Individual FD/Construction Project Application Form

High-Speed Intercity Passenger Rail (HSIPR) Program

Applicants interested in applying for funding of Final Design (FD)/Construction Projects under the FY10 Individual Project solicitation are required to submit this application form and other required documents as outlined in Section H of this application. List and describe any supporting documentation submitted in Section G. Applicants should reference the FY10 Individual Projects Notice of Funding Availability (NOFA) for more specific information about application requirements. If you have questions about the HSIPR Program or this application, please contact the Federal Railroad Administration (FRA) at HSIPR@dot.gov.

Applicants must use this form by entering the required information in the gray narrative fields, check boxes, or drop-down menus. Submit this completed form, along with any supporting documentation, electronically by uploading them to GrantSolutions.gov by 5:00 p.m. EDT on August 6, 2010.

A. Point of Contact and Applicant Information

Applicant should ensure that the information provided in this section matches the information provided on the SF-424 forms.

<table>
<tr><td colspan="3">(1) Name the submitting agency:
Missouri Department of Transportation</td><td colspan="3">Provide the submitting agency Authorized Representative name and title:
Rodney Massman, Administrator of Railroads</td></tr>
<tr><td>Street Address:
P.O. Box 270</td><td>City:
Jefferson City</td><td>State:
MO</td><td>Zip Code:
65102</td><td>Authorized Representative telephone:
573-751-7476
Authorized Representative email:
rodney.massman@modot.mo.gov</td></tr>
<tr><td colspan="3">Provide the submitting agency Point of Contact (POC) name and title (if different from Authorized Representative):
Rodney Massman, Administrator of Railroads</td><td colspan="3">Submitting agency POC telephone: 573-751-7476
Submitting agency POC email: rodney.massman@modot.mo.gov</td></tr>
<tr><td colspan="6">(2) List the name(s) of additional state(s) applying (if applicable):

N/A</td></tr>
</table>

B. Eligibility Information

Complete the following section to demonstrate satisfaction of applicant eligibility requirements.

(1) Select the appropriate box from the list below to identify applicant type. Applicant type is defined in Section 3.1 of the NOFA.

- ☒ State
- ☐ Group of States
- ☐ Amtrak
- ☐ Amtrak in cooperation with one or more States

If selecting one of the types below, additional documentation is required. Please select the appropriate box to establish applicant eligibility as described in Section 3.2 of the NOFA and list the supporting document in Section G.2 of this application.

- ☐ Interstate Compact
- ☐ Public Agency established by one or more States

(2) Indicate the planning processes used to identify the FD/Construction project. As defined in Section 3.5.1 of the NOFA, the process should analyze the investment needs and service objectives of the service that the individual project is intended to benefit. The appropriate planning document must be listed in Section G.2 of this application.

- ☐ State Rail Plan
- ☐ Service Development Plan (SDP)
- ☐ Service Improvement Plan (SIP)
- ☒ Statewide Transportation Improvement Plan (STIP)
- ☐ Other, please list this document in Section G.2 with "Other Appropriate Planning Document" as the title
- ☐ This project is not included in a relevant and documented planning process

(3) Establish completion of Preliminary Engineering requirements. List the documents that establish completion of Preliminary Engineering for the project covered by this application. See Section 4.2.5 and Appendix 2.3 of the NOFA. If more than five references, please provide the same information in a supporting document and list in Section G.2 of this application. Any supporting documents submitted should be listed in Section G.2 of this application.

Documentation	**Date** (*mm/yyyy*)	**Describe How Documentation Can Be Verified** (choose one)	
		Submitted in GrantSolutions	**Web Link** (if available)
95% Final Design Plans	*07/2010*	☒	
Historic and Cultural Resource Studies	*02/2010*	☒	
Wetland Delineation	*02/2010*	☒	
Cost Estimates	*07/2010*	☒	
MoDOT Design Plans and Estimate for Access Entrance	*07/2010*	☒	

(4) Establish completion of NEPA documentation. Indicate the date the document was issued and how the document can be verified by FRA. A NEPA decision document (Record of Decision or Finding of No Significant Impact) is not required for an application but must have been issued by FRA prior to award of a construction grant. Verified documents can be submitted as a supporting document or referenced through a public active URL. Any supporting documents should be listed in Section G.2 of this application. See Section 4.2.5 and Appendix 2.2 of the NOFA.

Documentation	**Date** (*mm/yyyy*)	**Describe How Documentation Can Be Verified** (choose one)	
		Submitted in GrantSolutions	**Web Link** (if available)
NEPA Documentation			
☐ Categorical Exclusion Documentation (worksheet)		☐	
☒ Final Environmental Assessment	*07/2010*	☒	
☐ Final Environmental Impact Statement		☐	
Project NEPA Determination			
☐ Categorical Exclusion		☐	
☐ Finding of No Significant Impact		☐	
☐ Record of Decision		☐	

C. FD/Construction Project Summary

Identify the title, location, and other information of the proposed project by completing this section.

(1) Provide a clear, concise, and descriptive project name. Use identifiers such as state abbreviations, major cities, infrastructure, and tasks of the individual project (e.g., "DC-Capital City to Dry Lake Track Improvements").

MO-KC to STL Corridor - Knob Noster Passing Siding

(2) Indicate the anticipated funding level for the FD/Construction project below. This information must match the SF-424 forms, and dollar figures must be rounded to the nearest whole dollar. When the non-Federal match percentage is calculated, it must meet or exceed 20 percent of the total project cost.

Federal Funding Request	Non-Federal Match Amount	Total FD/Construction Project Cost	Non-Federal Match Percentage of Total Project Cost
$ 7,724,800	**$** 1,931,200	**$** 9,656,000	20 **%**

(3) Indicate the activity(ies) for which you are applying. Check all that apply.

☒ Final Design ☒ Construction

(4) Indicate the anticipated duration, in months, for the FD/Construction project (e.g., 36).

Number of Months: 21

(5) List the name of the corridor where the project is located.

