Texas A&M Transportation Institute

Considerations for Public Freight Rail Projects in Texas

Final Report

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Executive Summary

In its Legislative Appropriations Request for fiscal years (FY) 2016–2017, the Texas Department of Transportation (TxDOT) included an exceptional-items request for $160.6 million in FY 2016 and $347.4 million in FY 2017 to enhance infrastructure on publicly owned short line railroads (South Orient in West Texas and the Northeast Texas Rural Rail Transportation District) and Class I freight railroad facilities in Beaumont and Houston. While the request was not funded by the 84th Texas Legislature, the request raises the issue of how such public freight rail projects (PFRPs) can be administered in Texas. This report describes:

- How PFRPs differ from other highway public-private partnerships (P3s) being pursued in Texas.
- How Texas statutes create institutions for freight railroad projects.
- Lessons learned from case studies in other states.
- How to apply best practices to PFRPs in Texas.

This report also builds upon previous Transportation Policy Research Center reports:

- *Public-Private Investment Models for Roadway Infrastructure* (PRC 14-15-F, June 2014).
- *Public Use of Rail Right-of-Way in Urban Areas* (PRC 14-12 F, December 2014).

The first question this report answers is "Why *public* freight rail projects? Why should the government be involved at all?" Fundamentally, the only reason for the State of Texas to contemplate PFRPs is to advance clear *public* interests. As Texas continues to grow, consumers and businesses will demand more results from the railroad network. The Texas Freight Mobility Plan estimates that rail tonnage will almost double by 2040, and this increasing rail traffic will affect Texas communities. The public sector may want to be involved in a project with a for-profit railroad company for a number of reasons:

- **Public interest does not match railroad business objectives.** As railroad traffic increases, communities will need to benefit from grade separations (i.e., separating road and rail traffic with a bridge), but railroads may not gain enough economic returns to merit paying for such expensive structures.
- **Railroads may be unable to reach agreement to resolve rail congestion that affects the public.** Multiple railroads may share assets with capacity constraints (e.g., a bridge, at-grade crossing, or shared switch or terminal) that affect the public (e.g., blocked crossings, noise, and emissions), and may not readily agree on allocating costs and responsibilities for solutions.
- **Railroads may not have access to capital to address public needs.** Texas has 46 small freight railroads serving shippers and communities, and some of these companies may not be able to access capital to invest in economic development projects of interest to the public.

In any of these instances, the public sector could consider participation in freight rail projects not as an income transfer but as a project-specific means of working with a private freight railroad (or railroads) to accomplish results for the public at large.

Public Freight Rail Projects

Texas has experience in highway P3s involving toll roads, managed lanes, and design-build projects, and the Texas Legislature has carefully considered the implications of such projects in extending P3 authority on a project-by-project basis. Highway and transit P3s generally involve the private sector in public transportation projects. Public freight rail projects involve the reverse—they involve the public sector in private freight railroad projects.

PFRPs can involve the following types of projects:

- Passenger rail improvements on the freight rail network.
- Public investment in freight rail network improvements.
- Public investment and facilitation of freight rail improvements involving more than one railroad.
- Public funding and ownership of freight rail facilities.

Texas Freight Rail Project Statutory Authority

Chapter 91 of the Texas Transportation Code authorizes TxDOT to plan for, acquire, finance, construct, maintain, and provide for the operation of a rail facility and accept federal, state, or private funding for that purpose. The Texas Transportation Code also authorizes other special-purpose entities to pursue freight and passenger rail projects, including:

- Freight rail districts.
- Rural rail transportation districts.
- Intermunicipal commuter rail districts.
- Commuter rail districts.

Public Freight Rail Project Case Studies

This report examines PFRPs in detail through case studies of the following projects:

- Tower 55 in Fort Worth, Texas.
- The Brownsville West Rail Bypass and International Bridge in Brownsville, Texas.
- The Chicago Region Environmental and Transportation Efficiency program in Chicago, Illinois.
- The Sheffield Flyover in Kansas City, Missouri.

Best Practices for Public Freight Rail Projects

These case studies produce the following overall lessons for consideration in PFRPs in Texas:

- **Funding**. PFRPs often involve public financial participation (but not always), and the following lessons can be learned from the case studies in this report:
    - Projects can be planned and organized to maximize private-sector match. This requires careful analysis of the public and private benefits of PFRPs so that funding can be allocated to match the benefits.
    - Public funding should accompany projects with public benefits, and groups of such projects practically require dedicated public funding. PFRPs can be long-term projects in planning and execution. For the public sector to remain active throughout the project, public funding should be dependable, not ad hoc.
    - PFRPs do not necessarily have to involve funding from all parties. Rail relocation projects in particular involve primarily public benefits, which may require the public sector (federal, state, and local) to fund the projects.

- **Institutional issues**. PFRPs address more than money, and these case study lessons identify how the public can add value through organization, planning and programming, and public engagement:
    - The public can contribute to PFRPs by acting as a mediator/sponsor among multiple railroads. Whether through a special-purpose legal entity or just as a grantee, the public sector can facilitate agreements among highly competitive freight railroads to resolve chokepoints and congestion.
    - Addressing projects as a regional group can be effective. Linked projects can garner broader support from multiple public and private parties and multiply economic and environmental benefits for PFRPs.
    - PFRPs can take advantage of existing public or private institutional arrangements. Nationally, some PFRPs have required unique entities for project funding or execution, but many PFRPs can leverage existing legislative authority. Since Texas has so many kinds of rail-related organizational structures, PFRPs in Texas can be organized to meet local project needs.
    - Program champions maintain momentum. Money and structure are valuable, but continued engagement of local business and political leaders can aid PFRPs over a long project development cycle.

This report concludes with a discussion of how such best practices could apply to Texas PFRPs.

Summary of Public-Private Partnership Policy and Practice

Texas and other states have used public-private partnerships (P3s) to gain from private-sector innovative design and construction practices on very large highway projects, attract private capital for construction and maintenance of the projects, and mitigate the risks of these large highway projects. As experience with these P3s grew for highway and transit projects, public-sector investment in private freight railroad projects also expanded. To describe the range of public freight rail projects (PFRPs), this section includes an overview of:

- Highway and transit P3 practices.
- Freight railroad projects.
- The freight rail project authority given by the Texas Legislature to the Texas Department of Transportation (TxDOT) and other special-purpose rail agencies.

Public-Private Partnerships in Other Transportation Modes

The Transportation Policy Research Center's (PRC's) report *Public-Private Investment Models for Roadway Infrastructure* (*1*) offers a broad survey of P3 mechanisms and Texas' experiences with this method. The document uses the Federal Highway Administration's (FHWA's) general definition of P3s as "a contractual agreement formed between public and private sector partners" that "allow[s] more private sector participation than is traditional."[1] This definition is echoed in the Eno Center for Transportation report *Partnership Financing: Improving Transportation Infrastructure through Public Private Partnerships* (*2*).

Both of these reports offer extensive background research and case studies describing different types of P3s. Therefore, this report will not repeat details of the types and applications of P3s but will rather offer an overall context for understanding freight rail P3s.

The traditional method for project delivery for highway and transit projects is as follows:

- Allocate pre-construction project development activities to the public sector (e.g., planning, environmental clearance, design and engineering, and right-of-way acquisition).
- Include the private sector in project implementation with contracts awarded on a lowest-bid basis (e.g., utility readjustment, construction, and equipment manufacturing and testing).
- Return the project to the public sector for its remaining life cycle (e.g., maintenance, operations, rehabilitation, and safety).

P3s can involve the private sector in the project design, engineering process, and construction (design-build); long-term maintenance of the project (design-build-operate-maintain); and/or financial partnership in the project.

