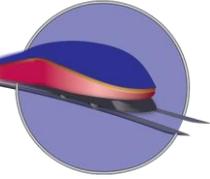


Project Name: KS-Topeka Subdivision-Rail Relay Date of Submission: 08/24/09 Version Number: 1

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.

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 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

A. Point of Contact and Applicant Information

(1) Application Point of Contact (POC) Name: John Maddox		POC Title: Freight and Rail Program Manager		
Street Address: Eisenhower State Office Building 700 SW Harrison St. 2 nd Floor Tower	City: Topeka	State: KS	Zip Code: 66610	Telephone Number: 785-296-3228
Fax: 785-296-0963		Email: johnm@ksdot.org		

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

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

(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 (<i>if known</i>)	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

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B. Project Overview

<p>(1) FD/Construction Project Name: KS-Topeka Subdivision-Rail Relay</p>
<p>(2) Indicate the Track under which you are applying: Track 1a - FD/Construction <i>Please note if you are applying for Track 1a–FD/Construction and Track 4 <u>concurrently</u>, you must submit two separate versions of this application into www.GrantSolutions.gov (one for Track 1a –FD/Construction and one for Track 4–FY 2009 Appropriations Projects).</i></p>
<p>(3) Indicate the activity(ies) for which you are applying (check both if applicable): <input checked="" type="checkbox"/> Final Design <input checked="" type="checkbox"/> Construction</p>
<p>(4) What are the anticipated start and end dates for the FD/Construction Project? (mm/yyyy) Start Date: 02/2010 End Date: 12/2010</p>
<p>(5) Total Cost of the FD/Construction Project (year of expenditure (YOE) Dollars*): \$ 7,685,989</p> <p>Please provide proposed inflation assumptions and methodology, if applicable in the space below. Please limit response to 1,000 characters.</p> <p>All unit costs used are based on projected 2010 unit values. No assumptions made for inflation as project is estimated to be completed in 2010.</p> <p>A 15% contingency factor is included in the project cost estimate to account for uncertainties in scheduling and material sourcing.</p> <p>Of the total cost of the FD/Construction Project, how much would come from the FRA HSIPR Program: (YOE Dollars**) \$ 7,685,989</p> <p>Indicate percentage of total cost to be covered by <u>matching funds</u> 0 % <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>(6) Project Overview Narrative. <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"> • The location of the project including name of rail line(s), State(s), and relevant jurisdiction(s) (include map if available in supporting documentation). • Identification of service(s) that would benefit from the project, the stations that would be served, and the State(s) where the service operates. • 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. • How the project will fulfill a specific purpose and need in a cost-effective manner. • The project’s independent utility. • The specific improvements contemplated. • Any use of railroad assets or rights-of-way, and potential use of public lands and property. • Other rail services, such as commuter rail and freight rail that will make use of, or otherwise be affected by, the project. <p>The Topeka Subdivision of the BNSF Railway in northeastern Kansas connects Holliday and Emporia via Topeka and runs parallel to BNSF's "Transcon" main line. The Transcon carries the majority of BNSF's east-west freight traffic while the Topeka Sub</p>

serves mainly as the route for Amtrak's Southwest Chief, a conduit for local manifest traffic, and a congestion relief valve for the Transcon.

Because of the low volume nature of this line, the track infrastructure does not need to be renewed as often as on higher volume, higher tonnage lines. This is especially true of the western end of the subdivision, where approximately 15 miles of jointed rail dating from 1953 - 1954 are still in service. At current freight volumes, weights, and speeds, this rail can remain in service for many years to come.

Amtrak service on the portions of the Topeka Subdivision that have continuous welded rail (CWR) is allowed to travel at 79 MPH. However, on jointed rail portions Amtrak speed is restricted to 60 MPH. The reason for the difference in allowable top speed is the nature of the jointed rail itself. Two characteristics of jointed rail are detrimental to Amtrak service:

1. Wear Characteristics - Jointed rail is subject to "end battering". As a wheel passes over the joint between rails, the small gap between the rails causes the wheel to impact the end of the rail opposite the direction of travel, having the same effect as if the rail end were being pounded with a very large sledgemoor. Over time this causes multiple issues:

- a. Loosening of bolts in track connector bars
- b. Deformation of the rail head at the ends of each rail
- c. Pulverizing of ballast under the joint, leading to a depression under each joint

Even with frequent monitoring and maintenance, it is not possible to maintain as smooth a track surface as is possible with CWR. Excessive speeds on jointed rail can lead to derailments caused by dips at the rail joint. To maintain safety and ride quality, passenger trains must travel at speeds lower than those allowed on CWR track.

