Narrative Application Form – Individual FD/Construction Part I

High-Speed Intercity Passenger Rail (HSIPR) Program

Applicants interested in applying for funding under the March 2011 Notice of Funding Availability (NOFA) are required to submit the narrative application forms, parts I and II, and other required documents according to the checklist contained in Section 4.2 of the NOFA and the Application Package Instructions available on FRA's website. All supporting documentation submitted for this FD/Construction project should be listed and described in Section G of this form. Questions about the HSIPR program or this application should be directed to the Federal Railroad Administration (FRA) at HSIPR@dot.gov.

Applicants must enter the required information in the gray narrative fields, check boxes, or drop-down menus of this form. Submit this completed form, along with all supporting documentation, electronically by uploading them to www.GrantSolutions.gov by 8:00 p.m. EDT on April 4, 2011.

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="2">(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>Address 1:

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="2">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="5">(2) List out 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 an application's eligibility requirements.

(1) Select the appropriate box from the list below to identify applicant type. Eligible applicants are listed 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 applicant types below, additional documentation is required to establish applicant eligibility. Please select the appropriate box and submit supporting documentation to demonstrate applicant eligibility, as described in Section 3.2 of the NOFA, to GrantSolutions.gov and list the supporting documentation under "Additional Information" 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 proposed 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. Refer to the FD/Construction Application Package Instructions for more information. The appropriate planning document must be submitted with the application package and 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) Verify the completion of Preliminary Engineering requirements. List the documents that establish completion of Preliminary Engineering for the project covered by this application. Refer to the NOFA and FD/Construction Application Package Instructions for more information. Any document not available online should be submitted with the application package and listed in Section G.2 of this application. If more rows are required, please provide the same information for additional PE requirements in a separate supporting document and list it in Section G.2 of this application.

Documentation	**Date of Issue** (*mm/yyyy*)	**Describe How Documentation Can Be Verified** (choose one)	
		Submitted in GrantSolutions	**Web Link** (if available)
Estimate from Union Pacific	03/11	☒	

(4) Verify the 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, Finding of No Significant Impact, or FRA Categorical Exclusion concurrence) is not required for an application but must have been issued by FRA prior to award of a construction grant. Applications that are accompanied by a final NEPA determination will be looked upon favorably during the application review and selection process. Verified documents can be submitted as a supporting document or referenced through an active public URL. Any document not available online should be submitted with the application package and listed in Section G.2 of this application. Refer to the NOFA and FD/Construction Application Package Instructions for more information.

Documentation	**Date of Issue** (*mm/yyyy*)	**Describe How Documentation Can Be Verified** (choose one)	
		Submitted in GrantSolutions	**Web Link** (if available)
NEPA Documentation			
☐ Categorical Exclusion Documentation (worksheet)		☐	
☒ Environmental Assessment—based on preliminary evaluation it is MODOT's assumption that an EA will be adequate for this project	To be determined	☒	
☐ Final Environmental Impact Statement	/	☐	
Project NEPA Determination			
☐ Categorical Exclusion	/	☐	
☐ Finding of No Significant Impact	/	☐	
☐ Record of Decision	/	☐	

(5) Select and describe the operational independence of the proposed FD/Construction project.[1] Refer to Sections 3.4.4 and 3.5.2 of the NOFA for more information about operational independence and applications related to previously-selected projects.

☒ This project is operationally independent.
☐ This project is operationally independent when considered in conjunction with previously selected or awarded HSIPR project(s) (identify previously selected or awarded projects below).
☐ This project is not operationally independent.

Briefly clarify the response:

This specific project is specifically to promote and advance the service so that 90-mph speed is achieved for the first time since 1971 when Amtrak began running on this route. The overall aim is to increase the speed for Amtrak; however, this area has been identified as a freight bottleneck as well in the University of Missouri study that identified this area as a frequent cause of freight delays. The overall approach is to build a second track that will support both sets of round trips per day at a speed not previously seen before. This section will entirely show the commitment of the state and the hope of the future in cooperation with the host railroad and the surrounding communities.

