

David Hoekel Parkway City of Wentzville St. Charles County MISSOURI

# FINAL Environmental Assessment

November 2014



## FEDERAL HIGHWAY ADMINISTRATION FINDING OF NO SIGNIFICANT IMPACT

FOR

## **David Hoekel Parkway**

### Wentzville, St. Charles County, Missouri

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

The Federal Highway Administration has determined that this project will not have any significant impact on the human and natural environment. This finding of no significant impact is based on the attached environmental assessment, which has been independently evaluated by the FHWA and determined to adequately and accurately discuss the need, environmental issues and impacts of the proposed project. It provides sufficient evidence and analysis for determining that an environmental impact statement is not required. The FHWA takes full responsibility for the accuracy, scope and content of the referenced environmental assessment.

Date of Approval Besponsi

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David Hoekel Parkway Wentzville, St. Charles County, Missouri

## FINAL 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

The Missouri Department of Transportation and The City of Wentzville, Missouri

> Cooperating Agency: U.S. Army Corps of Engineers

20/14 Date of Approval

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For EHWA

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The City of Wentzville, Missouri, in coordination with the Missouri Department of Transportation (MoDOT), and the Federal Highway Administration (FHWA), proposes constructing a new 6.3-mile roadway connection between I-70 and US 61 in St. Charles County. The City has designated this project as the David Hoekel Parkway. The proposed project would function as a four-lane divided roadway with limited access. The study area for the proposed action is located within St. Charles County on the northwestern corner of the greater St. Louis metropolitan area.



## TABLE OF CONTENTS

## **Executive Summary**

Α.	Intr	oduction	ES-1
Β.	Pu	rpose and Need	ES-2
C.	Pro	ject Alternatives	ES-2
	1.	No-Build Alternative	ES-3
	2.	Build Alternatives	ES-3
	3.	Reasonable Build Alternatives	ES-3
	4.	Alternatives Analysis	ES-4
	5.	Selected Alternative	ES-5
D.	Affe	ected Environment and Environmental Consequences	ES-5
	1.	Social and Economic Impacts	ES-5
	2.	Land Use Impacts	ES-8
	3.	Farmland Impacts	ES-8
	4.	Right-of-Way Impacts	ES-8
	5.	Geology	ES-9
	6.	Water Resources Impacts	ES-9
	7.	Water Quality Impacts	ES-11
	8.	Floodplain Impacts	ES-11
	9.	Biological Resources Impacts	ES-11
	10.	. Cultural Resources Impacts	ES-12
	11.	. Hazardous Material Site Impacts	ES-14
	12.	. Air Quality Impacts	ES-14
	13.	Noise Impacts	ES-15
	14.	. Visual Quality Impacts	ES-16
	15.	Construction Impacts	ES-16
Ε.	Con	nmitments	ES-17
	1.	Proposed Project Commitments	ES-17
	2.	Permits Required for Construction	ES-18
F.	Pub	lic Involvement	ES-19
	1.	Public Meetings	ES-19
	2.	Project Contact Resources	ES-19
G.	Age	ency Coordination	ES-20
Η.	Pub	blic and Agency Review	ES-20
	1.	Public Review	ES-20
	2.	Agency Review	ES-21

## **CHAPTER I – Purpose and Need for Action**

Α.	Project Overview and Background	I-1
	1. Project Limits and Termini	I-2
	2. Project Background	I-3
Β.	Purpose and Need	I-4
	1. Improve Access and Connectivity	I-4
	2. Reduce Congestion	I-5
	3. Improve Traffic Safety	I-9
	4. Support Local and Regional Growth	I-11

I-11	
I-12	
I-13	C. Rel
I-13	
I-13	
I-14	
I-14	
I-15	
I-15	D. Pla
I-16	E. Cor
	D. Pla E. Cor

## **CHAPTER II - Alternatives Considered**

Α.	Overview of Alternatives Development Process	II-1
В.	No-Build Alternative	II-2
C.	Build Alternatives	ll-2
	1. Facility Concept	ll-2
	2. Design Criteria	II-3
	3. Initial Build Alternatives	ll-5
	4. Screening of Initial Build Alternatives	II-5
	5. Reasonable Build Alternatives	II-6
D.	Construction Cost Estimates	ll-8
Ε.	Traffic Analysis	II-9
	1. Travel Demand Methodology	II-9
	2. Study Corridor Traffic Impacts	II-11
F.	Selected Alternative	II-14
G.	Project Phasing	II-15

### **CHAPTER III – Affected Environment** and Environmental Consequences

A.	<ul> <li>Social and Economic Characteristics</li></ul>	-1    -1    -3    -5
	4. Pedestrian and Bicyclist Considerations	III-8
	5. Demographics and Social Characteristics	8-111
	6. Economic Characteristics	111-11
	7. Environmental Justice and Title VI Considerations	III-12
Β.	Land Use	III-12
	1. Land Use Planning	III-12
	2. Land Use Planning Impacts	III-13
C.	Farmland	III-14
	1. Farmland Soils	III-14
	2. Farmland Impacts	III-15
	3. Farmland Conversion Impact Rating	III-16
D.	Right-of-Way Acquisition	III-17
	1. Property Ownership	III-17
	2. Property Impacts	III-18
	3. Mitigation	III-20
Ε.	Geology	III-21

F. Water Resources	III-22
1. Streams	III-23
2. Wetlands	III-24
3. Ponds	III-26
4. Compensatory Mitigation	III-27
5. Only Practicable Alternative Finding	III-27
G. Water Quality	111-28
1 Surface Water Quality	111-28
2 Groundwater Quality	111-30
H Floodolain	III_31
1 Introduction	111-31
2. Eleadalain Eneroachment	111-31
2. Flooding Disks	111-01
	111-33
4. Impacts on Natural and Beneficial Floodplain Values	111-33
5. Support of Probable Incompatible Floodplain Development	111-34
6. Measures to Minimize Floodplain Impacts and Measures to Restore and	
Preserve the Natural and Beneficial Floodplain Values	III-34
7. Only Practicable Alternative Finding	III-34
I. Biological Resources	III-34
1. Forest Communities	III-34
2. High Quality Natural Communities	III-35
3. Wildlife	III-36
4. Threatened and Endangered Species	III-37
J. Cultural Resources	111-38
1 Introduction	111-38
2 Archival Review of Previous Investigations	111-39
3 Archaeological Survey	111-40
1 Architectural Survey	III_40
5. Summary Impacts and Recommondations	III-41 III 40
5. Summary, impacts, and Recommendations	III-4Z
	111-43
1. Survey Methodology	111-43
2. Potential Hazardous Material Sites	111-44
3. Hazardous Material Impacts	111-44
L. Air Quality	III-45
1. Existing Air Quality	III-45
2. Conformity	III-47
3. Air Quality Impacts	III-49
M. Noise Analysis	III-49
1. Measured and Modeled Existing Noise Levels	III-49
2. Noise Abatement Criteria	III-50
3. Traffic Noise Modeling	III-51
4. Abatement Measures	III-52
5. Construction Noise	111-54
6 Undeveloped Lands	111-54
7 Conclusion	111-55
N Visual Quality and Aesthetic Considerations	111-55
1 Existing Visual Environment	111-55
<ol> <li>Lisung visual Livitorinient</li></ol>	III-55
2. Visual Quality Mailing	III-50
J. VISUAI IIIIPAUIS	
4. Aesthetic Considerations / Visual Enhancements	111-57
U. Construction Impacts	111-58
1. waste Disposal	111-58