2. Signal Continuity - Up until the 1980s, commands for wayside signals were transmitted through pole-mounted electrical wires running parallel to railroad lines. More recently the widespread use of CWR has allowed signals to be transmitted through the rails themselves due to CWR's unbroken electrical continuity between signals. Signal conductivity through remaining jointed rail installations is achieved by soldering short lengths of bonding wire between the ends of adjacent rails. This eliminates the need for pole line but brings problems of its own in the form of frequent wire breakages caused by end battering. Wire breakages interrupt the signal to wayside signals, causing them to default to a "stop" indication and halting traffic on the subdivision until repairs can be made, resulting in excessive delays.

The Topeka Subdivision sees a very low volume of freight trains - on average less than 2 per day. The majority of these are intermodal and loose car manifest trains, which are lighter in weight than unit coal or agricultural commodity trains. This light volume of relatively low-weight trains traveling at lower speeds has allowed the jointed rail on the Topeka Sub to remain in service even as jointed rail disappeared from other BNSF subdivisions, in some cases decades ago.

This project would replace the remaining jointed rail on the Topeka Sub with CWR, allowing Amtrak to travel at 79 MPH. CWR would also improve ride quality for Chief passengers and improve reliability of the service by reducing rail-related service interruptions and delays.

The project proposes to replace jointed rail with CWR at the following locations:

1. MP 91 - MP 93.663
2. MP 94.033 - MP 94.362
3. MP 96.156 - MP 97.759
4. MP 98.134 - MP 107.253
5. MP 107.433 - MP 107.956
6. MP110.316 - MP 111.019

In addition, two turnouts on this subdivision are within the project limits of jointed rail replacement and would need to be replaced with turnouts of heavier rail construction to match that of the rail to be installed.

(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.¹ 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):

(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
Class 1 Freight	BNSF Railway	14.94	14.95	Master Agreement in Place
Amtrak				Master Agreement in Place
Amtrak				Master Agreement in Place

¹ 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 ² within Project Boundaries	Notes
		Passenger	Freight			
Freight	BNSF Railway		55	14.94	2	All project activities located between MP 91.0 and MP 111.02
Intercity Passenger	Amtrak	60		14.94	2	All project activities located between MP 91.0 and MP 111.02
Freight						

(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.*

Equipment providing the service after project completion will not change.

The Southwest Chief service consists of: 2 P42 "Genesis" locomotives, 1 baggage car, 1 dorm / sleeper, 2 sleepers, 1 diner, 1 lounge, and 3 coaches.

(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: Partner consulted, awaiting support commitment

(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.

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

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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)
N/A	

(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 CE documentation submitted 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		
<input type="checkbox"/> Finding of No Significant Impact		
<input type="checkbox"/> Record of Decision		

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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.

The Southwest Chief is a transcontinental train connecting the Los Angeles Basin on the west coast to the midwestern commerce center of Chicago. Over 323,000 passengers used this service in 2008. It directly serves the major cities of Chicago, Kansas City, Albuquerque, Flagstaff, Los Angeles, the Kansas State capitol of Topeka, and a host of smaller communities along its route, including five in Kansas. In six of the cities this train serves, Thruway motorcoach service provides connectivity to surrounding communities and intermodal transit centers. In the major cities listed above, a variety of bus, light rail, and commuter rail services provide intermodal connectivity throughout the community.

To remain attractive and competitive as a passenger transportation mode, the Southwest Chief must provide the speed and quality of service necessary to drive ridership. The traveling public's satisfaction with the Chief's service is determined not only by the equipment and on-board service of the train itself, but also by the speed, reliability, and smoothness of the host freight railroads over which the Chief travels.

The project's goal is to address and improve each of these attributes from an infrastructure standpoint.

1. Speed of Passenger Service - The jointed rail currently in place on the Topeka Sub between MP 91 and MP 111.019 has been in service since 1953 - 1954. The reasons for this longevity are the low volumes, relatively light weight, and lower speeds of freight trains that allow the existing infrastructure to provide an acceptable level of track service availability. Indeed, the Southwest Chief accounts for the majority of the trips made over this subdivision. However, safety and ride quality concerns restrict the operating speed of Amtrak to 60 MPH. The project would replace this rail with heavier continuous welded rail (CWR), allowing Amtrak to travel through this area at 79 MPH. This results in 4 minutes of saved travel time per train versus today, resulting in a cumulative annual travel time savings of 48.7 hours per year per train.

