



Overview of TxDOT's Planning and Multimodal Programs

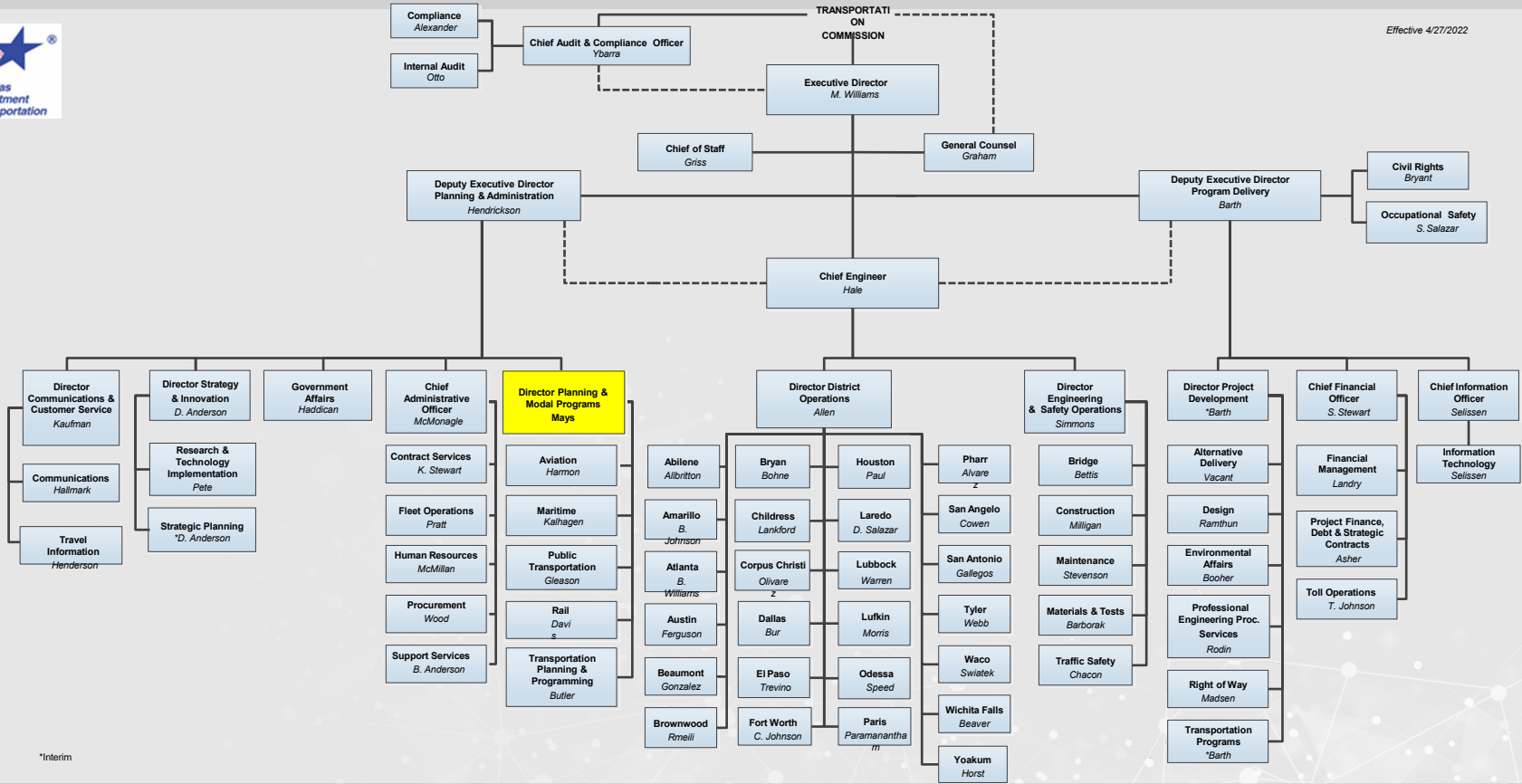
**TexITE Houston Chapter
August 10, 2022**



TxDOT's Current Organizational Structure



Effective 4/27/2022



*Interim

TxDOT's Planning and Multimodal Programs Organization Structure



Deputy Executive Director Planning and Administration
Brandye Hendrickson

Director of Planning and Modal Programs
Caroline Mays, AICP

Aviation Division
Dan Harmon

Maritime Division
Geir Kalhagen

Public Transportation Division
Eric Gleason

Rail Division
Jeff Davis

**Transportation Planning and
Programming Division**
Jessica Butler, P.E.

Multimodal Planner/Analyst
Loretta Brown, CTCM

Planning and Modal Programs Director Roles and Responsibilities



- Directs and oversees all planning activities of the Texas Department of Transportation (TxDOT) through a comprehensive systems approach, ensuring the implementation of a robust multimodal, multidisciplinary, innovative and consensus-oriented planning process.
- Directs and oversees the development of statewide multimodal transportation plans (Statewide Long-range Transportation Plan and Statewide Transportation Improvement Program), the development of the 10-year Unified Transportation Program; all department functions, operations and information related to freight, international trade and related activities.
- Directs and oversees Planning and Modal Programs; Aviation, Maritime, Public Transportation, Rail and Transportation Planning and Programming.
- Identify Grant opportunities
- Extensive contact with high level executives, governmental officials and other state and federal agencies.

Key Priorities and Focus Areas for TxDOT's Planning and Multimodal Programs



**Multimodal Planning
& Integration**



Safety



**Program & Project
Delivery**



**Technology &
Innovations**



Data & Performance



Diversity



Equity



**Customer Service &
Stakeholder Engagement**

Overview of TxDOT's Planning and Multimodal Programs (PMP) Divisions

*TxDOT's Mission:
Connecting You with Texas*



Aviation Division



August 10, 2022

Overview of TxDOT's Aviation Division (AVN)



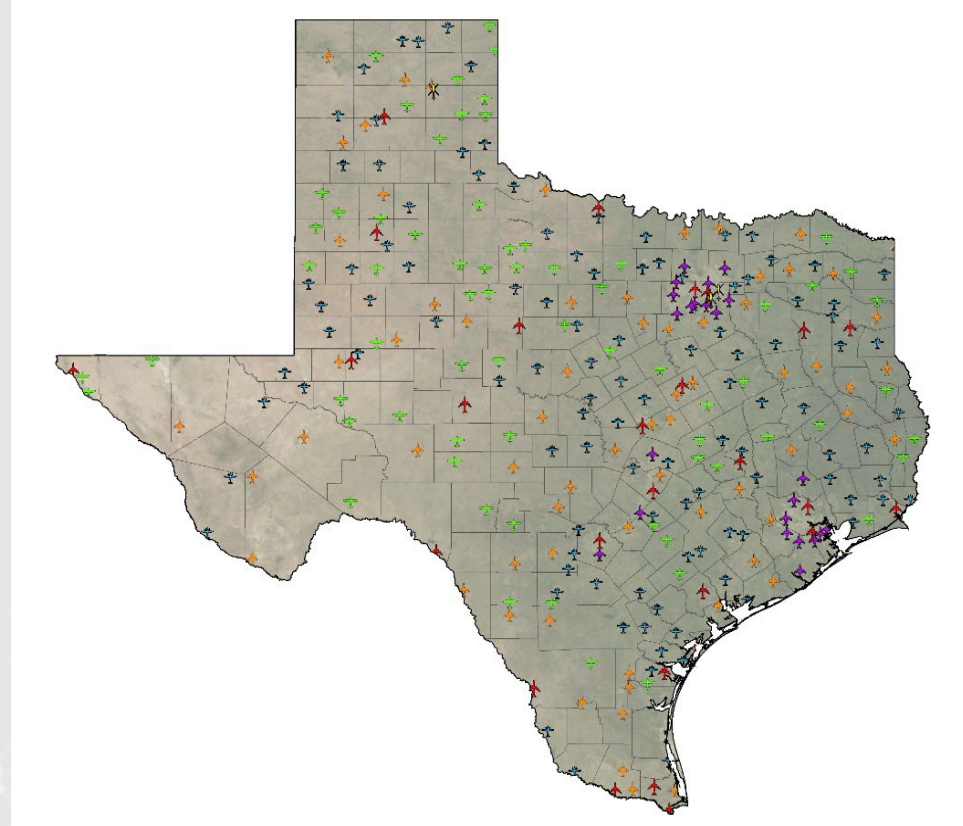
- **Develop a statewide system of airports**
- **Maintain the system**
- **Support economic development**
- **Manage state aircraft fleet**
- **Manage TxDOT UAS Program**





Overview of The Texas Airport System

- **289 Airports in Texas Airport System:**
 - **25 Commercial**
 - **264 General Aviation**
 - **24 Relievers**
 - **186 in NPIAS**
 - **42 Control Towers**
- **8.8 Million ops (5.8 General Aviation)**
- **Economic impact:**
 - **\$94B annually**
 - **780,000 jobs**






The Texas Airport System

- 8.8 Million ops (5.8 General Aviation)
- 15,520 based aircraft/26,424 registered aircraft
- 57,668 licensed pilots
- Economic impact:
 - \$94B annually
 - 780,000 jobs

AVIATION IN TEXAS


TxDOT Aviation aims to provide the safest and most efficient aviation system in the world. Our system serves our customers – the residents, businesses, and visitors of Texas – and helps them connect to the rest of the nation and the world.

