



Ports-to-Plains Corridor Feasibility Study (HB 1079)

Segment #1, Committee Meeting #3
Conference Call/Web-Ex



Welcome

TxDOT Leadership

**Caroline Mays,
Director, Freight, Trade and Connectivity, TxDOT**

**Honorable Dan Pope, Mayor, City of Lubbock,
Ports-to-Plains Advisory Committee Chair**

**Jared Miller,
Amarillo City Manager, Segment 1 Committee Chair**



- 1 Welcome
- 2 Recap of Previous Meeting
- 3 Determination of Areas Preferable and Suitable for Interstate Designation
- 4 Preliminary Cost Estimates
- 5 Break
- 6 Preliminary Committee Recommendations
- 7 Funding Sources
- 8 Review and Discussion of Report Chapters 3 and 4
- 9 Open Discussion
- 10 Adjourn

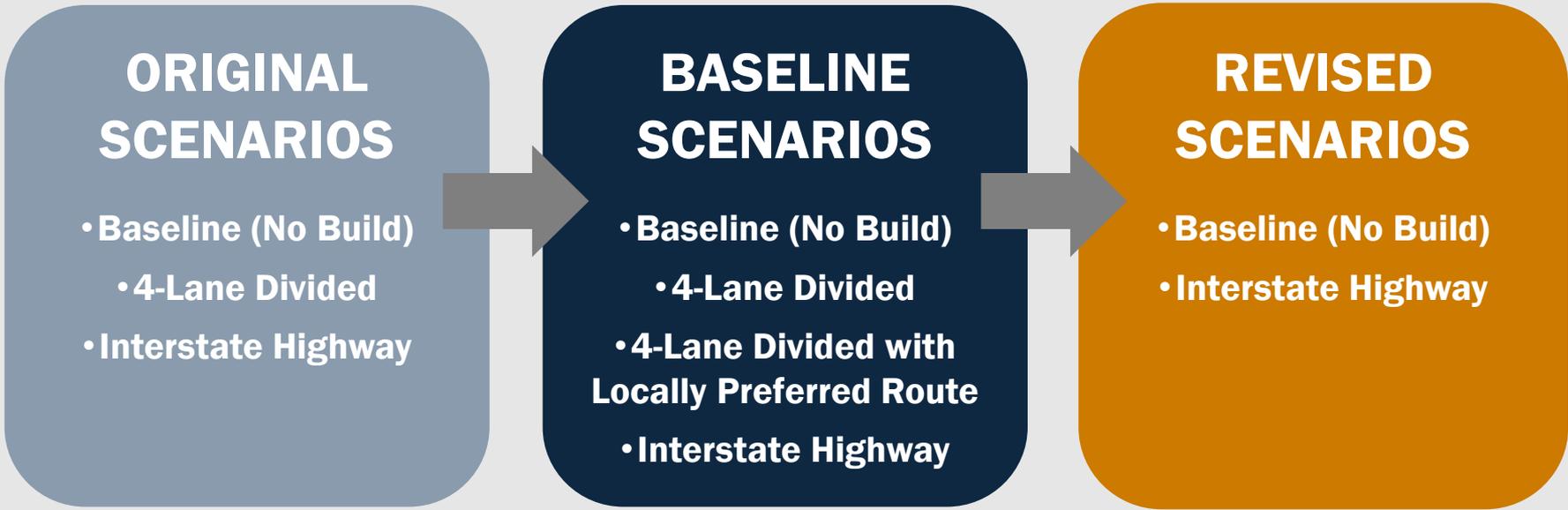


Segment #1

Recap of Previous Meeting

Caroline Mays, TxDOT

Jared Miller, Segment 1 Committee Chair



Overview of Segment Meeting #2 – February 6, 2020



- **Held in San Angelo, TX**
- **Members attended via online conference due to inclement weather**
- **Agenda**
 - Forecasted conditions
 - Planned and programmed projects
 - Identification of gaps
 - Preliminary Corridor Feasibility Analysis
 - Review and discussion of Report Chapters 1 and 2



Online Conference

Segment #1 Forecasted Total Population 2020 and 2050



2020



2050



499,624

(2020)

602,827

(2050)

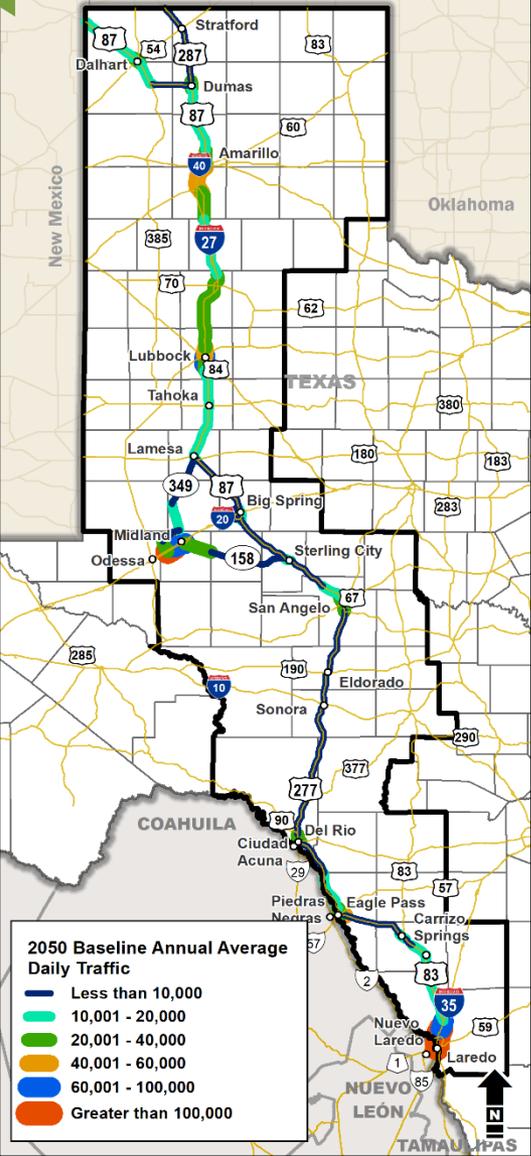
- Total population for the 29 counties is projected to **increase by 103,203** persons.
- **Randall County** (81%) and **Dallam County** (28%) have the highest projected population growth.
- **Castro County** (-35%) and **Hale County** (-33%) have the largest projected population declines.
- Overall Segment #1 population is projected to **grow by 21%**.

