

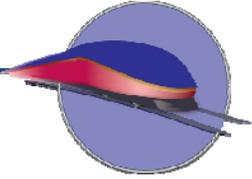
Project Name: TX - Tower 55 At Grade Improvement Project - Ia Date of Submission: 8/24/09 Version Number: v1

## High-Speed Intercity Passenger Rail (HSIPR) Program

# Application Form

## Track 1a–Final Design (FD)/Construction

## & Track 4–FY 2009 Appropriations Projects



Welcome to the Track 1a Final Design (FD)/Construction and Track 4 Application for the Federal Railroad Administration’s High-Speed Intercity Passenger Rail (HSIPR) Program. Applicants for Track 1a FD/Construction and/or Track 4 are required to submit this Application Form and Supporting Materials (forms and documents) as outlined in Section G of this application and in the HSIPR Guidance.

We appreciate your interest in the program and look forward to reviewing your application. If you have questions about the HSIPR program or this application, please contact us at [HSIPR@dot.gov](mailto:HSIPR@dot.gov).

### Instructions:

- Please complete the HSIPR Application electronically. See Section G for a complete list of the required application materials.
- In the space provided at the top of each section, please indicate the project name, date of submission (mm/dd/yy) and the application version number. The distinct Track 1a and/or Track 4 project name should be less than 40 characters and follow the following format: State abbreviation-route or corridor name-project title (e.g., HI-Fast Corridor-Track Work IV).
- For each question, enter the appropriate information in the designated gray box. If a question is not applicable to your FD/Construction Project, please indicate “N/A.”
- Narrative questions should be answered concisely within the limitations indicated.
- Applicants must upload this completed application and all other application materials to [www.GrantSolutions.gov](http://www.GrantSolutions.gov) by August 24, 2009 at 11:59pm EDT.
- Fiscal Year (FY) refers to the Federal Government’s fiscal year (Oct. 1- Sept. 30).
- Please direct questions to: [HSIPR@dot.gov](mailto:HSIPR@dot.gov)

## A. Point of Contact and Applicant Information

<b>(1) Application Point of Contact (POC) Name:</b> Jennifer Moczygemba, P.E.		<b>POC Title:</b> Multimodal Section Director		
<b>Street Address:</b> 118 E. Riverside Drive	<b>City:</b> Austin	<b>State:</b> TX	<b>Zip Code:</b> 78704	<b>Telephone Number:</b> 512-486-5125
<b>Fax:</b> 512-416-2348		<b>Email:</b> <a href="mailto:jmoczyg@dot.state.tx.us">jmoczyg@dot.state.tx.us</a>		

(2) Name of lead State or organization applying (only States may apply for Track 4 ): Texas Department of Transportation

(3) Name(s) of additional States and/or organizations applying in this group (if applicable): N/A

(4) Is this project for which you are applying for HSIPR funding related or linked to additional applications for HSIPR funding that may be submitted in this or subsequent rounds of funding?  Yes  No  Maybe  
 If “yes” or “maybe,” provide the following information:

Program/Project Name	Lead Applicant	Track	Total HSIPR Funding Proposed (if known)	Status of Application
		Track 1a - FD/Construction	\$	Applied
		Track 1a - FD/Construction	\$	Applied
		Track 1a - FD/Construction	\$	Applied
		Track 1a - FD/Construction	\$	Applied
		Track 1a - FD/Construction	\$	Applied
		Track 1a - FD/Construction	\$	Applied
		Track 1a - FD/Construction	\$	Applied
		Track 1a - FD/Construction	\$	Applied

Project Name: TX - Tower 55 At Grade Improvement Project - Ia Date of Submission: 8/24/09 Version Number: v1

## B. Project Overview

<p><b>(1) FD/Construction Project Name:</b> Tower 55 At Grade Rail Improvement Project</p>
<p><b>(2) Indicate the Track under which you are applying: Track 1a - FD/Construction</b>  <i>Please note if you are applying for Track 1a–FD/Construction and Track 4 concurrently, you must submit <b>two separate versions</b> of this application into <a href="http://www.GrantSolutions.gov">www.GrantSolutions.gov</a> (one for Track 1a –FD/Construction and one for Track 4–FY 2009 Appropriations Projects).</i></p>
<p><b>(3) Indicate the activity(ies) for which you are applying</b> (check both if applicable):</p> <p style="text-align: center;"> <input checked="" type="checkbox"/> Final Design      <input checked="" type="checkbox"/> Construction         </p>
<p><b>(4) What are the anticipated start and end dates for the FD/Construction Project?</b> (mm/yyyy)</p> <p style="text-align: center;"> <b>Start Date:</b> 02/2010      <b>End Date:</b> 02/2012         </p>
<p><b>(5) Total Cost of the FD/Construction Project</b> (year of expenditure (YOE) Dollars*): \$ 93,700,000</p> <p style="text-align: center;"><b>Please provide proposed inflation assumptions and methodology, if applicable in the space below. Please limit response to 1,000 characters.</b></p> <p>All cost projections in this application are based on 30% or better preliminary engineering estimate. All unit costs used are based on projected 2010 unit values and are escalated year over year by a 5% construction inflation rate. This inflation rate is the standard rate used for rail construction activities by both the BNSF and UP railroads, accounting both for construction material and labor cost increases.</p> <p>For 2010 expenditures, the projected unit costs are assumed and with 2011/2012 expenses the above stated inflation factors are used. This inflation rate coupled with a 15% contingency factor are included in the \$93.7M project estimate to account for both cost refinements during final design engineering as well as construction bidding uncertainties. All contract bids will require the inclusion for all applicable material, fuel and labor escalators prior issuance of the final agreements.</p> <p style="text-align: center;"><b>Of the total cost of the FD/Construction Project, how much would come from the FRA HSIPR Program:</b> (YOE Dollars**) \$30.0 M</p> <p style="text-align: center;"><b>Indicate percentage of total cost to be covered by <u>matching funds</u> 68%</b>  <i>Applications submitted under Track 4 require at least a 50 percent non-Federal match to be eligible for HSIPR funding.</i></p> <p><small>* Year-of-Expenditure (YOE) dollars are inflated from the base year.              ** This is the amount for which the applicant is applying.</small></p>
<p><b>(6) Project Overview Narrative.</b> <i>Please limit response to 5,000 characters.</i></p> <p>Provide an overview of the main features and characteristics of the FD/Construction Project, including:</p> <ul style="list-style-type: none"> <li>• The location of the project including name of rail line(s), State(s), and relevant jurisdiction(s) (include map if available in supporting documentation).</li> <li>• Identification of service(s) that would benefit from the project, the stations that would be served, and the State(s) where the service operates.</li> <li>• How the project was identified through a planning process and how the project is consistent with an overall plan for developing High-Speed Rail/Intercity Passenger Rail service.</li> <li>• How the project will fulfill a specific purpose and need in a cost-effective manner.</li> <li>• The project’s independent utility.</li> <li>• The specific improvements contemplated.</li> <li>• Any use of railroad assets or rights-of-way, and potential use of public lands and property.</li> <li>• Other rail services, such as commuter rail and freight rail that will make use of, or otherwise be affected by, the project.</li> </ul>

Amtrak has continued to focus on the value of intercity passenger rail (IPR) since its inception. Two viable segments of this national service network are the Heartland Flyer and Texas Eagle services connecting Oklahoma City to Fort Worth and San Antonio to Chicago respectively.

Running on BNSF and UP main lines, the Flyer and Eagle routes provide service both north/south and east/west across the nation. Since 1999, the Flyer's 418 mile daily round trip service from Oklahoma City to Fort Worth, TX has carried an average of near 80,000 passengers annually with 5 additional stops along the way. The Eagle, originating in 1948, is a once daily round-trip 1,308 mile service network from Chicago to San Antonio. With 26 total stops, the Eagle links up with Amtrak's Sunset Limited, offering another 13 stops between Del Rio, TX and Los Angeles, CA. Since 2004, the Eagle has average annual ridership over 250,000 passengers, providing direct connections with several of the nations largest cities.