THE TEXAS AIRPORT SYSTEM




264 General Aviation Airports


with 186 airports included in the National Plan of Integrated Airport Systems (NPIAS)



25 Commercial Service Airports



5.8 million General Aviation Operations



8,790,641 Total Operations

TEXAS AIRPORT SYSTEM ANNUAL ECONOMIC IMPACTS









\$94.3 billion	\$30.1 billion	778,955
Total Economic Output	Total Payroll	Total Jobs

Source: Texas Aviation Economic Impact Study, August 2019

TEXAS AIRPORT SYSTEM RANKS NATIONALLY

- #1** National; Regional; and Local General Aviation assets
- #2** Total NPIAS Airports; Reliever Airports; Based Aircraft (9.4% of U.S. Total); Air Transport Pilots; Remote Pilots; and Flight Instructors
- #3** Total Pilots; Student Pilots; Commercial Pilots; Private Pilots; Glider Pilots; Sport Pilots; and Total Aircraft Operations - all types

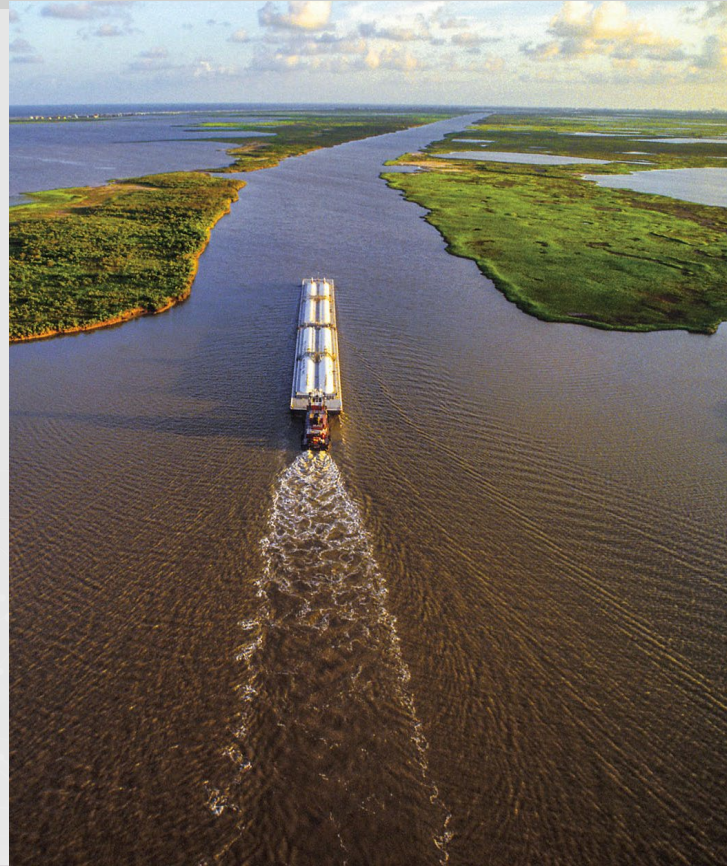
ADDITIONAL TEXAS AIRPORT BENEFITS INCLUDE

-  Aerial application that enhance crop yields
-  Rapid firefighting responses to wildfires
-  Bases for the military to train and maintain flight proficiency
-  First responders to execute search and rescue operations
-  Convenient access to flight training opportunities
-  Creation of Aviation Jobs, ranking Texas #1 in the nation
-  Law enforcement's aerial surveillance of illegal activities
-  Air ambulance operators conduct life-saving flights



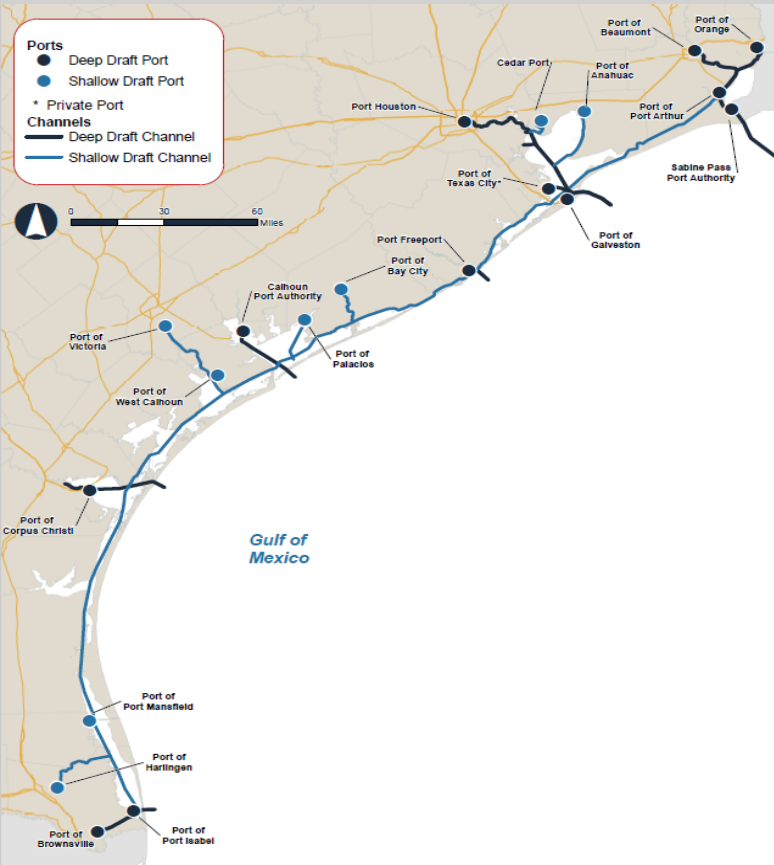
Maritime Division

Overview of TxDOT's Maritime Division (MRD)



- **Established in 2013**
- **Mission is to “promote high-value growth” in the state’s maritime transportation system**
- **Promote maritime transportation projects essential to maintaining Texas’ economic competitiveness**

Overview of Texas SeaPorts



- There are 20 ports in Texas, including 12 deep-draft and eight shallow-draft ports.
- Texas ports are diverse. We're home to the busiest port in the nation (Port Houston), a major cruise port (Port Galveston), energy ports, small commercial fishing ports, and strategic military ports.
- Together, Texas ports generate a significant economic impact, supporting \$426 billion in total economic output.



Maritime Division Key Activities

PORT SYSTEM OVERVIEW



Completing the 2024-2025 Texas Port Mission Plan.

- 141 connectivity projects from 18 participating ports totaling \$3.2 billion in potential investments
- Profiles 50 port capital projects totaling \$1.6 billion in potential investments. TxDOT is requesting \$150 million for these projects in the agency's LAR.
- 18 ship channel improvement projects and feasibility studies totaling \$4.8 billion in potential investments. TxDOT is requesting \$400 million for 8 federally authorized projects in the agency's LAR.



Maritime Division Key Activities

Completing the GIWW Legislative Report to the 88th Legislature

- Assesses the state of the Gulf Intracoastal Waterway
- It recommends increasing state funding to support the Brazos River Floodgates and Colorado River Locks Improvement Project

Implementing the Port Wayfinding Program

- Direct truckers to the safest and most efficient routes, reducing congestion around ports and improving safety by moving freight away from vulnerable areas like schools, residential areas, and hospitals.





