

U.S. Department of Transportation  
Federal Railroad Administration

## Record of Decision

Tier 1: Chicago to St. Louis High-Speed Rail  
Corridor Program

Chicago, Illinois to St. Louis, Missouri

December 2012

Prepared by:



U.S. Department of Transportation  
Federal Railroad Administration

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## Summary

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This is the Record of Decision (ROD) of the Federal Railroad Administration (FRA), an operating administration of the U.S. Department of Transportation, with regard to the Chicago to St. Louis High-Speed Rail (HSR) Corridor Program (Program) proposed by the Illinois Department of Transportation (IDOT). IDOT has proposed to implement the Program subject to the approval of appropriate authorities. FRA has served as the federal Lead Agency for the environmental review under the National Environmental Policy Act (NEPA). Federal Cooperating Agencies for the process have included the Federal Highway Administration (FHWA), the U.S. Army Corps of Engineers (USACE), the U.S. Fish and Wildlife Service (USFWS), and the U.S. Environmental Protection Agency (USEPA). Federal agencies with specific review, consultation, and/or permitting roles, include but are not limited to the Natural Resources Conservation Service (NRCS), the U.S. Coast Guard (USCG), and the U.S. Department of Commerce (USDOC).

FRA and IDOT used a tiered environmental process for the proposed Program. Tiering is a phased environmental review process which is commonly used in the development of complex projects. Volume I of the Tier 1 EIS addresses broad issues and alternatives for the Chicago-St. Louis HSR Corridor. If a decision is made to build additional rail improvements as an outcome of the Tier 1 process, Tier 2 environmental documents will be prepared for component projects. The Springfield Rail Improvements Project evaluated in Volume II of the Program EIS is an example of a Tier 2 component project and Tier 2 environmental review.

This ROD identifies the Selected Alternatives for the Chicago to St. Louis HSR Corridor Program only. FRA is issuing a separate contemporaneous ROD for the Springfield Rail Improvements Project.

In making this Tier 1 decision, FRA considered the information and analysis contained in the 2012 Draft Environmental Impact Statement (Draft EIS), and the 2012 Final Environmental Impact Statement (Final EIS) for the Tier 1 Program (collectively the "EIS Documents"). FRA also considered public and agency comments received during the public comment periods for the above documents.

FRA has prepared this ROD in accordance with the Council on Environmental Quality's (CEQ) regulations implementing NEPA, (40 CFR Part 1500) and FRA's Procedures for Considering Environmental Impacts (64 FR 28545, May 26, 1999). Specifically, this ROD:

- Provides background on the NEPA process leading to the November 2012 publication of the Final EIS, including a summary of public involvement and agency coordination.
- States and reaffirms the Program's Purpose and Need.



- Identifies the alternatives considered by FRA in making a decision at the Tier 1 level for the Program, including the environmentally preferable alternative.
- Identifies the Selected Alternatives for the Program. The selected alternative for the Springfield Rail Improvements Project, a component of the Program, is identified in a separate ROD for the Project being issued contemporaneously with this Program ROD.
- Summarizes the environmental benefits and adverse effects of the Selected Alternatives.
- Summarizes the comments received on the Final EIS.
- Discusses the measures to avoid and minimize environmental harm and the future evaluations for the Tier 2 studies.
- Presents the FRA Decision, determinations and findings on the proposed Program and identifies and discusses the factors that were balanced by FRA in making its decision.

## 1.0 Program Introduction

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IDOT proposes to improve high-speed passenger rail service between Chicago, Illinois and St. Louis, Missouri (a distance of approximately 284 miles, Exhibit 1-1). In general, the proposed Program improvements would include the development of double tracking along the existing Amtrak railroad corridor to improve high-speed passenger service reliability and safety, and to increase the number of trips between Chicago and St. Louis. The Program also includes improvements to railroad crossings, signals, and stations.

The EIS considered and evaluated multiple alternative alignments along existing railroads between Chicago and Joliet, through Springfield, and between Alton and St. Louis. It is important to note that these proposed improvements were considered in addition to those improvements from Dwight to St. Louis associated with FRA's 2004 Record of Decision for the Chicago-St. Louis High-Speed Rail Project and the 2011 Environmental Assessment (EA)/Finding of No Significant Impacts (FONSI) for the Union Pacific's Track Improvement Project from Joliet to Dwight, IL; those improvements are currently in the process of being constructed.

FRA and IDOT used a tiered environmental process for this Program. Under this process, the Tier 1 EIS addresses broad, corridor-level issues and alternatives. Tier 2 environmental documents address and evaluate individual component projects of the Selected Alternative carried forward from the Tier 1 study in more detail. This ROD evaluates the Selected Alternatives for the HSR Corridor Program at Tier 1.

Concurrently with this Tier 1 study of the Corridor Program, FRA and IDOT conducted a Tier 2 environmental analysis for the Springfield Rail Improvements Project. The Springfield Rail Improvements Project Tier 2 environmental evaluation considers the



Springfield portion of the Program corridor in more detail, evaluating alternative alignments through the City of Springfield in Volume II of the Program EIS. FRA is contemporaneously issuing a separate decision document (ROD) for the Springfield Rail Improvements Project as evaluated in Volume II. IDOT and FRA will carry out additional Tier 2 studies over time consistent with project implementation priorities and available funding.

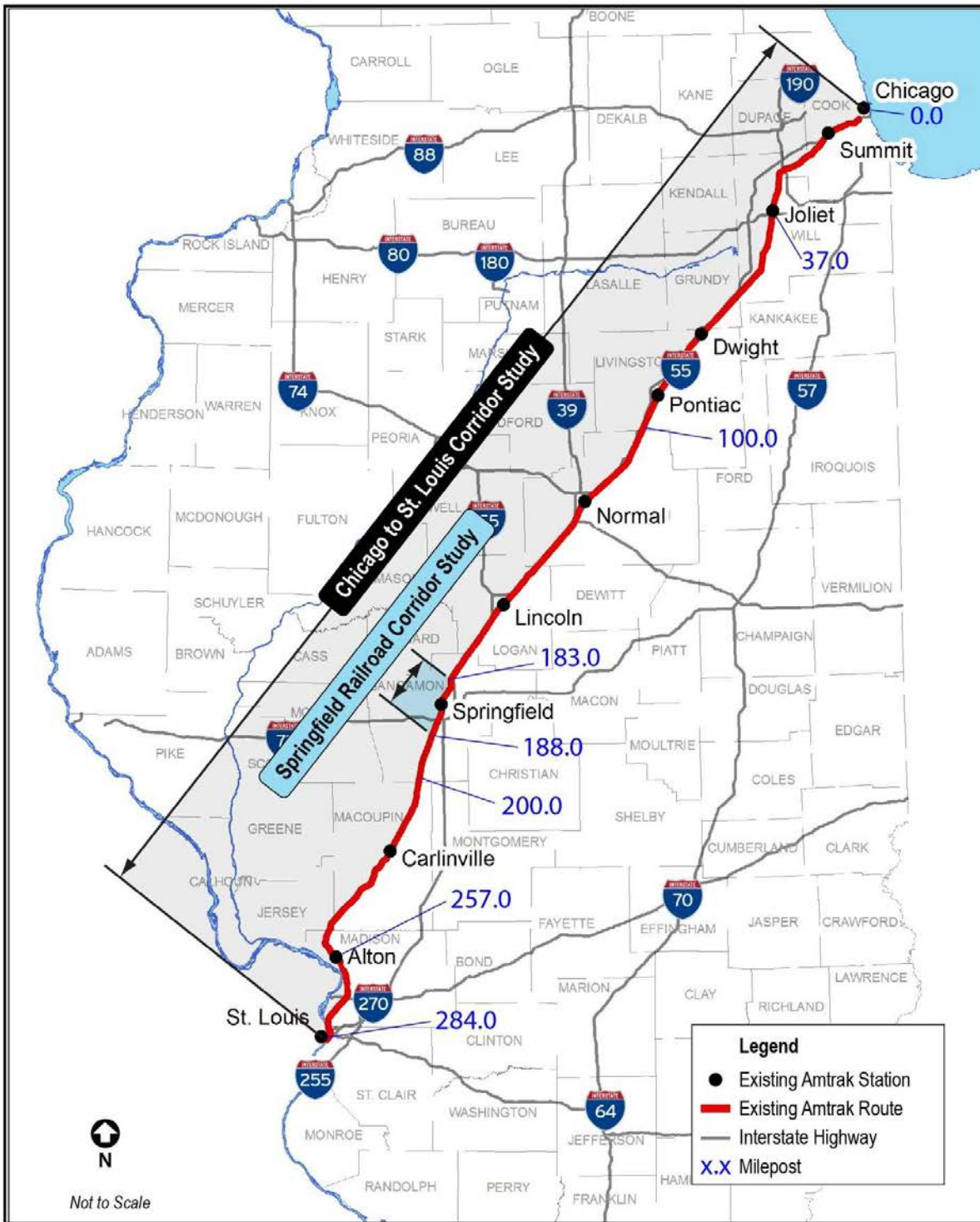


Exhibit 1-1. Program Location



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## 2.0 NEPA Process and Implementation Plan

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### 2.1 NEPA Process Background

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Milestone	Date
Notice of Intent & Public Scoping Meetings	February – March 2011
Draft Scoping Report	July 2011
Public Meetings on Draft Scoping Report and Alternatives	October 2011
Notice of Availability and Publication/Circulation of the Draft EIS	June 2012
Public Hearings: Chicago, Joliet, Bloomington, Springfield, and Alton	August 2012
Notice of Availability and Publication of the Final EIS	November 2012

The Tier 1 environmental process for the Program began formally in February 2011. Scoping Meetings were held in March 2011 and a Draft EIS was published on June 29, 2012.