[1] The definition is at http://www.fhwa.dot.gov/ipd/p3/defined/default.aspx.

Private-sector financial participation can include private equity contributions as leverage to public funding in design and construction or can involve ongoing commitments to maintain and operate the facility. In most cases, in return for equity contributions or revenue bonds for a transportation project, private-sector investors expect ongoing financial returns in the form of shared revenues (from a toll road or managed lanes) or availability payments (in which the public sector agrees on an annual payment to the private project developer for the public use of the highway or transit facility).

P3s are also an alternate means of allocating project risks among the public and private sectors. Two particular kinds of project risks—constructability and life-cycle maintenance—illustrate the contrast between traditional and P3 methods. *Constructability* refers to the manner in which the plans and specifications are actually sequenced and carried out on the job site. In the traditional design-bid-build method, an engineering firm working for the public sector designs the plans to fit the purpose, need, and function of the project. The contractor bids on the project considering sourcing of materials, availability of equipment and labor, and sequencing of construction activities and traffic control; the contractor prices all those risks in the bid amount. In the case of a design-build project, the engineer and contractor work together to deliver the purpose, need, and function of the facility but do so considering the optimal means of constructing the project, which can affect the total cost of the project and its duration (earlier completion limits construction-related inconvenience to property owners and drivers and delivers project benefits sooner).

Life-cycle maintenance considers the ongoing maintenance expenses associated with the project over the useful life of the facility once constructed. If a private contractor is obligated to perform maintenance tasks after a project is built, then that obligation will affect a contractor's choices of materials and design features in design and construction (some pavements or bridges might be built with materials and methods that have slightly higher upfront costs but will cost much less to maintain over time). Under a low-bid design-bid-build process, a contractor is not asked to use or suggest materials or methods that might last longer.

Texas has used P3s to leverage private capital and to control project delivery risks for very large, expensive projects—more than $11 billion in projects to date. In the case of the SH 130 Segment 5 and 6 concession agreement, the private-sector concessionaire has borne the effects of less-than-expected toll revenues without exposing the state's debt or credit ratings to such risks.

However, P3s also raise concerns among policy makers, transportation experts, and the general public. The Texas Legislature's constraints on the use of P3s are informed by these concerns. The PRC P3 report (*1*) lists the following concerns identified in the review of literature on this method:

- Possible loss of public control and flexibility.
- Possible unreasonable private profits at the public's expense.
- Perceived loss of future public revenues.

- Risk of bankruptcy or default.
- Need for accountability and transparency.
- Environmental issues in contracting techniques.
- Involvement of foreign companies in partnerships.
- P3 toll road issues and accountability.
- Specific contract terms (e.g., maintenance standards, hand-back requirements, and commercial development).

By being aware of these concerns, the public sector can address them in the terms of P3 agreements, the procurement methods employed in soliciting P3 proposals, and the decision making used to determine the advisability of P3s as a means of project development.

Public Freight Railroad Projects

When the public sector and freight railroads talk about P3s, they tend to mean something different from the kinds of arrangements and contracts used in public toll road, managed lane, and highway and transit P3 projects. Freight railroads are generally a fully private venture.[2] The railroads:

- Own or control the right of way.
- Build and maintain the track structures, bridges, signals, and train control systems.
- Own or lease locomotives and maintain them.
- With shippers, own and lease railcars that carry various commodities.
- Operate trains, manage classification and switching yards, dispatch and manage train movements, and maintain track, bridges, railcars, right of way, and signal systems.

Freight railroads are self-funded through freight revenues and access to capital markets. When freight railroads refer to P3s, they are talking about projects that involve public participation in projects on the private freight rail network that remain under the control and ownership of the private sector. These two sets of projects are so distinct that this report will refer to them in different terms: *P3s* for traditional highway and transit projects, and *PFRPs* for freight rail projects. Figure 1 illustrates the distinction between typical surface transportation P3s and public freight rail projects.

[2] Some freight rail lines are publicly owned and leased to freight rail operators, and some rail lines are owned by passenger rail operators and allow freight rail operations.

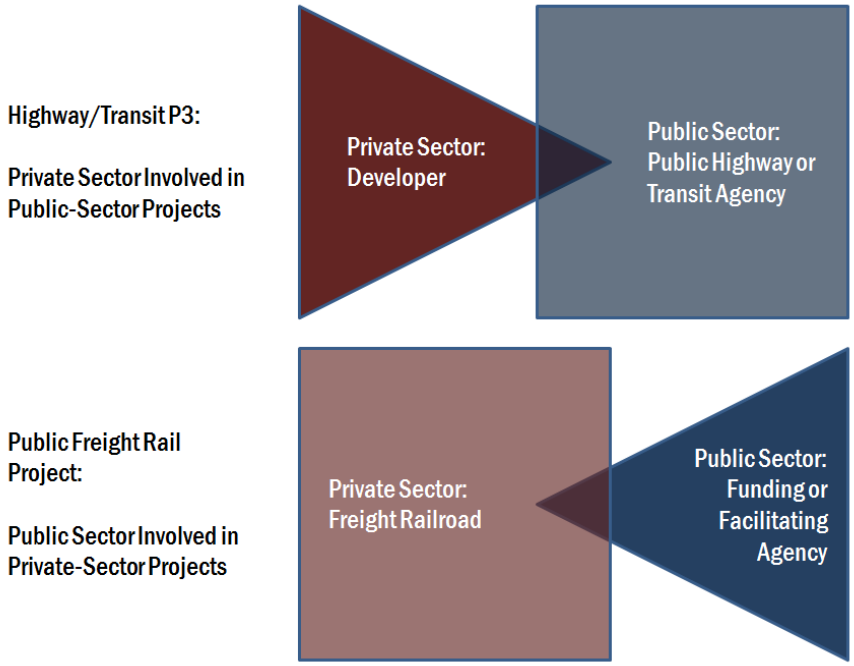


Figure 1. Public- and Private-Sector P3 Roles in Surface Transportation Projects.

PFRPs can take a number of different forms,[3] as discussed in the following subsections.

Passenger Rail Improvements on Freight Rail Network

State investment in corridor-based intercity passenger rail or in commuter rail systems often requires public investment in new capacity on the freight rail network (e.g., tracks and switching, right of way, signal system upgrades, and maintenance enhancement) to accommodate new passenger rail trains without adversely affecting current or future freight rail service.[4] A few examples of these kinds of projects include:

- State-sponsored intercity service in:
  - California (e.g., Capitol Corridor, Pacific Surfliner, and San Joaquin routes).
  - Washington and Oregon (e.g., Cascades).
  - Maine (e.g., Downeaster).

[3] A number of National Cooperative Highway Research Program and National Cooperative Rail Research Program projects discuss freight rail projects, including:

- Bing, A. J., E. W. Beshers, M. Chavez, D. P. Simpson, E. S. Horowitz, and W. E. Zullig. *Guidebook for Implementing Passenger Rail Service on Shared Passenger and Freight Rail Corridors*. TRB, National Research Council, Washington, D.C., 2010.
- CPCS, Inc. *Alternative Funding and Financing Mechanisms for Passenger and Freight Rail Projects*. TRB, National Research Council, Washington, D.C., 2015.
- Bryan, J., G. Weisbrod, and C. Martland. *Rail Freight Solutions to Roadway Congestion—Final Report and Guidebook*. TRB, National Research Council, Washington, D.C., 2007.

[4] Passenger railroad use of freight rail rights of way is also discussed in another PRC report: Prozzi, J., R. Walthall, M. Kenney, J. Warner, and C. Morgan. *Public Use of Rail Right-of-Way in Urban Areas*. Report PRC-14-12-F, Texas A&M Transportation Institute Policy Research Center, College Station, Tex., Dec. 2014.

