U.S. Congressional Budget Office):
  - Economic Growth: 1.9%
  - Exports: 2.2%
  - Imports: 2.4%

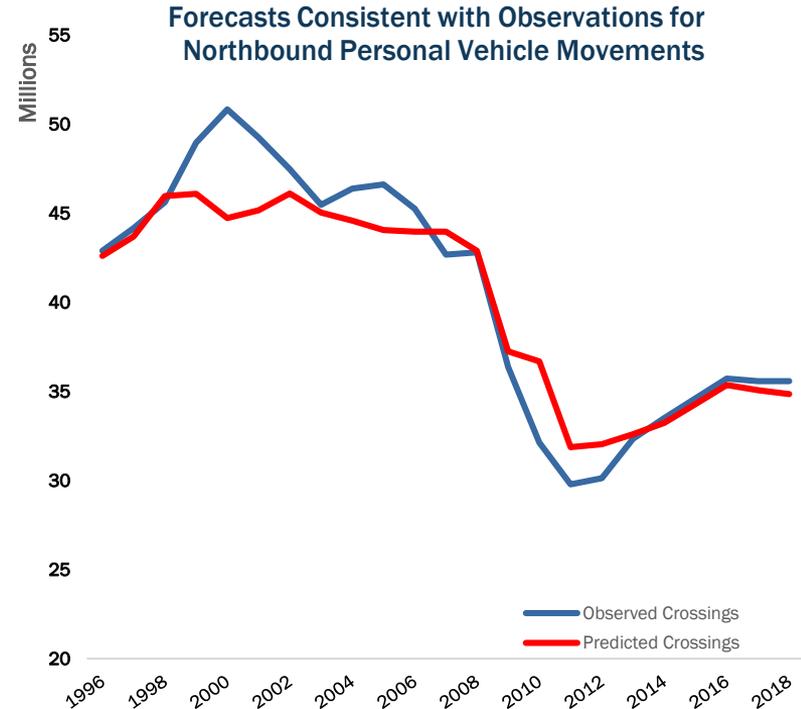
Northbound Movements: Origins (MX) and Destinations (U.S.)



**The majority of movement of goods have origins or destinations outside Texas and the Mexican border states for northbound and southbound**



- Developed forecasts of the movements of people and goods by POE
  - People: number of people, passenger vehicles, buses, pedestrians
  - Goods: trucks, railcars, tons, value
- Conducted trend analysis of border crossings and socioeconomic factors
- Collected forecasts of socioeconomic variables to form a **mid-case or “most likely” forecast**
- Allocated POE forecasts to border crossings
- Forecasts calibrated to other sources



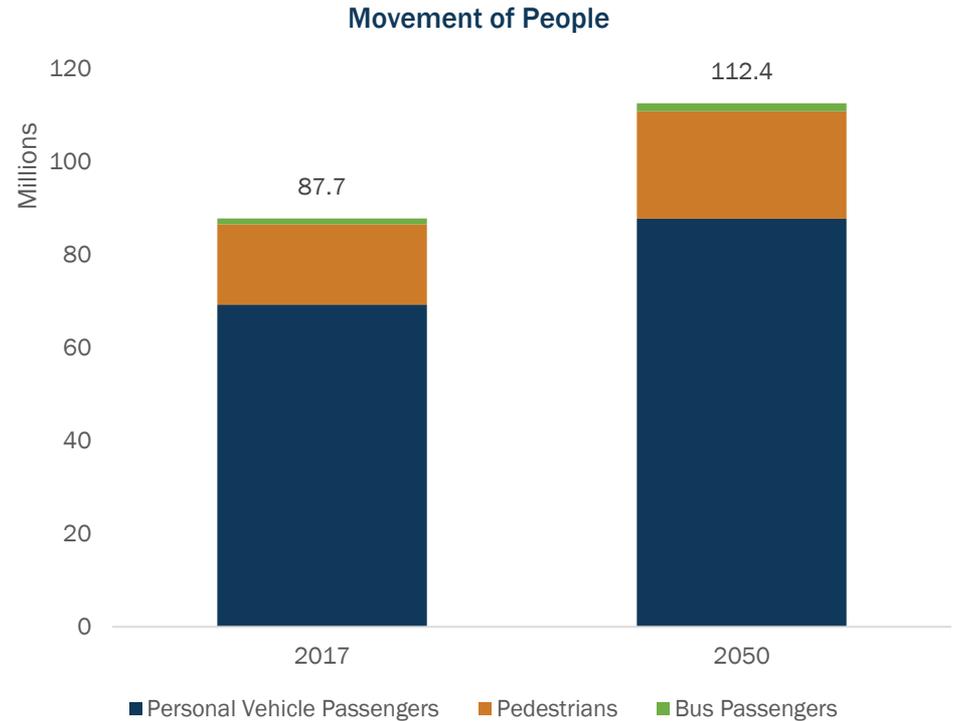


- Approach consistent with planning reports and research
- External inputs to forecast
  - Bureau of Transportation Statistics (BTS)
  - Texas SAM-V4 model
  - Texas Demographic Center
  - Energy Information Agency (EIA)
  - Organization for Economic Cooperation and Development (OECD)
- Forecasts validated against those developed by other sources
  - 2018 Texas Freight Mobility Plan
  - Freight Analysis Framework (FAF)
  - TRANSEARCH forecasts
  - FHWA border forecasts
- Reviewed Metropolitan Planning Organization Long-Range Plans

# Preliminary Future Movement of People Through Texas-Mexico Border: Mid-Case Forecast Borderwide

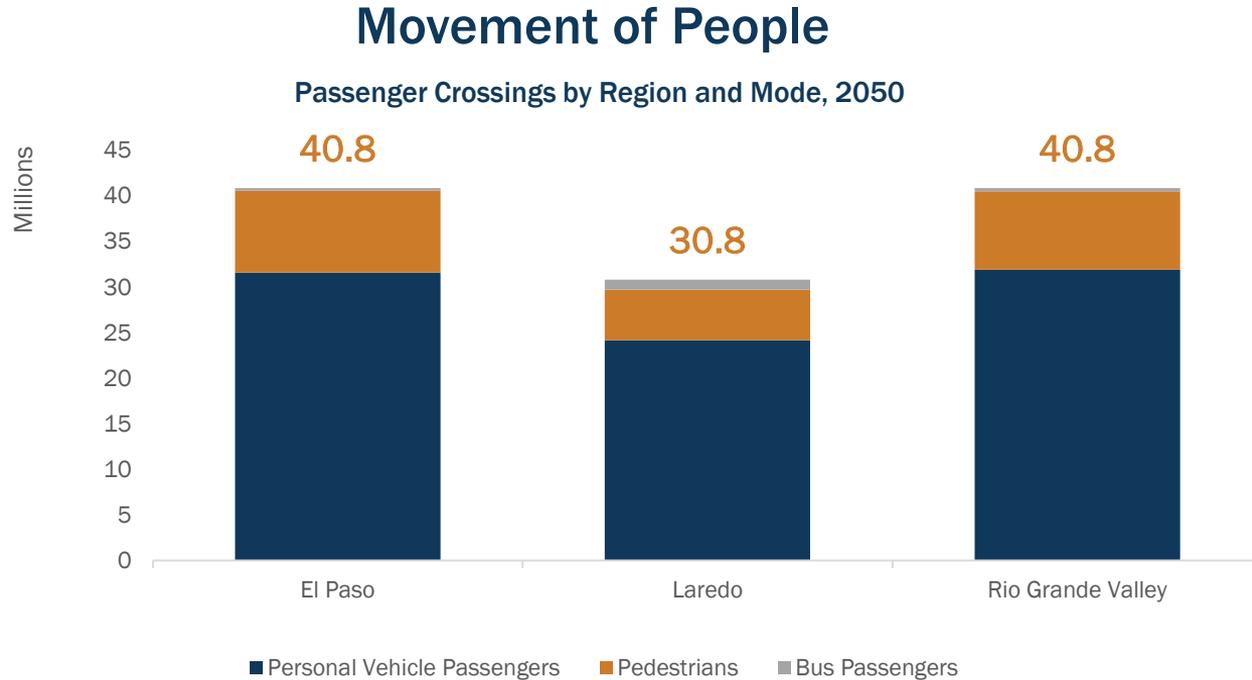


- 25 million additional people will cross the border through POEs in 2050 (28% growth)
- **Personal vehicles remain the major mode** of personal travel