[1] A project is considered to have operational independence if, upon implementation, it will have tangible and measurable benefits, either independently of other investments or cumulatively with projects selected to receive awards under previous HSIPR program solicitations.

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"). Please limit the response to 100 characters.

MO-KC to STL Corridor – Lees Summit to Pleasant Hill 90 mph

(2) If the applicant submitted an application for this project, or a project within the scope, that was not selected, indicate the solicitation under which that application was submitted. Check all that apply.

- ☐ ARRA – Track 1
- ☒ ARRA – Track 2
- ☐ FY 2009 – Track 4
- ☐ FY 2009 Residual
- ☐ FY 2010 Service Development Program
- ☐ FY 2010 Individual Project – PE/NEPA
- ☐ FY 2010 Individual Project – FD/Construction
- ☐ N/A

(3) Indicate the activity(ies) proposed in this application. Check all that apply.

☒ Final Design ☒ Construction

(4) Indicate the anticipated duration, in months, for the proposed FD/Construction project. Consider that American Recovery and Reinvestment Act funding must be obligated by September 30, 2017.

Number of Months: 36

(5) Specify the anticipated HSIPR funding level for the proposed FD/Construction project. This information must match the SF-424 documents, and dollar figures must be rounded to the nearest whole dollar. All applicants are encouraged to contribute non-Federal matching funds. FRA will consider matching funds in evaluating the merit of the application. See Section 3.3 of the NOFA for further information regarding cost sharing.

HSIPR Federal Funding Request	Non-Federal Match Amount	Total Project Cost	Non-Federal Match Percentage of Total
$48,373,920.00	0	$48,373,920.00	0%

(6) Indicate the source, amount, and percentage of non-Federal matching funds for the proposed FD/Construction project. The sum of the figures below should equal the amount provided in Section C.5. Click on the gray boxes to select the appropriate response 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. Also, list the percentage of the total project cost represented by each non-Federal funding source. Provide supporting documentation that will allow FRA to verify each funding source, any documentation not available online should be submitted with the application package and listed in Section G.2 of this application.

Non-Federal Match Funding Sources	Type of Source	Status of Funding[2]	Type of Funds	Dollar Amount	% of Total Project Cost	Describe Any Supporting Documentation to Help FRA Verify Funding Source
n/a	n/a	n/a	n/a	$ 0	0 %	n/a
Sum of Non-Federal Funding Sources				$ 0	0 %	N/A

(7) Indicate whether the proposed activities in this application are also included as a component project or phase in a Service Development Program application submitted concurrently.

☐ Yes, all of the activities in this application have also been submitted as a component project or phase of a Service Development Program application.

☐ Yes, some of the activities within this application have also been submitted as a component project or phase of a Service Development Program application.

☒ No, this application and its proposed activities have not been submitted as a component project or phase of a Service Development Program application.

(8) Indicate the name of the corridor where the project is located and identify the start and end points as well as major integral cities along the route.

Kansas City to St. Louis Union Pacific Corridor (begin at Milepost 6.9 on KC Terminal, continues over UP for 283 miles and ends at Milepost 0.0 at St. Louis Terminal). Major cities are Kansas City, Sedalia, Jefferson City, Kirkwood and St. Louis This is a federally designated high-speed rail corridor.

(9) 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 shapefile (.shp) as supporting documentation. This document must be listed in Section G.2 of this application.

This project is from milepost 249.85 to milepost 258.03 on the Sedalia subdivision of the Union Pacific Railroad from Lee's Summit, Missouri, to Pleasant Hill, Missouri, and will construct a second main line for 90-mph passenger rail operations. It will also connect the two existing sidings in both of those communities for a total track improvement that will include the two sidings as well.

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

[2] 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. 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 capital investment program.

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 connect two existing sidings between Lee's Summit and Pleasant Hill in Jackson and Cass counties. It will also lay a second track next to the main line track that will accommodate Amtrak trains at 90 mph. It includes the length of both the Lee's Summit and Pleasant Hill sidings. The 90- mph speeds will result in positive publicity for the passenger service.

