



# 2016 Texas Rail Plan Update

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## Appendix

May 2016



## **1.1 Introduction**

This document was developed by the Texas Department of Transportation (TxDOT) to update the 2010 State Rail Plan. This Plan is intended to express the state's vision for rail and identify opportunities for future improvement. The Plan was developed in conjunction with the Texas Freight Mobility Plan (TFMP) and the Texas Transportation Plan (TTP) 2040.

The rail network in Texas is a critical component of a thriving economy, safely connecting industries, ports, and people without congesting highways. This chapter outlines the statewide planning context and describes how public-private collaboration can benefit the predominantly private rail network. In addition, the chapter describes how rail supports established goals and objectives for a multimodal transportation system. The chapter summarizes recent achievements and future plans for the rail system.

## **1.2 Texas' Goals for its Multimodal Transportation System**

Texas' vision and goals for its multimodal transportation system are outlined in a number of recently published documents which are updated periodically. The plans and strategies outlined in this Rail Plan expand upon the objectives included in documents such as the Texas Freight Mobility Plan and TTP 2040.

### *1.2.1 Texas Transportation Plan 2040*

The Texas Transportation Plan (TTP) 2040 was adopted by the Texas Transportation Commission on February 26, 2015 to serve as TxDOT's long-range, performance-based transportation plan. The TTP addresses the statewide planning requirements under the current federal surface transportation act – Moving Ahead for Progress in the 21st Century (MAP-21), and Title 43, Texas Administrative Code, Chapter 16. The TTP outlines TxDOT's objectives to maintain a safe transportation system, address congestion, connect Texas communities, and become a best-in-class state agency.

Texas' adopted transportation goals and objectives are:

#### **Safety:**

- Reduce fatalities and serious injuries
- Improve safety of at-grade rail crossings
- Eliminate conflicts between modes wherever possible
- Increase bicycle and pedestrian safety through education, the design and construction of new facilities, and improvements to existing facilities
- Educate the public on the dangers of high-risk driving behaviors
- Coordinate with enforcement to improve driver compliance with laws

- Improve incident response times

#### **Asset Management:**

- Maintain and preserve multimodal assets using cost-beneficial treatments
- Achieve state of good repair for pavement assets, keeping pavements smooth and pothole free
- Achieve state of good repair for transit assets such that they are comfortable and reliable
- Identify and mitigate risks associated with asset failure
- Identify existing and new funding sources and innovative financing techniques for all modes of transportation
- Build upon and regularly update the asset inventories for all transportation modes

#### **Mobility and Reliability:**

- Reduce congestion and improve system efficiency and performance
- Plan, design, and construct strategic capacity projects
- Implement alternative strategies that reduce peak demand
- Improve operations within existing right-of-way
- Increase travel options and accessibility for all, especially elderly, disabled, and disadvantaged populations
- Increase freight and passenger travel time reliability
- Increase the capacity and efficiency of the transportation system across travel modes

#### **Multimodal Connectivity:**

- Provide transportation choices and improve system connectivity for all passenger and freight modes
- Provide and improve access to jobs, transportation choices, and services for all Texans
- Provide safe and convenient travel choices for all Texans with a focus on the complete trip
- Support the efficient and coordinated movement of goods and services between freight modes to facilitate statewide, national, and global commerce
- Support multimodal and intermodal planning, project development, and investments
- Improve connectivity between urban, suburban, and rural areas and between travel modes

**Stewardship:**

- Manage resources responsibly and be accountable and transparent in decision making
- Identify sustainable funding sources and leverage resources wisely to maximize the value of investments and minimize negative impacts
- Develop and implement a project development process that recognizes quality-of-life concerns for all system users and future generations of Texans
- Link transportation planning with land use
- Reduce project delivery delays
- Coordinate project planning and delivery with all planning partners and stakeholders
- Minimize impacts to natural, cultural, and historic resources and promote sustainability in project design and delivery

**Customer Service:**

- Understand and incorporate customer desires in decision processes and be open and forthright in all agency communications
- Collect and integrate feedback using innovative engagement techniques and technology
- Promote and enable public participation in project planning and development
- Improve accessibility of information through innovative, understandable, and relatable communication techniques
- Educate the public and stakeholders on transportation costs, funding availability, and investment tradeoffs

**Sustainable Funding:**

- Identify and sustain funding sources for all modes
- Identify and document costs to meet the state's future transportation needs
- Consider all funding sources to fill the needs-to-revenues gap
- Educate the public and stakeholders on the costs associated with constructing and preserving the system
- Evaluate the feasibility of innovative financing solutions
- Improve predictive capabilities for revenue forecasting and long-term needs assessments

Using the above goals and objectives as a guide, Texas has further identified key freight transportation needs and issues, including rail, in its 2015 Texas Freight Mobility Plan.

### 1.2.2 Texas Freight Mobility Plan

Texas' freight mobility goals, and their associated objectives related to rail, include:

**Safety** – Improve multimodal transportation safety:

- Increase the resiliency and security of the state's freight transportation system.

**Asset Management** – Maintain and preserve infrastructure using cost-beneficial treatment:

- Achieve and maintain a state repair for all freight transportation modes
- Utilize technology to provide for the resiliency and security of the state's freight transportation system.

**Mobility and Reliability** – Reduce congestion and improve system efficiency and performance:

- Utilize the most cost-effective methods to improve system capacity (including technology and operations).
- Partner with federal and Mexican officials to resolve border crossing challenges.

**Multimodal Connectivity** – Provide transportation choices and improve system connectivity for all freight modes:

- Increase Texas supply chain efficiencies by improving connectivity between modes.
- Improve first/last mile connectivity between freight modes and major generators and gateways.
- Improve connectivity between rural and urban freight centers.
- Improve highway and rail connectivity to major freight gateways and generators through increased capacity improvements or additional rail connections.
- Improve connectivity to Texas-Mexico border crossings through increased modal options.

**Stewardship** – Manage resources responsibly and be accountable in decision-making:

- Lead efforts to foster greater coordination among agencies responsible for freight system investment.
- Reduce project delivery delays.
- Coordinate project planning and delivery with all planning partners and stakeholders.
- Reduce adverse environmental and community impacts of the freight transportation system.

**Customer Service** – Understand and incorporate citizen desires in decision-making processes and be open and forthright in all agency communications:

- Implement a performance-based prioritization process for freight system investments.
- Develop and sustain partnerships with private-sector industries, communities, agencies and other transportation stakeholders.
- Increase freight expertise in TxDOT districts, across departments and among elected officials.
- Enhance workforce recruitment and retention in the transportation and logistics industry.

**Sustainable Funding** – Identify and sustain funding sources for all modes. Identify and sustain funding sources for all modes:

- Identify potential public and private revenue sources to fund priority freight projects.
- Identify and document the needed transportation investment costs to meet the state's future freight transportation needs.
- Educate the public and stakeholders on the costs associated with constructing and preserving the freight transportation system.
- Improve predictive capabilities for revenue forecasting and long-term needs assessments.

**Economic Competitiveness** – Improve the contribution of the Texas freight transportation system to economic competitiveness, productivity and development:

- Strengthen Texas' position as a trade and logistics hub by improving and maintaining Texas Freight Network infrastructure and connectivity to enhance trade routes and increase the flow of goods.
- Expand public-private partnerships to facilitate investments in freight projects that enhance economic development and global competitiveness.
- Identify critical freight infrastructure improvements necessary to support the capacity requirements of future supply chain, logistics and consumer demands.
- Conduct outreach activities and develop an educational campaign to increase awareness of the importance of freight to the Texas economy.
- Support strategic transportation investments to address the rapid increase in key industries, such as energy, agriculture and automotive production.

**Technology** – Improve the safety and efficiency of freight transportation through the development and utilization of innovative technological solutions:

- Support the development and deployment of integrated border crossing management through the integration of intelligent transportation systems across international borders.
- Support deployment of innovative technologies to enhance the safety and efficiency of the Texas Freight Network.
- Improve management and operations of the existing transportation system to enhance freight network performance and to improve safety and travel time reliability.

This State Rail Plan is intended to educate the public as to how the rail mode will contribute to meeting the above goals. It will accomplish this by describing rail's role in Texas' multimodal system and its contributions and benefits to the state's transportation system and economy. Chapter 5 details the relationship of rail in the established transportation goals and objectives and includes potential projects that further those goals.