*\*number of people*

# Preliminary Future Movement of People Through Texas-Mexico Border: Mid-Case Forecast by Region

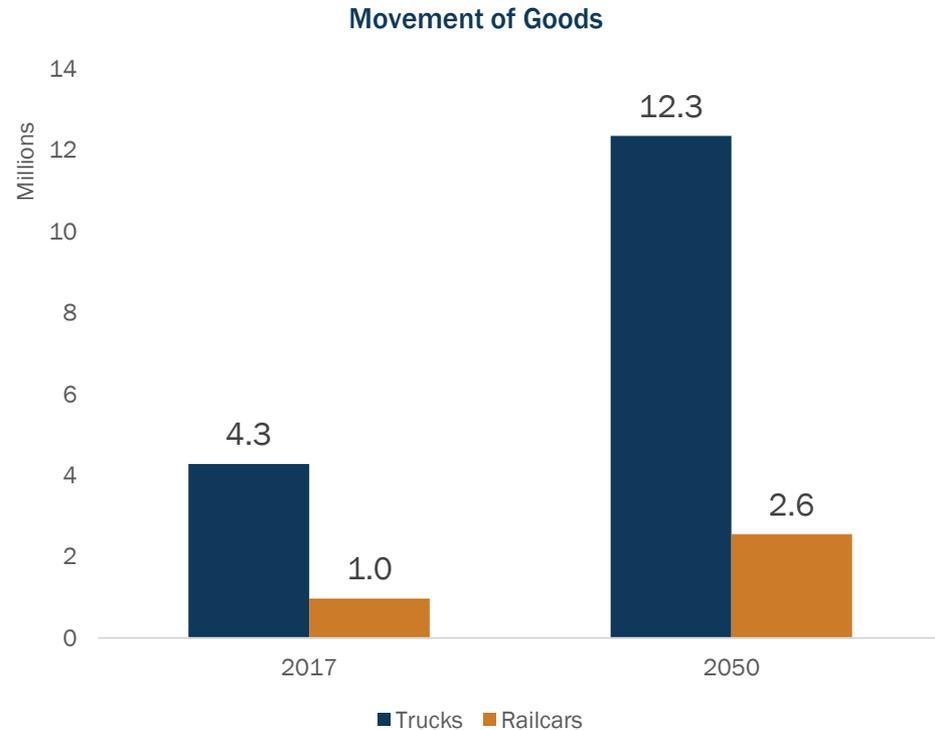


The movement of people is broadly distributed across the three border regions

# Preliminary Future Movement of Goods Through Texas-Mexico Border: Mid-Case Forecast Borderwide



- Trucks are expected to nearly triple (**189% growth**)
- Railcars expected to more than double (**163% growth**)

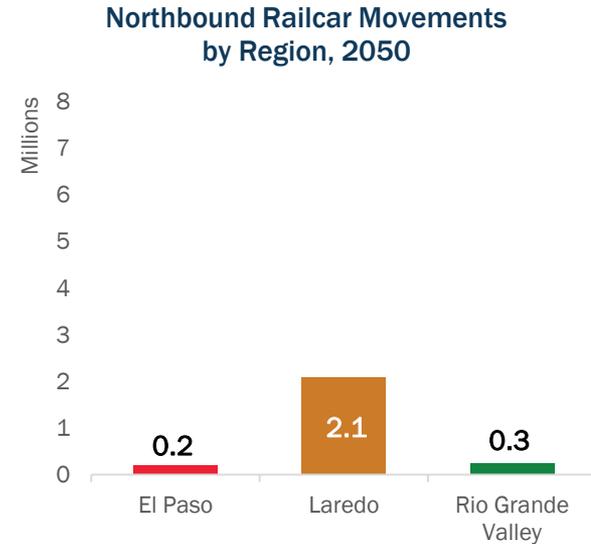
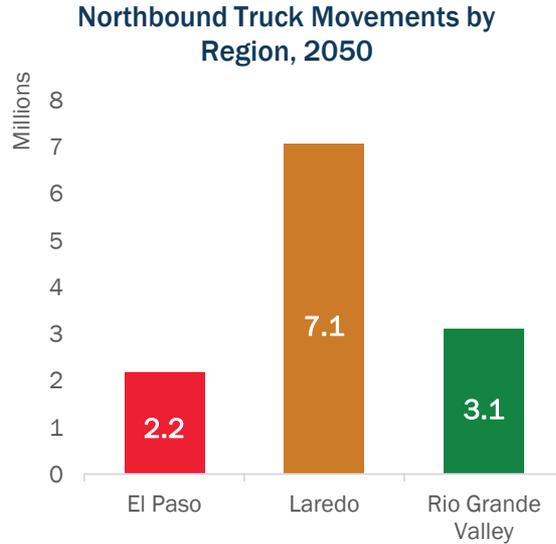


*\*number of crossings*

# Preliminary Future Movement of Goods Through Texas-Mexico Border: Mid-Case Forecast by Region



## Movement of Goods



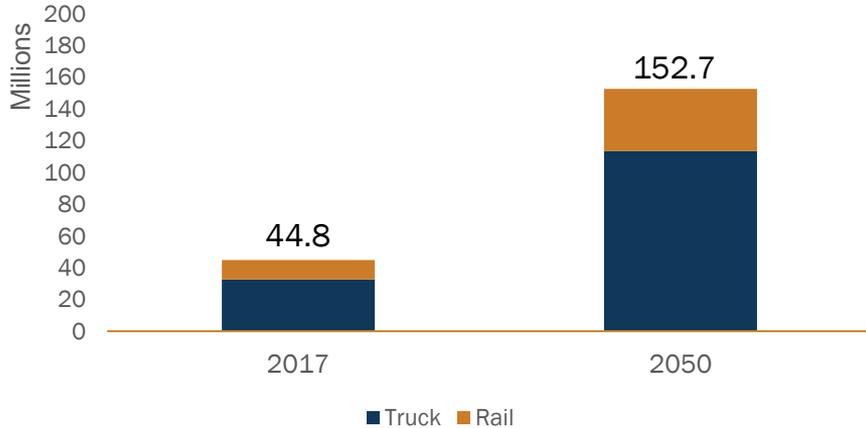
Goods are moved mostly through the Laredo/Coahuila/Nuevo León/Tamaulipas Region

# Preliminary Future Value of Trade Through Texas-Mexico Border

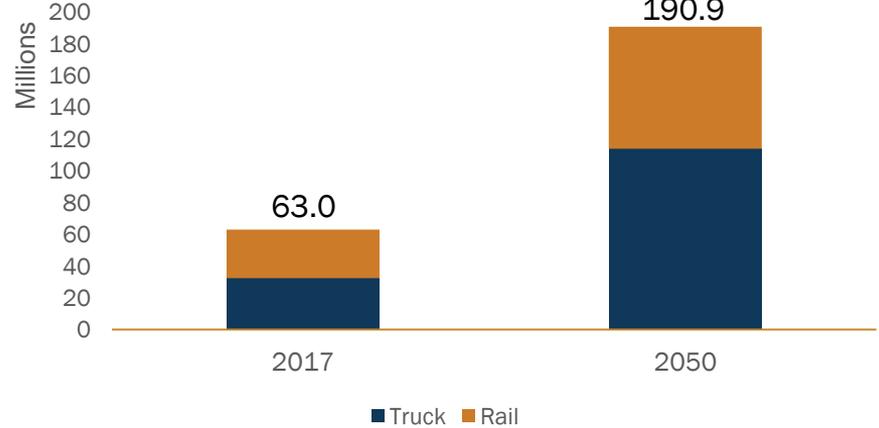


- **Tonnage is expected to more than triple** (219% overall) with faster growth in the northbound direction
- Truck tonnage grows faster (251%) than rail tonnage (170%)

### Total Northbound Tonnage



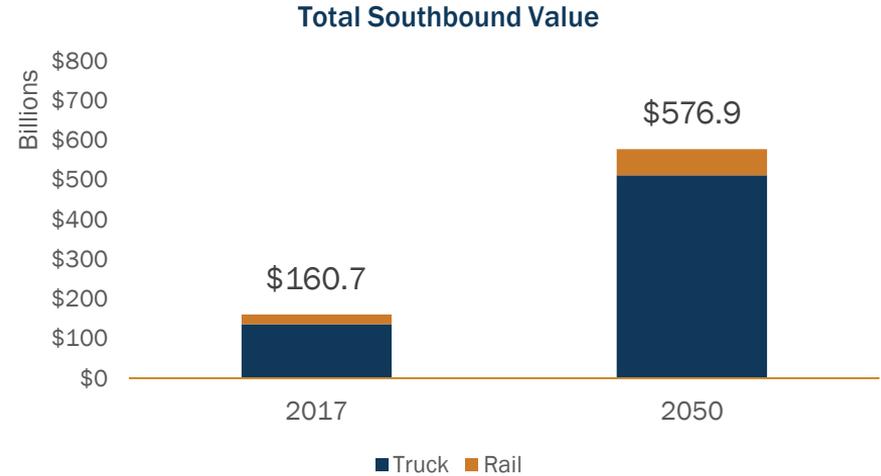
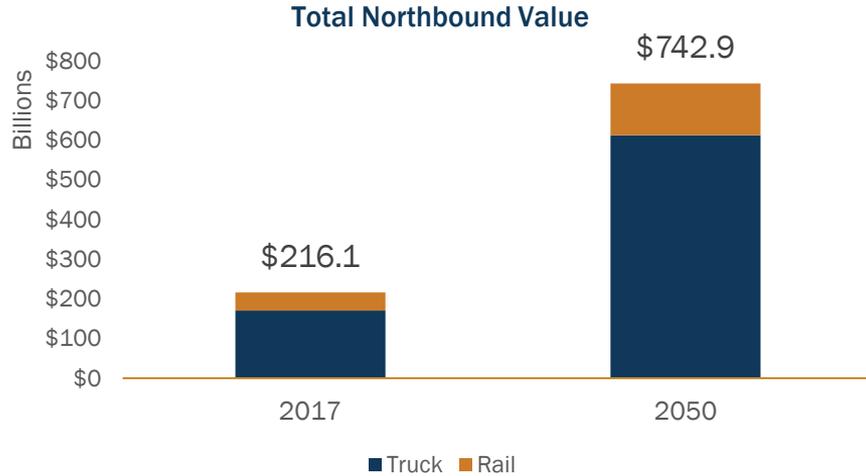
### Total Southbound Tonnage



