

Appendix A
Safety and Accident Data

APPENDIX A — TRAFFIC ACCIDENT AND SAFETY DATA

The National Environmental Policy Act (NEPA), 42 U.S.C. §§ 4321-4370f, requires that the analysis of the proposed project must consider and discuss its effects and impacts on mankind, on plants, animals, resources, and the natural world in general. One of the key elements to be discussed in any NEPA analysis of a proposed highway project is its effects and impacts on the safety of those who use those highways. However, Congress has recognized that even while this document summarizes and presents traffic accident and safety information for the general benefit of the public, pursuant to federal law, some people may attempt to use the information to establish federal, state, or local liability in lawsuits arising from highway accidents. Congress has enacted a law, 23 USC Section 409, which prohibits the discovery or use, in litigation, of highway accident and safety data, developed under federal law to make highway safety improvements. Congress's rationale is obvious: the safety data was compiled and collected at their request, to help prevent future accidents, injuries, and death on our nation's highways. If that information can be used in expensive damage suits, then the millions of dollars that litigation may cost the Missouri Department of Transportation (MoDOT) and local governments will not be available for their use to make Missouri's highways safer. The collection of this safety data should be encouraged, not discouraged.

Traffic accident statistics and safety data are compiled, presented, and summarized in portions of this NEPA document. Where noted in an introductory footnote to a segment of this document, the discussions, reports, lists, tables, diagrams and data presented throughout that chapter, unit, section or subsection were compiled or collected for the purpose of identifying, evaluating or planning the safety enhancement of potential accident sites or hazardous roadway conditions pursuant to federal law. Thus, that information and its supporting reports, schedules, lists, tables, diagrams and data are not subject to discovery, and they are prohibited by federal law (23 USC § 409) from being admitted into evidence in a federal or state court proceeding, or from being considered for other purposes, in any action for damages arising from an occurrence on the highways, intersections or interchanges discussed in this document.

Appendix B
List of Preparers

Appendix B: List of Preparers and Reviewers

This document was prepared by CH2M HILL under the direction of the Missouri Department of Transportation, City of Columbia, and Boone County. The following individuals were directly involved in the preparation of the EC-EIS in the capacity indicated.

Name and Years of Experience	Title	Education	Primary Responsibility
FEDERAL HIGHWAY ADMINISTRATION			
Peggy Casey, PE	Environmental Projects Team Leader	B.S., Civil Engineering University of Wisconsin 33 years of experience	<ul style="list-style-type: none"> • Document Review
MISSOURI DEPARTMENT OF TRANSPORTATION			
Mike Dusenberg, PE	District 5 Planning Manager	B.S., Civil Engineering University of Missouri 19 years of experience	<ul style="list-style-type: none"> • Study Coordination • Document Review
Matt Burcham	Environmental Process and Policy Specialist	B.S., Agriculture Kansas State University 16 years of experience	<ul style="list-style-type: none"> • Environmental Analysis • Document Review
Kristin Gerber	Community Relations Manager	M.S., Corporate Communication, B.A., Mass Communication 14 years of experience	<ul style="list-style-type: none"> • Public Involvement • Document Review
Kathy Harvey, PE	State Design Engineer	B.S., Civil Engineering, University of Missouri 19 years of experience	<ul style="list-style-type: none"> • Document Review
Tim Redmond, PE	Design Liaison Engineer	B.S., Civil Engineering, University of Missouri M.S., Engineering Management, University of Missouri 24 years of experience	<ul style="list-style-type: none"> • Document Review
Toni Prawl, Ph.D.	Senior Historic Preservation Specialist	Ph.D., Department of Art History, University of Missouri, M.A., Housing and Interior Design, University of Missouri 16 years of experience	<ul style="list-style-type: none"> • Historic Preservation • Document Review
Larry Ayres	Senior Historic Preservation Specialist	M.A. Anthropology, University of Arkansas 16 years of experience	<ul style="list-style-type: none"> • Historic Preservation • Document Review