Public Transportation Division





PTN Division Focus

Support mobility options for people who use alternatives to driving alone

➤ PTN Division Goals

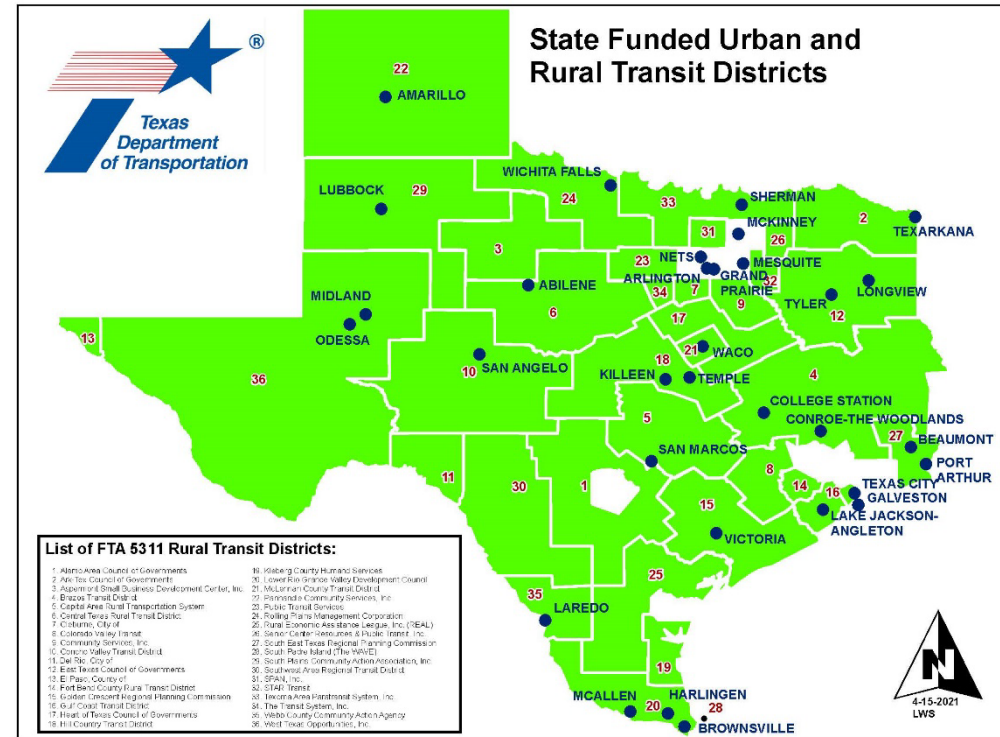
- Distribute state and federal funds to support mobility and congestion-relief programs
- Ensure compliance with funding program requirements
- Promote training, coordinated planning, partnerships and best practices
- Perform FTA Transit Safety program functions



Primary Customers: TxDOT-supported Public Transportation Programs



- Appx. \$125 million per year in federal and state grant program funds
- Supports programs serving more than a third of the state's population and over 90% of the state's land area
- About 29 million one-way passenger trips per year



Transit Fleet & Facilities



- Over 2500 transit vehicles
- 80 major facilities statewide



TxDOT-PTN Bicycle and Pedestrian Program Overview



Bicycle and Pedestrian Advisory Committee

- Strategic Direction Report

Funding

- Federal Highway Administration Transportation Alternatives
- Safe Routes to Schools - infrastructure

Planning

- Better incorporation of bikeways into project development/design at TxDOT
- Bicycle/pedestrian count program
- District Bike Plans
- Pedestrian/Bicycle Safety Subcommittee - Pedestrian Safety Action Plan
- TxDOT's Bicycle Tourism Trails Study (complete)

Research

- Bicyclist and Pedestrian crash research projects
- Economic Impact of Bicycling in Texas (complete)

Education/Awareness

- Bicycle Safety Guide
- National Bike Month and Bike to Work Day



Texas Statewide Pedestrian Safety Action Plan



August 10, 2022



Why Develop a Pedestrian Safety Action Plan?

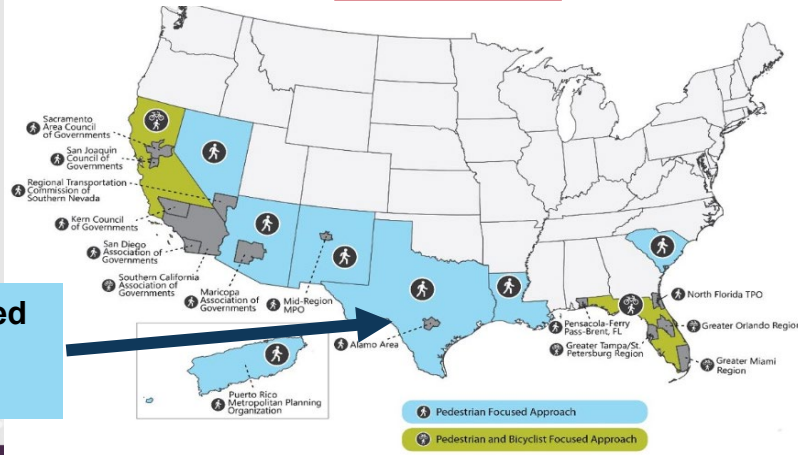
- Identify strategies to reduce frequency of pedestrian related crashes – with a focus on eliminating fatal and serious injury crash severities
- Fulfills recommendations from Texas Strategic Highway Safety Plan (SHSP)
 - [Strategy #7](#) – Develop strategic pedestrian safety plans tailored to local (Texas) conditions
- Federal Highway Administration (FHWA) identified Texas as a Focused Approach State providing technical assistance

Home — Emphasis Areas

Emphasis Areas

- Distracted Driving
- Intersection Safety
- Pedestrian Safety**
- Impaired Driving
- Older Road Users
- Roadway and Lane Departures
- Speeding

Pedestrian Focused Approach (Alamo Area)





Rail Division



August 10, 2022

Rail Division Leadership



Director, Rail Division - Jeff Davis



Jeff Davis brings decades of both public and private sector experience in transit, passenger, and freight rail planning, maintenance, operations and executive leadership to the position. His previous experience includes serving in leadership roles for the South Carolina Public Railways (SPCR), a division of the South Carolina Department of Commerce, which operated the Port Utilities Commission of Charleston, Port Terminal Railroad, and East Cooper and Berkeley Railroad. He served as head of the Mechanical Department and was promoted to manager of Operations and Regulatory Affairs. He has also held leadership positions with CSX serving as manager of Labor Relations and as Terminal Trainmaster in New Orleans.

In 2007, Jeff returned to SPCR as Executive Vice President & Chief Operating Officer. Through his safety first approach, he led SPCR to meet the milestone of 1,500 days injury free. In 2013, he was named Chief Executive Officer for the New Orleans Public Belt Railroad where he remained focused on safety and directed the operations of the New Orleans Rail Gateway and the interchange of six Class 1 Railroads: BNSF Railway Co., CN, CSX, Kansas City Southern, Norfolk Southern Railway, and Union Pacific. He has also held the position of Chief Operating Officer for TNW Corporation headquartered in Dallas, Texas, and most recently has served as the General Manager of Hulcher Services where he was responsible for the Southwest region's train derailment division.

Jeff has a Bachelor of Science Degree from Southern Wesleyan University in Business Management.

About Rail Division

The Rail Division (RRD) was established in December 2009 in response to a growing interest in rail transportation for both the movement of people and goods.

RRD implements State rail-related policies; performs infrastructure and operational analysis and project planning for freight and passenger service; monitors potential rail line abandonments; oversees rail-highway safety and rail inspections; enforces federal regulations; administers federal grant programs; manages the grade crossing inventory; and manages the State-owned South Orient Rail Line.



Division Objectives

- Perform infrastructure and operational analysis of both state- and privately-owned rail facilities to develop needs assessments as part of the project development process.
- Implement rail improvements by entering into public-private partnership agreements to provide investments in freight rail relocation projects, rail facility improvements, rail line consolidations, or new passenger rail developments.
- Planning and environmental analysis for potential freight and passenger rail corridors in partnership with other state and federal agencies.
- Analyze local, state, and national multimodal trends, policies, and legislation.
- Monitor potential rail line abandonments in Texas, as well as coordinating the state's involvement and response to abandonment filings.
- Perform research to develop more efficient use of the state's rail network.
- Administer lease and operating agreements on state-owned facilities and managing construction contracts for state or federally funded projects on those facilities, as well as private facilities.
- Act as the departmental liaison to railroad companies, intermodal interests, the Federal Railroad Administration (FRA), local governments, and the public with regard to rail planning and project development.
- Improve highway-rail grade crossings to reduce accidents.
- Administer the state rail safety inspection program in conjunction with the FRA, including accident and complaint investigations.



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10,500 miles of track
3 class 1's
55 shortlines
4 passenger/commuter rail
10,000 crossings
5,426 bridges

South Orient Rail Line

A 100-year vision marches on



In 1912, Arthur Stillwell's vision for the shortest route from the Midwest to the Pacific rolled into Fort Stockton, TX. Some 20 years later, the Texas segment was completed, but it took an additional 90 years to have a continuous track to the Pacific port of Topobampo.