Currently, this area will only accommodate a 50-mph speed limit for Amtrak trains, and the improvement would expedite passengers in leaving the Kansas City area and increasing the speed at which they get to other locations along the east/west statewide route. This will also decrease the time it takes to get the train from St. Louis to Kansas City. The project will complement the recently constructed or to-be-constructed sidings on the state's western side. The higher speeds will allow Union Pacific to more easily anticipate when the Amtrak trains will be in the area of the new sidings and adjust dispatching accordingly. This project is part of the high-speed rail corridor between St. Louis and Kansas City known as *Missouri River Runner*. This will have a connection to the high-speed line between Chicago and St. Louis at St. Louis, Missouri.

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

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

(12) Indicate the anticipated service outcomes of the proposed FD/Construction project. Check all that apply.

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

Briefly clarify the response(s) if needed:

The new top speed will be good for on-time performance and also lower the amount of time in the schedule required so that the trains can move across the route faster.

(13) Provide the following information about job creation through the life of the proposed 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 annual onsite and other direct jobs created (on a 2080 work-hour per year, full-time equivalent basis).	206	1	1
Indicate the anticipated fiscal year.	N/A	FY14	FY19

(14) Quantify the applicable service outcomes of the proposed FD/Construction project. Provide the current conditions and anticipated service outcomes. Future state information is required only for the service outcomes identified in Section C.11.

	Frequencies[3]	Scheduled Trip Time (round-trips, in minutes)	Average Speed (mph)	Top Speed (mph)	Reliability – Provide Either On-Time Performance Percentage or Delay Minutes
Current	4	540	49	79	80%

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

Future	4	530	80	90	80%

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

☐ Final Design activities are complete. ☐ Construction activities are complete.

☐ Final Design activities are in progress. ☐ Construction activities are in progress.

☒ No Final Design activities are in progress or completed. ☒ No Construction activities are in progress or completed.

Describe any activities that are underway or completed in the table below. If more space is necessary, please provide the same information for additional activities underway or completed 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*)
Estimate from UP	Estimate and initial track layout indications	☒	3/2011	3/2011

D. Infrastructure Owner(s) and Operator(s)

Address the section below with information regarding railroad infrastructure owners and operators of the proposed FD/Construction Project. Applicants that own and/or control the infrastructure to be improved by the project or have a service outcomes agreement in place with the infrastructure owning railroad for the proposed project, or an executed agreement that could be amended with the infrastructure owning railroad for a project(s) located on the same corridor as the proposed project, will be looked upon favorably during the application review and selection process.

(1) Provide information regarding Right-of-Way Owner(s). Where railroads currently share ownership, identify the primary owner. Click on the gray boxes to select the appropriate response from the lists of railroad type, right-of-way owner and status of agreement. If the Right-of-Way Owner is not included on the prepopulated list, select "Other" and type the name in the adjacent text box within that field. Should the application have more than five owners, please provide the same information for additional owners 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 Agreement to Implement
Freight	Union Pacific Railroad	283	424	**Service Outcomes Agreement**

(2) 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 gray box to select the appropriate response from the status of agreement list. Should the proposed service have more than three operators, please provide the same information for additional operators in a separate supporting document and list it in Section G.2 of this application.

Name of Rail Service Operator	Status of Agreement
Amtrak	Yearly Operating Agreement

(3) Provide information about the existing rail services within the project boundaries (e.g., freight, commuter, and intercity passenger). Click on the gray boxes to select the appropriate response from the list of types of service. If the Name of Operator is not included in the prepopulated list, select "Other" and type the name in the adjacent text box within that field.

Type of Service	Name of Operator	Top Existing Speeds Within Project Boundaries (mph)		Number of Route-Miles Within Project Boundaries (miles)	Average Number of Daily One-Way Train Operations[4] within Project Boundaries
		Passenger	Freight		
Freight	Union Pacific Railroad	60	55	.5	38
Passenger	Amtrak	60	55	.5	4

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

(4) Estimate the share of benefits that will be realized by non-intercity passenger rail services and select the approximate cost share to be paid by the beneficiary.[5] Click on the gray boxes to select the appropriate response from the lists of type of beneficiary, expected share of benefits, and approximate cost share. If more than three types of non-intercity 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 Non-Intercity Passenger Rail	Expected Share of Benefits	Approximate Cost Share
Freight	10%	0

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

E. Additional Response to Evaluation Criteria

Respond to each of the following evaluation criteria in the gray text boxes provided to demonstrate how the proposed FD/Construction project will achieve these benefits.