2. Quality of Passenger Service Ride - As jointed rail wears over time, "end battering" occurs. This is the impact of the rail wheel on the end of the rail opposite the direction of travel. This causes deformation of the rail head, loosening of the connector bar bolts, and pulverizing of ballast below the joint, resulting in dips. The cumulative effect of this is a rough, bouncing ride. If speeds over these joints are excessive, derailments can occur from cars literally bouncing off the track. The project would eliminate these issues and provide a safe, smooth, quiet ride for Chief passengers at high speed.

3. Reduced Delays - End battering of rails frequently results in breakage of the bonding wire between rails, breaking the signal circuit in the rails and causing signals on the subdivision to default to a "stop" indication. The installation of CWR would eliminate delays caused to Amtrak by jointed rail-related signal issues. As an example, in 2008, an average of 1.9 track-related signal defects per track mile were reported over the 20 mile proposed project area. The remaining 89 mile length of the Topeka Sub, which is laid with CWR, reported only 0.57 average track-related signal defects per track mile. For further comparison, the Gallup Subdivision in New Mexico is 280 miles of double track (560 track miles) CWR and is much more heavily traveled than the Topeka Sub. Yet it only reported 0.45 average track-related signal defects per track mile. **This means the 20 track miles of jointed rail on the Topeka Sub reported:**

a. 3.3 times more defects per mile than CWR on the Topeka Sub, and

b. 4.22 times more defects per mile than CWR on the Gallup Sub

Lastly, in 2008 the average delay time for Amtrak on the proposed project area due to track-related signal defects was 29.5 minutes per train. The project would eliminate these delays, increasing the reliability of the Chief's schedule.

Benefits Summary

1. Increased speed over Topeka Subdivision resulting in cumulative Southwest Chief travel time savings of 48.7 hours per year
2. Elimination of track joints creates improved quality of ride for Chief passengers
3. Replacement of jointed rail eliminates associated signal defects and resulting average 29.5 minutes per train of delay

The metrics of this improvement using Amtrak methodology are shown below in Table 1B.

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 <u>Plus</u> 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) ³ – percent of trains on time at endpoint terminals				<input checked="" type="checkbox"/>
Average train operating delays: minutes of en-route delays per 10,000 train-miles ⁴				<input checked="" type="checkbox"/>
Top operating speed (mph)	60	79	79	<input type="checkbox"/>
Average scheduled operating speed (mph) (between endpoint terminals)	52.464	52.548	52.548	<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:

- 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.

This project will carry economic recovery benefits mainly through the retention / creation of jobs in the following categories:

³ 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.

⁴ 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>

1. Project management oversight
2. Track work for turnout construction, and actual project construction work
3. Rail relay construction work
4. Signal work for site preparation and connection of existing signals to new rail infrastructure
5. Track material supply jobs associated with manufacture of components to replace material taken from BNSF inventory

The operating phase following project implementation will not have direct job growth associated with it, but due to the increase in Amtrak speed and service quality over the Topeka Subdivision, indirect jobs will be created in the passenger rail industry attributable to increased ridership.

The actual specific number of jobs created or retained by this project is dependent upon many factors including project scheduling, availability of materials, and other factors, but in terms of its national economic impact, U.S. Department of Commerce data indicate that every dollar of freight 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. Using this methodology, the \$7,685,989 amount associated with this project has the potential to create 154 jobs during construction.

The proposed project is located in Lyon and Osage counties. During the site preparation and construction phases of the project, contractors and BNSF track and signal crews would be using local lodging and eating facilities, contributing to the retention of jobs in the affected counties.

The technological advancement offered by this project is not new by any means, but offers increased efficiency nonetheless. Jointed rail is less reliable than CWR, requiring more outages to conduct routine maintenance and to repair defects in rails, connector bars, bolts, and bond wires. The placement of CWR will increase in-service availability of this line and reduce potential Amtrak service interruptions for unscheduled maintenance outages.

The long term benefits of this project are expected to be derived from the increased speed and quality of passenger train operations over the Topeka Subdivision. This makes the Southwest Chief more competitive with other forms of passenger transportation and is expected to drive ridership increases, which in turn offsets operating costs for Amtrak and benefits the on-line communities that the Southwest Chief serves. The timeline for these benefits is indefinite, as the project as proposed is a permanent installation whose utility (barring any future unforeseen major operational changes) is not expected to deteriorate given that BNSF would provide and fund required track maintenance.