As the nation's transportation supply chain continues to focus on environmental awareness, is impacted by increased fuel prices and is constrained by highway congestion, intercity passenger rail is developing as a more viable mode of transportation. Improving existing IPR service on-time performance (OTP), service flexibility and connectivity is the key towards meeting this transportation demand. The Tower 55 At-Grade Rail Improvement Project is well aligned with this national vision.

This application package is a compilation of BNSF and UP improvements to alleviate congestion at one of the nation's busiest rail intersections, Tower 55, located in Ft. Worth, Texas. Tower 55 is an at-grade intersection of two Class I railroads, BNSF Railway and Union Pacific Railroad. The BNSF and UP tracks passing through Tower 55 provide a vital economic link for Texas and North America. Today, the Tower 55 at-grade rail interlocker supports the following rail movements:

- Amtrak's Flyer/Eagle services
- Intermodal, auto, merchandise, and grain between the Pacific Northwest, California, the Midwest to the Gulf Coast, Southeast Texas and Mexico
- Coal traffic from the Powder River Basin, WY to electric utilities in South Texas

Handling an average of 102 trains per day, Tower 55 volume has increased over the years, straining the infrastructure to the point that capacity will be reached in the near future if no action is taken to improve Tower 55's flow/capacity. Today, the current configuration does not allow trains to move smoothly through the facility. Instead, trains are staged in sidings as they work their way through the junction. For BNSF, trains are regularly staged as far south as Temple, TX and as far north as Gainesville, TX. For UP, trains are regularly staged as far west as Abilene, TX, east as Big Sandy, TX, south as Waco, TX and north to Denison, TX. This train staging necessity propagates delay impacts to both the Flyer and Eagle services operating on BNSF and UP rail lines.

These proposed enhancements aim to alleviate this staging requirement and are the result of comprehensive Amtrak/BNSF/UP performance improvement effort for Amtrak's services. In addition, these improvements were identified and studied by the Tower 55 Technical Advisory Committee staffed by representatives of TxDOT, NCTCOG, Amtrak, the City of Fort Worth, the T, UP and BNSF, with the goal to identify options to improve freight mobility, regional congestion, and air quality. In addition, a comprehensive RTC modeling effort and specific delay impact analysis of the Flyer and Eagle services operating through Tower 55 has been completed.

As a result of modeling/delay impact analysis, a specified scope of work was generated to address the infrastructure conflicts at Tower 55. This scope of work includes additional track north, south and through the Tower 55 interlocker, enhancements to existing rail connectors, new rail signaling systems and public grade crossing/pedestrian improvements. Collectively, these improvements add up to a \$93.7 M improvement project at Tower 55.

These capital improvements will have significant impacts to Amtrak OTP and delay. For routes on BNSF, of the 100 Flyer trains delayed in 2008 for an average of 13 minutes per occurrence, it is estimated that OTP could improve by 7.8 percentage points with 10 minutes of delay reduction. As for the Eagle, 125 trains were delayed in 2008 for an average of 16 minutes per occurrence and a 13 percent improvement in OTP and 12 minute delay reduction is projected. For the Texas Eagle hosted on UP, a 6 to 8 minute per train reduction in delay is anticipated on each of the 2 daily trains that traverse Tower 55. Overall, this represents measurable reduction in delay occurrences and OTP of the Flyer and Eagle services respectively not to mention measurable velocity gains and more than 40% increase in Tower 55's capacity to accommodate train movements of all types versus today's traffic levels.

**(7) Status of Activities: Are any FD or Construction activities that are part of this planned investment underway or**

completed?

Yes (Final Design)     Yes (Construction)     No

If “Yes,” please describe the activities that are underway or completed in the table below.<sup>1</sup> If more than three activities, please detail in Section F of this application.

Activity	Description	Completed? (If yes, check box)	Actual Initiation Date (mm/yyyy)	Actual or Anticipated Completion Date (mm/yyyy)
		<input type="checkbox"/>		
		<input type="checkbox"/>		
		<input type="checkbox"/>		

(8) Describe the project service objectives (check all that apply):

- Additional Service Frequencies
- Improved Service Quality
- Improved On-Time Performance on Existing Route
- Increased Average Speeds/Shorter Trip Times
- Other (Please Describe): Support for additional future High Speed Rail corridor development.

(9) Types of capital investments contemplated (check all that apply):

- Structures (bridges, tunnels, etc.)
- Track Rehabilitation
- New or restored sidings/passing tracks
- Major Interlockings
- Station(s)
- Communication, Signaling and Control
- Rolling Stock Refurbishments
- Rolling Stock Acquisition
- Support Facilities (Yards, Shops, Admin. Buildings)
- Grade Crossing Improvements
- Electric Traction
- Other (Please Describe):

(10) Right-of-Way-Ownership. Provide information for all railroad right-of-way owners in the FD/Construction Project area. Where railroads currently share ownership, identify the primary owner. If more than three owners, please detail in Section F of this application.

Type of Railroad	Railroad Right-of-Way Owner	Route Miles	Track Miles	Status of Agreements to Implement Projects
Amtrak	Amtrak	Flyer-418/Eagle-1308	Flyer-418/Eagle-1308	Master Agreement in Place
Class 1 Freight	BNSF Railway	Flyer-418/Eagle-128	Flyer-418/Eagle-128	Master Agreement in Place
Class 1 Freight	Union Pacific Railway	Eagle-1180	Eagle-1180	Master Agreement in Place

<sup>1</sup> Please note: (a) requests for reimbursement of costs incurred prior to enactment of the relevant appropriations will not be considered and (b) supporting documentation for activities may also be required as noted in Appendix 2 of the HSIPR Guidance.

**(11) Services.** Provide information for all existing rail services within project boundaries (freight, commuter, and intercity passenger). *If more than three services, please detail in Section F of this application.*

Type of Service	Name of Operator	Top Speed Within Project Boundaries		Number of Route-Miles Within Project Boundaries	Average Number of Daily One-Way Train Operations <sup>2</sup> within Project Boundaries	Notes
		Passenger	Freight			
Intercity Passenger	Amtrak	20 MPH		Flyer-66/Eagle-290	6	Daily 21 and 22 trains at 3 moves per train
Freight	BNSF Railway		20 MPH	Flyer-66/Eagle-128	26	
Freight	Union Pacific Railroad		30 MPH	Eagle-162	70	

**(12) Rolling Stock Type.** Describe the fleet of locomotives, cars, self-powered cars, and/or trainsets that would be intended to provide the service upon completion of the project. *Please limit response to 1,000 characters.*

While increased frequency and trains sets are not a direct expectation of the Tower 55 Improvement Project, the OTP and run time efficiencies are expected to increase potential ridership, promoting future implementation of proposed additional route services along the existing designated High Speed Rail Corridor.

The Amtrak Flyer service currently consists of 1 GE Genesis P42 passenger locomotive, 2 Superliner coaches, 1 Superliner II Coach Café, and a Non-Powered Control Unit (NPCU) making the train bi-directional, adding to its overall operational flexibility.

As for the Eagle, the consist for Trains 21 and 22 are most typically made up of 1 GE Genesis P42 passenger locomotive, 1 Superliner dorm sleeper, 1 Superliner sleeper, 1 Cross Country Café, 1 Sightseer Lounge, 2 Superliner coaches and 1 coach-baggage car with a 12 hour turn around at each end of the service route.

**(13) Intercity Passenger Rail Operator.** Provide the status of agreements with partners that will operate the benefiting high-speed rail/intercity passenger rail service(s) upon completion of the planned investment (e.g., Amtrak).  
 Name of Operating Partner: Amtrak  
 Status of Agreement: Final executed agreement on project scope/outcomes

**(14) Benefits to Other Types of Rail Service(s).** Are benefits to non-intercity-passenger rail services (e.g., commuter, freight) foreseen?  
 Yes     No  
 If “Yes”, provide further details in Section E, Question 2.

<sup>2</sup> One daily round-trip train operation should be counted as two daily one-way train operations.