# Preliminary Future Value of Trade Through Texas-Mexico Border



- Mexico is the U.S.' largest trading partner in goods – just over half the value of trade through the border is Mexican exports to the U.S.
- The **value of trade grows faster (250%)** than the **movement of goods (184%)** due to greater growth in higher value supply chains such as high technology





- The mid case reflects a continuation of prevailing trends
  - 2.1% annual employment growth
  - 1.8% annual economic growth (U.S.)
  - Stable currencies
- Alternate future scenarios are based on factors affecting the movement of people and goods across the border
  - **Low case:** slower economic growth and restrictive border policies
  - **High case:** higher economic growth, facilitative border policies and additional infrastructure

## Low-Case Scenario

- Slower employment growth (1.3% per year)
- Slower national economic growth (1.6% per year)
- Peso (40% devaluation)
- Restrictive border & trade policies (-10% impact)

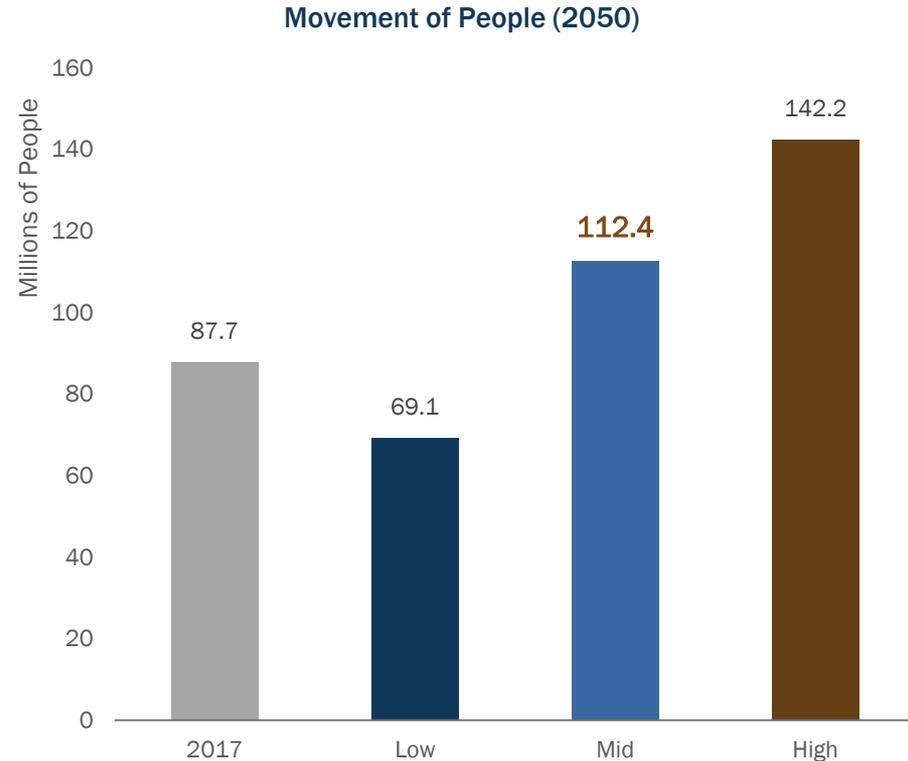
## High-Case Scenario

- Additional infrastructure investments
- Faster employment growth (2.4% per year)
- Faster national economic growth (2% per year)
- Peso (20% appreciation)
- Greater trade integration (+10% impact)

Question: Do the assumptions for the alternate scenarios make sense to you?

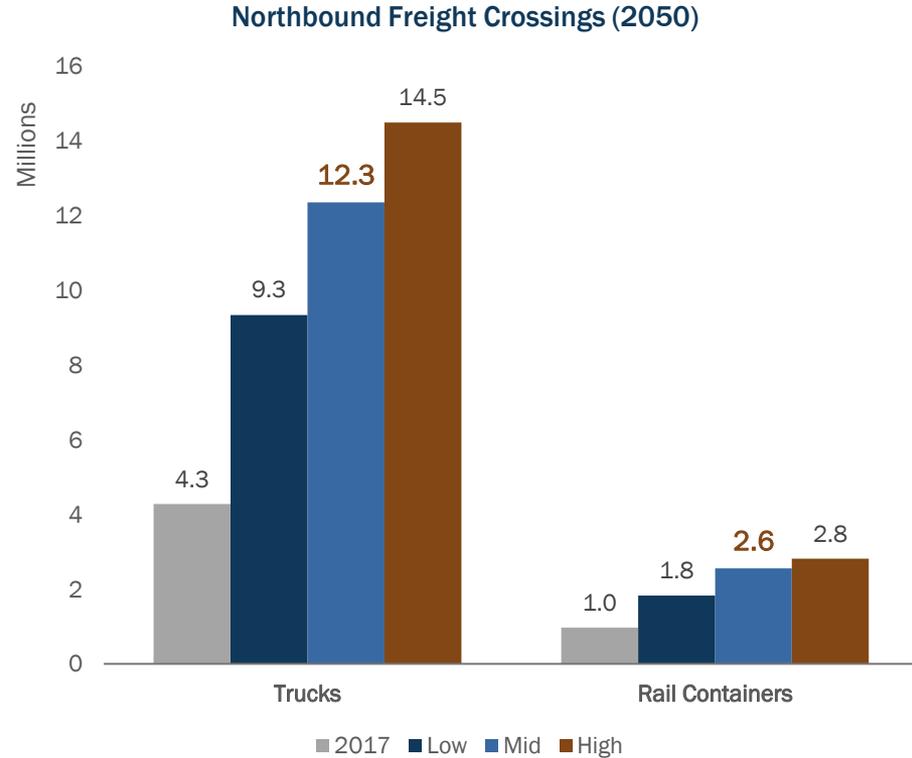


- In the low case, the movement of people is lower due to economic conditions, the exchange rate, and border policies
  - Cross-border land movements decline by more than 18 million to 2011 levels
- **In the high case, the movement of people increases by more than 50 million, straining border infrastructure**
  - Consistent with post-2011 trends





- **Even in the low case, cross-border movement of goods doubles, which will strain border infrastructure**
  - Over the long run, the U.S. and Mexico economies still grow, driving the demand for goods
- In the high case, trucks more than triple and rail containers nearly triple, driving the need for additional capacity
  - **With greater economic integration between the U.S. and Mexico, an efficient border is critical for the economies of both countries**





- **Border crossing capacity is anticipated to be strained** even further, in particular for the movement of goods
  - Commercial vehicles expected to grow across capacity-constrained border crossings
  - Wait times anticipated to increase significantly if no action is taken
- **North-south regional roadways providing access to border crossings are particularly affected** with limited other options to move people and goods
  - I-35 into and out of Laredo
  - I-10 in El Paso, impacting east-west connectivity with Laredo and RGV regions
  - I-69, US 59, and US 77 in RGV

## What Do the Forecast Results Mean for the BTMP?



- Usage of the POEs along the Texas-Mexico border will increase, regardless of future scenario
- Infrastructure improvements will be needed to accommodate future demand
- The mix of traffic across the border will shift towards the movement of goods