Name and Years of Experience	Title	Education	Primary Responsibility
BOONE COUNTY			
David Mink, PE	Boone County Public Works Director	Master of Public Administration, University of Kansas M.S., Civil Engineering, University of Missouri B.S., Civil Engineering, University of Missouri 32 years of experience	<ul style="list-style-type: none"> • Study Coordination • Document Review
Thad Yonke	County Planner	Masters of Community Planning, Auburn University Bachelor of Architecture, Auburn University 19 years of experience	<ul style="list-style-type: none"> • Study Coordination • Document Review
CITY OF COLUMBIA			
John Glascock	Columbia Director of Public Works	B.S., Civil Engineering, University of Missouri 18 years of experience	<ul style="list-style-type: none"> • Study Coordination • Document Review
David Nichols, PE	Columbia Chief Engineer	B.S., Civil Engineering, University of Missouri 24 years of experience	<ul style="list-style-type: none"> • Study Coordination • Document Review
CH2M HILL			
Buddy Desai, PE	Consultant Project Manager	M.S., Civil Engineering, University of Wisconsin B.S., Civil Engineering, University of Wisconsin 18 years of experience	<ul style="list-style-type: none"> • Project Management • Document Preparation • Public Involvement
Rob Miller, AICP	Environmental Project Lead	M.S., Environmental Resources/Forest Ecology, Pennsylvania State University B.S., Natural Resources Management, Rutgers University 19 years of experience	<ul style="list-style-type: none"> • Document Preparation • Environmental Analysis
Kevin Nichols, PE	Engineering Project Lead	M.S., Civil Engineering, Oregon State University B.S., Civil Engineering, Oregon State University 29 years of experience	<ul style="list-style-type: none"> • Roadway Design
Brian Sides, PE	Project Engineer	B.S., Civil Engineering, University of Missouri—Rolla 7 years of experience	<ul style="list-style-type: none"> • Bridge Design • Webmaster
Dan Sommer	Project Engineer	B.S., Civil Engineering, Southern Illinois University 7 years of experience	<ul style="list-style-type: none"> • Roadway Design
Cindy Juliano, PE	Traffic and Planning Manager	B.S., Civil Engineering, University of Akron 12 years of experience	<ul style="list-style-type: none"> • Traffic Analysis

Name and Years of Experience	Title	Education	Primary Responsibility
Rob Hursey	GIS Technician	M.S., Civil Engineering, Northwestern University B.S., Civil Engineering, Northwestern University B.S., Geography, Southern Illinois University—Edwardsville 7 years of experience	<ul style="list-style-type: none"> • GIS
Rob Hook	Environmental Planner	M.S., Biology/Applied Ecology, Eastern Kentucky University B.S., Biology, Thomas More College 16 years of experience	<ul style="list-style-type: none"> • Ecological studies • EIS preparation
Rebecca Hoff	Editor	B.A., English, Marshall University M.A., English, Marshall University 6 years of experience	<ul style="list-style-type: none"> • Publication Manager
Debra Ehrhardt	Editor	B.A., English, Northeastern Illinois University 8 years of experience	<ul style="list-style-type: none"> • Publication Manager
Rachel Grand	Staff Geologist	M.S., Geology, West Virginia University B.S., Southwestern Missouri State University 5 years of experience	<ul style="list-style-type: none"> • Hazardous Materials
ARCHAEOLOGICAL RESOURCE CENTER OF ST. LOUIS, INC. (ARC)			
Joe Harl	Cultural Resource Lead	A.M., Department of Anthropology, Washington University B.A., Department of Anthropology, University of Missouri 28 years of experience	<ul style="list-style-type: none"> • Cultural Resources
ENGAGE			
Marie Keister, APR, AICP	Public Involvement Lead	B.A., Communications 21 years of experience	<ul style="list-style-type: none"> • Public Involvement

Appendix C
Partnering Agreement

East Columbia EIS Partnering Agreement

The Missouri Dept. of Transportation, the City of Columbia, Mo. and the County of Boone, Mo. hereby enter into this **East Columbia EIS Partnering Agreement** on September 18, 2007.

