



ATTENTION!

Readers and Reviewers

This I-70 SIU 4 Final Environmental Impact Statement (EIS) has been prepared in the Condensed Format according to the guidance provided by Federal Highway Administration Technical Advisory, T6640.8A. This Condensed Format approach avoids repetition of material from the Draft EIS by incorporating by reference, the Draft EIS.

This Condensed Format parallels the format of the Draft EIS. Each major chapter of this Final EIS briefly summarizes the important information contained in the corresponding section of the Draft EIS and discusses any noteworthy changes that have occurred since the Draft EIS was circulated. Chapter V titled Comments and Coordination has been substantially rewritten to include an update of the comments received during the formal 45-day review period. The responses to substantive comments are also included in Chapter V.

In the event that a copy of the Draft EIS is needed for the review of this final document, please contact us at 1-800-590-0066 to request a copy, or access the project web site at www.improvei70.org to view the document on-line.

INTERSTATE 70 CORRIDOR
**SECOND TIER EIS
AND SECTION 4(f) EVALUATION
Route BB to Eastern Columbia
Boone County, Missouri**

MoDOT JOB NO. J411341G

Final Environmental Impact Statement and Section 4(f) Evaluation

Submitted Pursuant to 42 U.S.C. 4332 (2) (c)
and 49 U.S.C. 303 by the

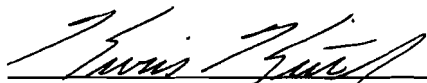
**U.S. Department of Transportation
Federal Highway Administration
and
The Missouri Department of Transportation**

Cooperating Agencies:

U.S. Army Corps of Engineers and U.S. Environmental Protection Agency

10/27/05

Date of Approval



For MoDOT

10/27/05

Date of Approval



Federal Highway Administration
Division Administrator

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The Missouri Department of Transportation (MoDOT) and the Federal Highway Administration (FHWA) are investigating improvements to Interstate Route 70 (I-70). In accordance with the National Environmental Policy Act (NEPA), a tiered approach was taken in the Improve I-70 investigation. A First Tier Environmental Impact Statement (EIS) was initiated to examine the entire 200-mile (320-km) section of I-70. The First Tier EIS was approved on 12/18/2001. This document is the Final (Second Tier) EIS and addresses Section of Independent Utility 4 (SIU 4). SIU 4 includes the portion of I-70 through Columbia, from just east of, but not including, the Missouri Route BB interchange (exit 115) to just east of the Missouri Route Z interchange (exit 133). This 18-mile (28.8-km) section of four-lane divided highway has limited access and contains 10 interchanges. The preferred alternative proposes to completely reconstruct I-70 along its existing corridor. The project will include additional through lanes, redesigned interchanges and all of the other improvements necessary to ensure that I-70 meets the expectations of an interstate highway. This Final EIS summarizes the data contained within the Draft EIS (purpose and need, the decision-making process and an evaluation of the social, environmental, and economic impacts associated with the project) as well as identifying any changes between the recommended preferred alternative (identified in the Draft EIS) and the preferred alternative identified in this document.

Comments on this Final EIS are due by _____, and should be sent to the persons listed above.

**INTERSTATE 70 CORRIDOR
SECOND TIER EIS**

**SIU 4: Exit 117 – Exit 133
Boone County, Missouri**

MoDOT JOB NO. J4I1341G

**Final
Section 4(f) Evaluation**

**For the
Napier - Bowling Estate
(Architectural Resource 4B0147)**

**U.S. Department of Transportation
Federal Highway Administration
and
The Missouri Department of Transportation**

10/27/05
Date of Approval


Federal Highway Administration
Division Administrator



INTERSTATE 70 CORRIDOR

KANSAS CITY TO ST. LOUIS, MISSOURI

Second Tier Final Environmental Impact Statement and Section 4(f) Evaluation

Section of Independent Utility #4

Boone County, Missouri

Route BB to Eastern Columbia

MoDOT Job Number: J411341G

November 2005





**Second Tier
Final
Environmental
Impact Statement
and Section 4(f)
Evaluation**

**SIU #4
Route BB
to Eastern
Columbia**

*MoDOT
Job Number
J411341G*



Summary

A. Introduction to FEIS

This document is the Final Environmental Impact Statement (FEIS) for the Second Tier evaluation of the portion of Interstate Route 70 (I-70) known as the Section of Independent Utility 4 (SIU 4). This document will summarize and update the data presented in the Draft Environmental Impact Statement (DEIS). The FEIS will utilize the same chapter organization as the DEIS¹. Each chapter will begin with a summary of the data presented in the DEIS. Whereas the DEIS is comprehensive, the FEIS will attempt to capture the essential elements of the analysis. Following the DEIS summary, each chapter will address the issues that have arisen since the publication of the DEIS. Particular attention will be paid to (1) changes to the DEIS's Recommended Preferred Alternative; (2) input that the project team received on the DEIS from stakeholders, resource agencies and the public and (3) updates to the technical reports undertaken for the project.