### **1.3 Rail Transportation's Role in the Texas Transportation System**

Construction of Texas' rail network changed where people lived, the way they lived and the way they earned their living in the state. Early settlers in Texas found a sparse and poor transportation system, primarily consisting of poor or nonexistent roads and rivers which were too shallow for dependable transportation. The construction of railroads boosted the state's economy by improving how people and products moved across Texas.

The first railroad line was the Buffalo Bayou, Brazos and Colorado Railway, started in 1853, which operated between Harrisburg (Houston) and Stafford. Early Texas railroads were established primarily along the gulf coast. Based on this new transportation mode's potential, the Texas legislature and some localities provided incentives for rail construction in the form of land grants and loans.

By the start of the Civil War there were nine railroad companies with 470 miles of track in Texas, primarily in the Houston area or serving sea or river ports. While further construction paused during the Civil War, the 1870s saw significant new construction of rail track reaching a total of 2,440 miles by the end of 1879. This decade also marked the connection of the Texas rail network to the national network when the Missouri, Kansas and Texas Railway Company (Katy) reached Denison from the north in 1872. Beginning in the 1880s, rail construction turned to the western part of Texas reaching a total of 4,000 miles by the end of that decade. During this time a number of Texas railroads were bought by larger railroad holding companies such as the Atchison, Topeka and Santa Fe, and the Missouri Pacific Railroad Company.

In 1891 the Texas Railroad Commission was created to address perceived railroad abuses and became the first rail planning agency in the state.

By 1911 more rail mileage was operated in Texas than in any other state. Rail mileage in Texas ultimately reached its peak in 1932 at 17,078 miles. In the 1920s and 1930s railroad consolidation continued. By the mid-1930s the Southern Pacific, Missouri Pacific, and Santa Fe controlled seventy percent of the state's rail mileage.

The growth of railroads allowed commerce to move more efficiently and passengers to travel faster and more inexpensively. More people moved into larger cities resulting in the urbanization of Texas. However, with the advent of improved roadways and jet air travel following World War II, the state's rail network mileage began a steady decline which ultimately led to the drastic reduction of rail passenger services. The increase in freight competition from trucks and financial difficulties suffered by a number of railroads in the 1960s through the 1980s resulted in a new wave of consolidation which reduced the number of Class I freight railroads operating in the state. The deregulation of the rail freight industry through the Staggers Act, as well as the formation of the National Railroad Passenger Corporation (Amtrak) in the 1980s stabilized both freight and passenger services and led to the revitalized state of railroading we see today.

The rail system in Texas today plays a leading role among states nationally with regard to its rail system, employees and retirees, and rail movements. According to the 2012 Association of American Railroad Statistics, Texas ranks first in the number of rail miles, freight rail employment, freight rail wages, railroad retirement beneficiaries, railroad retirement payments, and total rail tons terminated; second in total number of railroads; third in total rail carloads carried, total rail tons originated, and total rail carloads terminated; fourth in total rail carloads originated and total rail carloads originated; and fifth in total rail tons carried.

Texas also ranks highly among all states for rail movements of many individual commodities. For commodities originating by state, Texas ranks first for chemicals, stone, clay and glass materials, and petroleum refining products; third for intermodal; fifth for waste and scrap; sixth for pulp and paper; eighth for metallic ores; and ninth for primary metal products. For commodities terminating in the state, Texas ranks first for chemicals, stone, clay and glass materials, and petroleum refining products; second for coal, farm products, food products, and lumber and wood; third for intermodal and primary metal products; sixth for pulp and paper; and eighth for waste and scrap.

Today, Texas is served by three large and financially sound Class I railroads: the BNSF Railway (BNSF); Kansas City Southern (KCS); and Union Pacific (UP) systems. Texas also provides the majority of U.S. rail access points to Mexico, connecting this market to the Mid-Atlantic, Northeast and Midwest regions of the country. Its port capabilities also position it among the most important states with regard to freight intermodal transportation, the fastest growing rail category. The combination of rail and trucking support a major

intermodal freight transportation system in the state with approximately 20 intermodal transfer facilities. In addition, major intermodal logistics facilities have been developed in Fort Worth and Port of San Antonio where the interchange of freight between air, rail and truck modes have produced unique opportunities for logistics and distribution industries in the state.

Although Texas' intercity rail passenger services provide only a small portion of intercity travel in the state, initiatives continue toward expanding conventional rail passenger services, developing high speed rail corridors, and expanding commuter rail operations. These efforts will especially focus on providing intercity and local travelers with connections to other forms of passenger transportation (air, intercity bus, etc.), thus facilitating seamless intercity and commuter trips.

Subsequent chapters of this Plan will provide details of Texas' current and future rail freight and passenger endeavors.

#### **1.4 Institutional Structure of Texas' State Rail Program**

The Texas rail network is largely private. Investments are primarily market-driven and there are no consistent public funding sources to improve the rail network. A number of public entities collaborate with the private sector to carry out, administer, or assist in rail operations planning in the state.

##### *1.4.1 TxDOT*

TxDOT was established as the Texas Highway Department in 1917 by the Texas Legislature. TxDOT is currently a 12,000-person organization with responsibilities in all modes of transportation. There are 25 district offices located throughout the state and four regional offices that provide support services for the districts. TxDOT's divisions and offices provide additional support services to the districts and manage statewide processes like finance, statewide planning, specialized design expertise, environmental coordination and rail activities as defined below. TxDOT's administrative offices provide unified direction across the department to carry out policies set out by the Texas Transportation Commission and the Texas Legislature.

##### *1.4.2 TxDOT Rail Division*

TxDOT's Rail Division was established in December 2009 in response to a renewed and growing interest in rail transportation for both the movement of people and goods. The Rail Division is responsible for statewide rail planning. The Division implements rail-related policies and administers state and federal funds when available. The Rail Division also monitors potential rail line abandonments in Texas, as well as coordinates the state's involvement in and response to abandonment filings.

The Rail Division has specific responsibilities for the following rail functions in Texas:

- Performing infrastructure and operational analysis of both state and privately owned rail facilities to develop needs assessments as part of the project development process;
- Planning and environmental analysis for potential intercity and high performance passenger rail;
- Monitoring potential rail line abandonments in Texas, as well as coordinating the state's involvement and response to abandonment filings;
- Administering 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;
- Implementing 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;
- Analyzing local, state, and national railroad/multimodal trends, policies, and legislation;
- Performing research to develop more efficient use of Texas rail freight systems; and
- Acting as the departmental liaison to railroad companies, intermodal interests, the Federal Rail Administration (FRA), local governments, and the public with regards to rail planning and project development in Texas.

The Department's Traffic Operations Division also carries out the following rail-related responsibilities:

- Administering the state rail safety inspection program in conjunction with the FRA, including accident and complaint investigations.
- Providing the state safety oversight function as required by the FTA; and
- Improving highway-rail grade crossings to reduce accidents.

### *1.4.3 TxDOT Districts*

**Exhibit 1-1** shows the geographical breakdown of TxDOT's 25 districts. District staff, led by the TxDOT District Engineer, are familiar with the unique demands and local needs in their areas of responsibility. All 254 of the state's counties are assigned to one of the districts. Districts are further subdivided into area engineer offices and maintenance offices. Through this structure, TxDOT district offices offer local access to citizens who want to participate in the transportation development process. The district's Public Information Offices serve as a point of contact for citizens and the news media.

Exhibit 1-1: TxDOT Districts



Some issues pertaining to rail transportation may be analyzed at the TxDOT district level in coordination with Metropolitan Planning Organizations (MPOs) (see below) based upon a classification of the district as either a metropolitan district or a non-metropolitan district. These larger metropolitan districts often have rail transit and intercity passenger rail issues not shared by rural districts.

The primary functions of both TxDOT district personnel and local and regional government agencies involved with rail planning are to monitor local rail transportation needs and, when necessary, initiate rail development projects by either working directly with the railroad or contacting Rail Division staff for assistance and/or guidance. Additionally, local and regional governments serve as the “eyes and ears” for the implementation of improved safety measures for their highway-rail grade crossings. Through their efforts, recommended improvements to the local highway/railroad crossings can be executed to enhance the quality of life in their area.