2.	Water Quality	III-59
3.	Air	111-59
4.	Noise	III-60
5.	Vibration	III-60
6.	Traffic Impacts	III-60
7.	Utility Relocation	III-61
	-	

## **CHAPTER IV - Commitments**

A.	Proposed Project Commitments	IV-1
В.	Permits Required for Construction	IV-3
	1. Regulatory Permits	IV-3
	2. Construction Permits	IV-4

## **CHAPTER V – Comments and Coordination**

Α.	Public Involvement	V-1
	1. Meetings	V-1
	2. Project Correspondence	V-3
	3. Project Contact Resources	V-4
Β.	Agency Coordination	V-4
	1. Environmental Scoping Meeting	V-5
	2. Other Agency Meetings	V-6
	3. Cooperating Agency	V-7
	4. Tribal Communications	V-7
C.	Public and Agency Review	V-7
	1. Official Comment Period	V-7
	2. Draft EA Public Meeting	V-7
	3. Public Comments and Responses	V-8
	4. Resource Agency Comments and Responses	V-8

## **CHAPTER VI - Circulation List**

Α.	Federal Agencies	VI-1
Β.	State Agencies	VI-2
C.	Local Agencies	VI-3
D.	Tribal Consultation List	VI-4
Ε.	Copies Available for Public Viewing	VI-5

## **APPENDICES**

- Appendix A: Plan Plates and Interchange Concepts
- Appendix B: Public Parks
- Appendix C: Farmland Conversion Impact Rating
- Appendix D: Water Resources
- Appendix E: Cultural Resources
- Appendix F: Hazardous Materials
- Appendix G: Air Quality
- Appendix H: Noise Analysis

- Appendix I: Agency Correspondence
- Appendix J: Public Involvement
- Appendix K: Traffic Accident and Safety Data Disclaimer

## **List of Figures**

Figure ES-1: Alternatives Development Process	ES-2
Figure I-1: Project Location Map	I-1
Figure I-2: Study Area Map	I-2
Figure II-1: Alternatives Development Process	-1
Figure II-2: Proposed Typical Section	-4

## **List of Tables**

Table I-1: Existing (2012) and Forecasted (2040) Daily Two-Way Traffic DemandTable I-2: Level of Service Characteristics for FreewaysTable I-3: I-70 Mainline and Interchange Ramp Level of Service	I-6 I-7
(Existing 2012 and Projected 2040)	I-8
Table I-4: US 61 Mainline Level of Service (Existing 2012 and Projected 2040)	I-9
Table I-5: Existing Total Number of Crashes (Years 2007-2011)	I-10
Table I-6: Historical Crashes on I-70 (Years 1999-2011)	I-10
Table I-7: Crash Rates for I-70/US 61 Mainlines	_
Existing Average Annual Rate of Crashes (Years 2007-2011)	I-11
Table II-1: General Design Criteria	-4
Table II-2: Initial Alternatives Carried Forward as Reasonable Alternatives	II-5
Table II-3: Estimated Construction Costs in 2013 Dollars (Millions)	II-9
Table II-4: Existing (2012) and Forecasted (2040) Daily Two-Way Traffic Demand	II-10
Table II-5: Change in 2040 Average Daily Traffic at Adjacent Interchanges	
with David Hoekel Parkway/I-70 Interchange	II-11
Table II-6: Mainline Level of Service (Existing 2012 and Projected 2040)	II-11
Table II-7: I-70 and US 61 Interchange Ramp Terminal Level of Service	
(Existing 2012 and Future 2040)	II-13
Table II-8: David Hoekel Parkway Phasing and Funding Plan	II-16
Table III-1: Population (2000 & 2010)	III-9
Table III-2: Education (2010 and 2008-2010 Estimates)	III-9
Table III-3: Minority Populations (2010)	III-10
Table III-4: Housing Characteristics (2010)	III-10
Table III-5: Employment Characteristics (2010 and 2008-2010 Estimates)	III-11
Table III-6: Income and Poverty Characteristics (2010 and 2008-2010 Estimates)	III-12
Table III-7: Farmland Soils	III-15
Table III-8: Property Acquisition (Total and Partial)	III-20
Table III-9: Water Resources Impacts	III-23
Table III-10: Estimated 100-Year Floodplain Encroachments	III-32
Table III-11: Missouri and National Ambient Air Quality Standards	III-46
Table III-12: Measured Existing Noise Levels	III-50
Table III-13: Noise Abatement Criteria	III-51

Table III-14: Acoustical Mitigation – Noise Barrier Analysis	III-54
Table III-15: Visual Quality and Visual Receptors	III-56

## **List of Exhibits**

(Exhibits are located at the end of each respective Chapter)

Exhibit ES-1: Reasonable Alternatives Screening Matrix

Exhibit II-1: Initial Alternatives

Exhibit II-2: Reasonable Alternatives

- Exhibit II-3: Reasonable Alternatives Screening Matrix
- Exhibit II-4: Selected Alternative
- Exhibit II-5: Phasing Plan

Exhibit III-1: Parks, Neighborhoods and Other Public/Community Lands

Exhibit III-2: Existing Land Use

Exhibit III-3: Future Land Use

Exhibit III-4: Environmental Considerations



## EXECUTIVE SUMMARY

### A. Introduction

The City of Wentzville, Missouri, in coordination with the Missouri Department of Transportation (MoDOT) and the Federal Highway Administration (FHWA), proposes to construct a new roadway connecting I-70 and US 61 in St. Charles County. Known as the David Hoekel Parkway, the roadway would function as a four-lane divided arterial roadway with controlled access. This Environmental Assessment (EA) complies with the National Environmental Policy Act (NEPA) and evaluates viable alternatives developed to satisfy the purpose and need of the project.

The Selected Alternative for the David Hoekel Parkway EA was first conceived within several previous plans and studies conducted by the City of Wentzville. Each of these studies included public involvement activities to solicit public input on the project. The City first identified the need for a new roadway in the City's adopted Comprehensive Plan of 1999 (*A Community's Vision*). In 2001 the City studied this potential new corridor further by conducting the *I-70/US 61 Beltway Corridor Preservation Study*. The study area for the Corridor Preservation Study primarily focused on connections between I-70 and US 61 within the western portion of the City of Wentzville. The study included recommendations for a new roadway corridor and defined the footprint for the corridor, allowing the City to coordinate with proposed and planned development to preserve right-of-way for a future roadway.

Following the recommendations of the Corridor Preservation Study, the City prepared the I-70 Break-in-Access (BIA) Study for the project's Access Justification Request (AJR) with I-70. This study analyzed the effect of adding a new interchange to the I-70 corridor within Wentzville. The City completed the BIA/AJR study in November 2004 with a recommendation to construct a new interchange connection at the proposed location. In 2006, based on feedback received from MoDOT, the City developed a VISSIM traffic supplement to the original 2004 BIA/AJR to provide more detailed traffic simulation analysis for the project, and specifically for the weigh station located within the study limits. In 2006, MoDOT reviewed the revised BIA/AJR and traffic supplement and provided a letter of conditional approval of the new I-70 interchange access to the City of Wentzville. At that time, the FHWA reviewed the BIA/AJR and its traffic supplement, but a decision was made that no approvals of the BIA/AJR could be granted prior to completion of the NEPA process. Subsequent to this decision, the City of Wentzville, in coordination with MoDOT and FHWA, initiated the David Hoekel Parkway EA. In parallel with the EA, the BIA/AJR has been updated in 2014 to be consistent with the Selected Alternative for the EA and meet the most recent federal requirements of the AJR process. The final approval of the BIA/AJR by the FHWA will be concurrent with the completion of the NEPA process for the David Hoekel Parkway project.

