

SUMMARY

On April 3, 2009, the Draft Environmental Impact Statement (DEIS) for the East Columbia Environmental Impact Statement (EC-EIS) project was published and circulated for review. The DEIS presented the project's Preferred Alternative—the alternative that best accomplishes the purpose and need for the proposed action, while avoiding, minimizing, or mitigating the impacts to the social and natural environment. Following the publication of the DEIS, a number of outreach, circulation, and coordination efforts were conducted to determine the appropriateness of the Preferred Alternative¹. This Final Environmental Impact Statement (FEIS) is intended to officially identify the preferred course of action after evaluating all comments received from the public hearing following the availability of the DEIS for public and agency review.

A “condensed EIS format” was used for the FEIS whereby each section of the DEIS is summarized, any clarifications or new information is presented, and any changes to the Preferred Alternative are discussed.

This FEIS will also be subject to circulation, coordination, and evaluation. The National Environmental Policy Act (NEPA) process will conclude with a record of decision (ROD) that concisely outlines the selected alternative (as the Preferred Alternative will then be known), its impacts and needed mitigation, monitoring, and enforcement provisions.

A. Introduction to the EC-EIS

Because of the long-term interest in improving the transportation network of eastern Columbia/Boone County, a multi-component project team was assembled to investigate needs and propose solutions. The project team for the EC-EIS project was composed of the Missouri Department of Transportation (MoDOT), the City of Columbia, and Boone County. This document summarizes the investigation of the transportation problems associated with eastern Columbia/Boone County, the human and natural resources within the project's study area, the alternatives evaluated, the impacts associated with the alternatives, and the coordination efforts used to engage stakeholders.

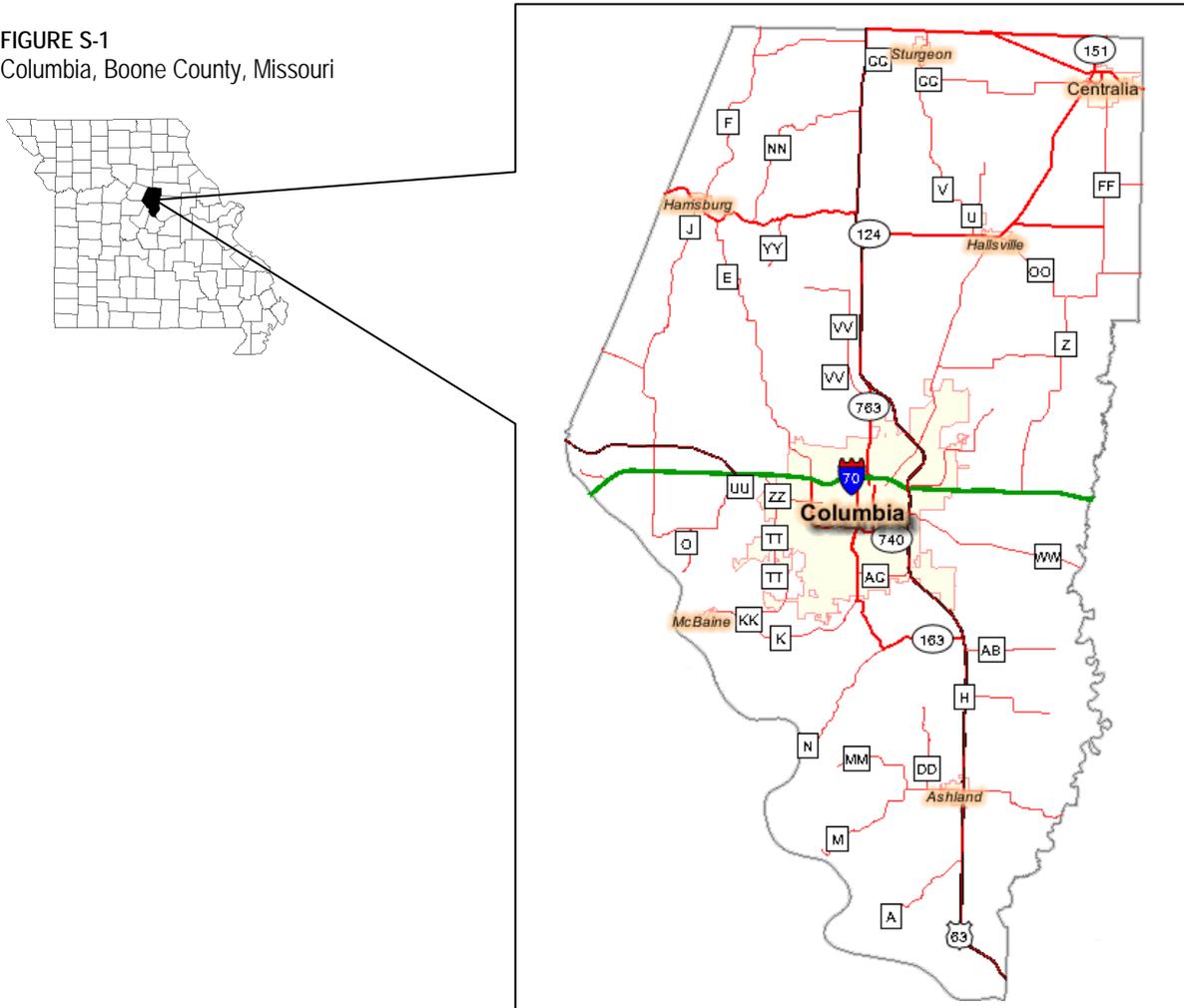
¹ Notwithstanding the identification of a Preferred Alternative, all reasonable alternatives presented in the DEIS remained under consideration through the public hearing and DEIS review and comment period.



B. Location and Termini

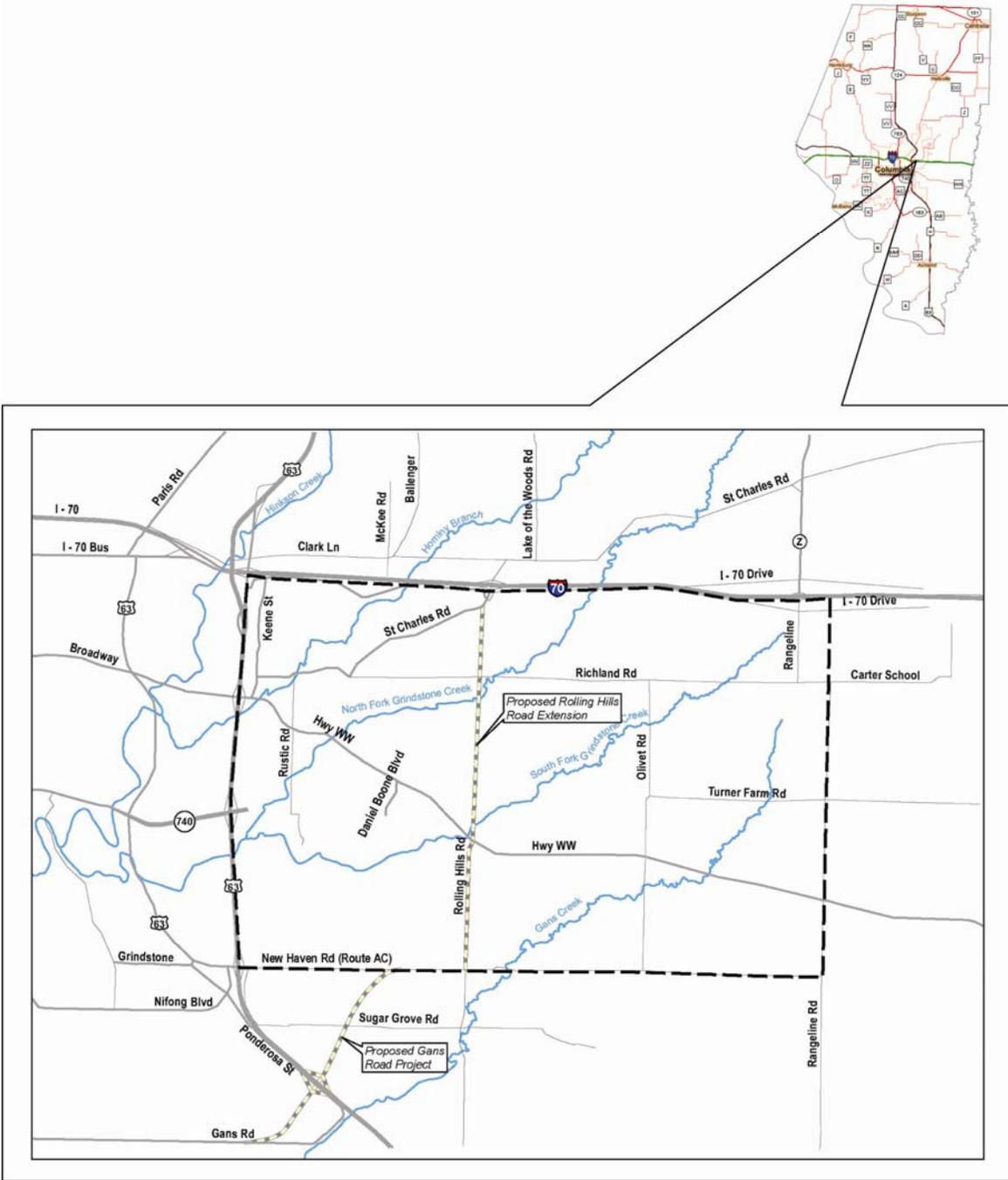
The study area for this project is located in eastern Columbia and central Boone County of the State of Missouri. **Figures S-1 and S-2** depict the general vicinity and the study area for the EC-EIS.

FIGURE S-1
Columbia, Boone County, Missouri



The study area is generally bounded by US-63 on the west, Rangeline Road on the east, Interstate 70 (I-70) on the north, and New Haven Road (Route AC) on the south. The project area is generally rural, with subdivisions and scattered residential development. A small cluster of commercial development exists in the upper northern portion of the study area, and several industrial businesses are located along Rangeline Road in the northeastern portion. The topography of the study area consists of gentle rolling hills dissected by numerous creeks, including Hominy Branch, Gans Creek, and the South and North Fork of Grindstone Creek.

FIGURE S-2
EC-EIS Study Area



C. Purpose of and Need for Proposed Action

Purpose and need refers to 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.

The transportation problems associated with the EC-EIS study area can be summarized as:

Traffic Congestion and Safety Concerns within the Existing Roadway Network—

The congestion and crash environment of the current roadway network is expected to worsen over time. One of the purposes of this project is to reduce congestion and improve safety conditions within the roadway network.

Incomplete Linkages between the Major Highways in Eastern Columbia and Boone County—

The existing roadway system has some notable areas of discontinuity. One of the purposes of this project is to investigate the type of roadway system that is appropriate for the future of eastern Columbia/Boone County. An essential element of this part of the project is to establish adequate continuity in eastern Columbia.

Inconsistency with Regional and Local Continuity Goals—In addition to the connectivity purposes discussed above, one of the purposes of this project is to provide the transportation infrastructure consistent with the creation of an eastern access point for Columbia.

D. Alternatives

The identification of the Preferred Alternative was based on a screening process that included a series of steps for developing and evaluating alternatives.

Initial alternatives were called conceptual alternatives. Conceptual alternatives that were determined as minimally satisfying the project's purpose and need were advanced for further consideration.

The reasonable range of alternatives (reasonable alternatives) were developed using the conceptual alternatives as a basis. This ensures that the reasonable alternatives remain consistent with the project's purpose and need and conform to appropriate design guidelines. Developing the reasonable alternatives allowed for the establishment of preliminary project footprints and detailed impact assessments, cost estimates, and traffic evaluations.



Based on public input, agency coordination, and internal analysis, a Preferred Alternative was developed and includes the following:

- The extension of Route 740 from its current terminus at US-63, using a new alignment, to the St. Charles interchange on I-70.
- The improvement of Broadway (Route WW) from US-63 to Olivet Road using the existing alignment.
- The probable extension of Ballenger Lane as a locally sponsored project.

See **Exhibit S-1** for a complete depiction of the Preferred Alternative.

The reasonable alternatives represent those improvements that satisfy the project's purpose and need, meet the established traffic-related threshold levels and engineering requirements, and minimize impacts to the human and natural environment.

The reasonable range of alternatives incorporates the following elements and alignments:

- The extension of Stadium Boulevard (Route 740) from US-63 to I-70. This extension would be configured as an expressway. The alignments vary in length between 2.9 and 5.6 miles long.
- The improvement of Broadway (Route WW) from US-63 to Olivet Road. Three possible alignments for the improvement of Route WW were developed; each configures Route WW as a major arterial west of the Route 740 extension and a minor arterial east of the Route 740 extension. The lengths of the alignments are very similar—roughly 4.0 miles.
- The extension of Ballenger Lane from the Stadium Boulevard extension to Clark Lane (Route PP). Each Stadium Boulevard extension alternative has a corresponding Ballenger Lane extension. Each version of a Ballenger Lane extension follows the same basic alignment. This is due to the limitations associated with the extension's termini and the distribution of the resources that the extension would affect. The Ballenger Lane extensions were configured as a major arterial. The lengths of the Ballenger Lane extensions vary between 0.7 and 1.6 miles long, depending on the distance to the corresponding Stadium Boulevard alternative.

Exhibit II-2 depicts the principal elements of the reasonable range of alternatives.

The alternative that best accomplishes the purpose and need for the proposed action while avoiding, minimizing, or mitigating the impacts to the social and natural environment was identified as the ***Preferred Alternative***. The project team believes that the Preferred Alternative best solves the transportation problems and minimizes impacts. The Preferred Alternative is summarized as follows:

The Extension of Stadium Boulevard (Route 740)

- The Preferred Alternative uses a new alignment from the existing US-63 interchange to the St. Charles interchange at I-70.
- The Stadium Boulevard extension would be an expressway.
- Overpasses at Lemone Industrial Boulevard (proposed) and Rustic Road would be investigated.
- At-grade intersections will be required at Route WW, Richland Road/Ballenger Lane, and Grace Lane/St. Charles Road (existing). The intersection of Richland Road and the Ballenger Lane extension with Route 740 is at a common location.

- For planning and impact evaluation purposes, Route 740 is assumed to be a limited access four-lane highway divided by a grassed median². Total right-of-way width estimate is 250 feet.

The Improvement of Route WW

- The improvement will extend from US-63 to approximately 200 feet west of Olivet Road. The improvement will use the existing alignment; the roadway footprint will be widened to the side that minimizes impacts to existing resources.
- Route WW would be a major arterial west of the Route 740 extension and a minor arterial east of the Route 740 extension.
- All existing intersections on Route WW would be maintained.
- The crossing of Grindstone Creek (North Fork) would involve the realignment of Route WW. This will eliminate a tight curve and facilitate the proposed intersection with the extension of Route 740.
- For planning and impact evaluation purposes, Route WW is assumed to be a four-lane roadway with a center turn lane, driveway access and at-grade intersections³. Total right-of-way width estimate is between 120 and 150 feet.

The Extension of Ballenger Lane

- This element would be processed as a locally sponsored project.
- The Ballenger Lane extension would be a major arterial.
- The Ballenger Lane extension may include an at-grade intersection with the existing I-70 Southeast (Outer Road).
- The intersection of Richland Road and the Ballenger Lane extension with Route 740 are at a common location.
- For planning and impact evaluation purposes, Ballenger Lane is assumed to be as expansive as a four-lane roadway with a center turn lane, driveway access and at-grade intersections⁴.

Pursuant to the circulation, coordination, and evaluation of the DEIS, the Preferred Alternative was largely accepted by stakeholders, project partners, agencies, and the public. Changes to the Preferred Alternative were minimal, all of which will be implemented during the final design process. These changes are listed in the Environmental Commitments (**Summary Section J**).

² The actual design configuration is subject to modification based on future funding constraints and/or practical design considerations.

³ The actual design configuration is subject to modification based on future funding constraints and/or practical design considerations.

⁴ The actual design configuration is subject to modification based on future funding constraints and/or practical design considerations.

E. Impacts

The process that led to the identification of the Preferred Alternative included the evaluation of impacts. The impact analysis was multifaceted, encompassing numerous elements such as right-of-way requirements, environmental impacts, socioeconomic consequences, disruptions to important cultural resources, community impacts, building relocations, and engineering considerations, along with an examination of the compatibility with local transportation priorities. **Chapter III** identifies the resources contained within the project's study area.

Impacts associated with the Preferred Alternative include the conversion of farmland, the acquisition of land and structures, stream and floodplain crossings, wetland impacts, woodland impacts, and work in proximity to several neighborhoods. **Table S-1** is an impact summary for the reasonable range of alternatives. The impacts associated with each of the reasonable range of alternatives are generally very similar and are discussed and compared in **Chapter IV**. **Table S-2** is an impact summary for the Preferred Alternative.

F. Public Involvement/Agency Coordination

The public involvement techniques used for this project included newsletters, Web sites, news media releases, formal and informal meetings, and other general coordination. The agency coordination process included four collaboration points when project updates were provided and input requested. These efforts helped shape the development of alternatives and the identification of the Preferred Alternative.

On April 3, 2009, the DEIS for the EC-EIS was published and circulated for comment. Following the publication of the DEIS, a number of outreach, and coordination efforts, including a Public Hearing, were taken to help determine the appropriateness of the Preferred Alternative. Overall, the Preferred Alternative was received positively during this outreach effort. The Preferred Alternative was also the consensus selection of the local planning partners. Documentation of the partner's acceptance of the Preferred Alternative is contained in **Appendix J**. The Partnering Agreement for the project is contained in **Appendix C**. The stakeholder reaction to the Preferred Alternative was similar to the partners—widespread acceptance, even if it was not the universally desired configuration. As expected, individually affected property owners had unique opinions. **Chapter V** provides a discussion of the public involvement and agency coordination activities that have been conducted.

Public involvement efforts will continue throughout the duration of the project. As an example, this FEIS will be made available for public review and coordinated with interested agencies, in accordance with MoDOT policy and adherence with NEPA.

G. Important Issues

Because the EC-EIS project entails a comprehensive evaluation of the transportation needs for a large multi-jurisdictional area, controversy and conflicts were inevitable. To address this issue, the project team established and approved a partnering agreement (see **Appendix J**). This agreement guided the three parties in working together cooperatively to



fulfill NEPA requirements associated with this project. A key element of the partnering agreement follows:

...the partners acknowledge and declare their intent to arrive at a consensus agreement about future local, regional and statewide transportation needs in such a way as to increase the likelihood that such future governing bodies will appropriately support the study's recommendations.

Two of the more contentious issues that the partners worked through were the Ballenger Lane extension and the most appropriate connection between US-63 and I-70.

1. The appropriateness of a Ballenger Lane extension has been investigated throughout the development of the EC-EIS. The probable extension of Ballenger Lane (over I-70 to Clark Lane/Route PP) was added to the Columbia Area Transportation Study Organization (CATSO) Roadway Plan in 1997. Because of the relationship of the Ballenger Lane extension with the extension of Stadium Boulevard, it was investigated as part of the EC-EIS. The traffic modeling analysis of a Ballenger Lane extension found that it would have a negligible impact on the operation of Stadium Boulevard from US-63 to I-70. Consequently, the Ballenger Lane extension was determined as non-essential to the EC-EIS. However, the traffic analysis did suggest that the Ballenger Lane extension might moderate volume levels on Clark Lane. This local benefit led to the agreement that if a Ballenger Lane extension was included in the project's Preferred Alternative, it would be processed and financed solely as a local project. Ultimately, the financing for the Ballenger Lane extension may include federal funding obtained by the local partners. Should federal funding be involved in the Ballenger Lane extension financing, this document would clear the project under NEPA and mandate that it be conducted in accordance with the environmental commitments in this document.
2. The Preferred Alternative was not originally the unanimous decision of the partners. Earlier in the study, Reasonable Alternative RR-2B was viewed as a superior alternative by a minority. Alternative RR-2B extends Route 740 using a new alignment to the Route Z interchange (the Preferred Alternative extends to the nearer interchange at St. Charles Road). The perceived advantages associated with RR-2B include the following:
 - Based on the assumption that project completion would not occur in the near term (10 years), RR-2B will better address the needs of Columbia that exist at that time.
 - The configuration uses a relatively unpopulated corridor.
 - Alternative RR-2B minimizes the alteration of the existing local roadway system.
 - The Route Z Interchange would be better able to handle increased traffic volumes resulting from the proposed project.

This minority did not dispute the advantages of the Preferred Alternative. They valued its closer conformance with the Major Roadway Plan (MRP), avoidance of new major stream crossings, minimization of residential relocations, lower total construction costs, and smaller project footprint.

H. Lead Agency

The lead federal agency for the EC-EIS project is the Federal Highway Administration (FHWA), with MoDOT as the co-lead agency. The project team for the EC-EIS is composed of MoDOT, the City of Columbia, and Boone County. The project team and their consultants are responsible for conducting the environmental and engineering evaluations, performing the public involvement activities, coordinating with state and federal review agencies, and preparing this EC-EIS.

I. Regulatory Compliance and Pending Actions

The planning, agency coordination, public involvement, and impact evaluation for the project were coordinated in accordance with 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 would 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 experience disproportionately adverse impacts under the reasonable range of alternatives.

River and wetland impacts associated with the Preferred Alternative are subject to permitting and associated water quality certification under Sections 404 and 401 of the CWA. Based on the identified Preferred Alternative, wetland delineations were conducted to verify the extent and quality of aquatic resources. This data will be used for permitting and mitigation purposes. In accordance with established procedure, the wetland delineation is presented in the FEIS. During the design phase, specific impacts to wetlands and other waters of the United States would be assessed to determine whether those impacts could be avoided or further minimized. Unavoidable impacts to wetlands and streams would require mitigation.

Relocation Assistance Plans for all potential acquisitions and relocations require approval by MoDOT 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 for relocated persons in finding comparable housing that is decent, safe, and sanitary. This applies to businesses, farms, nonprofit organizations, and residential properties.

Upon identification of a Preferred Alternative, the investigation of important archaeological resources was conducted. The archaeological resources eligible to the National Register of Historic Places (NRHP) will be addressed in accordance with the regulations (36 Code of Federal Regulations [CFR] 800) implementing Section 106 of the NHPA (16 U.S. Code [USC] 470).



Protected species coordination will continue with the United States Fish and Wildlife Service (USFWS) to minimize adverse effects to federally protected species.

J. Environmental Commitments

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

1. Relocation assistance will be provided for all businesses, nonprofit organizations, and residents that must be relocated. Assistance would be provided by MoDOT in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act. Relocation assistance under the program will be made available without discrimination to all those who will be relocated.
2. This project will comply with the Americans with Disabilities Act of 1990.
3. A MoDOT-approved maintenance of traffic plan will be developed and implemented for the construction phases of the project. Construction schedules, road closures, and detours will be coordinated with police and emergency services to reduce impact to response times of these agencies.
4. The design process will include periodic consultation with 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.
5. During the final design process, MoDOT will consider options to minimize new right-of-way acquisitions. The potential minimization of right-of-way acquisitions will not affect the ability of the project to satisfy the purpose and need approved by NEPA.
6. MoDOT will coordinate with the U.S. Army Corps of Engineers (USACE) to ensure compliance with Sections 401 and 404 of the CWA. This will address impacts to streams, wetlands, and other waters of the United States during the design process. Clean Water Act permits will require a detailed delineation and evaluation of waters and wetlands affected by the project and minimization of impacts. In accordance with established procedure, the wetland delineation results will be presented in the FEIS. During the design phase, specific impacts to wetlands and other waters of the United States will be assessed to determine whether those impacts can be avoided or further minimized. Unavoidable impacts to wetlands and streams will require mitigation. Development of mitigation strategies will be determined through the permitting process with the USACE and the Missouri Department of Natural Resources (MDNR).
7. Best management practices will be implemented to minimize soil erosion and sedimentation. Methods for stormwater management, during and after construction, will be conducted in accordance with MoDOT's *2004 Standard Specifications Book for Highway Construction* and the project's National Pollutant Discharge Elimination System (NPDES) stormwater permit.