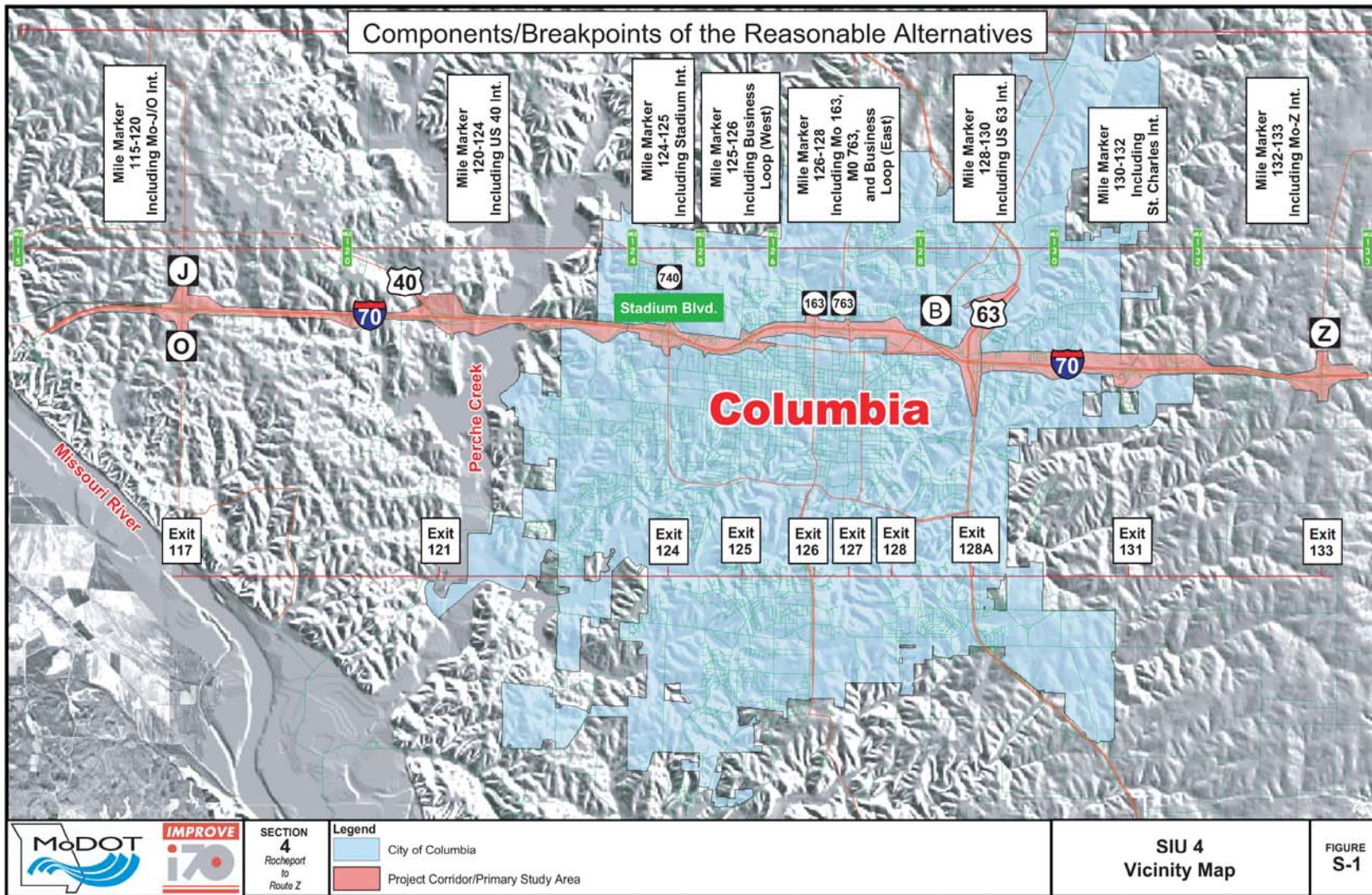
B. Location and Termini

The Missouri Department of Transportation (MoDOT) and the Federal Highway Administration (FHWA) are investigating improvements to I-70 across Missouri, from Kansas City to St. Louis. This effort is known as Improve I-70. In accordance with the Council on Environmental Quality Guidelines, a tiered approach was taken in the Improve I-70 investigation. A First Tier Environmental Impact Statement (EIS) was initiated to examine the entire 200-mile (321.9-kilometers [km]) section of I-70. The First Tier EIS focused on identifying the most appropriate types of improvements for I-70 on a conceptual level. It also identified seven Sections of Independent Utility (SIU) within the 200-mile (321.9-km) First Tier study area. A series of Second Tier studies was undertaken to identify specific improvements most appropriate to each SIU.