The Selected Alternative is approximately 6.3 miles in length. The logical termini for the project encompasses the intersection just south of I-70 at Jackson Road/S. Point Prairie Road and the proposed tie-in east of US 61 at Route P, in order to provide local access and connectivity within Wentzville and Flint Hill.

### B. Purpose and Need

The purpose of the David Hoekel Parkway is to provide the community with a safe and efficient roadway that is both cost-effective and environmentally sound. The new connection will:

- *Improve access and connectivity* between I-70 and US 61 in western Wentzville and the St. Louis region within St. Charles County,
- *Reduce congestion* and improve the travel capacity in the study area to meet future travel demands,
- Improve traffic safety to help address high crash locations within the study area,
- **Support local and regional growth** while addressing anticipated increases in local and regional travel demand and travel times that would accompany population and housing growth,
- **Support sustainable development** by providing and coordinating transportation connections with planned and proposed development, and
- **Promote a multimodal transportation system** by ensuring the project accommodates the needs of other transportation modes.

The goals identified for the project are consistent with those for the St. Louis region as outlined in the East West Gateway Council of Government's (EWGCOG) Regional Transportation Plan 2040.

### C. Project Alternatives

The identification of viable project alternatives involved a screening and detailed evaluation process with the public and federal, state and local agencies. The alternatives development process for the project is shown in Figure ES-1.

Figure ES-1 Alternatives Development Process



The process identifies alignment alternatives for the proposed roadway that are reasonable and feasible from a technical, environmental and economic standpoint. Based on the screening of Initial Alternatives, the alternatives development process defines and evaluates the range of alternative alignments in sufficient detail to identify the feasible and prudent alignments (i.e., *Reasonable Alternatives*). A more detailed evaluation of the Reasonable Alternatives then identifies the alternative alignment that best serves the stated purpose and need. The alternative that best accomplishes the purpose and need for the project, while providing acceptable impacts to both the natural and man-made environments, is designated as the *Identified Preferred Alternative*. The *Identified Preferred Alternative* is then presented within the approved Draft EA and at the Draft EA public meeting for agency and public review and comment. After all comments on the public meeting and Draft EA have been received and addressed, and pending a Finding of No Significant Impact (FONSI), the Identified Preferred Alternative.

#### 1. NO-BUILD ALTERNATIVE

The No-Build Alternative is represented by not taking action to construct the proposed David Hoekel Parkway. Under the No-Build Alternative, the community would continue to rely on the existing roadway system that is currently serving the community in and around the project corridor, plus any committed or reasonably anticipated transportation improvements in the study area. Routine operation and maintenance activities to the existing local road system would continue as scheduled. At this time, the forecasted improvements near the study area include the expansion of Interstate Drive, south of I-70, from Wilmer Road to Hepperman Road along I-70 at the southern end of the study area. The City of Wentzville plans to design and construct a new five-lane arterial road for Interstate Drive. The No-Build also assumes the future widening of I-70 to six lanes prior to 2040, as shown in the EWGCOG's Regional Transportation Plan 2040 within its fiscally constrained list of projects.

#### 2. BUILD ALTERNATIVES

The build alternatives under consideration for the project would involve a new connecting roadway, including interchanges at I-70 and US 61 and signalized intersections, between I-70 and US 61 on the west side of Wentzville, Missouri. The alternatives were analyzed based on estimated project costs, facility type, design requirements, physical constraints and potential impacts to the natural and man-made environments.

Two concepts of roadway design were considered for the build alternatives: 1) a controlled access, freeway-type concept providing fast and efficient access between I-70 and US 61, and 2) a more residential-type parkway concept providing greater access to population centers and key destination points throughout western Wentzville. This decision was based on an evaluation of how effectively each facility satisfied the requirements of the project's purpose and need. The decision was made to construct a parkway verses a freeway-type concept for this project.

The design criteria selected for the build alternatives were determined based on the need to satisfy the six elements of the project's purpose and need, state and local roadway design requirements, and land use considerations within the study area. Factors influencing the design criteria included the current and future projected traffic volumes, the selection of facility type, the existing vertical and horizontal constraints of the corridor, and design criteria guidelines presented in the American Association of State Highway and Transportation Officials (AASHTO) design guidelines, MoDOT specifications within the Engineering Policy Guide (EPG), and City of Wentzville design standards.

At the beginning of the NEPA process, initial build alternatives were developed and analyzed. The corridor was divided into five separate sections with designations A through E. Several alternative alignments were then developed within each section and screened. Initial build alternatives considered for the project are shown in Exhibit II-1 in Chapter II. The initial alternative development and screening process is described in Chapter II – Alternatives Considered.

#### 3. REASONABLE BUILD ALTERNATIVES

Based on the screening results of the initial build alternatives, three full-corridor alternatives were deemed viable to carry forward for further consideration within the EA as Reasonable Alternatives. The full-corridor alternatives were developed by combining the most reasonable and feasible alignments from each of the separate initial sections A through E. Each Reasonable Build Alternative would improve access and connectivity for the traveling public. They would reduce traffic congestion, improve traffic safety, support regional growth and sustainable development and promote a multimodal transportation system. Located within the

study area, each alternative begins at Jackson Road south of I-70 and terminates beyond US 61 in Flint Hill, Missouri. The alternatives range from approximately 6.3 miles to 6.9 miles in length, and all are within approximately 2,000 feet of one another. Each Reasonable Build Alternative is shown on Exhibit II-2 in Chapter II.

- **Build Alternative 1** would follow the existing alignment of Point Prairie Road south of Scotti Road, and a portion of the existing alignment of Peine Road north of Scotti Road.
- **Build Alternative 2**, the Selected Alternative, would extend north over I-70, traveling through an area dedicated for the proposed roadway at the northeast corner of Peruque Valley Park, and avoiding the residential subdivisions immediately north of I-70 and west of Point Prairie Road.
- **Build Alternative 3** and Build Alternative 2 would follow the same alignment from Jackson Road to Scotti Road. However, Alternative 3 splits east and extends along Scotti Road for approximately 3,000 feet before turning northeast and crossing Dry Branch creek at three different locations before reaching US 61.

Both of the interchange designs show the new roadway going over I-70 and US 61. Interchange concepts can be seen in Appendix A. A single point diamond interchange was selected for I-70 resulting from the need to limit the size of the interchange footprint, allow the I-70 south outer road to remain open to traffic, and avoid impacts to the existing and future land uses. The single point diamond interchange would provide greater potential for land development north of the interchange, it would result in fewer impacts to nearby parcels, particularly the Crossroads Baptist Church, and would increase the efficiency of the anticipated traffic flow.

At US 61, a tight diamond, modified diamond and a double roundabout (i.e., dog bone roundabout) interchange concept were considered for the David Hoekel Parkway's connection with US 61. Within the Draft EA, a tight diamond interchange concept was initially selected. Subsequent to the preparation of the Draft EA, a decision was made to modify the original interchange concept to a modified diamond interchange at US 61. As part of the revised Alternative 2, the alternate location would provide a shorter connection to Route P, would result in significant project cost savings, and would minimize impacts to McCoy Creek and Dry Branch. The EA has been updated to include the evaluation of the new alternate as a part of the Selected Alternative.