- Commuter rail services in:
    - California (e.g., Caltrain, Altamont Corridor Express, Metrolink, and Coaster).
    - Minnesota (e.g., Northstar).
    - Virginia (e.g., Virginia Railway Express).

These kinds of projects involve extensive operational modeling to determine how passenger train operations will affect freight rail operations. The projects allocate capital costs to the public and private parties based on the benefits each party receives from the projects. Many of the issues involved in these kinds of projects are discussed in further detail in the PRC P3 study (*1*), including a case study of passenger rail in a publicly owned rail corridor on the Cotton Belt corridor in the Dallas–Fort Worth region.

Public Investment in Freight Rail Network Improvements

Norfolk Southern Railroad worked with Ohio, West Virginia, and Virginia to prepare a Heartland Corridor program to enhance movement of double-stacked containers from ports in Hampton Roads and Newport News to Columbus and Chicago.[5] The program was jumpstarted by an earmark in 2005's Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) federal surface transportation authorization. The federal funds were administered by FHWA's federal lands program and were matched by funding from the railroad and the states.

The success of this multimodal freight corridor influenced the creation of the multimodal discretionary funding program in the 2009 American Recovery and Reinvestment Act (ARRA) named the Transportation Investments Generating Economic Recovery (TIGER) program. Subsequent TIGER grants have leveraged state and railroad funds in Norfolk Southern's Crescent Corridor (generally parallel to I-81 from Pennsylvania to Georgia and Alabama) and CSX investments in the National Gateway (another corridor from Ohio to Virginia). These projects involved a single railroad with multiple public funding partners and a mixture of project delivery mechanisms.

Public Investment and Facilitation of Freight Rail Improvements Involving More Than One Railroad

In some circumstances, the most important role the public sector can play is that of facilitator and mediator between competing freight railroads. Two at-grade railroad crossings of BNSF Railway (BNSF) and Union Pacific Railroad (UP) were resolved through projects that involved the public sector as a contracting agency and project organizer. At the Colton crossing in southern California, UP trains crossed a BNSF line at grade, causing significant delays in train movements and adverse community impacts (e.g., noise, blocked crossings, and emissions). California's Department of Transportation (Caltrans) and local governments helped organize a

[5] More information on the Heartland Corridor is available on the FHWA Innovative Project website at http://www.fhwa.dot.gov/ipd/project_profiles/wv_heartland.aspx.

project to construct a flyover bridge that separated the two lines and leveraged freight railroad capital contributions.

Similarly, in downtown Fort Worth, Texas, UP and BNSF crossed at grade at Tower 55 below the I-30/I-35W interchange, bringing adverse congestion and air quality consequences for freight and passenger rail traffic. The local metropolitan planning organization (MPO) helped develop a project to resolve some of the conflicts, and TxDOT committed a small amount of money and sponsored a successful TIGER grant application that leveraged substantial freight railroad capital investments.

A larger example of this type of PFRP occurred in Chicago, Illinois. All Surface Transportation Board (STB) Class I railroads have major operations in the Chicago region, along with passenger rail operations of Metra (commuter rail) and Amtrak, and all rail operators suffered extensive winter weather delays in 1999. This led to coordination among STB, the City of Chicago's transportation department, and all of Chicago's rail operators. This coordination created a regional operations simulation model to help coordinate problem resolutions and also led to identification of multiple projects to resolve operating conflicts for freight and passenger rail operation. The Chicago Region Environmental and Transportation Efficiency (CREATE) program was initially funded with SAFETEA-LU earmarks, subsequent TIGER grants, and state and railroad capital funding.

The Tower 55 and CREATE projects are discussed in more detail in the case study section of this report.

Public Funding and Ownership of Freight Rail Facilities

In some cases, the public benefits of a freight rail project outweigh the benefits to the freight railroad, or the scale of the project is too daunting or risky for the railroad(s) to take on with limited resources, or revenue traffic on a rail line is insufficient to cover operating costs, which might lead to its abandonment. In such cases, the public sector may benefit from taking on the financing, construction, and operation of a freight rail project.

Many states have allocated state funds to purchase freight lines prior to abandonment and lease the lines to short line railroads—Georgia, Oklahoma, and South Dakota are a few such states. The State of Texas purchased a short line railroad operation to keep it from being abandoned—the South Orient line from San Angelo to Presidio.[6]

The Ports of Los Angeles and Long Beach combined forces with Caltrans and other southern California agencies in the Alameda Corridor project, replacing 200 at-grade crossings and slow, circuitous routing to the ports with a new, below-grade, double-track railroad connecting the ports to major rail lines east of downtown Los Angeles. California created a special-purpose authority with revenue bonding capacity, and the U.S. Department of Transportation added a new kind of transportation project loan (the precursor for the Transportation Infrastructure

[6] More information on the South Orient line is published on the TxDOT website at http://www.txdot.gov/inside-txdot/division/rail/south-orient.html.

Finance and Innovation Act of 1998 [TIFIA]) toward the $2.4 billion project cost. BNSF and UP pay a per-railcar fee to the authority to use the facility. These revenues pay off the bonds and loan.

Another project was the replacement of a swing bridge over the Christiana River south of Wilmington, Delaware, on the Shellpot secondary owned by Conrail. Supports on the bridge shifted under a freight train in 1994, and Conrail declined to repair the older structure, instead routing rail traffic from the south off the Northeast Corridor. Delaware decided to authorize the rehabilitation of the rail line and bridge, and worked out an agreement with Norfolk Southern, the new owners of the line after the CSX-Norfolk Southern Conrail merger, to use the bridge to serve the Port of Wilmington and the Delaware-Maryland peninsula. Norfolk Southern paid the state a per-railcar fee to repay the $13 million project in 20 years.

Another such project, the Sheffield Flyover in Kansas City, Missouri, is discussed in the case study section of this report.

Texas Public Freight Rail Project Statutory Authority

TxDOT has broad authority under Chapter 91 of the Texas Transportation Code (TTC) for both passenger and freight rail projects. "Acquisition, financing, construction, operation, and maintenance of a rail facility" and the "sale, lease, or license of a rail facility to a rail operator and other public or private persons" are deemed to be governmental functions (TTC §91.002). TxDOT may plan, acquire, finance, construct, maintain, and provide for the operation of a rail facility and accept federal, state, or private funding for that purpose (TTC §91.004).

TxDOT cannot own rail rolling stock and cannot operate a freight or passenger railroad directly but must instead contract with a private entity to do so (TTC §91.005). However, TxDOT is authorized to acquire existing rail facilities that are "feasible and viable for rail transportation service" (TTC §91.032). TxDOT also has the authority to accept public or private funds for rail planning, feasibility studies, and the "acquisition, construction, maintenance or operation of a rail facility" (TTC §91.036). This latter provision may give TxDOT sufficient authority to enter into contractual arrangements with private railroads to execute freight rail projects using private funding from one or more railroads.

TxDOT has the authority to enter into PFRPs through the statutory framework in Chapter 223 of the TTC, dealing with comprehensive development agreements (CDAs), the legislation authorizing the design-build and P3 highway projects around the state. TxDOT has the authority to enter into CDAs for rail transportation projects "to the extent and in the manner" that TxDOT can enter into CDAs for highway and toll projects under Chapter 223 (TTC §91.054). Further, "all provisions of Chapter 223 relating to comprehensive development agreements apply" to rail CDAs. Subsequent to enacting original CDA authority in 2003, the Texas Legislature added a series of limitations on CDAs (*1*, pp. 18–21), including a specific listing of projects authorized to proceed as CDAs. Limits on CDAs in Chapter 223 may apply to CDA rail projects in

Chapter 91, but Chapter 91 otherwise confers powers to TxDOT that PFRPs could be executed without the form and processes of Chapter 223 CDAs.