Kansas City to St. Louis Corridor

(6) Describe the project location, using municipal names, mileposts, control points, or other identifiable features such as longitude and latitude coordinates. If available, please provide a project GIS .shp file as supporting documentation. This document must be listed in Section G.2 of this application.

This siding extension will be in Johnson County in western Missouri in the city of Knob Noster on the Union Pacific Railroad's Sedalia subdivision from milepost 209.24 to milepost 210, entirely within the state of Missouri, extending an existing siding that begins at milepost 208.1. Construction of new passing tracks will connect to the existing siding on one end and mainline tracks on the other at MP 208.

(7) Provide an abstract outlining the proposed FD/Construction project. Summarize the project narrative provided in the Statement of Work in 4-6 sentences. Specifically capture the major milestones, outcomes, and anticipated benefits that will result from the completion of the individual project.

This project will improve on-time performance along the entire Union Pacific corridor in Missouri between St. Louis and Kansas City and will also enhance the future provision of 90- to 110-mph service. This project will extend an existing siding to a full 9,000 feet, which will allow freight and Amtrak trains to pass each other. The area in which the siding will be constructed was identified as a bottleneck in a 2007 study by the University of Missouri as a section of track that needed an additional siding. There are no sidings currently within 28 miles of this location. The overall purpose of this project is to reduce Amtrak delays in an area the University of Missouri study identified as having nearly 20 percent of all delays, which is the largest amount of any area.

(8) Indicate the source, amount, and percentage of non-Federal matching funds for the FD/Construction project. The sum of the figures below should equal the amount provided in Section C.2. Click on the prepopulated fields to select the appropriate responses from the lists provided in type of source, status of funding, and type of funds. Dollar figures must be rounded to the nearest whole dollar. Identify supporting documentation that will allow FRA to verify the funding source and list it in Section G.2 of this application.

Non-Federal Funding Sources	New or Existing Source?	Status of Funding[1]	Type of Funds	Dollar Amount	% of Total Project Cost	Describe Any Supporting Documentation to Help FRA Verify Funding Source
Union Pacific Railroad	New	Committed	Cash	$ 482,800	5 %	See attached MOU.
Missouri Dept of Transportation	Existing	Committed	Cash	$ 1,448,400	15 %	See previous application for MODOT for Shell Spur siding for Intercity Passenger Rail Grant in which allocated $5 Million for siding construction; this project was under budget by $2 million and the remainder will be applied to this project.
Sum of Non-Federal Funding Sources				$ 1,931,200	20 %	N/A

(9) Indicate the type of expected capital investments included in the FD/Construction project. Check all that apply.

- ☐ Structures (bridges, tunnels, etc.)
- ☒ Track rehabilitation and construction
- ☒ Major interlockings
- ☐ Station(s)
- ☒ Communication, signaling, and control
- ☐ Rolling stock refurbishments
- ☐ Rolling stock acquisition
- ☐ Support facilities (yards, shops, administrative buildings)
- ☐ Grade crossing improvements
- ☐ Electric traction
- ☐ Other (please describe)

[1] 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., statutory authority) to be used to fund the proposed project 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 or appropriation guidance. 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, and additional debt capacity that requires no further approvals and has been dedicated by the sponsoring agency to the proposed project.

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 capital investment program that has yet to be committed in the near future. Funds will be classified as budgeted when available funding cannot be committed until the grant is executed or due to the local practices outside of the project sponsors 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 (e.g., 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 capital investment program).

(10) Indicate if any FD or Construction activities that are part of this proposed project are under way or completed. Check all that apply.

☐ Final Design activities are complete.
☒ Final Design activities are in progress.
☐ No Final Design activities are in progress or completed.

☐ Construction activities are complete.
☐ Construction activities are in progress.
☒ No Construction activities are in progress or completed.

Describe any activities that are under way or completed in the table below. If more space is necessary, please provide the same information in a supporting document and list in Section G.2 of this application.

Activity	Description	Completed? (If yes, check box)	Start Date (*mm/yyyy*)	Actual or Anticipated Completion Date (*mm/yyyy*)
95% NEPA Document	Evaluation of environmental impacts, and summary of work to this point.	☒	*02/2010*	*12/2010*
Design Plans	Specifies the proposed design of the siding.	☒	*07/2010*	*07/2010*
Estimate	Gives split out of costs for project.	☒	*07/2010*	*07/2010*
Project Location Sketch	Gives topographic map and aerial view of project location.	☒	*07/2010*	*07/2010*
Design Plans and Estimate of Access Point	Design Plans of Access Point off of Highway 50 for signal maintenance.	☒	*07/2010*	*07/2010*
Environmental Clearances	Evaluation of historic impact.	☒	*02/2010*	*02/2010*
Panoramic Map	Maps for length of project.	☒	*07/2010*	*07/2010*
MoDOT Design Plans and Estimate for Access Entrance	Design plans and estimate for construction of access.	☒	*07/2010*	*07/2010*
R/W Map	Map identifying right of way.	☒	*07/2010*	*07/2010*
Wetland Data Sheets	Evaluation of wetlands.	☒	*07/2010*	*07/2010*

D. Project Success Factors Overview

Answer the following questions about the individual project that is the subject of this FD/Construction application.

(1) Indicate the expected service outcomes of the FD/Construction project. Check all that apply.

- ☐ Additional service frequencies
- ☒ Improved operational reliability on existing route
- ☒ Service quality improvements
- ☒ Improved on-time performance on existing route
- ☒ Increased average speeds/shorter trip times
- ☐ Other (please describe)

Briefly clarify your response(s) if needed:

This project, along with all the other projects applied for in this round of applications and with those previously applied for, will have a profound improvement on all the service outcomes noted above and as identified in the 2007 University of Missouri study.

(2) Quantify the applicable service outcomes of the FD/Construction project. Provide the current conditions and anticipated service outcomes. Future state information is necessary only for relevant service benefits.

	Frequencies[2]	**Scheduled Trip Time** (in minutes)	**Average Speed** (mph)	**Top Speed** (mph)	**Reliability –** Provide Either On-Time Performance Percentage or Delay Minutes
Current	4	540	49	79	80%
Future	4	540	55	79	85%

(3) Select and describe the operational independence of the FD/Construction project.[3]

☒ This project is operationally independent. ☐ This project is not operationally independent.