Project Name: TX - Tower 55 At Grade Improvement Project - Ia Date of Submission: 8/24/09 Version Number: v1

### C. Eligibility Information

(1) Select applicant type, as defined in Appendix 1.1 of the HSIPR Guidance (only States may apply for Track 4):

- State
- Amtrak

If one of the following, please append appropriate documentation as described in Section 4.3.1 of the HSIPR Guidance:

- Group of States
- Interstate Compact
- Public Agency established by one or more States
- Amtrak in cooperation with a State or States

(2) Establish Completion of Preliminary Engineering. In the space(s) below, please list the documents that establish completion of Preliminary Engineering for the project covered by this application. See HSIPR Guidance Appendix 2.2. If more than four references need to be listed, please place the additional information in Question F.

Document Name	Completion Date (mm/yyyy)
30% Preliminary Engineering Plans	08/2009
30% Project Photo Log and Base Map	08/2009
30% Project Critical Path Schedule	08/2009

(3) Establish Completion of NEPA Documentation (the date document was issued and how documentation can be verified by FRA). The following are approved methods of NEPA verification (in order of FRA preference): 1) References to large EISs and EAs that FRA has previously issued, 2) Web link if NEPA document is posted to a website (including www.fra.gov), 3) Electronic copy of non-FRA documents attached with supporting documentation, or 4) a hard copy of non-FRA documents (large documents should not be scanned but should be submitted to FRA via an express delivery service). See HSIPR Guidance Section 1.6 and Appendix 3.2.9.

Documentation	Date (mm/yyyy)	Describe How Documentation Can be Verified
<input checked="" type="checkbox"/> Categorical Exclusion Documentation	08/2009	Copy of CATEX provided to FRA Attached
<input type="checkbox"/> Final Environmental Assessment		
<input type="checkbox"/> Final Environmental Impact Statement		

(4) Indicate if there is an environmental decision from FRA (date document was issued and web hyperlink if available).

Documentation	Date (mm/yyyy)	Hyperlink (if available)
<input type="checkbox"/> Categorical Exclusion Determination		Pending FRA Review
<input type="checkbox"/> Finding of No Significant Impact		
<input type="checkbox"/> Record of Decision		

Project Name: TX - Tower 55 At Grade Improvement Project - Ia Date of Submission: 8/24/09 Version Number: v1

## D. Public Return on Investment

(1) **1A. Transportation Benefits.** See HSIPR Guidance Section 5.1.1.1. Please limit response to 8,000 characters:

How is the project anticipated to improve Intercity Passenger Rail (IPR) service? Describe the overall transportation benefits, including information on the following (please provide a level of detail appropriate to the type of investment):

- **IPR network development:** Describe improvements to intermodal connections and access to stations as well as actual and potential expansions to the IPR network that may result from the project (including opportunities for interoperability with other services).
- **IPR service performance improvements** (also provide specific metrics in table 1B below): Please describe service performance improvements directly related to the project, as well as a comparison with the existing service (without project). Describe relevant reliability improvements (e.g., increases in on-time performance, reduction in operating delays), reduced schedule trip times, increases in frequencies, aggregate travel time savings (resulting from reductions to both schedule time and delays, expressed in passenger-minutes), and other relevant performance improvements.
- **IPR service results** (also provide specific metrics in table 1B below): Describe relevant outcomes of the service improvement such as increases in ridership, passenger-miles, and other results in comparison with the existing service (without project).
- **Suggested supplementary information** (only when applicable):
  - **Transportation Safety:** Describe overall safety improvements that are anticipated to result from the FD/Construction Project, including railroad and highway-rail grade crossing safety benefits, and benefits resulting from the shifting of travel from other modes to safer IPR service.
  - **Cross-modal benefits from the FD/Construction Project, including benefits to:**
    - ✓ **Commuter Rail Services** – Service improvements and results (applying the same approach as for IPR above).
    - ✓ **Freight Rail Services** – Service performance improvements (e.g., increases in reliability and capacity), results (e.g. increases in ton-miles or car-miles of the benefiting freight services), and/or other congestion, capacity or safety benefits.
    - ✓ **Congestion Reduction/Alleviation in Other Modes; Delay or Avoidance of Planned Investments** – Aviation and highway congestion reduction/alleviation, and/or other capacity or safety benefits. Describe any planned investments in other modes of transportation that may be avoided or delayed due to the improvement to IPR service that will result from the project.

As one of the nation’s most acute rail chokepoints, the Tower 55 improvements are essential to both passenger and freight operations running through the Texas and the entire south central United States. Rail lines for BNSF, UP, TRE and FWWR all converge at this intersection, with a daily average of 102 freight trains passing through Tower 55 daily. Additionally, two Amtrak Flyer and Eagle trains are forced to maneuver through this congested intersection daily. **With both passenger and freight trains demanding access to the capacity at Tower 55, delay times for passenger movements can be 30 minutes or more with averages approaching 90 minutes for freight movements through the interlocker.**

Tower 55 and BNSF and UP rail lines that run through Fort Worth, TX are integral to Amtrak’s service for 821/822 Flyer trains and 21/22 Eagle trains as part of the Inter City Passenger network. Both the Flyer and Eagle services utilize the interlocker at Tower 55 for both stationing at the Fort Worth Intermodal Transportation Center (ITC) and for through movements along their respective routes. The BNSF and UP railroads also utilize the interlocker for the majority of their north/south and east/west corridor movements that transit the state of Texas. Given the current daily service schedules of both the Flyer and Eagle routes and the additional intercity rail services offered at both origin and destinations alike, Tower 55 is a critical link to the viability of the network’s on-time performance (OTP) goals.

Specific to the Texas Eagle service, a total of six movements occur every day through Tower 55 as trains pass through the interlocker each afternoon en-route to the Fort Worth ITC station and their eventual destination. These six movements are categorized into three required movements per train per day: 1) Amtrak approaches T55 south bound and proceeds through the interlocker, 2) Amtrak backs into ITC located north of the tower for passenger boarding and 3) Amtrak departs ITC and heads south. This robust activity is reversed for north bound Eagle moves and is susceptible to capacity driven delays at the rail intersection. As for the Flyer route, these trains are equipped with NPCU's for bi-directional moves limiting the Flyers need to physically cross the diamond. However, considering the staging effects incurred by freight trains impacted by the interlocker's current capacity, often interfering with the Flyer's access to the ITC, Amtrak 821/822 trains are also subject to measurable delays due to Tower congestion.

The growing volumetric demands for both passenger and freight rail capacity has now begun to exceed the capacity threshold at Tower 55. With what used to be 2 and 3 day a week service plans for both the Flyer and Eagle coupled with much lower freight rail counts, the current infrastructure at Tower 55 was adequate to accommodate rail volumes with little resulting delay. Today, considering the multiple daily Amtrak movements as well as increased rail freight demand, the limited rail infrastructure to support north/south, east/west and quadrant connection movements has resulted in consistent capacity constraints in the form of both passenger and freight train delays.

These delays are a result of increased train staging in sidings as they work their way though the junction. For the BNSF route, trains are regularly staged as far south as Temple, TX and as far north as Gainesville, TX. In UP's case, trains are regularly staged as far west as Abilene, TX, east as Big Sandy, TX, south as Waco, TX and to the north at Denison, TX. This train staging propagates delay impacts to both the Flyer and Eagle services operating on both the BNSF and UP rail lines as they make their way towards the diamond working around the slower and lower priority freight trains.

Considering these negative impacts to the passenger movements running to and through Tower 55, on-time performance and run-times for both the Flyer 821/822 and Eagle 21/22 services are locally strained. In 2008 on BNSF, the Amtrak time table OTP for the Heartland Flyer was 36.2%, and for the Texas Eagle was 21.8% with similar OTP percentages on the UP. **This reflects the fact that there were literally hundreds of Texas Eagle and Heartland Flyer delays that were directly caused by Tower 55.** 2008's delay and year end OTP for both services are already strained, but further growth at Tower 55 relative to both passenger and freight movements will drive the passenger performance metrics further outside of acceptable ranges for OTP and service run-time. In view of this unfortunate reality as well as the fact that freight rail movements are experiencing the similarly impactful constraints, a detailed RTC modeling analysis and on-time performance review was initiated to first identify resulting train delays and second, to develop a remediation plan to improve the rail operations reliability.

To address the identified passenger and freight delay drivers, a combination of at-grade infrastructural improvements are proposed. These improvements include the installation of additional main line trackage north, south and through the Tower 55 interlocker. Coupled to this, enhancements to the existing 4 quadrant rail connectors are proposed. This additional track infrastructure will be advantaged with the installation of new signaling and controls systems as well as with improvements to local at grade public crossing and pedestrian access ways.