In addition to extending rail development authority to TxDOT, Texas lawmakers have created a series of special-purpose rail entities:

- **Freight rail districts (TTC Chapter 171).** These districts are created in a county with more than 3.3 million population and adjacent counties, with the authority extended to rural rail transportation districts, intermunicipal commuter rail districts, and regional mobility authorities (as authorized in TTC Chapter 370). An example is the Gulf Coast Rail District.
- **Rural rail transportation districts (TTC Chapter 172).**[7] This district is created by one or more counties to "plan, acquire, construct, complete, develop, own, operate, and maintain rail facilities inside or outside the district." An example is the Northeast Texas Rural Rail Transportation District.
- **Intermunicipal commuter rail districts (TTC Chapter 173).** These districts are for the provision of commuter rail services between two cities over 450,000 in population located less than 100 miles apart, including the acquisition, construction, development, ownership, operation, and maintenance of intermodal and commuter rail facilities. An example is the Lone Star Rail District.
- **Commuter rail districts (TTC Chapter 174).** These districts are formed by a county on the Texas-Mexico border to "acquire, construct, develop, own, operate, and maintain intermodal and commuter rail facilities to connect political subdivisions in the district" (TTC §174.201). An example is the Hidalgo County Commuter Rail District.

Figure 2 shows the Chapter 172 rural rail transportation districts (RRTDs) in Texas.

State law confers PFRP authority to some of these special-purpose rail entities. TTC §173.156 allows intermunicipal commuter rail districts to enter into "exclusive development agreements with a private entity" to provide for the "design, construction and financing, acquisition, maintenance or operation of a commuter rail facility or system." Rural rail transportation districts have broader freight rail authority than TxDOT under Chapter 91 and can acquire rail facilities and rolling stock and operate rail services directly or by contract.

[7] Rural rail transportation districts are described in more detail in two reports sponsored by TxDOT:

- Roop, S. S., C. A. Morgan, J. E. Warner, L. E. Olson, and L. L. Higgins. *Texas Rural Rail Transportation Districts: Characteristics and Case Studies*. Report 4007-1, Texas A&M Transportation Institute, College Station, Tex., 2001.
- Morgan, C. A., J. E. Warner, and B. R. Sperry. *Rural Rail Transportation Districts (RRTD) Update*. Report IAC 83-2XXIA010, Texas A&M Transportation Institute, College Station, Tex., 2013.

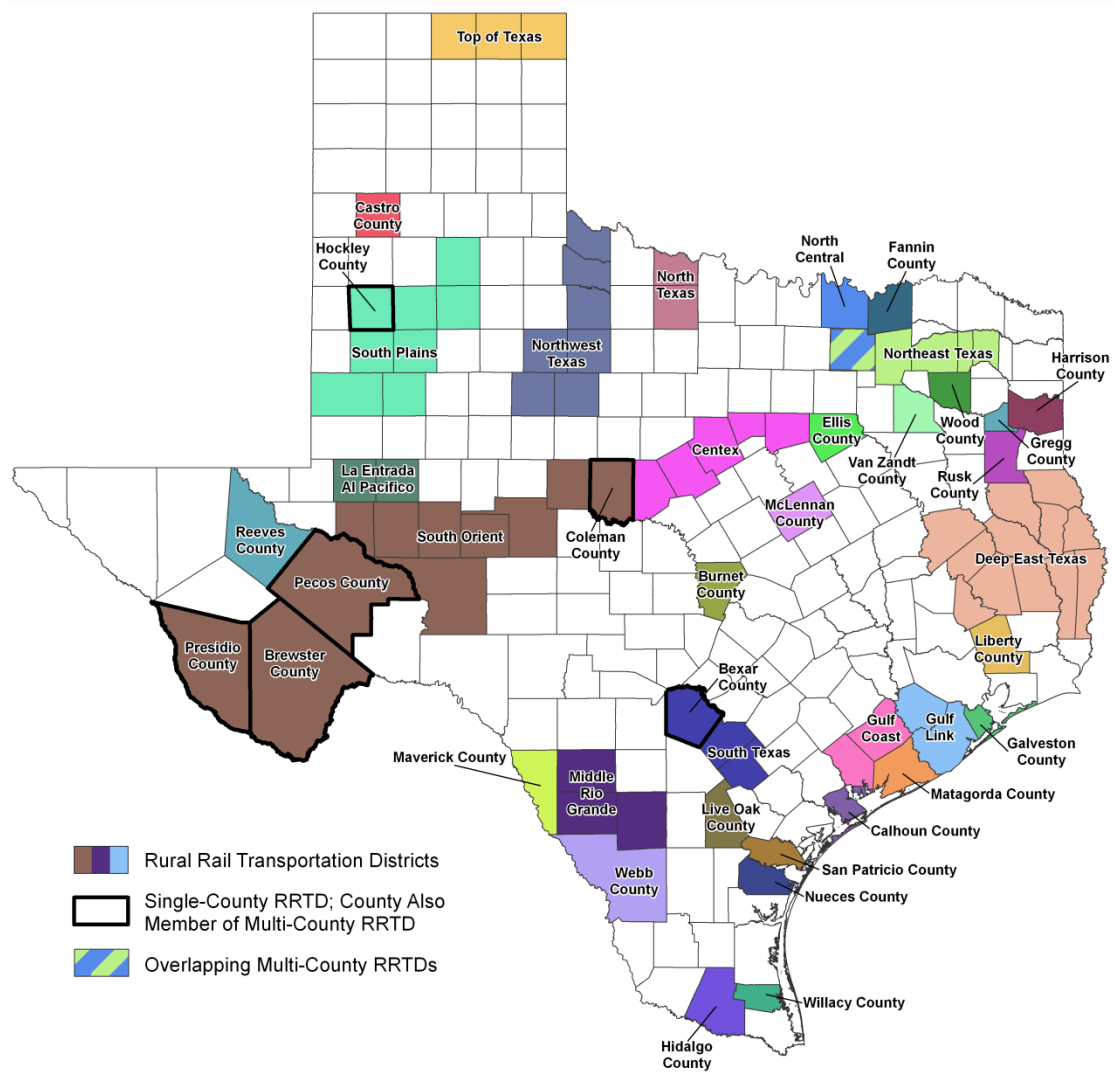


Figure 2. Texas Rural Rail Transportation Districts.

Public Freight Railroad Project Case Studies

This section explores four PFRP projects in depth to gain insights that can inform Texas PFRPs in the future. These case studies were prepared using available information from primary and secondary sources. Each study contains the following information:

- Problem identification.
- Project description.
- Funding sources.
- Stakeholders and governance structures.
- Project execution.
- Project evaluation.
- Major lessons learned and best practices for Texas public freight rail projects.

Tower 55 in Fort Worth, Texas

Problem Identification

Tower 55 is the name of an at-grade railroad crossing under the multilevel intersection of I-35W and I-30 just southeast of downtown Fort Worth, a location where the north–south BNSF and UP lines cross the east–west UP mainline (J. Neal, personal communication, June 24, 2015) (*3, 4*). Almost 100 trains a day pass through the intersection and related tracks and switches, including Trinity Railway Express (TRE) commuter trains and Amtrak intercity passenger trains.

