

2015 Educational Series

Rail



Rail

OVERVIEW

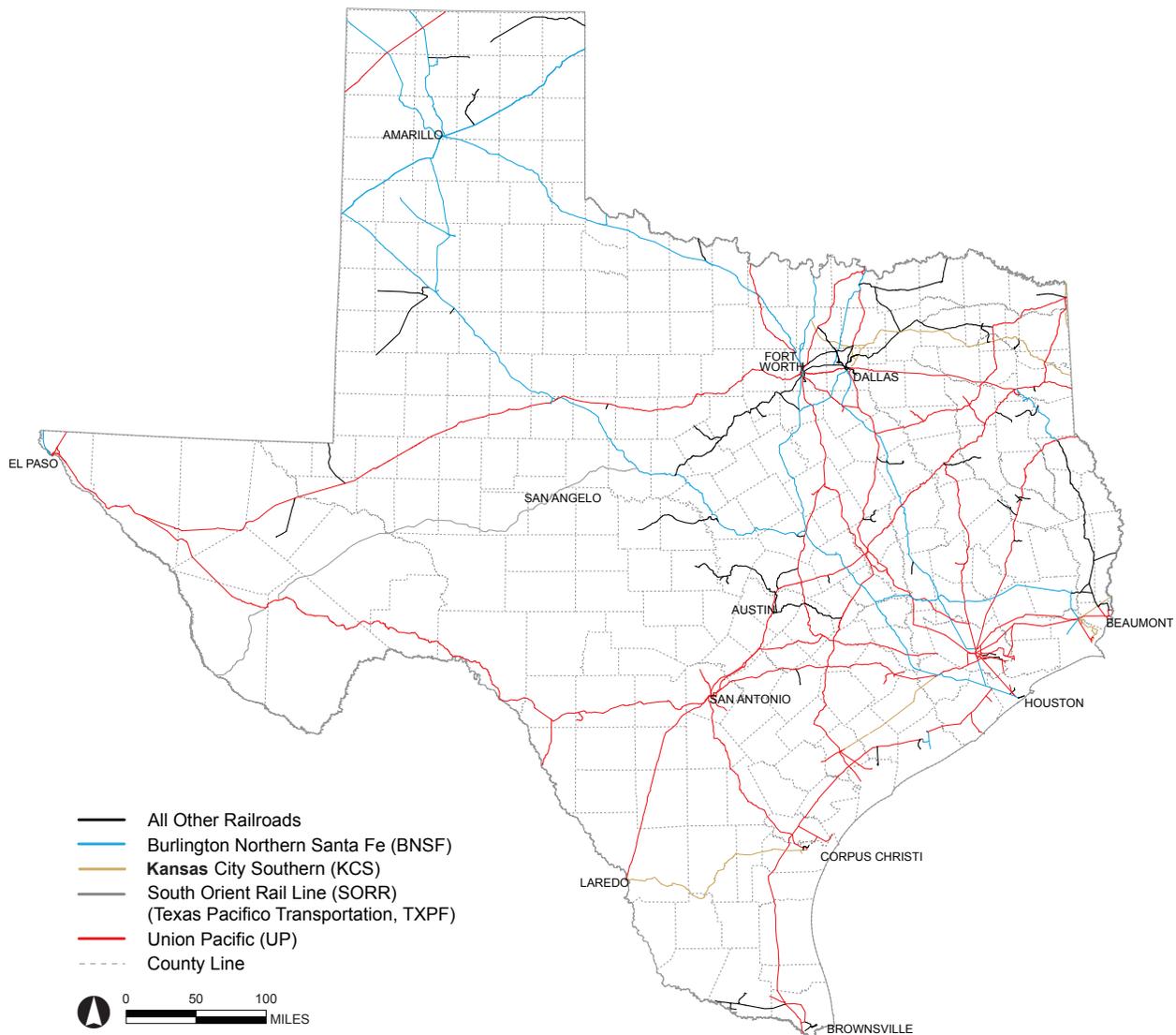
Since its inception, the Texas Department of Transportation (TxDOT) has focused on meeting the transportation needs of the citizens of Texas. In the past, “transportation infrastructure” was largely defined as highways. In recent years, as the public’s need for a multimodal approach to transportation has grown, TxDOT has worked diligently to develop and provide a comprehensive transportation system.