For routes hosted by BNSF, of the 100 Flyer trains delayed in 2008 for an average of 13 minutes per occurrence attributed to Tower 55, it is estimated that OTP can improve by 7.8 percentage points resulting in 10 minutes of delay reduction. As for the Eagle, 125 trains were delayed in 2008 for an average of 16 minutes per occurrence relative to Tower 55 and a 13 percent improvement in OTP is forecasted as well as a 12 minute estimated reduction in delay. For routes hosted by UP, a 6 to 8 minute per train reduction in delay is estimated on each of the 2 daily Eagle trains that traverse Tower 55 through the successful implementation of this project. Overall, this represents a measurable reduction in delay/conflict occurrences and an overall improvement in the OTP of the Flyer and Eagle services respectively not to mention measurable velocity gains and an estimated more than 40% increase in Tower 55's capacity to accommodate train movements versus today's traffic levels.

In general, the prescribed improvements at Tower 55 will increase interlocker through put, increase running speeds as well as add additional staging flexibility adjacent to the rail intersection. As described above, OTP and run-times are for passenger movements are expected to improve. For freight movements, the additional capacity and running speeds will accommodate future volume growth and help mitigate train delays, emissions, and both rail and truck diversion scenarios to that would otherwise result from the projected increase in transportation demands.

When considering the proposed infrastructure improvements and resulting OTP/run-time efficiencies, it is fully expected that the end result will be increased ridership resulting in more passenger-miles ridden on both the Flyer and Eagle services. Overall, service reliability will be greatly improved, driving a more cost effective, timely and predictable intercity passenger operation. These positive end results are directly in line with the long term OTP goals and increased service offerings to meet growing ridership demands in the future.

**1B. Operational and Ridership Benefits Metrics:** In the table(s) below, provide information on the anticipated transportation benefits and ridership changes projected to result from the project. Please do not include benefits and changes that would occur even if the project is not implemented (for example, as a result of population or economic growth factors).

Project/Program Metric	Actual— FY 2008 levels	Projected Totals by Year (Actual Levels Plus Project-Caused Changes Only)		“X” If N/A or Unsure
		First Full Year After Project Completion	Fifth Full Year After Project Completion	
Annual passenger-trips				<input checked="" type="checkbox"/>
Annual passenger-miles (millions)				<input checked="" type="checkbox"/>
Annual IPR seat-miles offered (millions)				<input checked="" type="checkbox"/>
Average number of daily round train trip operations (typical weekday)				<input checked="" type="checkbox"/>
On-time performance (OTP) <sup>3</sup> – percent of trains on time at endpoint terminals	Flyer-36.2%/Eagle-21.8% (BNSF)	Flyer+7.8%/Eagle+13% (BNSF)	Flyer+7.8%/Eagle+13% (BNSF)	<input type="checkbox"/>
Average train operating delays: minutes of en-route delays per 10,000 train-miles <sup>4</sup>	Flyer 13min/Eagle 16min (BNSF)	Flyer -10min/Eagle -12min (BNSF) Eagle -8 min (UP)	Flyer -10min/Eagle -12min (BNSF) Eagle -8 min (UP)	<input type="checkbox"/>
Top operating speed (mph)				<input checked="" type="checkbox"/>
Average scheduled operating speed (mph) (between endpoint terminals)	20 MPH N/S & 30 MPH E/W	30 MPH N/S & 40 MPH E/W	30 MPH N/S & 40 MPH E/W	<input type="checkbox"/>

**(2) 2A. Economic Recovery Benefits.** This section is required for Track 1a, and optional for Track 4. Please limit response to 4,000 characters. For more information, see Section 5.1.1.2 of the HSIPR Guidance.

Describe the contribution the FD/Construction Project is intended to make towards economic recovery and reinvestment, including information on the following:

<sup>3</sup> As calculated and reported by Amtrak according to its existing procedures and definitions. An example can be found at page E-7 of the May 2009 Monthly Performance Report at <http://www.amtrak.com/pdf/0905monthly.pdf>. ‘On-time’ is defined as within the distance-based thresholds originally issued by the Interstate Commerce Commission, which are: 0 to 250 miles and all Acela trains—10 minutes; 251 to 350 miles—15 minutes; 351 to 450 miles—20 minutes; 451 to 550 miles—25 minutes; and 551 or more miles—30 minutes.

<sup>4</sup> As calculated by Amtrak according to its existing procedures and definitions. Useful background can be found at pages E-1 through E-6 of Amtrak’s May, 2009 Monthly Performance Report at <http://www.amtrak.com/pdf/0905monthly.pdf>

- How the project will result in the creation and preservation of jobs, including number of onsite and other direct jobs (on a 2,080 work-hour per year, full-time equivalent basis), and timeline for achieving the anticipated job creation.
- How the different phases of the project will affect job creation (consider the construction period vs. operating period)
- How the project will create or preserve jobs or new or expanded business opportunities for populations in Economically Distressed Areas (consider the construction period vs. operating period)
- How the project will result in increases in efficiency by promoting technological advances.
- How the project represents an investment that will generate long-term economic benefits (including the timeline for achieving economic benefits and describe how the project was identified as a solution to a wider economic challenge)
- If applicable, how the project will help to avoid reductions in State-provided essential services.

The Tower 55 Improvement Project would result in many economic recovery benefits. Over the life of the project it is estimated to create 1,874 direct and indirect jobs-years of employment based on the US Department of Commerce data indicate that every dollar of rail infrastructure investment generates more than three dollars in total economic output because of the investment, purchases, and employment occurring among upstream suppliers. All told, each \$1 billion of new rail investment creates an estimated 20,000 jobs nationwide (on a 2,080 work-hour per year, full-time equivalent basis). The majority of jobs created supporting this project will be in the construction industry starting in the 2nd quarter of 2010, with some jobs created in the first few quarters related to the architectural, engineering, and planning services industry.

There are two distinct phases of the Tower 55 Improvement Project, the construction phase and the operating phase. The majority of the direct job creation will occur during the construction phase, which includes all engineering and construction completion. The operating phase following project implementation will not have direct job growth, but due to the efficiency improvements achieved and increase in traffic flow through the intersection, indirect jobs will be created in the passenger rail industry attributable to increased ridership due to better OTP and increased reliability as well as future job growth throughout the industries who move freight on the BNSF and UP railroads.

The populations most likely to benefit from the direct job creation by this project will be the local populations around the project area, as construction jobs are typically sourced locally. The City of Ft. Worth participates in the Texas Enterprise Zone program, and has designated a large portion of its city as an economically distressed geographic area. The Tower 55 Improvement Project is located within one of these designated enterprise zone areas, so the primary pool of construction jobs created could potentially be filled from this area.

The improvements being proposed for Tower 55 will result in measurable train operating efficiencies as it relates to the implementation of new signal and interlocker controlling systems. Considering the extreme rail volumes utilizing the rail intersection, an advance Centralized Traffic Control (CTC) interlocking is proposed. This new signaling system will promote centralized train dispatching and track control for all movements in, around and through the interlocker. This will support added train dispatching capacity, smoother rail operations and increased speeds through the interlocker.

The efficiencies, OTP improvements, environmental and economic benefits are all long-term benefits, which are projected to be realized for at least the next 20 years. This project was identified as a major economic chokepoint due to its enormous congestion for both passenger and freight rail, as costly time delays continued to intensify as train congestion has increased over the years. Through the implementation of this project, these limitations can be lifted, directly stimulating the local economy through construction activities and longer term indirect benefits through significant improvements to passenger rail service, as well as allowing more efficiency in freight movement. This economic benefit would be achieved immediately upon completion of the project, as train movements would see an immediate impact.

**2B. Job Creation:** Provide the following information about job creation through the life of the FD/Construction Project. Please consider construction, maintenance, and operations jobs.