Source: Texas Demographic Center

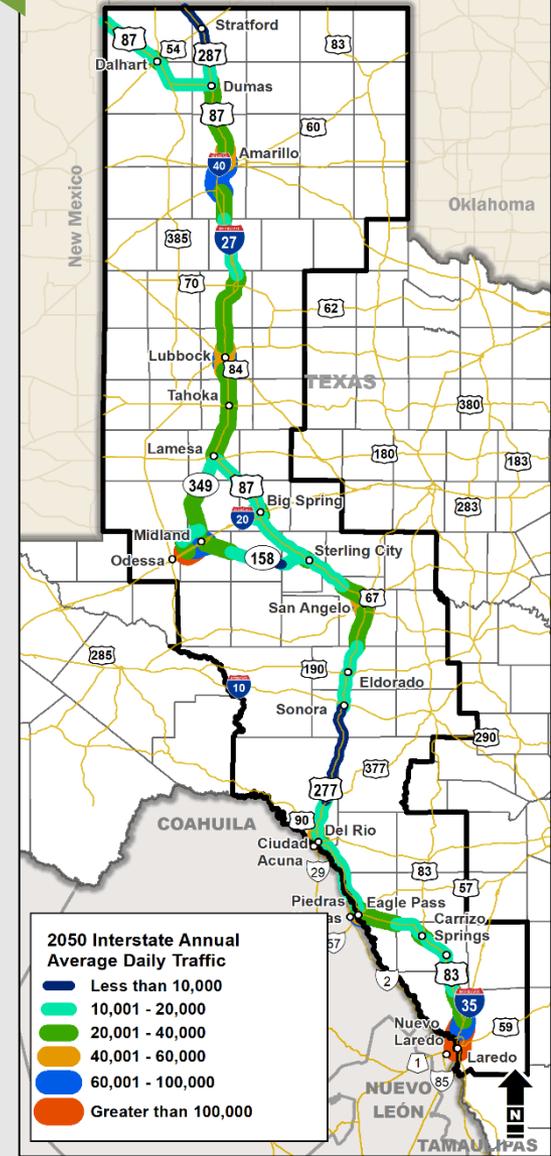
Forecasted Traffic Conditions



2050 Traffic - No Build



2050 Traffic - Interstate



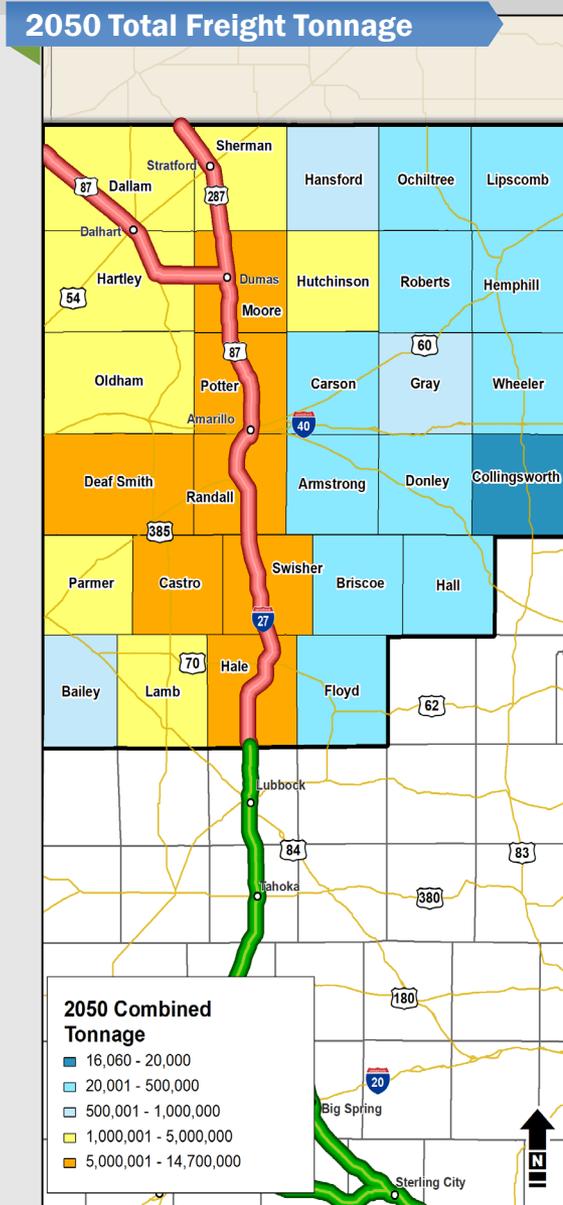
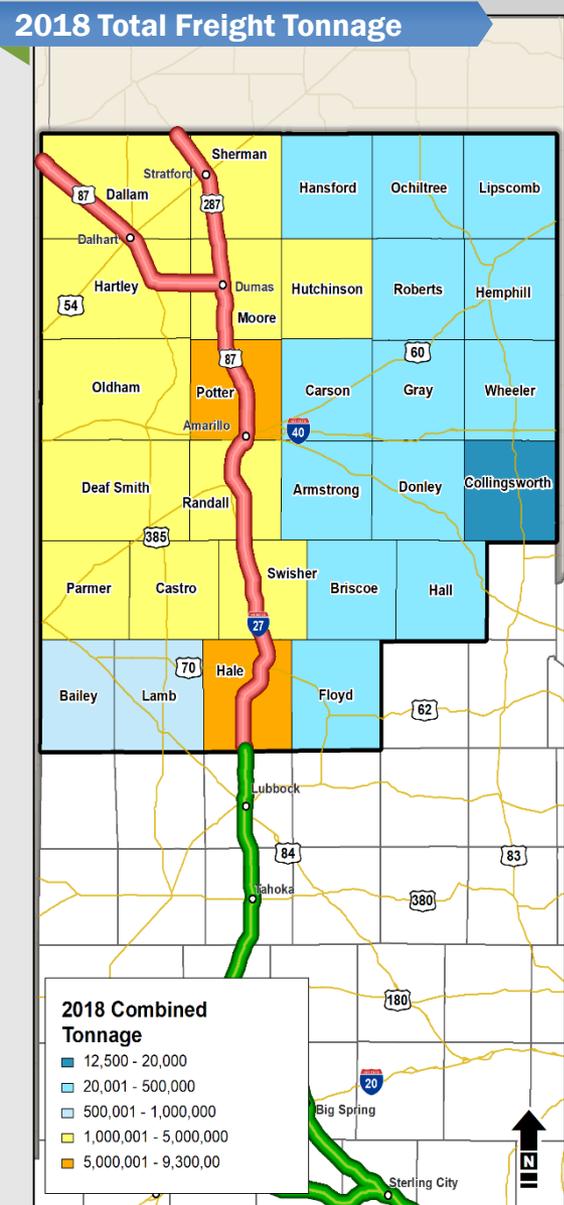
Overview of Findings

- **Interstate Highway Growth**
 - 100-200% growth over 2018 volumes found in all three segments on arterial sections
 - US-87 provides path to I-25
 - US-287 route unimproved in Oklahoma

- **Interstate Highway Diversions**
 - Fills in National Grid
 - Most diversions from within 100 miles
 - Diversions also traced on national and statewide basis

Source: TxDOT SAM and TxDOT 2018 RID

Segment #1 Total Freight Growth by County - 2050

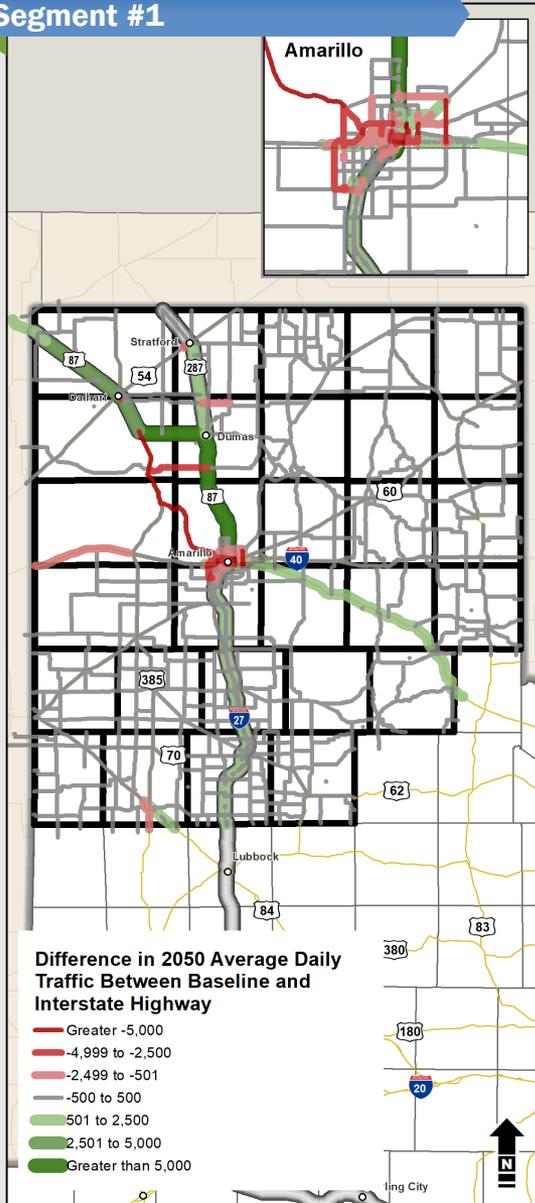


- Segment #1 total truck tonnage is projected to **grow 59%** through 2050, concentrated particularly along I-27
 - 28 million tons added, for 39% of the new tons on the corridor
 - Total volume 79 million tons
- Fastest county growth:
 - **Castro** - 115%
 - **Hansford** - 104%
 - **Moore** - 94%
- Largest county growth:
 - **Potter** + 5.4 mil. tons
 - **Moore** + 3.1 mil. tons
 - **Castro** +3.0 mil. tons

Source: TxDOT SAM and TRANSEARCH database



Segment #1



Diversions – Segment #1

- Existing I-27 only moderately increases from shifts versus No Build
- North of Amarillo, the corridor draws from SH 354, US 385, and FM 1061
- Corridor will attract trips to US 287 southeast of Amarillo and divert trips from I-40 west of Amarillo
- Corridor draws strong demand to US 87 towards New Mexico and I-25
 - US 287 to I-70 in Colorado not as attractive

Source: TxDOT SAM and TxDOT 2018 RID

Segment Committee Report Outline



- Executive Summary
- Letter from the Segment Committee Chair

1. Introduction
2. Existing Conditions and Needs Assessment
3. Forecasting and Future Conditions
4. Segment Feasibility Analysis
5. Economic Development Impacts of the Segment

6. Segment Improvement Strategies
7. Public Involvement and Stakeholder Engagement
8. Segment Committee Findings and Recommendations
9. Financial Plan
10. Implementation Plan
 - Figures, Tables, and Appendices



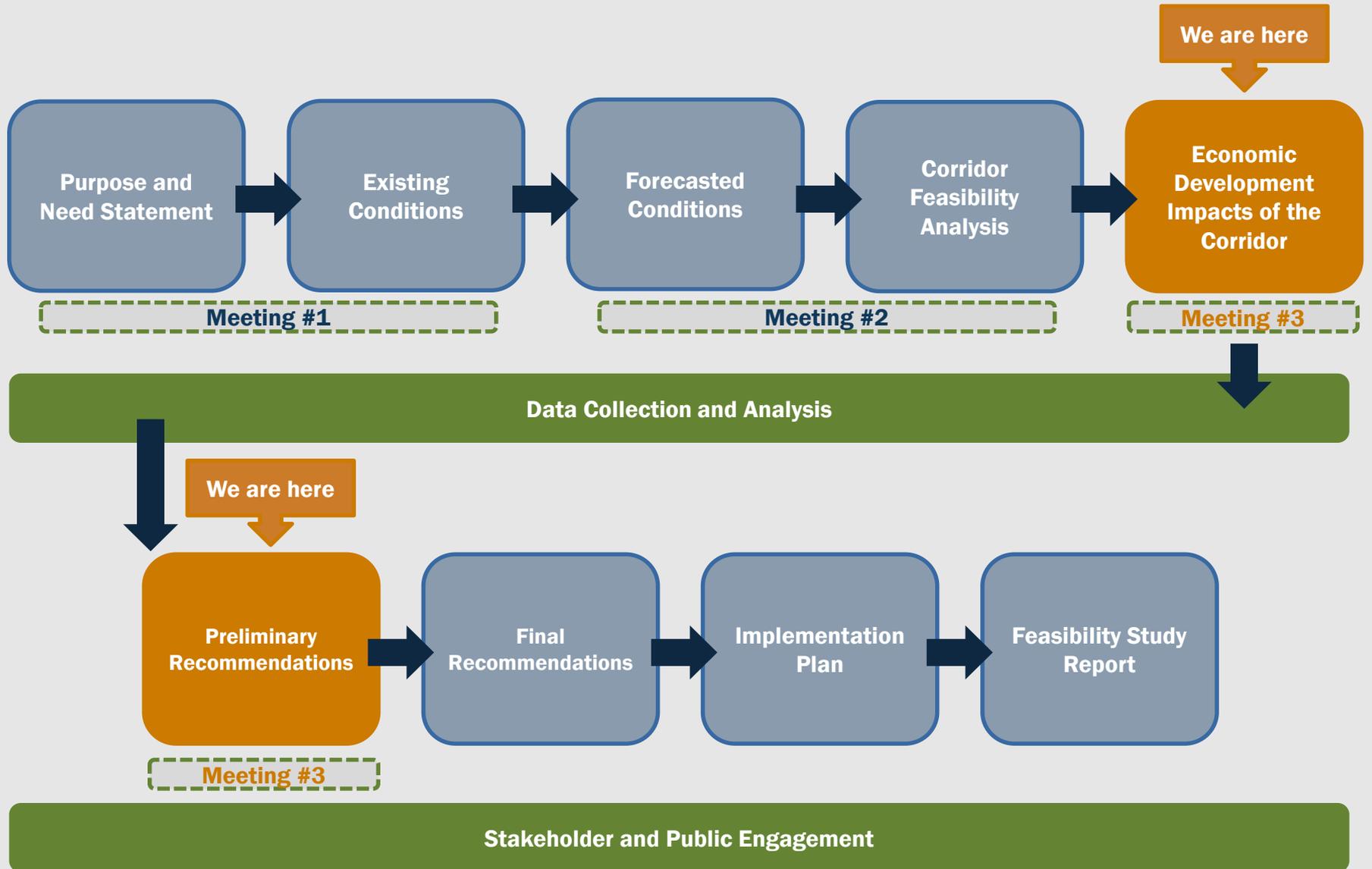
- Executive Summary
- Letter from the Segment Committee Chair