The Draft EIS presented the purpose and need for the Program, the reasonable range of alternatives for passenger and freight rail, the existing environmental setting, potential effects from Program implementation, and identified measures to reduce or eliminate potential adverse environmental effects.

The Draft EIS also informed decision makers, interested parties, and the public about the differences among various alternatives and options. The Draft EIS was circulated for 45 days for public review and comment. Public hearings were held in Chicago, Joliet, Bloomington, Springfield, and Alton to provide additional opportunity for the public to comment on the Draft EIS.

The Final EIS was published on November 9, 2012. It addressed changes to the Tier 1 Chicago to St. Louis HSR Corridor Program as a result of public and agency comments on the Draft EIS, and identified the potential environmental effects of the Preferred Alternatives which were included in the Final EIS. The Final EIS also identified Tier 2 studies that would be evaluated in a greater level of detail.



## 2.2 Implementation Plan

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It would be very challenging to try to implement a regional corridor program of this size and scope at one time. Rather, FRA and IDOT anticipate a series of incremental steps that would logically advance the Program. Therefore, IDOT has developed an implementation plan to help guide the identification and selection of staged improvements within the corridor. Ahead of any future projects, should federal funding be utilized, Tier 2 project level NEPA documentation for the specific project being implemented must also be completed to assess the environmental effects and to document measures to avoid or to minimize and mitigate impacts.

The following is a list of anticipated Tier 2 Project Level NEPA studies that are identified in Volume I of the EIS. The list is organized from north to south. Tier 2 project limits and logical termini for the projects are based on the extent of major infrastructure improvements and station locations. Intermediate termini will be identified using train operation modeling where additional improvements are necessary to support service level increases. The sequence of construction will be based on the results of train traffic modeling. The scope of each Tier 2 document may change depending on future funding, implementation decisions, and additional design.

Chicago to Joliet – This Tier 2 Project Level NEPA document will include additional track, sidings, culvert and bridge improvements, signal improvements, commuter rail station improvements, HSR station improvements, rail flyovers, rail connections and a parallel structure across the Chicago River at 21<sup>st</sup> Street to improve capacity and reliability for identified incremental service additions.

- Joliet to Springfield - This Tier 2 Project Level NEPA document will include additional track, sidings, culvert and bridge improvements and roadway grade separations to improve capacity and reliability for identified incremental service additions.
- Springfield – This Tier 2 Project Level NEPA document is included as Volume II of the Tier 1: Chicago to St. Louis HSR Corridor Program EIS.
- Springfield Flyover - This Tier 2 Project Level NEPA document will include new track alignment and a railway flyover structure to separate the Union Pacific and Norfolk Southern railroads at-grade crossover to improve capacity and reliability along the corridor.
- Springfield Flyover to St. Louis Area - This Tier 2 Project Level NEPA document will include additional track, sidings, culvert and bridge improvements and roadway grade separations to improve capacity and reliability for identified incremental service additions.
- St. Louis Area - This Tier 2 Project Level NEPA document will include new double track approaches to an increased capacity Mississippi River crossing to improve capacity and reliability for identified incremental service additions. The Tier 2 Level





NEPA document will evaluate alternatives for an increased capacity Mississippi River crossing. A new double track connection to the Merchants bridge will also be examined for redundant access in the system for the Mississippi River crossing and to provide construction staging and future maintenance routes.

- Station Improvements – Tier 2 Project Level NEPA documents will include HSR station improvements at Joliet, Dwight, Pontiac, Normal, Lincoln, Carlinville and Alton. These improvements include pedestrian grade separation structures to provide access to both platforms and to avoid pedestrians crossing tracks at-grade, additional parking requirements, and additional station capacity requirements for identified incremental service additions.

### 3.0 Purpose and Need

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The purpose of the proposed Chicago to St. Louis HSR Corridor Program is to enhance the passenger transportation network in the Chicago to St. Louis HSR Corridor by improving high-speed passenger rail service, resulting in a more balanced use of different corridor travel options by diverting trips made by automobile and air to rail.

The existing transportation network consists of highway (automobile and bus), air, and passenger rail travel. Currently, nearly all trips made annually within the Chicago to St. Louis HSR Corridor are accomplished through automobile and air travel, with only one percent by passenger rail. Enhancements to passenger rail service would lead to reduced travel times, improved service reliability, increased frequency of trips, and increased capacity. Increased use of passenger rail would result in an overall improvement in traveler safety in the corridor, as well as a reduction in air pollutant emissions and energy consumption.

The need for the Chicago to St. Louis HSR Corridor Program is based on the following:

- Because of inadequate rail capacity and deficiencies in the existing rail infrastructure, there is currently a modal imbalance within the corridor. Rail travel represents only 1.3 percent of the 51 million annual person trips within the Chicago to St. Louis Corridor, while automobile travel comprises 97.5 percent of these trips. The other two modes, air and bus, comprise only 1.1 percent and 0.2 percent, respectively. By 2030, it is projected that 62 million annual trips will occur in the Chicago to St. Louis Corridor with 96.6 percent consisting of automobiles, 1.5 percent air, 1.7 percent rail, and 0.2 percent bus. As a result, the modal imbalance is projected to remain largely the same in 2030.
- Between 2007 and 2010, on-time performance for rail passenger service between Chicago and St. Louis ranged from 38 percent to 75 percent. For air travel, 15 to 20 percent of flights in the corridor arrive late.





- The single track between Joliet and St. Louis cannot accommodate existing and projected freight and passenger train traffic resulting in travel time delays and the inability to increase passenger rail service.
- The new Joliet Intermodal Terminal will double the number of freight trains using the Chicago to St. Louis Corridor from six to 12. The number of freight trains is projected to increase to 22 by the year 2017, which could affect the performance and capacity for high-speed passenger rail.
- From 2007 to 2010, rail passenger ridership between Chicago and St. Louis has increased 34 percent. (Over this same period, ridership on the state-supported trains between Chicago and St. Louis increased by 72 percent.)
- Automobile and bus travel between Chicago and St. Louis is limited primarily to I-55. Travel by this one route can often be unreliable due to traffic congestion, weather, roadway construction, and accidents, which can substantially increase travel times.
- Automobile travel, which represents 95.5 percent of the trips within the corridor, is the least safe mode of transportation when compared to air, rail, and bus travel. Therefore, there is a need to provide safer alternative modes of transportation along the corridor.
- Although air travel has the shortest travel times and is the safest mode of transportation, additional travel time must be considered for passage through airport security and travel to and from the airport. In addition, air travel is vulnerable to weather conditions, which can result in major delays and cancelled flights. Also, there is currently no direct air service from the central part of the corridor to St. Louis, and air travel provides little service to intermediate destinations.

## 4.0 Alternatives

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### 4.1 Alternatives Considered and Dismissed

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An initial range of multiple HSR Build Alternative alignments were developed and evaluated for three sections along the study corridor: Chicago to Joliet, through Springfield, and Alton to St. Louis. The evaluation and screening of alternatives was based on the objectives and criteria presented in Table 4-1 and designed to help identify the reasonable alternatives to be evaluated in detail in the EIS.



**Table 4-1. Tier 1 Objectives and Screening Criteria**

Objective	Criteria and Measures
Meet Purpose and Need (increase passenger rail ridership through improved travel times, frequency and reliability of service, and improve safety.)	<ul style="list-style-type: none"> <li>• Length (miles)</li> <li>• Travel time (minutes)</li> <li>• Connectivity to other intercity passenger rail, intermodal services to improve mobility to important business/leisure destinations (qualitative discussion)</li> <li>• Safety (qualitative discussion based on ridership data)</li> </ul>
Minimize operational and construction issues	<ul style="list-style-type: none"> <li>• Operational issues (qualitative discussion, including host railroad’s readiness/ability to accommodate high-speed passenger rail)</li> <li>• Potential conflicts with freight and other passenger service)</li> <li>• Number of at-grade crossings</li> <li>• Construction issues (qualitative discussion)</li> </ul>
Minimize capital and maintenance costs	<ul style="list-style-type: none"> <li>• Capital cost, including right-of-way (dollars)</li> <li>• Maintenance cost (dollars)</li> </ul>
Minimize environmental impacts (natural, socioeconomic, and cultural resources)	<ul style="list-style-type: none"> <li>• Existing and planned development [land use compatibility (qualitative discussion), right-of-way impacts (acres of right-of-way required)]</li> <li>• Natural resources [Water resources impacts (# of crossings), floodplain impacts (# of crossings), wetlands (acres of wetlands in right-of-way), and threatened and endangered species impacts (number of species)]</li> <li>• Social and economic resources [environmental justice (EJ) impacts (areas where EJ population &gt;50%), community and neighborhood impacts (qualitative discussion), buildings directly impacted (# of buildings potentially displaced)</li> <li>• Cultural and recreational resources [historic resources impacts (# of resources), recreational/potential Section 4(f)/6(f) resources impacts (# of adjacent resources)</li> </ul>

#### 4.1.1 Chicago to Joliet Alternatives

Out of the 16 alternative alignments that were developed and evaluated between Chicago and Joliet, 14 were eliminated from further consideration after application of the Tier 1 Objectives and Screening Criteria. A more detailed description of each alternative is provided in Volume I of the Draft EIS. The following summarizes the reasons for eliminating each:

- Chicago to Joliet Alternative 1 was eliminated primarily because of poor travel time, operational issues, and anticipated difficulties related to the host railroad’s readiness to accommodate high-speed passenger service on its tracks.