Briefly clarify your response:

This project will increase on-time performance and ridership even if no other projects are constructed in that it is in an area with no current usable sidings in either direction for many miles, thus allowing passage of Amtrak trains and freight trains in the same area without the Amtrak train taking the siding.

(4) Provide Right-of-Way ownership information in the FD/Construction project area. Where railroads currently share ownership, identify the primary owner. If Amtrak is the Type of Railroad, the Right-of-Way Owner field does not need to be completed. Click on the prepopulated fields to select the appropriate response from the lists of railroad types and status of agreements. If more than five owners please provide the same information in a separate supporting document, and list it in Section G.2 of this application.

Type of Railroad	**Right-of-Way Owner**	**Route-Miles**	**Track-Miles**	**Status of Agreements to Implement**
Class 1 Freight	Union Pacific Railroad	283	424	Preliminary Executed Agreement/MOU

[2] Frequency is measured in daily one-way train operations. One daily round-trip operation should be counted as two daily one-way train operations.

[3] A project is considered to have operational independence if, upon being implemented, it will provide tangible and measurable benefits, even if no additional investments in the same service are made.

(5) Name the Intercity Passenger Rail Operator and provide the status of agreement. If applicable, provide the status of the agreement with the partner that will operate the planned passenger rail service (e.g., Amtrak). Click on the prepopulated field to select the appropriate response from the status of agreement list.

Name of Rail Service Operator	Status of Agreement
Amtrak	Final executed agreement on project scope/outcomes

(6) Identify the types of services affected by the FD/Construction project and provide information about the existing rail services within the project boundaries (e.g., freight, commuter, and intercity passenger). Click on the prepopulated fields to select the appropriate response from the list of types of service.

Type of Service	Name of Operator	Top Existing Speeds Within Project Boundaries		Number of Route-Miles Within Project Boundaries	Average Number of Daily One-Way Train Operations[4] Within Project Boundaries	Notes
		Passenger	Freight			
Freight	Union Pacific Railroad	70	55	1	22	This is in an area of mostly single track but there is another UP subdivision, the River Sub. that functions as a one-way directional running complement to this subdivision. The total amount of train operations on both subdivisions is 38.
Intercity Passenger	Amtrak	70	55	1	4	There are two morning trains in both directions and two evening trains in both directions.

(7) Estimate the share of benefits that will be realized by nonintercity passenger rail services (e.g., commuter, freight) and select the approximate cost share to be paid by the beneficiary.[5] Click on the prepopulated fields to select the appropriate response from the lists of type of beneficiary, anticipated share of benefits, and approximate cost share. If more than five types of nonintercity passenger rail are beneficiaries, please provide additional information in a separate supporting document, and list it in Section G.2 of this application.

Type of Nonintercity Passenger Rail	Expected Share of Benefits	Approximate Cost Share
Freight	Less than 50%	0-24%

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

[5] Benefits include service improvements such as increased speed, on-time performance, improved reliability, and other service quality improvements.

E. Additional Response to Evaluation Criteria

Provide a separate response to each of the following categories of potential benefits to identify the ways in which the proposed FD/Construction project will achieve these benefits.

(1a) Transportation Benefits

Describe the ways in which the proposed FD/Construction project will address the potential of successfully executing these transportation benefits in a cost-effective manner:

- Supporting the development of intercity high-speed rail service;
- Generating improvements to existing high-speed and intercity passenger rail service, as reflected by estimated increases in ridership (as measured in passenger-miles), increases in operational reliability (as measured in reductions in delays), reductions in trip times, additional service frequencies to meet anticipated or existing demand, and other related factors;
- Generating cross-modal benefits, including anticipated favorable impacts on air or highway traffic congestion, capacity, or safety, and cost avoidance or deferral of planned investments in aviation and highway systems;
- Creating an integrated high-speed and intercity passenger rail network, including integration with existing intercity passenger rail services, allowance for and support of future network expansion, and promotion of technical interoperability and standardization (including standardizing operations, equipment, and signaling);
- Encouragement of intermodal connectivity and integration through provision of direct, efficient transfers among intercity transportation and local transit networks at train stations, including connections at airports, bus terminals, subway stations, ferry ports, and other modes of transportation;
- Enhancing intercity travel options;
- Ensuring a state of good repair of key intercity passenger rail assets;
- Promoting standardized rolling stock, signaling, communications, and power equipment;
- Improved freight or commuter rail operations, in relation to proportional cost-sharing (including donated property) by those other benefiting rail users;
- Equitable financial participation in the project's financing, including, but not limited to, consideration of donated property interests or services; financial contributions by freight and commuter rail carriers commensurate with the benefit expected to their operations; and financial commitments from host railroads, non-Federal governmental entities, nongovernmental entities, and others;
- Encouragement of the implementation of positive train control (PTC) technologies (with the understanding that 49 U.S.C. 20147 requires all Class I railroads and entities that provide regularly scheduled intercity or commuter rail passenger services to fully institute interoperable PTC systems by December 31, 2015); and
- Incorporating private investment in the financing of capital projects or service operations.

There are many transportation benefits associated with extending a siding at Knob Noster in Johnson County Missouri, on the Union Pacific Sedalia subdivision at milepost 209.24, as the corridor is already a designated high-speed rail corridor (see attached U.S. map). The *Missouri River Runner* Amtrak service has four trains per day that connect to large metropolitan areas. In St. Louis, there are connections to five Amtrak trains to Chicago, one to San Antonio and one Amtrak bus connector to Carbondale, Illinois. These connections are based in the recently expanded St. Louis Gateway Center, which makes it possible to house all services in one building. Also at the center is several intercity bus services, city bus service and MetroLink light rail system, which connects to the airport and many other areas of St. Louis metro region.