#### 4. ALTERNATIVES ANALYSIS

The Reasonable Alternatives Screening Matrix (Exhibit ES-1), shown at the end of the Executive Summary, details comparisons of the No-Build and Reasonable Build Alternatives. The Reasonable Alternatives were compared and screened based on a 200-foot corridor width for each alternative.

As a result of widening Point Prairie Road, **Alternative 1** would result in greater impacts to residential units and community cohesion, and would also result in greater constructability constraints, difficult traffic management during construction, and greater utility conflicts than the other build alternatives.

**Alternative 2** would result in the least impacts to streams and floodplains, the least impacts to residential units, minimal impacts to businesses, and the least amount of constructability constraints throughout the alignment. Alternative 2 also has the lowest estimated project cost since it provides a more direct connection across US 61 to the east to Route P.

While **Alternative 3** shares the alignment with Alternative 2 south of Scotti Road, the alignment north of Scotti Road would result in greater stream and floodplain impacts along Scotti Road

and greater impacts to prime farmland and floodplains south of Peine Road as compared to Alternatives 1 and 2.

#### 5. SELECTED ALTERNATIVE

The Selected Alternative for the project is Alternative 2. Alternative 2 would result in the least impacts to the natural and man-made environment and is lower in cost in comparison to the other build alternatives. The alternative would result in the least impacts to streams and floodplains, the least impacts to residential units, minimal impacts to businesses, and the least amount of constructability constraints throughout the alignment. It would also accommodate economic development plans, maintain neighborhood cohesion, and provide connections to existing facilities to improve traffic flow in the northwestern portion of Wentzville. In addition, Alternative 2 has been coordinated with local land use planning and corridor preservation initiatives and the local community has been supportive of this alternative through both the previous and current planning efforts for the David Hoekel Parkway. For these reasons, this alternative has been designated as the **Selected Alternative**. The Selected Alternative in greater detail are included in Appendix A, along with the interchange configurations for I-70 and US 61.

### D. Affected Environment and Environmental Consequences

The following is a summary of the environmental factors considered and the impacts of the Reasonable Alternatives, including the Selected Alternative. In addition, Exhibit ES-1 (at the end of this summary) and Exhibits III-1 through III-4 (at the end of Chapter III) pertain to this impacts discussion.

The Reasonable Build Alternatives 1, 2 and 3 were compared and screened based on a 200foot corridor width for each alternative. The 200-foot corridor includes the roadway travel lanes, sidewalks on each side, and construction easements on each side to allow for cut and fill operations.

#### 1. SOCIAL AND ECONOMIC IMPACTS

#### a. Neighborhood and Community Cohesion

Alternative 1 would have a moderate impact on existing neighborhoods and community cohesion and Alternatives 2 and 3 would have a low to moderate impact. The Selected Alternative (Alternative 2) would not sever or disrupt any existing established neighborhoods or communities. It would, however, travel through three developing residential subdivisions that have been planned to accommodate the Selected Alternative. The alignment is also adjacent to three other subdivisions: two existing and one under development. Based on the above considerations, the Selected Alternative would not have a negative impact on neighborhoods and community cohesion. It could have positive impacts on the neighborhoods by providing better access to other community facilities, as well as the regional transportation system including I-70 and US 61.

#### b. Changes in Traffic Patterns

While there were three different Reasonable Build Alternatives identified for the project, the traffic projections did not vary by alternative because the limits of the project were relatively fixed due to spacing constraints with adjacent interchanges on I-70 and US 61. Additionally, each alternative provided the same overall connectivity and access to the local Wentzville transportation network. Average daily traffic projections for the Reasonable Build Alternatives are shown to be an average of 26,000 west of US 61 in Wentzville and approximately 5,000

east of US 61 in Flint Hill in 2040. Truck percents for the Reasonable Build Alternatives were assumed to be approximately five percent of the vehicle mix.

Since the Reasonable Build Alternatives would provide a new route for motorists to travel, some reductions in traffic demand can be expected in other corridors or at other interchanges. There is not anticipated to be a significant change in through-traffic volumes on I-70 or US 61 as a result of the new roadway. This is because the Selected Alternative is anticipated to mainly change travel patterns within the City of Wentzville and interchange entering and exiting locations to access I-70 and US 61. In addition, a significant amount of bypass traffic between I-70 and US 61 along the Selected Alternative is not anticipated. The roadway is planned to be a four-lane parkway with a posted speed of 45 mph and several signalized intersections. It will not be a freeway bypass and the City has proposed imposing truck restrictions through Wentzville in the near term. However, the existing I-70 interchanges at Wentzville Parkway (25 percent traffic reduction), Route W/T (seven percent traffic reduction), and Point Prairie Road (56 percent traffic reduction) are anticipated to experience traffic relief due to a change in travel patterns.

#### c. Public and Community Facilities, Parks and Recreation Areas

There are four public parks (all of which are owned by the City of Wentzville and designated as park land) in or adjacent to the study area: Rotary Park, Peine Road Park, Peruque Valley Park, and an unnamed park along Peruque Creek. The FHWA has determined that all four of these parks are Section 4(f) eligible; however, none of them have been the recipient of Section 6(f) funds. Only Alternative 1 would negatively impact public park land. It would impact a small portion (0.2 acre) of an unnamed and undeveloped City park. None of the public (or private) parks/recreation areas would be negatively impacted by the other Reasonable Alternatives. Although the Selected Alternative (Alternative 2) would pass through the eastern edge of Peruque Valley Park, the land has a corridor dedicated specifically for the Selected Alternative alignment. As such, there is no conversion of existing park use to transportation use, and thus no Section 4(f) impact.

There are two schools within or adjacent to the study area: Peine Ridge Elementary School is adjacent to, but outside of the study area, and St. Theodore Catholic School is located in Flint Hill within the study area. None of the Reasonable Alternatives would have negative impacts on either of these schools; however, they would both benefit from the improved access that the project would provide to the region.

Three existing churches are located in the study area: the Crossroads Free Will Baptist Church, the Agape Word Center, and St. Theodore Catholic Church. None of the existing churches would be directly impacted by the Reasonable Alternatives; however, the Selected Alternative (Alternative 2), would cross an access drive leading to a parcel that is owned by the Faith United Church of Christ, thereby removing access to the property. The property is currently vacant and there are no current plans filed with the City of Wentzville at this time for a church to be constructed on the property. Access can be restored to this parcel by providing a new access road from the church property that travels along the north side of the proposed alignment and intersects with the Selected Alternative at the proposed intersection with existing Peine Road.

There are four known cemeteries in the study area, none of which would be impacted by the Reasonable Alternatives.

The City's police facility is located outside of the study area; however, two fire/ambulance facilities (Fire Station No. 2 and a new Emergency Medical Service (EMS) facility) that serve the immediate area are located within the study area. None of the safety/emergency facilities would

be directly impacted by the Reasonable Alternatives. However, Fire Station No. 2 on Mette Road and the new EMS facility on N. Point Prairie Road would benefit from improved access to US 61 and the Selected Alternative. Response times for emergency vehicles and police personnel would improve as a result of providing smoother flowing transportation facilities in the vicinity of the corridor.

#### d. Pedestrian and Bicyclist Considerations

The City of Wentzville's Comprehensive Plan includes a map showing the St. Charles County Trails and Greenways Development Plan. This map indicates on-street bike lane routes and separated paths that are designated as either existing, planned, or possible (future) routes. While the plan shows no existing bike/pedestrian paths or bike lanes within or adjacent to the corridors of the Reasonable Alternatives, there are identified future separate paths and others that are designated as future bike lanes (on-street). The Selected Alternative would include a walking/bicycling path along its entire length that will connect with any future paths that are in place when the roadway is constructed.

#### e. Demographics and Social Characteristics

For comparisons, the census data in Chapter III was gathered for the City of Wentzville, St. Charles County, the City of St. Louis, and the State of Missouri. Between 2000 and 2010 the City of Wentzville's population increased approximately 321 percent. St. Charles County had a 27 percent increase from 2000 to 2010. Both growth rates were significantly higher than Missouri at seven percent, and the City of St. Louis which had a decline in population of about eight percent, for the same time period. Table III-1 in Chapter III shows the population from the Census 2010.

In estimates for the year 2010, the study area contained the lowest percentage (3.7 percent) of adults over 25 years of age with less than a high school education. The percentage of non-whites was somewhat similar for Wentzville and St. Charles County at 10 percent and 9.3 percent respectively. The City of St. Louis had the highest percentage of non-whites at about 56 percent, while the State of Missouri had a non-white population of about 17 percent.

In the year 2010, the City of St. Louis and the State of Missouri had the lowest percentage of occupied housing units at 80.7 percent and 87.6 percent respectively. St. Charles County had the highest occupancy rate at 95.2 percent, while Wentzville had the next highest occupancy rate of 94.8 percent.

#### f. Economic Characteristics and Environmental Justice

Based on Year 2010 figures, the highest median home value was in Wentzville at \$210,900, while the lowest was in the City of St. Louis at \$119,900.

In all of the areas studied, the highest estimated percentage of employees was in the educational, health and social services category. The other two industries that employed substantial numbers of people were estimated to be retail trade and manufacturing. In addition, Wentzville showed a substantial estimated number of people employed in the finance, insurance, and real estate industry. The industry with the lowest estimated number of employees across all of the areas was agriculture, forestry, fishing and hunting, and mining. This is not surprising considering the suburban nature of most of the areas.

The City of St. Louis had the lowest median household income at \$32,688 in the year 2010 estimate, as well as having the highest percentage of persons below the poverty level at 27.8 percent. Wentzville had the highest median household income at an estimated \$69,339 and the

lowest number of persons below poverty level at an estimated three percent. The estimated per capita income for Wentzville was estimated to be \$26,262, which was higher than St. Louis and the State, but lower than St. Charles County.

The Environmental Justice evaluation, which includes the census data presentation, indicates that the study area is not considered to have a low-income population or minority population that would require special considerations under the guidance of Environmental Justice procedures. As such, none of the Reasonable Alternatives would result in disproportionately high or adverse effects for minority and/or low income populations within the project area.

#### 2. LAND USE IMPACTS

It is anticipated that areas within and adjacent to the study area, would not experience major land use changes from those identified on future land use plans as a result of implementing the Selected Alternative. Since the Selected Alternative is an integral part of the Wentzville and Flint Hill future land use plans, the project is therefore consistent with the plans. The Selected Alternative is located in an area that is currently experiencing residential growth, and development will occur in the currently undeveloped areas according to the Cities' plans.

#### 3. FARMLAND IMPACTS

Alternative 1 would impact 9.4 acres of Prime Farmland, Alternative 2 would impact 9.9 acres and Alternative 3 would impact 15.3 acres. As stated, the Selected Alternative (Alternative 2) would impact 9.9 acres of Prime Farmland (including Prime Farmland if drained) and would also impact 51.3 acres of Farmland of Statewide Importance. Impacts to farmland were also analyzed through coordination with the Natural Resource Conservation Service (NRCS) by utilizing the *Farmland Conversion Impact Rating for Corridor Type Projects* (Form SCS-CPA-106). The Total Points scored for the Reasonable Alternatives were as follows: Alternative 1 scored 84, Alternative 2 (Selected Alternative) scored 82, and Alternative 3 scored 93. None of these scores exceeded the 160-point threshold established for consideration of farmland protection measures under the Farmland Protection Policy Act (7 CFR, Part 658). In order to minimize farm severances and impacts to farmland, the majority of the proposed alignment extends along property lines, through land that has been planned for other land use development or land that has been taken out of farm production.

#### 4. **RIGHT-OF-WAY IMPACTS**

The screening for the Reasonable Alternatives involved an estimate of impacts to properties affected by a 200-foot corridor that would accommodate temporary construction easements for grading operations and roadway embankment.

Through the screening process, it was determined that **Alternative 1** would have the potential of impacting 48 single-family residential properties (18 by total acquisition and 30 by partial acquisition), five businesses (two by total acquisition and three by partial acquisition), one multi-family residential property by partial acquisition, and four community properties by partial acquisition. **Alternative 2** would have the potential of impacting 16 single-family residential properties (three by total acquisition and 13 by partial acquisition); one business would be impacted by partial acquisition, one multi-family residential property by partial acquisition, and three community properties by partial acquisition. **Alternative 3** would have the potential of impacting 20 residential properties (four by total acquisition and 16 by partial acquisition), one partial impact to a business, and no impacts to public properties.

In the Selected Alternative (Alternative 2), three single-family residences would be acquired. Six of the partially impacted residential properties would require new access roads or drives and the other seven would experience only small portions of land acquisition such as undeveloped edges along property lines or corners of properties. The one property containing a multi-family complex (Peine Lakes Apartments) would be impacted at the east edge by a small portion of land acquisition.

The one business that would be impacted by partial acquisition is the Flint Hill Soccer Fields. Three community properties (Faith United Church of Christ property (currently vacant with no plan filed with the City of Wentzville to construct a church), a neighborhood swimming pool area, and a city sewage lift/pump station) would be impacted by small portions of land acquisition that would not affect any structures or future development on the properties. Nineteen undeveloped parcels would be impacted by partial acquisition. Two of the 19 properties would lose their current means of access, thereby requiring new access. One property, located on the south side of I-70, could obtain access from another proposed road (Interstate Drive), and the other parcel would require a new access drive.

In an effort to make the property acquisition process as equitable as possible, regulations of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (42 U.S.C. 4601) and the requirements of Title VI of the Civil Rights Act of 1964, would be followed to ensure adequate consideration and compensation for the persons whose property is acquired for the project.

#### 5. GEOLOGY

The study area is located within the Dissected Till Plains of the Central Lowlands physiographic province. The topography is characterized by glaciated, open rolling hills with steep valley slopes. Local relief in the area varies from elevation of 696 feet at the south near I-70 to 475 feet where McCoy Creek leaves the study area near the north. General subsurface conditions consist of varying thicknesses of glacial and alluvial soils. The soil thickness is 50 feet or less and consists mostly of glacially derived silty clay loam. No known caves, springs, sinkholes or other karstic features are noted in the study area. In addition, there is no active mining or records of past mining in the study area. However, the project is within some areas that have the potential of being affected by earthquakes in the New Madrid Seismic Zone.