- Chicago to Joliet Alternative 3 was eliminated primarily because of operational issues, anticipated difficulties related to the host railroad's readiness to accommodate high-speed passenger service on its tracks, higher potential right-of-way impacts because of a section of existing single track, potential Section 4(f) impacts, and generally a higher potential for environmental impacts.
- Chicago to Joliet Alternative 4A was eliminated primarily because of a lack of accessibility to passenger rail and anticipated difficulties related to the host railroad's readiness to accommodate high-speed passenger service on its tracks.
- Chicago to Joliet Alternative 4B was eliminated primarily because of operational issues and anticipated difficulties related to the host railroad's readiness to accommodate high-speed passenger service on its tracks.
- Chicago to Joliet Alternative 4C was eliminated primarily because of operational issues. (Alternative 4D is similar to 4C, but the potential connection to the NS railroad at 40th Street is considered a more viable option than providing a new connection at the Englewood flyover.)
- Chicago to Joliet Alternative 4E was eliminated primarily because of poor travel times and operational issues. This alternative includes the backup maneuver into Union Station currently used by Amtrak's Illini-Saluki-New Orleans trains.
- Chicago to Joliet Alternatives 5A through 5D were eliminated primarily because of poor travel times, operational issues, and anticipated difficulties related to the host railroad's readiness to accommodate high-speed passenger service on its tracks. Alternative 5D also has a high number of at-grade highway-rail crossings and costs substantially more than Alternatives 5A, 5B, and 5C.
- Chicago to Joliet Alternatives 6A through 6D were eliminated primarily because of poor travel times, connectivity to passenger rail, operational issues, and anticipated difficulties related to the host railroad's readiness to accommodate high-speed passenger service on its tracks. Alternative 6D also has a high number of at-grade highway-rail crossings and costs substantially more than Alternatives 6A, 6B and 6C.

The following two remaining alternatives between Chicago and Joliet were carried forward for further study in the Tier 1 Draft EIS because they best met the overall screening criteria and purpose and need for this Program and were reasonable and feasible:

- Chicago to Joliet Alternative 2; and
- Chicago to Joliet Alternative 4D

#### **4.1.2 Springfield Alternatives**

Out of the five alternative alignments that were developed and evaluated through Springfield, the following three were eliminated from further consideration after



application of the Tier 1 Objectives and Screening Criteria. A more detailed description of each alternative is provided in Volume I of the Draft EIS. The following summarizes the reasons for eliminating each:

- Springfield Alternative 3 was eliminated primarily because of lack of support from the Canadian National Railroad, the high capital costs, and the large area of right-of-way required. This alternative had the fewest environmental justice and neighborhood impacts, but constructing the grade separations on the Canadian National corridor included within Alternatives 1 and 2 was identified as a more cost effective way to mitigate these issues.
- Springfield Alternative 4 was eliminated because of the operational issues associated with introducing crossovers in the Union Pacific line north and south of the City, the high capital cost, and the community impact. This alternative was among the highest in terms of length of rail corridor through residential neighborhoods and environmental justice areas. The alternative did not provide any notable advantage relative to the other alternatives.
- Springfield Alternative 5 was eliminated because of the operational issues associated with introducing crossovers in the Union Pacific line north and south of the City and the increased length of Canadian National track. This alternative also would have the highest capital cost and the largest area of new right-of-way required. This alternative was among the highest in terms of length of rail corridor through residential neighborhoods. It did not provide any notable advantages relative to the other alternatives.

The following two remaining alternatives through Springfield were carried forward for further study in the Tier 1 Draft EIS because they were the best at meeting the overall screening criteria and purpose and need for this Program and were reasonable and feasible:

- Springfield Alternative 1; and
- Springfield Alternative 2

#### **4.1.3 Alton to St. Louis Alternatives**

Out of the six alternative alignments that were developed and evaluated between Alton and St. Louis, the following three were eliminated from further consideration through application of the Tier 1 Objectives and Screening Criteria. A description of each alternative is provided in the Draft EIS. The following summarizes the reasons for eliminating each:

- Alton to St. Louis Alternative 1 was eliminated primarily because of construction issues with adding another deck on the existing MacArthur Bridge;
- Alton to St. Louis Alternative 2 was eliminated primarily because of its higher construction costs, poor construction impact rating, more at-grade highway-rail crossings, and potential effects to Jefferson National Expansion Memorial Park; and



- Alton to St. Louis Alternatives 3 and 4 were eliminated primarily because they would require improvements along two railroad routes, resulting in much higher overall costs, while still potentially affecting the Jefferson National Expansion Memorial Park.

The following two remaining alternatives between Alton and St. Louis were carried forward for further study in the Tier 1 Draft EIS because they were the best at meeting the overall screening criteria and purpose and need for this Program and were reasonable and feasible:

- Alton to St. Louis Alternative 1A; and
- Alton to St. Louis Alternative 1B.

## 4.2 Alternatives Carried Forward for Detailed Study in the Tier 1 EIS

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### 4.2.1 No-Build Alternative

The No-Build Alternative includes the continuation of intercity passenger service between Chicago and St. Louis along with the planned passenger rail improvements that will allow for limited HSR service between Joliet and St. Louis. The limited HSR service will be provided between Joliet and St. Louis and will begin following completion of several upgrades to the existing tracks that were approved by FRA's 2004 Record of Decision (ROD) (Dwight to St. Louis improvements) and 2011 Finding of No Significant Impact (FONSI) (Joliet to Dwight improvements). The limited HSR service resulting from those improvements will include up to three daily passenger round trips operating at up to 110 mph between Joliet and Alton, with remaining portions of the corridor operating at speeds of up to 79 mph. One additional non-HSR daily passenger round trip will continue to operate between Chicago and St. Louis, and one non-HSR Texas Eagle daily passenger round trip will continue to operate between Chicago and San Antonio, Texas, over the Chicago to St. Louis Corridor under the No-Build Alternative.

The estimated one-way end-to-end travel times for the partial HSR trips under the No-Build Alternative is expected to be between four hours and 30 minutes to four hours and 45 minutes. This would allow the No-Build Alternative to provide travel times that are up to one hour and 12 minutes faster than the existing route prior to these improvements being completed.

### 4.2.2 Build Alternatives

To facilitate the development and evaluation of complete alternatives for the Tier 1 EIS that extend from Chicago to St. Louis, the study corridor was divided into the following



seven sections. The names of the alternatives that were carried forward were changed to correlate with the section number that they were located within.

- Section 1: Previously referred to as Chicago to Joliet Alternative 2 (Existing Amtrak Route)
- Section 2: Previously referred to as Chicago to Joliet Alternative 4D (Proposed other existing route along the Rock Island District [RID])
- Section 3: Joliet to Springfield (Existing Amtrak Route)
- Section 4: Previously referred to as Springfield Alternative 1 (Existing Amtrak Route)
- Section 5: Previously referred to as the Springfield Alternative 2 (Proposed other existing along 10<sup>th</sup> Street.)
- Section 6: Springfield to Alton (Existing Amtrak Route)
- Section 7: Previously referred to as Alton to St. Louis Alternatives 1A/1B (Existing Amtrak Route)

Based on various combinations of these seven sections, the following four Build Alternatives that extend between Chicago and St. Louis were developed and evaluated in the Tier 1 Draft EIS (Exhibit 4-1):

- Alternative A (Sections 1, 3, 4, 6, 7)
- Alternative B (Sections 1, 3, 5, 6, 7)
- Alternative C (Sections 2, 3, 4, 6, 7)
- Alternative D (Sections 2, 3, 5, 6, 7)

All of these Build Alternatives would include eight daily HSR round trips allowing for 110 mph intercity passenger service for the entire route between Chicago and St. Louis. The overall travel times for these Build Alternatives between Chicago and St. Louis would range from three hours and 51 minutes to four hours and 10 minutes, which would result in a maximum decrease in travel time of one hour and 47 minutes over existing conditions. One additional non-HSR Texas Eagle daily passenger round trip would continue to operate under the Build Alternatives.

One of the key elements of the Build Alternatives is to provide a minimum of double tracking for the entire Chicago to St. Louis Corridor. The Build Alternatives also include additional siding track and improvements to railroad crossings (including rail to rail grade separations and pedestrian grade separations at the train stations), signals, and stations. The potential locations of highway to rail grade separations has also been identified that will be studied in greater detail during the Tier 2 studies. A new station along Section 2 of Alternatives C and D between Chicago and Joliet, and consideration of a new station between Alton and St. Louis will also be evaluated during the Tier 2 studies.