1. Introduction*
2. Existing Conditions*
3. Forecasted Conditions
4. Segment Interstate Feasibility Analysis and Findings

5. Public Involvement and Stakeholder Engagement
6. Segment Committee Recommendations and Implementation Plan
 - Figures, Tables, and Appendices

*Reviewed with Committee

Ports-to-Plains Corridor Feasibility Study Scope





Segment #1

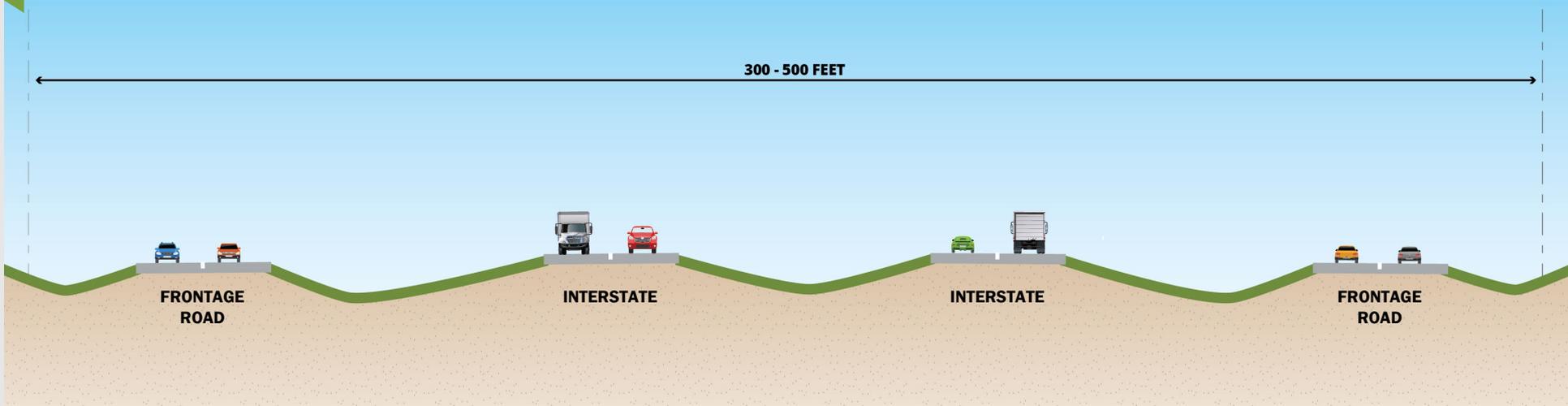
Determination of Areas Preferable and Suitable for Interstate Designation

Akila Thamizharasan, TxDOT
Consultant Team

Interstate with Frontage Roads Cross Section



Includes Frontage Roads



No driveways connecting to main lanes.



No stop signs or traffic signals on main lanes.



Higher design speeds



Traffic will flow uninterrupted from one end of the facility to the other. To accomplish this, **overpasses are necessary.**

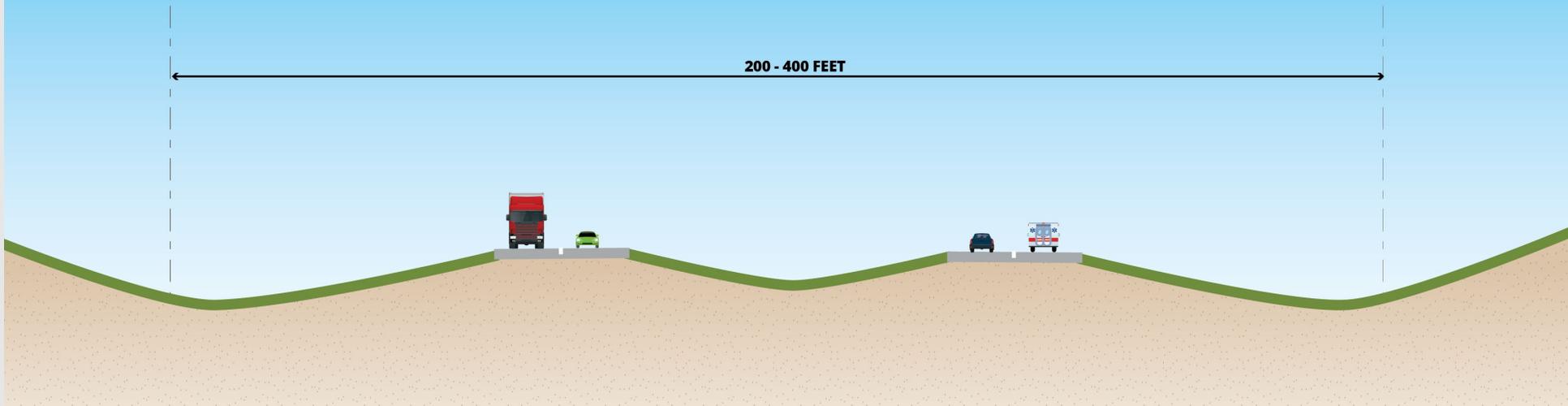


Larger right-of-way **widths**

Interstate Without Frontage Roads Cross Section



No Frontage Roads



No driveways connecting to main lanes.



No stop signs or traffic signals on main lanes.



Higher design speeds



Traffic will flow uninterrupted from one end of the facility to the other. To accomplish this, **overpasses are necessary.**



Larger right-of-way **widths**



- **FHWA has approval authority**

- **Three methods to obtain interstate designation**
 - **Method 1:** The US DOT Secretary may designate, if the corridor currently meets standards
 - **Method 2:** TxDOT may submit a proposal requesting designation as a future interstate
 - **Method 3:** By congressional act

- **Within the scope of this study, **Methods 1 and 2** are being assessed**

Method 1 – Segment #1 Eligibility under 23 USC 103(c)(4)(A)



Segment #1



Corridor Characteristics

Evaluation

- Part of the corridor, I-27 (103 miles), is already designated interstate
- Remaining Corridor (7 miles of access-controlled freeway and 165 miles uncontrolled access) evaluated for:
 - Planned and programmed projects
 - Horizontal and vertical sight distance
 - Right-of-way widths
 - Number of existing lanes
 - Median widths

Method 1 Key Takeaway

- Remaining corridor, including the 7-mile access-controlled freeway section, does not meet interstate standards and is not eligible for interstate designation under 23 USC 103(c)(4)(A)

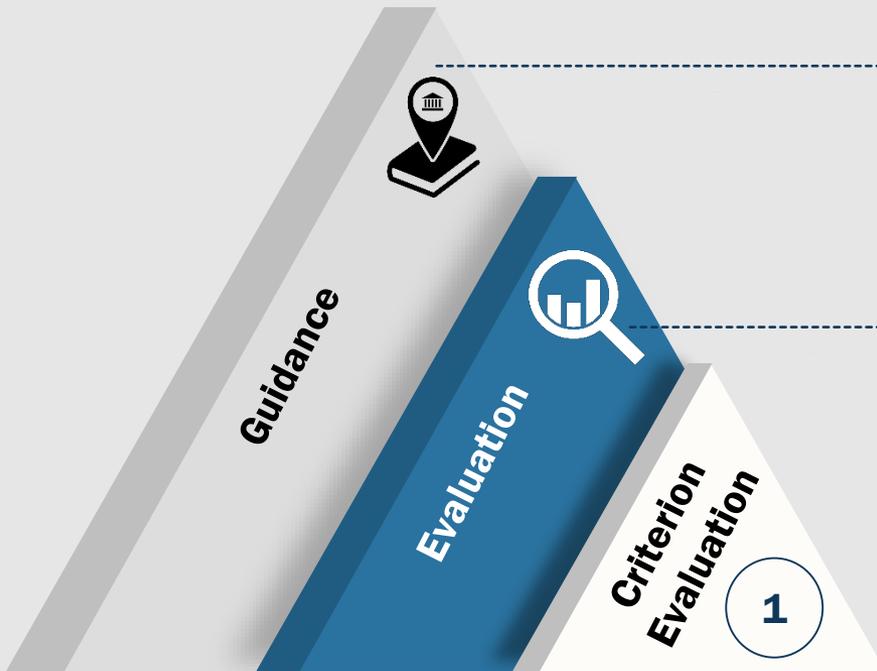
Method 2 – Segment #1 Eligibility under 23 USC 103(c)(4)(B)



Proposals must be submitted by TxDOT. If the route is not yet complete, TxDOT may request designation as a future part of the Interstate System.