#### 6. WATER RESOURCES IMPACTS

#### a. Stream Impacts

Through the screening process of the Reasonable Alternatives within the 200-foot corridor, it was determined that potential impacts would occur to streams, potential wetlands, and ponds. Those estimated impacts are summarized in the evaluation matrix in Exhibit ES-1. Alternative 1 would potentially impact nine streams totaling approximately 2,572 linear feet, Alternative 2 would potentially impact eleven streams totaling approximately 2,043 linear feet, and Alternative 3 would potentially impact 15 streams totaling approximately 3,691 linear feet.

Field investigations were performed for the Selected Alternative (Alternative 2). The impacts to each water resource were determined and are summarized in the text below and in Appendix D.

The Selected Alternative (Alternative 2) would involve 11 stream crossings resulting from fill material for culverts or embankment material placed within the ordinary high water mark (OHWM) of the stream. Where streams are bridged, impacts would be avoided or minimized. A total of 2,043 linear feet of stream channel would be filled by culverting or embankment, equating to 0.49 surface acres of impacts, based on the average OHWMs of the streams impacted. The US Army Corps of Engineers has determined that an individual Section 404 Permit will be required for the project.

The Selected Alternative corridor is aligned through three new subdivisions that have the potential for containing mitigation areas directly adjacent to the parkway corridor: Keeneland Trails, Stonemoor, and Westhaven (Peine 240). Through research at the St. Charles County Recorder of Deeds office, it was determined that the properties encompassing the stream corridors adjacent to the Selected Alternative preserved corridor do not have deed restrictions associated with them. However, one stream corridor at the south end of the Stonemoor residential development contains a mitigation area (trees planted in the stream's riparian area) that would be impacted by the construction limits of the Selected Alternative.

#### b. Wetland Impacts

Through the screening of the Reasonable Alternatives within the 200-foot corridor, it was estimated that Alternative 1 would impact 0.4 acre of National Wetlands Inventory (NWI) designated potential wetlands, and that Alternatives 2 and 3 would each impact 0.6 acre of NWI designated potential wetlands.

Based on the preliminary findings of the field investigations, it was determined that there are no jurisdictional wetland areas within the limits of construction of the Selected Alternative (Alternative 2). Therefore, the Selected Alternative would not result in impacts to jurisdictional vegetated wetland areas. Although there would be impacts to 0.27 acre of fringe wetlands around six upland ponds, the ponds and their associated fringe wetlands were determined to be non-jurisdictional.

#### c. Pond Impacts

Through the screening of the Reasonable Alternatives within the 200-foot corridor, it was estimated that Alternative 1 would impact one potentially jurisdictional pond, and that Alternatives 2 and 3 would have no impacts to potentially jurisdictional ponds. The Selected Alternative (Alternative 2) would result in fill material being discharged into the open water areas of six upland ponds, totaling 0.27 acre of impacts; however, these ponds were determined to be non-jurisdictional.

#### d. Compensatory Mitigation

During the project design phase, specific impacts to "Waters of the U.S." will be assessed to determine if those impacts can be avoided or minimized, and to determine the applicability of an individual Section 404 Permit. At that time, if stream mitigation is required, an evaluation will be performed based on the Missouri Stream Mitigation Method, if appropriate, in order to determine mitigation credits required and appropriate mitigation options for stream impacts.

In a letter dated September 18, 2008 (see Appendix I), the USACE stated that impacts to the mitigation area along the stream corridor at the south end of the Stonemoor residential development will require a 2:1 replacement ratio. Coordination will take place with the USACE and appropriate resource agencies during the permitting process to develop appropriate mitigation strategies. Where appropriate, possible mitigation strategies for stream impacts could include new channel construction (stream relocation to partially offset filled streams), utilizing in-stream grade control structures, stabilizing disturbed banks with a combination of live vegetation and riprap or erosion control mats (bioengineering techniques), incorporating native seeding and plantings along the stream banks and buffer zones, buying credits in a mitigation bank, or by providing an in-lieu fee for stream mitigation at other locations through programs such as the Stream Stewardship Trust Fund.

#### 7. WATER QUALITY IMPACTS

The National Pollutant Discharge Elimination System (NPDES) permit, administered by the Missouri Department of Natural Resources (MDNR), requires that slopes and ditches be properly designed to prohibit or reduce erosion. To protect the environment from sedimentation and construction pollutants during the building phase, the control of water pollution is to be accomplished by the use of the City's and MoDOT's Best Management Practices (BMPs). The BMPs can include measures such as the use of temporary berms, ditch checks, slope drains, sediment basins, rain gardens, straw bales, silt fences, seeding, mulching, and drainage basins. The City of Wentzville will also consider detention areas within the median to collect and filter roadway run-off.

There are three public drinking water wells, approximately eight privately registered wells, and 53 domestic water wells scattered throughout or adjacent to the study area. Most of these are assumed to be constructed in the Mississippian aquifer and are used for residential or limited agricultural use. There are no surface water intakes to public drinking water sources within the study area. If wells are discovered to be impacted during the construction of the roadway, mitigation measures will include proper sealing of the wells to prevent ground water pollution from construction and from future road maintenance.

#### 8. FLOODPLAIN IMPACTS

Through the screening of the Reasonable Alternatives within the 200-foot corridor, it was estimated that Alternative 1 would impact approximately 18.6 acres of the 100-year floodplain, Alternative 2 would impact approximately 11.0 acres, and Alternative 3 would impact approximately 30.5 acres.

Encroachments on the 100-year floodplain of Peruque Creek, the McCoy Creek Tributary, and Dry Branch would be the result of encroachment of embankment fill for the roadway or fill at bridge abutments. After further analysis of the impacts within the construction limits of the Selected Alternative (Alternative 2), it was determined that a total of 11.0 acres of floodplain would be affected. The Selected Alternative would include bridges and culvert extensions that would be designed to avoid a rise in the regulatory floodway. The City's Comprehensive Land Use Plan indicates that the floodplain areas would remain undeveloped. The floodplains are currently being preserved as common space in new developments that occur near the floodplain. All practical measures to minimize impacts to the floodplain have been incorporated into the development of the Selected Alternative and construction would incorporate features necessary to meet the National Flood Insurance Program (NFIP), Federal Emergency Management Agency (FEMA), State Emergency Management Agency (SEMA), St. Charles County and City of Wentzville floodplain guidelines. The municipalities are responsible for obtaining a floodplain development permit from SEMA during the design phase, in addition to a "No-Rise" certificate and statements as to the effects of possible flooding.

#### 9. BIOLOGICAL RESOURCES IMPACTS

#### a. Forest Impacts

The majority of the study area is a mixture of both developed and undeveloped land. The undeveloped land includes remnant woodlands, open pasture, and open utility corridors. Based on the screening of the Reasonable Alternatives within the 200-foot corridor, it was estimated that Alternative 1 would impact 37.7 acres of woodlands, Alternative 2 (Selected Alternative) would impact 40.3 acres of woodlands, and Alternative 3 would impact 41.9 acres of woodlands. As mitigation for woodland impacts, the City of Wentzville will consider incorporating tree plantings along the corridor where practicable.

#### b. Wildlife Impacts

The study area is located near the edge of an urban area that is becoming developed and much of the natural habitat that previously occurred has been fragmented. Wildlife habitat in the study area includes grassland/open pasture, wooded areas, and the aquatic environments of streams and ponds. Some wildlife may have difficulty withstanding the loss of their limited habitat and there could also be a slight increase in wildlife mortality after construction due to the addition of the new roadway. However, wildlife in the area has or is beginning to adapt to the conditions of ongoing development in the area and the direct influence on mortality rates brought on by any of the Reasonable Alternatives is not anticipated to be greater than that caused by current land use development.

#### c. Threatened and Endangered Species Impacts

At the beginning of the NEPA process a letter was sent to the Missouri Department of Conservation (MDC) and the United States Fish and Wildlife Service (USFWS) inviting them to a project scoping meeting and to participate in a Resource Management Group, and requesting input concerning species listed as federally endangered or threatened that could occur in or near the study area. The USFWS did not attend the Resource Management Group meetings or submit a reply to the project coordination letter. According to the MDC, there are no known locations, recorded occurrences, or designated critical habitat of federal state-listed species within the study area, nor any records of unlisted species/habitats of conservation concern. However, in 2007, the MDC's Heritage Review Report indicated that the federal and state-listed endangered Indiana bat (Myotis sodalist) could potentially occur in the area. In a subsequent MDC Heritage Review Report (January 24, 2014), the Indiana bat was not included. However, a USFWS Information, Planning and Conservation (IPaC) official review response was generated on January 24, 2014, indicating that gray bats (federal and state endangered), Indiana bats (federal and state endangered), and northern long-eared bats (federal proposed endangered as of October 2013) occur throughout Missouri and may occur within the project boundary.

Gray bats roost in caves or mines year-round, however, none exist in the study area. The Indiana bat and the northern long-eared bat occupy caves or mines for hibernation in winter, but during spring and summer their maternity roost sites tend to be in living, injured (e.g. split trunks and broken limbs), dead or dying trees, with loose exfoliating bark or cracks or cavities. Preferred roost trees are generally located in riparian and upland forest openings. In general, there is not a substantial difference among the Reasonable Alternatives regarding impacts to woodlands that could be potential bat summer habitat. The Selected Alternative has been aligned to avoid as much of the floodway and floodplain as practicable, thereby minimizing impacts to the wooded riparian areas. Most of the unavoidable impacts would be in areas that have already been fragmented by development, as the project is located within a growing urban area.

#### 10. CULTURAL RESOURCES IMPACTS

#### a. **Previous Investigations**

A cultural resource investigation was conducted in the study area in 2007-2008 in order to identify any significant cultural resources that could be impacted by the project. A records and literature search (archival review) was performed and revealed that no properties on the National Register of Historic Places (NRHP) exist within the study area. In addition, none of the bridges or culverts within the study area has been determined to be significant. As a result, none of the Reasonable Alternatives would impact any existing NRHP sites.

Subsequent to the 2007-2008 archival review, modifications have been made to the design of the proposed US 61 interchange of the Selected Alternative, resulting in changes to the project limits. As such, a subsequent records and literature search was performed in December of 2012 at the State Historic Preservation Office (SHPO) to identify any cultural resources reported since the original cultural resources survey was conducted in 2007-2008. The archival search revealed that no properties have been placed on the NRHP and no cultural resource surveys by other entities were conducted within the previous project area or the new proposed interchange area in the four years since the previous survey. In addition, a field survey with shovel testing and visual observations of the new areas in the current archaeological APE was performed. This survey indicated that these areas were previously disturbed and no additional archaeological sites were identified.

#### b. Archaeological Survey

The initial archaeological survey was performed in 2008 for only the Preferred Alternative (Alternative 2) construction limits. The archaeological survey identified nine archaeological sites and two isolated finds. Three of the archaeological sites have been determined by the SHPO to be potentially eligible for listing in the NRHP: Site 23SC2140, Site 23SC2141 and Site 23SC2146.

*Site 23SC2140* – The artifacts recovered from shovel tests indicate that tools were being manufactured at this site, as well as repaired, and that the site may have been used as habitation. The entirety of this site would be impacted by the Selected Alternative alignment.

**Site 23SC2141** – This farmstead site was first occupied by at least 1840 and the farmstead continued to be used into modern times. Intact remains dating to the  $19^{th}$  and early  $20^{th}$  century likely exist and could provide important insights into the lives of the early farmers of this region. This site would be impacted by the Selected Alternative along its western edge, which does not include any of the building sites.

**Site 23SC2146** – This site consists of a farmstead dating back to 1834. Although the residence and a nearby outbuilding had recently been razed, five other outbuildings continue to stand. The outbuilding likely served as a summer kitchen and a slave quarters. Also present just north of the proposed construction easement is the family cemetery. It is likely that yard features and intact artifacts are still associated with this historic farmstead. The Selected Alternative would avoid this site.

No additional archaeological sites were identified during the 2012 cultural resources survey.

#### c. Architectural Survey

There were no architectural properties or districts currently listed on the NRHP or currently recommended for the National Register in the architectural study area. The initial 2008 architectural survey resulted in the identification of 255 previously unrecorded properties, no previously recorded architectural properties, nine previously recorded non-significant bridges and culverts, and no previously unrecorded bridges. None of the properties were determined to be eligible for listing in the National Register. One private family cemetery was encountered, which is located at the east terminus of the project. This private cemetery would not be impacted by the Selected Alternative.

During the subsequent 2012 cultural resources survey, a reevaluation was required of all properties within the original architectural APE that had reached the 45 year mark since 2008. In addition, six additional properties, located within the architectural APE of the modified

proposed US 61/David Hoekel Parkway interchange, were also surveyed. Only one of the additional parcels had a building within the current architectural APE that was 45 years or older. None of those properties were recommended as eligible for the NRHP.

#### d. Impacts and Recommendations

The Selected Alternative alignment would have no impact on architectural properties that are listed or eligible for listing in the NRHP. The Selected Alternative would impact two archaeological sites and will be further refined as the final alignment within the alternative is determined after the design phase. At that time, the extent of impacts to the archaeological sites will be determined. If any potentially eligible sites are impacted by the construction limits of the project, further archaeological testing will be conducted to determine if they are eligible for the NRHP. If an archaeological site is determined eligible, appropriate procedures will be followed to comply with Section 106 of the National Historic Preservation Act of 1966, including an assessment of adverse effects and, if appropriate, measures to avoid, minimize, or mitigate adverse effects through a Memorandum of Agreement (MOA).

#### 11. HAZARDOUS MATERIAL SITE IMPACTS

The Phase I hazardous waste assessment identified potential hazardous material sites on 11 properties with ten of the sites located within the study area. The sites were determined to have a low potential for contamination. None of the Reasonable Alternatives would impact any existing hazardous material sites. However, the Selected Alternative would have a partial impact to the property on which a sewage lift station is located, adjacent to Route P, and would impact a sewage lift station east of US 61. Any unanticipated hazardous material encountered during construction of the proposed project would be handled in accordance with federal, state, and local laws and regulations.

#### 12. AIR QUALITY IMPACTS

The St. Louis Metropolitan Area is currently designated as a non-attainment area for particulates (annual  $PM_{2.5}$ ) and ozone (O<sub>3</sub>). The O<sub>3</sub> nonattainment is Subpart 2/Moderate. Under the provisions of the Clean Air Act Amendments (CAAA) of 1990, the EWGCOG, as the Metropolitan Planning Organization (MPO) for the region, is the agency responsible for making sure a transportation project conforms to the air quality goals stipulated in the State Implementation Plan (SIP). The conformity determinations for both air pollutants have been conducted by the East-West Gateway Council of Governments (EWGCOG) using the latest SIP submittals.