#### *1.4.4 Texas Commuter Rail Operations*

Currently, three commuter rail passenger services operate in Texas. These services are distinguished from light rail systems in that they may operate over existing rail freight lines. Regional or city authorities own, operate, and maintain commuter and light rail systems. TxDOT has no funding role and regulatory oversight is limited to safety programs of some commuter services.

The Dallas-Fort Worth region is served by the Trinity Railway Express (TRE), a 34-mile route linking Dallas and Fort Worth and serving ten stations. The TRE is a joint service of Dallas Area Rapid Transit (DART) and the Fort Worth Transportation Authority.

The Capital Metropolitan Transportation Authority's MetroRail Red Line connects Austin to its northern suburbs. The 32-mile line operates between downtown Austin and the city of Leander and serves nine stations.

The Denton County Transportation Authority's A-Train provides regional passenger rail service between Denton and Carrollton. The 21-mile route serves five stations including the terminal transfer station which allows connection to DART Green Line in Carrollton.

#### *1.4.5 Metropolitan Planning Organizations*

Metropolitan Planning Organizations (MPOs) are federally mandated and funded transportation policy-making organizations comprised of local government and transportation officials. The formation of an MPO is required for any urbanized area with a population greater than 50,000.

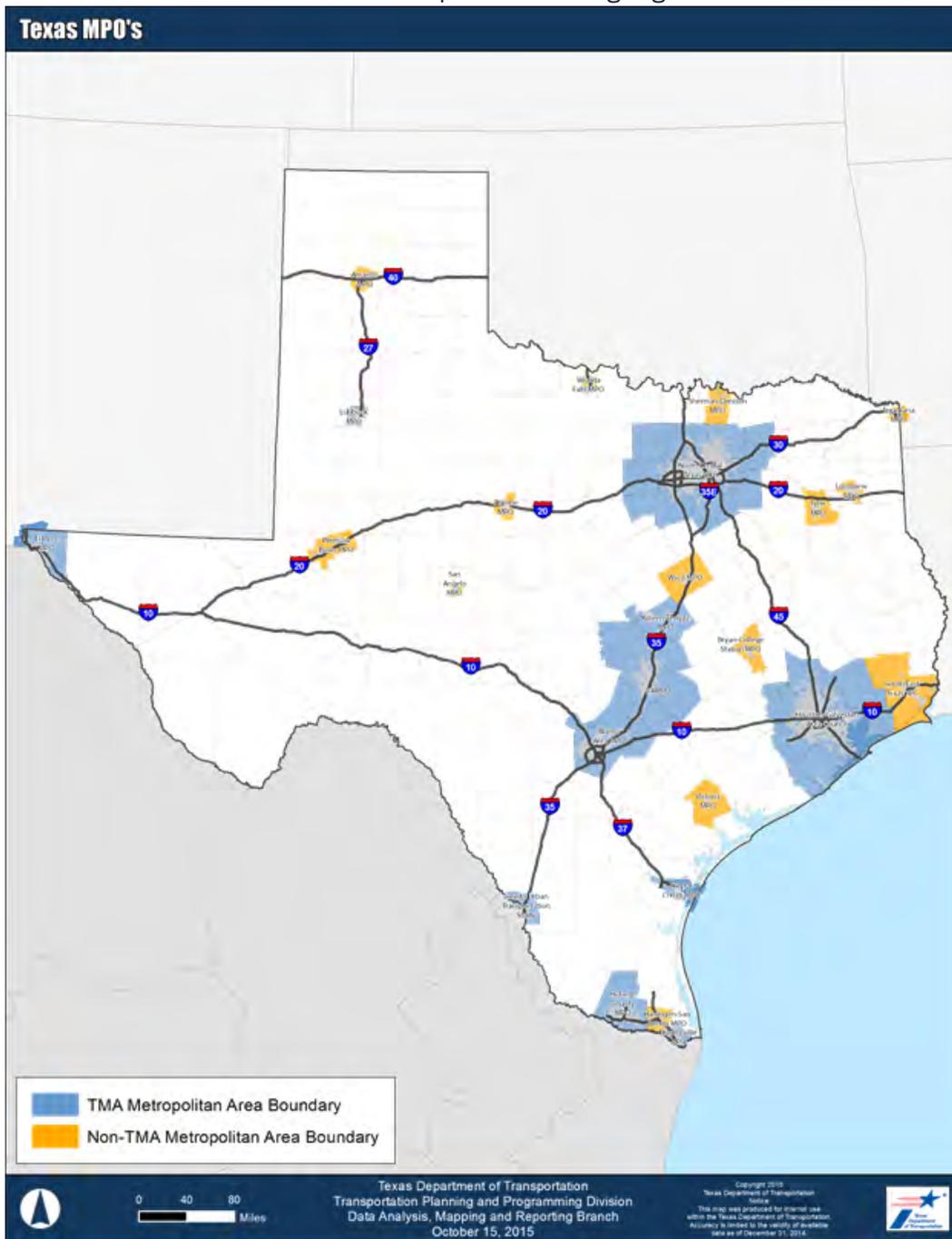
MPOs are required to maintain and continually update a Long Range Transportation Plan (LRTP) as well as a Transportation Improvement Program (TIP), which is a multi-year program of transportation projects to be funded with federal and other transportation funding sources. As MPO planning activities have evolved to address the movement of freight as well as passengers, they have also included consideration of multimodal solutions, improved intermodal connections, and more specific rail and rail-related project solutions. MPOs may work cooperatively with area transportation stakeholders to understand and anticipate the area's travel needs and to develop supplemental urban regional freight and passenger planning efforts that involve project initiatives to address rail capacity, service levels and bottlenecks. Some rail projects identified in TxDOT Regional Freight Studies are included in MPO transportation improvement plans.

There are 25 MPOs in Texas located in the following municipalities:

- Abilene
- Amarillo
- Austin
- Beaumont-Port Arthur
- Brownsville
- Bryan-College Station
- Corpus Christi
- Dallas-Fort Worth
- El Paso
- Harlingen-San Benito
- Hidalgo County
- Houston-Galveston
- Killeen-Temple
- Laredo
- Longview
- Lubbock
- Midland-Odessa
- San Angelo
- San Antonio-Bexar County
- Sherman-Denison
- Texarkana
- Tyler
- Victoria
- Waco
- Wichita Falls

These MPO regions are outlined in **Exhibit 1-2** below.

Exhibit 1-2: Texas Metropolitan Planning Organizations



Source: Association of Texas Metropolitan Planning Organizations

### 1.4.6 State and Local Economic Development Agencies

Texas has a number of state and local public or private economic development agencies which recruit industries and businesses on the basis of their location, available labor force, room for growth, and access to rail and other transportation assets.

The Texas Directory of Economic Development Organizations lists 94 entities around the state, including economic development agencies and authorities, chambers of commerce, alliances, development councils, corporations, and associations at the regional, county or local level of government. Many of these agencies offer incentives such as tax exemptions and credits and other means of assistance to attract business interests.

Although these agencies do not generally work directly with freight railroad operators, they do have a vested interest in the level of rail services and rail assistance programs available to supplement their incentives.

#### *1.4.7 Rural Rail Transportation Districts*

In 1981, in response to concerns over the loss of rural rail service, the Texas Legislature voted to allow the formation of Rural Rail Transportation Districts (RRTDs). The only statutory funding source available to RRTDs, other than receiving donations of cash and real property, is to issue revenue bonds and the use of anticipation notes. This revenue assists RRTDs with preserving rail infrastructure and promoting economic development. Counties can establish RRTDs to acquire abandoned rail lines, construct new lines or rehabilitate existing lines. They can also develop rail to serve industrial parks, intermodal facilities and transloading facilities. The June 2013 joint TTI/TxDOT study noted 42 RRTDs, with only 13 active districts. These include:

- Centex (Brown, Comanche, Erath, Hood and Johnson counties).
- Ellis County.
- Fannin County.
- Galveston County.
- La Entrada Al Pacifico (Ector and Midland counties).
- North Texas (Archer and Wichita counties).
- Northeast Texas (Collin, Franklin, Hopkins, Hunt and Titus counties).
- Nueces County.
- Pecos County.
- Presidio County.
- Rusk County.
- San Patricio County.
- Top of Texas (Hansford, Lipscomb and Ochiltree counties).

A number of RRTDs, including Calhoun County, Gregg County, Gulf Link (Brazoria and Fort Bend counties), Liberty County, Matagorda County, McLennan County, Van Zandt County and Webb County, are considered semi-active and have boards in place to reactivate for a viable opportunity.