In 2009, the Sunset Advisory Commission and the legislature encouraged TxDOT to create a Rail Division (RRD), which became fully operational on Dec. 1, 2009, and consolidated TxDOT’s major rail responsibilities into one division. On Nov. 1, 2013, TxDOT reorganized the Rail Division and transferred the rail-highway grade crossing program and the rail safety inspection programs to the Traffic Operations Division (TRF). This reorganization combined all TxDOT’s transportation safety

programs into one division, TRF. RRD’s responsibilities have since been focused toward planning and implementing freight and passenger rail projects and programs, high speed passenger rail development, management of state-owned rail facilities such as the South Orient Rail Line (SORR), and oversight of the safety of rail transit systems.

Texas leads all other states in total rail miles with 10,425 total miles of track, and total number of public highway-rail grade crossings with

Texas Rail Network



9,728. There are also 4,801 private highway-rail grade crossings and 2,378 highway-rail grade separations (bridges).

FREIGHT RAIL IN TEXAS

Freight volumes on all transportation modes are driven in part by overall trends in economic activity. Texas has maintained a strong economy during the recent national recession and the future outlook for the state's economy is positive. In 2011, Texas ranked fifth nationally in total rail tons originating by state (89.3 million tons) and first overall in total rail tons terminated, or arriving at their destination, by state (202.4 million tons). Texas is first nationally in both chemical and petroleum freight rail tons originating and terminating by state. This is largely attributable to Texas' robust energy sector.

Freight rail capacity and mobility can be severely limited by capacity constraints or "bottlenecks." These choke points can be caused by infrastructure issues, such as single-track main lines, insufficient numbers of passing tracks, numerous at-grade road crossings on high-volume routes, older bridge structures that can't support increasing tonnages and train volumes, inadequate train signal systems for growing freight movements and a lack of adequate storage and switching yards. Rail capacity constraints should be addressed wherever possible to prevent the diversion of freight from rail to roadways. Railroad operators invest in selected upgrades to their rail networks over time, but many bottlenecks are likely to remain unaddressed into the foreseeable future. Public-sector funding can be combined with private investment to assist in accelerating high-priority

rail capacity projects, as was the case with the recently completed Tower 55 railroad intersection project in Fort Worth.

Highway-Rail Safety Improvements – Programs and Projects

TxDOT's TRF administers federal and state programs to improve highway-rail grade crossings by partnering with railroads to install and maintain crossing signals and gates, improve crossing surfaces on state highways, consolidate and close redundant crossings, and construct highway-rail grade separations. TxDOT executes over 200 agreements with railroad companies per year for safety, maintenance, and construction activities involving railroad rights-of-way. State-Railroad agreements are executed for individual projects and also by master agreements. TxDOT administers several federal and state funded programs to improve safety and operations on and around railroad rights of way.

TxDOT dedicated-fund highway-rail programs include:

- Federal Railway-Highway Crossing Safety & Signal - \$15 million per year
- Federal Railroad Grade Separation - \$25 million per year
- State Railroad Grade Crossing Replanking (Re-Surfacing) - \$3.5 million per year
- State Railroad Signal Maintenance - \$1.1 million per year

Freight Rail Safety Inspections

TRF is responsible for managing the state rail safety inspection participation program in cooperation with the Federal Railroad Administration (FRA). TxDOT rail safety inspectors conduct the same safety inspections of railroad facilities and equipment as do their FRA counterparts. 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,



South Orient Rail Line

and track. TxDOT closely coordinates rail safety inspection activities with the FRA Region 5 office located in Fort Worth. Texas is currently participating in the FRA State Rail Safety Participation Program, under 49 CFR Part 212, which allows states to enter into an agreement with FRA for the delegation of specified authority. A total of 30 states, including Texas, participate in the program. This includes investigative and surveillance authority regarding all or any part of federal railroad safety laws. The state rail safety inspection program is funded at \$1.5 million per year by the freight railroad companies operating in the state through an annual assessment referred to as the State Rail Safety Program Fee.