(1) Project Readiness

Describe the feasibility of the proposed FD/Construction project to proceed promptly to award, including addressing:

- The applicant's progress, at the time of application, in reaching compliance with NEPA for the proposed project. Although a NEPA decision document (Record of Decision, Finding of No Significant Impact, Categorical Exclusion determination) is not required at the time of application, applications for Individual FD/Construction Projects that are accompanied by a final NEPA determination will be looked upon favorably during the application review and selection process;
- The applicant's progress, at the time of application, in reaching final service outcomes agreements (where necessary) with key project partners. Applicants that own and/or control the infrastructure to be improved by the project or have a service outcomes agreement in place with the infrastructure owning railroad for the proposed project, or an executed agreement that could be amended with the infrastructure owning railroad for a project(s) located on the same corridor as the proposed project, will be looked upon favorably during the application review and selection process; and
- The quality and completeness of the project's Statement of Work, including whether the Statement of Work provides a sufficient level of detail regarding scope, schedule, and budget to immediately advance the project to award.

This project will increase the usefulness and the public acceptance of rail passenger service by showing a concrete movement toward faster travel times and by decreasing the amount of time spent on the entire route. The public response to faster service should be overwhelming, and when this section of track is built for higher speeds, the remainder of the route will build support for higher speeds.

This project also offers some key safety benefits. In this area, there are many grade separations and few crossings. If the project goes forward, MoDOT in its role as the rail safety agency for the state will complete the necessary medians and lighting upgrades to the remaining crossings in order to ensure the contact between vehicles and the 90-mph trains is limited.

There is no current commuter service on the route; however, future commuter trains in the greater Kansas City area would enjoy the benefits of higher speeds. The Lee's Summit-to-Pleasant Hill area is a major Kansas City suburban enclave.

PE-NEPA has already been approved for this project, and work is expected to begin shortly. The work done on this project will also be a precursor to the work done in the entire corridor for the future 90-mph section on to Jefferson City from Pleasant Hill. See also the statement of work attached – it is similar to the scopes of work done for other similar Union Pacific projects.

The railroad has done videos of the area and indicated in its reports that the area does have several bridges; however, they are over small creeks and streams and not major rivers. There will be a small wetland impact, but no community impacts due to the nature of the rural area around it. The railroad also considered a possible alignment on an adjacent abandoned railroad but is not pursuing this option. In summary, the environmental impacts are an issue but will not be unduly burdensome to overcome with the proper study and PE-NEPA completion as has already been awarded to MoDOT for this project.

(2a) Transportation Benefits

Describe the transportation benefits that will result from the proposed FD/Construction project and how they will be achieved in a cost-effective manner, including addressing:

- Generating improvements to existing high-speed and intercity passenger rail service, as reflected by estimated increases in ridership, increases in operational reliability, 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;
- Encouragement of intermodal connectivity and integration, including a focus on convenient connection to local transit and street networks, as well as coordination with local land use and station area development;
- 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 from benefiting entities in the project's financing;
- 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.

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 interconnect ability 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. The expected improvements to Amtrak service will foster positive enhancement to livable communities.

(2b) Other Public Benefits

Describe the other public benefits that will result from the proposed FD/Construction project and how they will be achieved in a cost-effective manner, including addressing:

- The extent to which the project is expected to create and preserve jobs and stimulate increases in economic activity;
- Promoting environmental quality, energy efficiency, and reduction in dependence on oil, including the 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; and
- Promoting coordination between the planning and investment in transportation, housing, economic development, and other infrastructure decisions along the corridor, as identified in the six livability principles developed by DOT with the Department of Housing and Urban Development and the Environmental Protection Agency as part of the Partnership for Sustainable Communities, which are listed fully at http://www.dot.gov/affairs/2009/dot8009.htm.