This is a revised version of an earlier partnering agreement dated December 12, 2005.

This agreement will guide the three parties and the CH2M Hill consultant team in working together cooperatively to fulfill NEPA requirements associated with this project.

These requirements include determining how the parties will identify current and future transportation needs and, within that context, identify acceptable alternatives for:

- Taking care of the existing transportation system;
- Making the system work better;
- Increasing the system's capacity appropriately; and
- Improving overall system safety.

Each partner recognizes the unique nature of this cooperative undertaking and agrees to approach this study with an open mind regarding methodology, conclusions and follow-up actions. To better ensure that outcome, the partners agree to the following parameters for working together.

Study Oversight

1. The parties agree to place day-to-day responsibility for study decisions into the hands of the project's Study Management Committee, which will consist of two representatives from each governmental partner as specified below.

MoDOT	Roger Schwartze, P.E., District Engineer, District 5
MoDOT	Gayle Unruh, Environmental & Historical Preservation Manager
City of Columbia	Bill Watkins, City Manager
City of Columbia	John Glascock, P.E., Public Works Director
Boone County	Ken Pearson, Boone County Presiding Commissioner
Boone County	David Mink, P.E., Public Works Director

2. The committee also will regularly meet, review, evaluate and provide input on project-related events, development and content as submitted periodically to them by the CH2M Hill project manager for the consultant team.
3. Members of the committee agree to govern their reviews, approvals and decisions by consensus as long as such actions comply with NEPA and other such federal or state regulations as may apply to this project.
4. Once this committee has reached consensus on review items from the consultant team, these items will be considered approved and the team can move forward with the next step in the NEPA process.

Internal Communications

1. The parties agree to communicate with each other in a continual, open and timely way regarding any and all matters that may impact the findings of this study or its prospects for success.
2. This information sharing includes making available to each other and the consultant team any information one party shall request that is pertinent to the study's conduct or completion.
3. All partners agree to vigilantly monitor and report to one another any developments within the study area that may impact current or future local, regional or state transportation needs.

External Communications

1. MoDOT's committee members, along with the consultant team project manager will serve as primary project spokespeople due to the public involvement need to speak clearly and consistently regarding NEPA requirements for the study.
2. These spokespeople agree to exercise care in their characterizations of committee's positions and actions.
3. Other committee members may speak publicly about the study; however, they agree to make clear when they do so that they are speaking as representatives of their governmental units.

4. Materials designed for use in public involvement and communication will be reviewed and produced as follows:
 - a. The consultant team will originate materials as its scope of work and project needs demand;
 - b. The team will consult with MoDOT's Community Relations Manager regarding the suitability and appropriateness of all such communication plans and materials; and then
 - c. Communication plans and materials will then be submitted simultaneously to members of the study committee for their input, review and approval.

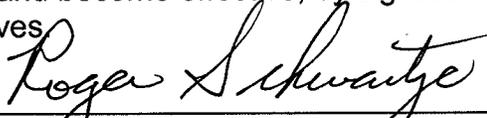
Recommendations and Evaluations

1. The partners agree to review and evaluate all alternatives within the context of NEPA requirements.
2. CH2M Hill will, as part of its work, develop a clear and quantifiable system for evaluating alternatives that can be used to assist the partners in their review of and communication regarding the development and adoption of preliminary and preferred alternatives.
3. The partners understand that their efforts, by law, cannot bind their future governing bodies in ways that would require them to support, fund or act on any recommendations stemming from the study.
4. However, 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.