In 2001, the Texas Legislature directed TxDOT to purchase the South Orient Rail Line (SORL) to prevent its abandonment. TxDOT became the railroad's permanent owner and Texas Pacific Transportation LTD (TXPF) – a subsidiary of the largest railroad in Mexico – obtained a 40-year operating lease with renewal options.

The SORL interchanges with BNSF and Fort Worth and Western Railroad at San Angelo Junction, and TXPF holds trackage rights with Union Pacific (UP) over 11 miles near Alpine, TX. The line facilitates significant economic activity throughout Texas, shipping agriculture, energy resources, lumber, steel, and other goods and materials.

The San Angelo Rail Park – a 183-acre, multi-modal, multi-commodity, inland rail port, began facilitating freight cars in 2022, serving as a significant economic driver for the Concho Valley economy and supporting the local manufacturing and agricultural sectors' business with Mexico.

Business across the SORL grew to 40,000 carloads in 2018, allowing TXPF, TxDOT, FRA, and local governments to re-invest over \$135M, increasing track class to 40 mph over much of the line.

The entire history of SORL reflects the roller coaster nature of the energy sector, with many swings over time. Although recent carloads have dropped with changing energy industry needs, the upgraded track can now serve the emerging market potential of international shipping through the Presidio port of entry.

RRD continues stewardship of this state investment and has big plans for the future.



The Presidio International Rail Bridge



From floods and fires come renewed prospects

The original rail bridge in Presidio, TX one of only seven rail gateways to Mexico, survived the occasionally wild Rio Grande, but a series of fires in 2008 and 2009 left the line inoperable. TXPF completed all bridge upgrades in 2019, and TxDOT followed with \$10M in improvements to tracks in Presidio County.

The shared objective of the SORL for both TxDOT and TXPF is to reestablish international commercial rail service, as specified in the lease. Funding and constructing a freight rail inspection facility near the Presidio-Ojinaga port of entry is the final remaining project component necessary for international train service to begin, as required by U.S. Customs and Border Protection (CBP).



FedEx Grant

The FRA granted TxDOT \$7M with \$3.3M in state match from the TxDOT TXPF carload fee agreement fund. To improve track, grade crossings, and bridges in Presidio Co. Construction finished in 2021.

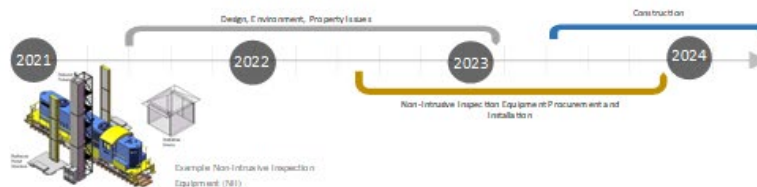
District Support

RRD is thankful for the tireless efforts of district staff in Brownwood, San Angelo, Odessa, and Alpine/El Paso, TX to successfully state let the SORL rail construction projects from 2004-present. The unique aspects and plan specifications of rail work and environmental clearance are demanding on district staff.

Inspection station planning

Staff from many TxDOT districts and divisions are working with RRD and TXPF to achieve the goal of international trade. In 2021, TxDOT secured a commitment for approximately \$17.5M from the Federal Highway Administration (FHWA) through the National Highway Freight Program (NHFP). SB 8 provides an additional \$15.5M to fully fund the customs inspection facility.

Working with U.S. CBP, TXPF is also seeking an interim security and inspection arrangement to begin international train service before completion of the permanent facility.





Texas State Rail Plan

The rail system in Texas plays a critical role as a state, national, and international economic driver, moving people and goods across the state. The Texas rail network is the largest in the country with over 10,500 miles of track and serves as a connection between all modes of transportation. RRD facilitates the continuing development, improvement, and maintenance of a best-in-class freight and passenger rail system for Texas.

The 2019 Texas Rail Plan is a federally specified document detailing the state of the rail system in Texas and opportunities for improvement. The Plan sets a direction for rail planning and project development, with the intention to meet federal requirements to qualify the state for any future federal rail funding. In accordance with state law, the plan includes forecasts and potential impacts of proposed passenger rail systems. It guides the work of RRD by putting forth the state's vision for the rail system and identifying opportunities for future improvement.



RRD's responsibilities include coordination with railroads on freight and passenger rail issues, oversight of state and federal funds appropriated for rail projects and rail-highway crossings, safety inspections of the network; and management of state-owned rail facilities such as the SORL.

The Texas Rail Plan and the work of RRD support TxDOT's strategic plan goals by working to increase safety, manage system assets, increase mobility and reliability, increase multimodal connectivity, and increase economic competitiveness. These goals align with the goals of both the statewide Texas Transportation Plan and the Texas Freight Mobility Plan.

Additional information can be found on the RRD website.

Project Spotlight



Metroplex
Freight
Mobility Study



Houston
Beaumont
Freight Rail
Study



Statewide
Study of
Grade
Separation
Candidates



Section
130



Railroad
Traffic Signal
Preemption



Statewide
Crossing
Inventory
Update

Metroplex Freight Mobility Study

RRD conducted a comprehensive analysis of the freight transportation network to identify mutually beneficial mobility improvements. In addition to rail operations modeling and conceptual designs to improve freight rail efficiency, the study refined infrastructure solutions needed to support expanded passenger service on the Trinity Railway Express, planned rail improvements to allow new passenger service on the Madill Subdivision, and developed plans and cost estimates for solutions at priority highway-railroad grade crossings.

Infrastructure solutions needed to support expanded passenger service on the existing Trinity Railway Express and benefit freight movement have been incorporated into capital projects and grant awards sponsored by the North Central Texas Council of Governments.

The summary and recommended next steps can be found on the Division website. RRD will begin another phase in 2022 to ready rail capacity concepts for federal grants. The work will include surveying, preliminary engineering, and benefit-cost calculations.



Houston-Beaumont Freight Rail Study

The Houston-Beaumont Freight Rail Study is an update to a previous study prepared for the Houston and Beaumont region focused on potential improvements related to railroad capacity and roadway-railroad crossings. The *Houston Region Freight Study*, issued in 2007 by TxDOT, was the start of a conversation to address deficiencies within the region's freight network (roads, ports, and railroads) and to develop ways to accommodate future freight movements.

Through the study of the freight rail network using proprietary rail operations data and modeling, the updated report identifies alternatives for rail and roadway system improvements, including grade separation, crossing closure, and rail capacity, to address vehicular/rail and freight rail performance within the 11-county region. The study recommends execution strategies and funding opportunities for several construction scenarios.

These proposed projects are anticipated to reduce vehicular and train delays, increase transportation system capacity, reduce the potential for incidents, and improve the quality of life for users. These recommendations may be used to form the basis for an infrastructure plan focused around railroad-related efforts following these principles.

RRD and local stakeholders are considering additional tasks to ready project ideas for grant funding in 2022. Additional information can be found on the RRD website.



Proposed Improvements

- 20 potential railroad improvements
- 50 potential grade separations
- 22 potential crossing closures

Statewide Study of Grade Separation Candidates

RRD conducted a study to identify rail and roadway system alternatives to improve vehicular/rail interaction and freight rail performance at selected at-grade crossings throughout the State. RRD aims to provide planning support to its partners in areas within the state where at-grade crossing studies have not been recently developed. This study includes the screening of all active, public highway-railroad at-grade crossings to identify candidate grade separation projects that could potentially improve mobility and reduce vehicular delays. The study also includes conceptual plan development, preparation of cost estimates, and initial benefit-cost analysis to support preparation future planning of these projects and development of potential federal grant funding applications.



The results of this study identified 20 at-grade crossings as potential grade separation or crossing improvement projects. Additional information can be found on the RRD website.

Railroad-Traffic Signal Preemption

Across the state, there are 533 railroad signals interconnected with highway traffic signals to improve mobility and prevent dangerous queuing of vehicles on railroad tracks at red lights. Maintenance and standardization may be difficult with various road owners.

RRD is preparing standardized preemption timing processes, a Railroad Preemption Manual, and implementing training programs to establish uniform preemption and maintenance practices in the state. Railroad and road user safety and efficiency are promoted through standardization of the preemption process.



Section 130

RRD has the authority to implement rail improvements through public-private partnership agreements. This authority has been used throughout the state to improve safety at over 98% of public crossings. RRD manages \$20M per year in federal Section 130 funds for a wide variety of crossing improvements.

The majority of Section 130 funds are used to reimburse railroads for signal upgrades, crossing surfaces, signage, and civil improvements at crossings prioritized through an extensive analysis of safety data. The Division plans to assist the Districts with several additional projects, including the redesign and reconstruction of humped crossings that can stall low-clearance trucks on the tracks.