Anticipated number of <u>annual</u> onsite and	FD/ Construction Period	First full Year of Operations	Fifth full Year of Operations
--	-------------------------	-------------------------------	-------------------------------

other direct jobs created (on a 2080 work-hour per year, full-time equivalent basis)	1,874	N/A	N/A
--	-------	-----	-----

**(3) Environmental Benefits.** *Please limit response to 4,000 characters.*

How will the FD/Construction project improve environmental quality, energy efficiency, and reduction in the Nation’s dependence on oil? Address project-caused changes in the following:

- Any projected reductions in key emissions (CO<sub>2</sub>, O<sub>3</sub>, CO, PM<sub>x</sub>, and NO<sub>x</sub>) and their anticipated effects. Provide any available forecasts of emission reductions from a baseline of existing service for the first and fifth years of full operation (*provide supporting documentation if available*).
- Any expected energy and oil savings from traffic diversion from other modes and changes in the sources of energy for transportation. Provide any available information on changes from the baseline of the existing service for the first and fifth years of full operation (*provide supporting documentation if available*).
- Use of green methods and technologies. Address green building design, “Leadership in Environmental and Energy Design” building design standards, green manufacturing methods, energy efficient rail equipment, and/or other environmentally-friendly approaches.

The Tower 55 Improvement Project derives many environmental benefits. These benefits range from reduced key emissions factors such as CO<sub>2</sub>, HC, CO, PM<sub>x</sub>, and NO<sub>x</sub> to decreased diesel fuel burn as a result of improve flow and reduced train run-times. All of these benefits would occur in the Dallas-Fort Worth non-attainment area, supporting EPA’s goal of improved air quality in North Texas.

To generate activity values as a basis for emission calculations, RTC modeling was used to compare current, “Build” and “No Build” operating scenarios relative to rail congestion and the relationship to overall environmental impact. As part of this simulation process, when considering the Build scenario, several environmental benefits were realized and can be categorized by: train delay savings, averted rail traffic diversion, averted truck diversion and reduce vehicular delays.

Considering the Build scenario, both passenger and freight trains will experience reduced train delays. Using the fuel savings from the RTC tool, comparing the build vs. no-build alternatives, emissions reductions were derived by fuel consumption benefits through reduced locomotive braking, idling, and restarting due to better traffic flow. To generate the resulting emissions benefits, the average line-haul emission rates were multiplied by the fuel consumption benefits associated with the operating improvements derived from this project.

Based on the current capacity constraints at the interlocker, passenger and freight train flow is unstable at Tower 55. As capacity strains were demonstrated by the RTC results, freight train diversions are projected to accommodate traffic growth for north and south movements via other available routes in the Metroplex east and west of Tower 55. These train diversions by traffic type are required to accommodate future projected growth assuming no construction. Based on increased transit times due to increased route miles and additional fuel consumption, these route diversions result in additional locomotive emissions being emitted.

As for east and west rail movements, RTC was used to quantify an equivalent diversion impact of the no build option relative to train movements through Tower 55. For these candidate movements, considering the current capacity constraints at the interlocker, volume growth without improvements will drive diversion from rail to truck. The diversion to truck will result in additional air emissions and fuel burn as well as added highway congestion and increased operations/maintenance to infrastructure already at capacity. Emissions reductions were calculated using the RTC results from the diversion analysis to calculate additional over-the-road truck emissions from diverted freight growth that could no longer be moved via rail through Tower 55.

Finally, considering the proposed Tower 55 improvements, improved rail congestion will result in reduce vehicle idling emissions due to minimized vehicle delay at attributable at grade public crossings. Today, the congested rail operation at Tower 55 impacts train velocity throughout North Texas. This impact results in slower train speeds, increased run times and added train staging delays. These rail impacts result in added congesting and wait time at numerous at grade public crossings in the Metroplex. To estimate the resulting vehicle delay, the vehicle approach volumes, average delay period, and total daily delay due to congestion were combined.

To continue to realize these “green” benefits, the improvements at Tower 55 are paramount. Assuming implementation, the emissions benefits for all environmental benefit categories including both passenger and freight emissions reductions are measurable. For the projected 20 year life of this project the following emissions benefits are projected: 1,992,761 million metrics tons of CO<sub>2</sub>, 617 metric tons of HC, 5.4 metric tons of CO, 366 metric tons of PM<sub>x</sub>, and 15,238 metric tons of NO<sub>x</sub>.

**(4) Livable Communities Project Benefits Narrative.** *(For more information, see Section 5.1.1.3 of the HSIPR Guidance, Livable Communities). Please limit response to 3,000 characters.*

How will the FD/Construction Project foster Livable Communities? Address the following:

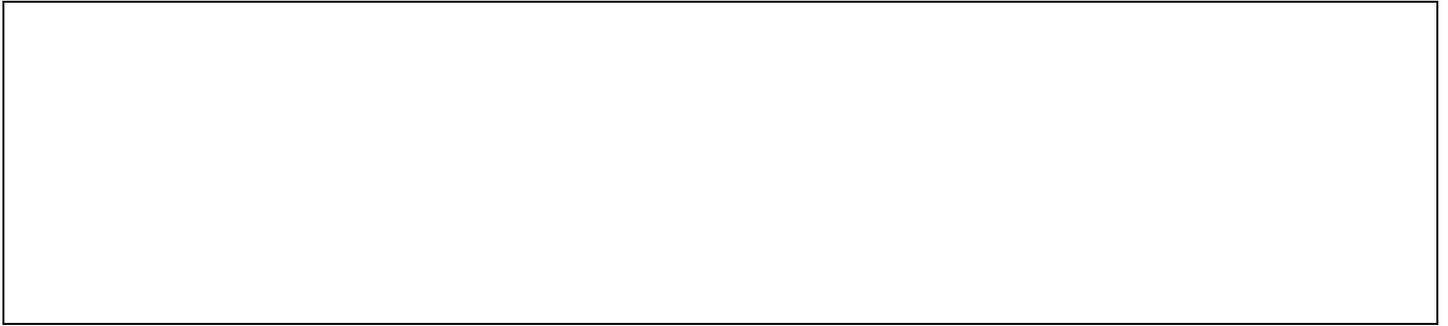
- Integration with existing high density, livable development: Provide specific examples, such as (a) central business districts with walking/biking and (b) public transportation distribution networks with transit-oriented development.
- Development of intermodal stations: Describe such features as direct transfers to other modes (both intercity passenger transport and local transit).

A livable community offers safety, education, parks, good jobs, affordability and mobility. Livability is sustained by connectivity, allowing for ease of travel for work, play and school. While inner-city public transportation fosters livability at the individual city level, Amtrak provides connectivity between these communities spread out over thousands of miles. The proposed at grade improvements to Tower 55 will allow Amtrak passengers more time to enjoy their communities. As previously mentioned, Heartland Flyer travelers will save a projected 10 minutes of lost travel time per trip, while Texas Eagle travelers will save 12 minutes of projected lost travel time per trip. The travel time saved by these improvements can be spent in any one of the 30+ cities these two routes directly serve, significantly improving the livability or quality of life of each passenger.

The Flyer connects the two major business centers of Oklahoma City and Ft. Worth, with stops in Norman, Purcell, Pauls Valley, & Ardmore, OK, as well as Gainesville, TX. The Flyer carries you directly in to downtown Oklahoma City, with the station located adjacent to the historic Bricktown Entertainment District. The district includes a canal with a mile-long river walk lined with restaurants. The station is also conveniently located near the city’s Metro Transit public bus system, allowing passengers access to other attractions such as the National Cowboy and Western Heritage Museum and Myriad Botanical Gardens. Flyer travelers can also connect to the Texas Eagle and other Amtrak routes to travel to Chicago and further east, south to Austin and San Antonio, or west to Los Angeles.

The Eagle offers daily service along 26 stops between Chicago and San Antonio, with options to continue to Los Angeles along Amtrak’s Sunset Limited service originating in New Orleans. The Eagle offers true connectivity between large and small cities on the east and west coasts, and is the quintessential example of inter-city passenger rail. The main cities along this route, Chicago, Dallas/Ft. Worth and Los Angeles, are the model of public transportation, offering passengers unlimited access to all the cities have to offer.