Proposals must include:

- Route description and **statement of justification**
- **Statements regarding coordination** with adjoining states, responsible local officials, and officials of areas under Federal jurisdiction
- Consideration based on **six evaluation criteria**
- **A highway:**
 - Must be a logical addition or connection to the Interstate System
 - Have affirmative recommendation of TxDOT
 - Have written agreement of TxDOT that corridor will be constructed to meet interstate standards within 25 years of the agreement with FHWA Administrator
 - Must be on the National Highway System



a. Be of sufficient length

b. Serve long-distance interstate travel

- Connecting routes between principal metropolitan cities, or
- Industrial centers important to national defense and economic development

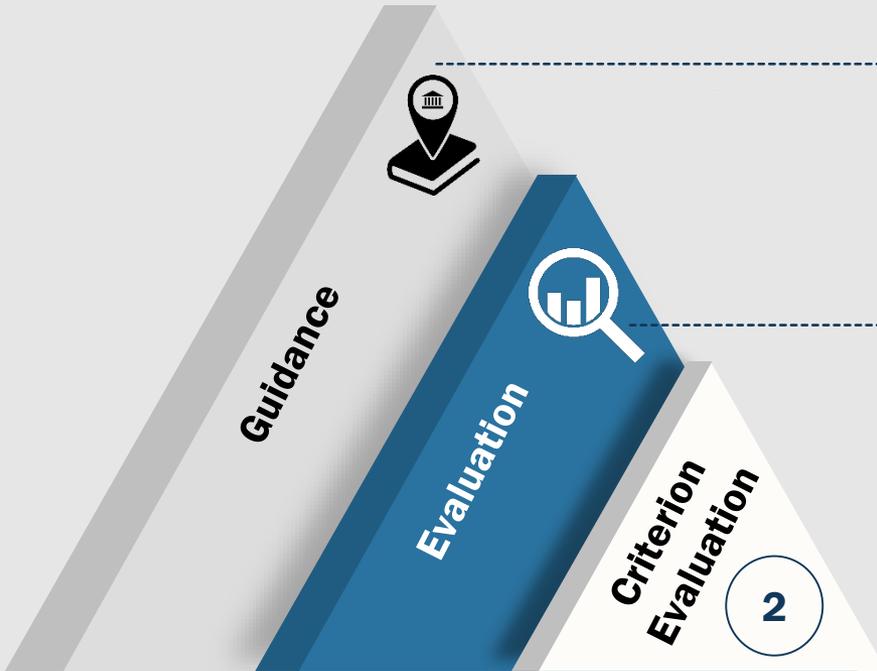
a. Meets

b. 1) Existing I-27 (103 miles): Meets
2) Remaining Corridor (172 miles):

Considerations:

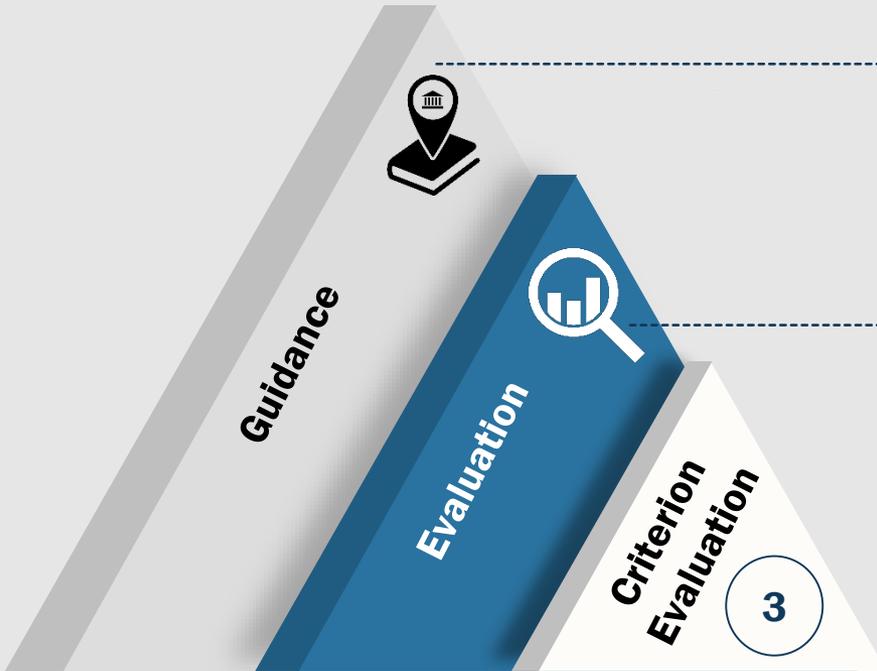
- Extend 190 miles through Oklahoma and Colorado and terminate at I-70 in Limon, CO, or
- Extend 90 miles through New Mexico and terminate at I-25 in Raton, New Mexico, or
- Both

**TxDOT Coordination required with NMDOT, ODOT, and CDOT*



Should not duplicate other interstate routes. Should serve interstate traffic movement not provided by another interstate route.

- Meets**
1. 200 miles to I-35 (at nearest point)
 2. 300 miles to I-25 (at nearest point)



Should directly serve major highway traffic generators

- Urbanized area with a population over 100,000, or
- Similar major concentrated land use activity that produces and attracts long-distance Interstate and statewide travel of persons and goods.

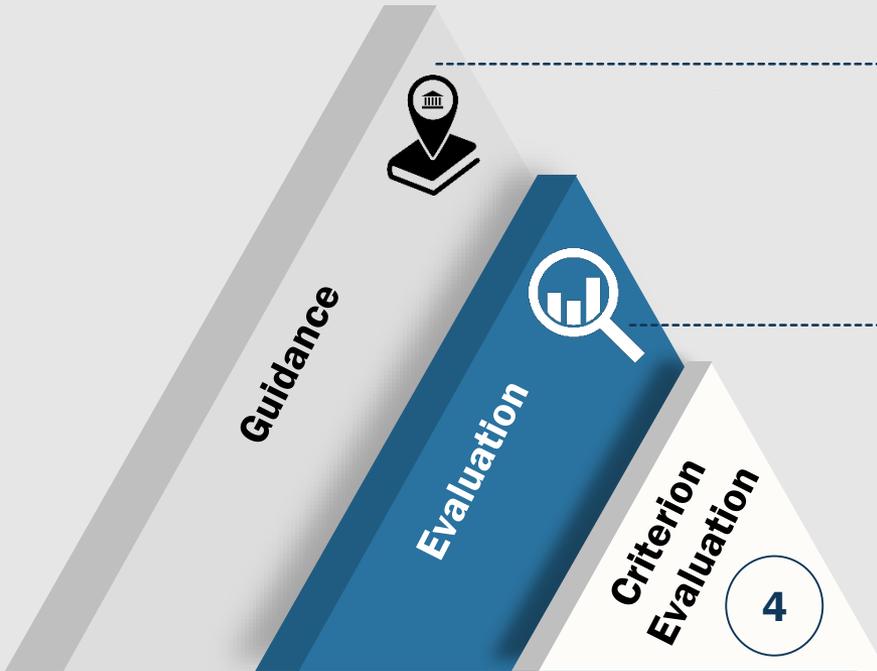
1) Existing I-27 (103 miles): Meets

2) Remaining Corridor (172 miles):

Considerations:

- Extend 190 miles through Oklahoma and Colorado and terminate at I-70 in Limon, CO, or
- Extend 90 miles through New Mexico and terminate at I-25 in Raton, New Mexico, or
- Both

**TxDOT Coordination required with NMDOT, ODOT, and CDOT*



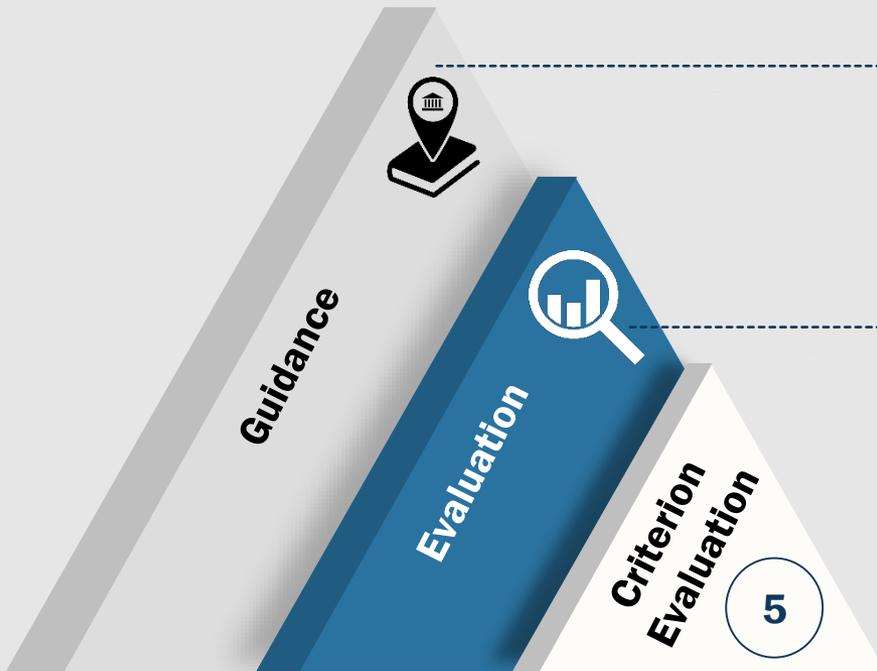
Should connect to the Interstate System at each end, or an international border, or terminate in a “major highway traffic generator” that is not served by another Interstate route

- 1) Existing I-27 (103 miles):** Meets
- 2) Remaining Corridor (172 miles):**

Considerations:

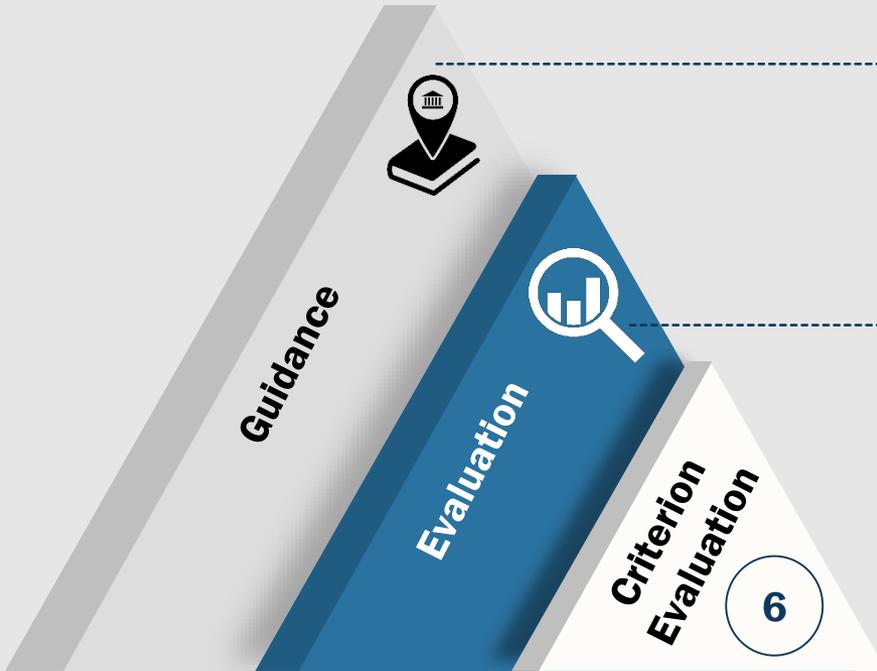
- Extend 190 miles through Oklahoma and Colorado and terminate at I-70 in Limon, CO, or
- Extend 90 miles through New Mexico and terminate at I-25 in Raton, New Mexico, or
- Both

**TxDOT Coordination required with NMDOT, ODOT, and CDOT*



1) Must meet current interstate standards, or
2) A formal agreement to construct the route to standard within 25 years must be executed between the States and the Federal Highway Administration.