The Texas A&M Transportation Institute (TTI)/TxDOT study noted that “measuring progress of

RRTDs toward outcomes related to their original motivation for forming is difficult based on the limited information available regarding RRTD activities.” Changes in rail planning and activity patterns in specific regions highlight the need for improved coordination on a statewide level. Enhanced coordination strategies include identifying opportunities for interaction with other special districts (e.g., RMAs and MPOs), private railroads (especially Class I railroads) and TxDOT. The report concluded that TxDOT must determine its role for effectively coordinating the activities of RRTDs and incorporating these activities into statewide rail planning efforts.

## **1.5 Texas’ Authority to Conduct Rail Planning and Investment**

Although a consistent source of public funding is only available for at-grade improvements, the Texas Transportation Code, Title 5, Chapter 91 and Title 7 Chapter 201 provide TxDOT with authority to carry out rail planning, project development and financing for both rail freight and passenger improvements in the state.

Chapter 91 authorizes TxDOT to plan and make policies for the location, construction, maintenance, and operation of a rail facility or system in the state, as well as acquire, finance, construct, maintain, and operate a passenger or freight rail facility or system. It also authorizes the department to accept grants or loans from federal or state agencies, as well as public or private entities.

Chapter 201 authorizes TxDOT to facilitate the development and interconnectivity of rail systems in the state, and to coordinate activities regarding the planning, construction, operation, and maintenance of a statewide passenger rail system. Under this authority, the department shall coordinate with other entities involved with passenger rail systems, including governmental entities, private entities, and nonprofit corporations. The department is also required to prepare and update annually a long-term plan for a statewide passenger rail system. Information contained in the plan must include:

- A description of existing and proposed passenger rail systems;
- Information regarding the status of passenger rail systems under construction;
- An analysis of potential interconnectivity difficulties;
- Ridership projections for proposed passenger rail projects; and
- Ridership statistics for existing passenger rail systems.

## **1.6 Recent Investments/Initiatives in the Texas Rail System**

The 2010 Texas Rail Plan focused its short-term (5 year) rail improvement financing plan on intercity passenger rail corridors and freight rail improvements within Texas. The goals for passenger improvements were to establish priority passenger rail corridors and to prepare Service Development Plans (SDP) and Service Level NEPA evaluations for the priority corridors. The short-term goals for the freight rail program were to eliminate freight rail bottlenecks on existing rail corridors and enhance freight rail fluidity and public safety.

Although TxDOT does not have a funding program specifically dedicated to rail improvements outside of its grade crossing improvement programs, it has successfully applied for and been granted over \$80 million from various federal discretionary programs. These funds were leveraged with local agency funding and significant project contributions from private railroads to develop the public-private partnerships necessary to finance major projects from the 2010 Texas Rail Plan. In addition, TxDOT programmed and initiated a grade separation program of projects which totaled over \$150 million.

Selected examples of recent projects and their financing partnerships include:

- Completion of the South Orient Railroad Improvements – through a funding partnership which included federal budget appropriation funds and American Recovery and Reinvestment Act (ARRA) funding, state legislative general revenue funds, local funding assistance from the City of San Angelo and funding provided by the operating railroad, the Texas Pacific Transportation, a total of over \$26 million has been invested in this state-owned railroad. These capital improvements allowed increases in speed from 10 to 25 mph and has resulted in a significant increase in carloadings on the line.
- Tower 55 Multimodal Improvement Project – this project addressed a safety and congestion situation at an at-grade rail intersection where five major freight and passenger rail routes converged into two doubletrack mainlines crossing each other. Through a funding partnership, which included a federal TIGER grant, funding from TxDOT and the City of Fort Worth, and major contributions by BNSF Railway and Union Pacific Railroad, a total of over \$101 million was invested in a combination of at-grade infrastructure improvements, new signaling and control systems, and the installation of additional main line trackage through the area. These improvements will increase rail throughput, increase running speeds and enhance public safety.
- TRE Valley View Double Track Project – this project was advanced to improve existing passenger rail service between Fort Worth and Dallas along the Trinity Railway Express (TRE) corridor by adding 1.4 miles of double track, converting a turnout to a crossover, and constructing a new bridge. Equal contributions from a federal High Speed Intercity Passenger Rail (HSIPR) grant and funding provided by DART provided a total of \$14.4 million to complete the project. This project allows Amtrak service to move off the UP mainline onto the TRE corridor, improving the movement of freight and facilitating more frequent and reliable passenger rail service.

In addition to the above projects, Texas' Class I railroads make significant capital investments within the state annually. UP's 2015 capital program plans for Texas called for \$383 million for infrastructure projects, while BNSF's Texas program called for \$223 million. KCS also makes significant capital investments in the state annually.

## **1.7 A Summary of Freight and Passenger Rail Services in Texas**

The rail system in Texas is comprised of more than 10,400 route miles. Including consideration of trackage rights where multiple railroads may operate over the same segments of track, the state's railroads operate over 14,500 miles of rail line within the state. These rail lines carry over 8.8 million rail carloads annually. In addition to rail activities between Texas and other U.S. states, Texas also receives over 750,000 rail cars across the Mexican border. In 2014, rail cars moved 20 percent of the total freight tonnage moved in the state.

A total of 46 short line railroads and three Class I's operate within the state. The two largest carriers, UP and Fort Worth-based BNSF, operate over almost 11,400 miles, or 78 percent of the total miles. The Kansas City Southern (KCS), the third Class I railroad in the state, operates over 820 miles. Short line railroads, comprised of local railroads or switching/terminal railroads comprise the remaining almost 2,300 miles of rail line operated in the state.

In addition to rail carload traffic, the state's rail network moves more than 7.4 million tons of intermodal rail freight. In total, Texas is home to approximately 20 intermodal rail facilities. Rail freight also provides essential services at the Port of Houston.

A detailed description of the Texas rail freight and passenger network, individual railroads, and rail facilities are provided in Chapter 2.

Intercity rail passenger service in Texas is provided by three Amtrak routes. The *Texas Eagle* and *Sunset Limited* are part of Amtrak's long-distance service network. The *Texas Eagle* operates daily service between Chicago and San Antonio. At San Antonio, the service 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. 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.

Rail commuter operations also serve the Dallas-Fort Worth and Austin areas, and additional commuter rail services are under consideration.

In recent years TxDOT has actively carried out planning route alternative studies, service development plans, federal grant applications and related federal environmental requirements toward expanding intercity rail passenger operations in the state and region.

TxDOT is in the process of advancing two potential High Speed Intercity Passenger corridors within Texas through the environmental review and conceptual engineering processes. These corridors are between Oklahoma City and South Texas, and between Dallas and Fort Worth. Investor-lead or public-private partnerships would be needed to develop the corridors; the state facilitates

development but has no intention of providing subsidy for intercity passenger rail proposals. TxDOT is also assisting the FRA in providing oversight of the Dallas to Houston High Speed Rail Environmental Impact Statement (EIS) study being proposed by Texas Central Railway. The Texas Central proposal is a privately funded project to develop high-speed passenger service between Dallas and Houston. No state or federal funds are being utilized to conduct the study, development, construction, or operation of the service.

TxDOT has conducted a feasibility study, developed a Service Level National Environmental Policy Act (NEPA) document, and finalized a Service Development Plan for the Texas-Oklahoma Passenger Rail Corridor. These efforts, funded through a federal HSIPR grant (\$5.6 million), Texas General Revenue funding (\$1.4 million), the North Central Texas Council of Governments, the Oklahoma and Texas Departments of Transportation, and the Federal Highway Administration (combined \$5.6 million), has developed preferred service alternatives for passenger rail service along the 850-mile corridor between Oklahoma City and South Texas.

Because the study was federally funded, a service level environmental impact statement (EIS) was prepared to comply with the NEPA. The service-level EIS documents the impacts, benefits and costs of each passenger alternative compared to the no-build alternative. These findings were made available for public review and comment in January and February, 2014.

TxDOT is currently working with FRA to study a high-performance, intercity passenger rail service between Dallas and Fort Worth. The 30-mile Dallas-Fort Worth Core Express Service project will evaluate the potential for a high-speed rail connector, linking other proposed high-performance rail projects in Texas.