Both the Flyer and Eagle trains arrive at the recently constructed Intermodal Transportation Center (ITC); the hub for bus, taxi and rail service in Ft. Worth, allowing direct transfers to multiple modes of transportation. The ITC is located only blocks away from historic Bass Performance Hall and Sundance Square, part of a 20-block entertainment district in the heart of downtown Ft. Worth. The ITC offers other modes of public transportation such as Greyhound inter-city bus service, Ft. Worth’s city bus system known as The T, as well as the Trinity Railway Express, a commuter rail connecting the cities of Ft. Worth and Dallas. Additionally, DFW Airport provides a shuttle service every 15 minutes, which allows passengers from as far north as Oklahoma City easy access to DFW’s international airport.



Project Name: TX - Tower 55 At Grade Improvement Project - Ia Date of Submission: 8/24/09 Version Number: v1

## E. Project Success Factors

**(1) Project Management Approach and Applicant Qualifications Narrative:** *Please provide separate responses to each of the following. Additional information on project management is provided in Section 5.1.2.1 of the HSIPR Guidance, Project Management.*

**1A. Applicant qualifications.** *Please limit response to 2,000 characters.*

Management experience: Does the applicant have experience in managing rail investment projects and managing projects of a similar size and scope to the one proposed in this application?

Yes - Briefly describe experience (brief project(s) overview, dates)

No- Briefly describe expected plan to build technical and managerial capacity; provide reference to Project Management Plan.

The railroad project funding will be administered by TxDOT through a written agreement with the railroad to provide the work through railroad force account. The railroad will provide plans, specifications, and estimates for the project which will be attached to the agreement as an exhibit and as a detailed project description.

The agreement requires the railroad and/or its contractors to provide a comprehensive general liability insurance policy, a contractor's protective liability insurance policy, and railroad protective liability insurance, providing a limit of not less than \$2,000,000 aggregate for all occurrences.

The agreement stipulates that development of the project must comply with the National Environmental Policy Act and the National Historic Preservation Act and stipulates how the cost of any environmental mitigation or remediation will be included in the project costs.

The agreement requires the railroad to comply with all applicable provisions of the American Recover and Reinvestment Act of 2009 (ARRA), including all reporting requirements, audits, examination of records, and identifies specific reporting and auditing requirements by ARRA Section. The agreement includes the requirement for all parties to comply with all federal, state, and local laws, statues, ordinances, rules, regulations, and orders and decrees of any courts or administrative bodies. The agreement includes a lobbying certification in which the parties certify that no appropriated funds have been or will be used for lobbying efforts.

When the agreement is finalized and signed by both parties, and the grant agreement is executed with the FRA and funds obligated, the project will proceed through the railroad force account process as detailed above. Monthly invoices will be submitted for work completed and paid after audit and verification of the work reported. TxDOT would then submit billings to the FRA for reimbursement.

This process is the same process that TxDOT has used for many years for grade crossing improvements and is a well established process.

**1B. Describe the organizational approach for the different project stages included in this application (final design, construction), including the roles of staff, contractors and project stakeholders in implementing the project. For construction activities, provide relevant information on work forces, including railroad contractors and grantee contractors.** *Please limit response to 2,000 characters.*

A diverse cross functional team has and will be assembled to implement and manage the Tower 55 Improvement Project. The project team currently consists of applicable members of the Texas Department of Transportation, NCTCOG, the City of Fort Worth, Amtrak, and BNSF/UP Railroads with support from professional consultants. Through the contribution of this inclusive team, a project plan was developed including scope development, preliminary engineering, land acquisition, environmental permitting, final design, bidding/contract generation and construction.

Scope development for Tower 55 was completed through comprehensive RTC modeling of the future and proposed freight and passenger rail operations. Led by the BNSF and UP, the results of this modeling effort were utilized to develop infrastructure improvements supporting operational fluidity resulting in an agreed to project scope of work. With this scope of work, the BNSF

and UP have progressed a 30% or better preliminary engineering effort with the assistance of HDR Engineering and support and review by the NTCOG and City of Fort Worth. The results of this effort are engineered plans, critical path project schedule, and ROM estimate.

As for final design and construction, pending HSIPR funding award, it is currently planned for the Texas Department of Transportation to act as the governing agency in control of funding allocation and budgetary review, the BNSF and UP railroads as the project implementers responsible for final design with HDR Engineering as the low bidder, construction bidding/contract generation and 3<sup>rd</sup> party construction for the proposed rail improvements with the City of Fort Worth assisting with project planning support for all construction activities requiring public interface. At this time, it is expected that all site prep work, signal design and construction, heavy civil construction, and structural construction will be performed by contract support. The BNSF and UP railroads will be responsible for project management, field review and track construction.

**1C. Does the FD/Construction Project require approval by FRA of a waiver petition from a Federal railroad safety regulation? (Reference to, or discussion of, potential waiver petitions will not affect FRA’s handling or disposition of such waiver petitions.)**

- YES- If yes, explain and provide a timeline for obtaining the waivers  
 NO

*Please limit response to 1,500 characters.*

**1D. Provide a preliminary self-assessment of project uncertainties and mitigation strategies (consider funding risk, schedule and budget risk and stakeholder risk). Describe any areas in which the applicant could use technical assistance, best practices, advice or support from others, including FRA. Please limit response to 2,000 characters.**

The inclusive scope of work is financially reasonable, constructible, and meets all parties’ operational needs; however, risks from project uncertainties do exist. To alleviate the impact of these risks, a risk assessment was performed to identify key drivers and mitigation strategies. As part of this process, risks were categorized as Stakeholder, Funding/Budgetary, and Schedule risks with risks preventing project implementation labeled as non-starter.

Stakeholder risks are those relative to agreements, contracts and assurances. While unlikely, two main risks were identified: 1) stakeholder scope and agreement incongruity and 2) ROW acquisition. To mitigate agreement incongruity, a Scope and Terms Agreement for pre-concurrence in advance of potential HSIPR funding award has been implemented. As for ROW acquisition risk, a recent redesigned of the project minimizes required ROW acquisition. Only 9.15 acres of additional ROW is required for construction and due diligence efforts are underway with the City of Fort Worth.

Three Funding/Budgetary risks were identified: 1) non-award of HSIPR funding, 2) bid overruns and 3) scope creep. The impact of non-award of HSIPR is a non-starter risk. All efforts to develop an effective project resulting in positive impacts to high speed rail and economic recovery were taken to mitigate this risk. As for bid overruns, a cross team review process was utilized to ensure that all scope items were inclusive and accounted for in the estimates. The risk of scope creep will be mitigated by the agreed to Scope and Terms Agreement.

Finally, two Schedule risks were identified: 1) weather impacts and 2) signal design/material acquisition. To mitigate the occurrence and impact of these risks, a phasing plan has been developed to condense the critical path with concurrent construction activity. This preliminary planning will promote immediate final design activity and increase activity float to ensure a timely and flexible schedule.

**(2) Stakeholder Agreements Narratives. Additional information on Stakeholder Agreements is provided in Section 5.1.2.2 of the HSIPR Guidance.**

Under each of the following categories, describe the applicant’s progress in developing requisite agreements with key stakeholders. In addition to describing the current status of any such agreements, address the applicant’s experience in framing and implementing similar agreements, as well as the specific topics pertaining to each category.

**2A. Ownership Agreements – Describe how agreements will be finalized with railroad infrastructure owners listed in the**

“Right-of-Way Ownership” and “Service Description” tables in Section B. If appropriate, “owner(s)” may also include operator(s) under trackage rights or lease agreements. Describe how the parties will agree on project design and scope, project benefits, project implementation, use of project property, project maintenance, scheduling, dispatching and operating slots, project ownership and disposition, statutory conditions and other essential topics. Summarize the status and substance of any ongoing or completed agreements. *Please limit response to 2,000 characters.*

Considering that the project involves property of both railroads, all parties have worked collectively to produce an agreeable scope of work. Specifically, preliminary engineering has been reviewed and agreed upon by the all parties. A high-level construction schedule is understood by all Parties which will meet ARRA Track 1 requirements. TxDOT will assume responsibility for overseeing overall project progression and budget. Due to existing collective bargaining agreements, all construction activities will be the sole responsibility of each Railroad for work performed on its own property and as such, all Parties agree that the Railroads will own all improvements on their respective properties, including sole responsibility for all operations and maintenance in perpetuity.