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.

	FD/ Construction Period	First full Year of Operations	Fifth full Year of Operations
Anticipated number of <u>annual</u> onsite and other direct jobs created (on a 2080 work-hour per year, full-time equivalent basis)	154	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 (CO₂, O₃, CO, PM_x, and NO_x) 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 Topeka Sub Rail Relay Project derives indirect environmental benefits. While it is probable with higher speeds the locomotive fuel use will go up, increased train speed / schedule reliability is likely to increase ridership, and replace definitive automobile trips in the region (with particular impact on single occupancy vehicles often associated with the business traveler), with the fuel efficiency and low environmental footprint of intercity passenger rail. These benefits would occur along the current Southwest Chief route, supporting our national vision towards improved air quality by leveraging and improving green transportation services.

(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).

Livable communities offer 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 such as bus or light rail systems fosters livability at the individual city level, Amtrak provides connectivity between these communities spread out over thousands of miles. This project would improve the speed, comfort, and reliability of the Chief, promoting and encouraging the development of reliable intermodal connections and transit-oriented development.

The Southwest Chief is a transcontinental train connecting the Los Angeles Basin on the west coast to the midwestern commerce center of Chicago. Over 323,000 passengers used this service in 2008. It directly serves the major cities of Chicago, Kansas City, Albuquerque, Flagstaff, Los Angeles, the Kansas State capitol in Topeka, and a host of smaller communities along its route, including five in Kansas. In six of the cities this train serves, Thruway motorcoach service provides connectivity to surrounding communities and intermodal transit centers. In the major cities listed above, a variety of bus, light rail, and commuter rail services provide intermodal connectivity throughout the community. All of these services depend upon the reliability of the Southwest Chief's schedule to maintain the integrity of their own schedules. This high level of schedule integrity is essential to maintaining the quality and livability for both rural and high density communities alike.

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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 KDOT Service Development Plan Project Team brings a combined 46 years of experience with rail planning, research, study coordination, and public involvement. This team will consist of: John Maddox, C.P.M., Freight and Rail Unit Program Manager, Bureau of Transportation Planning, 10 years rail planning experience; John Rosacker, J.D., C.P.M., Rail Coordinator, Freight and Rail Unit, Bureau of Transportation Planning, 28 years rail planning experience; Eddie Dawson, C.P.M., Research Analyst, Freight and Rail Unit, Bureau of Transportation Planning, 7 years rail planning experience; and Joel Skelley, Statewide Multimodal Planner, Bureau of Transportation Planning, 11 years multimodal planning experience and 1 year rail planning experience. Chris Herrick, P.E., Director of Planning and Development and Dennis Slimmer, P.E., Bureau Chief of Transportation Planning will provide executive management assistance. Support and resources also will come from KDOT's Statewide Planning Unit, Metropolitan Planning Organization Unit, and Bureau of Design Coordinating Section. KDOT will work closely with the BNSF Railway staff during all phases of the project. Additionally, both KDOT and BNSF Railway staff will coordinate efforts during all phases of the project with the appropriate Amtrak staff. KDOT management and staff have excellent relationships with all the partners that would be involved with this project.

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 Topeka Subdivision Rail Relay Project. The project team currently consists of applicable members of the Kansas Department of Transportation, Amtrak, and BNSF Railway with support from professional consultants. Through the contribution of this inclusive team, a project plan was developed including scope development, NEPA review, and construction.

Pending HSIPR funding award, it is currently planned for the Kansas Department of Transportation to act as the governing agency in control of funding allocation and budgetary review and the BNSF Railway as the project implementer responsible for project management, field review and completion of rail relay.

Please also see Section F - Additional for a copy of BNSF's Business Process Framework for ARRA Funded Projects. This business process outlines BNSF's internal process to manage, administer, report, and comply with specific ARRA funding guidelines and requirements.

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 and assurances. While unlikely, one main risk was identified: stakeholder scope and agreement incongruity. To mitigate agreement incongruity, a Scope and Terms Agreement for pre-concurrence in advance of potential HSIPR funding award will be implemented.

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 for the Topeka Subdivision Rail Relay project. 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 Scope and Terms Agreement.

Finally, two Schedule risks were identified: 1) weather impacts and 2) 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.