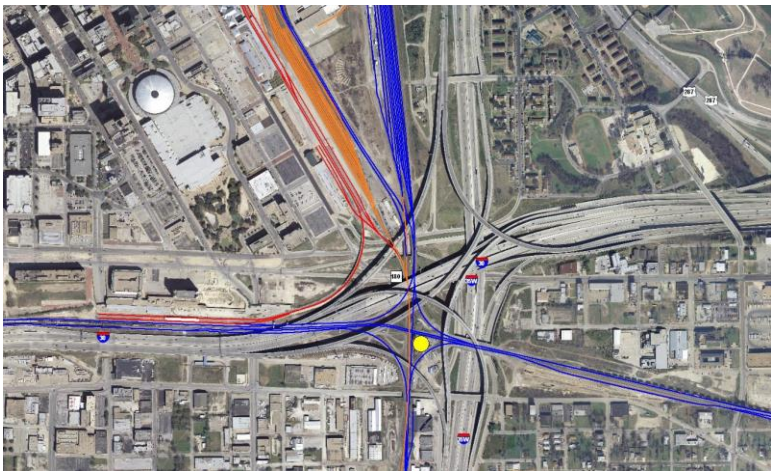
The at-grade crossing requires a full stop of each train to wait for another to proceed, delaying train velocity through the crossing and causing trains to be staged and wait 50 to 100 miles away. This congestion also blocks highway-rail grade crossings and interrupts pedestrian traffic through nearby neighborhoods.

Project Description

The region's MPO, the North Central Texas Council of Governments (NCTCOG), studied solutions to resolve the operational conflicts at Tower 55 and reviewed the environmental impacts of a grade separation and flyover at the location. The Tower 55 project location is shown in Figure 3.

The study effort faced three problems:

- The scope of the project was larger and more expensive than the two freight railroads were expecting.
- The railroads were unable to agree on which directional movements should fly over the other.
- Nearby neighborhoods were concerned about disruptions to vehicle and pedestrian traffic patterns associated with the larger structures.



I-30 runs from east to west, and I-35W runs from north to south.
Color legend:
- *The Tower 55 intersection is in yellow.*
- *UP rail lines are in blue.*
- *BNSF rail lines are in orange.*
- *TRE rail lines are in red.*

Source: NCTCOG.

Figure 3. Tower 55 Project Location in Fort Worth.

The MPO identified an interim solution that involved the following:

- Additional trackage north, south, and through Tower 55 on BNSF and UP.
- Improved track alignment and switches to promote faster train movements.
- Enhanced signals/interlocking with positive train control compatibility.
- New and structurally improved bridges and drainage structures.
- City arterial street/intersection improvements and grade-crossing closures.
- Improved pedestrian safety and viability and new emergency vehicle access adjacent to an elementary school and the neighborhood it serves (*5*).

Funding Sources

TxDOT sponsored an application for TIGER grant funding in the second project call in 2010, joined by the MPO, the Fort Worth Transit Authority (The T), the City of Fort Worth, UP, and BNSF (Table 1).

Table 1. Funding for Tower 55.

Source of Funding	Funds Contributed (Millions)
State of Texas	$1.0
City of Fort Worth	$1.0
NCTCOG/The T	$2.5
TIGER II	$34.0
UP/BNSF	$65.5
Total funding	***$104.0***

The TIGER II application was ranked by the Texas Transportation Commission as Texas' top application, and the two-thirds private/non-federal match proved persuasive in securing the grant funding.

Stakeholders and Governance Structures

A number of community groups, elected officials, and business groups submitted letters of support with the TIGER grant application, and the public-sector partners maintained extensive communications during the construction phases of the project. No special-purpose governmental structure was created for the project, beyond the project construction agreements necessary to obtain federal funding, close public crossings, and reconstruct railroad bridges over public streets.

Project Execution

Each railroad managed construction contracts for its respective property's track work, switches, and train control systems and work on grade separations. TxDOT reviewed construction work being funded with federal dollars but was not involved in contracting the work to be done.

Project Evaluation

The TIGER II grant application included projections of economic and environmental benefits of the project improvements, primarily associated with the impacts of reduced rail congestion on carriers, freight shippers, and nearby communities. Benefits included:

- Reduced grade crossing delays for motorists and pedestrians—100,000 hours less per year.
- Reduced emissions from rail congestion and delayed trains—93,000 tons of carbon dioxide reduction per year.
- Reduced fuel consumption—22,600 gallons per day.
- Improved emergency vehicle access to neighborhoods through grade separations.
- Almost $1 billion in supply chain costs avoided for shippers and consumers.
- Expanded capacity expected to support freight rail growth for the next 20 years.

Lessons Learned and Best Practices

The Tower 55 project offers a number of lessons for future PFRPs in Texas:

- **The public sector is valuable as a mediator/sponsor**. Ultimately, TxDOT and other local governments committed less than 5 percent of the total funding for the project, but that funding was effectively leveraged by federal and private funds. The local MPO had been working with the railroads and Fort Worth community leaders to identify possible engineering solutions for the project, after the MPO leadership (staff and board) was convinced of the regional importance of the project. This groundwork identified an interim solution for improvements that was the basis of the TIGER grant application. TxDOT was able to step in as the grant sponsor, coordinating the activities of all parties to prepare an effective grant application.

- **Projects can be planned and organized to maximize private-sector match.** The freight railroads benefitted from capacity expansions and congestion relief from this project. As a result, BNSF and UP contributed two-thirds of the funding for the project. The project partners had submitted an unsuccessful grant application in the first round of TIGER funding, but the second, successful application included $23 million more in private funding.
- **Public funding should accompany projects with public benefits.** The project offered railroad improvements but also included substantial redesign and reconstruction of a number of grade separations and closures of highway-rail grade crossings. These neighborhood improvements extended beyond the actual at-grade rail intersection and offered improved emergency vehicle access through wider roadways. Enhanced sidewalks allowed pedestrians to avoid trespassing on crowded rail lines. Nearby neighborhoods and other communities along UP and BNSF rail lines throughout the Dallas–Fort Worth region also enjoyed fewer trains idling to pass through Tower 55, with fewer blocked crossings and reduced emissions.

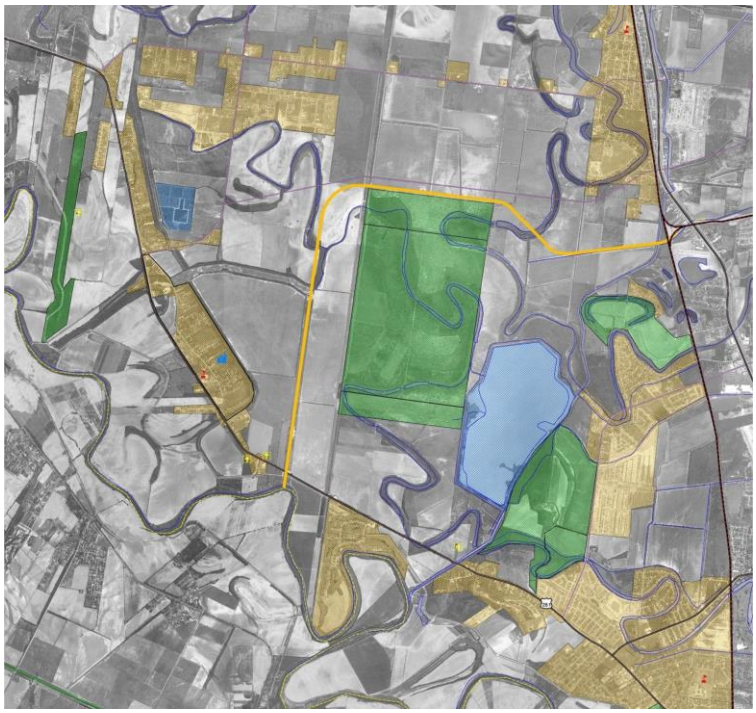
Brownsville West Rail Bypass and International Bridge in Brownsville, Texas

Problem Identification

Brownsville's rail border crossing is the fifth busiest border crossing along the U.S.-Mexico border, and the trains moving to and from the border crossing move through the center of Brownsville across a number of grade crossings. The existing rail bridge, owned by the private Brownsville and Matamoros Bridge Company (partially owned by UP), opened in 1910. Cameron County has sought to build a new rail border crossing west of downtown and relocate rail traffic out of the city via a new rail line that connects north of Brownsville with a spur that serves the Port of Brownsville (*6, 7, 8, 9*).