The Missouri DOT's *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 double track between Lee's Summit to Pleasant Hill project would include the construction of a double track and signal upgrades for the purpose of increasing Amtrak train speed from 79 to 90 mph on this corridor segment. Project construction is located in the economically distressed area of Greater Kansas City, Missouri. Total project investment is $56.6 million.

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

Statewide Impact of Double Track Lee's Summit to Pleasant Hill

During the next three years, each dollar of project investment returns (benefit-cost ratio):

0.03 : 1.00 in new net general revenues totaling $1.488 million,
0.53 : 1.00 in new personal income totaling $30.064 million,
0.77 : 1.00 in new value-added (GSP) totaling $43.586 million, and
1.33 : 1.00 in new economic activity (output) totaling $75.503 million.

On average each year, the project creates:

206 new jobs annually (134 direct/ 72 indirect), paying an average wage of $44,127 per job,
$ 0.50 million in new net general revenues annually,
$ 10.02 million in new personal income annually,
$ 14.53 million in new value-added to economy annually, and
25.17 million annually in new economic activity.

(See attached MERIC report.)

(3) Project Delivery Approach

Describe the risk associated with the delivery of the proposed FD/Construction project within budget, on time, and as designed, including addressing:

- The timeliness of project completion and the realization of the project's benefits;
- The applicant's financial, legal, and technical capacity to implement the project;
- The applicant's experience in administering similar grants and projects;
- The soundness and thoroughness of the cost methodologies, assumptions, and estimates;
- The thoroughness and quality of the project management documentation;

- The timing and amount of the project's future noncommitted investments;
- The adequacy of any completed engineering work to assess and manage/mitigate the proposed project's engineering and constructability risks; and
- The sufficiency of system safety and security planning.

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. The award was made Sept. 30, 2008, and construction began May 29, 2009. Work was completed in November 2009. 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.

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 similar to the Shell Spur project (but would be much larger) and the Knob Noster siding extension, which was designed using part of the monies from the same Shell Spur grant. The 90-mph mainline construction is expected to be similar conceptually to the Shell Spur siding improvements but with two main tracks. MoDOT has been extensively involved in all areas of the Shell siding project including design, pre-bid process and daily updates with the contractor.

(4) Sustainability of Benefits

Identify the likelihood of realizing the proposed FD/Construction project's benefits, including addressing:

- The applicant's financial contribution to the project;
- The quality of a financial planning documentation that analyzes 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;
- The quality and adequacy of project identification and planning; and
- The reasonableness of estimates for user and non-user benefits for the project.

There is no known funding risk if approved per the cost-sharing terms with Union Pacific and the MOU. The project can be completed in a two-year construction timeframe, so barring extreme unforseen 'acts of God,' such as earthquakes, tornados, 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.

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 similar to the FRA assistance requested during the successful implementation of the application for an intercity passenger rail grant in 2008.

All projects MoDOT applied for under Track 1b for PE/NEPA in the first round are on schedule to have the PE-NEPA

completed soon. When PE and NEPA are completed, the projects can be moved to Track 1A-FD/Construction at the next available funding cycle. 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 and the service outcomes agreement** 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.

F. Statement of Work

The Statement of Work (SOW) is a required document. This must be submitted using the Narrative Application Form Part II. Statement of Work available on FRA's website to provide the required information. The quality and completeness of this document will be measured as a Project Readiness evaluation criterion, as outlined in Section 5.2.1 of the NOFA. Please provide the SOW as a separate document and list it in Section G.2 of this application.

The SOW is a description of the work that will be completed under the grant agreement and must address the background, scope, and schedule, and include a high-level budget of the proposed project.

(1) The SOW is required for a complete application package.

(2) The SOW should contain sufficient detail so that both FRA and the applicant can:

a. Understand the expected outcomes of the work to be performed by the applicant, and

b. Track applicant progress toward completing key project tasks and deliverables during the period of performance.

(3) The SOW should clearly describe project objectives, but allow for a reasonable amount of flexibility regarding how the objectives will be accomplished. It is important to describe the overall approach to and expectations for project/activity completion.