Implementation

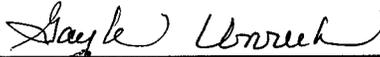
This agreement is entered into, and become effective, by signature of the steering committee representatives

MoDOT



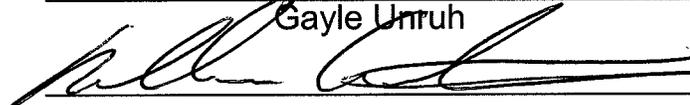
Roger Schwartze

MoDOT



Gayle Unruh

City of Columbia



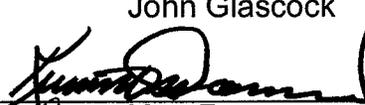
Bill Watkins

City of Columbia



John Glascock

Boone County



Ken Pearson

Boone County



David Mink

Appendix D
Measures to Minimize Harm

Measures to Minimize Harm

Measures to minimize harm are efforts that are proposed to reduce the identified impacts associated with the Preferred Alternative. The purpose of this section is to provide an overview of these efforts.

1. Right-of-Way Acquisition and Relocation Program

The Missouri Department of Transportation's (MoDOT's) right-of-way acquisition and relocation program is carried out in compliance with the Uniform Relocation Assistance and Real Properties Acquisition Policies Act of 1970 (Uniform Act), as amended in 1987 (42 United States Code [USC] 4601). The Uniform Act, as well as Missouri law, requires that just compensation be paid to the owners of private property taken for public use. An appraisal of fair market value is the basis for determining just compensation to be offered the owner for the property to be acquired. The Uniform Act defines an appraisal as a written statement independently and impartially prepared by a qualified appraiser setting forth an opinion of defined value of an adequately described property as of a specific date, supported by the presentation and analysis of relevant market information.

The MoDOT's right-of-way acquisition and relocation program is designed to provide uniform and equitable treatment for those persons who are relocated from their residences, businesses, or farms. The program is carried out without discrimination and in compliance with Title VI, the President's Executive Order on Environmental Justice, Limited English Proficiency, and the Americans with Disabilities Act. It provides advisory assistance to owners and tenants who are relocated as well as relocation assistance payments designed to compensate relocated persons for costs that have been imposed on them by a MoDOT highway project. Relocation assistance under this program is made available to all affected parties without discrimination.

Any relocated owner-occupant or tenant of a dwelling who qualifies as a relocated person is entitled to payment of his or her actual moving and related expenses as MoDOT determines to be reasonable and necessary. A relocated owner-occupant who has occupied an affected dwelling for at least 180 days is also eligible to receive up to \$22,500 for a replacement housing payment, which includes the amount by which the cost of a replacement dwelling exceeds the acquisition cost of the affected dwelling, increased interest costs, and incidental costs. A relocated owner-occupant who has occupied an affected dwelling for at least 90 days, but less than 180 days, or a tenant who has occupied an affected dwelling for at least 90 days, is entitled to a payment not to exceed \$5,250 for either a rental or down payment assistance.

Any relocated business, farm operation, or nonprofit organization that qualifies as a relocated person is entitled to payment of actual moving and related expenses, as MoDOT determines to be reasonable and necessary. In addition, a business, farm, or nonprofit organization may be eligible to receive a payment, not to exceed \$10,000, for expenses incurred in re-establishing the business, farm operation, or nonprofit organization at a replacement site.

A relocated business may be eligible to choose to receive a fixed payment in lieu of the payments for actual moving and related expenses and actual reasonable re-establishment expenses. The payment amount for this entitlement alternative is based on the average net earning of the business. This fixed payment amount cannot be less than \$1,000 or more than \$20,000.

The Uniform Act requires that comparable, decent, safe, and sanitary replacement housing within a person's financial means be made available before the person may be relocated. Should this project include persons who cannot readily be moved using the regular relocation program benefits and procedures (i.e., when there is a unique housing need or when the cost of available comparable housing would result in payments in excess of the \$22,500 or \$5,250 statutory payment limits), MoDOT's relocation policy commits to utilizing housing of last resort. Housing of last resort involves the use of payments in excess of statutory maximums or the use of other unusual methods of providing comparable housing. MoDOT would use housing of last resort on a case-by-case basis.