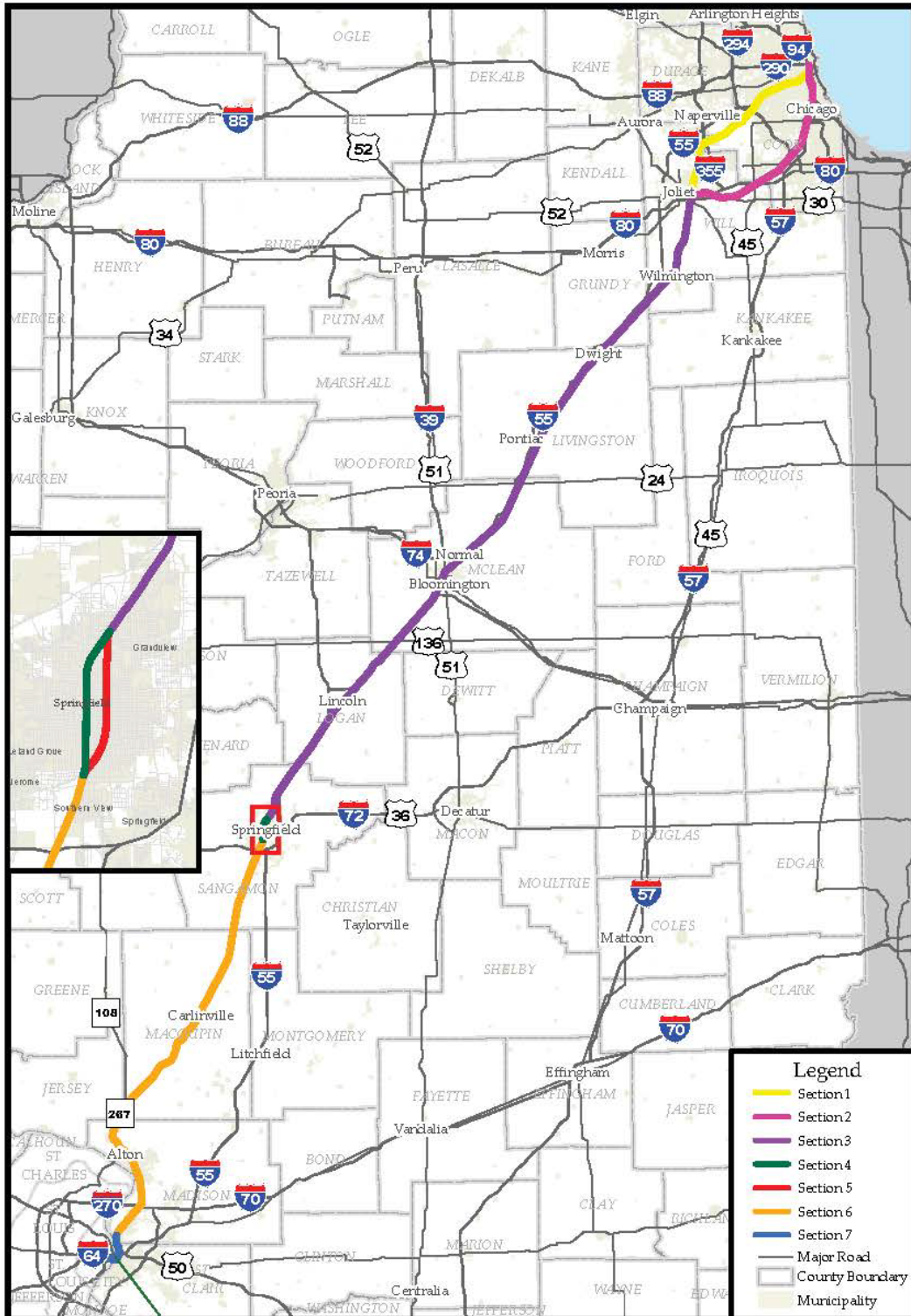


Exhibit 4-1. Build Alternative Sections between Chicago and St. Louis





### 4.3 Preferred Alternatives Identified in the Tier 1 Final EIS

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FRA and IDOT identified Tier 1 Alternatives C (Sections 2, 3, 4, 6, and 7) and D (Sections 2, 3, 5, 6, and 7), both of which include Section 2, as the Preferred Alternatives in the Final EIS. Because all of the Alternatives A, B, C, and D include Sections 3, 6, and 7, the impacts and performance measures within these sections are the same for all of the alternatives. Therefore, there were no differentiating factors that could be used in selecting one alternative over another based on these sections.

As a result, the choice of the Tier 1 Preferred Alternative was limited to comparing the differences in impacts and performance measures between the alternatives that include Section 1 (i.e., Alternatives A and B) and the alternatives that include Section 2 (i.e., Alternatives C and D). Because the Tier 1 study did not result in a selection between Sections 4 and 5 that travel through Springfield, two Tier 1 Preferred Alternatives were advanced, including both Section 4 and Section 5, for further consideration at Tier 2.<sup>1</sup> The factors that led to the identification of Alternatives C and D as the Preferred Alternatives are summarized in sections S.3.3 and S.5 of the Final EIS.

### 4.4 Selected Alternatives

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The Selected Alternatives are the alternatives which the FRA finds would most closely align with FRA's statutory mission and responsibilities, giving consideration to economic, environmental, technical and other relevant factors. The Selected Alternatives are the same as the Preferred Alternatives as identified in the Final EIS. Thus, FRA has selected the Alternatives C and D, which will utilize the Northeast Illinois Regional Commuter (NIRC) Rock Island District (RID) Railroad between Chicago and Joliet and the existing Amtrak route from Joliet to St. Louis, with the exception of the portion of the corridor through Springfield.

FRA did not identify the No Build Alternative as the Selected Alternative because it would not meet the purpose and need and it would not produce the benefits that would occur as a result of implementing the Corridor Program such as: full ridership potential would not be realized under the No Build Alternative when compared to the Build Alternatives due to longer travel times; the No Build Alternative would not provide enough increase in annual passenger rail ridership to meet the overall purpose and need of the Program; additional traffic and unreliability will exacerbate issues coordinating freight and passenger rail under the No Build Alternative, potentially affecting businesses and passengers relying on rail service along the route; slow moving trains in

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<sup>1</sup> The Tier 2 Environmental Evaluation for the Springfield Rail Improvements Project (Volume II of the FEIS) identified the 10<sup>th</sup> Street corridor as the Preferred Alternative.



urban areas may interfere with emergency vehicle response times in the surrounding areas, especially where emergency response stations are located in areas where at-grade rail crossings are frequently blocked; and increased numbers of slow moving trains could result in adverse social and economic impacts to local communities due to automobile delays at crossings as well as delays in delivering freight and passengers/workers to their destinations on time under the No Build Alternative.

Build Alternatives C and D, both of which include Section 2, have been selected based on the following comparison of Section 1 (i.e., Canadian National Railroad) and Section 2, RID route.

**Operational:**

Operational performance of the Selected Alternatives to achieve acceptable on-time performance standards was of high importance when selecting an alternative. Currently, Amtrak is pursuing relief from the Surface Transportation Board for failure of the Canadian National Railroad (Section 1) to properly dispatch Amtrak trains to avoid delays. The RID Railroad (Section 2) is dispatched by Metra. While Section 2 has considerably more traffic than Section 1, the Metra trains are on a fixed timetable with a 95 percent on-time performance record. Section 1 has unpredictable freight traffic, including shipper servicing which makes on-time performance more difficult to achieve. Incremental infrastructure improvements to Section 2 can be made to preserve or enhance on-time performance in a shorter time frame at a lower cost. Section 1 would require construction of four costly and time consuming flyovers to preserve or enhance on-time performance. In comparison, Section 2 requires only one flyover at the Joliet, Elgin, & Eastern (EJ&E) Railroad.

**Cost:**

Section 2 costs \$200 to \$500 million less than Section 1 primarily due to the need for the four flyovers.

**Hine's Emerald Dragonfly:**

Section 1 would impact 3.7 acres of Critical Habitat for the federally and state endangered Hine's emerald dragonfly. Because the Critical Habitat is on both sides of the existing railroad alignment and immediately adjacent to the right-of-way, these impacts would be difficult to avoid and mitigate. In addition, the USFWS has expressed concern regarding the Program's impacts to the Critical Habitat and the potential increase in train-dragonfly collisions. Section 2, however, would not result in any impacts to the Hine's emerald dragonfly.

**Public Policy:**

If Amtrak service is no longer on Section 1, two Chicago Region Environmental and Transportation Efficiency (CREATE) Project flyovers on that route may not be needed.



The ability to reprioritize limited CREATE resources for more urgent projects would be of significant public benefit and would reduce the total cost of the CREATE Program. Additional infrastructure investment along Section 2 would not only benefit the HSR Program but also would place that investment in a publicly owned corridor.

**Section 5 through Springfield:**

FRA and IDOT have advanced both Alternatives C and D at the Tier 1 level of review and have not made a selection of a route through Springfield at the Tier 1 level. Since the agencies decided to carry out a Tier 2 level of analysis for the Springfield section at the same time and as a component of the Tier 1 EIS, it is more appropriate for the selection of the identified alternative for Springfield to be made in the separate Tier 2 ROD being issued contemporaneously with this Tier 1 ROD. The justification for the selection of the selected alternative through Springfield is addressed in that ROD.

**Summary:**

Alternatives C and D, both of which include Section 2, have been identified as the Selected Alternatives based on the following reasons:

- Avoids Critical Habitat of the federally and state endangered Hine's emerald dragonfly.
- More passenger friendly dispatching.
- Fewer unpredictable train events to affect on-time performance.
- On-time performance can be preserved or enhanced with smaller incremental improvements in a shorter time frame at lower cost.
- Total cost is less.
- Allows potential CREATE Program reprioritization or program cost savings.
- Invests public funds in a publically owned transportation corridor.