(4) If the SOW describes work for phases and/or groups of component projects, the larger program should be explained in the background section of the SOW. The remainder of the SOW should be limited to describing the activities that directly contribute to the combined FRA and applicant effort which is funded under the grant agreement.

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 being addressed (e.g., Section E.2). Completing this question is optional.

(2) Please provide a document title, filename, and description for all optional supporting documents. Ensure that these documents are uploaded to GrantSolutions.gov with the narrative application form and use a logical naming convention.

Document Title	Filename	Description and Purpose
Introductory letter from MoDOT Director	1Intro LETTER signed by KKeith.pdf	Cover letter for the HSIPR projects signed by MoDOT Director
Estimate	Lees summit to pleasant hill estimate.pdf	Provides split out of costs for project.
Plan Sheet	Lees summit to pleasant hill plan.pdf	Provides design location for project.
Introductory letter from MoDOT Director	1lntro LETTER signed by KKeith.pdf	Cover letter for the HSIPR projects signed by MoDOT Interim Director
Overview of 2011 Projects	2Project Overview.pdf	Overview of Projects
HSIPR Projects Division of Costs	3HSIPR RAIL PROJECTS DIVISION OF COSTS Mar29 2011.docx	HSIPR Projects Division of Costs
Project Map and Partner Signature Map	4 2J011_HSIPR_Project_Map.pdf	Detailed project map and same map with signatures of support
Project Map and Partner Signature Map	SProject Map and Partner Signature Map.pdf	Detailed project map and same map with signatures of support
MOU between 4 states for joint application	6 State Equipment MOU.pdf	Demonstrates support of project by all parties.
Support Letter from UP for 2011 Applications	7 2011_UP_Support_Ltr.pdf	Provides support of projects for application
MoDOT/UP/Amtrak SOA	8Preliminary Executed SOA with UP.pdf	Identifies Service Outcomes for completion of projects
Multi State Governors MOU	9MuIti - StateGovernorsM0USigned.pdf	Demonstrates commitment to High Speed Rail
Map of High Speed Rail	10US Federally Designated High Speed Rail Corridor Map.pdf	Identifies High Speed Rail Corridors

Letters of Reduced	11Complete Letters of Support-reduced.pdf	Letters of Support
Rail Capacity Analysis I & II	12Rail Capacity Analysis ReportsI and II.pdf	Rail Capacity Analysis Reports I and II
2009, 2010 and 2011 Economic Studies	13Economic Studies by MERIC.pdf	HSIPR Statewide and Lonterm Impacts Study prepared by MERIC
Mo Passenger Rail Schedule	14MO Passenger Rail Schedule.pdf	Missouri Passenger Rail Schedule
Mo Intercity Bus Stops	15Intercity Bus Stops.pdf	Missouri Intercity Bus Stops
Statewide Transportation Improvement Plan	16MHTC Auth on Corridor Improvement Projects STIP 2011-2015.pdf	Projects identified in Statewide Transportation Improvement Plan
Amtrak Operating Agreement	17Amtrak Operating Agreement.pdf	Amtrak Operating Agreement
Amtrak-MoDOT MOU	18Amtrak-MoDOT MOU.pdf	Amtrak-MoDOT MOU
Kansas City Terminal Memorandum of Understanding	19Kansas_City_Terminal_MOU.pdf	Commitment to application by MoDOT and KCT
Terminal Railroad Association of St. Louis Memorandum of Understanding	20STLTerminal-MoDOT MOU.pdf	Commitment to application by MoDOT and TRRA
Terminal Railroad Association of St. Louis Memorandum of Understanding	21TRRA MOU N. Market and Merchants.pdf	Commitment to application by MoDOT and TRRA
UP Memorandum of Understanding	22UP-MODOT MOU signed copy.pdf	Commitment to application by MoDOT and UP
UP Track Layout	23UP Track Layout.pdf	UP Track Layout
1996 Agreement	24-1996 agreement between MODOT and UP to preserve 3 more slots.pdf	1996 Agreement between MoDOT and UP to preserve 3 more slots
Amtrak Support Letter for Merchants and N Market	25 Amtrak Support for Merchants and N. Market	Amtrak Support Letter
Shell Spur Agreement	26Shell SpurAgreement.pdf	Shell Spur Agreement