# BTAC Feedback

1. Do the forecast results make sense to you? Please explain.

# Chapter 7: Economic Importance of the Border

Preliminary Analysis and Findings

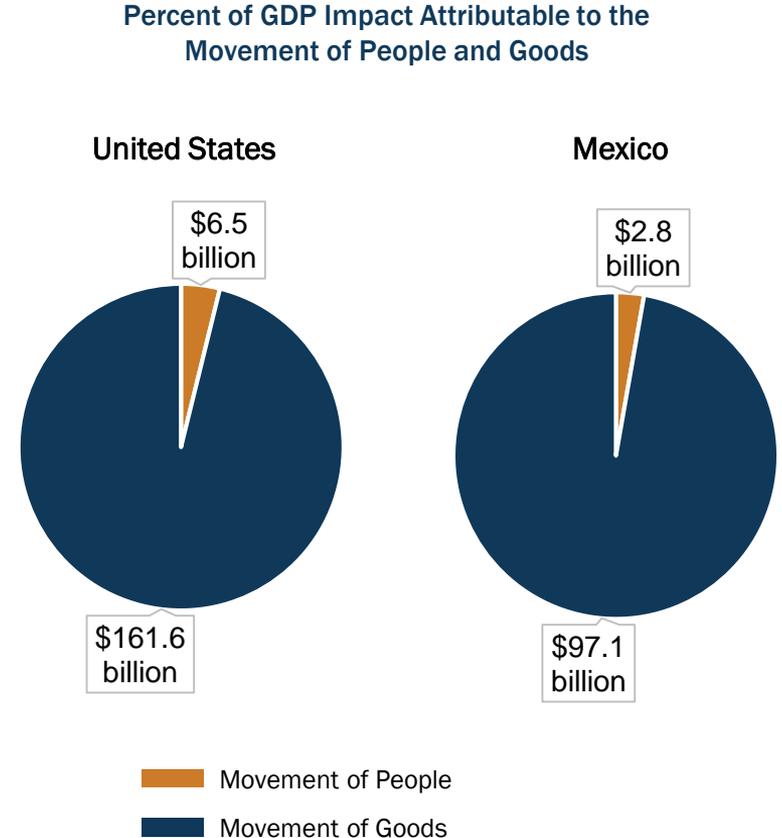


Chapter Purpose	Key Messages	Preliminary Findings
<ul style="list-style-type: none"><li>▪ Demonstrate the economic importance of the border</li><li>▪ Highlight the economic impacts of border delays</li><li>▪ Provide input into the investment plan</li></ul>	<ul style="list-style-type: none"><li>▪ The Texas-Mexico border supports the economies of the border region in Mexico, Texas, and the U.S.</li><li>▪ The benefit of trade extends to U.S. and Mexican states beyond the border</li><li>▪ Current delays at the border represent missed economic opportunities</li><li>▪ Future delays will grow as a result of increased demand</li></ul>	<ul style="list-style-type: none"><li>▪ The Texas-Mexico border generates more than \$268 billion annually in GDP and generates 4.9 million jobs in both countries</li><li>▪ 97% of the total economic impact is due to the movement of goods</li><li>▪ The movement of people contributes more than \$9 billion annually to the GDP of the border region</li><li>▪ Border crossing delays represent missed economic opportunities of more than \$2.7 billion annually in both countries</li></ul>

# Preliminary Economic Importance of Travel Through the Border



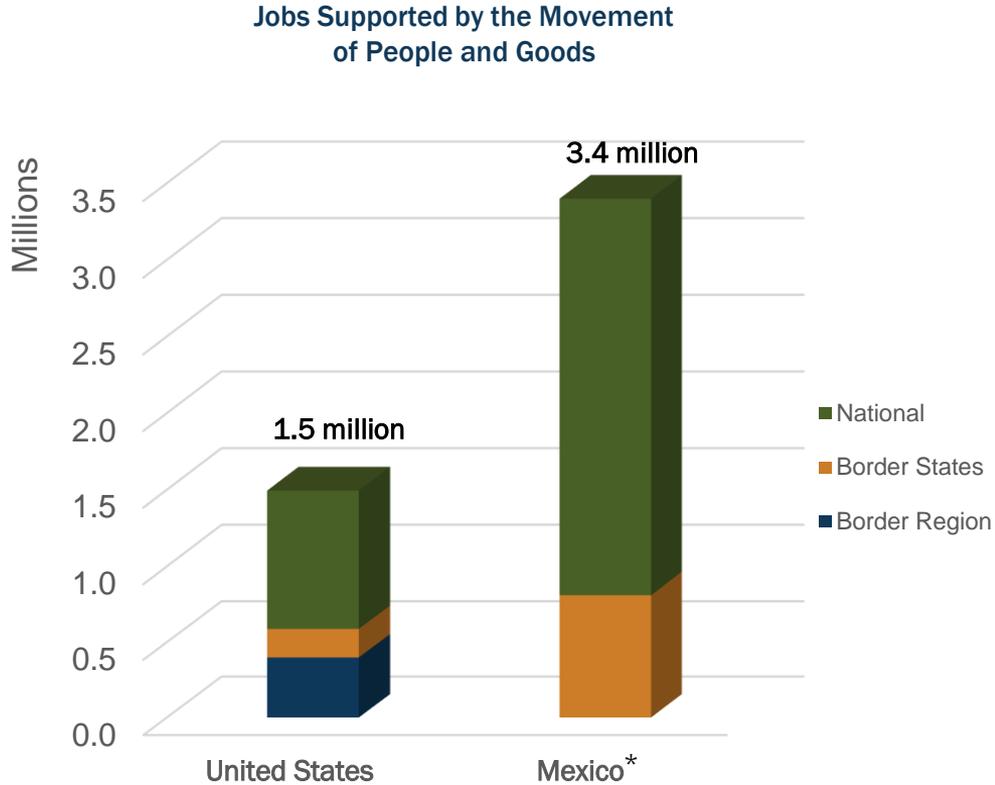
- The movement of people and goods through the Texas-Mexico border has a significant impact on both countries
- The border generates **more than \$268 billion annually in GDP**
  - \$168 billion in the U.S.
  - \$100 billion in Mexico
- The majority of this impact is due to the movement of goods



# Preliminary Economic Importance of Travel Through the Border



- The movement of people and goods **generates 4.9 million jobs** on both sides of the border
  - 1.5 million jobs in the U.S.
  - 3.4 million jobs in Mexico
- These jobs support economies at all levels of geography:
  - National: both countries
  - State: border states
  - Regional: border region



\* State results include border region results in Mexico

# Preliminary Economic Importance of Cross-Border Trade/ Goods

- Total economic impact
- Key supply chain impact
- Binational, national, state, and regional economic impact



## 1. Estimate the value of exports by supply chain, origin, and POE

- Data: supply chain profile 2017 data
- Source: U.S. Census Bureau Trade Data Online (TDO), Freight Analysis Framework (FAF), Bureau of Transportation Statistics (BTS) TransBorder Freight Data

## 2. Estimate the impacts of exports using input-output models

- Data: 2018 multipliers for U.S., 2015 multipliers for Mexico
- Source: IMPLAN

## Measures and outcomes

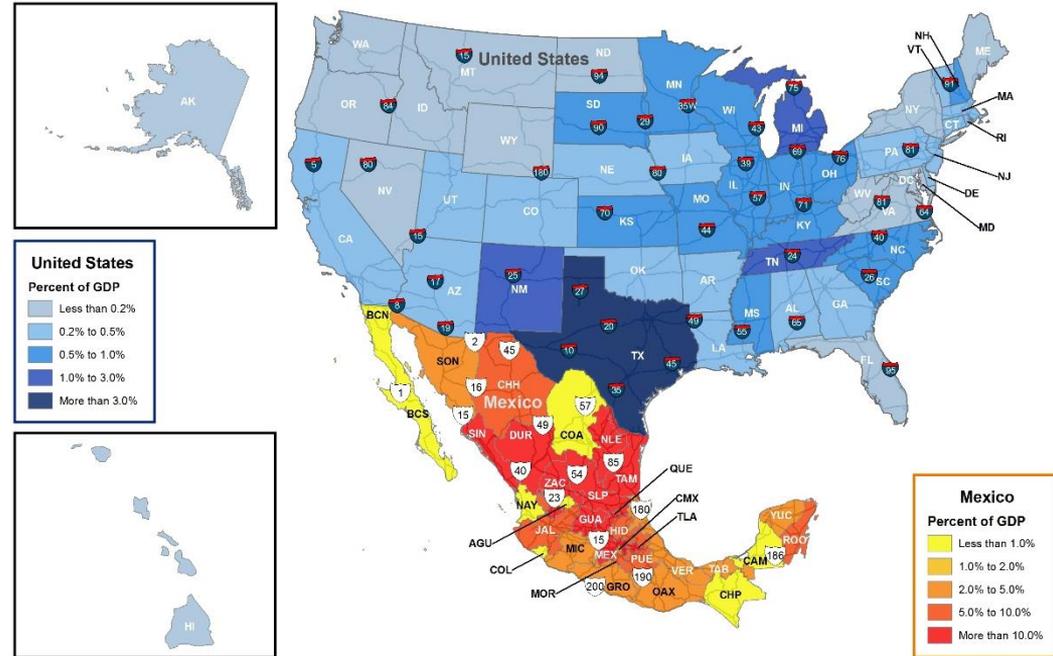
- Gross Domestic Product (GDP), employment, and labor income

# Preliminary Economic Importance of Trade Through the Border



- The economic impact of goods movement across the Texas-Mexico border **reaches the entire U.S. and Mexico**
- Manufacturing integration after NAFTA has allowed (and USMCA will allow) North American manufacturing to be more competitive with Asia
- The Texas-Mexico border trade has had a nationally significant impact on GDP in both countries