**Additional Considerations:**

While Alternatives C and D are the Selected Alternatives for the reasons described in this section 4.4, they involve significant and costly improvements in Section 2 in moving service off of the existing Amtrak route. As described in section 2.2 of this ROD, IDOT's implementation plan calls for the Program to be implemented in incremental steps due to the Program size and scope. Therefore, resources will need to be prioritized and costs and benefits weighed in deciding which improvements will be advanced first.

Accordingly, in advancing the overall Program, FRA's selection of Alternatives C and D would not preclude limited interim investments on the existing Amtrak route (particularly safety-related improvements) that might be appropriate prior to the implementation of the major improvements contemplated in Sections 2.

Tier 2 environmental analyses for such investments might need to be made, as appropriate. Additionally, during the Tier 2 studies for Section 2, alternative



connections that would provide access to Union Station could be considered if that connection would be deemed better than the connection at 40th Street.

It should also be noted for the Selected Alternatives that while the MacArthur Bridge is identified as the preferred route for the Chicago to St. Louis HSR Corridor Program, the Merchants Bridge also plays an important role in serving as an alternate route during maintenance or unexpected disruptions, and also as a key part of the St. Louis area rail network providing potential benefits to both freight and passenger traffic. The bridge connections for both the MacArthur and Merchants Bridges should be further evaluated during the Tier 2 studies.

#### 4.5 Environmentally Preferable Alternative

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CEQ regulations implementing NEPA require that a ROD specify the alternative or alternatives considered to be environmentally preferable. “Environmentally preferable” is defined as “the alternative that will promote the national environmental policy as expressed in the NEPA, Section 101.” Ordinarily this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative that best protects, preserves, and enhances historic, cultural, and natural resources. The impacts assessed for this Tier 1 EIS were based on a Tier 1 level of analysis, which does not involve detailed design and field surveys. The subsequent Tier 2 studies for this Program will further evaluate impacts and measures to avoid and minimize the impacts identified, and are at a greater level of detail.

Selected Alternatives C and D are the environmentally preferable alternatives based on a broad Tier 1 review and analysis which outlined that there will be: no critical habitat of the federally and state endangered Hine’s emerald dragonfly impacted; no farms will be bisected; the Program is not anticipated to result in significant adverse impacts to public health related to air pollutants and air toxics or contributions to Green House Gas emissions; no new land use changes will be generated in and around the Corridor, reducing traffic on the regions roadways and highway infrastructure, and the majority of the impacts would be within the existing right-of-way and in previously disturbed areas. The adverse environmental effects associated with the Selected Alternatives were less substantial than the consequences associated with the No Build Alternative in terms of air quality, energy, and traffic, and thus identified the Selected Alternatives as environmentally preferable.



## 5.0 Summary of Potential Effects and Measures to Avoid and Minimize Harm

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FRA and IDOT conducted a comprehensive review and analysis of the potential impacts of the Preferred Alternatives at the Tier 1 level in the Final EIS, building upon the impact analysis of the Draft EIS. The effects of the Selected Alternatives (which are the same as the Preferred Alternative from the Final EIS), which is the approved “Program” in this ROD, are summarized below. The impacts assessed for the Tier 1 EIS were based on a Tier 1 level of analysis, which does not involve detailed design and field surveys. The Tier 2 studies will be at a greater level of detail than the Tier 1 EIS. The Tier 2 studies will further evaluate impacts and measures to avoid and minimize those impacts, as well as indirect and cumulative impacts.

Potential land acquisition and displacement of residences and businesses will be fully assessed in the Tier 2 studies. Right-of-way purchases will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Act of 1970 (Uniform Act) (42 USC 4601 et seq.), as amended, and the provisions of the State of Illinois Relocation Assistance Plan. A more detailed analysis will be conducted during the Tier 2 studies to determine the impacts to low-income and minority (Environmental Justice) populations and to ensure compliance with Executive Order 12898 and DOT Order 5610.2(a).

Further evaluation of historic architectural resources will be needed during the Tier 2 studies in order to identify potentially eligible historic properties and to make determinations of effect in accordance with Section 106 of the National Historic Preservation Act. One archaeological site was identified in the Tier 1 Final EIS. The Tier 2 studies will also conduct additional investigations to identify potential archaeological resources and to determine if construction would have an adverse effect on these resources. .

Detailed field studies will be conducted during the Tier 2 studies to further identify and evaluate impacts to natural resources, water resources, floodplains, and wetlands. These studies will also identify necessary measures to avoid and minimize impacts to these resources. Coordination with the appropriate resource agencies, including Endangered Species Act, Section 7 consultation, will occur during the Tier 2 process. During the design phase, there will be opportunities to avoid and/or minimize floodplain impacts by designing bridges to span 100-year flood zones or portions of them. Design features such as steeper side slopes and/or retention walls may also be implemented to reduce the disturbance footprint. Coordination with the USACE, the USFWS, and the IDNR will be required to determine specific wetland mitigation requirements to adequately compensate for wetland losses.



Detailed noise and vibration studies will be conducted during the Tier 2 studies. The mitigation measures identified in the Tier 1 Final EIS would be considered and applied as appropriate in the Tier 2 studies.

Coordination with the resource and regulatory agencies and the local communities will continue as the Program moves into the Tier 2 studies. Measures will be identified in the Tier 2 studies to avoid, minimize, and mitigate impacts as a result of implementing the Selected Alternatives.

Table 5-1 summarizes the Tier 1 level of impacts and costs for the Selected Alternatives C and D. Potential measures to mitigate the impacts associated with the Selected Alternatives are presented in Table 5-2. These potential measures will be refined further and finalized in the Tier 2 documents following more detailed impacts analysis.

## 5.1 Land Use/Socioeconomic Impacts

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Table 5-1 shows the number of displacements and the acreage of right-of-way that would be needed for the Selected Alternatives C and D. As indicated by the table, Alternative C would result in fewer displacements and require less right-of-way than Alternative D. Potential impacts by each the Selected Alternative to low-income and minority populations (i.e., environmental justice populations) were also evaluated. Both alternatives would traverse ten census tracts with more than 50% of the population below poverty level. With regard to minority populations, Alternatives C and D would traverse 89 census blocks respectively with more than 50% of the population being minority.

Right-of-way purchases conducted pursuant to a federally funded program would comply with the Uniform Act, and U.S. DOT regulations, 49 CFR Part 24. IDOT will implement the provisions of the State of Illinois Relocation Assistance Plan in accordance with the Uniform Act.



**Table 5-1. Summary of Impacts and Costs**

Resources	Selected Alternative C	Selected Alternative D
Buildings Displaced	262	317
Community Facilities	0	0
Environmental Justice >50% Minority Census Blocks	83	89
Environmental Justice >50% Poverty CensusTracts	10	10
New Right-of-Way	700-716 ac	736-737 ac
Prime Farmland Soils	1,903 ac	1,900 ac
Historic Sites	6	5
Archaeological Sites	0	0
Forest	254.3 ac	248.1 ac
Prairie Remnants	233.1 ac	233.1 ac
Protected Natural Areas	17.74 ac	17.74 ac
Critical Habitat (Hine's Emerald Dragonfly)	0	0
Noise Sensitive Receptors	339	806
Vibration Sensitive Receptors	249	283
Surface Water	191	191
Special Status Streams:		
Biologically Sensitive Streams #/ft	5/805	5/805
Illinois Natural Areas Inventory Streams #/ft	6/1,004	6/1,004
Nationwide Rivers Inventory Streams #/ft	3/554	3/554
Navigable Waterways #/ft	7/883	7/883
Wellhead Protection Areas	2	2
Floodplains #/acres	44/85.5	44/85.2
Wetlands #/acres	71/55.0	71/54.9
Special Waste Sites	260	276
Section 4(f) Properties	14	14
Costs (millions)	\$4,912-\$5,232	\$5,114-\$5,193





**Table 5-2. Potential Mitigation Measures**

Impact	Mitigation
Land Use	Long Term - IDOT will implement the provisions of the State of Illinois Relocation Assistance Plan in accordance with the Uniform Act as mitigation measures where ROW acquisitions and land use changes occur.
Cultural	Mitigation measures will be determined based on the more detailed investigations from Tier 2 studies and in compliance with Section 106 of the National Historic Preservation Act.
Natural Resources	<p>Short Term - Avoidance, minimization, and best management practices implementation will reduce adverse impacts.</p> <p>Long Term – Coordination will continue through the Tier 2 level with the Illinois Nature Preserves Commission regarding the avoidance, minimization, and mitigation of any impacts to prairies. Coordination will continue through the Tier 2 level with the USFWS and INDR regarding the avoidance, minimization, and mitigation of any impacts to state and federal threatened and endangered species. Upland forests will be replaced on a 1:1 ratio in accordance with IDOT policy "D&amp;E-18 Preservation and Replacement of Trees".</p>
Construction	<p><b>Air Quality:</b> Short Term - State and local regulations regarding dust control and other air quality emission reduction controls will be followed during construction.</p> <p><b>Noise and Vibration:</b> Short term and Long term noise mitigation measures will be identified during Tier 2 studies.</p> <p><b>Water Quality/Erosion Control:</b> Short Term - BMPs will be utilized to protect water quality. Runoff from construction sites must be diverted from directly entering streams during and after construction. Any impervious areas resulting in a small reduction in recharge area will be mitigated using stormwater retention/detention basins.</p>
Floodplains	Mitigation measures will be determined based on the more detailed impact determinations from Tier 2 studies.
Wetlands	Long Term - A conceptual wetland mitigation plan will be developed to compensate for unavoidable impacts. Coordination with the USACE, the USFWS, and the IDNR will be required to determine specific mitigation requirements to adequately compensate for wetland losses pending final design to quantify actual wetland impacts.