1) Existing I-27 (103 miles): Meets
2) Remaining Corridor (172 miles): TxDOT would have to enter into an agreement with NMDOT, ODOT, and CDOT committing to construction within 25 years.



Must have an approved **final environmental document** and project action must be **ready to proceed with design** at the time of designation

- 1) **Existing I-27 (103 miles):** Meets
- 2) **Remaining Corridor (172 miles):** TxDOT, NMDOT, ODOT, and CDOT would all have to complete an environmental document.



Key Takeaways:

- Existing I-27 (103 miles) is already designated interstate.
- Remaining corridor (172 miles) would need to meet criteria 1 through 6 under Method 2 and be subject to TxDOT and FHWA approval.
- TxDOT Coordination required with NMDOT, ODOT, and CDOT, including possible Agreements signed.



Segment #1

Preliminary Cost Estimates

Akila Thamizharasan, TxDOT

Consultant Team



Previous Report

- Year: 2015
- Planning-level estimate using national per-mile costs
- Not indexed to Texas or shale play areas
- Not adjusted for differences in terrain
- Made percentage assumptions regarding right-of-way and utility relocation costs
- Shale play areas in midst of 2-year slump
- Frontage roads on all except 205 miles
- Inflation 2015-2020
 - TxDOT Highway Cost Index – 2%
 - FHWA Highway Construction Cost Index – 18%
 - Bureau of Labor and Statistics CPI Inflation Calculator – 8.6%

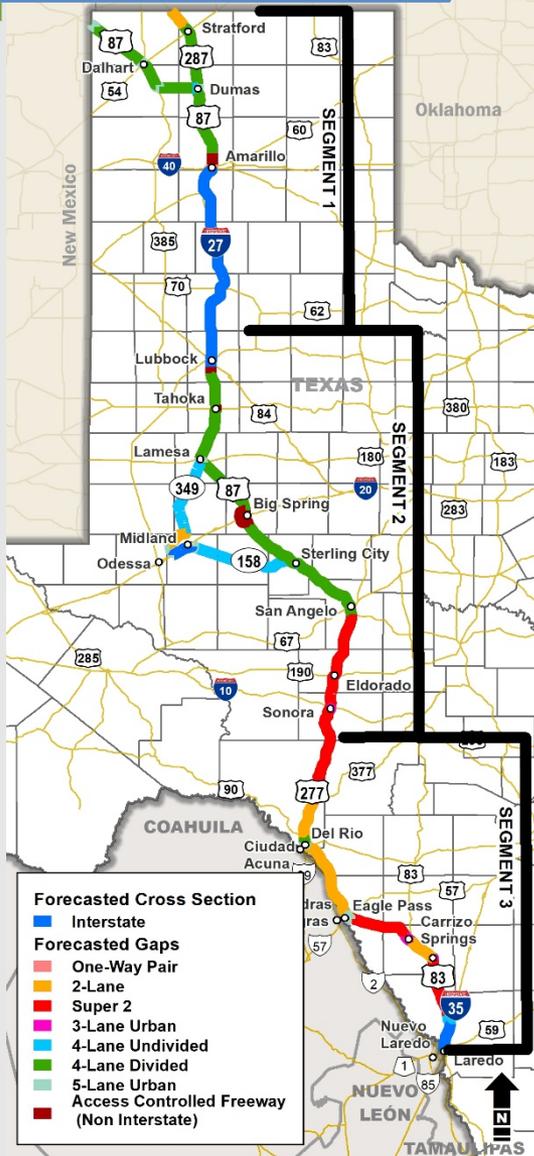
Current Study

- Year: 2020
- Planning-level estimate using project-specific data
- Concept Station software
- Calculated quantities and prices for major costs
- ROW estimated as a percentage of the construction costs
- Calculated preliminary major utility relocation costs for parallel pipelines, oil and gas wells, and water wells, and railroad relocation based on available data
- Uses bids from each district
- Two estimates; one for frontage roads throughout and one for frontage roads in cities and towns

Preliminary Interstate Cost Estimates for Corridor



Ports-to-Plains Corridor



Total (811 miles*)

(Frontage roads in urban and rural areas):

Construction	\$24.471 billion (\$30.17 M/mi)
Right of way	\$2.447 billion
Major Utilities	<u>\$0.968 billion</u>
TOTAL	\$27.886 billion

Total (811 miles*)

(Frontage roads only in urban areas):**

Construction	\$16.434 billion (\$20.3 M/mi)
Right of way	\$1.643 billion
Major Utilities	<u>\$0.780 billion</u>
TOTAL	\$18.857 billion

*Miles do not include I-27, I-20, and I-35

** Estimate includes approximately 100 miles of frontage roads in urban areas.

Preliminary Interstate Cost Estimates for Segment #1



Segment #1



Segment #1 Cost Estimate (172 miles)

(Frontage roads in urban and rural areas):

Construction	\$4.667 billion
Right of Way	\$0.467 billion
Major Utilities	<u>\$0.142 billion</u>
TOTAL	\$5.276 billion

(Frontage roads only in urban areas**):

Construction	\$3.250 billion
Right of Way	\$0.325 billion
Major Utilities	<u>\$0.104 billion</u>
TOTAL	\$3.680 billion

*Miles do not include I-27

** Estimate includes approximately 100 miles of frontage roads in urban areas.



Segment #1

Preliminary Committee Recommendations

Caroline Mays, TxDOT

Consultant Team

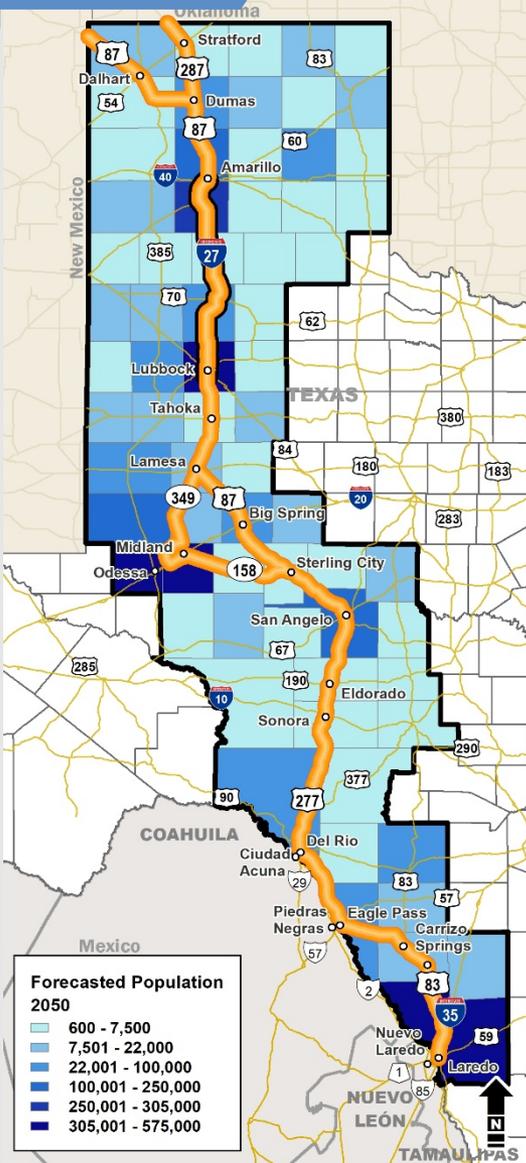


- **Data to consider**
- **Recommendations from previous meeting**
- **Discussion of committee preliminary recommendations**

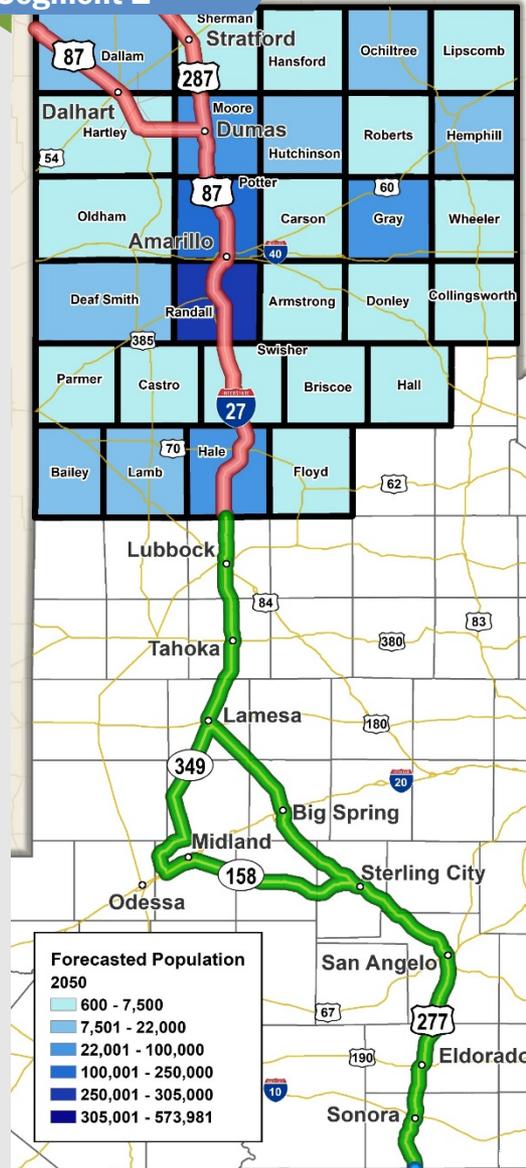
Data to Consider – Forecasted Population (2050)