Section of Independent Utility 4 includes the city of Columbia and the portions of I-70, from just east of, but not including, the Missouri Route BB interchange (MO-BB, exit 115) to just east of the MO-Z interchange (exit 133). The MO-J/O interchange (exit 117) is the western-most interchange within SIU 4. This 18-mile (29.0-km) section of four-lane divided highway has limited access and contains 10 interchanges. Section of Independent Utility 4 spans virtually the entire width of Boone County. The logical termini for SIU 4 were initially established in the First Tier EIS and confirmed during the Second Tier EIS (**see Figure S-1**).

¹ The DEIS and the FEIS are organized as follows: Chapter 1 – Purpose and Need, Chapter 2 – Alternatives, Chapter 3 – Affected Environment, Environmental Consequences and Measures to Minimize Harm, Chapter 4 – Section 4(f), Chapter 5 – Comments and Coordination, Chapter 6 – List of Preparers and Chapter 7 – Distribution List.

Figure S-1: SIU 4 Vicinity Map



C. Proposed Action

The proposed action is the implementation of the preferred alternative for the SIU 4 portion of the Improve I-70 project. As stated in the First Tier EIS, the overall goal of the Improve I-70 project is “to provide a safe, efficient, environmentally sound and cost-effective transportation facility that responds to corridor needs as well as expectations of a national interstate.”

Within SIU 4, the preferred alternative specifies the improvement of I-70 along its existing alignment. Improvements include increasing the number of through lanes on I-70 from four to six, west of the U.S. 40 interchange and east of the MO-Z interchange, and from four to eight from U.S. 40 interchange to the MO-Z interchange. In addition, the preferred alternative would include the reconstruction/reconfiguration of the existing interchanges.

D. Purpose of and Need for Proposed Action

Purpose and need is the term used to describe the transportation-related problems that a project is intended to address. The generation and evaluation of alternatives are conducted to develop the most appropriate solution to the identified problems. A preferred alternative would be selected, in part, on the basis of how well it satisfies the project’s purpose and need.

The purpose and need elements associated with the Second Tier of the I-70 (SIU 4) EIS are to:

- **Accommodate existing and future traffic volumes on I-70**—Within SIU 4, the overall volume of traffic on I-70 is projected to at least double between 2000 and 2030. With the No-Build Alternative, these increases would result in future operational difficulties for travelers on I-70. Consequently, one element of the purpose of and need for improvements to I-70 is to develop alternatives that accommodate existing and projected traffic volumes.
- **Improve existing I-70 design**—Interstate 70 has been in place for many decades and several design features do not meet the standards required of modern roadway facilities. In order to satisfy future transportation demand, there is a need to improve outdated design elements. Consequently, one element of the purpose and need is to improve the existing facility by developing it in accordance with current design standards.
- **Accommodate all users of I-70**—Section of Independent Utility 4 is roughly equidistant between the major population centers of Missouri (St. Louis and Kansas City). Interstate 70 plays an important role in freight movement and general inter/intra-state travel. Because SIU 4 also traverses the city of Columbia, it plays an important role in the local roadway network. This creates a situation where the existing traffic streams are in conflict. Trucks present an additional operational challenge because of their size and operating characteristics. It is the intent of this project to accommodate the various traffic streams to the extent practical. Consequently, one element of the purpose and need for SIU 4 is to develop alternatives that accommodate all users of I-70. All other things being equal, the alternative that best accommodates all users of I-70 would be superior.

- **Improve user safety**—Both the frequency and severity of crashes on I-70 have been increasing over time. Because traffic volumes on SIU 4 are expected to at least double by the design year of 2030, the number of crashes can also be expected to increase. Consequently, one purpose and need element for SIU 4 is to develop alternatives that improve user safety on I-70.

E. Alternatives

A screening process was used to develop and evaluate alternatives. At the end of each screen, a selection process was undertaken whereby the most appropriate alternatives were advanced for further consideration. At each screen, the amount of data collected (to assist with decision-making) was increased. The overall decision-making process of the project started with the corridors that emerged from the First Tier EIS. The three corridors evaluated included improving the existing I-70 corridor, a Near North Corridor and a Far North Corridor. Ultimately, improving the existing I-70 corridor was the only corridor deemed reasonable for further evaluation.

Within the existing I-70 corridor, concept development focused on the mainline widening alternatives and the interchange configurations. To accommodate the access needs within SIU 4 properly, numerous concepts were considered. Initially, preliminary concepts were developed and evaluated. This was followed by a detailed concept phase. At this stage, a one-way frontage road concept, a two-way frontage road concept and a collector/distributor concept were developed. The detailed concepts included complete engineering depictions, iterative traffic evaluations and quantitative impact assessments. Ultimately, it was determined that none of these individual concepts alone was optimal. Instead, a hybrid or combination of concepts would be needed. The hybrids emerging from the concept-stage are also referred to as the reasonable alternatives. The reasonable alternatives have benefits that the individual concepts cannot attain. The reasonable alternatives were organized by location.