**Table 5-2. Potential Mitigation Measures (continued)**

Noise and Vibration	<p>Long Term</p> <ul style="list-style-type: none"> <li>• Wheel treatments;</li> <li>• Rail treatments;</li> <li>• Vehicle treatments;</li> <li>• Building insulation;</li> <li>• Noise barriers;</li> <li>• Maintenance- <ul style="list-style-type: none"> <li>– Rail grinding on a regular basis, especially on rails that tend to develop corrugations;</li> <li>– Wheel truing to re-contour the wheel and remove wheel flats. This can result in a dramatic vibration reduction. However, significant improvements can be gained from simply smoothing the running surface. Install wheel-flat detector systems to identify vehicles that are most in need of wheel truing;</li> <li>– Implement vehicle reconditioning programs, particularly with components such as suspension systems, brakes, wheels, and slip-slide detectors;</li> </ul> </li> <li>• Relocation of Special Trackwork;</li> <li>• Ballast Mats;</li> <li>• Resiliently Supported Ties;</li> <li>• High Resilience Fasteners; and</li> <li>• Floating Slab Trackbed.</li> </ul>
Visual and Aesthetic Quality	<ul style="list-style-type: none"> <li>• Long Term - Views from trains into private spaces would be a positive visual impact and views of trains and new rail lines would be considered a minor adverse visual impact. IDOT will determine potential ways to help reduce minor impacts, such as planting vegetation screens or providing aesthetically pleasing features as part of the HSR design.</li> </ul>
Special Waste	<p>Mitigation measures will be determined based on the more detailed impact determinations from Tier 2 studies.</p>
Section 4(f)/6(f) Resources	<p>Mitigation measures will be determined based on the more detailed impact determinations from Tier 2 studies.</p>

## 5.2 Energy

Table 5-3 presents the annual energy consumption by mode and alternative. The results in Table 5-3 show that the total energy consumption from intercity passenger travel under the No-Build Alternative would be higher than the Selected Alternative. Although the Selected Alternatives would result in an increase in energy consumption compared to the No-Build Alternative with regard to rail transportation, all of the other three modes would experience a decrease, thereby, resulting in an overall net decrease in energy consumption. This overall net decrease could be attributed to a shift in ridership from the other three less energy efficient modes to rail.



**Table 5-3. Annual Energy Consumption (billions of BTUs)**

Alternative	Rail	Automobile	Bus	Air	Total
Existing (2010)	199	22,754	69	411	23,433
No-Build (2030)	354	27,558	93	692	28,697
Selected Alternatives C and D	572	27,143	83	628	28,426

### 5.3 Agriculture

Table 5-1 presents the impacts to prime farmland soils for each Selected Alternative. As indicated in the table, there is minimal variation in total acres of impacts between the Selected Alternatives. Because the Selected Alternatives would follow the existing railroad tracks, no farms would be bisected by any of the alternatives. The increase in train traffic along the corridor could result in increased delays at railroad crossings, as farm vehicles would be required to stop more frequently for trains crossing roadways.

### 5.4 Cultural Resources

In accordance with Section 106 of the National Historic Preservation Act, each alternative was evaluated for potential impacts to historic architectural and archaeological resources. A file search was conducted to identify any properties within the study corridor that are listed or eligible for listing on the National Register of Historic Places (NRHP). Based on this information, it was determined that Selected Alternatives C and D would impact approximately six and five NRHP listed/eligible architectural sites, respectively. More detailed field surveys for potentially eligible properties that are not currently listed on the NRHP and the determination of effects will be conducted during Tier 2 studies.

With regard to known archaeological resources, potential impacts were considered where proposed improvements (construction activity) would physically impact the property on which the resource lies or would be immediately adjacent to the construction activity such that temporary impacts could result. Because the resources lay belowground, noise, vibration, and visual impacts were not considered.

One site, 11MP4, located in Macoupin County is adjacent to an area where construction activities would occur. However, based on the Tier 1 level of analysis, this site is currently not shown as being directly impacted by the Selected Alternatives. Further evaluation will be required during Tier 2 studies to determine if the Selected



Alternatives would have an adverse effect on this site. In addition, Tier 2 studies will include a survey of potential archaeological resources in all areas to be disturbed.

## 5.5 Natural Resources

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### 5.5.1 Forests, Prairie Remnants, and Illinois Natural Areas

The Selected Alternatives were evaluated for potential impacts to natural resources such as forest, prairie remnants, and protected natural areas. Table 5-1 shows the impacts to these resources for each of the Selected Alternatives. With regard to impacts to prairie remnants, and protected natural areas, the Selected Alternatives would have the same impacts. With regard to forest impacts, however, Selected Alternative C would impact approximately six more acres than Selected Alternative D. There are six natural areas located within the construction -limits of the Selected Alternatives: Hickory Creek Barrens Nature Preserve (0.3 acre), Funks Grove Nature Preserve (0.9 acre), Thaddeus Stubblefield Grove Nature Preserve (7 acres), Hitts Siding Prairie Nature Preserve (0.6 acre), Funks Grove Land and Water Reserve (7.9 acres), and Denby Prairie Nature Preserve (1.14 acres).

### 5.5.2 Threatened and Endangered Species

The Selected Alternatives would not impact USFWS designated Critical Habitat for the federally and state endangered Hine's emerald dragonfly.

Based on the IDNR EcoCat database and coordination with USFWS and IDNR, there are no Critical Habitats of other federally listed species located within the study corridor that could be impacted by any of the Program's alternatives. Based on Natural Heritage Data Base records of occurrences, the federally and state endangered leafy prairie clover and the federally threatened and state endangered Mead's milkweed occur within the existing and proposed ROW. However, this Tier 1 level of documentation did not include detailed fieldwork to identify potential habitats and/or populations of threatened and endangered species. Therefore, conclusions about impacts to listed species or their habitat cannot be made at this time. Further coordination with USFWS and IDNR will continue during the Tier 2 stage.

Species listed as threatened or endangered by the state, which have recorded occurrences within the existing or proposed right-of-way based on the Natural Heritage Data Base, are included in Chapter 5, Table 5.6-3 and Exhibits 5.6-1 through 5.6-3 of the Tier 1 Final EIS. Most of the records for state listed species occur in Sections 3 and 6. Since these sections are included in all the Selected Alternatives, there is little difference in the species records for each alternative. All species listed in Table 5.6-3 are present in the right-of-way of the Selected Alternatives, with the exception of the leafy prairie clover, which is only known for Section 1.



### 5.5.3 Air Quality

The proposed improvement would impact the counties of Cook, Will, and Grundy in the northeastern Illinois nonattainment area, and the counties of Jersey, Madison, St. Clair, and St. Louis in the St. Louis nonattainment area. While the proposed Program would increase diesel locomotive emissions, these increases would be offset by decreases in regional mobile source auto vehicle miles traveled (VMT). The Program-generated net increases in predicted annual pollutant emissions, from high-speed rail passenger service, in nonattainment areas would all be below general conformity de minimis threshold values. Pursuant to the General Conformity Rule, EPA considers project-generated emissions below these de minimis values to be minimal. Such projects do not require formal conformity determinations. With regard to greenhouse gas (GHG) emissions, the Selected Alternatives would reduce CO<sub>2</sub> emissions by 22,200 tons/year versus the No-Build Alternative. As a result, the Program is not anticipated to result in significant adverse impacts to public health related to air pollutants and air toxics or contributions to GHG emissions.

### 5.5.4 Noise and Vibration

As indicated in Table 5-1, the Selected Alternative C would impact fewer noise and vibration sensitive receptors than Selected Alternative D.

### 5.5.5 Water Quality

#### 5.5.5.1 *Surface Water*

The Selected Alternatives would result in the same number surface water crossings (191).

#### 5.5.5.2 *Special Status Streams*

Both of the Selected Alternative would result in impacts to Biologically Sensitive Streams (five crossings/805 feet), Illinois Natural Areas Inventory Streams (six crossings/1,004 feet), and Nationwide Rivers Inventory Streams (three crossings/554 feet), and Navigable Waterways (seven crossings/883 feet). Further coordination with USFWS and IDNR will continue during the Tier 2 stage.

#### 5.5.5.3 *Well Crossings*

Both of the Selected Alternatives would cross the same number of Wellhead Protection Areas (2) and Non-Community Water Supply Well Setbacks (5). Further coordination with IDNR will continue during the Tier 2 stage.



#### 5.5.5.4 *Floodplains*

Table 5-1 shows the impacts from Selected Alternatives C and D would have on floodplains (44 crossing and 85.2 acres). Of the 44 crossings, 29 would be perpendicular crossings for both Selected Alternatives

#### 5.5.5.5 *Wetlands*

For this Tier 1 level of analysis, National Wetland Inventory (NWI) mapping was used to determine potential wetland impacts. Field investigations were not conducted to verify this information. Therefore, wetland delineations will need to be conducted during the Tier 2 environmental documentation. The wetland communities that would be impacted by the Selected Alternatives are palustrine (i.e., freshwater) emergent (PEM), palustrine forested/scrub-shrub (PFO/PSS), palustrine unconsolidated bottom (PUB) (i.e., ponds), and riverine (i.e., rivers). Table 5-1 shows the Selected Alternatives would impact 65 wetlands totaling approximately 46 acres. Out of all the wetland communities impacted, PFO/PSS wetland communities would have the greatest impacts.