Percent of GDP Dependent on Trade through Texas-Mexico Border

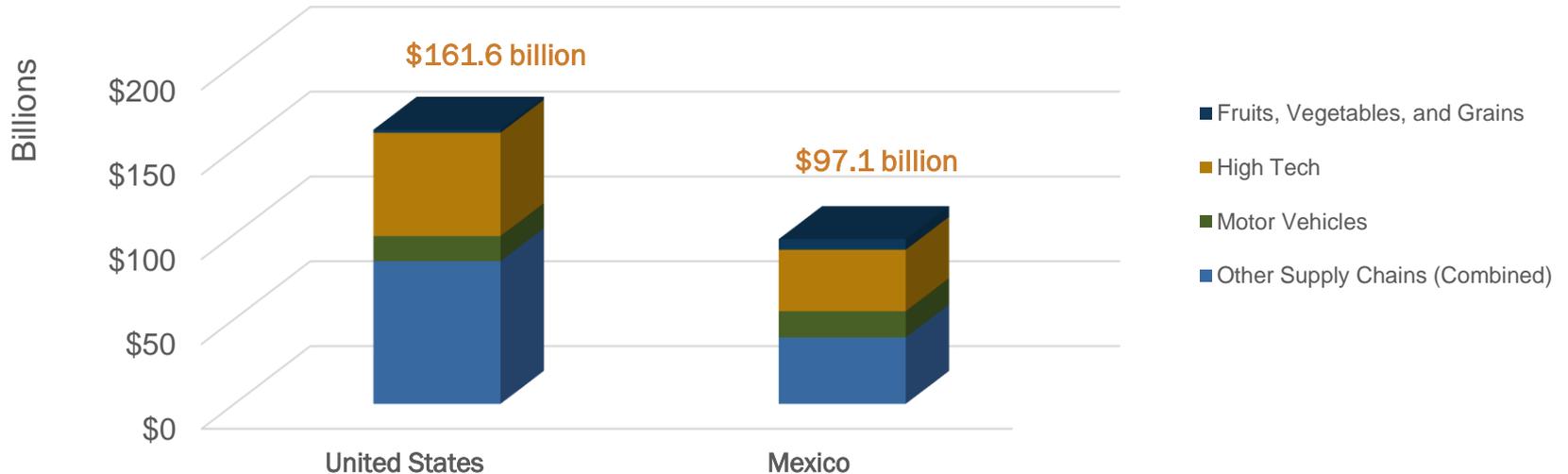


# Preliminary Economic Importance of Key Supply Chains Through the Border



- **Higher value-added manufacturing in durable goods** including machinery, contribute the most to the U.S. and Mexican economies
- Goods move across the border, benefiting from the abundance of Mexican labor and U.S. technology

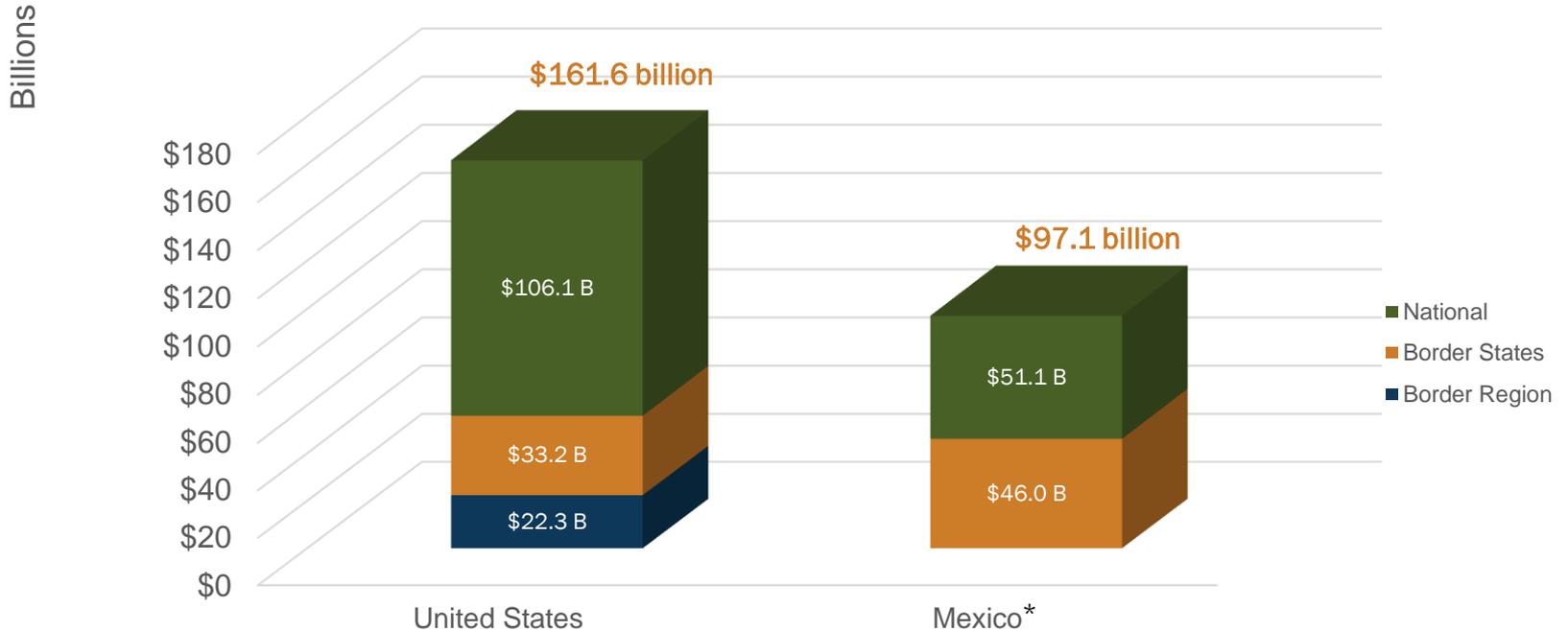
Impact of Key Supply Chains on GDP



# Preliminary Economic Impact of Trade by Geography



## Economic Impact of Movement of Goods through Texas-Mexico Border



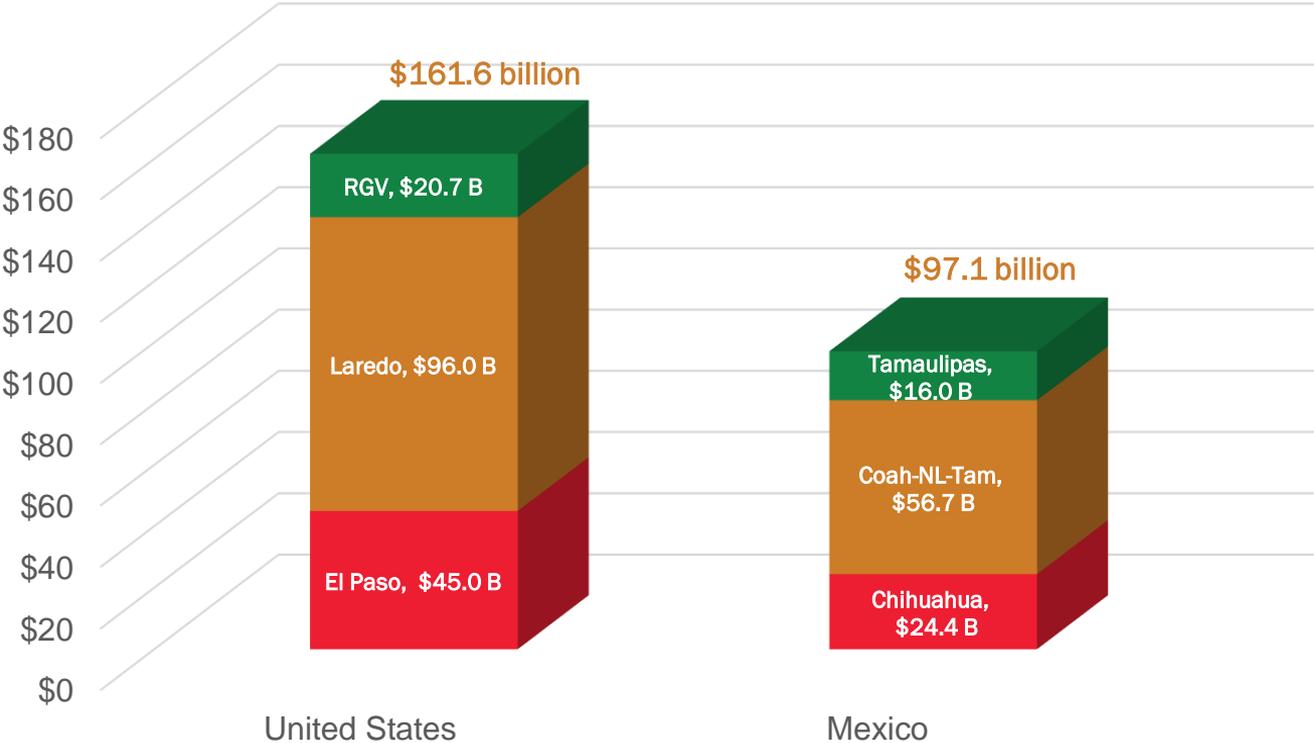
\* State results include border region results in Mexico