Project Description

In 2004, Cameron County secured a Presidential Permit for the construction of a new international rail bridge over the Rio Grande River and an 8-mile new single track rail line to connect the bridge to the UP main line into Brownsville. The county, through the Cameron County Regional Mobility Authority, has been able to proceed with construction of the new rail line, the rail bridge (the U.S. portion), and related border inspection facilities required by the General Services Administration, including relocation of the Customs and Border Patrol's Vehicle and Cargo Imaging System to the new bridge. The new rail line will also allow smaller rail yards in Brownsville to be consolidated into the Olmito yard north of town, and will eliminate a number of highway-rail grade crossings in Brownsville. The project site is shown in Figure 4. The new international rail bridge opened on August 6, 2015.



Relocated rail line is shown in yellow. Brownsville is to the right.

Figure 4. West Brownsville Railroad Relocation in Cameron County.

Funding Sources

Table 2 shows how the bridge and rail line's $34 million cost is funded.

Table 2. Funding for Brownsville West Rail Bypass and International Bridge.

Source of Funding	Funds Contributed (Millions)
2003 federal appropriations earmark	$1.11
2005 federal appropriations earmark	$1.75
SAFETEA-LU earmark	$5.00
TxDOT grade separation bridge funds	$13.00
ARRA MPO-directed funds	$7.81
Federal Railroad Administration rail relocation grant	$4.00
Local matching funds	$1.67
Total funding	***$34.34***

The TxDOT funding was redirected from three grade separations programmed in Brownsville over the rail line to be relocated. The Texas Transportation Commission reallocated that $13 million from projects in the Unified Transportation Plan to the Cameron County Regional Mobility Authority for the rail relocation project.

Stakeholders and Governance Structures

Cameron County will transfer ownership and control of the rail line to UP and the U.S. portion of the international rail bridge to the Brownsville and Matamoros Bridge Company (co-owned by UP) once the rail bridge is operational. The Cameron County Regional Mobility Authority was governed by statutes and regulations enacted in Chapter 370 of the TTC.

Project Execution

Cameron County Regional Mobility Authority managed construction and ensured it was performed according to UP rail standards and in accordance with the provisions of the Presidential Permit, the associated environmental assessment, and the finding of no significant impact.

Project Evaluation

By eliminating grade crossings, the project is expected to reduce delays by 11 million vehicle hours per year by 2025. The project is also expected to reduce delay-related emissions by 3,300 tons of carbon dioxide per year.

Lessons Learned and Best Practices

This project offers the following lessons for other public freight rail projects in Texas:

- **Public freight rail projects can take advantage of existing institutional authorities**. The new bridge was granted a Presidential Permit sought by Cameron County. The county was already familiar with the process, having received a Presidential Permit for the new Los Tomates International Bridge, opened in 1999 and owned by the Cameron County International Bridge System. An existing regional mobility authority managed the construction, and was given multimodal responsibility and authority by the Texas Legislature. The private Brownsville and Matamoros Bridge Company will own the new rail bridge. This company has owned and operated the rail bridge in Brownsville for more than a century.
- **PFRPs do not necessarily have to involve funding from all parties**. Because the impetus behind the rail relocation came from the public sector and because the rail relocation did not necessarily fill a compelling need of the freight railroad, the Brownsville rail relocation did not involve any financial contributions from UP. This is typically the case for publicly sought freight rail relocations. However, the rail bridge and new rail line, consolidation of other rail yards, and transfer of ownership to the Brownsville and Matamoros Bridge Company all involved close coordination and involvement of UP, therefore presenting another example of a PFRP.

Chicago Region Environmental and Transportation Efficiency Program in Chicago, Illinois

Problem Identification

As mentioned previously, the Chicago region is the nation's busiest railroad hub, with operations of all major Class I freight railroads and substantial intercity and commuter rail traffic. Railroads move 37,500 freight rail carloads through Chicago each day (A. Winnick, personal communication, June 8, 2015) (*10, 11, 12*). This is more than the number moving through the entire state of Texas daily.[8] Twenty-five percent of the nation's rail freight moves through the Chicago region, almost $350 billion in value each year, generating 29 percent of annual revenues earned each year by all Class I railroads. As important as Chicago freight rail operations are to the national freight network, when abnormal congestion strikes Chicago, consequences reverberate throughout the country.

After substantial, chronic congestion in Chicago in 1999 (a combination of extreme winter weather and complications of the Conrail purchase by Norfolk Southern and CSX), STB convened an informal group of all freight railroads, Amtrak, Metra (the Chicago commuter rail authority), the Illinois Department of Transportation, and the Chicago Department of Transportation. The group developed a regional railroad operations model and a coordination plan in the event of future congestion issues. The railroads, state, and city created the Chicago Transportation Coordination Office (CTCO) to share information and communications among railroads. That group developed a program of rail improvements—the CREATE program—in specific corridors that promised to improve rail operations and reduce congestion and highway-railroad conflicts, as shown in Figure 5.

Project Description

With the aid of a Chicago-area rail operations simulation model, the working group of freight and passenger railroads and public agencies identified a series of projects that would best improve railroad operations, remove chokepoints, and increase rail velocities. The projects fall into these categories:

- Grade separation of six railroad-railroad crossings (rail-rail flyovers) to eliminate train interference and associated delay, primarily between passenger and freight trains.
- Grade separation of 25 highway-rail grade crossings to reduce motorist delay, improve safety, eliminate crossing accidents, decrease energy consumption, and reduce air pollution.
- Additional rail connections, crossovers, trackage, and other improvements to expedite train movements in four rail corridors traversing the Chicago region.

[8] Association of American Railroads state profiles estimated 9.15 million freight rail carloads moving to, out of, and through Texas in 2012 based on STB waybill sample information. This number represents 25,073 freight rail carloads a day in Texas.

Source: CREATE (http://www.createprogram.org/proj_map2.htm).

Figure 5. CREATE Program Map.

Twenty-two projects have been completed, 10 are under construction, and 18 are in design or environmental clearance.

Funding Sources

Current estimates for project completion total $3.8 billion (up from the $1.5 billion originally estimated). Table 3 shows the funding sources to date.

Table 3. Funding for the CREATE Program.