### 5.6 Utilities

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The Selected Alternatives would require the relocation of utilities in the corridor which has been included in their cost estimates.

### 5.7 Visual and Aesthetic Quality Impacts

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Table 5-4 shows the relative visual impacts to each of the landscape units along the Selected Alternatives. Most of the landscape units would have minor/negligible impacts from the Selected Alternatives except for the Chicago, Joliet, and Springfield areas, which would have moderate impacts.

### 5.8 Special Waste

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A database search was conducted to identify special waste sites that may be impacted by the Program. Table 5-1 shows that Selected Alternative C (260) would impact 16 fewer sites than Selected Alternative D (276).

### 5.9 Section 4(f)/6(f) and Parklands

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This section identifies the potential for the Selected Alternatives to impact resources protected by Section 4(f) of the Department of Transportation Act of 1966 and Section 6(f) of the Land and Water Conservation Fund (LWCF) Act of 1965 such as public parks, recreation areas, wildlife and waterfowl refuges, and historic properties. For this Tier 1 analysis, potential impacts were considered when any portion of a Section 4(f) resource fell within or would physically abut the existing or proposed right-of-way limits of the



Selected Alternatives. These impacts do not represent an official determination of Section 4(f) use. Although a determination of effect has not been made for historic properties, the seven NRHP historic sites located along the corridor were included as potential Section 4(f) properties for this analysis. Based on this evaluation, it was determined that both Selected Alternatives would impact approximately 19 Section 4(f) properties.

**Table 5-4. Visual Resource Impact Summary**

Landscape Unit	No-Build Alternative	Selected Alternative C	Selected Alternative D
Chicago Area	○	●	●
Joliet Area	○	●	●
Will County	○	○	○
Grundy County	○	○	○
Livingston County	○	○	○
McLean County	○	○	○
Bloomington-Normal Area	○	○	○
Logan County	○	○	○
Sangamon County	○	○	○
Springfield Area	○	●	●
Macoupin County	○	○	○
Madison County	○	○	○
St. Louis Area	○	○	○

## 5.10 Indirect and Cumulative Impacts

It is anticipated that the Selected Alternatives would result in negligible indirect impacts for the following reasons:





- The Selected Alternatives would utilize existing rail corridors and train stations and, therefore, would not result in the development of new access or train stations in areas that previously did not have any passenger rail service.
- It is anticipated that the increased ridership would have a minimal effect on inducing development around the existing train stations, which are already located in developed/urbanized areas. Any induced growth that may occur would be limited to the built-up areas in the immediate vicinity of the train stations and would likely include small restaurants and/or retail shops that would be attracted by the increase in transit passengers and potential customers. Any potential growth that may occur would be controlled by the local, state, and federal agencies that would be responsible for approving such development and permitting the impacts to any regulated resources that may be impacted.

With regard to natural, cultural, agricultural, and socioeconomic resources, it is anticipated that the Selected Alternatives would result in negligible cumulative impacts for the following reasons:

- Because the Chicago-St. Louis HSR Corridor Program would involve primarily the addition of a second track that would parallel the existing track, the majority of the impacts would be within the existing right-of-way and in previously disturbed areas.
- Any new impacts outside of the existing track's footprint and right-of-way would be relatively narrow, linear, and distributed over a long distance (i.e., 284 miles). As a result, the impacts to any given resource (e.g., natural, cultural, agricultural, or socioeconomic) within any given area (e.g., ecosystem, watershed, community) is expected to be relatively small and would have a negligible cumulative effect when added to any other project impacts in those areas.
- The vast majority of the study corridor has been, currently is, and will continue to be farmland. The remaining study corridor is mostly comprised of highly developed urban areas that would not contribute to cumulative impacts. The potential for this Program to generate land use changes in and around the study corridor from farmland/undeveloped land to suburban or urban land is minimal due to the fact that the rail corridor already exists and the Program would help to reduce growth pressures on non-urban land by focusing on already built out areas and reducing traffic on the regions roadways and highway infrastructure.

The most notable known projects that would result in cumulative impacts along the study corridor when added to this Program are the high-speed rail improvements from Dwight to St. Louis associated with the 2004 ROD and the high-speed rail improvements from Joliet to Dwight associated with the 2011 EA/FONSI. Although minimal, the cumulative negative impacts associated with these projects would primarily be limited to prime farmland, vegetation/habitat, wetlands, and streams that are located along the



existing railroad corridor. With regard to air quality, these projects are expected to provide an overall cumulative benefit. The high-speed rail facility is expected to provide service to motorists who would otherwise travel between Chicago and St. Louis by automobile. This shift in travel mode is expected to reduce overall vehicle emissions. These projects would also result in a cumulative benefit of removing automobiles from congested roadways and improving safety by shifting automobile travelers to a safer mode of transportation.

## 5.11 Travel Benefits

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### 5.11.1 Travel Time, Frequency, Reliability

Rail passenger travel time between Chicago and St. Louis would decrease and the Selected Alternatives could therefore result in an additional 35- to 39-minute travel time savings compared to the No-Build Alternative.

With the Selected Alternatives, three additional passenger round trips would be operated daily.

The Selected Alternatives would include the addition of a second track through most of the corridor (Dwight to St. Louis), rail-to-rail grade separations, and added capacity north of Joliet, as well as associated signal improvements. These features would address the reliability-related issues due to train interference that are not addressed by the No-Build Alternative.

### 5.11.2 Safety

Overall passenger safety in the corridor would increase in that the annual passenger miles traveled by rail in the corridor is expected to rise to 328 million passenger miles (Year 2030) from the existing 114 million passenger miles. This is 125 million passenger miles greater than with the No-Build Alternative. To the extent that this increase represents a diversion from automobile travel, the safety risk to travelers would decrease in that rail travel is safer than automobile travel. Annual passenger miles by automobile are projected to decrease by 118 million passenger miles compared to the No-Build Alternative.

With additional trains operating in the corridor, the possibility of train collisions is increased. However, the installation of a positive train control signal system would mitigate this risk.

### 5.11.3 Additional Travel Benefits

Improvements to passenger rail service improve its competitiveness with other modes of travel. When compared to the other transportation modes, the Selected Alternatives would provide more access to intermediate markets along the corridor except for



automobile travel, which currently provides access along the entire corridor via the interstate interchanges. Between Chicago and St. Louis, the Selected Alternatives would provide improved access to nine intermediate markets via the train stations while air and bus travel currently provides access to only two markets (Bloomington/Normal and Springfield). With regard to trip service, the Selected Alternatives would provide for safe use of cell phones and internet access for diverted automobile drivers. As for air travel, although cell phone and internet access is available at airports, there are more restrictions/limitations regarding their use during flight. With regard to cost and service, Selected Alternatives would provide higher quality service than bus travel and rail service under the No-Build Alternative at a lower cost than air travel.

## 5.12 Transportation Impacts

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### 5.12.1 Freight Rail Service Impacts

Implementation of the Selected Alternatives may require some freight train scheduling modifications to prevent conflicts with passenger rail service proposed for the Selected Alternatives. The increased frequency of passenger trains will further restrict rail time available for freight movements. Since high-speed operations will occur primarily during the daytime, coordination with the host railroads would be required to determine if the routing of freight trains could occur outside of the peak intercity passenger periods. Ultimately, the freight carrier would have to agree to such a shift.

### 5.12.2 Commuter Rail Service Impacts

Commuter rail service in the Chicago area currently operates on Section 2 (Metra RID) of Selected Alternatives C and D. No other commuter rail service operates in the corridor. Metra has no plans for changing or expanding the existing service along Metra's RID. There is also no intercity passenger service currently operated via the Metra RID. The assumed capacity improvements for the high speed service will be developed further in the Tier 2 process to provide appropriate additional capacity, but not for the additional commuter service. Further improvements (i.e. crossovers, portions of new track) can be developed and analyzed to support the future additional commuter rail service.

Implementation of the Selected Alternatives would not result in changes in the number of commuter trains operating daily. Impacts from the Selected Alternatives could result in additional intercity passenger trains operating, potentially affecting commuter rail service.

### 5.12.3 Impacts to Rail Service during Construction

In general, construction activities for the Selected Alternatives would affect rail traffic by reducing operating train speeds through the construction zones, adding to rail travel time and, in turn, cost. This would occur when adding new siding tracks, double-tracks, and connection tracks. The other impact would be schedule adjustments for existing



operations to create windows of opportunity for temporary shutdown of rail operations on selected track sections, such as when the new turnouts are being placed for the passing sections and new sidings, or when there is a potential safety risk, such as during the construction of a flyover. During construction, there may be track outages that would interrupt intercity passenger rail service. As necessary, bus service would be provided along the corridor to replace intercity passenger rail service lost during construction.

#### **5.12.4 Highway-Rail Grade Crossings Impacts**

Based on the 2004 ROD and 2011 EA, at-grade highway-rail crossings through most of Sections 3 through 7 (Joliet to East St. Louis) will be upgraded to provide four-quadrant gates and roadway configuration/approach improvements based on crossing diagnostics.