Corridor



Segment 1



Corridor

- Corridor total population for all 69 counties is projected to **increase by 1,211,288 persons**
- Overall corridor population is projected to **grow by 61%**

Segment 1

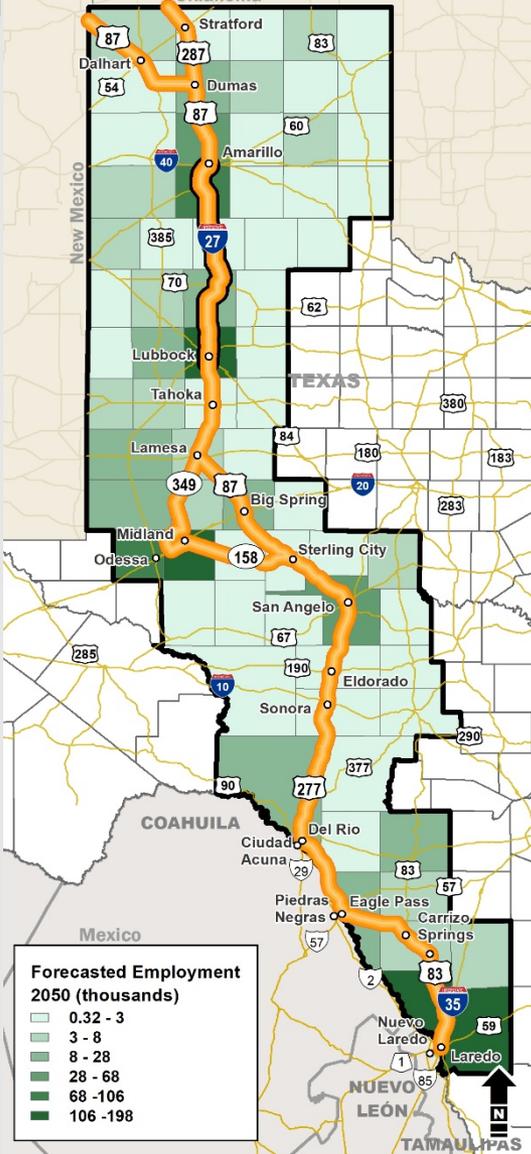
- Segment #1 total population for the 29 counties is projected to **increase by 103,203 persons** from 499,624 to 602,827.
- Overall Segment #1 population is projected to **grow by 21%**.

Source: Texas Demographic Center

Data to Consider – Forecasted Employment (2050)



Corridor



Segment 1



Corridor

- Corridor total employment is projected to increase by **149,372 persons**
- Overall corridor employment is projected to grow by **17%**

Segment 1

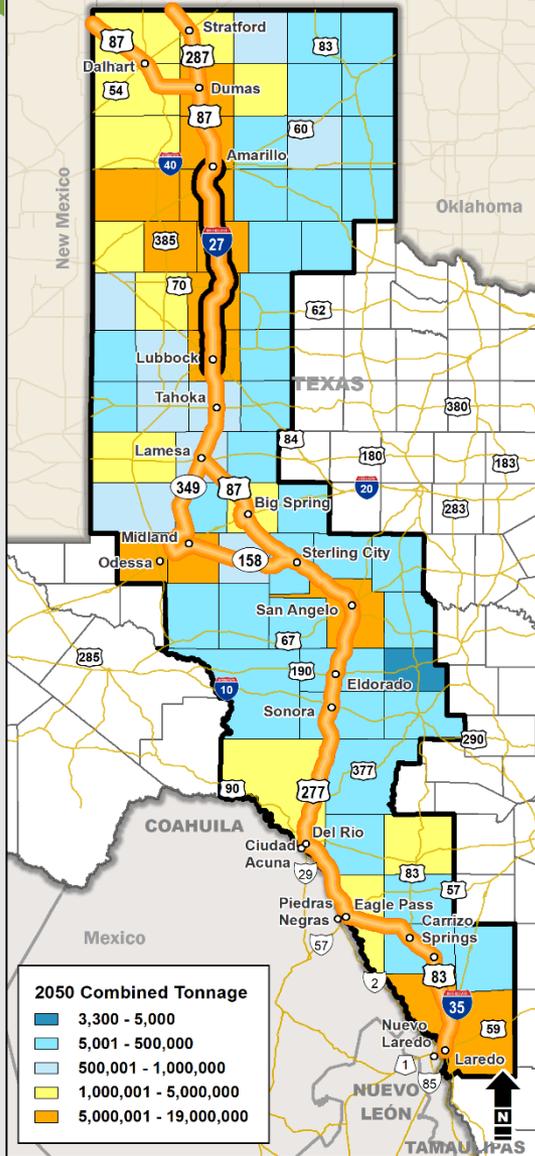
- Segment #1 total employment is projected to increase by **17,487 persons**
- Overall Segment #1 employment is projected to grow by **8%**.

Source: Moody's Analytics Forecasted Data

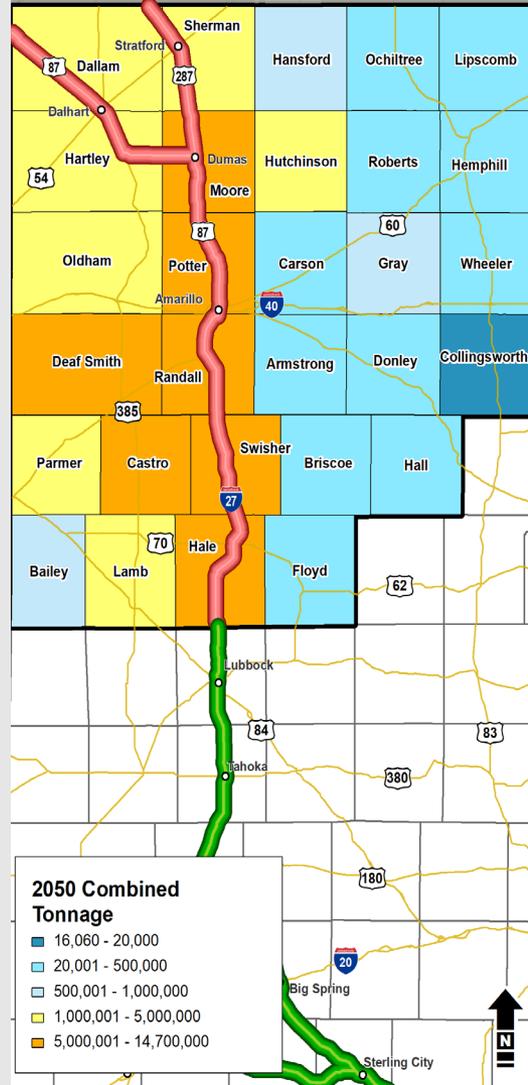
Data to Consider - Forecasted Freight (2050)



Corridor



Segment 1



Corridor

- Corridor total truck tonnage is forecast to **grow 78%** through 2050
 - 73 million tons added**
 - Total volume reaches 167 million tons**

Segment 1

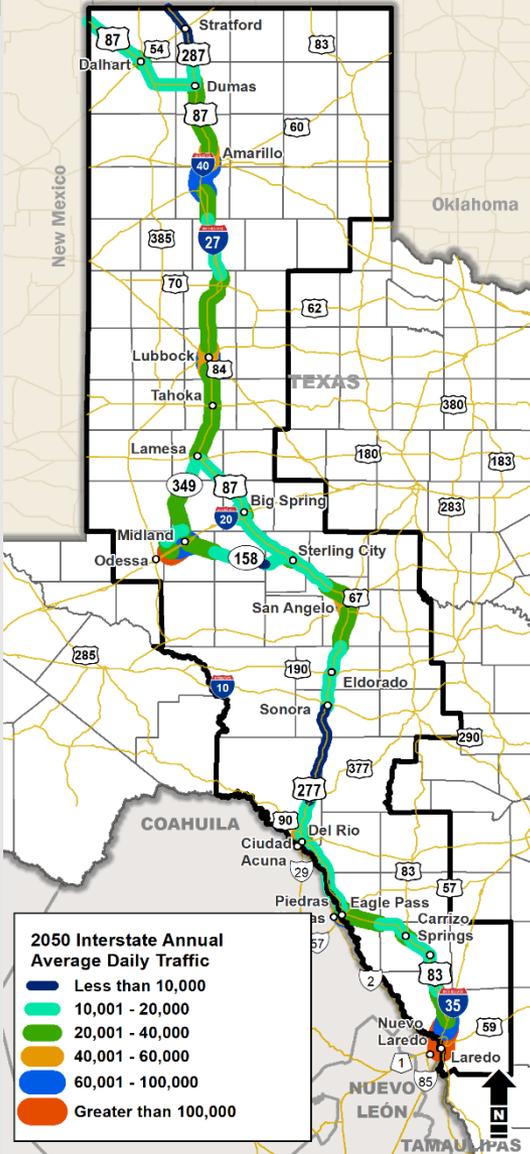
- Segment #1 total truck tonnage is projected to **grow 59%** through 2050, concentrated particularly along I-27
 - 28 million tons added, for 39% of the new tons on the corridor**
 - Total volume 79 million tons**

Source: TxDOT SAM and TRANSEARCH database

Data to Consider – Forecasted Interstate Traffic (2050)



Corridor



Segment 1



Corridor

- **100-200% growth** over 2018 volumes found in all three segments on arterial sections
- **US-87** provides path to I-25
- **US-287** route unimproved in Oklahoma