Source of Funding	Funds Contributed (Millions)
Private railroads	$234.0
Chicago Department of Transportation	$10.1
Illinois Department of Transportation	$410.0
Federal sources:	$581.9
• ARRA high-speed rail	$133.0
• TIGER IV grant	$10.4
• TIGER I grant	$100.0
• SAFETEA-LU earmark	$100.0
• Federal rail relocation	$1.9
• Other federal funds	$236.6
Total funds received to date	$1,236.0
Unfunded portion	$2,564.0
Total CREATE program cost	$3,800.0

Stakeholders and Governance Structures

The multiple project partners have entered into a series of agreements, creating a project administration and governance structure that involves the following groups:

- **Stakeholder Committee.** The committee is chaired by a railroad appointee and joined by the commissioner of the Chicago Department of Transportation and the secretary of the Illinois Department of Transportation. All project decisions must be unanimous. Projects are assigned to one of three program managers: one for freight railroads, one for rail passenger components, and one for public improvements (grade separations and grade crossing improvements).
- **CTCO.** CTCO reviews and updates rail operating assumptions as projects are complete and coordinates rail operations during construction.
- **Project Office.** The Project Office is responsible to the Stakeholder Committee and retained by the Association of American Railroads (AAR) on behalf of the freight railroads. The Project Office reviews plans and supports the three program managers with accounting, engineering, and construction management services.
- **Management Committee.** Any changes to the CREATE project lists must be made unanimously by an 11-member Management Committee, composed of all freight rail railroads, AAR, the Illinois Department of Transportation, the Chicago Department of Transportation, and CTCO.
- **Public Information Working Group**. The group is made up of 11 Management Committee members. It works with the public and local governments on project execution.

Project Execution

The involvement of state and federal funding required the Illinois Department of Transportation and FHWA to be engaged in project administration. The application of public funding to CREATE projects required environmental clearances and reviews for most of the projects. As a result, the Illinois Department of Transportation and FHWA created a comprehensive approach to environmental reviews because so many of the CREATE projects affected each other and needed to be considered collectively. The approach also used common assumptions about demographics, traffic growth, and emissions. The process reviewed each project to determine which could be advanced to early construction through categorical exclusions (exclusively on rail rights of way), which required an environmental assessment (and related findings of no significant impacts) and a more involved environmental impact statement (and related record of decision).

Project Evaluation

Grade separations are estimated to save motorists 2,400 hours of delay each day and save bus passengers 1,400 hours of delay. The full CREATE program expects to save 3.4 million gallons of diesel fuel each year and reduce carbon dioxide emissions by 36,000 metric tons over a 30-year period. The program will also provide $222 million in safety benefits by reducing rail-related fatalities and injuries. The full program is expected to eliminate 817,000 passenger hours of delay each year for commuter and intercity rail passengers.

Lessons Learned and Best Practices

Texas policy makers and rail planners can apply the following lessons from the CREATE program:

- **Addressing projects as a regional group can be effective**. The CREATE program involved multiple railroads and multiple projects within a metropolitan region, in part because the interconnected rail-to-rail relationships among passenger and freight railroads could not be resolved through ad-hoc projects. The creation of CTCO by regional and national parties (the Chicago Department of Transportation, the Illinois Department of Transportation, AAR, and STB) provided the analytical groundwork for project identification and evaluation—analyses that assessed the public and private operational benefits associated with the projects.
- **Programs of projects with primarily public benefits require dedicated public funding**. The CREATE program has completed a number of complicated, expensive, and important rail projects already providing operating benefits, and has done so with a majority of state and federal funding. The State of Illinois is less able to dedicate significant funding given its overall finances, and the federal government has limited discretionary funding programs (earmarks are eliminated, and TIGER grants are allocated to projects in smaller slices dictated by Congress). A program or collection of projects with primarily public benefits may require public funding to complete. Failure to achieve

that public funding could diminish the continued involvement of the freight railroads because they see fewer gains being made through the collective program efforts.

- **Program champions maintain momentum**. STB and the mayor of Chicago have continued to support the CREATE program, even as the people occupying the four positions have changed. In light of unpredictable public funding, the visible advocacy by these four officials has been essential to keeping the program moving forward, particularly as public funding has slowed.

Sheffield Flyover in Kansas City, Missouri

Problem Identification

While Chicago has the most train traffic by railcar volume and train moves, Kansas City, Missouri, sees more train tonnage moved through the region than any other rail hub in the country. Kansas City is served by five Class I railroads, and 80 percent of the rail tons in Kansas City move through the area.

The Sheffield Junction was a series of rail-to-rail crossings (*13, 14, 15*). It had an at-grade crossing of the BNSF transcontinental line moving intermodal containers from California to Chicago and a UP main line. The junction saw more than 100 BNSF trains a day, 60 to 80 UP and Kansas City Southern (KCS) trains a day, and 50 Kansas City Terminal Railroad trains a day. The at-grade crossings, like at Tower 55 in Texas, slowed train movements throughout the busy Kansas City network.

Project Description

The project, shown in Figure 6, involved a series of rail bridges, including a 6,000-foot, double-track rail bridge across a number of crossings. The flyover was located on right of way owned by the Kansas City Terminal Railway, a Class III switching railroad in the Kansas City area, co-owned by Class I railroads and operated by a third-party short line operation.

The cost of the project was too large for the railroads to contemplate in the late 1990s, and furthermore, a new railroad bridge would effectively boost railroad property taxes for the railroads owning the terminal railroad. The solution was the creation of a transportation corporation, a quasi-governmental entity created by Missouri legislation that authorizes the issuance of revenue debt. Such a corporation, the Kansas City Intermodal Transportation Corporation, funded the project. The corporation, as a governmental entity, did not owe property taxes for the new railroad flyover improvements. The project also included extensive utility readjustments and improvements into nearby industrial areas and local road reconstruction. Some public land needed for the project was exchanged with the city in a land swap.

Source: TranSystems Inc. (http://www.transystems.com/Home/Markets/Freight-Rail/Grade-Separations/Flyovers/Projects/Sheffield-Junction-Flyover.aspx).

Figure 6. Sheffield Flyover as Completed.

Funding Sources

The transportation corporation issued $74 million in revenue bonds. The three railroads (BNSF, UP, and KCS) are obligated to repay the corporation's debt over a 20-year period.

Project Execution

The construction work was managed by the terminal railroad with the assistance of a project management consulting engineering firm.

Stakeholders and Governance Structures

The transportation corporation was created by the terminal railroad, which was already governed by a corporate structure and owned by the Class I railroads.

Project Evaluation

The project's management consulting firm estimates that reduction in grade crossing delays from resolving the at-grade crossings saved $1.85 million per year for motorists. Speeding up train movements was estimated to save railroads $5 million annually in reduced delays.

Lessons Learned and Best Practices

The Sheffield Flyover project can offer applications for freight railroads and public agencies in Texas:

- **The public sector can act on behalf of multiple railroads**. As in the Shellpot bridge and Alameda Corridor projects described in the first section of this report, the Sheffield Flyover is an example of the public sector creating a governmental entity to execute a

project for the railroads. The freight railroads are paying off the project debt (though not on a carload usage basis as was the case with the other two projects). Public-sector involvement can help resolve complicated interactions of multiple railroads at major chokepoints.

- **The project took advantage of an existing corporate arrangement among the railroads**. The transportation corporation used to issue the debt financing the project was a new governmental entity. However, this entity was created by the terminal railroad company, a pre-existing company co-owned by the freight railroads. The corporation was created as a funding mechanism, but the terminal railroad provided a corporate structure to manage project construction and ongoing operations.

Public-Private Partnership Best Practices for Texas Freight Rail Projects

Summary of Best Practices

General Best Practices

The Eno P3 report (*2*) was compiled with the assistance of a respected team of P3 practitioners and researchers, offering a series of policy recommendations for effective P3s:

- For states and localities:
  - Develop effective enabling legislation, balancing public and private interests, adequately protecting the public, and allowing opportunities for private benefit.
  - Establish appropriate institutional structures and management policies so that the public sector is equipped to fully understand these new project funding and delivery methods.
  - Promote public engagement, which not only reduces public risks and improves project delivery, but may also reduce public opposition before it swamps the P3 project.
- For federal policy:
  - Provide federal incentives to state and local governments that increase local revenues for transportation so that federal discretionary programs (TIGER, TIFIA, and Railroad Rehabilitation and Improvement Financing) give extra weight to applicants that are leveraging more of their own funding.
  - Accelerate P3 deals under TIFIA so that new TIFIA funding authorized in the Moving Ahead for Progress in the 21st Century Act (MAP-21) can be allocated to P3 projects, which brings in public and private funds.
  - Initiate a multimodal partnership to administer federal P3 programs so that all modal administrations are involved in spreading new TIFIA funding to non-highway modes.
  - Develop multimodal model contracts aimed at protecting public interests, building upon new MAP-21 mandates for consistent P3 road contracts. Extend those models to other modes and enhance public interest protection and private-sector predictability.
  - Develop standard project appraisal methods so that public-sector agencies can have a sound basis for determining P3 costs and benefits compared to traditional project delivery methods.