A detailed evaluation of the costs, benefits and impacts associated with the reasonable alternatives resulted in the identification of the preferred alternative. The preferred alternative satisfies the project's purpose and need, minimizes negative environmental impacts (eliminates avoidable significant negative impacts) and, overall, best balances the costs and benefits of project development. An extensive public involvement process also accompanied the development and evaluation of alternatives. By the time the preferred alternative was announced, at least 20 public involvement events had been held.

The preferred alternative is depicted visually on **Exhibit II-1**. The preferred alternative consists of the following elements:

Western Part of Project Area: Western Terminus to Stadium Interchange

This portion of I-70 extends between mile 116.2 and 124.6, including the MO-J/O interchange and the U.S. 40 interchange. The mainline widening would occur to the south and the widened rural median would be maintained. The widening to the south minimizes impacts and allows for a seamless transition to the Missouri River crossing that occurs in SIU 3 (approximately 1.3 miles [2.1 km] west of the SIU 4 termini). The MO-J/O interchange would be constructed as a diamond interchange, and the U.S. 40 interchange would be reconstructed as an enhanced diamond interchange.

Central Part of Project Area: Columbia between Stadium and U.S. 63

This portion of the study area extends from mile markers 124.6 to 130.0, including the Stadium Boulevard, Business Loop West, MO-763, MO-163, Business Loop East, U.S. 63 and Business 63 interchanges. Overall, the mainline widening occurs symmetrically on each side for the existing highway². Room for a maximum of eight lanes would be available. Narrower medians in this largely urban portion of the project area would be used to minimize impacts. The existing frontage roads would be maintained and, in some cases, improved. The Stadium interchange would be reconstructed as a tight diamond³, and the Business Loop West interchange would be reconstructed as a two-point interchange. The 163/763/Business Loop East interchanges would be part of a one-way frontage road system, and the U.S. 63 interchange would be a four-movement system interchange combined with Business 63 as a tight diamond.

Eastern Part of Project Area: U.S. 63 to MO-Z

This portion of the study area extends from mile marker 130.0 to the eastern terminus (mile marker 134.0), including the St. Charles Road and MO-Z interchanges. The mainline widening would occur symmetrically on each side for the existing highway and the urban median would be used. The existing frontage roads would be maintained and, in some cases, improved. West of the MO-Z interchange, there would be eight through lanes and east of the interchange there would be six through lanes. The St. Charles interchange would be reconstructed as a tight diamond interchange, and the MO-Z would be a standard diamond interchange.

F. Impacts

The process that led to the identification of the preferred alternative included evaluations of impacts. The impact analysis included right of way impacts, environmental impacts, community impacts, displacement impacts, engineering impacts and issues along with an examination of the compatibility with local transportation priorities. An extensive public involvement plan was also used in the decision-making process. Even though the preferred alternative involves the improvement of the existing roadway, it is expected that approximately 400 acres of new right-of-way will be required. Most of this right-of-way is agricultural land, but it also includes commercial, residential and industrial land uses. A total of 142 structures are expected to be acquired to build the preferred alternative. This includes 39 single-family residential units, four multiple-family residential units, 66 structures associated with business operations, 23 outbuildings and 10 public or fraternal buildings. The residential units represent a total of 299 dwelling units. The vast majority of these come from two senior citizen residences located on the north side of I-70, between the Stadium and Business Loop West interchanges. The preferred alternative has been configured to avoid the area's public parks. Likewise, it was the project team's intent to avoid impacts to sites on or eligible for the national Register of Historic Places. This proved impossible and the Napier-Bowling Estate is affected by the preferred alternative. While none of the structures on the estate will need to be acquired, a portion of the 30-acre site is required to construct the I-70 Business Loop interchange. This required the development of a Section 4(f) evaluation (see Chapter IV). Ultimately, it was concluded that

² One important exception occurs in the vicinity of the Business Loop West interchange. An existing substandard curve would be modified in this area, resulting in widening to the north for the portion of I-70 west of the Business Loop and widening to the south for a portion of I-70 east of the Business Loop.

³ The Stadium interchange will be supplemented with additional ramps to and from the east at Fairview Road. Additionally, the Preferred Alternative treatment at the Bernadette/Fairview intersection has been slightly modified from that shown in the DEIS.

there was no feasible and prudent alternative to the impacts to this architectural resource. In addition to the impacts to the human environment, the preferred alternative impacts the natural environment. Among the impacts are nearly 19,000 linear feet of stream impacts. Much of this is associated with the expansion of existing bridges or culverts that run under I-70. Additionally, freshwater wetlands, woodland habitat and agricultural lands will be lost. The improvement of I-70 within SIU 4 will also require large expenditures of money. The total cost (in 2005 dollars) is expected to be \$627,997,000.