Legal Oversight

TxDOT monitors potential rail line abandonments in Texas and coordinates the state's involvement and response to abandonment filings. Occasionally, rail lines are subject to abandonment by the railroad due to low traffic volumes. When this occurs, TxDOT analyzes whether or not the abandoned line will serve a purpose for the department either as a rail facility or as a future roadway or expansion of an existing road.

TxDOT is responsible for administering the lease and operating agreements on state-owned facilities and operating agreements on state-supported passenger routes. These responsibilities also require the department to manage the construction contracts for state or federally funding projects on those facilities, as well as oversight of state or federally funded projects on private railroad facilities such as Tower 55.

The South Orient Rail Line (SORR)

SORR is a TxDOT-owned facility that has one of only seven rail gateways between the United States and Mexico. The SORR is a 391 mile line that extends from a few miles southwest of Coleman through San Angelo to Presidio at the Texas-Mexico border.

SORR has the potential to relieve some of the congestion at other border crossings through the diversion of rail traffic to the gateway at Presidio/Ojinaga. The rail line is maintained and operated by Texas Pacifico Transportation, Ltd (TXPF) through a lease agreement with TxDOT. When, SORR was acquired by TxDOT through an abandonment application, the infrastructure was severely deteriorated due to deferred maintenance by the previous owners.

Since TxDOT completed the acquisition of the SORR in 2001, annual carloads interchanged on the line averaged 2,031 (2001 – 2009). Late in 2009, TxDOT began the rehabilitation of the east end of the line from near Coleman to San Angelo, using a phased approach to upgrade this segment of the SORR. Funding for this rehabilitation included:

- \$14.01 million from the American Recovery and Reinvestment Act (ARRA);
- \$212,355 remaining from a 2004 Omnibus appropriation;
- \$910,000 in TXPF matching funds from 2004;
- \$4.6 million in TXPF funding from 2009;
- \$3 million in Texas general revenue funds from the 2010–2011 appropriations act;
- \$2 million provided by the FRA in the 2010 Omnibus appropriation;

- \$800,000 contributed by TXPF in 2011;
- \$200,000 in contingency funds; and
- \$500,000 in surplus equipment sales revenues.

The \$26 million rehabilitation was completed in 2012 and resulted in a dramatic increase in rail freight traffic. The annual carloads interchanged totaled 10,649 in 2012, a 424 percent increase over the historical average of 2,031. Annual carloads interchanged in 2013 totaled 23,358, a 1,050 percent increase over the historical numbers. Much of this rail freight is in support of the petroleum mining industry in the region. This increase in business has resulted in the creation of over 100 well paying jobs in the region and removed thousands of heavy trucks from the region's highways.

RRD is using a \$5 million Texas general revenue appropriation from the 83rd Legislature, Regular Session, 2013, to replace outdated rail in the city of San Angelo and to rehabilitate an additional 16 miles of track west of San Angelo. SORR is currently not operated from Fort Stockton through Presidio, though TxDOT and TXPF are developing a project to reconstruct the international bridge at Presidio, which was destroyed by fires in 2008 and in 2009. Reconstructing the bridge is the first step in opening the Presidio gateway in support of the North American Free Trade Agreement (NAFTA) trade.

PASSENGER RAIL IN TEXAS

Passenger rail can be categorized as high-speed, intercity, commuter and regional, light rail and trolley, and tourism rail. While definitions may vary, high-speed rail is generally considered to be greater than 110 mph on dedicated track. Intercity

rail is service that is not primarily used for commuter service and operates at speeds slower than high-speed. Commuter and regional rail primarily serve customers on daily trips between suburban and urban areas, and may run on freight corridors. Light rail generally serves commuters, but is typically operated within urban areas on dedicated corridors with specialized equipment and is usually electrified.