Considering the above, TxDOT, and USDOT will have no future obligation to maintain or contribute to this facility in any way once construction has been completed. And, joint freight operations and maintenance responsibilities will be managed by the existing joint facility agreement between the Railroads for the existing crossing. Once the project is fully funded, the Railroads and TxDOT will enter into Construction and Maintenance (CM) agreements which formalize the above terms consistent with the requirements of the Parties and the ARRA. These CM agreements are predominantly standard form, and have been successfully entered into and fully executed numerous times previously by the Railroads and TxDOT.

Additionally, passenger operations affected by this project are in place now and are already controlled by existing operating agreements between the Railroads and Amtrak. Per the current operational agreements, it is agreed to by all parties that dispatching and operating protocols establish the priority of Amtrak passenger trains and that these terms ensure that congestion relief benefits will first accrue to the passenger trains.

**2B. Operating Agreements** – Describe the status and contents of agreements with the intended operator(s) listed in “Services” table in the Project Overview section above. Address project benefits, operation and financial conditions, statutory conditions, and other relevant topics. *Please limit response to 2,000 characters.*

A solidified operating agreement between the National Railroad Passenger Corporation and Burlington Northern Railroad Company and The Atchison, Topeka and Santa Fe Railway Company exists and is valid.

By statute and under the Agreement the BNSF agrees to provide Amtrak with the use of facilities and the service requested by Amtrak for or in connection with the operation of Amtrak’s Intercity Rail Passenger Service, including the carrying of mail and express on Intercity Rail Passenger Trains to the extent authorized by the Act (Title 49 USC Section 24101 et seq.).

In addition, BNSF agrees under the Agreement to “provide and furnish all labor, materials, equipment and facilities necessary to perform the service to be provided” under Sections 3.1 and 3.2 (Basic Service, and New, or Emergency Service) of the Agreement.

Finally, the Agreement ensures that “BNSF shall cooperate in good faith with Amtrak in providing service which will contribute to the success of Amtrak’s Intercity Rail Passenger Service.” In that regard, BNSF has worked closely with Amtrak management in Texas, as well as state transportation officials, in the identification of capital investments needed to improve Amtrak service.

This application puts forth such proposed infrastructure improvements to improve the viability of the Flyer and Eagle Amtrak services by maximizing OTP and run time reliability through alleviating the congestion constraints at Tower 55.

**2C. Selection of Operator** – This question applies to Track 1a only. If the proposed operator railroad was not selected competitively, please provide a justification for its selection, including why the selected operator is most qualified, taking into account cost and other quantitative and qualitative factors, and why the selection of the proposed operator will not needlessly increase the cost of the project or of the operations that it enables or improves. *Please limit response to 1,000 characters.*

N/A

**2D. Other Stakeholder Agreements** – Provide relevant information on other stakeholder agreements including State and local governments. *Please limit response to 2,000 characters.*

N/A

**2E. Agreements with operators of other types of rail service** – Describe any cost sharing agreements with operators of non-intercity passenger rail service (e.g., commuter, freight). *Please limit response to 2,000 characters.*

The Tower 55 At-Grade Rail Improvement Project would be funded by three primary sources:

- a. \$30.0 M HSR-1 funding – contained herein
  - b. \$30.9M TIGER Grant – to be submitted to the OST USDOT September 15, 2009, subject HSR funds
  - c. \$32.8 M Private match funding – by BNSF and UPRR
- \$93.7M Total

This HSR 1A application has been configured to describe the Tower 55 At-Grade Rail Improvement Project and propose partial HSR funding assistance required by the railroads to economically justify the proposed improvements. This proposed federal funding strategy is supported by the associated improvements in delays / OTP the project would deliver to existing Amtrak IPR services – 21/22 and 821/822.

The proposed HSR Track 1a funding level of \$30.0 M is being submitted assuming a successful award of TIGER funding noted above. This structure is proposed to FRA and USDOT as a means to evaluate and award ARRA funding specific to the public benefits that are generated from the project. TxDOT believes this approach would relieve each individual ARRA funding program from the burden of funding benefits that are outside of the program’s core purpose / intent.

**(3) Financial Information.**

**3A. Capital Funding Sources.** Please provide the following information about your funding sources (if applicable).

Non FRA Funding Sources	New or Existing Funding Source?	Status of Funding <sup>5</sup>	Type of Funds	Dollar Amount (YOE Dollars)	% of Project Cost	Describe Uploaded Supporting Documentation to Help FRA Verify Funding Source
Private Match	New	Budgeted	BNSF and UP Capital Contribution	\$32.8M	35%	Letter of Support from BNSF and UP
TIGER Grant	New	Planned	Federal	\$30.9M	33%	<a href="http://www.bnsf.com/communities/govtaffairs/tower55/intro.pdf">www.bnsf.com/communities/govtaffairs/tower55/intro.pdf</a>

<sup>5</sup> **Reference Notes:** The following categories and definitions are applied to funding sources:

**Committed:** Committed sources are programmed capital funds that have all the necessary approvals (e.g. legislative referendum) to be used to fund the proposed project/program without any additional action. These capital funds have been formally programmed in the State Rail Plan and/or any related local, regional, or State Capital Investment Program CIP or appropriation. Examples include dedicated or approved tax revenues, State capital grants that have been approved by all required legislative bodies, cash reserves that have been dedicated to the proposed project/program, and additional debt capacity that requires no further approvals and has been dedicated by the sponsoring agency to the proposed project/program.

**Budgeted:** This category is for funds that have been budgeted and/or programmed for use on the proposed project but remain uncommitted, i.e., the funds have not yet received statutory approval. Examples include debt financing in an agency-adopted CIP that has yet to be committed in their near future. Funds will be classified as budgeted where available funding cannot be committed until the grant is executed, or due to the local practices outside of the project sponsor's control (e.g., the project development schedule extends beyond the State Rail Program period).

**Planned:** This category is for funds that are identified and have a reasonable chance of being committed, but are neither committed nor budgeted. Examples include proposed sources that require a scheduled referendum, requests for State/local capital grants, and proposed debt financing that has not yet been adopted in the agency's CIP.

**3B. Capital Investment Financial Agreements:** Describe any cost sharing contribution the applicant intends to make towards the FD/Construction Project, including its source, level of commitment, and agreement to cover cost increases or financial shortfalls. Describe the status and nature of any agreements between funding stakeholders that would provide for the applicant’s proposed match, including the responsibilities and guarantees undertaken by the parties. Provide a brief description of any in-kind matches that are expected. *Please limit response to 2,000 characters.*

The Texas Department of Transportation does not intend to provide funding for the Tower 55 improvements. The intent of this application is to secure \$30.0 M in funding for the project improvements through the HSIPR grant program. With the assistance of the BNSF Railway (BNSF) and Union Pacific Railroad (UPRR), a separate application requesting \$30.9 M in funding through the TIGER grant program will be submitted in September, 2009. Both railroads have committed to contribute a combined private match totaling \$32.8 M towards the remainder of the improvement project, for a total project fund of \$93.7 M. BNSF and UPRR commit to complete the Tower 55 improvements contingent upon being awarded both the HSIPR and TIGER grant amounts requested.

In the event the project experiences cost overruns or financial shortfalls beyond the sum of the HSIPR and TIGER grant amounts totaling \$60.9M, and the agreed upon matching funds by BNSF and UPRR, BNSF and UP would fund the remaining balance.

**3C. Operating Financial Plan:** Does the applicant expect that the State operating subsidy requirements for the benefiting intercity passenger rail service will significantly increase, **as a result of the project**, during the first five years after project completion?

Yes  No

If “Yes,” please complete the table below (in YOE dollars) and answer the following questions. *Please limit response to 2,000 characters.*

- (a) How did you project future State operating subsidies for the benefiting service(s); and
- (b) What are the source, nature, and likelihood of the funding that will enable the State to finance the projected increases in annual operating subsidies due to the project?