The DEIS comprehensively identifies the impacts associated with this project. **Table S-1** is an impact summary for the preferred alternative.

G. Lead Agency/Cooperating Agencies

The lead federal agency for the EIS is FHWA in consultation with MoDOT. The Missouri Department of Transportation and its consultants are responsible for conducting the environmental and engineering evaluations, carrying out the public involvement activities, coordinating with state and federal review agencies and preparing the EIS in consultation with FHWA. The federal cooperating agencies include the United States Environmental Protection Agency (USEPA) and the United States Army Corps of Engineers (USACE).

The SIU 4 Study Team, which included staff and representatives from MoDOT Headquarters and MoDOT District Five, met regularly with staff from Columbia Area Transportation Study Organization (CATSO), the City of Columbia and Boone County to determine and study the alternatives developed for the Columbia area. The group met regularly to review land use and traffic data, widening concepts and emerging alternatives. This collaborative effort provided guidance and insight throughout the process. The study team also made at least quarterly presentations to the CATSO board to update them on study progress and seek direction on Columbia-specific issues.

Resource agency coordination was also a priority throughout the Improve I-70 Second Tier studies. A Study Management Group (SMG) was convened to ensure proactive coordination. Group activities included regularly scheduled SMG meetings, phone calls, e-mails, correspondence and face-to-face meetings on SIU-specific issues. Included in the SMG are representatives from the MoDOT headquarters and district offices, FHWA, USACE, USEPA, Missouri Department of Natural Resources (MDNR), Missouri Department of Conservation (MDC), Natural Resources Conservation Service (NRCS), United States Coast Guard (USCG) and United States Fish and Wildlife Service (USFWS).

H. Regulatory Compliance

The planning, agency coordination, public involvement and impact evaluation for the project were coordinated in accordance with National Environmental Policy Act (NEPA), the Clean Water Act (CWA), the Clean Air Act (CAA), the Farmland Provision Policy Act, Executive Order 11988 on Wetland and Floodplain Protection, the Fish and Wildlife Coordination Act, the Endangered Species Act (ESA), the National Historic Preservation Act (NHPA) and other state and federal laws, policies and procedures for environmental impact analyses and preparation of environmental documents.

This document complies with United States Department of Transportation (USDOT) and FHWA policies to determine whether a proposed project will have disproportionate impact on minority or low-income populations. It meets the requirements of the Presidential Executive Order on Environmental Justice 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*. Neither minority nor low-income populations will receive disproportionately adverse impacts under the reasonable range of alternatives.

River and wetland impacts associated with the range of reasonable alternatives are subject to permitting and associated water quality certification under Sections 404 and 401 of the CWA. This project is being processed in accordance with the policy of merging the NEPA review and compliance with the CWA. Key to merging the review is the coordination between the MoDOT and FHWA with the USACE and MDNR at several concurrence points. In this way, the full rationale of the decisions by the MoDOT and FHWA can be shared with the regulators as the decisions are made, reducing the potential for having to revisit critical planning decisions at a later time.

Relocation Assistance Plans for all potential acquisitions and displacements will require approval before being implemented. The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, provides for payment of just compensation for property acquired for a federal aid project. The relocation program provides assistance to displaced persons in finding comparable housing that is decent, safe and sanitary. This applies to businesses, farms, nonprofit organizations and residential properties.

All necessary coordination has been completed to address the adverse affects associated with the preferred alternative, in accordance with Section 106. Additionally, the project team has coordinated with FHWA to satisfy the Section 4(f) requirements associated with historic site impacts (see Chapter IV).

Informal coordination with the MDC will be continued to determine whether the proposed improvements will affect state-protected species. Coordination will also be continued with the USFWS to determine whether the project will adversely affect federally protected species.

I. Environmental Commitments

During the design and implementation of the preferred alternative, MoDOT is committed to obtaining necessary permits and performing other actions that will minimize and mitigate the impacts of the project on the environment. Those commitments are summarized below:

1. Missouri Department of Transportation will comply with the appropriate currently adopted design criteria and design standards.
2. Missouri Department of Transportation will incorporate suitable and reasonable Intelligent Transportation Systems (ITS) elements into the Improve I-70 program.
3. Missouri Department of Transportation will consult with emergency responder agencies involved in traffic incident management on I-70 in future design and maintenance of traffic plan development as the Improve I-70 program progresses.
4. Missouri Department of Transportation will construct frontage roads for the purposes of maintaining existing local service connections and maintaining

existing access to adjacent properties, where warranted. The frontage roads as proposed in the Frontage Road Master Plan may be constructed in the future as needs arise and as funding becomes available. Where reasonably possible, any eight-foot (2.4 meters) paved shoulder along new frontage road construction could serve as a one-way bicycle facility.