High-Speed Rail

Texas currently has no high-speed rail service. However, there is a growing interest to provide an alternative to air and auto travel and the addition of high-speed rail service would expand travel options. The corridor between the DFW Metroplex and Houston has been targeted as a critical multimodal need. In May 2011, the FRA awarded \$15 million in High-Speed and Intercity Passenger Rail funding (HSIPR) to TxDOT to begin engineering and environmental studies on a high-speed rail link between Houston and the Metroplex. TxDOT has also executed a contract with a consulting firm to perform this work between Dallas and Fort Worth. The consultant will identify a preferred alternative for the service, evaluate environmental effects and necessary mitigation measures and complete preliminary engineering activities for service between Dallas and Fort Worth. TxDOT is working with the FRA to provide oversight of private developer Texas Central Railway's (TCR) efforts to implement high-speed passenger rail service on a 240-mile route between Houston and Dallas. TCR is in the early stages of the



Amtrak train at Gainesville's Santa Fe Depot

necessary preliminary engineering and environmental studies to implement high-speed passenger rail that will operate at over 200 mph. TCR's plans include trains operating in both directions every 30 minutes with service projected to begin in 2021. Connectivity to Fort Worth from TCR's terminus in Dallas will be studied by TxDOT's consultant.

Intercity Passenger Rail

Amtrak is the sole provider of Intercity Passenger Rail service in Texas. It serves most of the state's major metropolitan areas, though not all major urban areas are directly connected. Amtrak's partnership with motor coach services provides bus connections from Amtrak stations to other areas of the state. Currently, there are three Amtrak routes in Texas. Two of the routes are fully funded by Amtrak: the Texas Eagle (San Antonio to Chicago) and the Sunset Limited (Los Angeles to New Orleans).

The third route, the Heartland Flyer, is jointly subsidized by TxDOT

and the Oklahoma Department of Transportation. The Heartland Flyer provides once-daily service in each direction between Fort Worth and Oklahoma City, with stops in Gainesville, TX, and four additional Oklahoma cities. The annual subsidy has increased from \$1.8 million in 2007 to an estimated \$3.12 million in 2015. In August 2014, TxDOT published a request for information for alternative service providers on the Heartland Flyer route, by either train or bus. TxDOT also notified Amtrak that the state's subsidy would be limited to \$2.5 million in 2015, the amount that was appropriated for the service in that year.

TxDOT is also conducting the Texas-Oklahoma Passenger Rail Study (TOPRS) to evaluate a range of passenger rail service options in an 850-mile corridor from South Texas to Oklahoma City. TOPRS will produce an environmental document and service development plan for the corridor which can serve as a business prospectus for private investors to develop passenger rail services in the corridor.

Commuter and Regional Rail Service

CapMetro in Austin, The T in Fort Worth, DART in Dallas, and Houston METRO all have a component of rail transit. New trolley systems are also in various stages of development in McKinney and El Paso, while Galveston is faced with reopening their trolley that was damaged by hurricane Ike or repaying federal grants that were used for its operation and maintenance.

Trinity Rail Express (TRE) and DART have the most mature systems and serve customers on routes within the Dallas-Fort Worth Metroplex. DART operates the nation's longest light rail system (90 miles) and provides service to destinations in Dallas, Carrollton, Farmers Branch, Garland, Irving, Plano and Richardson. Riders can access the DFW International Airport and downtown Fort Worth through both DART and TRE connections. TRE has Dallas County stops at Union Station, Victory Station, Medical/Market Center, Downtown Irving and West Irving. In addition, TRE has stops in Tarrant County at CenterPort/DFW Airport, Richland Hills, Fort Worth Intermodal Transportation Center and T&P Station.

CapMetro's 32-mile MetroRail commuter rail line extends from Leander, a suburb north of Austin, to downtown Austin, with stops at Leander Lakeline, Howard, Kramer, Crestview, Highland, MLK, Jr., Plaza Saltillo and the Austin Convention Center.