In Kansas City, the *Missouri River Runner* service connects to one train to Chicago and one train to Los Angeles. Plans are to also provide for the Heartland Flyer service to connect to Wichita, Oklahoma City and Dallas. These connections are all based in the Union Station complex, which is joined to several hotels and attractions through a downtown skyway.

The service improvements are outlined in the attached document highlighting a recent University of Missouri study of Amtrak delays and their causes. The findings show a dramatic decrease in Amtrak delays as a result of this project. Passenger numbers are currently increasing on the *Missouri River Runner* route. These numbers increased 10 percent from fiscal year 2008 to fiscal year 2009 and by nearly the same percentage in 2010 and are expected to significantly increase with a reliable on-time performance, something that has been sought for many years. There is no commuter rail service on the line.

See the attached findings from the University of Missouri capacity study on specific improvements to on-time performance expected as a result of this project. The study demonstrates that all projects would result in a 47 percent decrease in Amtrak delays, and this project specifically would result in a 42 percent decrease in Amtrak delays. The new project will effectively reduce the overall travel time for passengers and increase ridership. Additional safety benefits will be realized due to fewer blocked crossings. The increased rail capacity will further open options for both Amtrak and freight trains. The overall OTP for the service last year was 92%.

Positive Train Control (PTC) refers to technology that will eventually be used on this line that is capable of preventing train-to-train collisions, over speed derailments and casualties or injuries to roadway workers. It is a process by which the train can detect speed reductions and the train will automatically slow down or come to a complete stop if the engineer does not respond in a timely manner. The proposed upgrades listed in this grant application will allow for the upgrades of signalized circuitry on these projects and a smoother transition from the standardized signal systems to the new circuitry that is compatible with positive train control equipment. Therefore, such upgrades will encourage the railroads to take a more immediate role in implementing PTC on the corridor, permitting freight and passenger trains to interact within a safer environment, especially in congested areas such as St. Louis.

UP is contributing 5 percent of the project improvement costs. This is a complementary project to the many other projects on the line and was also previously applied for during the 2009-2010 round of applications for PE-NEPA work and the 2008 intercity passenger rail program for preliminary engineering, both of which were successfully awarded. UP is showing its commitment to the project by its voluntary contribution of 5 percent and its use of future dispatching techniques to allow for better and easier dispatching of Amtrak trains in the area. UP also supported the effort to apply for this project in the previous round of applications, which shows its commitment and focus to this effort to make the Sedalia subdivision more accessible to Amtrak trains, even though it is for freight purposes that are only one half of the equation in getting trains from Kansas City to Jefferson City in that UP runs trains bi-directionally on the River subdivision and the Sedalia subdivision.

(1b) Other Public Benefits

Demonstrate the potential of the proposed project to achieve other public benefits in a cost-effective manner:

- Environmental quality and energy efficiency and reduction in dependence on foreign oil, including use of renewable energy sources, energy savings from traffic diversions from other modes, employment of green building and manufacturing methods, reductions in key emissions types, and the purchase and use of environmentally sensitive, fuel-efficient, and cost-effective passenger rail equipment;
- Promoting interconnected livable communities, including complementing local or state efforts to concentrate higher-density, mixed-use, development in areas proximate to multi-modal transportation options (including intercity passenger rail stations);
- Improving historic transportation facilities; and
- Creating jobs and stimulating the economy. Although this solicitation is not funded by the American Recovery and Reinvestment Act of 2009 (Public Law 111-5), these goals remain a top priority of this Administration. Therefore, Individual Project applications will be evaluated on the extent to which the project is expected to quickly create and preserve jobs and stimulate rapid increases in economic activity, particularly jobs and activity that benefit economically distressed areas, as defined by section 301 of the Public Works and Economic Development Act of 1965, as amended (42 U.S.C. 3161) ("Economically Distressed Areas").

Allowing MoDOT to finalize the PE/NEPA study for the Knob Noster siding extension, much of which has already been in progress, will confirm that freight and passenger rail travel improves the environment, provides energy-efficient transportation, increases passenger/freight rail fluidity and reduces oil dependency. It will also analyze and continue the work already completed to minimize the stream impacts from the rail line on a nearby stream. The project positively affects rail travel by strengthening the Missouri corridor, increasing on-time performance and providing growth opportunities for additional freight and passenger trains, while offering many environmental benefits to the state.

- Each ton-mile of freight moved by rail reduces greenhouse gas emissions by 2/3, compared to truck transportation.

- Freight trains are almost 4 times more fuel-efficient than trucks and have less impact on greenhouse gas emissions.
- Rail travel generates less carbon dioxide and consumes less energy per passenger mile than cars or planes.

Amtrak has committed to a 6 percent reduction in carbon dioxide emissions by volunteering to meet reduction targets.

One of the project's goals is to improve dependability and speed of Amtrak service between St. Louis and Kansas City. This service connects 10 diverse communities including Missouri's two largest major metropolitan areas, the state capital and several popular historic towns. Improving the service will synergistically support the existing transportation systems providing intermodal access to an abundance of work- and tourist-related locations within these 10 communities. The Gateway Transportation Center in downtown St. Louis combines access from Amtrak to the local transit systems (light rail and bus), taxis and intercity buses.

In Hermann, Sedalia and Jefferson City, passengers can access the Katy Trail State Park, which is Missouri's most popular hiking/biking facility and the nation's longest rails-to-trails conversion. Amtrak and Missouri partnered to provide specific accommodation for bicycles on board the trains in response to passengers' desiring to take bikes along for trail rides. Also in Sedalia, the OATS transit system shares the building with the Amtrak station.

In Warrensburg, home of the University of Central Missouri, the local bus system includes the Amtrak station along with 14 other regular stops. In Kansas City, the Amtrak station is located at Union Station, which is a local bus transfer facility offering access to the metropolitan area.

In addition to these locations with interconnectability to other transportation facilities, six of the Amtrak stations provide direct access to historic downtown business areas with stores, restaurants, wineries and lodging within walking distance. Clearly the expected improvements to Amtrak service will foster positive enhancement to livable communities.