Subsidy	Actual— FY 2009 levels (YOE Dollars)	Projected Totals by Year (Actual Levels Plus Project Caused Changes Only) (YOE Dollars)	
		First Full Year After Project Completion	Fifth Full Year After Project Completion
State operating subsidy (total for all benefiting services)	N/A	N/A	N/A
<p><b>(4) Financial Management Capacity and Capability</b> – Provide audit results and describe applicant capability to absorb potential cost overruns, financial shortfalls, or financial responsibility for potential disposition requirements (include as supporting documentation as needed). Provide statutory references/ legal authority to build and oversee a rail capital investment. <i>Please limit response to 2,000 characters.</i></p> <p>In the event the project experiences cost overruns or financial shortfalls beyond the sum of the HSIPR and TIGER grant amounts totaling \$60.9M, and the agreed upon matching funds by BNSF and UPRR, BNSF and UP would fund the remaining balance.</p> <p>The railroad project funding will be administered by TxDOT through a written agreement with the railroad to provide the work through railroad force account. The railroad will provide plans, specifications, and estimates for the project which will be attached to the agreement as an exhibit and as a detailed project description.</p> <p>The agreement requires the railroad and/or its contractors to provide a comprehensive general liability insurance policy, a contractor’s protective liability insurance policy, and railroad protective liability insurance, providing a limit of not less than \$2,000,000 aggregate for all occurrences.</p> <p>The agreement stipulates that development of the project must comply with the National Environmental Policy Act and the National Historic Preservation Act and stipulates how the cost of any environmental mitigation or remediation will be included in the project costs.</p> <p>The agreement requires the railroad to comply with all applicable provisions of the American Recover and Reinvestment Act of 2009 (ARRA), including all reporting requirements, audits, examination of records, and identifies specific reporting and auditing requirements by ARRA Section. The agreement includes the requirement for all parties to comply with all federal, state, and local laws, statues, ordinances, rules, regulations, and orders and decrees of any courts or administrative bodies. The agreement includes a lobbying certification in which the parties certify that no appropriated funds have been or will be used for lobbying efforts.</p> <p>When the agreement is finalized and signed by both parties, and the grant agreement is executed with the FRA and funds obligated, the project will proceed through the railroad force account process as detailed above. Monthly invoices will be submitted for work completed and paid after audit and verification of the work reported. TxDOT would then submit billings to the FRA for reimbursement.</p> <p>This process is the same process that TxDOT has used for many years for grade crossing improvements and is a well established process.</p> <p>TxDOT has the statutory authority to build and oversee rail construction projects under Chap 91 of the Transportation Code.</p>			
<p><b>(5) Timeliness of Project Completion</b> – Provide the following information on the dates and duration of key activities, if applicable. <i>For more information, see Section 5.1.3.1 of the HSIPR Guidance, Timeliness of Project Completion.</i></p>			
Final Design Duration:	6 months		
Construction Duration:	20 months		
Rolling Stock Acquisition Duration:	N/A months		
Rolling Stock Testing Duration:	N/A months		

Service Operations Start date:	Concurrent during construction
<p><b>(6) If applicable, describe how the project will promote domestic manufacturing, supply and other industries, including United States-based equipment manufacturing and supply industries. Please limit response to 1,500 characters.</b></p> <p>The Tower 55 Improvement Project promotes domestic manufacturing, supply and local US industry in many ways. Specifically, all construction materials anticipated for project implementation will be sourced domestically. This includes approximately \$37.5 M in materials ranging from rail, ties and ballast to bridge structure, signaling systems and specialized construction equipment.</p> <p>Connected with most of these materials are manufacturing and/or industry refinement processes. Whether it be ballast quarry blasting and refinement, concrete tie manufacturing, new rail extrusion, bridge beam development, signal equipment assembly or specialized equipment supply/rental, all are domestically performed and are a vital part of the US economy.</p> <p>Explicit to construction, \$28.1 M in labor dollars are anticipated to be expended on domestically sourced services specific to heavy civil, structural, rail and signal/control systems implementation. Each of these specific industries rely heavily on other associated domestic support services such as heavy civil and rail construction equipment manufactures, geotechnical exploration and testing, labor resource management and administrative functions. In all, promotion of this project will have impact throughout the US economic chain.</p>	
<p><b>(7) If applicable, describe how the project will help develop US professional railroad engineering, operating, planning and management capacity needed for sustainable HSR/IPR development in the United States, including promotion of a diverse workforce. Please limit response to 1,500 characters.</b></p> <p>Striving to meet the needs for an efficient, environmentally friendly and reliable passenger transportation system, since the late 1990's much effort has been expended by USDOT, TxDOT, North Central Texas Council of Governments, affected Cities and contributing Class I railroads towards developing a viable high speed rail corridor through Texas and into Oklahoma supporting the Flyer and Eagle routes today and in the future. This effort has afforded growth and experience in design, operation and management of a viable intercity passenger service among all parties.</p> <p>Specific to this project, several local rail engineering and operation modeling/planning firms have been contracted to join the collective team relative to scope development and preliminary engineering. This diverse work force has worked diligently to best understand current operational sensitivities, infrastructure constraints towards future growth and to develop infrastructure conflict resolutions. Through the work performed to date, critical drivers of on-time performance and run time have been realized.</p> <p>By promoting this project with a HSIPR funding award, continued focus will be given to this promising high speed rail corridor, affording further team development, more refined knowledge of high speed rail and local opportunities for professional services specifically related to the growth and viability of the corridor.</p>	

Project Name: TX - Tower 55 At Grade Improvement Project - Ia Date of Submission: 8/24/09 Version Number: v1

## F. Additional Information

**(1) Please provide any additional information, comments, or clarifications and indicate the section and question number that you are addressing** (e.g., Section E, Question 1B). *This section is optional.*

See included BNSF Project Management Plan for additional support relative to project planning and process control.

Project Name: TX - Tower 55 At Grade Improvement Project - Ia Date of Submission: 8/24/09 Version Number: v1

## G. Summary of Supporting Materials

Application Form	Required	Optional	Reference	Description	Format
<input checked="" type="checkbox"/> This Application Form	✓		HSIPR Guidance Section 4.3.3.3	This document to be submitted through <i>GrantSolutions</i> .	Form
Supporting Forms	Required	Optional	Reference	Description	Format
<input checked="" type="checkbox"/> General Info.	✓		HSIPR Guidance Section 4.3.5	This document to be submitted through <i>GrantSolutions</i> .	Form
<input checked="" type="checkbox"/> Detailed Capital Cost Budget	✓		HSIPR Guidance Section 4.3.5	This document to be submitted through <i>GrantSolutions</i> .	Form
<input checked="" type="checkbox"/> Annual Capital Cost Budget	✓		HSIPR Guidance Section 4.3.5	This document to be submitted through <i>GrantSolutions</i> .	Form
<input checked="" type="checkbox"/> Project Schedule	✓		HSIPR Guidance Section 4.3.5	This document to be submitted through <i>GrantSolutions</i> .	Form
Supporting Documents	Required	Optional	Reference	Description	Format
<input checked="" type="checkbox"/> Map of the Planned Investment		✓	Application Question B.6	Map of the Planned Investment location. Please upload into <i>GrantSolutions</i> .	None
Standard Forms	Required	Optional	Reference	Description	Format

<input checked="" type="checkbox"/> SF 424: Application for Federal Assistance	✓		HSIPR Guidance Section 4.3.3.3	Please submit through <i>GrantSolutions</i>	Form
<input checked="" type="checkbox"/> SF 424C: Budget Information-Construction	✓		HSIPR Guidance Section 4.3.3.3	Please submit through <i>GrantSolutions</i>	Form
<input checked="" type="checkbox"/> SF 424D: Assurance Construction	✓		HSIPR Guidance Section 4.3.3.3	Please submit through <i>GrantSolutions</i>	Form
<input checked="" type="checkbox"/> FRA Assurances Document	✓		HSIPR Guidance Section 4.3.3.3	May be obtained from FRA’s website at <a href="http://www.fra.dot.gov/downloads/admin/assurancesandcertifications.pdf">http://www.fra.dot.gov/downloads/admin/assurancesandcertifications.pdf</a> . The document should be signed by an authorized certifying official for the applicant. Submit through <i>GrantSolutions</i> .	Form

**PRA Public Protection Statement:** Public reporting burden for this information collection is estimated to average 32 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. According to the Paperwork Reduction Act of 1995, a federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for this information collection is **2130-0583**.