Statewide Crossing Inventory

RRD is conducting a complete update of data and maps of public highway-rail crossings throughout the state. The work will update existing grade crossing information in the TxDOT Texas Railroad Information Management System database and the FRA Office of Safety Analysis Grade Crossing Inventory database. This grade crossing data is vital to many public and private plans and programs, from long-range transportation improvement plans by the state and local governments, to routing and permitting of oversized vehicle trips.

Rail Safety Spotlight



Safety Inspection Spotlight: Track

TxDOT rail safety investigators conduct safety inspections of railroad facilities and equipment. They also monitor compliance with both state and federally-mandated safety regulations in the areas of hazardous materials, operating practices, motive power and equipment, signal and train control and track.

The track inspector is required, at a minimum, to be able to conduct independent inspections of track structures for the purpose of determining compliance with the Track Safety Standards (49 CFR Part 213), to make reports of those inspections, and to recommend enforcement actions when appropriate to promote compliance. TxDOT staff examines railroad track for proper condition, including alignment, profile and geometrical surface. Curves and spirals are measured for uniformity and proper super elevation.



Crossing Safety Spotlight: High-Center Mitigation

High-centered crossings can stall low-clearance trucks on the tracks. Also known as humped crossings, they occur across the state and can change with road wear and railroad maintenance. RRD is using lidar to assess hazards and providing funding and engineering for reconstruction projects. RRD plans to mitigate three of these in the Odessa District, one in the Bryan District, and one in the Pharr District, pictured at right.



2022 Outlook



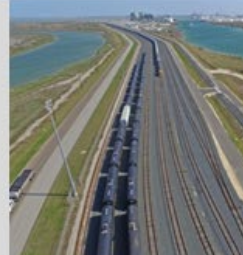
Infrastructure Investment and Jobs Act Opportunities

Overview: The Infrastructure Investment and Jobs Act directs \$102B in rail funding over the next 5 years, not including several highway programs that could include multimodal projects.

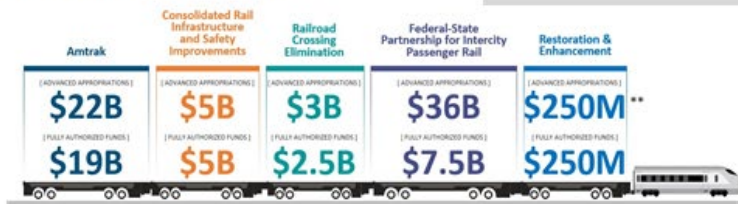
Freight Capacity: The Consolidated Rail Infrastructure and Safety Improvement grant program, the main FRA discretionary grant, will expand from \$300M per year to \$1B. The expansion interests Class 1 railroads, who must partner with governments for applications. Rail growth in Texas is a top industry priority. Many stakeholders are interested in advancing concepts from the Houston and Dallas freight studies to improve freight flow and possibly address blocked crossing issues.

Grade Separations: RRD has bridge concept plans for at-grade public crossings across the state with high train and vehicle counts. The new \$600M grant program should support these, considering freight and population growth relative to the nation. RRD will consult with the districts and local stakeholders in anticipation of a program call.

Passenger Rail: New passenger rail projects could receive a significant portion of rail funding, possibly \$20B or more, not including the amounts specifically dedicated to the Amtrak Northeast Corridor. TxDOT has a statutory responsibility to coordinate stakeholders for passenger rail and is weighing the cost-benefit of Amtrak expansion concepts.



In 2018, Texas ranked second nationwide for total waterborne tonnage handled and first nationwide for total foreign waterborne tonnage of imports and exports, and generated over \$242 billion in annual overall trade. Rail is a vital link to the ports, and the Texas Rail Plan and the 2023 Texas Port Mission Plan have many rail priority projects. RRD will work with Maritime Division and stakeholders to support project development.



First/ Last Mile Support for Economic Development

Shortline railroads are a vital link in the transportation network that help keep trucks off the roads, but they often lack capital needed for maintenance and growth. RRD traditionally focuses limited state funds on the state-owned shortline. As SORL potential grows, the state can expand support to other shortlines in 2022.

RRD will engage the shortline association in 2022 and discuss options for engineering and assessment support, grant writing, rough crossing replanks, and the potential for accessing state rail improvement funding.



Texas is served by 56 freight railroads consisting of three Class I and 53 shortline rail operators. The Class I rail operators in Texas include BNSF Railway, Kansas City Southern Railway (KCS), and UP as shown on the map. Texas' Class I railroads make significant capital investments within the state annually. UP's 2018 capital program plans for Texas called for \$450 million for infrastructure projects, while BNSF's Texas program called for \$375 million. KCS also makes significant capital investments in the state annually.

Shortline railroads provide specialized services and connect with the Class I railroads.

Texas is home to approximately 20 intermodal rail facilities, where

shipping containers are transferred between trains and trucks or vessels. These facilities are concentrated mostly in the eastern portion of the state. BNSF and UP operate intermodal facilities at the Port of Houston, which is the No. 2 seaport by volume (tonnage) in the U.S.

Texas rail lines carry more than 9.9 million rail carloads annually. In addition to rail shipments between Texas and other U.S. states, Texas receives more than 750,000 rail cars across the Mexican border. In 2016, Texas railroads moved more than 400 million tons of freight.

Additional information regarding the Texas Freight Rail Network can be found in the [Texas Rail Plan](#).



Class I railroads own nearly 80 percent of the rail network in Texas, totaling 8,388 miles of track in 2018.

Shortline railroads own and use 2,143 miles of track, including trackage rights, which comprise about 20 percent of the state's total trackage in 2018.

Benefits of Freight Rail

The Texas rail network is a valuable asset to the citizens of Texas. It is a critical component of a thriving economy, safely connecting industries, ports, people, and providing an effective alternative to highways. Freight rail supports producers and consumers and the entire Texas economy. Rail is especially critical for intermodal containers and high-value goods moving long distances, and for liquid and dry bulk goods.

The benefits of moving freight by rail include less congestion on highways, efficient fuel consumption, lower greenhouse gas emissions, and an excellent safety record. It would take 365 semi-trailer trucks to carry the same amount of cargo as a 100-car train carrying 100 tons per rail car. Benefits generated by the rail industry in Texas stem from firms providing freight and passenger transport services, as well as industries using rail freight services to transport goods. Of these activities, freight users generate more than 99 percent of the economic impact.

Moving Freight Across the Country

Annually, freight rail carries 9 percent of Texas freight tonnage and 15 percent of Texas freight value considering domestic and international trade. The top rail commodities by value are:

- Chemical Products (28%)
- Transportation Equipment (25%)
- Intermodal/mixed freight (24%)
- Food Products (5%)
- Primary Metals (3%)

Freight Rail Means Business

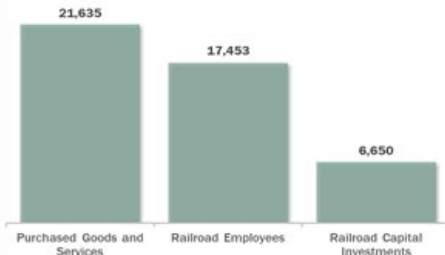
Enterprise Impacts capture the effects of freight rail as a business. These effects include direct employment in the rail industry, indirect impacts arising from spending by the industry, and induced impacts generated by rail industry employee spending. Effects are generated by railroad employment, retirement benefits, capital investments, and purchase of goods and services in Texas that ripple through the state economy.

Annually, freight rail supports 122,800 jobs, \$8.7 billion in labor income, \$13.6 billion in Gross State Product, and \$0.8 billion in state and local tax revenues.

Freight Rail by the Numbers

- Texas has 10,538 freight rail track miles (1st in U.S.)
- Annually, freight rail moves about 325 million tons of freight and \$405 billion in value, including \$8 billion tons and \$7 billion in cross-border trade.

Direct Employment by Texas Freight Rail Industries



All values as of 2018

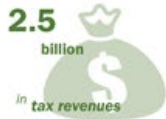
Economic Impact of Freight Rail in Texas



All values as of 2018

Economic Importance

Freight rail supports a wide variety of freight-producing and consuming industries in Texas.



Movement in Tons and Value

Freight Moving by Rail

Annually, freight rail operators move 325 million tons of freight worth \$405 billion to, from, and within Texas. Another 132 million freight tons and \$369 billion in freight value passed through Texas. The largest share of tonnage is inbound, while the largest share of value is pass-through.