The *High-Speed Intercity Rail Plan's* goal is to reduce delay time for both passenger and freight trains by adding additional rail sidings and enhancing existing rail infrastructure. The project would span the distance between Kansas City and St. Louis. The first phase involved three corridor improvement projects with a combined investment of $36 million. Additional projects in this round of applications complete phase two with a combined investment of $36 million. The total investment estimated for the Missouri plan as of today is estimated at $247 million, with more investments to come. (See attached MODOT/UP/Amtrak proposed funding improvements and graph as of August 2010.)

The Knob Noster project would extend an existing siding to 9,000 feet along a 27-mile rail segment for the purpose of reducing recrew and increasing train velocity and was already designed as a result of the study money provided in previous FRA Intercity Passenger Rail Grant No. 6048. Project construction is located in the economically distressed area of western central Missouri. The total project investment is $9.7 million and is estimated to create 43 jobs in the construction phase and 81 jobs in the operations phase on average annually.

The following information from the Missouri Department of Economic Development's Missouri Economic Research and Information Center in 2009 addresses the economic recovery and reinvestment benefits.

Statewide Impact of Knob Noster Siding Project as of 8/2009:

During the next seven years, every dollar of project investment returns (benefit-cost ratio):
0.10 : 1.00 in new net general revenues totaling $0.829 million,
2.09 : 1.00 in new personal income totaling $17.748 million,
2.64 : 1.00 in new value-added (GSP) totaling $22.417 million, and
4.72 : 1.00 in new economic activity (output) totaling $40.082 million.

On average each year, the project creates:
70 new jobs annually (38 direct/ 32 indirect) paying an average wage of $29,166 per job,
$ 0.12 million in new net general revenues annually,
$ 2.54 million in new personal income annually, and
$ 3.20 million in new value-added to the economy annually, and $ 5.73 million annually in new economic activity.

(See attached 2009 MERIC report.)

As materials are made, bought and consumed for this project, a need for additional resources will occur that will provide opportunities for U.S. manufacturing firms to increase their production of these items. The sources of supply for these items and the procurement contracts covering their acquisition and installation will include "Buy America" provisions and requirements,

which will help support the U.S. industry as a whole.

If this application is approved, MoDOT will appreciate an expedited completion of the grant agreement, so the project can be quickly started. MoDOT will require minimal technical assistance similarto the FRA assistance requested during the successful implementation of the application for an intercity passenger rail grant in 2008 and the first round of HSIPR applications in 2009.

The applicant previously secured a grant from the Federal Railroad Administration, Intercity Passenger Rail Program, Grant No. 6048 of $3,292,684, to construct a new siding at Shell Spur on the same Union Pacific-Amtrak corridor of this project, and to begin preliminary design for the Knob Noster siding extension. The award was made Sept. 30, 2008, and construction began May 29, 2009. Work was complete by Dec. 31, 2009, and the siding is now in use. The siding extension design drawings for Knob Noster were also done at the same time. The award was matched to a $5 million state appropriation. An MOU and a later multifaceted agreement were signed in 2009 with the Union Pacific Railroad to facilitate the project. A grant agreement was also signed with the FRA. Also three shovel-ready projects were awarded to MODOT in 2010 on the first round of applications, and these projects are in the pre-construction stage. PE-NEPA money was also granted for the Knob Noster siding extension project in the same round of applications.

Both application and the current grant oversight are efforts on behalf of many areas of expertise in the Missouri Department of Transportation. These areas include, but are not limited to, environmental, design, controller's office, transportation planning, governmental relations and multimodal operations. The key stakeholder/project driver in MoDOT is the railroad section. Each of these units also interfaces with Union Pacific and the actual contractor as well in order to solve problems and expedite solutions.

The project is somewhat similar to the Shell Spur project, and the Knob Noster siding was actually designed using part of the monies from the same Shell Spur grant. The Knob Noster construction is expected to be similar in scope and outcome to the Shell Spur siding. MoDOT has been extensively involved in all areas of the siding project including design, pre-bid process and daily updates with the contractor.

PE/NEPA for all projects will be completed relatively quickly upon grant award, and the Knob Noster project is no exception. It is expected that Knob Noster would be on of the first FD/Construction projects to move immediately after the environmental issues are finalized and completed. Each of the projects has been estimated in terms of projected costs and are refinanced in one or both of the following: (1) the University of Missouri Engineering School’s detailed capacity analysis of the line and its subsequent updates, and (2) the memorandum of understanding signed between MoDOT and Union Pacific – a result of MoDOT’s efforts to pursue projects for funding along the present UP corridor for its state-supported trains and in conjunction therewith to secure minimum levels of performance.

(2) Project Delivery Approach

Consider the following factors to determine the risk associated with the proposed project’s delivery within budget, on time, and as designed:

- The adequacy of any completed engineering work to assess and manage/mitigate the proposed project’s engineering and constructability risks;
- The sufficiency of system safety and security planning; and
- The project's progress, at the time of application, towards compliance with environmental review requirements under NEPA and related statutes.

There is no known funding risk if approved per the cost-sharing terms with Union Pacific per the MOU. The project can be completed in a two-year construction timeframe, so barring extreme unforseen 'acts of God,' such as earthquakes, tornadoes, floods or fires, there are no schedule risks. Amtrak has shown no propensity to discontinue service as long as there is state financial support, which has been in place for more than 30 years. Many communities have invested substantial funds in their train stations and have a vested interest in ensuring the route's success, so there is no substantial risk of cities discontinuing support of their station stops. An outline System Safety Program Plan in conjunction with the Union Pacific, consistent with the requirements outlined in Section 4.2.6 of the CFR Vol. 75, No. 126 and 49 CFR 659 has been generated and is submitted in support of this application (see attachment).