Tier 2 studies under the Selected Alternatives will need to be conducted to evaluate crossing improvements such as additional tracks, crossing surfaces, and gates to accommodate the upgraded service. The Selected Alternatives would increase vehicular delay at highway-rail grade crossings for the following reasons:

- Additional intercity passenger rail service: Gate down time would increase because the number of passenger trains operating in the corridor would increase from 10 per day to 18 per day.
- Increase in advance warning time: All crossings will be equipped with constant warning time. Currently, crossing gates are activated approximately 20 to 30 seconds prior to a train reaching the grade crossing. For high-speed passenger trains, crossing gates would be activated sooner, possibly up to 90 seconds before a train reaches the crossing. This increase in time would cause additional vehicular delay for motorists using the highway-rail grade crossing. As part of implementation of the 2004 ROD improvements, coordination with the Illinois Commerce Commission is underway to determine the length of time required for the gates to be activated before a train reaches a crossing.

The combination of additional trains and longer gate down times would increase the amount of time that a crossing is blocked by approximately 20 minutes per day.

Every highway-rail crossing in the study corridor was evaluated for its suitability for grade separation. Potential grade separation locations were identified based on setting (urban or rural) and their predicted exposure factor, a function of train and vehicular volumes. At the conclusion of this evaluation, 101 crossings were identified in the study corridor for potential grade separation, which would be evaluated further during Tier 2 analysis.



### **5.12.5 Impacts to Vehicular Crossings during Construction**

Vehicular traffic would be temporarily affected at locations where grade crossings would be separated, modified, or improved. While the exact construction zones are not known at this time, temporary lane closures or roadway closures would be required to construct some of the proposed improvements. The grade crossing improvements would, at a minimum, require traffic to slow down as it passes through the construction zone while new warning devices and other improvements are installed. In some cases, temporary diversion of traffic to adjacent crossings could be required. Construction of grade separations would be staged to minimize street closures.

Where impacts to vehicular traffic exists, emergency services, schools, businesses, and other activities requiring vehicular access would be affected by potential delays or detours. However, construction related impacts on vehicular traffic would be temporary. Traffic maintenance planning would be coordinated with schools and emergency service providers.

### **5.12.6 Station Access and Parking Impacts**

The Selected Alternatives could involve proposed parking expansions and station improvements to accommodate the increase in ridership. It is anticipated, however, that there would be no access or traffic congestion problems associated with the Selected Alternatives.

Potential new stations will be evaluated in suburban Chicago (between Chicago and Joliet) and St. Louis (between St. Louis and Alton). If the Program moves forward, the potential location for these stations would be evaluated in Tier 2 studies. However, it is assumed that the location of new stations would be easily accessible from the highway and arterial system.

## **6.0 Permits**

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There will be permit requirements for construction of the Selected Alternatives associated with the crossing and filling of water resources and wetlands. Section 404 permits will be needed from the USACE for wetlands where filling occurs. As part of any Section 404 permit submittal, the USACE will be provided with all coordination documentation for any alternative selected that would affect the Hine's emerald dragonfly and its Critical Habitat or any other threatened and endangered species yet to be identified. In addition, a Section 401 water quality certification will have to be obtained from the Illinois Environmental Protection Agency.

Permits from the Illinois Department of Natural Resources, Office of Water Resources, will be required for construction activity in and around streams and floodplains.



It is anticipated that the Selected Alternatives for this Program will result in the disturbance of one or more acres of total land area. Therefore, it will be subject to the requirement of a National Pollutant Discharge Elimination System (NPDES) permit for stormwater discharges from the construction sites. The NPDES permit program requires a Notice of Intent, the development of a Stormwater Pollution Prevention Plan (SWPPP), and the submission of a Notice of Termination when final stabilization of the construction site has been achieved. The SWPPP would identify potential sources of pollution which may reasonably be expected to affect the quality of stormwater discharges from the construction site and would describe and ensure the implementation of practices which would be used to reduce the pollutants in discharges associated with construction site activities and assure compliance with the terms of the permit. Permit coverage for the Program will be obtained either under the Illinois Environmental Protection Agency General Permit for Stormwater Discharges from Construction Site Activities (NPDES Permit No.ILR10) or under an individual NPDES permit.

If previously unknown occurrences of endangered species are identified during Program implementation, all activity in the immediate area would cease. Coordination with the US FWS would be initiated as required by Section 7 of the Endangered Species Act of 1973, and appropriate state or federal permits would be sought.

## 7.0 Summary of Comments on the Tier 1 Final EIS

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During the 30 day waiting period following the publication of the Final EIS, FRA received letters from both the Illinois and US EPA outlining future coordination and permitting requirements. The letters are attached in Appendix A:

- IL EPA letter was received on November 16, 2012; the agency has no objections to the Project, however, a stormwater permit will be required if one or more acres is disturbed during future construction activities, and hazardous materials if encountered, will need to be properly disposed of or recycled.
- US EPA letter was received on December 10, 2012; the agency appreciates acknowledgement of their comments on the Draft EIS and commends the Final EIS for improvements to the following sections; Purpose and Need; Alternatives; Environmental Impacts; Threatened and Endangered Species; Migratory Birds; Environmental Justice; Noise Receptors; Water Crossings; and Cumulative Impacts; and recommends that Cumulative Impacts to be analyzed in Tier 2 studies. The US EPA also commends the Preferred Alternative selections for both the Corridor and Springfield, and the agency looks forward to future coordination with the FRA and IDOT.





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## 8.0 Corrections to the Tier 1 Final EIS

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There are no changes to the Final EIS.

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## 9.0 Decision

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IDOT proposes to implement high-speed passenger rail service between Chicago and St. Louis. The purpose of the Program is to offer a safe, reliable alternative to automobile and air travel between Chicago and St. Louis using proven rail technology. Currently, the overwhelming majority of travelers use automobiles on I-55, contributing to substantial safety and congestion concerns on that roadway and in adjacent communities. Projected travel demand on I-55 is expected to continue to increase commensurate with projected population growth in Illinois. Implementation of the Program will help address these needs. In addition, the Passenger Rail Investment and Improvement Act of 2008 established high-speed rail corridor development as an important component of the Nation's transportation policy.

Implementation of the Chicago to St. Louis HSR Corridor Program is thus consistent with the Department of Transportation and FRA's vision of the important role high-speed intercity passenger rail can play in certain travel markets (see Vision for High-Speed Rail in America, April 2009 <http://www.fra.dot.gov/downloads/rrdev/hsrstrategicplan.pdf>).

The Selected Alternatives C and D identified in this ROD will utilize the Rock Island District route between Chicago and Joliet and the existing Amtrak route from Joliet to St. Louis, with the exception of the portion of the corridor through Springfield. Section 4.4 of this ROD articulates in detail the considerations and factors balanced by FRA in arriving at this decision. These considerations extended to an evaluation of several action alternatives and a No Build Alternative.

FRA, in accordance with the Council on Environmental Quality NEPA implementing regulations and FRA's Procedures for Considering Environmental Impacts, finds that the requirements of NEPA have been satisfied for the Tier 1 Chicago to St. Louis HSR Corridor Program.

The environmental record for the Tier 1 Chicago to St. Louis HSR Corridor Program includes the Draft EIS (June 2012), the Final EIS (November 2012), and this ROD, which includes comments from the circulation of the Final EIS. These documents represent the detailed analysis and findings required by NEPA on:

- The environmental impacts of the proposed Program.
- Alternatives to the proposed Program.
- Irreversible and irretrievable commitments of resources on the environment which may be involved in the proposed Program should it be implemented.





On the basis of the evaluation of social, economic, and environmental impacts contained in the Tier 1 Draft EIS and Tier 1 Final EIS, as well as the written and oral comments offered by the public and by other agencies, FRA determines that:

- Adequate opportunity was afforded for the presentation of views by all parties with a significant economic, social, or environmental interest, and fair consideration was given to the preservation and enhancement of the environment and to the interest of the communities in which the proposed Program is located; and
- All reasonable steps were taken to minimize potential adverse environmental effects of the proposed Program, and where potential adverse environmental effects remain; they have been fully reported in Tier 1 Draft EIS and Tier 1 Final EIS and will be further evaluated during Tier 2 studies.

The extensive opportunities provided for public and other stakeholder involvement in planning and decision-making are described in the Tier 1 Final EIS and summarized in this ROD. The reasonable steps to minimize potential adverse environmental effects are described in the Tier 1 Final EIS and are detailed as Measures to Avoid and Minimize harm in this ROD. As outlined in Section 5.0 of this ROD, the findings for Section 106, Section 4(f)/6(f), Section 7 endangered species, wetlands, floodplains, floodways, and environmental justice will be determined during the Tier 2 studies when more detailed analysis will be conducted.



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## 10.0 Conclusion

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The FRA has reached a decision based on the information contained in the Tier 1 Draft EIS and Final EIS. FRA approves the Selected Alternatives identified in this ROD. FRA has selected these alternatives because they 1) best satisfy the Purpose and Need for the proposed action; and 2) minimize impacts to the natural and human environment by utilizing existing transportation corridors where practicable and incorporating other mitigation measures that will be defined in further detail in Tier 2 analyses.

Accordingly, these alternatives have been selected based on processes in compliance with NEPA and other applicable requirements, and, therefore, may be advanced.

Joseph C. Szabo  
Administrator  
Federal Railroad Administration

Date

Attachments: