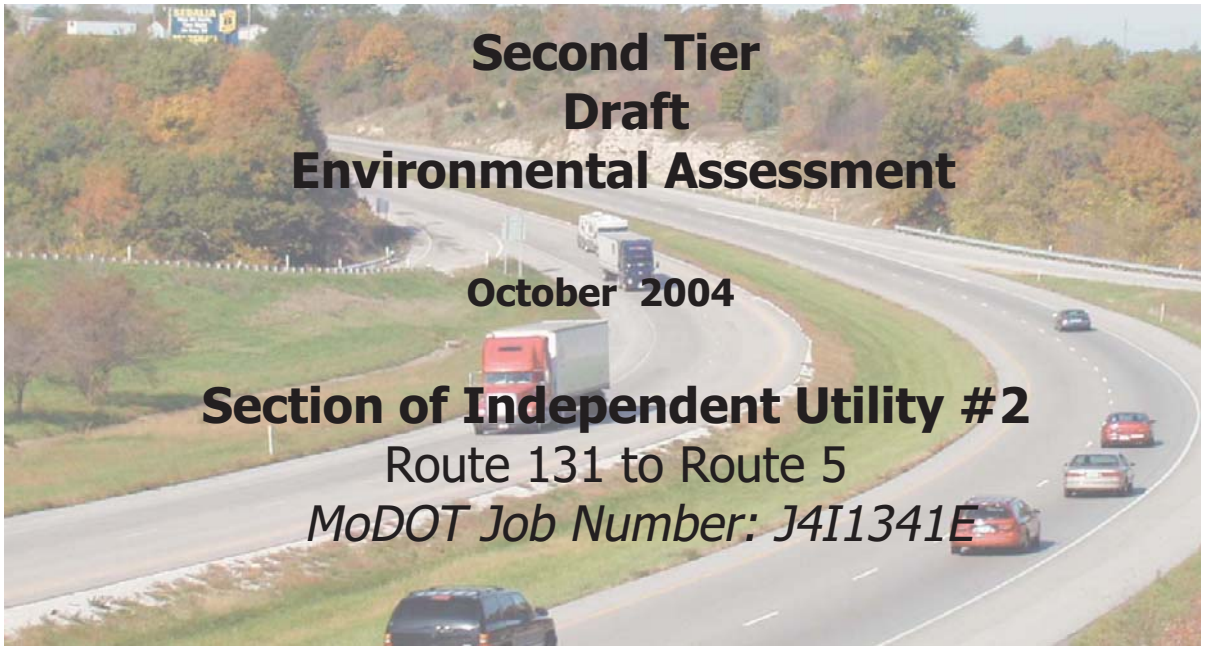
IMPROVE i70

INTERSTATE 70 CORRIDOR

Kansas City to St. Louis, Missouri



Second Tier Draft Environmental Assessment

October 2004

Section of Independent Utility #2

Route 131 to Route 5

MoDOT Job Number: J4I1341E

MoDOT

INTERSTATE 70 CORRIDOR
Kansas City to St. Louis, Missouri

LAFAYETTE, SALINE AND COOPER COUNTIES IN MISSOURI
ODESSA TO BOONVILLE
SIU 2
Route 131 to Route 5

MoDOT PROJECT NO. J4I1341E

Draft
Environmental Assessment

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: United States Environmental Protection Agency
United States Army Corps of Engineers

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Date of Approval

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9/30/04
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SIU 2 is a proposed 60-mile (100 kilometer) transportation improvement to Interstate 70 extending from Route 131 (but not including the interchange) near Odessa, Missouri to Route 5 (but not including the interchange) near Boonville, Missouri. This project would improve the safety and system efficiency of existing I-70. The proposed improvement would provide six 12-foot (3.7 meters) travel lanes, four 12-foot (3.7 meter) shoulders and a median, generally between 120 to 130 feet (36.6 to 39.6 meters) wide. In addition to the mainline improvements in SIU 2, 13 interchanges would be reconstructed to meet the current access management guidelines as determined practical.