(3) Sustainability of Benefits

Address the likelihood of realizing the proposed project's benefits:

- The quality of financial planning documentation that demonstrates the financial viability of the HSIPR service that will benefit from the project;
- The availability of any required operating financial support, preferably from dedicated funding sources for the benefiting intercity passenger rail service(s);
- The quality and adequacy of project identification and planning;
- The reasonableness of estimates for user and non-user benefits for the project;
- The comprehensiveness and sufficiency, at the time of application, of agreements with key partners (including the railroad operating the intercity passenger rail service and infrastructure-owning railroads) that will be involved in the operation of the benefiting intercity passenger rail service, including the commitment of any affected host-rail carrier to ensure the realization of the anticipated benefits, preferably through a commitment by the affected host-rail carrier(s) to an enforceable on-time performance of passenger trains of 80 percent or greater;
- The favorability of the comparison between the level of anticipated benefits and the amount of Federal funding requested; and
- The applicant's contribution of a cost share greater than the required minimum of 20 percent.

The HSIPR project that will benefit from this planning is the *Missouri River Runner* Amtrak service that has been in existence for 31 years and continues to thrive. Recent increases in on-time performance and in passenger increases in numbers have made it a route with a great future. Although it is funded by general revenue from the state and like every other state, Missouri has had an extremely tight budget the last few years, there is no reason to expect that the service will not continue, especially as other projects to improve on-time service come on line and further support its funding.

The list of projects identified for this application were essentially the same as are being used with some exceptions from the 2007 University of Missouri study. All of these projects present a comprehensive and complete overview of the entire line and the needs along the line. This project is in a small area that was specifically identified in the 2007 study as the area between Lee's Summit and Warrensburg. According to the study, the area needing improvements, which when totalled together equal 19.1 percent of all total delays on the line (by far the largest amount of delays), so the spirit and intent of the project is well within the study's guidelines. The study has garnered great attention and continues to do so. As the projects are funded, it creates even greater support and continuing emphasis on funding all projects in the study.

Estimates for users vary, but in light of the fact that this is an area with no other sidings for many miles in either direction, this will create an excellent service method for trains to use in order to quickly reach the stations at Sedalia and Lee's Summit. It is estimated that a substantial portion of the freight trains now using the mainline will be diverted to the siding at the times the Amtrak trains are in the area.

The UP is commited by its MOU to the succcess of this project by its contribution of 5 percent. MODOT maintains this project will not only improve Amtrak on-time performance but also remove freight trains from the mainline and move them onto the siding, thereby making the solution for all parties better and more comprehensive. Not only is the UP committed to at least an 85 percent on-time performance when this and several other projects are completed in the immediate area of western Missouri per the MODOT-UP MOU of 2009, they are also committed immediately to an 80 percent OTP when the three shovel-ready projects previously applied for and granted in 2010 are complete. The amounts requested are 80 percent federal, and the MODOT funding at 15 percent will use the funds leftover from the previously underbudget and successful California siding project, in FRA grant no. 6048. UP will provide the remaining 5 percent of the cost.

These amounts are commensurate with the overall benefits in that the Amtrak benefits will be immediately apparent when in place. The freight benefits will, over a number of years and along with future projects for Missouri KC to St. Louis service for passenger trains, show how the additional capacity provided helps remove freight trains from former bottlenecks and puts them on a track to success with fewer problems in arriving at stations on-time. As the frequencies in freight train travel and the Missouri passenger rail service may be expected to increase in the future, the types of access and infrastructure improvements sought, such as the existing project, will be clearly the type of projects with the most delivery at the least cost.

F. Statement of Work

Provide a detailed response for how the FD/Construction project will be carried out in the text fields and tables provided. The tables in this section are unlocked; applicants can add rows, as necessary, for additional tasks. If you reference a supporting document, it must be listed in Section G.2.

(1) Background. Briefly describe the events that led to the development of this FD/Construction project and the issue the project will address. Also describe the rational planning process used to analyze the investment needs and service objectives of the full corridor on which the individual FD/Construction project is located.

The area in which the siding will be constructed was identified as a bottleneck in a 2007 study by the University of Missouri and as a section of track that needed an additional siding. There are no sidings currently within 28 miles of this location. This project will extend an existing siding to a full 9,000 feet, which will allow freight and Amtrak trains to pass each other. MoDOT has also agreed to allow access to the site for maintenance from the nearby Highway 50. The overall purpose of this project is to reduce Amtrak delays in an area the university study identified as having nearly 20 percent of all delays, which is the largest amount of any area. MODOT"s contribution will be made up of the leftover under-budget money from the successful and similar California siding project. This project will improve on-time performance along the entire Union Pacific corridor in Missouri between St. Louis and Kansas City and will also enhance the future provision of 90- to 110-mph service.

(2) Scope of Activities. Clearly describe the scope of the proposed FD/Construction project and identify the general objective and key deliverables.

(2a) General Objective. Provide a general description of the work to be accomplished through this grant, including project work effort, project location, and other parties involved. Describe the end-state of the project, how it will address the need identified in Background (above), and the outcomes that will be achieved as a result of the project.

The purpose of this project is to increase fluidity of train movement and decrease delays of Amtrak passenger trains in the 27-mile segment of single track on UPRR's Sedalia subdivision between Centerview MP 224.0 and Dresden MP 197.0. At present, this single track segment has only one siding to facilitate train traffic meets and passes at Knob Noster. However, the siding at Knob Noster is 6,295-feet long, and the majority of freight trains do not fit in the siding. Thus faster passenger trains cannot pass slower freight trains. This project will extend an existing siding to a full 9,000 feet, which will allow freight and Amtrak trains to pass each other. The area in which the siding will be constructed was identified as a bottleneck in a 2007 study by the University of Missouri and as a section of track that needed an additional siding. There are no sidings currently within 28 miles of this location.

This results in Amtrak passenger trains being delayed on both sides of the 27-mile corridor causing significant bottlenecks while waiting trains wait for this stretch of the track to clear. The siding track will also improve the efficiency of the railroad by allowing for train meets and sorting of cars for freight trains as well as an area for storing trains during maintenance incidents.

(2b) Description of Work. Provide a detailed description of the work to be accomplished through this grant by task (e.g., FD and Construction) including a description of the geographical and physical boundaries of the project. Address the work in a logical sequence that would lead to the anticipated outcomes and the end state of the activities.