(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 the BNSF Railway, 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 HSR Track 1 requirements. KDOT 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 the BNSF 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, KDOT, and USDOT will have no future obligation to maintain or contribute to this facility in any way once construction has been completed. Once the project is fully funded, the BNSF and KDOT will enter into Construction and Maintenance (C&M) agreements which formalize the above terms consistent with the requirements of the Parties and the ARRA. These C&M agreements are predominantly standard form, and have been successfully entered into and fully executed numerous times previously by the BNSF and KDOT.

Additionally, passenger operations affected by this project are in place now and are already controlled by existing operating agreements between the BNSF 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 benefits will first accrue to passenger service.

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, as well as state transportation officials, in the identification of capital investments needed to improve Amtrak service.

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.*

BNSF will realize benefits from this project from reduced delays to freight traffic. Although BNSF is not participating in the cost of project installation, BNSF will be responsible for the cost of all future maintenance and upkeep of the new infrastructure as noted in the Construction and Maintenance agreements described above.

(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	Status of Funding ⁵	Type of Funds	Dollar Amount (YOE)	% of Project Cost	Describe Uploaded Supporting Documentation to
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⁵ 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.

	Source?			Dollars)		Help FRA Verify Funding Source
	New	Committed				
	New	Committed				
	New	Committed				

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 applicant (Kansas Department of Transportation) does not intend to participate in any of the estimated costs of this project; however, the project would be located on the BNSF Railway, which has agreed to take responsibility for any and all cost overruns. BNSF would also be responsible for all future maintenance and upkeep of the infrastructure.

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?

N/A

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)													
<p>(4) Financial Management Capacity and Capability – 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>All improvements associated with this project would be installed on the Topeka Subdivision of the BNSF Railway in Kansas. BNSF has provided KDOT with all cost estimates for this project, including contingencies. In the event of funding award, BNSF would perform all material acquisition and construction of the project and would be responsible for any cost overruns or financial shortfalls. BNSF would also be responsible for all future maintenance and upkeep of the infrastructure.</p>													
<p>(5) Timeliness of Project Completion – 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> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 40%;">Final Design Duration:</td> <td style="text-align: center;">2 months</td> </tr> <tr> <td>Construction Duration:</td> <td style="text-align: center;">10 months</td> </tr> <tr> <td>Rolling Stock Acquisition Duration:</td> <td style="text-align: center;">N/A months</td> </tr> <tr> <td>Rolling Stock Testing Duration:</td> <td style="text-align: center;">N/A months</td> </tr> <tr> <td>Service Operations Start date:</td> <td style="text-align: center;">11/2010 (mm/yyyy)</td> </tr> </table>				Final Design Duration:	2 months	Construction Duration:	10 months	Rolling Stock Acquisition Duration:	N/A months	Rolling Stock Testing Duration:	N/A months	Service Operations Start date:	11/2010 (mm/yyyy)
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Rolling Stock Testing Duration:	N/A months												
Service Operations Start date:	11/2010 (mm/yyyy)												
<p>(6) If applicable, describe how the project will promote domestic manufacturing, supply and other industries, including United States-based equipment manufacturing and supply industries. <i>Please limit response to 1,500 characters.</i></p> <p>All track materials anticipated to be used in this project are domestically sourced. This amounts to approximately \$7.7M in track material. In addition, all construction management and labor would be performed by US-based BNSF employees.</p>													
<p>(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. <i>Please limit response to 1,500 characters.</i></p> <p>Through partnership, BNSF and Amtrak are building the skills and relationships necessary to develop new regional and intercity passenger opportunities and refine existing services as well. As Amtrak works to bring the vision of true high speed rail to fruition, the nation's freight railroads will continue to play a role in the movement of passengers even as freight volumes continue to increase. The relationships and base of knowledge that projects such as this help build will be crucial to ensuring that the two modes of rail transportation can grow together with each mode helping to ensure the other's success.</p>													

Project Name: KS-Topeka Subdivision-Rail Relay *Date of Submission:* 08/24/09 *Version Number:* 1

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.*

1. *The attachment entitled "ARRA Business Process Framework" graphically illustrates applicant's response to Section E Question 1B.*
2. *The attachment entitled "Figure 1" graphically illustrates proposed project limits.*

Project Name: KS-Topeka Subdivision-Rail Relay Date of Submission: 08/24/09 Version Number: 1

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 http://www.fra.dot.gov/downloads/admin/assurancesandcertifications.pdf . The document should be signed by an authorized certifying official for the applicant. Submit through <i>GrantSolutions</i> .	Form

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