Summary of Case Study Lessons

Another set of lessons to consider comes from the four case studies reviewed in this report:

- **Funding.** PFRPs often involve public financial participation (but not always), and the following lessons can be learned from the case studies in this report:

- Projects can be planned and organized to maximize private-sector match. This requires careful analysis of public and private benefits of PFRPs so that funding can be allocated to match the benefits.
- Public funding should accompany projects with public benefits, and groups of such projects practically require dedicated public funding. PFRPs can be long-term projects in planning and execution. For the public sector to remain active throughout the project, public funding should be dependable, not ad hoc.
- PFRPs do not necessarily have to involve funding from all parties. Rail relocation projects in particular involve primarily public benefits, which may require the public sector (federal, state, and local) to fund the projects.

- **Institutional issues.** PFRPs address more than money, and these case study lessons identify how the public can add value through organization, planning and programming, and public engagement:
  - The public can contribute to PFRPs by acting as a mediator/sponsor among multiple railroads. Whether through a special-purpose legal entity or just as a grantee, the public sector can facilitate agreements among highly competitive freight railroads to resolve chokepoints and congestion.
  - Addressing projects as a regional group can be effective. Linked projects can garner broader support from multiple public and private parties, and multiply economic and environmental benefits for PFRPs.
  - PFRPs can take advantage of existing public or private institutional arrangements. Nationally, some PFRPs have required unique entities for project funding or execution, but many PFRPs can leverage existing legislative authority. Since Texas has so many kinds of rail-related organizational structures, PFRPs in Texas can be organized to meet local project needs.
  - Program champions maintain momentum. Money and structure are valuable, but continued engagement of local business and political leaders can aid PFRPs over a long project development cycle.

Applying Best Practices in Texas

The three state recommendations of the Eno report (*2*) could apply to Texas public freight rail projects:

- **State statutes.** The Texas Legislature may have authorized sufficient authority in Chapter 91 for TxDOT to participate in a variety of freight rail arrangements, subject to availability of state funds. Nevertheless, were such PFRPs to be contemplated by public and private parties, Texas legislators—both members in affected districts and members of funding and oversight committees—may consider formal or informal monitoring of the PFRPs to ensure that projects proceed in accordance with statutory expectations.

- **Institutional considerations.** The PRC P3 project (*1*) recommended expansion of technical support for P3 administration in Texas. TxDOT has already developed an experienced group of staff and consultants in the Strategic Projects and Finance Divisions. Even if PFRPs are not advanced as CDAs, existing TxDOT expertise can offer valuable lessons and best practices for consideration.
- **Public engagement.** PFRPs may not be completely new in Texas or elsewhere, as this report explains, but the approach is sufficiently unconventional to merit a sophisticated and transparent program of engaging and informing Texans, particularly those affected or adjacent to public freight rail projects. Such engagement will be a critical element of the success of future Texas PFRPs.

The first section of this report describes different types of PFRPs, and Texas has examples of freight rail projects from each of these categories. Table 4 lists the PFRP type, Texas example, and some possible applications of best practices that might be considered.

Table 4. Freight Rail Public-Private Partnership Best Practice Applications.

Public Freight Rail Project Type	Texas Example	Application of Best Practices
Passenger rail improvements on a freight rail network	Lone Star Rail District—project to operate commuter rail between Austin and San Antonio on UP railroad line. Involves relocating UP to a new location bypass east of I-35. More information about this TTC Chapter 173 district at http://www.lonestarrail.com/.	• Freight rail relocation may be necessary to free rail capacity for commuter rail. This primarily public benefit may require public funding from an as-yet-undetermined source. • Challenging to apply state funds (through the unfunded but authorized Texas Rail Relocation Fund) to a project that benefits a particular railroad almost exclusively. • Project being advanced through a special-purpose district created by Texas Legislature.
Public investment in network improvements for a single freight railroad	• West Brownsville Bypass described previously. • Sweetwater Rail Logistics Center, a set of new tracks and switching to serve grain and oil and gas shippers, funded by BNSF, shippers, and the Sweetwater Economic Development Corporation (which gave $500,000). More information at http://www.clineshalealliance.com/uploads/CSA_140711_Sweetwater_Logistics_Center.pdf.	• Sweetwater project maximized leverage of private funding for project with small public investment. • West Brownsville bypass, like the Lone Star Rail freight relocation, was undertaken for public benefits with public funding. • Both projects used existing institutions to facilitate the projects.

Table 4. Freight Rail Public-Private Partnership Best Practice Applications (Continued).

Public Freight Rail Project Type	Texas Example	Application of Best Practices
Public investment and facilitation of freight rail improvements involving more than one railroad	• Tower 55—a group of projects described in case study. • Gulf Coast Rail District (GCRD)—a group of rail capacity and public safety projects (grade separations, bridge improvements, and track improvements in corridors in Houston), pursued by TTC Chapter 171 freight rail district. More information at http://www.gcfrd.org. • Neches River bridge—TxDOT has studied the feasibility of constructing an additional rail bridge across the Neches River in Beaumont to serve KCS, BNSF, and UP. Forty-eight trains a day move across the 1941 lift bridge in place. The feasibility study can be found at https://ftp.dot.state.tx.us/pub/txdot-info/tpp/neches-final-report.pdf.	• Positive cost benefit of grade separations in moving rail traffic to a northern bridge in Beaumont may merit consideration of public funding for these public benefits. Private capacity gains could be funded by private railroads. • If new federal transportation legislation creates bigger multimodal freight funding programs, GCRD could compete better for those funds with state or local funds to leverage private contributions. • TxDOT may have sufficient authority in TTC Chapter 91 to facilitate the Neches River bridge project, or the port and Jefferson County could create a rail district or regional mobility authority to take on the project.
Public funding and ownership of freight rail facilities	• La Entrada al Pacifico Rural Rail District—an effort to extend the West Texas and Lubbock rail service in an abandoned north–south rail corridor generally parallel to US 385 from Seagraves to the UP line in Odessa to the South Orient/Texas Pacifico Rail Line in McCamey. Studies on this route show increasing feasibility with increasing oil and gas activity in the Permian Basin. More information at http://www.motran.org/research2.html. • South Orient Rail Line—a state-owned rail line from Presidio to San Angelo, connecting with UP in Alpine and Fort Worth and Western in San Angelo. Texas Pacifico Transportation, Ltd., operates freight rail service under a lease to TxDOT. The State of Texas has appropriated funds for rail upgrades and received stimulus funding for rail rehabilitation projects. More information on the South Orient from TxDOT at http://www.txdot.gov/inside-txdot/division/rail/south-orient.html.	• Rural rail districts are Texas-specific, locally administered institutions to retain and expand short line rail service outside metropolitan areas. County governments' active engagement keeps the organizations functional. • Rural rail districts are authorized to leverage freight rail revenues for capital projects. South Orient projects, which have enabled substantial increases in carloads in West Texas, depend on discretionary federal and state funding.

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