This siding extension will be in Johnson County in the city of Knob Noster on the Union Pacific Railroad's Sedalia subdivision from milepost 209.24 to milepost 210, extending an existing siding that begins at milepost 208.1. Construction of new passing tracks will connect to existing siding on one end and mainline tracks on the other at MP 208. The overall purpose of this project is to reduce Amtrak delays in an area the university study identified as having nearly 20 percent of all delays, which is the largest amount of any area.

MoDOT and UP have been working on an environmental assessment for this project located on the Union Pacific Railroad in Missouri on the Sedalia subdivision along the *Missouri River Runner* route, which is the Amtrak-state supported service. There are 10 Amtrak stations along the route that include St. Louis, Kirkwood, Washington, Hermann, Jefferson City, Sedalia, Warrensburg, Lee's Summit, Independence and Kansas City. There is no commuter rail service on this line. The only freight

use is by Union Pacific freight trains, which will also benefit from the shovel-ready project. There will be no donated land from the railroad in order to construct the project.

MoDOT understands that normal FHWA-approved methods of achieving environmental compliance are not sufficient to document these FRA methods. MoDOT plans to achieve environmental compliance with FRA's permission through procedures similar to the following. In conducting the Environmental Assessment, the following steps will or have already occurred.

- Identify project's purpose and need, and alternates being considered
- Early consultation, coordination with agencies with jurisdiction by law or with special expertise to specific resources
- Draft document development
- Hold public hearing, if necessary
- Agency and internal review of draft document
- Identification of preferred alternatives, if necessary
- Final document development
- Public, agency and internal review of final document
- Letter to federal agency to accompany FONSI that states any changes to preferred alternate
- Develop Finding of No Significant Impact (FONSI)
- Federal approval with a signed FONSI

The expectation is that this required environmental work would be completed quickly in time for the project to move forward to construction as soon as possible. Attached is documentation of the many steps that MODOT and Union Pacific have already taken towards environmental compliance, including the draft EA, which is nearly 95 percent complete. In addition, an initial inquiry was made to the Corps of Engineers regarding the potential impact to an adjacent stream and leach field located within the project limits. The adjacent leach field is part of the City of Knob Noster's Wastewater Treatment Facility. The initial EA was drafted with the preferred alternative having impact to the leach field. However, upon further evaluation, MoDOT and Union Pacific were proactive and modified the original plans to avoid the impact to the leach field. The EA will need to be updated to reflect the new design. Rather than constructing a sideroad adjacent to the siding, an approximate 300-foot x 45-foot concrete pad area will be constructed adjacent to the signal to allow access for signal maintenance, which will avoid the leach field. In addition, MoDOT, in coordination with UPPR, has identified all impacts to wetlands and streams. Overall, approximately 2,300 feet of an adjacent stream will be impacted, which will more than likely require an individual 404 water quality permit.

Completing the remainder of the environmental work is the next step, but much has already been accomplished both in engineering and in environmental and access issues. Preliminary engineering is complete, and the documentation is attached. In addition, the newly constructed siding will require access from an adjacent highway. MoDOT's design staff has prepared the design drawings and estimate for constructing the access entry. (See attachment.)

(2c) Deliverables. Describe the specific elements of the project to be completed to FD, or constructed in accordance with the FD that was either provided to FRA during the application process or completed as a part of this grant. In the table provided, list the deliverables, both interim and final, which are the outcomes of the project tasks.

	Deliverable	Task
1	Project drawings and estimate	Preliminary Engineering
2	Final Environmental Assessment, SHPO Clearance, applicable permits	NEPA Evaluation
3	Track Drawing Plan Sheets	Final Design
4	Stakeholder Construction Agreement, Tri-Party Service Outcomes Agreement, Grant Agreement with FRA	Agreements for Obligation of funds
5	MoDOT Design Plans and Estimate for Access Entrance	Design plans and estimate for construction of access.

(3) Project Schedule. In the table below, estimate the approximate duration for completing each task in months (e.g., 36). For total project duration, reference Section C.4.

	Task	Task Duration
1	FD/Engineering***much of this work has already been completed	3
2	Construction	18
	Total project duration	21

(4) Project Cost Estimate/Budget. Provide a high-level cost summary of FD/Construction work in this section, using Appendix 3 of the NOFA and the HSIPR Individual Project Budget and Schedule form as references. The figures in this section of the Statement of Work should match exactly with the funding amounts requested in the SF-424 form, the HSIPR Individual Project Budget and Schedule form, and in Section C of this application. If there is any discrepancy between the Federal funding amounts requested in this section, the SF-424 form, the HSIPR Individual Project Budget and Schedule form, or Section C of this application, the lesser amount will be considered as the Federal funding request. Round to the nearest whole dollar when estimating costs.

The total estimated FD/Construction project cost is provided below, for which the FRA grant will contribute no more than the Federal funding request amount indicated. Any additional expense required beyond that provided in this grant to complete the FD/Construction project shall be borne by the Grantee.

FD/Construction Project Overall Cost Summary		
#	Task	Cost in FY11 Dollars
1	Engineering***part of these costs will be or are already covered by 2009 PE-NEPA application; much of this work has already been completed.	$789,000
2	Construction	$ 8,867,000
	Total FD/Construction project cost	$ 9,656,000

Federal/Non-Federal Funding			
		Cost in FY11 Dollars	Percentage of Total Activities Cost
	Federal funding request	$ 7,724,800	80 %
	Non-Federal match amount	$1,931,200	20 %
	Total FD/Construction project cost	$ 9,656,000	100 %

G. Optional Supporting Information

Provide a response to the following questions, as necessary, for the proposed FD/Construction project.

(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 3). Completing this question is optional.

The Knob Noster siding is the second of three sidings identified in a University of Missouri study as needed to help alleviate Amtrak delays. This siding is also the only siding in which the preliminary engineering and design dollars are already allocated by a September 2008 grant in the intercity passenger rail FRA grant no. 6048 and a subsequent ARRA-HSIPR grant in 2009 for PE-NEPA activities. During the preliminary design phase following the ARRA grant award, MoDOT, in coordination with Union Pacific, has been proactive to minimize environmental impacts to be able to expedite the construction process as much as possible when construction funds are awarded through the current HSIPR grant award.