Houston's METRORail 12-mile Red Line light rail service connects downtown Houston to the Medical Center southwest of downtown Houston, with 24 station stops in the corridor. Travel time from end-to-end is 50 minutes and averages over 26 million boardings per month.

Rail Transit Safety Oversight

The statewide rail safety and security program for rail transit fixed guideway public transportation systems is also managed by RRD, in conjunction with the Federal Transit Administration (FTA). Congress approved and funded a recent FTA initiative to expand regulatory oversight of these systems through state grants. This is resulting in an expansion of the state's regulatory functions related to rail transit, with TxDOT due to receive a substantial amount of federal funding for this program.

TEXAS RAIL PLAN

TxDOT published the Texas Rail System Plan in 2005 and the subsequent Texas Rail Plan in 2010. These documents were developed in conjunction with stakeholders and FRA, to address existing and future passenger and freight rail services in Texas. In addition, RRD publishes an annual update of the passenger rail portion of the Rail Plan as mandated by the Texas Legislature. TxDOT has contracted, with a consultant firm, to update the Texas Rail Plan, which will be published in 2015. The main

components of the updated rail plan will include establishing vision, goals, and objectives for the rail system and its integration into the state's multimodal transportation system. Other key components are an inventory of freight and passenger rail infrastructure and an overall needs assessment. The final component, planning for the future, involves developing prioritized strategies to achieve the state's vision, goals and objectives.

CONCLUSION

RRD is continuing on its mission to facilitate the development of a mature and comprehensive rail system and has been recognized for its efforts to target areas with critical multimodal infrastructure needs. TRF's rail safety programs continue to work to reduce vehicular-rail conflicts at grade crossings and to work with FRA to improve the safety of railroad track, equipment, operations, signals, and hazardous materials movements. As we continue the processes of mitigating congestion, improving safety, and providing economic development opportunities, TxDOT looks forward to working with its partners across the state to improve and expand transportation options for the citizens of Texas. TxDOT's vision for a safer, more efficient, and more reliable freight and passenger rail system will support Texas in achieving reduced congestion, improved air quality, and enhance economic opportunity.



Rail Grants

TxDOT has aggressively pursued federal grants for rail projects, such as those available under HSIPR and the Transportation Infrastructure Generating Economic Recovery (TIGER) programs. TxDOT has recently been awarded the following grants:

- \$3.8 million in HSIPR funds to adjust signal timing on over 63 miles of the BNSF Fort Worth Subdivision to support increased train speeds on Amtrak's Heartland Flyer passenger route. The project was completed in 2014 and allowed the Heartland Flyer train speeds to increase from 55 mph to 79 mph in Texas that saves 16 minutes in travel time.
- \$7.2 million in HSIPR funds to construct additional track on a portion of TRE line at Valley View. The project will improve commuter rail service between Fort Worth and Dallas and allow the rerouting of Amtrak's Texas Eagle passenger train from the Union Pacific corridor through Tower 55 to TRE's line. This will improve the Texas Eagle's on-time performance while also freeing up track time through Tower 55 from the rerouting of the Texas Eagle.
- \$34 million in TIGER II funds for multimodal improvements at Tower 55 in Fort Worth, where BNSF lines cross UP lines at-grade. This is one of the most congested rail crossings in the country, with approximately 100 trains going through the interchange on a daily basis. This location has been compared to a proverbial at-grade crossing of interstate highways with a four-way stop. The improvements at Tower 55 will increase capacity through the intersection, improve train operations, and reduce train delays as well as vehicular delays at blocked crossings. The project will be completed in the fall of 2014.
- \$15 million in HSIPR funds for preliminary engineering and environmental work for high-speed passenger rail service between Houston and the D/FW Metroplex, mentioned earlier.

TEXAS DEPARTMENT OF TRANSPORTATION

MISSION STATEMENT

Work with others to provide safe and reliable transportation solutions for Texas.

GOALS

- Maintain a safe system
- Address congestion
- Connect Texas communities
- Become best-in-class state agency

VALUES

- Trust
- Integrity
- Responsibility
- Excellence
- Service