8. Floodplain permits will be obtained from the State Emergency Management Agency (SEMA).
9. If encountered during construction, appropriate study and remediation of hazardous waste sites 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 Missouri state law.
10. Dust control during construction will be performed in accordance with MoDOT's standard methods, which require application of water or approved dust control measures on haul roads and during grading. Pavement material batch plants will be situated in accordance with MoDOT's *Standard Specifications Book for Highway Construction* or any special provisions developed during coordination with MDNR regarding air quality standards and emissions. Portable material plants will be operated in accordance with MDNR air quality requirements/guidelines. A permit must be obtained from the MDNR to open burn or open burn with restrictions.
11. To reduce the impacts of construction noise, MoDOT has special provisions in construction contracts 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. Construction equipment would be required to have mufflers constructed in accordance with the equipment manufacturer's specifications. Further, MoDOT would monitor project construction noise and require noise abatement measures in cases where the criterion is exceeded.
12. There would be no impacts to schools. The Cedar Ridge Elementary (located at the corner of Route WW and Roseta Avenue) would not be directly affected by the improvement of Route WW. However, because of its location along Route WW, indirect and construction-related impacts are expected. Allowances may be necessary to maintain school bus access to some areas during construction. Coordination with the school administrators will be made in accordance with MoDOT standard procedures and are considered an environmental commitment of this project.
13. The improvement of Route WW is adjacent to American Legion Park; however, the Preferred Alternative was designed to avoid all direct impacts. Because of its location along Route WW, there may be easements needed to maintain access during construction, but they will be temporary in nature and will not affect the use of the park. Temporary easements are not subject to Section 4(f) provided that they meet certain conditions. The temporary construction easements are not subject to Section 4(f) in this instance because such closure:
 - Will be of short duration and less than the time needed for construction of the project
 - Will result in no change of ownership or retention of long-term interests in the land for transportation purposes
 - Will not result in any adverse change to the activities, features, or attributes which are important to the purposes or functions that could qualify the resource for protection under Section 4(f)



- Will include only a minor amount of land
14. The final design process will include review and design of appropriate facilities based on existing and projected land use. The current presence of housing, schools, parks, and commercial uses along the corridors and the expectation of similar future development, indicate a potential need for bike and pedestrian accommodations. An environmental commitment of this project is the coordination with the City of Columbia and Boone County in the development of a user appropriate final design.
 15. Adherence to MoDOT's Noise Policy is an environmental commitment of this project. Based on planning level engineering evaluations, traffic noise impacts are expected in the vicinity of Richland Road and Grace Lane. See **Exhibit IV-1F**. A 10-foot noise barrier between Richland Road and Grace Lane is expected to mitigate traffic noise levels consistent with highway traffic noise analysis and abatement guidelines. When available, detailed engineering data will be used to evaluate if noise abatement measures are required in this area and if so, can be designed such that they are both reasonable and feasible. At that time, the possible noise abatement types and locations will be presented and discussed with the benefited residents.
 16. The development and construction of the Ballenger Lane extension is entirely a locally sponsored project. However, all of the policies, restrictions, and commitments that affect other components of the Preferred Alternative apply to the Ballenger Lane extension. To assist the local project team, a MoDOT-supplied advisor will be made available to assist with the "local" development of this project.
 17. MoDOT is committed to minimizing lighting impacts. Efficient lighting and equipment will be installed, where appropriate, to optimize the use of light on the road surface while minimizing light intruding on adjacent properties.
 18. The Preferred Alternative uses the I-70 interchange at St. Charles Road. During the traffic analysis part of the EC-EIS project, the interchange configuration contained in the I-70 EIS was used. While this analysis concluded that the St. Charles Road interchange would operate satisfactorily with any of the reasonable alternatives, a commitment as to the specific design of the interchange is not being made at this time.