# Preliminary Economic Impact of Trade Through the Border by Region



Economic Impact of Movement of Goods through Texas-Mexico Border

Billions



# Preliminary Economic Importance of Cross-Border Movement of People

- Total economic impact
- Economic impact by mode and region
- Economic impact on hospitality industries

## 1. Estimate expenditures by categories

- Categories: retail, hotels & restaurants, recreation & entertainment, miscellaneous
- Data: crossing data, expenditure estimates
- Source: U.S. Customs and Border Protection (CBP), San Diego Association of Governments (SANDAG), Arizona Office of Tourism

## 2. Estimate the impacts of expenditures using input-output models

- Data: 2018 multipliers for U.S., 2015 multipliers for Mexico
- Source: IMPLAN

## Measures and outcomes

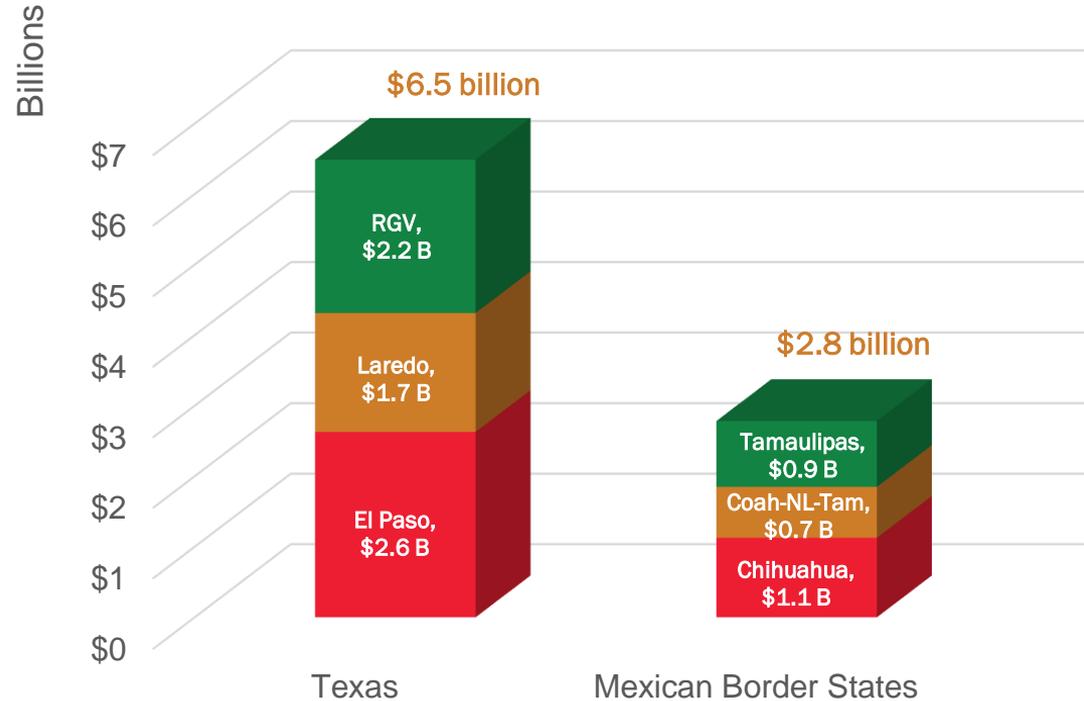
- Gross Domestic Product (GDP), employment, and labor income

# Preliminary Economic Impact of Movement of People on GDP



- Pedestrian and personal vehicle trips strongly influence the border economy
- Historically, Mexican nationals visit and shop in Texas
- **The movement of people generates over \$9 billion annually in GDP**
  - 79% by personal vehicle
  - 20% by foot (pedestrian)
  - 1% by bus
- The impacts are greatest in the El Paso/Santa Teresa/Chihuahua and Rio Grande Valley/Tamaulipas Regions

Economic Impact of Movement of People Through Texas-Mexico Border

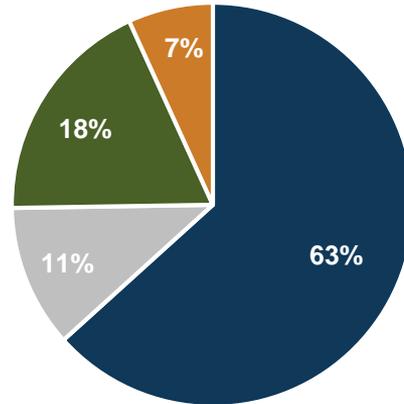


# Preliminary Breakdown of Impact of Movement of People on GDP by Industry

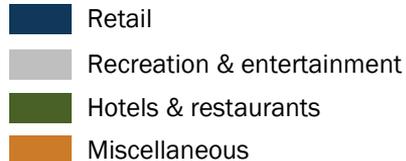
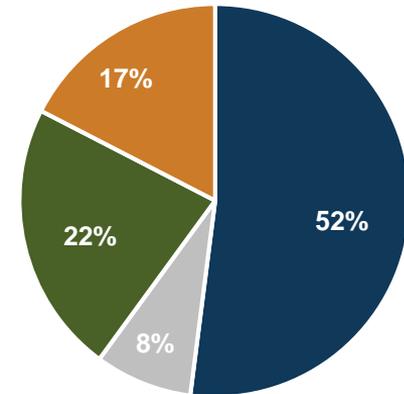


- Employment in these sectors explains why job growth in some areas of the border was among the fastest in the U.S. through the early 2000s
- The **retail industry, particularly in the U.S., benefits from the movement of people across the border**

Texas Border Region



Mexico Border Region



# Preliminary Economic Cost of Congestion

- Economic impact of border wait times and crossing times
- Economic impact of wait times for movement of people and goods



## 1. Estimate lost exports and expenditures due to delays at border

- Based on how industries and people react to changes to delays at land ports of entry (elasticities)
- Data: crossing data, delay data, supply chain profile 2017 data, demand elasticities
- Source: U.S. Customs and Border Protection (CBP), Texas A&M Transportation Institute (TTI), San Diego Association of Governments (SANDAG), Arizona Office of Tourism, plus prior supply chain profile and crossing data