September 2004

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AASHTO	American Association of State and Highway Transportation Officials
AOI	Area of Influence
ADT	average daily traffic
APE	area of potential effects
AQCR	air quality control regions
AST	aboveground storage tank
BEA	Bureau of Economic Analysis
BMP	Best Management Practice
CAR	Center for Archaeological Research
CFR	Code of Federal Regulations
CRP	Conservation Reserve Program
CSR	Code of State Regulations
EA	Environmental Assessment
EB	eastbound
EDR	Environmental Data Resources
EIS	environmental impact statement
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
GEC	General Environmental Contractor
HCM	Highway Capacity Manual
HPP	Historic Preservation Program
I-70	Interstate 70
ITS	intelligent transportation system
LOS	level of service
LWCF	Land and Water Conservation Fund
MDC	Missouri Department of Conservation
MDNR	Missouri Department of Natural Resources
MoDOT	Missouri Department of Transportation
MOU	Memorandum of Understanding
MUTCD	Manual on Uniform Traffic Control Devices
NAAQS	National Ambient Air Quality Standards
NAC	noise abatement criteria
NEPA	National Environmental Policy Act
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
PCB	Polychlorinated Biphenyl
PDO	property-damage-only
PWSD	Public Water Supply District
RCRA	Resource Conservation Recovery Act
ROD	record of decision
ROI	Region of Influence
ROW	right of way
SEMA	State Emergency Management Agency
SHPO	State Historic Preservation Office
SIU	section of independent utility

List of Acronyms (Cont'd)

SMG	Study Management Group
SPUI	single point urban interchange
STRAHNET	Strategic Highway Network
TNM	Traffic Noise Model
USACE	United States Army Corps of Engineers
USC	United States Code
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	underground storage tank
VMT	vehicle miles of travel
WB	westbound
WHPA	Well Head Protection Area
WRP	Wetlands Reserve Program

SUMMARY

A. Overview

1. Preferred Alternative

The Missouri Department of Transportation (MoDOT) and the Federal Highway Administration (FHWA) propose improving the I-70 corridor to meet current and future transportation needs in Missouri. The location of the proposed improvements is generally between the metropolitan areas of Kansas City and St. Louis. In 2001, MoDOT completed the "First Tier" Final EIS under the National Environmental Policy Act (NEPA) as the first step toward improving I-70. As a result of the First Tier EIS, a preferred strategy consisting of widening I-70 to three lanes in each direction was selected.

This Environmental Assessment (EA) is part of the "Second Tier" of NEPA environmental review under which a total of seven "Sections of Independent Utility" (SIUs) along I-70 are being evaluated. This EA addresses the area designated SIU 2. SIU 2 encompasses 60 miles (100 kilometers) of I-70 in Missouri generally between Route 131 (not including the interchange) in Odessa to Route 5 (not including the interchange) near Boonville. The NEPA/Clean Water Act merged process will not be used for the SIU 2 Environmental Assessment. MoDOT will continue to coordinate with the United States Army Corps of Engineers (USACE) regarding Section 404 issues and will submit an application for a Section 404 permit during the final design phase.

2. Purpose and Need

The purpose and need for the proposed improvements within SIU 2 comprises: addressing improvements needed to conform to current highway design standards; improving safety for the traveling public; improving efficiency of the transportation system (capacity and travel time); addressing economic development and related transportation requirements (freight/goods movement and seasonal recreation traffic); and meeting national needs for a strategic highway corridor network. The primary proposed improvements within SIU 2 would include the mainline (through lanes), bridges, frontage roads and interchanges associated with I-70.

3. Alternatives

The interchange alternatives addressed in this EA were developed through a comprehensive statewide coordination process and alternative screening effort. The alternative screening process and associated memoranda involved the two primary components of the Preferred Alternative: mainline improvements and interchange improvements. The final results of the screening process (Preferred Alternative and Interchange Alternatives) resulted in a number of interchange alternatives and the No-Build Alternative. Implementation of the No-Build alternative would leave I-70 in its current configuration with the addition of Intelligent Transportation Systems (ITS) and routine maintenance being the only upgrades. Improvements associated with the Preferred Alternative are summarized below:

- Reconstruct existing lanes and construct one new lane in each direction (mainline improvements);
- Interchange reconstruction;
- Improvements to the frontage road system;
- Implementing the Rest Area Master Plan;
- Reconstruction of the westbound weigh station facility; and
- Installation of electronic signage and other technology to assist motorists and improve traffic conditions (Intelligent Transportation Systems).

Proposed mainline improvements in SIU 2 would consist of six 12-foot (3.7-meter) travel lanes, four 12-foot (3.7 meter) shoulders and a median, generally between 120 to 130 feet (37 to 40 meters) wide, assumed as 124 feet (38 meters) wide for this EA. These improvements address safety issues, allow for continuous mainline service during construction, allow for the addition of future lanes and/or allow for the possibility of some type of future transportation improvement.

In addition to the mainline improvements, a system of frontage roads would be constructed. Along some sections of SIU 2, existing frontage roads or portions of old U.S. 40 would be utilized as frontage roads. Though continuous frontage roads are a long-term goal and are included as part of the Preferred Alternative for environmental planning purposes, continuous frontage roads are not a high priority. Including continuous frontage roads as part of the Preferred Alternative provides a long-term master plan for the corridor, but MoDOT is not committed to building continuous frontage roads in the near term. MoDOT is committed, however, to construct frontage roads for the purposes of maintaining existing local service connections and maintaining existing access to adjacent properties. Each frontage road will be assessed on an individual basis as to whether or not any existing discontinuities will be addressed as part of the initial construction. Improvement of existing discontinuities will depend on the availability of construction funding and relative priorities.

For the mainline improvement, alternatives were evaluated in the FTEIS and verified during the second tier study process (Mainline Technical Memorandum). During the second tier, north versus south mainline alternatives were evaluated for the SIU 2 corridor. Based on this evaluation, it was determined that the mainline would be widened to the north from the western terminus at mile marker 39 to mile marker 69, where a transition from north to south would occur. The crossover transition occurs between mile marker 69.04 and mile marker 69.79. From this transition point, the remainder of the mainline would be widened to the south to the eastern terminus of SIU 2. Sheet A-33 shows where the proposed crossover from north to south would occur and relates the proposed improvements to existing conditions.

Within SIU 2, there are approximately 128 linear miles (206 kilometers) available for frontage roads on the north and south sides of I-70. Of the 128 miles, 53 miles (85 kilometers) of frontage roads would be constructed initially along with mainline construction to maintain access to residences, businesses or other private lands. Twenty-four miles (39 kilometers) of frontage roads along SIU 2 could be constructed at a later date, 27.6 miles (43 kilometers) of existing frontage roads could be utilized or upgraded in place, 20.1 miles (32.3 kilometers) of existing roads could be used as alternative frontage roads and 3.2 miles (5.1 kilometers) of SIU 2 would lack frontage roads due to rough terrain. The two locations where the frontage road system would have discontinuities occur east of mile marker 76.9 and east of mile marker 91.4. At both of these locations, topographical features make extensions of the frontage roads either too

circuitous or inappropriately expensive given their utility. Exhibits showing the improvements show the future frontage road construction in a format different from the initial frontage road construction (Appendix A).

As part of the Preferred Alternative in SIU 2, 13 interchanges, nine overpasses, one underpass and one under highway cattle pass would be improved. Of the 13 interchanges, the standard diamond interchange template was applied at eight locations due to the lack of constraints that would warrant alternative designs. At the remaining five interchange locations, various alternatives such as the single point urban interchange and the half folded diamond designs were developed and evaluated to avoid topographical features and avoid and minimize impacts to commercial or residential developments or environmental resources (See Section A of Chapter II for drawings of each design). At each interchange and overpass, proposed improvements would require demolition of existing bridges and demolition of most of the existing interchange ramps. Ultimately, alternative interchange designs were carried forward for analysis in the EA at five locations. These included the I-70/Route 13 Interchange, the I-70/Route 23 Interchange, the I-70/U.S. 65 Interchange, the I-70/Route 127 Interchange and the I-70/Route 135/41 Interchange. Detailed analysis of interchange alternatives is discussed in the SIU 2 Interchange Technical Memorandum as available upon request.

As part of the Second Tier studies for I-70, an Enhancement Subcommittee was established to prepare a Corridor Enhancement Plan for I-70. Overall, these enhancements predominantly involve visual quality and aesthetic improvements that would result in beneficial impacts. However, other key components would likely include improved interaction between pedestrians, cyclists and motorists, as well as mitigation for wetland impacts and related riparian habitat enhancements.

4. Consultation and Coordination

Consultation and coordination related to planned improvements to I-70 began with the First Tier Study (Appendix B) during the year 2000 and continued as part of the statewide Second Tier NEPA efforts for each of the seven SIUs. During the First Tier Study, MoDOT provided numerous specific opportunities for public and local, state and federal agency input. The results of the First Tier Study are documented in the First Tier EIS.

The Second Tier public involvement program provided further and more specific opportunities for public and agency input. These efforts have involved and continue to involve interested agencies, local units of government and the general public through various means. This effort has resulted in a wide range of comments and input into the development and evaluation of the various improvements defined in this EA.

The SIU 2 public involvement process started with initial strategy meetings to determine the goals and objectives of the public involvement plan. Once the goals and objectives were established, a public involvement plan was prepared. The plan included information postcards, public workshops, media outreach, newsletters and community meetings. A project Web site was also developed (www.improvei70.org) to provide public access to background information about the Improve I-70 Study and to serve as a repository for reasonable alternatives and other project related information.

The initial newsletter was mailed to approximately 469 individuals within SIU 2. Following the newsletter publication, a postcard was mailed to the SIU 2 address list to inform and remind

individuals of the public workshops. Two public workshops were held in SIU 2 at Concordia and Blackwater on April 15 and 16, 2003, respectively. Approximately 160 people attended the meetings and 20 comment forms were received. Subsequent to the public workshops, the public involvement team met with community leaders in Concordia, Sweet Springs and Marshall. Additional Consultation and Coordination information is contained in Chapter V.

B. Summary of Impacts and Findings

All of the documentation in this EA and the findings presented herein are preliminary and will undergo agency and public review. Refinements to the analyses in this EA are expected to occur until the Final EA is completed and related decisions are made.

The major environmental impacts anticipated for the No-Build and Build Alternatives, both beneficial and adverse, are summarized in the following table (Table S-1). Table S-1 presents a summary of the social, economic and environmental impacts associated with the No-Build and the Build alternatives. It is important to note that the No-Build is compared to the Preferred Alternative, which includes the mainline improvements and improvements at 13 interchanges.

1. Aggregated Impacts of the Preferred Alternative

Chapter IV presents an analysis of the Preferred Alternative and interchange alternatives. Table S-1 summarizes and compares the aggregated impacts of the Preferred Alternative for the key issues addressed in each technical section of Chapter IV (Sections A through K).

Based on the nature of the project, the planning that has occurred to date, evaluation of the effects described in Chapter IV and measures that have been taken or will be taken to mitigate environmental effects, a preliminary finding has been made that the Preferred Alternative would not likely result in significant effects.

2. Comparison of the Impacts of the Interchange Alternatives

At five of the 13 interchanges, alternative designs were evaluated relative to both potential social and natural impacts and a Preferred Alternative was selected. With regard to residential and commercial impacts, each residence or business was evaluated on the conceptual designs as a displacement or as a partial take. If it was obvious that the residence or business would be impacted by implementation of the Preferred Alternative, it was considered a displacement. If the property parcel of the business or residence was located inside of the right of way line and it appeared that the structure might be avoided during final design, it was considered a partial take. It is important to note that the businesses or residences shown as partial takes on the conceptual drawings in Appendix A could be avoided during the final design process. However, due to their apparent close proximity to the Preferred Alternative, they were enumerated as a partial take. Chapter IV analyzes and compares the impacts of the Preferred Alternative and No-Build alternatives. Table S-1 summarizes and compares the overall impacts of the interchange alternatives. Chapter IV of this EA presents findings regarding the preferred alternatives at each interchange location and summarizes the overall impacts of the Preferred Alternative.

Table S-1: Summary of Social, Economic and Environmental Impacts

Evaluation Factor	No-Build	Preferred Alternative*	Route 13 Interchange		Route 23 Interchange		Route 127 Interchange		U.S. 65 Interchange		Route 135/41 Interchange	
			Alt. A Diamond	Alt. B SPUI	Alt. A Diamond	Alt. B SPUI	Alt. A Diamond	Alt B Partial Folded Diamond	Alt. A No-Build	Alt. B Diamond	Alt. A Diamond	Alt. B Diamond to the West
Land Use	No impacts	Minimal impact to rural agricultural uses	Minimal impact	Minimal impact	Minimal impact	Minimal impact	Minimal impact	Minimal impact	Minimal impact	Minimal impact	Minimal impact	Minimal impact
Prime Farmland	No impacts	490 acres	2 acres	2 acres	3 acres	2 acres	13 acres	13 acres	No Impact	No Impact	26 acres	26 acres
Social Impacts	No impacts	No impacts	No impacts	No impacts	No impacts	No impacts	Mobile home park near interchange	Mobile home park near interchange	No Impact	No Impact	Outer road near neighborhood	New area developed, west of existing interchange
Displacement Impacts	No impacts	21 bus. 33 res.	1 bus. 0 res.	1 bus. 0 res.	4 bus. 0 res.	3 bus. 0 res.	4 bus. 3 res.	4 bus. 4 res.	0 bus. 0 res.	0 bus. 0 res.	4 bus. 4 res.	5 bus. 4 res.
Partial Takes	No. impacts	38 bus. 26 res.	3 bus. 0 res.	3 bus. 0 res.	10 bus. 1 res.	8 bus. 1 res.	3 bus. 8 res.	3 bus. 7 res.	0 bus. 0 res.	0 bus. 1 res.	8 bus. 3 res.	2 bus. 3 res.
Economic Dev. Impacts	No impacts	50-year benefits of a multi-million dollar project and numerous jobs	50-year benefits of a multi-million dollar project and numerous jobs	50-year benefits of a multi-million dollar project and numerous jobs	50-year benefits of a multi-million dollar project and numerous jobs	50-year benefits of a multi-million dollar project and numerous jobs	50-year benefits of a multi-million dollar project and numerous jobs	50-year benefits of a multi-million dollar project and numerous jobs	Mainline improvements would benefit neighboring communities	50-year benefits of a multi-million dollar project and numerous jobs	50-year benefits of a multi-million dollar project and numerous jobs	50-year benefits of a multi-million dollar project and numerous jobs
Air Quality	No impacts	No Violation of NAAQS	No Violation of NAAQS	No Violation of NAAQS	No Violation of NAAQS	No Violation of NAAQS	No Violation of NAAQS	No Violation of NAAQS	No Violation of NAAQS	No Violation of NAAQS	No Violation of NAAQS	No Violation of NAAQS
Water Quality	No impacts	Minor impacts to creek and river crossings	1 crossing	1 crossing	4 crossings	4 crossings	3 crossings	3 crossings	No Impact	No Impact	3 crossings	0 crossings
Noise Impacts (Receptors)	No impacts	8 bus. 71 res. 1 Cons. Area, 1 campground	Minimal impact	Minimal impact	Minimal impact	Minimal impact	Minimal impact	Minimal impact	Minimal impact from mainline only	Minimal impact	Minimal impact	Minimal impact
Terrestrial Community	No impacts	No impacts to threatened or endangered species.	No impacts to threatened or endangered species.	No impacts to threatened or endangered species.	No impacts to threatened or endangered species.	No impacts to threatened or endangered species.	No impacts to threatened or endangered species.	No impacts to threatened or endangered species.	No impacts to threatened or endangered species.	No impacts to threatened or endangered species.	No impacts to threatened or endangered species.	No impacts to threatened or endangered species.

*Mainline and interchange improvements

Table S-1: Summary of Social, Economic and Environmental Impacts (Continued)

Evaluation Factor	No Build	Preferred Alternative*	Route 13 Interchange		Route 23 Interchange		Route 127 Interchange		U.S. 65 Interchange		Route 135 Interchange	
			Alt. A Diamond	Alt. B SPUI	Alt. A Diamond	Alt. B SPUI	Alt. A Diamond	Alt B Partial Folded Diamond	Alt. A No-Action	Alt. B Diamond	Alt. A Diamond	Alt. B Diamond to the West
Wetlands	No impacts	26.9 acres	0 ac.	0 ac.	0 ac.	0 ac.	2.4 ac.	2.4 ac.	No impacts	0 ac.	0 ac.	0 ac.
WRP lands	No impacts	8 acres	0 ac.	0 ac.	0 ac.	0 ac.	2 ac.	2 ac.	No impacts	0 ac.	0 ac.	0 ac.
CRP lands	No impacts	28 acres	0 ac.	0 ac.	0 ac.	0 ac.	2 ac.	4 ac.	No impacts	0 ac.	1 ac.	10 ac.
Water Body and Wildlife	No impacts	Minimal Impacts	Minimal Impacts	Minimal Impacts	Minimal Impacts	Minimal Impacts	Minimal Impacts	Minimal Impacts	No impacts	Minimal Impacts	Minimal Impacts	Minimal Impacts
Forested Areas	No impacts	294 acres	4 ac.	4 ac.	3 ac.	2 ac.	4.3 ac.	4.3 ac.	No impacts.	0 ac.	2 ac.	0 ac.
Floodplain crossed	No impacts	98 acres	1.3 ac.	1.3 ac.	0 ac.	0 ac	3.2 ac.	3.2 ac.	No impacts.	0 ac.	0 ac.	0 ac.
Architectural Resources	No impacts	1 eligible architectural resource	0 eligible resources	0 eligible resources	0 eligible resources	0 eligible resources	0 eligible resources	0 eligible resources	0 eligible resources	0 eligible resources	0 eligible resources	0 eligible resources
Archeological Resources (recommended for Phase II)	No impacts	14 potential resources	0 eligible resources	0 eligible resources	0 eligible resources	0 eligible resources	0 eligible resources	0 eligible resources	0 eligible resources	0 eligible resources	0 eligible resources	0 eligible resources
Hazardous Waste Sites	No impacts	33	2	2	5	4	2	2	No Impacts	No impacts	7	6
Visual Quality	No impacts	Low impact	Low impact	Low impact	Low impact	Low impact	Low impact	Low impact	Low impact	Low impact	Low impact	Low impact
Construction	No impacts	Temporary impacts to air, noise and water, mitigated by pollution controls	Temporary impacts to air, noise and water, mitigated by pollution controls	Temporary impacts to air, noise and water, mitigated by pollution controls	Temporary impacts to air, noise and water, mitigated by pollution controls	Temporary impacts to air, noise and water, mitigated by pollution controls	Temporary impacts to air, noise and water, mitigated by pollution controls	Temporary impacts to air, noise and water, mitigated by pollution controls	Mainline temporary impacts to air, noise and water, mitigated by pollution controls	Temporary impacts to air, noise and water, mitigated by pollution controls	Temporary impacts to air, noise and water, mitigated by pollution controls	Temporary impacts to air, noise and water, mitigated by pollution controls
Cost**.	$372,000	$956,000	$30,000	$44,000	$54,000	$56,000	$27,000	$28,000	$8,000	$23,000	$22,000	$18,000
Parklands	No impacts	No impacts	No impacts	No impacts	No impacts	No impacts	No impacts	No impacts	No impacts	No impacts	No impacts	No impacts

*Mainline and interchange improvements
**Costs are in thousands. Cost of the No-Build Alternative includes reconstruction of the existing facility through the Year 2030.

Preferred Alternative

a. Comparison of the Alternatives at the Route 13 Interchange

Alternative A is a standard diamond interchange at the existing location whereas Alternative B is a Single Point Urban Interchange (SPUI) at the existing location. Although the SPUI design would handle traffic more efficiently than the standard diamond design, the projected traffic at this interchange does not warrant the $14,000,000 cost differential. Regarding displacements, the implementation of both alternatives would displace the same businesses (Iron Horse, Inc.) and no residences. Regarding natural resources such as prime farmland, wetlands, floodplains and forested areas, both alternatives would have similar impacts. Based on these preliminary findings for the key differences, Alternative A is the recommended preferred alternative at the I-70/Route 13 Higginsville interchange.

b. Comparison of the Alternatives at the Route 23 Interchange

Similar to the I-70/Route 13 interchange, alternatives evaluated for the I-70/Route 23 interchange included the standard diamond design, Alternative A, and the SPUI design, Alternative B.

Implementation of Alternative B would cost approximately $2,000,000 more than the implementation of Alternative A. The benefits of implementing the SPUI design at this location outweigh this slight cost differential. The benefits of implementing Alternative B include one fewer business displacement, two fewer business partial takes, fewer acres of prime farmland and linear distance of stream impacted and a minimized overall footprint. Based on these preliminary findings for the key differences, Alternative B is the recommended preferred alternative at this location.

c. Comparison of the Alternatives at the Route 127 Interchange

Two alternatives were evaluated for the I-70/Route 127 interchange at Sweet Springs. Alternative A is the standard diamond design at the existing location. Alternative B is a half folded diamond at the existing location. The configuration of the half folded diamond is exactly the same as the diamond with the exception of the configuration of the westbound I-70 exit and entrance ramps. The westbound exit and entrance ramps are both folded into the northeast quadrant versus the westbound I-70 entrance ramp being in the northwest quadrant and the westbound I-70 exit ramp being in the northeast quadrant. In this case, Alternative B minimizes potential impact to the proposed I-70 Medical Center site located in the northwest quadrant of the existing interchange.

Alternative B would have more CRP impacts and one more residential impact than Alternative A. The implementation of Alternative A or Alternative B would have similar impacts to wetlands, streams, forested lands and floodplains. For these reasons and the city's plans for a future medical center, Alternative B is the recommended preferred alternative at this location.

d. Comparison of the Alternatives at the U.S. 65 Interchange

The U.S. 65 interchange is the only cloverleaf interchange in SIU 2. The cloverleaf design allows for the free flow of traffic through the interchange to U.S. 65. Because this interchange is

different from all of the others in SIU 2, a number of alternatives were evaluated during the early screening phases of this project. These alternatives included rebuilding the cloverleaf to current standards, the standard diamond, the single point urban interchange and various full deck directional interchanges. Key evaluation factors for reconstructing the U.S. 65 interchange included, traffic, safety, capacity in terms of weave distances, right of way requirements and related costs and the evaluation of various design options compared to impact tradeoffs. Based on the early screening process, it was determined that the following designs could be feasible and should be considered for further evaluation: 1) standard diamond, 2) expanded cloverleaf, and 3) fully directional. After further evaluation of the traffic right of way, impact tradeoffs and costs, it was determined that only two of the three alternatives were to be evaluated as part of this EA.

Alternative A is the no action alternative and Alternative B is the standard diamond design. The U.S. 65 interchange is unique from all of the other interchanges because the existing design is a cloverleaf with an overpass for I-70. This is the only interchange in SIU 2 that could be left in place and continue to be utilized after the mainline widening improvements are complete. Both alternatives A and B could be implemented without the need for additional right of way. Although the implementation of Alternative A would be less costly than Alternative B, the existing ramps would have substandard radii that would require traffic to change speeds at a faster rate than normal. As traffic volumes increase, substandard radii would become a safety issue at this location.

The major difference between the two alternatives is the design configuration. Alternative A would maintain the cloverleaf design and the free flow of traffic north and south on U.S. 65, whereas the implementation of Alternative B would introduce some type of stop control (lights or signs) at the ramp terminals. This could cause additional secondary impacts through the development of lands adjacent to U.S. 65 to serve the traveling public.

Although there are cost differences, both alternatives would not require additional right of way and would have similar natural resource impacts. However, the implementation of Alternative B would provide a safe and up-to-date facility for the interchange at Marshall Junction. Therefore Alternative B is the recommended preferred alternative at this location.

e. Comparison of the Alternatives at the Route 135/ Route 41 Interchange

At the I-70/Route 135/41 interchange, two alternatives were evaluated. Alternative A is a standard diamond design at the existing location. Alternative B is also a standard diamond design but is offset approximately 1,660 feet (488 meters) west of the existing interchange. Alternative B was developed because this interchange is characterized by commercial developments in the southern quadrants and residential developments in the northern quadrants. The implementation of Alternative A would displace one fewer business and two fewer residences than Alternative B. In addition, the reverse curve associated with Alternative B that is required for the tie in to Route 135 would require non-standard frontage roads on the south side of I-70. The implementation of Alternative A would also impact fewer acres of CRP lands than implementation of Alternative B. Based on these preliminary findings, Alternative A is the recommended preferred alternative.

C. Commitments and Mitigation Summary

The section provides a summary of the commitments and mitigation obligations that are mentioned throughout this EA. Most of the commitments and mitigation obligations are standard practice obligations that MoDOT would initiate on any major transportation infrastructure improvement projects. The commitments and mitigation obligations can be separated into three main categories: 1) erosion and surface water runoff, 2) socioeconomic resources and 3) natural and cultural resources. These commitments and obligations are discussed by category.

Erosion and surface water runoff

During construction MoDOT would utilize Best Management Practices and comply with all regulatory requirements and permit conditions to control erosion and surface water runoff from construction. Water quality impacts are expected to be temporary in nature and would be minimized by implementing MoDOT's Erosion and Sedimentation Control Guidelines. MoDOT would apply Best Management Practices and would perform on-site inspections in areas where erosion and sedimentation may impact primary waterways and other water resources.

Socioeconomic Resources

The Preferred Alternative includes implementation of a Corridor Enhancement Plan that is intended to minimize potentially negative effects. The Plan includes aesthetic components, plus a "friendly" environment for pedestrians and bicyclists at appropriate locations.. Implementation of a Corridor Enhancement Plan is dependant upon funding.

Regarding the acquisition of private lands and the displacement of businesses and residences, MoDOT would comply with the Uniform Relocation Assistance and Real Property Acquisition Policies of 1970. Additionally, MoDOT would work cooperatively with local governments and property owners during the final design process to minimize property impacts where possible. MoDOT would provide appropriate compensation on a case-by-case basis for business displacements.

MoDOT would work with negatively affected businesses to minimize impacts. This would include signs during detour periods that would direct motorists to parking areas.

MoDOT would comply with FHWA's Noise Abatement Criteria (NAC) and MoDOT's policy developed from the NAC. As traffic volumes increase in the future prior to project construction, it may be appropriate to consider mitigation measures for sensitive receptors.

MoDOT has special provisions in the construction contract that requires contractors to comply with all applicable local, state, and federal laws and regulations relating to noise levels permissible within and adjacent to the project construction site. MoDOT would monitor project noise during construction. Based on the noise study completed, no noise abatement measures would be considered for the preferred alternative.

During the final design process, MoDOT would perform hazardous waste investigations on the sites that are or may be contaminated and may be disrupted during construction. Additionally, MoDOT would coordinate with local public service and utility service providers during final design to minimize infrastructure disruption and relocation.

MoDOT would implement measures that control windborne dust in construction areas near sensitive receptors and where dust may create nuisances or hazardous driving conditions.

Natural and Cultural Resources

MoDOT would comply with Section 404 of the Clean Water Act, the Endangered Species Act, as amended and Section 106 of the National Historic Preservation Act.

MoDOT would continue to work with Army Corps of Engineers regarding wetland impacts and mitigation.

When trees are removed, MoDOT would implement their tree mitigation policy and plant two trees for every tree removed that has a diameter greater than six inches diameter at breast height.

Where feasible, MoDOT's design process would minimize impacts to floodplains. MoDOT would continue to coordinate with the NRCS to determine appropriate mitigation measures for the loss of CRP and WRP lands (Appendix L).

Regarding cultural resources, MoDOT would coordinate with the State Historic Preservation Officer (SHPO) to conduct appropriate mitigation for potential impacts to cultural resources.

MoDOT would implement the stream mitigation and enhancement plan for the major river crossings.

MoDOT would review the Natural Heritage Database and coordinate with the US Fish and Wildlife Service periodically during the project development process to identify any new locations of Indiana Bat activity.

MoDOT would commit to reviewing the Natural Heritage Database periodically for new locations of the running buffalo clover and would then field check for the running buffalo clover at least one year prior to construction activities at the Lamine River and any new areas identified.

Other

MoDOT would 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.

MoDOT would construct frontage roads for the purposes of maintaining existing local service connections and maintaining existing access to adjacent properties.

MoDOT would 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.

Construction period mitigation monitoring would occur to ensure that the required measures are implemented and are effective.