Economic Impact

Annual Enterprise Impacts (direct, indirect, and induced impacts from freight rail as a business):

- 122,800 jobs
- \$8.7 billion in income
- \$13.8 billion in Gross State Product
- \$2.5 billion in tax revenue

Annual User Impacts (direct impacts in freight rail-dependent industries):

- 171,000 jobs
- \$19.8 billion in income
- \$70 billion in Gross State Product



Texas Passenger Rail System



Intercity passenger rail service in Texas is provided by Amtrak, the National Railroad Passenger Corporation. It operates three routes as shown on the map: the Heartland Flyer, Sunset Limited, and Texas Eagle.

The Texas Eagle operates daily service between Chicago and San Antonio. At San Antonio, it connects to the Sunset Limited for continued service to Los Angeles. Twelve stations within Texas are served by this train.

The Sunset Limited provides tri-weekly service between New Orleans and Los Angeles. Seven Texas stations are served by this train.

The Heartland Flyer is a daily passenger train that operates between Oklahoma City and Fort Worth. Two stations in Texas are

served by this train. The service is operated by Amtrak under contract to the states of Texas and Oklahoma. The schedule is timed to allow transfers to the Texas Eagle in each direction.

The Texas Rail Plan also summarizes efforts underway by a private, investor-driven company called Texas Central Partners to build and operate a 240-mile-long high-speed passenger rail line between Dallas and Houston. The proposed line is planned to take approximately 90 minutes, with one intermediate stop in the Brazos Valley.

Additional information regarding the Texas Passenger Rail Network can be found in [Texas Rail Plan](#).



In addition to three intercity passenger trains, Texas has four commuter rail operations, three in the Dallas/Fort Worth region and one in Austin. These operations are planned, managed, and funded by local/regional transit agencies.

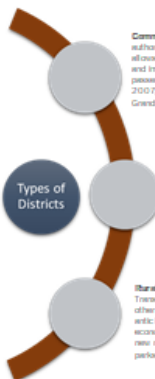
Texas also has six light rail streetcar transit operations — in Dallas, Houston, Galveston, and El Paso — and six tourism railroads.

Passenger rail can be categorized as high-speed, intercity, commuter and regional, light rail and trolley, and to tourism rail. The Texas passenger rail system is comprised of intercity passenger rail services operated by Amtrak, regional commuter rail and local rail transit services operated by public transit agencies, and privately owned tourist railroads. Additional information regarding the Texas Passenger Rail Network can be found in the [Texas Rail Plan](#) located on the RRD website.

Passenger Rail Category	Providers	Service Name
High-Speed Rail - rail operating at speeds of 125 mph or above on nonstop or with limited stops between cities and operating on a grade-separated, dedicated right-of-way.	No high-speed rail service currently provided	None
Intercity Passenger Rail - rail serving multiple cities on routes with longer distances (typically 100 miles or more) and more frequent stops, and operating on tracks that are part of the existing national railroad network at conventional passenger train speeds.	Amtrak	Heartland Flyer Texas Eagle Sunset Limited
Commuter Rail - rail primarily serving work commuters and local travelers between communities in an urban area or metropolitan region, on routes with frequent stops, and typically operating on tracks that are part of the existing national railroad network.	Dallas Area Rapid Transit and Trinity Metro Denton County Transportation Authority Capital Metropolitan Transportation Authority Trinity Metro	Trinity Railway Express A-Train MetroRail TEXRail
Light Rail - public transportation operating on rail within an urban area. Light rail vehicles are electric rail cars operating in dedicated rights-of-way that are either separated from other traffic or in city streets mixed with general traffic.	Dallas Area Rapid Transit Metropolitan Transit Authority of Harris County (METRO)	DART Rail METRORail
Trolley and Streetcar - local public transportation using vehicles that run on dedicated tracks to provide short-trip urban circulation. Vehicles range from vintage trolleys to modern multi-section articulated streetcars.	Dallas Area Rapid Transit McKinney Avenue Transit Authority and Dallas Area Rapid Transit Sun Metro Island Transit (City of Galveston)	Dallas Streetcar McKinney Avenue Trolley / M-Line El Paso Streetcar Galveston Island Trolley (under restoration)
Tourism Rail - rail operating generally for entertainment and sightseeing purposes.	The Western Group Austin Steam Train Association Grapevine Vintage Railroad Galveston Railroad Museum Texas Transportation Museum DBR Entertainment, Inc.	Texas State Railroad Hill Country Flyer Bertram Flyer Cotton Belt Route Trinity River One-Hour Train Excursion Rides Grapevine One-Hour Train Excursion Horseshoe Express Longhorn & Western Railroad Historic Jefferson Railway

Rail Districts are political subdivisions of the state whose formation is authorized by legislative authority. Rail districts are generally given the power of eminent domain and the power to bond for projects. They are not given a dedicated source of funding for projects and most are not given the authority to tax.

Rural Rail Transportation Districts (RRTDs) in Texas are formed to prevent the loss of rural rail lines that have been abandoned by rail companies or to maintain the former rail right-of-way for future transportation uses. RRTDs that include state-owned right-of-way are listed below. For information on the formation and governance of rail districts, please visit the [Texas Rail Plan](#).



Commuter Rail - The four existing commuter rail services in Texas are operated by local transit authorites, however, other rail lines may also be built and operated as commuter rail. The state legislature allows for the formation of commuter rail districts, under certain conditions, to facilitate the planning and implementation of rail intended primarily for daily commuting. The 75th Texas Legislature passed the first bill to authorize the formation of an intermunicipal commuter rail district in 1997. In 2007, the 80th Texas Legislature authorized the creation of a commuter rail district in the Lower Rio Grande Valley.

Freight Rail - The 75th Texas Legislature in 2005 authorized the creation of a freight rail district in a county with a population of 3.3 million or more, and the 81st Texas Legislature in 2009 added that a freight rail district may exercise the powers of an intermunicipal commuter rail district created under Chapter 173, Transportation Code. The Gulf Coast Rail District, which encompasses most of the Houston area, was established under this legislation. RRTD related project development, secured as the fiscal agent, and provided oversight of the Gulf Coast project in Houston, which was funded by the District through an appropriation of Congregational Millage tax and Air Quality funds by the MPO.

Rural Rail Transportation - The Texas Legislature voted to allow the formation of Rural Rail Transportation Districts (RRTDs) in 2005. The only statutory funding source available for RRTDs, other than receiving donations of cash and real property, is to issue revenue bonds and the use of certain tax monies. The revenue bonds RRTDs with preserving rail infrastructure and promoting economic development. Counties can establish RRTDs to acquire abandoned rail lines, construct new rail lines, or rehabilitate existing rail lines. They can also develop rail access to serve industrial parks, intermodal facilities, and transit facilities.

Fannin County Rural Rail Transportation District



In 2008, TxDOT entered into a lease agreement with Fannin County Rural Rail Transportation District to operate on the state-owned rail line located in Lamar and Fannin Counties that extends from Mile Post 84.0 to Mile Post 127.5 on the Bonham Subdivision—a total of approximately 33.5 miles.

Fannin County Rural Rail Transportation District is working to identify potential funding sources for rehabilitation of the line and possible operators that it would contract for freight rail service.

Northeast Texas Rural Rail Transportation District



The Northeast Texas Rural Rail Transportation District (NETEX) secured a legislative appropriation that granted it funds from state general revenue, through TxDOT, for the purchase and operation of the rail line from a point west of Sulphur Springs at Mile Post 524.0 to a point west of Greeville at Mile Post 555.0.

Northeast Texas Connector, LLC, through an operating lease with NETEX, moves commodities such as grain, plastic, rock, and aluminum.