Narrative Application Form Individual FD/Construction Part II Statement of Work

High-Speed Intercity Passenger Rail (HSIPR) Program

Statement of Work

The quality and completeness of this document will be measured as a Project Readiness evaluation criterion, as outlined in Section 5.2.1 of the NOFA. The applicant must provide a sufficient level of detail regarding scope, schedule, and budget that demonstrates the project is ready to immediately advance to award. Tables have been provided as illustrative examples for capturing data however, applicants can delete or adjust the tables as necessary. This form must be listed in Section G.2 of the Narrative Application Form Part I.

(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 transparent, inclusive planning process used to analyze the investment needs and service objectives of the full corridor on which the individual FD/Construction project is located.

This proposed project is located on the Union Pacific Railroad in Missouri 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 project. It is anticipated that there will be no donated land from the railroad in order to construct the project.

A major point in improving the time it takes to get the train from one point to another across the state is increasing the speed. This project will increase the top speed on the Lee's Summit to Pleasant Hill portion from 75 to 90. When completed, the project will be noted as having a positive impact on the passenger service's on-time performance.

Both Amtrak and freight will use the new tracks. Although only Amtrak will use the speed of 90 mph, the added benefit from the increased portion of the track capacity will be an added benefit to freight movements at all times of the day. The extra track will help sort trains in this area, which is not currently double track. This was the first 90 mph operation proposed and on which PE-NEPA was approved on a previous round of funding. Due to the delays in this area, most of the western area was identified as a route bottleneck by the University of Missouri's 2006 study, and this will alleviate those problems, including the area that is between Lee's Summit and Pleasant Hill, which was and is still a large bottleneck.

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

The project for 90-mph operation from Lee's Summit to Pleasant Hill will be divided into two major tasks: final design and construction. These tasks will be further divided into subtasks, described in detail below. The project will be designed and constructed in accordance with AREMA recommended practices and UP standards.

Task 1: Final Design

MoDOT will perform or cause to be performed Final Design (100 percent design) of the second track that will accommodate 90 mph operations, in accordance with the preliminary engineering documentation approved by FRA. During Final Design, the construction sequencing of the major construction elements will be identified. Final Design documents are to be approved and signed by all stakeholders (MoDOT, UP, Amtrak and FRA) prior to FRA's approval and reimbursement of final design work. The final design deliverables will consist of the following.

1. Scaled plans of the track layout
2. Signal design plans
3. Engineering specifications and notes
4. An updated itemized cost estimate of work
5. Updated project schedule

The final design deliverables listed above will be submitted to FRA for review and comment. When FRA's comments have been resolved, FRA will provide its written approval of the final design deliverables.

Task 2: Construction

MoDOT will complete or cause to be completed all tasks associated with construction of the 90-mph track layout that will accommodate passenger rail. Task 2 includes the bidding and awarding of a competitive contract for all tasks associated with construction. The majority of the tasks may be contracted to outside bidders, while UP may perform tasks such as signal system adjustments. Construction will include grading, track, signal, utility work, drainage and fencing work, among others, as prescribed in the detailed scope and in accordance with approved final design deliverables submitted under Task 1. Task 2 also includes any inspection and testing of the project as required by MoDOT and / or FRA.

(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.

This project will construct a second track from Pleasant Hill to Lee's Summit and will allow passenger trains to travel at 90 mph and cross from track to track in either direction. Because this is in an area that has many different passenger stations, it will allow better access to each station and enhance passenger comfort because the train will reach its destinations sooner. This project will improve on-time performance along the entire Union Pacific corridor in Missouri between St. Louis and Kansas City and will enhance the future provision of 90- to 110-mph service.