(2) Please provide a document title, filename, and description for all optional supporting documents. Ensure that these documents are uploaded to GrantSolutions.gov using a logical naming convention or that an active link is provided with your application.

Document Title	Filename	Description and Purpose
95% NEPA Document	95 percent NEPA Document.docx	Evaluation of environmental impacts.
Knob Noster Design Plans	Knob_Noster_Design_Plans.pdf	Specifies the design of the siding.
Knob Noster Siding Estimate.pdf	Knob_Noster_Siding_Estimate.pdf	Gives split out of costs for project.
Project Location Sketch	Knob Noster Location Map.pdf	Gives topographic map and aerial view of project location.
Design Plans and Estimate of Access Point	UP_Rte 50_Entrance.pdf MoDOT Access Estimate.pdf	Design Plans and estimate of access point off of Highway 50 for signal maintenance.
SHPO Clearance	Knob_Noster_Environmental Correspondence.pdf	Evaluation of historic impact.
Track Design Plans	Knob_Noster_Design_Plans.pdf	Design plans for track construction.
Panoramic Map	Knob_Noster_Panoramic_Mao_07_26_10.pdf	Maps for length of project.
R/W Map	R_W_Map_Sedalia Sub MP 210.pdf	Map identifying right of way.
Wetland Data Sheets	Wetland_data_sheets.pdf	Evaluation of wetlands.
Environmental Clearances	Knob_Noster_Environmental Correspondence.pdf	Other environmental correspondence.
Introductory letter from MoDOT Interim Director	1Intro LETTER signed by KKeith.pdf	Cover letter for the HSIPR projects signed by MoDOT Interim Director
Project Overview	2Project Overview.pdf	Introduction to HSIPR projects for 2010
HSIPR Projects Division of Costs	3HSIPR RAIL PROJECTS DIVISION OF COSTS July 2010.pdf	HSIPR Projects Division of Costs
Project Map and Partner Signature Map	4Project Map and Partner Signature Map.pdf	Detailed project map and same map with signatures of support
Governor's MOU	5Multi-StateGovernorsMOUSigned.pdf	Signed copy of Multi-State Governors' MOU
States for Passenger Rail High Speed Rail Corridors	6US Federally Designated High Speed Rail Corridor Map.pdf	US Federally Designated High Speed Rail Corridor Map
Letters of Support	7Complete Letters of Support-reduced.pdf	Letters of Support
Rail Capacity Analysis I & II	8Rail Capacity Analysis Reports I and II.pdf	Rail Capacity Analysis Reports I and II
2009 MERIC Analysis Report	9MERIC HSIPR Statewide and Longterm Impacts 2009.pdf	HSIPR Statewide and Longterm Impacts 2009 study prepared by MERIC

2010 MERIC Analysis Report	10MERIC HSIPR Economic Impacts of Terminal RR.pdf	HSIPR Economic Impacts of Terminal RR study prepared by MERIC
MO Passenger Rail Schedule	11MO Passenger Rail Schedule.pdf	Missouri Passenger Rail Schedule
MO Intercity Bus Stops	12Intercity Bus Stops.pdf	Missouri Intercity Bus Stops
STIP 2011-2015 and East West Gateway Support Letter	13STIP 2011-2015 plus East West Gateway Support Letter.pdf	HSIPR Projects on MoDOT's 2011-2015 STIP to include support letter from East West Gateway
Amtrak-MoDOT MOU	14Amtrak-MoDOT MOU.pdf	Amtrak-MoDOT MOU
Amtrak Operating Agreement	15Amtrak Operating Agreement.pdf	Amtrak Operating Agreement
UP-MoDOT MOU	16UP-MODOT MOU signed copy.pdf	UP-MoDOT MOU
Terminal-MoDOT MOU	17Terminal-MoDOT MOU.pdf	Terminal-MoDOT MOU
'96 Agreement	18-1996 agreement between MODOT and UP to preserve 3 more slots.pdf	1996 agreement between MODOT and UP to preserve 3 more slots
UP Track Layout	19UP Track Layout.pdf	UP Track Layout
Shell Spur Agreement	20Shell Spur Agreement.pdf	Shell Spur Agreement

H. Checklist of Application Materials

Use this section to determine the thoroughness of your FD/Construction application prior to submission.

Documents	Format
1. Application Form	
☒ HSIPR Individual Project Application Form – FD/Construction	Form
2. Budget and Schedule Form	
☒ HSIPR Individual Project Budget and Schedule Form	Form
3. OMB Standard Forms	
☒ SF 424: Application for Federal Assistance	Form
☒ SF 424A: Budget Information-Non Construction	Form *
☒ SF 424B: Assurances-Non Construction	Form *
☒ SF 424C: Budget Information-Construction	Form **
☒ SF 424D: Assurances-Construction	Form **
4. FRA Assurances Document	
☒ FRA Assurances Document (See Section 4.2.4 of the NOFA)	Form
5. Project Development Supporting Documentation	
☒ Project Planning Documentation (See Section 4.2.5 of the NOFA)	No Specified Format
☒ Preliminary Engineering (PE) Documentation (See Section 4.2.5 of the NOFA)	No Specified Format
☒ NEPA Documentation (See Section 4.2.5 of the NOFA)	No Specified Format
6. Project Delivery Supporting Documentation	
☒ Project Management Documentation (See Section 4.2.6 of the NOFA)	No Specified Format
☒ Financial Planning Documentation (See Section 4.2.6 of the NOFA)	No Specified Format
☒ System Safety Plan (See Section 4.2.6 of the NOFA)	No Specified Format
☒ Railroad and Project Sponsor Agreements (See Section 4.2.6 of the NOFA)	No Specified Format
7. Optional Supporting Documentation	
☒ Other Relevant and Available Documentation (See Section 4.2.7 of the NOFA)	n/a

* These documents are required for FD/Construction projects that include investments that are not construction activities.
** These documents are not required for FD/Construction applications that only include investments that are not construction activities.

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**.