A detailed description of all Texas' proposed passenger and freight rail improvements and planning efforts are provided in Chapters 3 and 4 respectively.

## **Chapter 1 - References**

Texas A&M Transportation Institute, Rural Rail Transportation Districts (RRTDs) Update, 2013. Retrieved September 2014 from <http://ftp.dot.state.tx.us/pub/txdot-info/rail/rural/rtd-update.pdf>

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2010 Texas Rail Plan, Appendix 7C

## Chapter 2 Appendix

Table 1: Rail Movement by Commodity (All Directions), 2012

STCC2	Commodity	Tons		Units	
		Amount	Percent	Amount	Percent
01	Farm Prods.	31,620,961	8.0%	448,585	4.7%
08	Forest Prods.	2,080	0.0%	160	0.0%
09	Fresh Fish or Marine Prods.	44,720	0.0%	2,240	0.0%
10	Metallic Ores	1,659,743	0.4%	16,818	0.2%
11	Coal	71,586,266	18.2%	595,283	6.3%
13	Crude Petrol. or Natural Gas	5,357,052	1.4%	58,172	0.6%
14	Nonmetallic Minerals	43,311,887	11.0%	425,230	4.5%
19	Ordnance or Accessories	52,648	0.0%	1,376	0.0%
20	Food or Kindred Prods.	32,085,120	8.2%	571,506	6.0%
21	Tobacco Prods.	0	0.0%	0	0.0%
22	Textile Mill Prods.	114,640	0.0%	7,720	0.1%
23	Apparel or Related Prods.	1,631,960	0.4%	131,680	1.4%
24	Lumber or Wood Prods.	4,201,956	1.1%	58,900	0.6%
25	Furniture or Fixtures	573,320	0.1%	59,320	0.6%
26	Pulp, Paper or Allied Prods.	9,477,116	2.4%	223,124	2.4%
27	Printed Matter	229,520	0.1%	12,320	0.1%
28	Chemicals or Allied Prods.	68,555,034	17.4%	821,953	8.7%
29	Petroleum or Coal Prods.	17,774,620	4.5%	221,800	2.3%
30	Rubber or Misc Plastics	1,128,040	0.3%	82,040	0.9%
31	Leather or Leather Prods.	19,000	0.0%	1,800	0.0%
32	Clay, Concrete, Glass, or Stone	8,719,443	2.2%	102,285	1.1%
33	Primary Metal Prods.	12,847,958	3.3%	166,267	1.8%
34	Fabricated Metal Prods.	630,492	0.2%	47,272	0.5%
35	Machinery	612,108	0.2%	30,088	0.3%
36	Electrical Equipment	1,019,408	0.3%	81,788	0.9%
37	Transportation Equipment	14,800,371	3.8%	760,357	8.0%
38	Instrum., Photo Eq., Optical Eq.	69,400	0.0%	5,040	0.1%
39	Misc Manufacturing Prods.	438,920	0.1%	38,760	0.4%
40	Waste or Scrap Materials	5,636,548	1.4%	108,774	1.1%
41	Misc Freight Shipments	916,634	0.2%	105,449	1.1%
42	Shipping Containers	1,606,200	0.4%	345,280	3.6%
43	Mail or Contract Traffic	13,680	0.0%	1,240	0.0%
44	Freight Forwarder Traffic	2,394,120	0.6%	155,000	1.6%
45	Shipper Association Traffic	800	0.0%	40	0.0%
46	Misc Mixed Shipments	52,974,440	13.5%	3,692,560	39.0%
47	Small Packaged Shipments	811,720	0.2%	81,880	0.9%
48	Waste	246,128	0.1%	3,008	0.0%
49	Hazardous Materials	0	0.0%	0	0.0%
50	Secondary Traffic	0	0.0%	0	0.0%
60	Unclassified	0	0.0%	0	0.0%
Total		393,164,053	100.0%	9,465,115	100.0%

Source: prepared by CDM Smith, based on the STB Waybill Sample data for 2012

Table 2: Rail Movement by Commodity (All Directions), 2013

STCC2	Commodity	Tons		Units	
		Amount	Percent	Amount	Percent
01	Farm Prods.	31,572,744	7.8%	463,031	4.6%
08	Forest Prods.	160	0.0%	40	0.0%
09	Fresh Fish or Marine Prods.	62,600	0.0%	3,200	0.0%
10	Metallic Ores	1,816,055	0.5%	18,420	0.2%
11	Coal	66,924,457	16.6%	557,343	5.6%
13	Crude Petrol. or Natural Gas	6,729,120	1.7%	73,139	0.7%
14	Nonmetallic Minerals	50,222,612	12.5%	490,935	4.9%
19	Ordnance or Accessories	58,724	0.0%	1,848	0.0%
20	Food or Kindred Prods.	30,726,001	7.6%	590,866	5.9%
21	Tobacco Prods.	360	0.0%	120	0.0%
22	Textile Mill Prods.	118,560	0.0%	8,560	0.1%
23	Apparel or Related Prods.	1,914,760	0.5%	153,120	1.5%
24	Lumber or Wood Prods.	4,369,596	1.1%	60,384	0.6%
25	Furniture or Fixtures	604,800	0.1%	61,800	0.6%
26	Pulp, Paper or Allied Prods.	9,910,920	2.5%	242,120	2.4%
27	Printed Matter	280,560	0.1%	16,120	0.2%
28	Chemicals or Allied Prods.	71,447,200	17.7%	930,350	9.3%
29	Petroleum or Coal Prods.	18,785,757	4.7%	234,180	2.4%
30	Rubber or Misc Plastics	1,384,640	0.3%	98,640	1.0%
31	Leather or Leather Prods.	20,920	0.0%	1,640	0.0%
32	Clay, Concrete, Glass, or Stone	8,456,265	2.1%	104,640	1.1%
33	Primary Metal Prods.	12,759,836	3.2%	164,635	1.7%
34	Fabricated Metal Prods.	750,652	0.2%	51,884	0.5%
35	Machinery	551,460	0.1%	37,512	0.4%
36	Electrical Equipment	1,119,446	0.3%	91,522	0.9%
37	Transportation Equipment	15,228,924	3.8%	776,796	7.8%
38	Instrum., Photo Eq., Optical Eq.	73,880	0.0%	5,480	0.1%
39	Misc Manufacturing Prods.	510,640	0.1%	49,440	0.5%
40	Waste or Scrap Materials	5,437,084	1.3%	103,276	1.0%
41	Misc Freight Shipments	995,700	0.2%	114,595	1.2%
42	Shipping Containers	1,683,080	0.4%	375,600	3.8%
43	Mail or Contract Traffic	6,280	0.0%	400	0.0%
44	Freight Forwarder Traffic	1,202,880	0.3%	73,480	0.7%
45	Shipper Association Traffic	0	0.0%	0	0.0%
46	Misc Mixed Shipments	56,373,640	14.0%	3,915,080	39.3%
47	Small Packaged Shipments	909,280	0.2%	86,840	0.9%
48	Waste	241,516	0.1%	3,000	0.0%
49	Hazardous Materials	0	0.0%	0	0.0%
50	Secondary Traffic	0	0.0%	0	0.0%
60	Unclassified	0	0.0%	0	0.0%
	<b>Total</b>	<b>403,251,109</b>	<b>100.0%</b>	<b>9,960,036</b>	<b>100.0%</b>