MoDOT's relocation program is designed to ease the property transition for the property owner or renter who is relocated. Working closely with residents and MoDOT's relocation agents, as needed or requested, provides the needed guidance to relocate any eligible party. Housing of last resort would be provided as needed, but the local residential and commercial property market is expected to more than absorb the relocations associated with this project.

2. Traffic Management

A traffic management plan would be developed and implemented during future engineering phases to ensure reasonably convenient access to agricultural fields, residences, businesses, community services, and local roads during construction. Existing local roads that would intersect the new highways would remain open to traffic with minor interruptions during intersection construction. MoDOT would coordinate construction activities, sequencing, and traffic management plans with local fire, police, and emergency rescue services to minimize delays during the construction period.

3. Noise and Air Quality

To reduce the impacts of construction noise, the special provisions of the construction contract would require that motorized equipment be operated in compliance with all applicable local, state, and federal laws, and regulations relating to noise levels permissible within and adjacent to the project construction site. At a minimum, the provisions would require that motorized construction equipment not be operated between 10:00 p.m. and 6:00 a.m. without prior written approval of the project engineer. All construction equipment would be required to have mufflers constructed in accordance with the equipment manufacturer's specifications, or a system of equivalent noise-reducing capacity. Mufflers and exhaust systems would be required to be maintained in good operating condition, free from leaks and holes.

Construction contractors would be required to comply with regulations on air pollution control. These regulations would apply to fugitive dust control and open burning of grub material. Dust control during construction would 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 would be situated in accordance with the *Standard Specifications* or any special provisions developed during coordination with the Missouri Department of Natural Resources (MDNR) regarding air quality standards and emissions. Portable material plants would 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.

4. Borrow and Disposal

Selection of any material borrow sites would be the responsibility of the construction contractor subject to approval by MoDOT. Unusable excavated material would be disposed of by the contractor in accordance with MoDOT's *Standard Specifications for Highway Construction* and special provisions to ensure protection of wetlands and waterways. All waste and demolition material from project construction activities would be disposed of in accordance with the standard specifications or special provisions to ensure protection of wetlands and waterways.

5. Water Quality, Hydrology, and Hydraulics

To protect water quality and reduce impacts during and after construction, best management practices would be implemented to prevent and reduce soil erosion and sedimentation in local waterways and sinkholes, if any are found in the area. MoDOT would employ methods for stormwater management during and after construction in accordance with its *Standard Specifications for Highway Construction* and National Pollutant Discharge Elimination System (NPDES) stormwater permit. Erosion control devices would be installed before the onset of construction activities that are likely to cause erosion. Temporary and permanent erosion control methods would include silt fences, retention basins, detention ponds, interceptor ditches, seeding and sodding, installing riprap on exposed embankments, and installing erosion mats and mulching. Disturbed areas would be graded and seeded as soon as possible to minimize erosion.

Development within floodplains is regulated under the National Flood Insurance Program (NFIP). The Federal Emergency Management Agency (FEMA) has mandated that projects can cause no rise in the regulatory floodway and a 1-foot cumulative rise for all projects in the base (100-year) floodplain. For projects that involve the state of Missouri, the State of Missouri Emergency Management Agency (SEMA) issues floodplain development permits. In accordance with MoDOT's Bridge Design Manual, encroachments into the floodplain, including culvert construction, replacements, or extensions, would require a floodplain development permit from SEMA. Structure sizing would be performed in accordance with state and federal guidelines regarding floodplain encroachment and hydraulic capacity. All new structures would be in compliance with state guidelines.