Segment 1

- **US-87 near New Mexico**
 - 2050 No Build: 10,700
 - 2050 Interstate: 13,200
- **US-87 north of Amarillo**
 - 2050 No Build: 14,600
 - 2050 Interstate: 24,200
- **I-27 north of Lubbock**
 - 2050 No Build: 32,100
 - 2050 Interstate: 33,000

Source: TxDOT SAM and TxDOT 2018 RID

Data to Consider - Safety Data (2014-2018)



Corridor



Segment 1



Corridor

- Corridor total crashes is **17,741**
- Highest rates in cities (**Midland, Big Spring, Amarillo**)
- Lower rates in **south end of corridor**

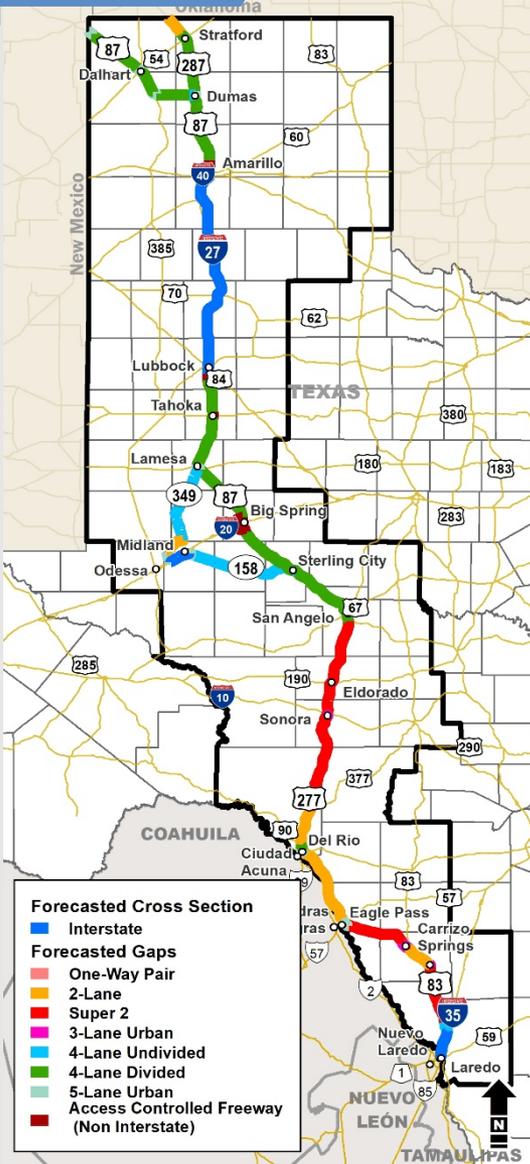
Segment 1

- Segment #1 total crashes is **5,716**
- Highest rate is **through downtown Amarillo**
- Higher rates **in Dumas and Dalhart**
- Lower rates **on rural I-27**

Data to Consider - Forecasted Cross Sections



Corridor



Segment 1



Corridor

- Corridor total miles of **corridor gaps is 811 miles** (total miles is 963)

Segment 1

- Segment #1 total miles of **corridor gaps is 172 miles** (including 7 miles of access-controlled freeway)
- Total miles of Segment #1 is **275 miles** (including **103 miles** of interstate from Amarillo south to the Hale/Lubbock County line)

Segment #1 Recommendations from Previous Meetings



Segment #1



Safety Projects ■

- Improve intersection US 287/ US 54 in Stratford
- Improve intersection US 54 in Dalhart
- Straighten curves through Hale Center

Added Capacity Projects ■

- 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.

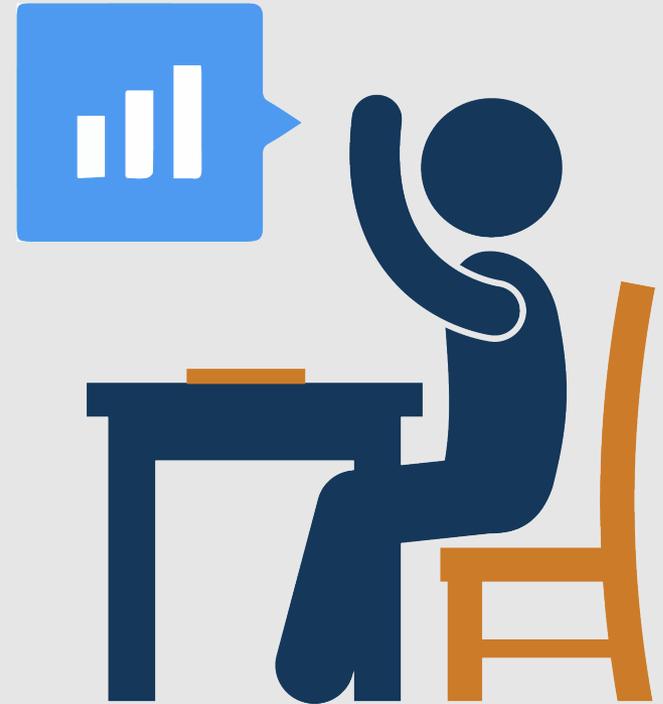
Proposed Relief Route Studies ■

- Dumas
- Invest in Loop 335 around Amarillo



Committee Feedback

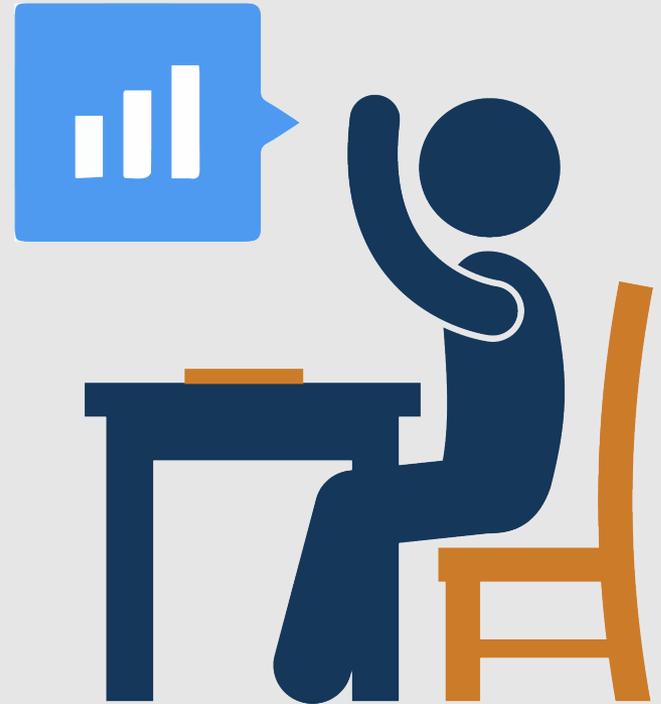
What added capacity improvements and locally preferred routes would you recommend from **Amarillo to Dumas?**





Committee Feedback

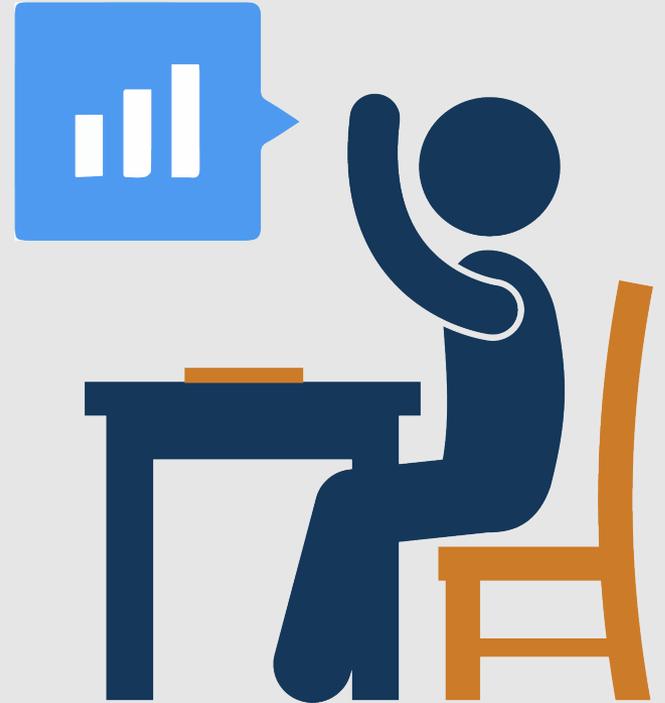
What added capacity improvements and locally preferred routes would you recommend **north of Dumas**?





Committee Feedback

What safety/operational improvements would you recommend?