This project will most greatly impact the current bottlenecks in the area; however, it will have an even greater impact on the route's future. The 90-mph service will be faster service, and the additional track in the area will allow the UP to route trains over second tracks which currently do not exist as problems occur. It also gives options early in the process when dispatchers are faced with difficulties in routing faster Amtrak trains around or behind freight trains so that problems are identified quickly and routed correctly.

(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.

Description of Work: On Sedalia Subdivision, MP 249.85 near Pleasant Hill, Cass County, Missouri, to Lees Summit, Jackson County, at MP 258.03, install double track project to accommodate 90 mph operations.

MoDOT will perform all tasks required for the project through a coordinated process with the railroad owner UP (Union Pacific Railroad), the operator (Amtrak), and the FRA. Natalie Roark is the MoDOT High-Speed Rail Project Manager responsible for facilitating the coordination of all activities between UP, MoDOT and the FRA for implementation of the high-speed rail projects through completion of construction. This also includes facilitating the completion of all stakeholder agreements and the final FRA grant agreement. Huy Pham is the Union Pacific contact responsible for facilitating the completion of the construction and grant agreements and all activities between Union Pacific Railroad, MoDOT and the FRA through completion of the project. The Amtrak point of contact is Michael Franke, Assistant Vice President of State and Commuter Partnerships.

This project may require an environmental assessment or impact statement. The DOT provided the project's approximate construction cost estimate, and it is also attached. Since this project is exclusively on UP right of way and most likely does not require property acquisition, the environmental issues will be handled in a manner similar to those for other railroad track addition projects. The *Missouri River Runner* is the service currently on the line.

UP, in coordination with MoDOT, will perform final design (100 percent design) of the track and signal improvements. Final Engineering Drawings will be furnished to the FRA after the final design check is complete. In addition, route and aspect charts depicting the proposed signal configuration for the project and adjacent blocks will also be provided.

Union Pacific Railroad will perform all necessary track and signal work. Items of work include the following.

- Property, Utilities and Permitting
- Site Preparation, Construction and Roadbed
- Drainage, Structure/Bridges
- Track Work
- Track Engineering/Geotechnical/Supervision
- Signal Work
- Positive Train Control Improvements
- Estimates for Maintenance costs for speed increases

The project will take approximately 3 years to complete, beginning as soon as the grant agreement is executed and negotiations with UP are finalized. Upon award of the project, MoDOT will monitor and evaluate the project's progress through the administration of regular progress meetings scheduled throughout the project duration. Topics of discussion may include: review of construction activities, field observations, identification of problems incurred and decisions/fixes for those problems, identification of potential future problems that could impede progress and proposed corrective measures to regain projected schedule, review of project schedule and progress and review of billing invoices. There will be continued communication by all parties involved.

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

	Deliverable	Task
1	Project drawings and estimate	Preliminary Engineering
2	Environmental assessment/Impact statement	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

(3) Project Schedule. In the table below, estimate the approximate duration for completing each task in months. For total project duration, reference Section C.4 in the Narrative Application Form Part I.

	Task	Duration		
		Start Month	to	End Month
1	FD/Engineering	June 2011	**to**	June 2012
2	Construction	June 2012	**to**	May 2014
	Total project duration	*36 months*		

(4) Project Cost Estimate/Budget. Provide a high-level cost summary of FD/Construction work in this section, using the FD/Construction Application Package Instructions, the HSIPR Individual Project Budget and Schedule form, and the Narrative Application Form Part I 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 Section C of the Narrative Application Form Part I. 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 the Narrative Application Form Part I, the lesser amount will be considered as the Federal funding request. Round to the nearest whole dollar when estimating costs.

The total estimated cost of the proposed FD/Construction project 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 proposed FD/Construction project shall be borne by the Grantee.

FD/Construction Project Overall Cost Summary		
#	**Task**	**Cost in FY11 Dollars**
1	Engineering	$ 1,418,800
2	Construction	$46,955,100
	Total FD/Construction project cost	$48,373,900

Federal/Non-Federal Funding			
		Cost in FY11 Dollars	**Percentage of Total Activities Cost**
	Federal funding request	$ 48,373,900	100 %
	Non-Federal match amount	$0	0 %
	Total FD/Construction project cost	$ 48,373,900	100 %