Source: prepared by CDM Smith, based on the STB Waybill Sample data for 2013

Table 3: Rail Outbound Movement by Commodity, 2013

STCC2	Commodity	Tons		Units	
		Amount	Percent	Amount	Percent
01	Farm Prods.	838,520	1.4%	17,348	1.0%
08	Forest Prods.	0	0.0%	0	0.0%
09	Fresh Fish or Marine Prods.	0	0.0%	0	0.0%
10	Metallic Ores	330,881	0.5%	3,353	0.2%
11	Coal	0	0.0%	0	0.0%
13	Crude Petrol. or Natural Gas	1,164,116	1.9%	13,657	0.8%
14	Nonmetallic Minerals	1,028,650	1.7%	11,026	0.6%
19	Ordinance or Accessories	3,600	0.0%	200	0.0%
20	Food or Kindred Prods.	3,020,436	5.0%	79,584	4.6%
21	Tobacco Prods.	0	0.0%	0	0.0%
22	Textile Mill Prods.	13,760	0.0%	1,320	0.1%
23	Apparel or Related Prods.	280,760	0.5%	21,920	1.3%
24	Lumber or Wood Prods.	284,080	0.5%	5,920	0.3%
25	Furniture or Fixtures	36,520	0.1%	4,600	0.3%
26	Pulp, Paper or Allied Prods.	1,851,640	3.1%	54,520	3.1%
27	Printed Matter	10,840	0.0%	640	0.0%
28	Chemicals or Allied Prods.	28,303,783	46.8%	346,883	19.9%
29	Petroleum or Coal Prods.	4,389,508	7.3%	56,484	3.2%
30	Rubber or Misc Plastics	268,720	0.4%	19,800	1.1%
31	Leather or Leather Prods.	2,920	0.0%	160	0.0%
32	Clay, Concrete, Glass, or Stone	790,104	1.3%	16,716	1.0%
33	Primary Metal Prods.	2,278,700	3.8%	26,996	1.5%
34	Fabricated Metal Prods.	122,564	0.2%	7,636	0.4%
35	Machinery	126,928	0.2%	10,528	0.6%
36	Electrical Equipment	246,242	0.4%	25,974	1.5%
37	Transportation Equipment	5,491,295	9.1%	290,942	16.7%
38	Instrum., Photo Eq., Optical Eq.	2,160	0.0%	200	0.0%
39	Misc Manufacturing Prods.	73,000	0.1%	5,760	0.3%
40	Waste or Scrap Materials	1,426,580	2.4%	24,348	1.4%
41	Misc Freight Shipments	299,136	0.5%	34,809	2.0%
42	Shipping Containers	1,031,560	1.7%	237,480	13.6%
43	Mail or Contract Traffic	0	0.0%	0	0.0%
44	Freight Forwarder Traffic	141,080	0.2%	8,840	0.5%
45	Shipper Association Traffic	0	0.0%	0	0.0%
46	Misc Mixed Shipments	6,491,520	10.7%	405,320	23.3%
47	Small Packaged Shipments	89,560	0.1%	9,920	0.6%
48	Waste	14,120	0.0%	160	0.0%
49	Hazardous Materials	0	0.0%	0	0.0%
50	Secondary Traffic	0	0.0%	0	0.0%
60	Unclassified	0	0.0%	0	0.0%
	<b>Total</b>	<b>60,453,283</b>	<b>100.0%</b>	<b>1,743,044</b>	<b>100.0%</b>

Source: prepared by CDM Smith, based on the STB Waybill Sample data for 2013

Table 4: Rail Inbound Movement by Commodity, 2013

STCC2	Commodity	Tons		Units	
		Amount	Percent	Amount	Percent
01	Farm Prods.	17,312,780	9.6%	167,895	5.8%
08	Forest Prods.	160	0.0%	40	0.0%
09	Fresh Fish or Marine Prods.	34,200	0.0%	1,760	0.1%
10	Metallic Ores	1,308,274	0.7%	13,147	0.5%
11	Coal	58,629,073	32.4%	488,589	16.8%
13	Crude Petrol. or Natural Gas	2,518,349	1.4%	26,972	0.9%
14	Nonmetallic Minerals	25,882,958	14.3%	245,642	8.5%
19	Ordnance or Accessories	12,084	0.0%	232	0.0%
20	Food or Kindred Prods.	15,372,593	8.5%	201,590	6.9%
21	Tobacco Prods.	0	0.0%	0	0.0%
22	Textile Mill Prods.	10,960	0.0%	960	0.0%
23	Apparel or Related Prods.	427,480	0.2%	32,240	1.1%
24	Lumber or Wood Prods.	2,832,996	1.6%	31,404	1.1%
25	Furniture or Fixtures	89,120	0.0%	8,680	0.3%
26	Pulp, Paper or Allied Prods.	2,244,200	1.2%	50,200	1.7%
27	Printed Matter	43,400	0.0%	2,200	0.1%
28	Chemicals or Allied Prods.	19,606,745	10.8%	232,560	8.0%
29	Petroleum or Coal Prods.	6,476,620	3.6%	83,228	2.9%
30	Rubber or Misc Plastics	213,160	0.1%	15,000	0.5%
31	Leather or Leather Prods.	1,560	0.0%	80	0.0%
32	Clay, Concrete, Glass, or Stone	3,700,360	2.0%	40,940	1.4%
33	Primary Metal Prods.	6,161,208	3.4%	74,711	2.6%
34	Fabricated Metal Prods.	181,840	0.1%	12,196	0.4%
35	Machinery	98,800	0.1%	6,364	0.2%
36	Electrical Equipment	201,312	0.1%	13,276	0.5%
37	Transportation Equipment	4,828,840	2.7%	246,821	8.5%
38	Instrum., Photo Eq., Optical Eq.	17,600	0.0%	1,160	0.0%
39	Misc Manufacturing Prods.	82,960	0.0%	8,040	0.3%
40	Waste or Scrap Materials	1,316,240	0.7%	19,028	0.7%
41	Misc Freight Shipments	426,576	0.2%	53,320	1.8%
42	Shipping Containers	66,000	0.0%	13,320	0.5%
43	Mail or Contract Traffic	680	0.0%	40	0.0%
44	Freight Forwarder Traffic	118,880	0.1%	7,320	0.3%
45	Shipper Association Traffic	0	0.0%	0	0.0%
46	Misc Mixed Shipments	10,604,840	5.9%	791,160	27.3%
47	Small Packaged Shipments	116,120	0.1%	11,160	0.4%
48	Waste	119,276	0.1%	1,440	0.0%
49	Hazardous Materials	0	0.0%	0	0.0%
50	Secondary Traffic	0	0.0%	0	0.0%
60	Unclassified	0	0.0%	0	0.0%
	<b>Total</b>	<b>181,058,244</b>	<b>100.0%</b>	<b>2,902,715</b>	<b>100.0%</b>

Source: prepared by CDM Smith, based on the STB Waybill Sample data for 2013

Table 5: Rail Intra by Movement Commodity, 2013

STCC2	Commodity	Tons		Units	
		Amount	Percent	Amount	Percent
01	Farm Prods.	1,642,972	3.3%	15,476	2.6%
08	Forest Prods.	0	0.0%	0	0.0%
09	Fresh Fish or Marine Prods.	0	0.0%	0	0.0%
10	Metallic Ores	95,432	0.2%	956	0.2%
11	Coal	0	0.0%	0	0.0%
13	Crude Petrol. or Natural Gas	1,664,215	3.3%	17,628	3.0%
14	Nonmetallic Minerals	20,771,818	41.7%	207,507	35.3%
19	Ordnance or Accessories	9,660	0.0%	148	0.0%
20	Food or Kindred Prods.	573,064	1.2%	8,344	1.4%
21	Tobacco Prods.	0	0.0%	0	0.0%
22	Textile Mill Prods.	0	0.0%	0	0.0%
23	Apparel or Related Prods.	0	0.0%	0	0.0%
24	Lumber or Wood Prods.	91,400	0.2%	1,000	0.2%
25	Furniture or Fixtures	0	0.0%	0	0.0%
26	Pulp, Paper or Allied Prods.	307,040	0.6%	4,440	0.8%
27	Printed Matter	0	0.0%	0	0.0%
28	Chemicals or Allied Prods.	12,066,878	24.2%	132,923	22.6%
29	Petroleum or Coal Prods.	5,830,473	11.7%	61,732	10.5%
30	Rubber or Misc Plastics	3,640	0.0%	80	0.0%
31	Leather or Leather Prods.	0	0.0%	0	0.0%
32	Clay, Concrete, Glass, or Stone	2,884,161	5.8%	28,444	4.8%
33	Primary Metal Prods.	880,856	1.8%	10,068	1.7%
34	Fabricated Metal Prods.	11,088	0.0%	132	0.0%
35	Machinery	4,000	0.0%	200	0.0%
36	Electrical Equipment	5,212	0.0%	112	0.0%
37	Transportation Equipment	1,564,421	3.1%	59,409	10.1%
38	Instrum., Photo Eq., Optical Eq.	0	0.0%	0	0.0%
39	Misc Manufacturing Prods.	0	0.0%	0	0.0%
40	Waste or Scrap Materials	1,169,216	2.3%	15,252	2.6%
41	Misc Freight Shipments	28,532	0.1%	1,378	0.2%
42	Shipping Containers	59,800	0.1%	14,360	2.4%
43	Mail or Contract Traffic	0	0.0%	0	0.0%
44	Freight Forwarder Traffic	0	0.0%	0	0.0%
45	Shipper Association Traffic	0	0.0%	0	0.0%
46	Misc Mixed Shipments	105,080	0.2%	6,920	1.2%
47	Small Packaged Shipments	0	0.0%	0	0.0%
48	Waste	61,600	0.1%	640	0.1%
49	Hazardous Materials	0	0.0%	0	0.0%
50	Secondary Traffic	0	0.0%	0	0.0%
60	Unclassified	0	0.0%	0	0.0%
	<b>Total</b>	<b>49,830,558</b>	<b>100.0%</b>	<b>587,149</b>	<b>100.0%</b>