## 2. Estimate impacts using input-output models

- Data: 2018 multipliers for U.S., 2015 multipliers for Mexico
- Source: IMPLAN

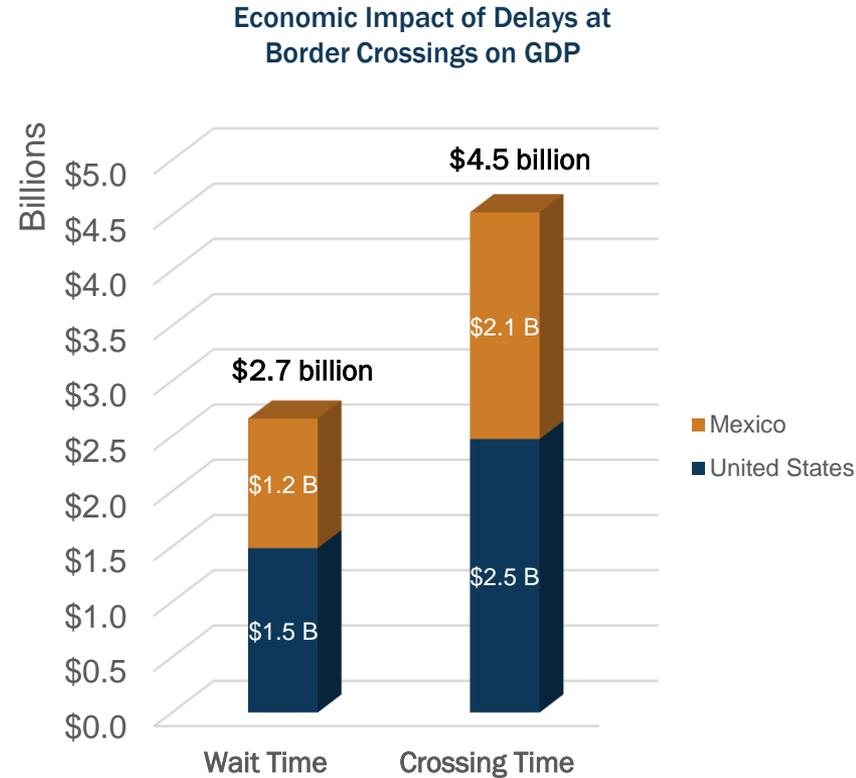
## Measures and outcomes

- Gross Domestic Product (GDP), employment, and labor income

# Preliminary Economic Impacts of Border Delays on GDP



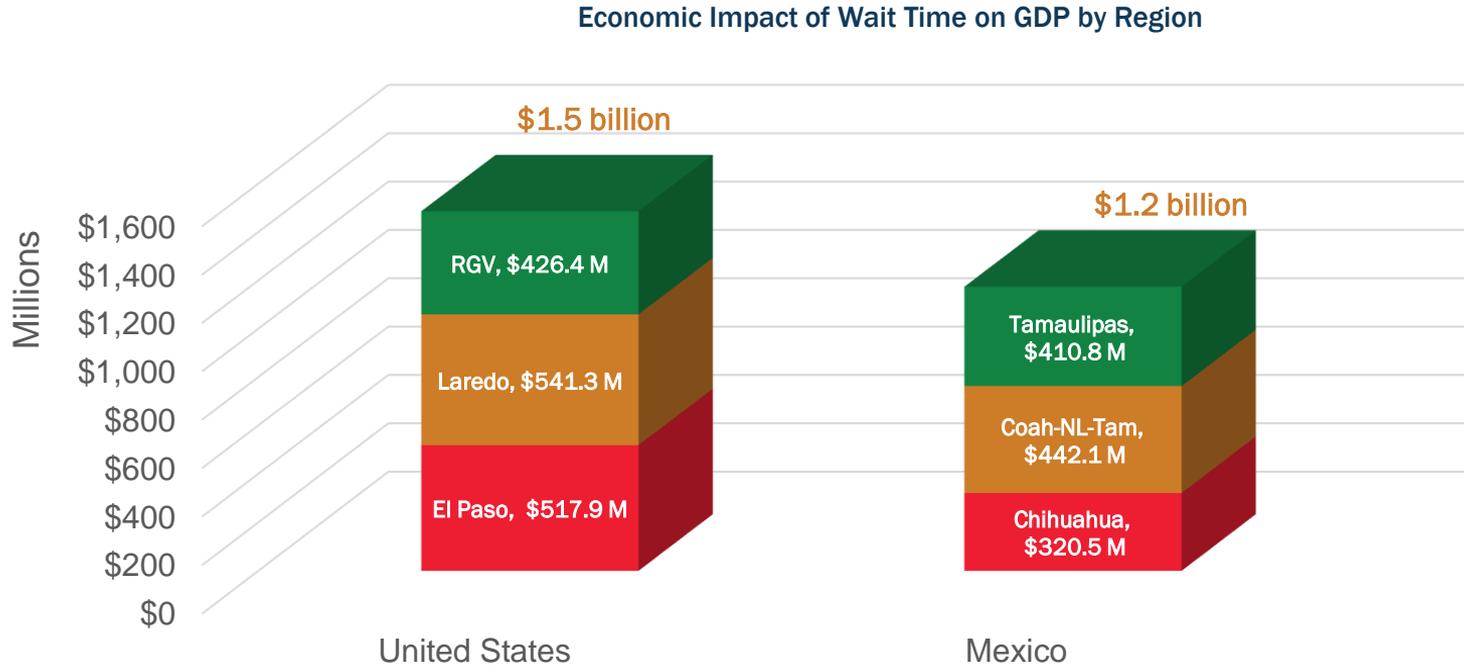
- **Border delays represent missed opportunities** to the U.S. and Mexican economies (more than \$2.7 billion in GDP)
- This impact almost doubles with crossing time (to \$4.5 billion in GDP)
  - Texas: \$1.2 billion annually
- **Delays at the border increase transportation costs for goods**, making them more expensive and reducing demand
- Decreases in reliability for just-in-time logistics reduces competitiveness with other nations



# Preliminary Economic Impacts of Border Delays on GDP by Region



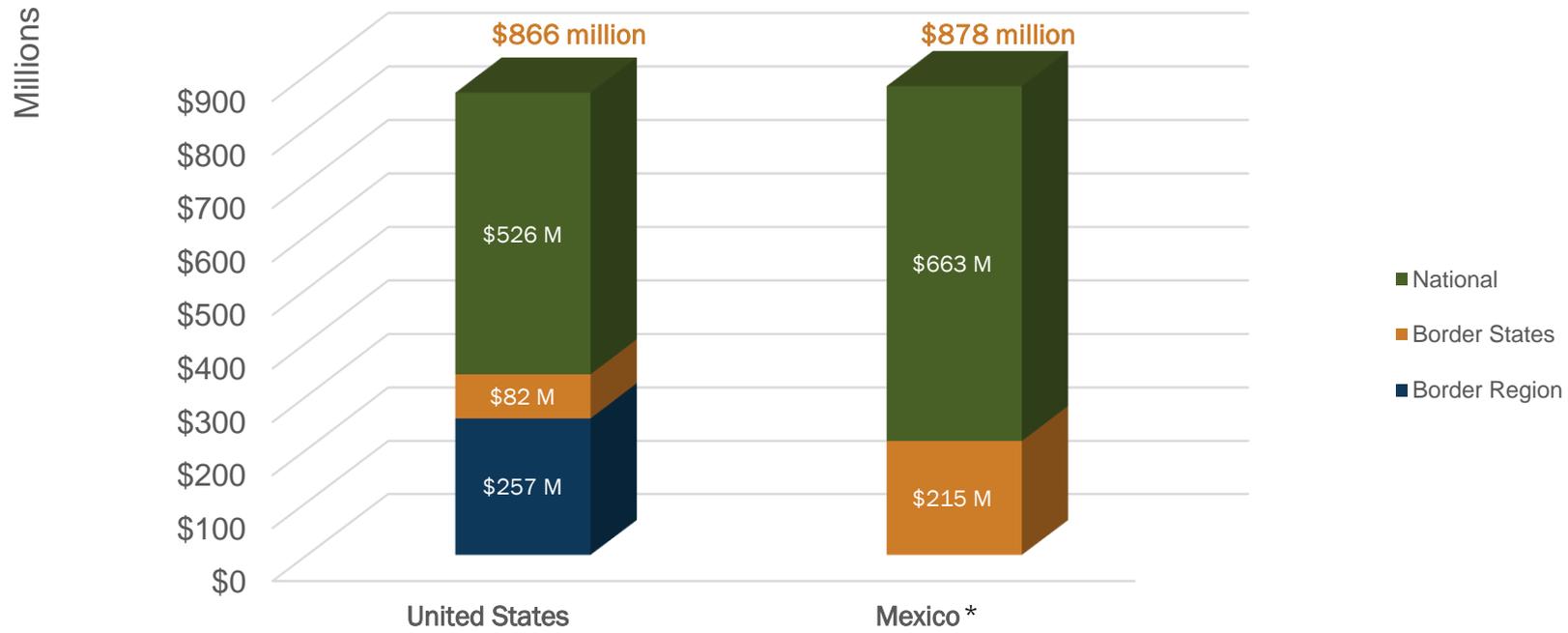
- Delays at the border for the movement of people and goods represent missed economic opportunities in all three regions