5. Missouri Department of Transportation will develop a maintenance of traffic plan for the construction phases. Through traffic will be maintained along I-70 and at access points to the interstate from cross roads. It is likely that some interchange ramps and cross roads will be closed and temporary detours required. Construction schedules, road closures and detours will be coordinated with police forces and emergency services to reduce impact to response times of these agencies.
6. Missouri Department of Transportation will coordinate with project area businesses regarding access issues, via direct communication throughout the construction period.
7. Missouri Department of Transportation will coordinate with local public service and utility service providers during the final design phase of the project and during the construction period to minimize infrastructure relocation, modifications and connectivity requirements.
8. During right of way acquisition and relocations, MoDOT will assure that this will be accomplished in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. Missouri Department of Transportation is committed to examining ways to further minimize property impacts throughout the corridor, without compromising the safety of the proposed facility, during subsequent design phases.
9. During construction, MoDOT's standard specifications, MDNR Solid Waste Management Program, and MoDOT's Sediment and Erosion Control Program will all be followed.
10. To minimize impacts associated with construction, pollution control measures outlined in MoDOT's Standard Specifications for Highway Construction will be used. These measures pertain to air, noise and water pollution as well as traffic control and safety measures. Through MoDOT's approved Pollution Prevention Plan for the National Pollutant Discharge Elimination System (NPDES), the control of water pollution will be accomplished. In addition, all construction and project activities will comply with all conditions of appropriate U.S. Army Corps of Engineers and Missouri Department of Natural Resources permits and certifications. Finally, the Missouri Department of Transportation has special provisions for construction which require that all contractors comply with all applicable local, state, and federal laws and regulations relating to noise levels permissible within and adjacent to the project construction site.
11. Missouri Department of Transportation is committed to minimize lighting impacts. Efficient lighting and equipment will be installed, where appropriate, to optimize the use of light on the road surface while minimizing stray light intruding on adjacent properties.

12. Missouri Department of Transportation will review the Natural Heritage Database and coordinate with the U.S. Fish and Wildlife Service periodically during the project development process to identify any new locations of threatened and endangered species.
13. Landscaping in the right of way will include native plant species and other enhancements in accordance with the statewide I-70 Corridor Enhancement Plan to the maximum extent possible. In accordance with MoDOT standards, new seed mixes, mulch and plant materials will be free of invasive weedy species to the extent possible. Where appropriate, MoDOT will partner with the MDC Grow Native program and implement the establishment of native vegetation along highway rights of way.
14. All crossings of jurisdictional streams and discharges of fill into freshwater wetlands are regulated under Sections 401 and 404 of the Clean Water Act (CWA). All permits required by the CWA will be obtained prior to construction. It is expected that the Record of Decision will include an umbrella Section 404 permit for SIU 4. Once funding is available, the subsequent detailed design work will allow specific impacts and mitigation to be identified in the context of the alternative selected with the Second Tier NEPA process. This assures that project alternative decisions made in the NEPA process are not re-opened in the subsequent Section 404 permit process unless warranted. Wetland replacement will also be provided for through the permit process. The Missouri Department of Transportation has developed a Conceptual Wetland Mitigation Plan to compensate for wetland impacts. This plan addresses the wetland impacts associated with all of the I-70 SIUs. Wetland mitigation for SIU 4 will emerge from the finalized version of the mitigation plan.
15. Missouri Department of Transportation will continue to coordinate with the SHPO and comply with the existing executed Programmatic Agreement that complies with the National Historic Preservation Act.
16. When trees are removed, MoDOT will implement the tree replacement policy and plant two trees for every tree removed that has a diameter greater than six inches at breast height.
17. Where feasible, MoDOT's design process will minimize impacts to floodplains.
18. Mitigation efforts to prevent the rise in flood elevation of each of the water bodies affected will be employed in an effort to obtain a No-Rise Certification permit from the State Emergency Management Agency (SEMA).
19. Missouri Department of Transportation will continue to coordinate with the NRCS to determine appropriate mitigation measures for the loss of Conservation Reserve Program (CRP) and Wetlands Reserve Program (WRP) lands.
20. Plans for suitable pedestrian, bicycle and wheelchair access across I-70 will be developed during the design of the interchanges.
21. Missouri Department of Transportation's Noise Policy will be used to address noise impacts. Where appropriate, possible noise abatement types and locations will be presented and discussed with the benefited residents during the