Source: prepared by CDM Smith, based on the STB Waybill Sample data for 2013

Table 6: Rail Through Movement by Commodity, 2013

STCC2	Commodity	Tons		Units	
		Amount	Percent	Amount	Percent
01	Farm Prods.	11,778,472	10.5%	262,312	5.5%
08	Forest Prods.	0	0.0%	0	0.0%
09	Fresh Fish or Marine Prods.	28,400	0.0%	1,440	0.0%
10	Metallic Ores	81,468	0.1%	964	0.0%
11	Coal	8,295,384	7.4%	68,754	1.5%
13	Crude Petrol. or Natural Gas	1,382,440	1.2%	14,882	0.3%
14	Nonmetallic Minerals	2,539,186	2.3%	26,760	0.6%
19	Ordnance or Accessories	33,380	0.0%	1,268	0.0%
20	Food or Kindred Prods.	11,759,908	10.5%	301,348	6.4%
21	Tobacco Prods.	360	0.0%	120	0.0%
22	Textile Mill Prods.	93,840	0.1%	6,280	0.1%
23	Apparel or Related Prods.	1,206,520	1.1%	98,960	2.1%
24	Lumber or Wood Prods.	1,161,120	1.0%	22,060	0.5%
25	Furniture or Fixtures	479,160	0.4%	48,520	1.0%
26	Pulp, Paper or Allied Prods.	5,508,040	4.9%	132,960	2.8%
27	Printed Matter	226,320	0.2%	13,280	0.3%
28	Chemicals or Allied Prods.	11,469,794	10.2%	217,984	4.6%
29	Petroleum or Coal Prods.	2,089,156	1.9%	32,736	0.7%
30	Rubber or Misc Plastics	899,120	0.8%	63,760	1.3%
31	Leather or Leather Prods.	16,440	0.0%	1,400	0.0%
32	Clay, Concrete, Glass, or Stone	1,081,640	1.0%	18,540	0.4%
33	Primary Metal Prods.	3,439,072	3.1%	52,860	1.1%
34	Fabricated Metal Prods.	435,160	0.4%	31,920	0.7%
35	Machinery	321,732	0.3%	20,420	0.4%
36	Electrical Equipment	666,680	0.6%	52,160	1.1%
37	Transportation Equipment	3,344,368	3.0%	179,624	3.8%
38	Instrum., Photo Eq., Optical Eq.	54,120	0.0%	4,120	0.1%
39	Misc Manufacturing Prods.	354,680	0.3%	35,640	0.8%
40	Waste or Scrap Materials	1,525,048	1.4%	44,648	0.9%
41	Misc Freight Shipments	241,456	0.2%	25,088	0.5%
42	Shipping Containers	525,720	0.5%	110,440	2.3%
43	Mail or Contract Traffic	5,600	0.0%	360	0.0%
44	Freight Forwarder Traffic	942,920	0.8%	57,320	1.2%
45	Shipper Association Traffic	0	0.0%	0	0.0%
46	Misc Mixed Shipments	39,172,200	35.0%	2,711,680	57.4%
47	Small Packaged Shipments	703,600	0.6%	65,760	1.4%
48	Waste	46,520	0.0%	760	0.0%
49	Hazardous Materials	0	0.0%	0	0.0%
50	Secondary Traffic	0	0.0%	0	0.0%
60	Unclassified	0	0.0%	0	0.0%
	<b>Total</b>	<b>111,909,024</b>	<b>100.0%</b>	<b>4,727,128</b>	<b>100.0%</b>

Source: prepared by CDM Smith, based on the STB Waybill Sample data for 2013

Table 7: Rail Outbound Tons by Geography, 2013

STCC2		Originating Texas Counties						Total	Percent
		Harris	Tarrant	Dallas	Webb	Brazoria	Remaining		
28	Chemicals or Allied Prods.	11,031,689	479,320	312,240	99,400	2,726,240	13,654,894	28,303,783	46.8%
46	Misc Mixed Shipments	2,229,400	2,050,160	1,678,280	142,720	0	390,960	6,491,520	10.7%
37	Transportation Equipment	159,272	636,920	19,360	2,002,452	7,360	2,665,931	5,491,295	9.1%
29	Petroleum or Coal Prods.	1,876,000	12,760	54,000	720	102,920	2,343,108	4,389,508	7.3%
20	Food or Kindred Prods.	218,920	203,200	233,720	138,640	150,280	2,075,676	3,020,436	5.0%
	Remaining Commodities	1,352,514	1,253,016	1,631,120	793,120	54,720	7,672,251	12,756,741	21.1%
	Total	16,867,795	4,635,376	3,928,720	3,177,052	3,041,520	28,802,820	60,453,283	100.0%
	Percent	27.9%	7.7%	6.5%	5.3%	5.0%	47.6%	100.0%	
STCC2		Terminating State						Total	Percent
		Illinois	California	Louisiana	Tennessee	Ontario	Remaining		
28	Chemicals or Allied Prods.	7,149,292	2,480,834	4,991,488	1,996,764	1,155,280	10,530,125	28,303,783	46.8%
46	Misc Mixed Shipments	1,086,960	4,564,360	0	0	0	840,200	6,491,520	10.7%
37	Transportation Equipment	2,309,050	484,732	789,184	157,804	102,520	1,648,005	5,491,295	9.1%
29	Petroleum or Coal Prods.	901,840	575,600	541,920	149,040	130,200	2,090,908	4,389,508	7.3%
20	Food or Kindred Prods.	652,720	844,964	115,840	123,672	0	1,283,240	3,020,436	5.0%
	Remaining Commodities	1,188,372	3,550,725	1,711,327	54,520	327,552	5,924,245	12,756,741	21.1%
	Total	13,288,234	12,501,215	8,149,759	2,481,800	1,715,552	22,316,723	60,453,283	100.0%
	Percent	22.0%	20.7%	13.5%	4.1%	2.8%	36.9%	100.0%	

Source: prepared by CDM Smith, based on the STB Waybill Sample data for 2013

Table 8: Rail Inbound Tons by Geography, 2013

STCC2		Originating State						Total	Percent
		Wyoming	Illinois	California	Oklahoma	Wisconsin	Remaining		
11	Coal	53,911,864	0	0	30,720	0	4,686,489	58,629,073	32.4%
14	Nonmetallic Minerals	538,382	3,830,396	840	7,639,644	8,261,966	5,611,730	25,882,958	14.3%
28	Chemicals or Allied Prods.	4,674,984	870,632	662,792	289,256	18,120	13,090,961	19,606,745	10.8%
01	Farm Prods.	16,520	3,655,807	108,755	1,927,715	231,702	11,372,281	17,312,780	9.6%
20	Food or Kindred Prods.	20,120	1,894,354	890,080	58,880	55,400	12,453,759	15,372,593	8.5%
	Remaining Commodities	950,664	7,579,460	9,794,508	1,055,650	219,200	24,654,613	44,254,095	24.4%
	Total	60,112,534	17,830,649	11,456,975	11,001,865	8,786,388	71,869,833	181,058,244	100.0%
	Percent	33.2%	9.8%	6.3%	6.1%	4.9%	39.7%	100.0%	
STCC2		Terminating Texas Counties						Total	Percent
		Harris	Dallas	Bexar	Tarrant	Titus	Remaining		
11	Coal	3,234,786	0	6,416,158	0	9,309,634	39,668,495	58,629,073	32.4%
14	Nonmetallic Minerals	132,180	3,258,306	1,535,069	339,930	14,108	20,603,365	25,882,958	14.3%
28	Chemicals or Allied Prods.	4,744,899	1,090,144	512,880	1,676,880	7,840	11,574,102	19,606,745	10.8%
01	Farm Prods.	5,388,733	93,280	63,144	623,824	0	11,143,799	17,312,780	9.6%
20	Food or Kindred Prods.	1,403,214	1,193,396	149,120	1,762,524	79,840	10,784,499	15,372,593	8.5%
	Remaining Commodities	9,615,420	6,583,670	1,559,232	5,396,770	62,652	21,036,351	44,254,095	24.4%
	Total	24,519,232	12,218,796	10,235,603	9,799,928	9,474,074	114,810,611	181,058,244	100.0%
	Percent	13.5%	6.7%	5.7%	5.4%	5.2%	63.4%	100.0%	