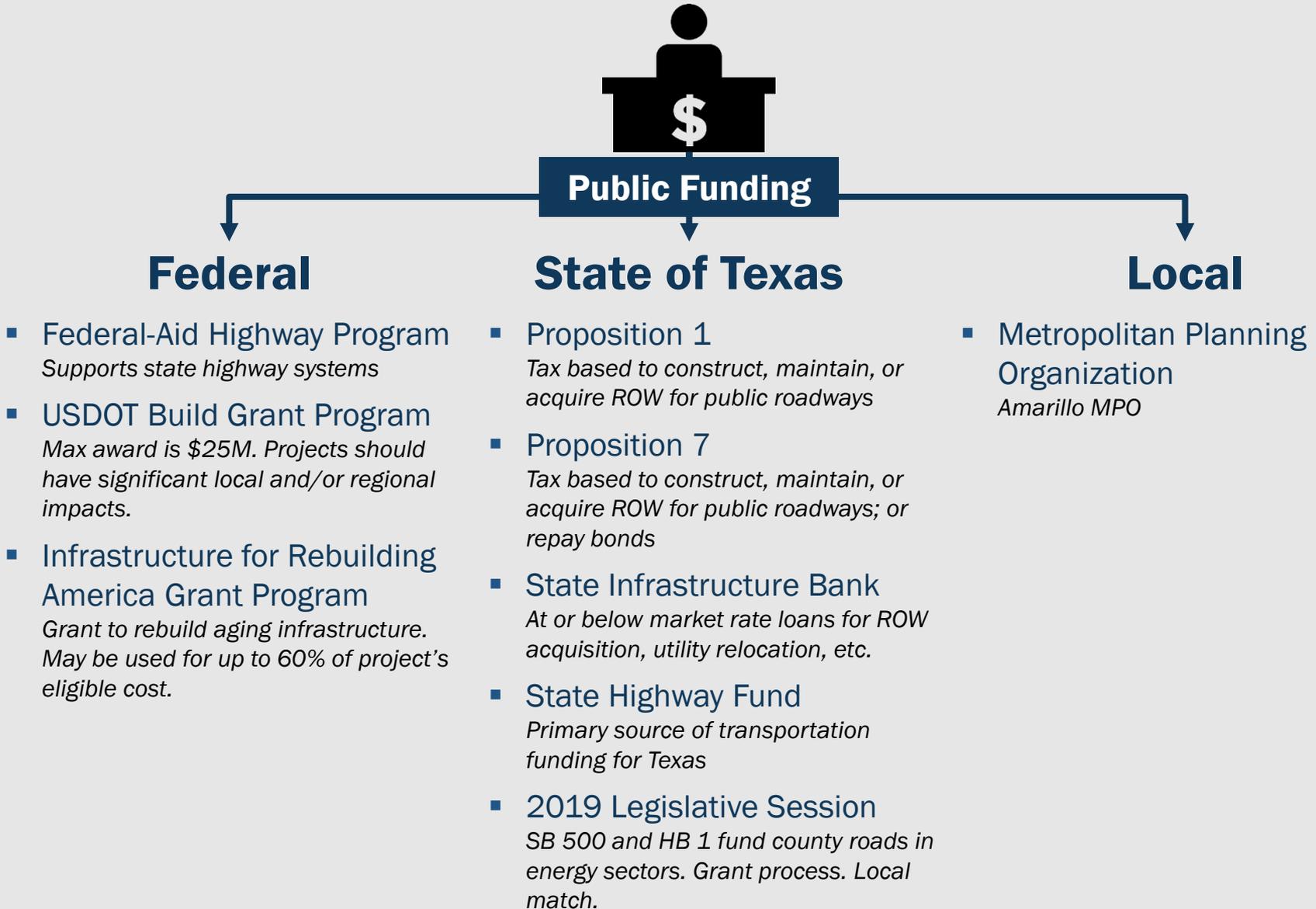


Segment #1

Funding Sources

Caroline Mays, TxDOT

Consultant





Private Funding

Permian Strategic Partnership

Collaboration between local communities and coalition of energy companies in Permian Basin Region. One of the five focus areas is safer roads.

County Energy Reinvestment Zone

A zone that lies within one contiguous area within a county affected by oil and gas exploration. Purpose of zone is to garner an increase in property taxes generated by oil and gas projects. May be used for transportation projects.

Public-Private Partnerships

USDOT encourages use of P3s, a contractual agreement between public and private entity. However, State of Texas has legislatively prohibited creation of new P3s.



Segment #1

Review and Discussion of Report Chapters 3 and 4

Caroline Mays, TxDOT

Jared Miller, Segment 1 Committee Chair



- Executive Summary
- Letter from the Segment Committee Chair
- 1. Introduction
- 2. Existing Conditions
- 3. Forecasted Conditions
- 4. Segment Interstate Feasibility Analysis and Findings

- 5. Public Involvement and Stakeholder Engagement
- 6. Segment Committee Recommendations and Implementation Plan
- Figures, Tables, and Appendices

Review
with
Committee



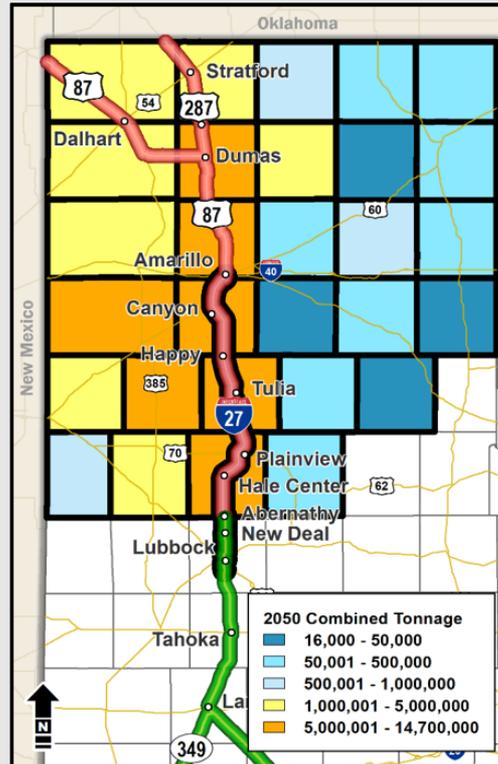
Summary of Chapter 3: Forecasted Conditions



The purpose of this Chapter is to provide a summary of Forecasted Conditions to the year 2050.



Source: TxDOT SAM and Stars II



Source: TxDOT SAM and Transearch

The Segment #1 data showed:

- Population - 21% Growth
- Economics - 186% Growth in Income
- Freight Production - 59% Growth
- Planned and Programmed Projects
- Total Traffic Volumes (2050)
 - Baseline: 48% Corridor Growth
 - Interstate: 79% Corridor Growth
- Freight Flow
 - Heavy Demand on Ports-to-Plains Corridor, I-40, and US-287 to southeast



This Chapter provides an analysis of the feasibility of an Interstate Facility within the Corridor, including findings on the requirements of HB 1079:

- **Ability of Energy Industry to Transport Products to Market**
 - Interstate Scenario would increase diverted truck tons by 99 percent over Baseline Scenario
- **Examination of Freight Movement**
 - Interstate Scenario would create full access-controlled facility and attract 22% more truck trips demonstrating an increase in freight mobility
- **Determination of Traffic Congestion Relief**
 - Interstate Scenario shows higher free-flow speeds and a stronger traffic diversion capability over the Baseline Scenario indicating the ability to reduce traffic congestion from nearby corridors in Segment #1 and from other corridors in the state.
- **Determination of Ability to Promote Safety and Mobility**
 - Interstate Scenario is estimated to reduce the current Segment #1 crash rate by approximately 28 percent, and an average travel time savings of 31 minutes over Baseline Scenario.



- **Determination of Areas Preferable and Suitable for Interstate Designation**
 - 172 miles of Segment #1 currently does not meet interstate standards.
 - The corridor is not designated as “future interstate,” therefore must meet criteria for interstate designation in 23 U.S.C. 139 Appendix A .
- **Examination of Project Costs**
 - Estimated cost of developing Segment #1 to interstate standards is \$3.68B (with frontage roads only in urban areas) or \$5.276B (with frontage roads in urban and rural areas).
- **Evaluation of Economic Development Impacts, Including Job Creation**
- **Assessment of Federal, State, Local and Private Funding Sources**



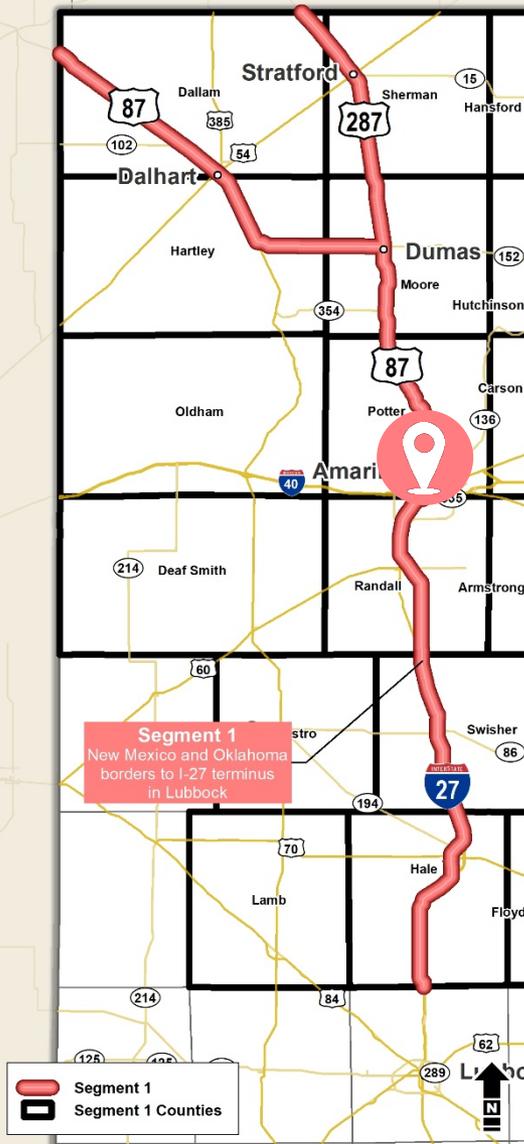
Open Discussion

Jared Miller, Segment 1 Committee Chair

Segment #1 Meetings – Round #4

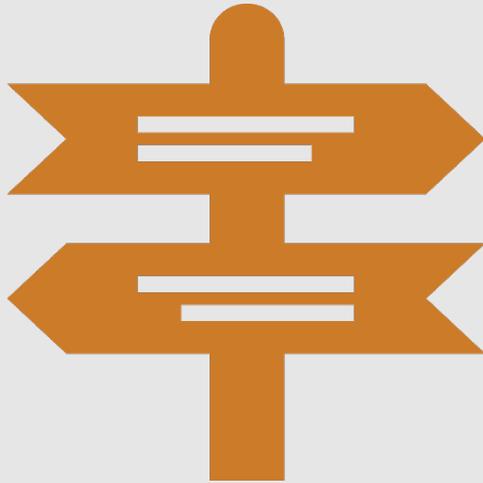


Segment #1



Amarillo

- Segment Committee Meeting
Thursday, May 14, 2020
- Location / Online
Civic Center, Amarillo, TX



May 2020 Meeting #4

**Implementation Plan
Report Chapters 5 and 6
Draft Segment Committee
Report**

June 2020 Meeting #5

**Public Meetings
Round 3 Summary**

**Finalize Segment
Committee Report and
Executive Summary**



For more information visit
www.txdot.gov keyword search
"Ports to Plains"