# Preliminary Economic Impacts of Delays to the Movement of Goods on GDP by Geography



### Economic Impact of Goods Wait Time on GDP by Geography

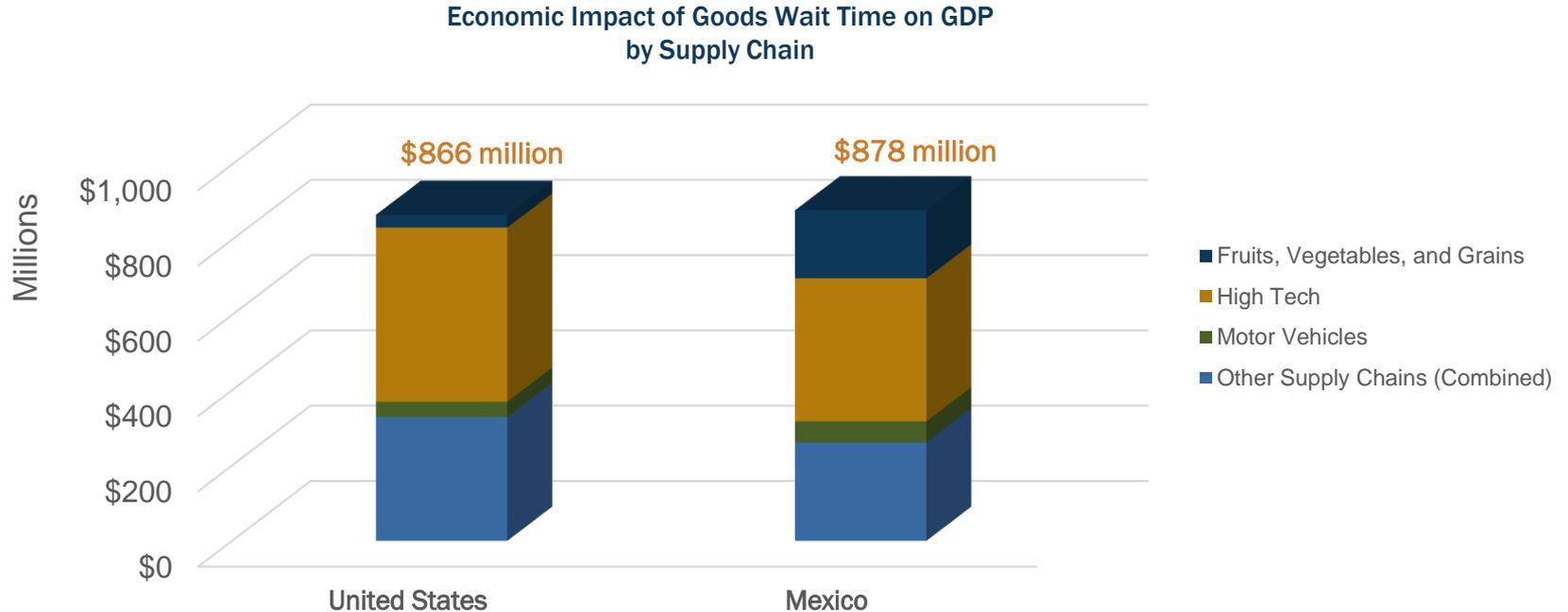


\* State results include border region results in Mexico

# Preliminary Economic Impacts of Border Delays on Key Supply Chains



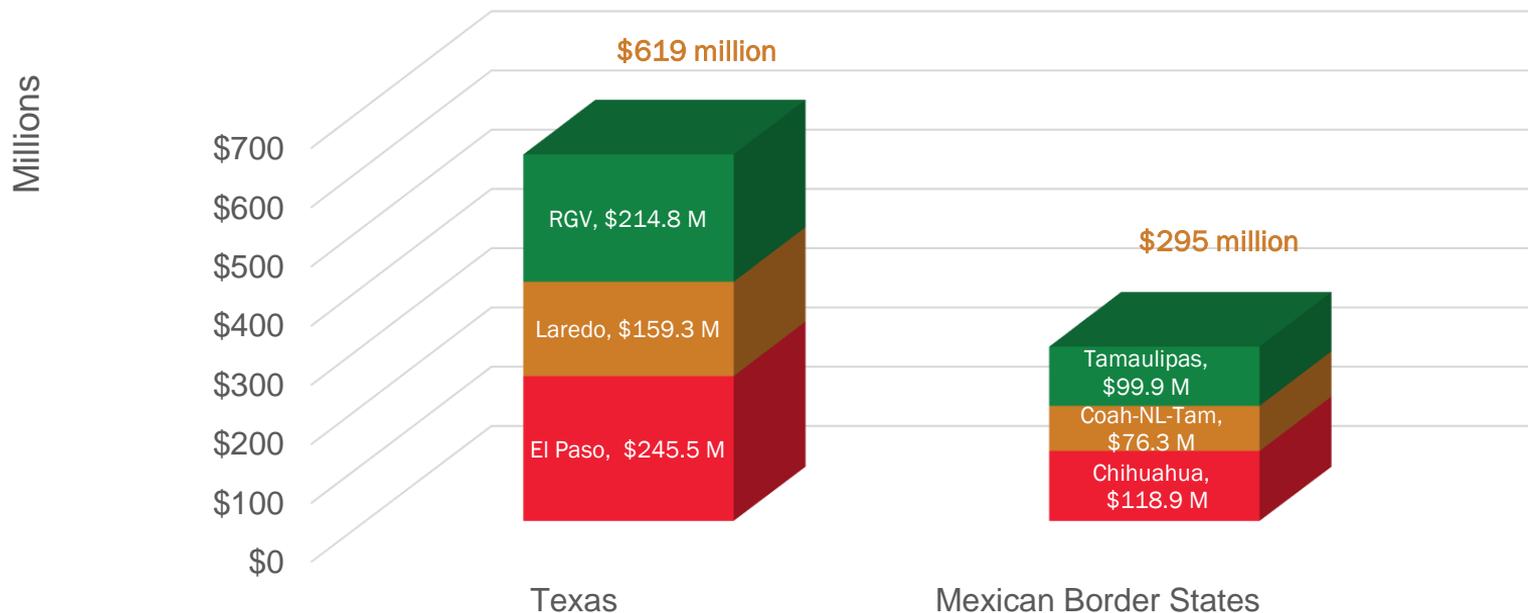
- Border delays affect key supply chains in the U.S. and Mexico



# Preliminary Economic Impacts of Delays to the Movement of People on GDP by Region



Economic Impact of People Wait Time on GDP  
by Region



## What do the Economic Impact Results Mean for the BTMP?



- Investments in border crossings and the border region's roads will help reduce delays
- Facilitating the flow of goods across the Texas-Mexico border is important for the U.S. and Mexico remaining competitive with other nations
- Investments will also increase regional trade in high value-added manufactured goods and preserve jobs in both countries

# BTAC Feedback

1. Do the economic impact results make sense to you?  
Please explain.
2. Which economic impact measures (GDP, employment, labor income) would you most like to see?

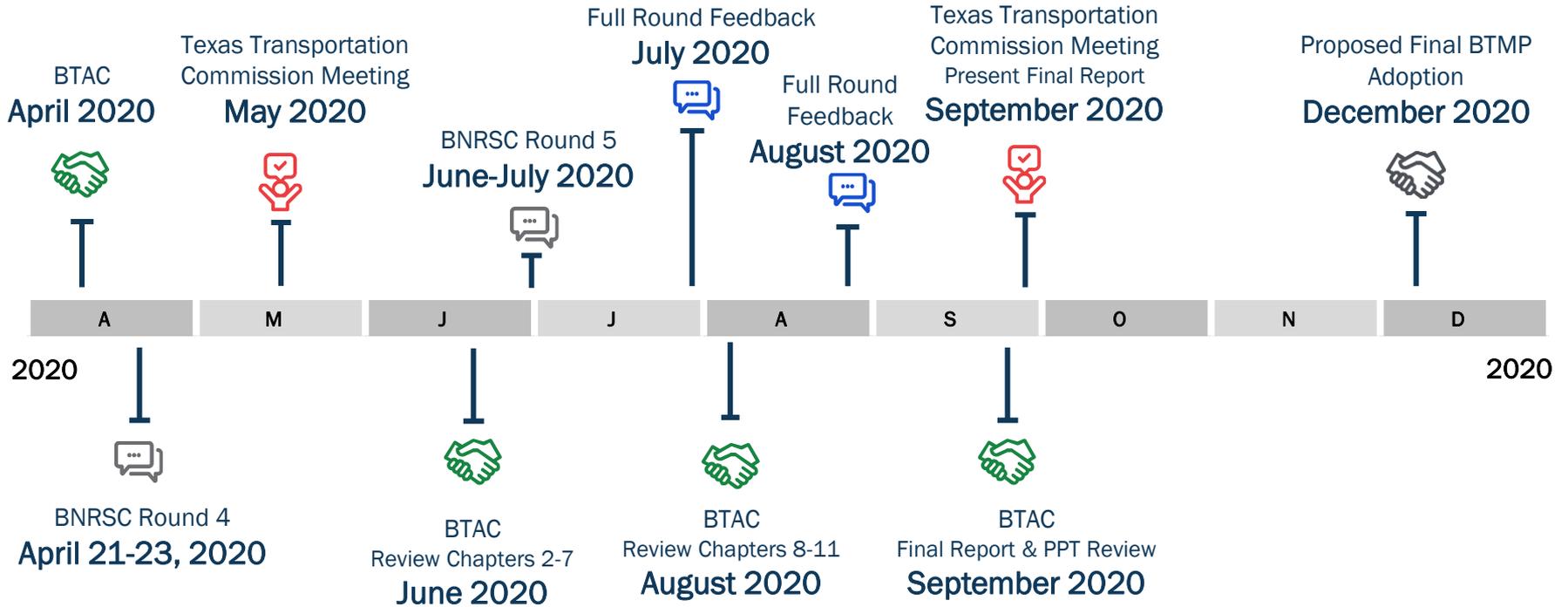
# Study Tasks/Three Month Look-Ahead



Forecasting (Task 6)	Economic Analysis (Task 7)	Recommendations & Investment Plan (Task 8)	Implementation Plan (Task 9)
<ul style="list-style-type: none"> <li>▪ Refine future scenarios</li> <li>▪ Refine future forecasts</li> </ul>	<ul style="list-style-type: none"> <li>▪ Refine assessment of economic importance of trade through the border</li> <li>▪ Refine assessment of economic impact of wait times</li> <li>▪ Assess economic impact of BTMP recommendations</li> </ul>	<ul style="list-style-type: none"> <li>▪ Discuss project prioritization process</li> <li>▪ Draft prioritize policies, programs &amp; projects from existing plans and stakeholders</li> <li>▪ Identify funding sources</li> </ul>	<ul style="list-style-type: none"> <li>▪ Identify methodology to create implementation plan</li> <li>▪ Draft implementation plans for high-priority policies, programs &amp; projects</li> </ul>

Next BNRSC Meetings	Next BTAC Meeting	Next BTAC Meeting Content
July 2020	July 9, 2020	<ul style="list-style-type: none"> <li>▪ Chapter 6: Future Forecasts for the Border Region (Recap)</li> <li>▪ Chapter 7: Economic Importance of the Border (Recap)</li> <li>▪ Chapter 8: Identification of Future Needs and Strategies</li> <li>▪ Chapter 9: Stakeholder Engagement</li> </ul>

# BTMP Schedule





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