- preliminary design phase. Noise abatement measures will be considered that are deemed reasonable, feasible and cost effective.
22. During the final design process, the MoDOT will consider options to minimize new right of way acquisition.
 23. To avoid potential negative impacts on the Indiana bat, coordination with the USFWS will be conducted. The USFWS advocates reviewing projects on a case-by-case basis focusing on the project's proximity to known hibernacula; maternity, male roosts and/or important foraging areas; the composition of the woodland and the land use of the area after the project is complete. Missouri Department of Transportation will review the Natural Heritage Data Base periodically during the project development process to identify any new locations of endangered species activity. Missouri Department of Transportation will continue consultation with the USFWS to avoid or minimize potential impacts to this species.
 24. Missouri Department of Transportation will continue cooperating with MDNR, MDC and USFWS to relocate the population of bristled cyperus known to occur within the right of way to other publicly owned lands prior to construction.
 25. Additional study and proper remediation of hazardous waste sites that will be encountered by construction will be performed as needed to minimize exposure of construction workers and the public to hazardous wastes and to ensure proper disposal of contaminated earth and other substances. This includes proper disposal of demolition debris in accordance with state law.
 26. The I-70 Study Team will continue to coordinate with local planning agencies, including CATSO and the Columbia Planning and Building Department.
 27. The design of roadway crossings over I-70 and bridges over streams in the Columbia area will be coordinated with the City Planning and Building Department and the Parks and Recreation Department to make the crossings as compatible as possible with plans to extend bicycle and pedestrian trails and pathways along the roadways and stream corridors.
 28. Detailed design of the project will include early coordination with City and County public works departments and the Missouri One-Call System to identify utilities in the project area. The design process will include periodic consultation of utility owners to ensure compatibility of the roadway design with continued service, proper design of any utilities requiring relocation, construction techniques and timing and technical assistance during construction.



Table S-1
Preferred Alternative Impact Summary
 Improve I-70: Columbia Area (SIU 4)

IMPACT CATEGORY	MEASURE	TOTAL IMPACTS FOR PREFERRED ALTERNATIVE
RIGHT OF WAY IMPACTS (Existing Land Use within Required Right of Way)		
Residential	acres	54
Commercial	acres	63
Industrial	acres	9
Agricultural (Wooded/Vacant)	acres	249
Public (Publicly Owned Parcels)	acres	11
Other (e.g. utilities, institutional, fraternal organizations)	acres	11
Total Right of Way Required	acres	397
ENVIRONMENTAL IMPACTS		
Wetland Impacts	acres	8.3
Non-Wetland Pond Impacts	acres	2.2
100-Year Floodplain Impacts	acres	72
Stream Crossings	#	73
Natural Community Impacts	acres	143
Potential Threatened/Endangered Species Impacts	Yes/No	Yes
Number of Sites Requiring Additional Hazardous Material Assessment	#	15
Secondary and Cumulative Impacts	rating	O
Visual Impacts - Existing vs. Proposed	rating	+
COMMUNITY IMPACTS		
National Register of Historic Places Impacted	#	1 - Bowling Napier Estate
Important Community Resources - Displacement of Structures	#	5
Important Community Resources - Property Acquisition	acres	15.7
Potential Impacts to Low Income or Minority Populations (EJ)	rating	O
Potential for Noise Walls	Yes/No	Yes
DISPLACEMENT IMPACTS		
Residential Impacts (Displacement of Dwelling Units)	#	299
Total Number of Structures Acquired	#	142
Business Operation Impacts (Displacement of at Least One Structure)	#	66
Total Number of Tax Map Parcels Affected	#	612
ENGINEERING ISSUES		
Comply with MoDOT Access Management Criteria	rating	O
Construction Staging	rating	O
Traffic Operations	rating	O
Maintenance of Traffic	rating	O
Phased Implementation of Full Build	rating	N/A
Project Costs		
New Construction Cost	2005 Dollars	\$469,630,000
Right of Way Cost, including displacements	2005 Dollars	\$134,886,000
Maintain Existing Travel Patterns	rating	O
Ability to Accommodate Future Expansion	rating	-
COMPATIBILITY WITH CATSO PRIORITIES		
Conformance with Adopted Local Plans	rating	O
Impact on Local Street System	rating	O
Impact on Land Use Patterns	rating	+
Impact on Neighborhood Stability	rating	O

RATING SYSTEM	
Positive Impact/Performs Better than other Alternatives	+
Neutral Impact/No Differentiator	O
Negative Impact/Performs Poorer than other Alternatives	-



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Documents Available Upon Request

Documents Applicable to Entire 200-miles of I-70

Environmental Methodologies	-	GEC
Rest Area Study	-	GEC
Frontage Road Master Plan	-	GEC
Median Area Study	-	GEC
Design Criteria and Cost Estimating Guide	-	GEC
I-70 Corridor Enhancement Plan	-	GEC
Cultural Resources Methodologies	-	GEC
Geomorphologic Report	-	GEC

Documents Applicable to I-70 SIU4

Cultural Resources Reports	-	SEC
Wetland Delineation Report	-	SEC
North-South Rural Screening Evaluation	-	SEC
Conceptual Corridor Screening (June 2003)	-	SEC
CATSO Travel Model – Validation and Model Development	SEC -	SEC
Stakeholder Interview Summary Report (June 2002)	-	SEC
I-70 Hotline Calls – Questions and Comments	-	SEC
I-70 Website Contacts – Questions and Comments	-	SEC
Traffic Performance Screening (June 11, 2003)	-	SEC
Business Survey Form	-	SEC