Source: prepared by CDM Smith, based on the STB Waybill Sample data for 2013

Table 9: Rail Tonnage Growth Rates by Commodity and Direction (2010-2040 CAGR)

STCC2	Commodity	Outbound	Inbound	Intra	Through
01	Farm Products	3.9%	2.2%	2.0%	2.5%
08	Forest Products	2.2%	2.8%	#N/A	4.3%
09	Fresh Fish or Marine Products	#N/A	2.4%	#N/A	2.6%
10	Metallic Ores	2.0%	2.3%	1.9%	3.3%
11	Coal	#N/A	-2.1%	1.1%	-2.0%
13	Crude Petroleum or Natural Gas	3.6%	2.0%	#N/A	2.0%
14	Nonmetallic Minerals	2.3%	2.4%	2.2%	2.5%
19	Ordnance or Accessories	1.1%	1.1%	1.1%	1.1%
20	Food or Kindred Products	1.5%	2.0%	2.2%	2.1%
21	Tobacco Products	#N/A	#N/A	#N/A	-5.6%
22	Textile Mill Products	0.6%	0.7%	#N/A	0.2%
23	Apparel or Related Products	0.4%	1.8%	#N/A	1.4%
24	Lumber or Wood Products	2.2%	2.4%	2.0%	2.9%
25	Furniture or Fixtures	4.0%	3.7%	#N/A	3.7%
26	Pulp, Paper, or Allied Products	2.0%	2.0%	2.1%	2.3%
27	Printed Matter	0.9%	1.3%	#N/A	1.5%
28	Chemicals or Allied Products	2.2%	2.2%	2.2%	2.6%
29	Petroleum or Coal Products	0.2%	0.2%	-0.6%	0.8%
30	Rubber or Miscellaneous Plastics	4.3%	4.0%	4.5%	4.3%
31	Leather or Leather Products	3.2%	#N/A	#N/A	0.7%
32	Clay, Concrete, Glass, or Stone	3.1%	2.8%	2.3%	3.1%
33	Primary Metal Products	2.9%	2.1%	3.5%	2.9%
34	Fabricated Metal Products	3.3%	4.0%	#N/A	3.7%
35	Machinery	5.0%	5.1%	5.2%	4.8%
36	Electrical Equipment	4.8%	4.8%	4.4%	5.4%
37	Transportation Equipment	4.6%	4.1%	4.9%	4.8%
38	Instrument, Photo, and Optical Equipment	4.4%	4.3%	#N/A	9.7%
39	Miscellaneous Manufacturing Products	4.5%	4.0%	#N/A	4.2%
40	Waste or Scrap Materials	5.2%	4.9%	5.1%	5.8%
41	Miscellaneous Freight Shipments	3.4%	4.1%	2.9%	3.5%
42	Shipping Containers	3.3%	3.4%	3.4%	3.3%
43	Mail or Contract Traffic	-0.4%	-0.4%	#N/A	-0.4%
44	Freight Forwarder Traffic	3.5%	3.5%	#N/A	3.5%
45	Shipper Association Traffic	#N/A	1.8%	#N/A	1.8%
46	Miscellaneous Mixed Shipments	4.2%	4.9%	4.4%	4.3%
47	Small Packaged Shipments	3.4%	3.4%	#N/A	3.4%
48	Waste	2.3%	2.4%	2.5%	3.7%
49	Hazardous Materials	#N/A	#N/A	#N/A	#N/A
50	Secondary Traffic	#N/A	#N/A	#N/A	#N/A
60	Unclassified	#N/A	#N/A	#N/A	#N/A
	Total	2.8%	1.4%	2.2%	3.2%

Source: based on TRANSEARCH CAGR 2010-'40

Table 10: Rail Tonnage Forecast by Commodity and Direction, 2040

STCC2	Commodity	Outbound	Inbound	Intra	Through	Total
01	Farm Prods.	4,572,493	45,894,227	3,093,500	28,060,911	81,621,131
08	Forest Prods.	25,183	903	0	30,647	56,733
09	Fresh Fish or Marine Prods.	0	20,815	0	43,584	64,399
10	Metallic Ores	493,117	1,437,846	178,580	271,820	2,381,363
11	Coal	0	36,292,834	2,498,127	5,102,545	43,893,506
13	Crude Petrol. or Natural Gas	616,056	36,558	0	143,188	795,803
14	Nonmetallic Minerals	3,394,389	29,960,088	31,950,597	9,303,530	74,608,605
19	Ordnance or Accessories	57,901	81,430	5,783	21,000	166,113
20	Food or Kindred Prods.	5,144,686	28,795,314	1,590,006	23,554,207	59,084,214
21	Tobacco Prods.	0	0	0	105	105
22	Textile Mill Prods.	10,201	17,927	0	117,552	145,679
23	Apparel or Related Prods.	216,794	447,732	0	1,321,942	1,986,468
24	Lumber or Wood Prods.	848,422	4,443,012	80,657	2,618,431	7,990,521
25	Furniture or Fixtures	88,886	180,835	0	1,377,079	1,646,800
26	Pulp, Paper or Allied Prods.	2,713,397	4,279,804	533,160	8,737,064	16,263,425
27	Printed Matter	8,485	43,779	0	238,871	291,135
28	Chemicals or Allied Prods.	51,478,134	33,237,115	23,090,419	19,785,084	127,590,753
29	Petroleum or Coal Prods.	4,603,571	5,853,925	3,618,094	2,619,509	16,695,100
30	Rubber or Misc Plastics	990,970	505,104	3,005	2,947,151	4,446,230
31	Leather or Leather Prods.	5,399	0	0	26,951	32,350
32	Clay, Concrete, Glass, or Stone	2,018,453	5,971,779	5,898,270	3,045,612	16,934,115
33	Primary Metal Prods.	4,137,270	9,925,759	2,209,282	6,163,525	22,435,835
34	Fabricated Metal Prods.	257,581	423,563	0	1,033,888	1,715,033
35	Machinery	550,903	292,200	9,927	803,344	1,656,375
36	Electrical Equipment	1,219,904	582,065	85,754	2,272,960	4,160,684
37	Transportation Equipment	15,113,218	13,002,874	4,359,604	10,876,856	43,352,551
38	Instrum., Photo Eq., Optical Eq.	39,348	58,727	0	1,274,385	1,372,460
39	Misc Manufacturing Prods.	170,441	191,143	0	1,204,631	1,566,215
40	Waste or Scrap Materials	5,767,299	5,411,438	5,945,474	8,418,875	25,543,085
41	Misc Freight Shipments	928,815	1,199,424	77,140	821,082	3,026,463
42	Shipping Containers	2,260,691	248,950	325,743	1,986,814	4,822,198
43	Mail or Contract Traffic	6,757	3,449	0	10,663	20,869
44	Freight Forwarder Traffic	545,855	504,421	0	4,371,683	5,421,958
45	Shipper Association Traffic	0	1,355	0	5,760	7,115
46	Misc Mixed Shipments	24,615,256	39,486,142	98,640	125,585,471	189,785,509
47	Small Packaged Shipments	185,351	296,186	0	1,543,854	2,025,391
48	Waste	58,944	202,805	73,867	379,274	714,891
49	Hazardous Materials	0	0	0	0	0
50	Secondary Traffic	0	0	0	0	0
60	Unclassified	0	0	0	0	0
	<b>Total</b>	<b>133,144,171</b>	<b>269,331,531</b>	<b>85,725,629</b>	<b>276,119,849</b>	<b>764,321,180</b>

Source: based on TRANSEARCH 2010-'40