Appendix E
Aquatic Impacts

**Appendix E - Table 1
Preferred Alternative Stream Impacts (linear feet)
Delineation Level Data**

Stream Number	Stream Name	Stream Type	Project Component	Notes on Expected Impacts	Width (feet)	Depth (inches)	Impact (linear feet)
1	Hominy Branch	Perennial	Ballenger Extension	New Stream Impacts	15	18	304
2	Tributary to North Fork	Ephemeral	Ballenger Extension	New Stream Impacts	2	6	321
3	Tributary to North Fork	Ephemeral	Ballenger Extension	New Stream Impacts	3	10	344
4	Tributary to North Fork	Ephemeral	Ballenger Extension	New Stream Impacts	2	6	358
5	Tributary to North Fork	Ephemeral	Ballenger Extension	New Stream Impacts	3	10	529
6	Tributary to Hominy Branch	Ephemeral	Ballenger Extension	New Stream Impacts	4	10	256
7	Tributary to Hominy Branch	Ephemeral	Ballenger Extension	New Stream Impacts	3	12	382
8	North Fork Grindstone Creek	Perennial	Stadium Extension	New Stream Impacts	16	28	84
9	Tributary to North Fork	Intermittent	Stadium Extension	New Stream Impacts	5	12	471
10	Tributary to North Fork	Ephemeral	Stadium Extension	New Stream Impacts	3	10	453
11	Tributary to North Fork	Ephemeral	Stadium Extension	New Stream Impacts	3	10	423
12	Tributary to North Fork	Ephemeral	Stadium Extension	New Stream Impacts	3	8	417
14	Tributary to North Fork	Ephemeral	Stadium Extension	New Stream Impacts	2	8	486
15	Tributary to North Fork	Ephemeral	Stadium Extension	Mod at Existing Stream Work	3	10	610
16	Tributary to North Fork	Ephemeral	Stadium Extension	New Stream Impacts	3	12	477
17	Tributary to North Fork	Ephemeral	Stadium Extension	New Stream Impacts	2	8	223
18	Tributary to North Fork	Ephemeral	Stadium Extension	New Stream Impacts	3	6	562
19	Tributary to North Fork	Ephemeral	Stadium Extension	New Stream Impacts	2	6	446
20	Tributary to North Fork	Ephemeral	Stadium Extension	Mod at Existing Stream Work	3	8	974
21	Tributary to North Fork	Ephemeral	Stadium Extension	New Stream Impacts	3	8	404
22	Tributary to North Fork	Ephemeral	Stadium Extension	New Stream Impacts	3	12	565
23	Tributary to North Fork	Ephemeral	Stadium Extension	New Stream Impacts	4	20	439
24	Tributary to North Fork	Ephemeral	Stadium Extension	New Stream Impacts	3	18	417
25	Tributary to North Fork	Ephemeral	Stadium Extension	New Stream Impacts	3	12	284
26	Tributary to North Fork	Ephemeral	Stadium Extension	New Stream Impacts	3	16	709
28	Tributary to North Fork	Ephemeral	Stadium Extension	Mod at Existing Stream Work	6	18	67
29	Hominy Branch	Perennial	Route WW Improvement	Modification at Existing Bridge	16	28	364
30	North Fork Grindstone Creek	Perennial	Route WW Improvement	Modification at Existing Bridge	12	25	401
31	South Fork Grindstone Creek	Perennial	Route WW Improvement	Modification at Existing Bridge	10	12	311
32	Tributary to South Fork	Intermittent	Route WW Improvement	Mod at Existing Stream Work	8	18	596
33	Tributary to South Fork	Ephemeral	Route WW Improvement	New Stream Impacts	5	8	204