To request available data, please contact:
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Acronyms and Abbreviations

AADT	average annual daily traffic
AASHTO	American Association of State Highway and Transportation Officials
ACHP	Advisory Council on Historic Preservation
ADT	average daily traffic
APE	Area of Potential Effects
AQCR	Air Quality Control Region
ASLA	American Society of Landscape Architects
ASR	Aquifer Storage and Recover
AST	Aboveground Storage Tanks
BMP	Best Management Practices
C/D	collector-distributor
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CARES	Center for Agricultural, Resource and Environmental Systems
CATSO	Columbia Area Transportation Study Organization
CCRA	Columbia Cosmopolitan Recreation Area
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CFR	Code of Federal Regulations
CO	carbon monoxide
COLT	Columbia Terminal Railroad
CORRACTS	Corrective Action Reports
CRP	Conservation Reserve Program
CSR	Code of State Regulations
CVISN	commercial vehicle electronic clearance system
CVO	commercial vehicle operations
CWA	Clean Water Act
dBA	decibels, A-weighted
DOLIR	Department of Labor and Industry Relations
DOT	Department of Transportation
EDR	Economic Development Research Group
EIS	environmental impact statement
EMS	Emergency Medical Services
EO	Executive Order
ERNS	Emergency Response Notification System
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FINDS	Facility Index System
FPPA	Farmland Protection Policy Act
FSA	Farm Service Agency
FTA	Federal Transit Administration
GEC	general engineering consultant

GIS	geographic information system
HAR	highway advisory radio
HCS	Highway Capacity Manual
HOV	high-occupancy vehicle
I-70	Interstate Route 70
ITS	intelligent transportation system
km	kilometer
LF	Landfill Sites
LOS	level of service
LQG	large quantity generator
LUST	Leaking Underground Storage Tank
LWCF	Land and Water Conservation Fund
m	meter
MDA	Missouri Department of Agriculture
MDC	Missouri Department of Conservation
MDNR	Missouri Department of Natural Resources
MEGA	Missouri Environmental Geology Atlas
MIS	Major Investment Study
MLTS	Material Licensing Tracking System
MO	Missouri route
MoDOT	Missouri Department of Transportation
MOT	maintenance of traffic
MOU	Memorandum of Understanding
mph	miles per hour
MRP	Major Roadway Plan
MSA	Metropolitan Statistical Area
NAAQS	National Ambient Air Quality Standard
NAC	Noise Abatement Criteria
NAGPRA	Native American Graves Protection and Repatriation Act
NEPA	National Environmental Policy Act
NGVD	National Geodetic Vertical Datum
NHPA	National Historic Preservation Act
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NRC	Nuclear Regulatory Commission
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
O&M	Operations and Maintenance
PEM	palustrine emergent wetland
PF01	palustrine deciduous forested wetland
PFO	palustrine forested
PIC	public involvement consultant
PSR	Pavement Serviceability Rating
PSS	palustrine scrub-shrub wetland
PUB	palustrine unconsolidated bottom
PUD	Planned Unit Development
PWSD	Public Water Supply District
RCI	ride condition index
RCRA	Resource Conservation and Recovery Act

RCRIS	Resource Conservation and Recovery Information System
REDI	Regional Economic Development, Inc
ROD	Record of Decision
ROW	right-of-way
RTP	Regional Transportation Plan
RWIS	road weather information systems
SARA	Superfund Amendments and Reauthorization Act
SEC	section engineering consultant
SEMA	State Emergency Management Agency
SFHA	Special Flood Hazard Area
SHPO	State Historic Preservation Office
SHWS	State Hazardous Waste Sites
SIP	State Implementation Plan
SIU	section of independent utility
SMG	Study Management Group
SPUI	single point urban interchange
SQG	small quantity generator
SSD	Stopping Sight Distance
STIP	State Transportation Improvement Program
STRAHNET	Strategic Highway Network
SWF	Solid Waste Facilities
TAZ	traffic analysis zone
TDM	transportation demand management
TIP	Transportation Improvement Plan
TMDL	total maximum daily loads
TNM	Traffic Noise Model
TSD	transfer, storage and disposal
TSM	transportation system management
Uniform Act	Uniform Relocation and Real Property Acquisition Policies Act of 1970
USACOE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USDOT	United States Department of Transportation
USDOI	United States Department of Interior
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USCG	United States Coast Guard
USGS	United States Geological Survey
UST	Underground Storage Tank
V/C	volume to capacity ratio
VCP	Voluntary Cleanup Program
VFW	Veterans of Foreign Wars
VHT	vehicle hours of travel
VMS	variable message signs
VMT	vehicle miles of travel
WRP	Wetland Reserve Program