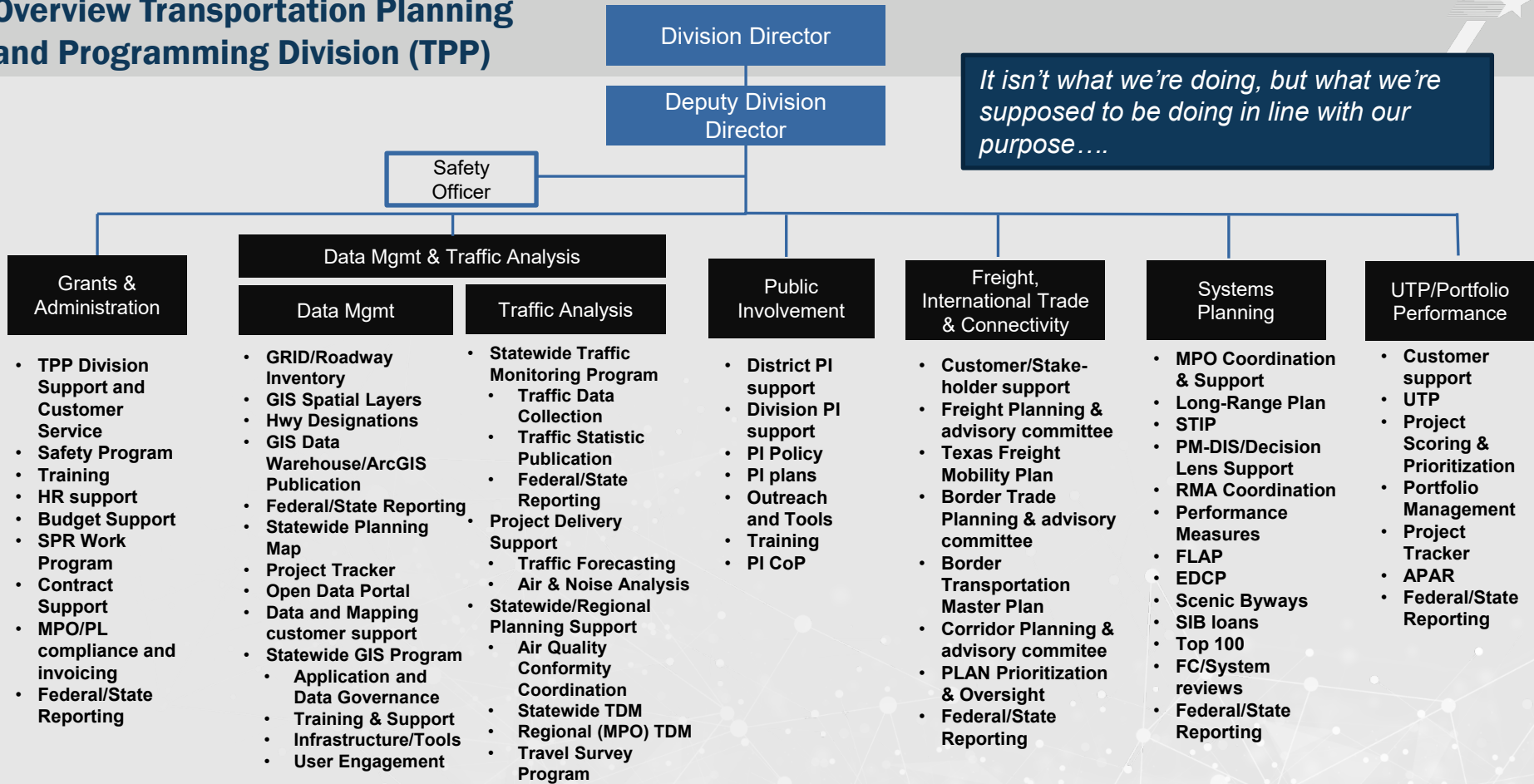


Transportation Planning and Programming Division





Overview Transportation Planning and Programming Division (TPP)



Grants & Administration

- TPP Division Support and Customer Service
- Safety Program
- Training
- HR support
- Budget Support
- SPR Work Program
- Contract Support
- MPO/PL compliance and invoicing
- Federal/State Reporting

Data Mgmt & Traffic Analysis

Data Mgmt

- GRID/Roadway Inventory
- GIS Spatial Layers
- Hwy Designations
- GIS Data Warehouse/ArcGIS Publication
- Federal/State Reporting
- Statewide Planning Map
- Project Tracker
- Open Data Portal
- Data and Mapping customer support
- Statewide GIS Program
 - Application and Data Governance
 - Training & Support
 - Infrastructure/Tools
 - User Engagement

Traffic Analysis

- Statewide Traffic Monitoring Program
 - Traffic Data Collection
 - Traffic Statistic Publication
 - Federal/State Reporting
- Project Delivery Support
 - Traffic Forecasting
 - Air & Noise Analysis
- Statewide/Regional Planning Support
 - Air Quality Conformity Coordination
 - Statewide TDM
 - Regional (MPO) TDM
 - Travel Survey Program

Public Involvement

- District PI support
- Division PI support
- PI Policy
- PI plans
- Outreach and Tools
- Training
- PI CoP

Freight, International Trade & Connectivity

- Customer/Stakeholder support
- Freight Planning & advisory committee
- Texas Freight Mobility Plan
- Border Trade Planning & advisory committee
- Border Transportation Master Plan
- Corridor Planning & advisory committee
- PLAN Prioritization & Oversight
- Federal/State Reporting

Systems Planning

- MPO Coordination & Support
- Long-Range Plan
- STIP
- PM-DIS/Decision Lens Support
- RMA Coordination
- Performance Measures
- FLAP
- EDCP
- Scenic Byways
- SIB loans
- Top 100
- FC/System reviews
- Federal/State Reporting

UTP/Portfolio Performance

- Customer support
- UTP
- Project Scoring & Prioritization
- Portfolio Management
- Project Tracker
- APAR
- Federal/State Reporting

What is the Unified Transportation Program?



- TxDOT's 10-year plan that guides the development of transportation projects across the state
- Determines how much transportation funding the state expects to have over the next decade and how to distribute it
- Includes all transportation projects that TxDOT is developing for construction over the next 10 years
- Organized into 12 funding categories that focus on different highway project types or ranges of activities
- Required by state law to be approved by the Texas Transportation Commission each year by August 31
 - May be updated more frequently if necessary to authorize a major change to one or more funding allocations or project listings.



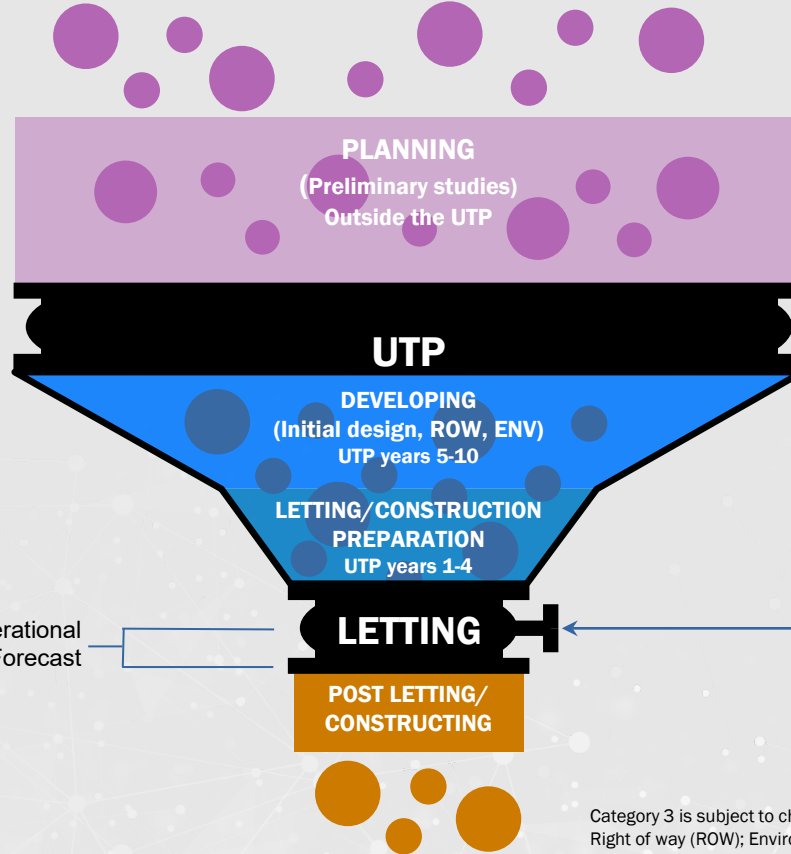
How TxDOT Plans: Managing Development (Constraint)



Planning Forecast \$80,132,409,011*
Est. Cat 3: \$ 5,000,000,000
Est. 2023 UTP: \$85,132,409,011

Planning Forecast*

Operational Cash Forecast



Valves to speed up or slow down number of projects under development based on funding

Valves to speed up or slow down number of projects proceeding to letting based on funding

Category 3 is subject to change and represents a snapshot in time as of June 14, 2021. Right of way (ROW); Environmental clearance (ENV)



2050 Horizon

- ✓ Overarching vision for future transportation investments
- ✓ Long-term growth forecasts
- ✓ Foundation to support other modal planning