**Appendix E - Table 1
Preferred Alternative Stream Impacts (linear feet)
Delineation Level Data**

Stream Number	Stream Name	Stream Type	Component	Notes on Expected Impacts	Width (feet)	Depth (inches)	Impact (linear feet)
34	Tributary to South Fork	Ephemeral	Route WW Improvement	New Stream Impacts	3	10	620
35	Tributary to North Fork	Ephemeral	Route WW Improvement	New Stream Impacts	4	18	92
36	Tributary to North Fork	Ephemeral	Route WW Improvement	New Stream Impacts	3	12	136
37	Tributary to South Fork	Ephemeral	Route WW Improvement	Mod at Existing Stream Work	3	12	413
38	Tributary to South Fork	Ephemeral	Route WW Improvement	Mod at Existing Stream Work	2	10	343
39	Tributary to South Fork	Ephemeral	Route WW Improvement	Mod at Existing Stream Work	2	6	231
40	Tributary to South Fork	Ephemeral	Route WW Improvement	Mod at Existing Stream Work	2	6	384
42	Tributary to South Fork	Ephemeral	Route WW Improvement	Mod at Existing Stream Work	5	18	636
43	Tributary to North Fork	Ephemeral	Stadium Extension	New Stream Impacts	3	6	253
44	Tributary to North Fork	Ephemeral	Stadium Extension	Mod at Existing Stream Work	3	8	40
45	Tributary to South Fork	Intermittent	Route WW Improvement	Mod at Existing Stream Work	4	12	289
46	Tributary to South Fork	Intermittent	Route WW Improvement	Mod at Existing Stream Work	3	9	115
Total							16,437
Impact Subtotals							
	By Stream Type			By Stream Watershed			
	Ephemeral	13,500		Hominy Branch			1,306
	Intermittent	1,473		North Fork of Grindstone			10,988
	Perennial	1,464		South Fork of Grindstone			4,143
		16,437					16,437
	By Project Component			By Impact Type			
	Route WW Improvement	5,136		Modification at Existing Bridges			1,076
	Stadium Extension	8,807		Modification at Stream Work			4,700
	Ballenger Extension	2,494		New Stream Impacts			10,661
		16,437					16,437

**Appendix E - Table 2
Preferred Alternative Impacts: Waters of the United States
Delineation Level Data**

Wetland Impacts						
ID Number	Total Area (ac)	Impacted Area (ac)	Type	Non-Jurisdictional <or> Jurisdictional	Project Component	Notes
1	0.1	0.1	Forested Wetland	Jurisdictional	Ballenger Extension	Not on NWI
2	0.1	0.1	Forested Wetland	Jurisdictional	Ballenger Extension	Not on NWI
4	0.2	0.2	Emergent Wetland	Jurisdictional	Stadium Extension	Wetland fringe to constructed open water feature (#7)
5	0.3	0.3	Emergent Wetland	Jurisdictional	Stadium Extension	Wetland upslope of large Richland Road wetland/pond complex (#6)
6	0.4	0.4	Emergent Wetland	Jurisdictional	Stadium Extension	Wetland fringe to open water feature
8	0.3	0.3	Emergent Wetland	Jurisdictional	Stadium Extension	Wetland fringe to open water feature (#7)
13	0.3	0.1	Emergent Wetland	Jurisdictional	Route WW Improvement	Current configuration of wetland fragments in the vicinity of the Old Hawthorne development.
14	<0.1	<0.1	Emergent Wetland	Jurisdictional	Route WW Improvement	
15	<0.1	<0.1	Emergent Wetland	Jurisdictional	Route WW Improvement	
Total		1.5				
Pond and Open Water Impacts						
ID Number	Total Area (ac)	Impacted Area (ac)	Type	Isolated <or> Tributary	Project Component	Notes
7	3.1	0.3	Open Water	Tributary	Stadium Extension	Open water feature adjacent to wetlands #4 and #8. Two portions of pond affected by Preferred Alternative
9	Pond: 0.42 Wetland: 0.12	0.3	Open Water	Tributary	Stadium Extension	Most of the open water portion of feature will be impacted by Preferred Alternative. Upslope wetland fragment should remain post-construction.
11	0.1	0.1	Open Water	Tributary	Stadium Extension	Farm pond
12	0.2 (total of two fragments)	<0.1	Open Water	Tributary	Route WW Improvement	Remnant following removal of pond retaining structures
Total		0.7				
Impact Subtotals (ac)						
By Type			By Stream Watershed			By Project Component
Emergent Wetlands		1.3	Hominy Branch		0.0	Route WW Improvement 0.1
Forested Wetlands		0.2	North Fork of Grindstone		2.1	Stadium Extension 1.9
Open Water		0.7	South Fork of Grindstone		0.1	Ballenger Extension 0.2
		2.2			2.2	2.2