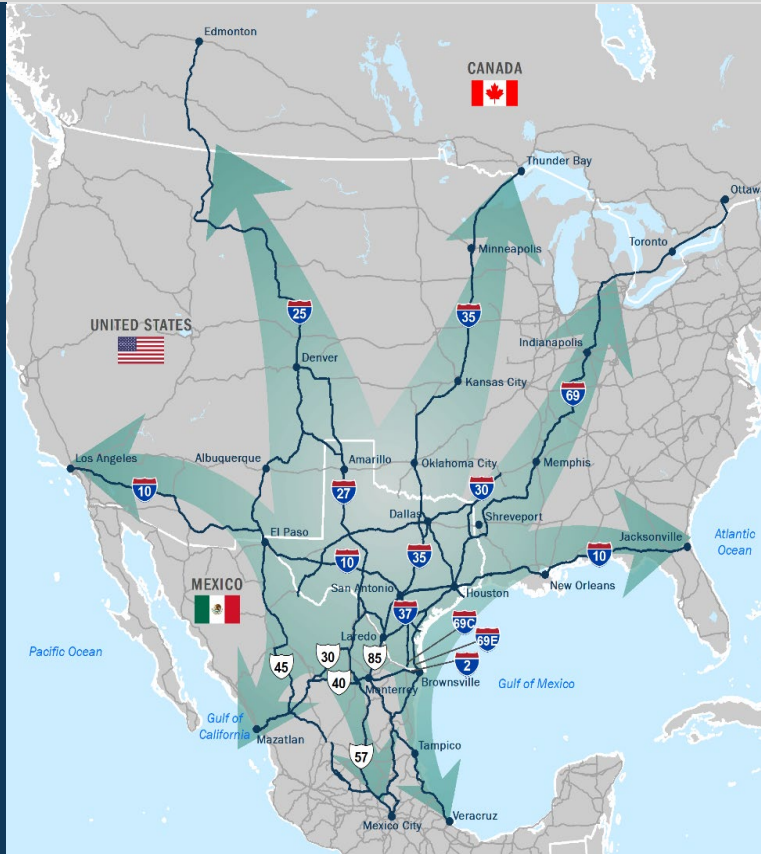
- **Federally-required State Freight Plan, now required to be updated every four years**
- **Texas Delivers 2050 is now underway**
- **Guided by input from stakeholders and the Texas Freight Advisory Committee**
- **Approved by the Texas Transportation Commission**
- **Submitted to the Federal Highway Administration in early 2023 after receiving**

Texas-Mexico Border Transportation Master Plan



Comprehensive, multimodal, Texas-Mexico long-range plan:

- Identifies current and future transportation needs, challenges, and opportunities for moving people and goods across the Texas-Mexico border.
- Outlines policy, program and project recommendations to address the needs.
- Facilitates coordination and collaboration between Texas and Mexico on Texas-Mexico border transportation planning and programming.



GOALS

MOBILITY AND RELIABILITY

SUSTAINABLE FUNDING

CONNECTIVITY

CROSS-BORDER RESILIENCY

SAFETY AND SECURITY

ASSET PRESERVATION

ECONOMIC COMPETITIVENESS

STEWARDSHIP AND SUSTAINABILITY

CUSTOMER SERVICE

Corridor Planning– 2022 Current and Future Efforts



STATEWIDE

- Interstate Development and Designation:
 - I-69
 - I-14
 - Ports-to-Plains
- Statewide Connectivity Initiative/Key Corridors:
 - US 87 / US 83
 - US 281
 - US 59
 - US 175 / US 69
- Texas Trunk System (Rural Connectivity)
- I-27 Advisory Committee (SB 1474)



END TO END CORRIDORS

- I-20 Texas Corridor Study
- I-10 Texas Corridor Study
- US 82 Texas Corridor Study
- US 90 Texas Corridor Study



REGIONAL CORRIDORS

- SH 6 Corridor Study (BRY)
- US 69 Env/Schem (TYL)
- US 67/87 Route Study (SJT)
- FM 2271 Extension Feasibility Study (WAC)
- US 77 Route Study (CRP)
- MoKAN Corridor Feasibility Study (AUS)
- US 57 Corridor Interstate Feasibility Study (LRD/SAT)
- US 83 Regional Corridor Study (PHR/LRD)



SPECIAL APPLICATIONS

- Corridor Planning Tools
 - Corridor Prioritization Tool (CPT) and Corridor Evaluation Tool (CET)
- HOU/HGAC Pilot Study and District Strategic Planning Document
- Automation of Feasibility Study Requests in TxC
- Automation of PLAN Authority Requests in TxC
- CBP Crossroads Webpage



PUTTING TxDOT
ON THE MAP

Statewide GIS Program

Mission

“Connecting TxDOT with the tools, resources, and information to put TxDOT on the map!”

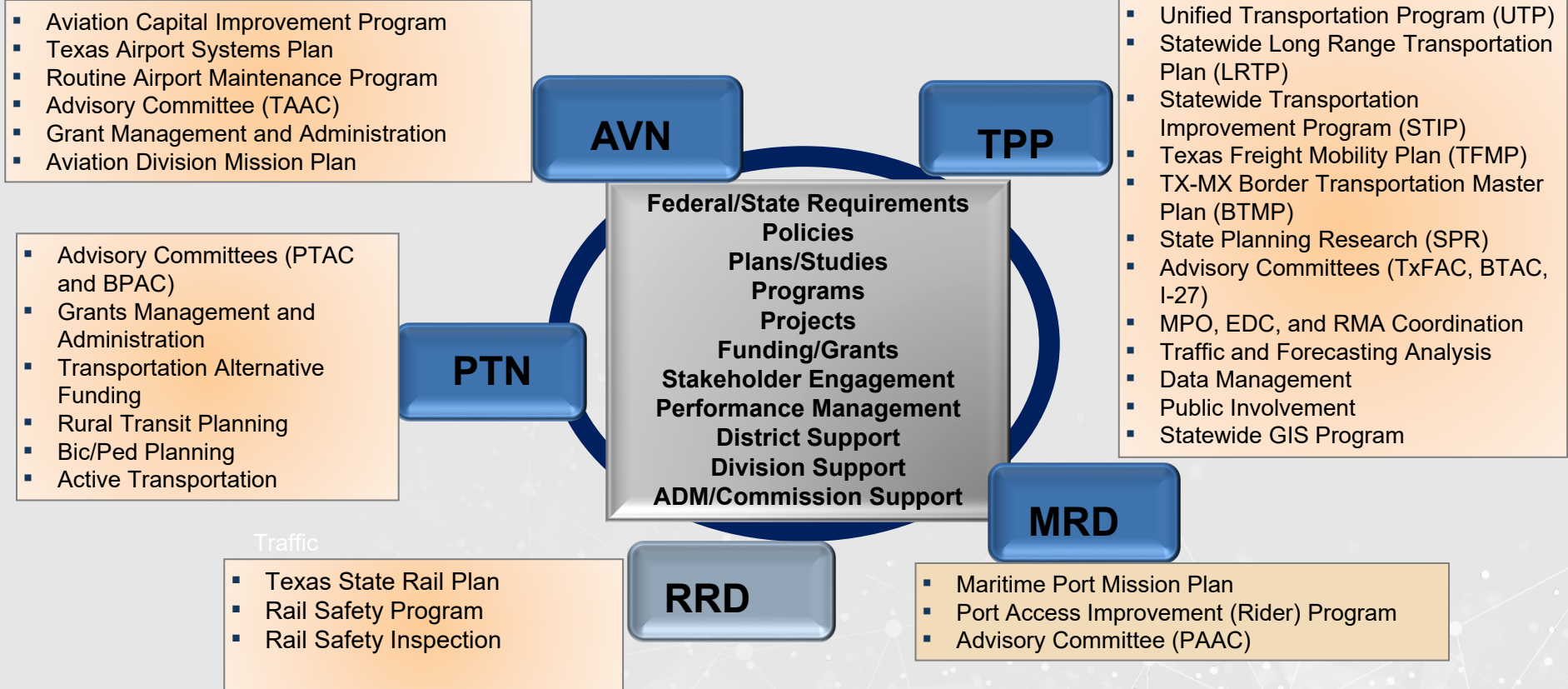
Vision

“A Connected TxDOT, advancing project delivery and infrastructure management through the advancement of geospatial technologies and enterprise capabilities”

Education
Communication
Applications
Enterprise Governance



Summary: TxDOT's Planning and Multimodal Programs



The background of the slide is a photograph of a shipping yard. In the foreground, a blue and orange forklift is parked on a concrete surface. To the right, there are several stacks of colorful shipping containers in shades of yellow, red, and blue. The sky is a mix of blue and orange, suggesting a sunset or sunrise. The text 'Thank you!' is overlaid in a large, white, sans-serif font with a slight drop shadow.

Thank you!

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Texas Department of Transportation
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