The Selected Alternative for the David Hoekel Parkway project was evaluated within EWGCOG's Air Quality Conformity Determination modeling for the region, approved by the Federal Highway Administration on September 2, 2011, and was found to be in conformity with the requirements of the Clean Air Act Amendments of 1990, the relevant sections of the Final Conformity Rule 40 CFR Part 93, and the Missouri State Conformity Regulations 10 CSR 10-5.480. The finding is documented in the *Air Quality Conformity Determination and Documentation (8-Hour Ozone & PM2.5) for the Regional Transportation Plan 2040 and 2012-2015 Transportation Improvement Program.* The conformity analysis for the project has been incorporated into subsequent updates of the RTP 2040, TIP and Air Quality Conformity Determination within the Amendment to the FY 2014-2017 TIP.

(<u>http://www.ewgateway.org/pdffiles/library/AQ/AQConformityDoc/AQConformityDoc-FY2014.pdf</u> (David Hoekel Parkway project listed on page A-46)).

The EWGCOG will update and reanalyze the project's air quality conformity modeling within the next air quality conformity determination for the St. Louis region in order to reflect the final

project description of roadway and interchange improvements for the Selected Alternative. The project will not be constructed until the new air quality conformity determination for the region, with inclusion of the project, is approved. As with the 2011 air quality conformity determination, it is anticipated that the project will not adversely impact the air quality for the region and that the region will remain in conformity with the requirements of the Clean Air Act Amendments of 1990, the relevant sections of the Final Conformity Rule 40 CFR Part 93, and the Missouri State Conformity Regulations 10 CSR 10-5.480 since the project has not changed significantly since that time.

The EPA and the FHWA issued a joint guidance on March 29, 2006 on how to perform qualitative hot-spot analyses in  $PM_{2.5}$  and  $PM_{10}$  nonattainment and maintenance areas, and the criteria necessary to meet the  $PM_{2.5}$  and  $PM_{10}$  hot-spot analysis requirements established in the March 10, 2006, final transportation conformity rule (71 FR 12468). Based on an analysis of the final rule, 40 CFR 93.123(b)(1), and criteria recently adopted by the interagency group, it was determined that the Selected Alternative was not considered a "project of air quality concern" and does not meet the criteria stipulated for requiring a PM2.5 or PM10 hot-spot analysis as defined in the final rule.

In the design year (2040), it is expected there would be reduced Mobile Source Air Toxins (MSAT) emissions in the study area due to the EPA's MSAT reduction programs. On a regional basis, it is anticipated that the EPA's vehicle and fuel regulations, coupled with fleet turnover, would over time cause substantial reductions that, in almost all cases, would cause region-wide MSAT levels to be substantially lower than today.

#### 13. NOISE IMPACTS

The FHWA's Noise Abatement Criteria (NAC) and MoDOT's FHWA-approved interpretation of the NAC, as detailed in MoDOT's Traffic Noise Policy, were used in the analysis of the acoustic impact of the proposed project. The analysis was conducted according to the guidelines as presented in the Code of Federal Regulation, Title 23 Part 772, which provides procedures whereby the acoustic impact of the Selected Alternative can be assessed and the needs for abatement measures determined. Although MoDOT's current noise policy has incorporated changes that were made to 23 CFR 772 by FHWA, which went into effect July 13, 2011; MoDOT's previous noise policy that was in effect prior to that date was used for this noise analysis because this proposed project had reached the practicable alternatives stage prior to that date.

Noise mitigation measures for traffic noise impacts will be considered when the predicted noise levels approach or exceed those values for the appropriate activity category of the Noise Abatement Criteria or when the predicted traffic noise levels substantially exceed the existing noise levels. MoDOT has defined the NAC approach or exceed criteria for Activity Category "B" as being equal to or greater than 66 dBA  $L_{eq}(h)$  for noise sensitive receivers such as residences, churches, schools, libraries, hospitals, nursing homes, apartment buildings, condominiums, etc. MoDOT has defined an increase of 15 decibels or more over the existing noise as being substantial.

The noise analysis discussed in this section, and the Noise Study in Appendix H of the EA document, were prepared based on a US 61 interchange at Peine Road and an alignment segment east of US 61 that was similar to the Alternative 1 alignment. However, subsequent modifications were made to the design of the proposed US 61 interchange of the Selected Alternative. The noise sensitive receptors in the vicinity of the new proposed interchange remain the same as those of the previous interchange design, and the conclusions at the end of this section are still applicable to the modified interchange area.

Existing noise levels were developed from field measurements that were conducted at seven representative sites in the study area. Existing design year  $L_{eq}(h)$  noise levels within the project study area ranged from 40 to 64 dBA  $L_{eq}(h)$ . The FHWA Traffic Noise Model, (TNM<sup>®</sup> 2.5) was then used to model design year 2030  $L_{eq}$  noise levels. One hundred eighteen (118) representative receiver locations were selected to illustrate the noise impacts adjacent to the proposed project. These noise levels were compared to the existing noise levels to determine if MoDOT's 15 decibel increase criteria would be exceeded, and to the NAC noise levels. Exceeding either criterion is, by definition, an impact.

Future design hour noise levels would exceed the NAC at sixteen of the 118 representative receivers. These receivers represent one clubhouse, one swimming pool, 10 apartments, and 19 residences. Future  $L_{eq}(h)$  noise levels at these receivers would range from 66 to 71 dBA. The change in noise levels at these locations would be an increase in a range of four to 28 decibels.

In addition to those receivers that would be exposed to noise levels above the NAC, 16 additional receivers would be exposed to future design hour noise levels that would substantially exceed existing noise levels. These receivers represent 39 existing and permitted residences. Future  $L_{eq}$  (h) noise levels at these receivers would range from 55 to 65 dBA. The noise levels at these locations would be an increase in a range of 15 to 25 decibels. It should be noted that MoDOT's noise policy requires mitigation only for existing receivers, not for receivers in buildings constructed after the proposed roadway is built.

Based on the completed noise study, only five of the seven noise barriers analyzed within the project limits would meet MoDOT's definition for feasible and reasonable noise mitigation. This indicates that noise barriers could be considered for the project. Public informational meetings will be conducted throughout the project development process, from planning, to design, to construction; to solicit comments, opinions and concerns from local officials and the public. Upon completion of the public information meetings, should the majority of benefitted residents concur that noise walls are desired, the City of Wentzville will install the noise barriers that are feasible and reasonable adjacent to the Selected Alternative. The final recommendations will be made after the final design and public involvement processes are complete.

#### 14. VISUAL QUALITY IMPACTS

All of the Reasonable Alternatives would have similar impacts regarding views <u>from</u> the road and views <u>of</u> the road. The most notable high quality views <u>from</u> the road would occur in the areas where the new roadway crosses the riparian corridor of Peruque Creek and tributaries of McCoy Creek where the elevated roadway would provide views of the streams and adjacent woodlands. High quality views from the road would also occur near upland wooded areas. However, when new development takes place in those areas, much of the woodland would likely be removed. The proposed project would have an overall moderate impact along the riparian corridors and wooded uplands. The visual "change" would be moderate since these areas have already been altered by fragmentation and clearing, and would continue to be altered as new development occurs. The sensitive visual receptors that are, and will be, concentrated in the existing and future residential developments will be subject to undesirable views of the road, since no road has previously existed there.

#### 15. CONSTRUCTION IMPACTS

The City would coordinate with the public and with utility companies to address concerns during the final design and phasing of construction activities. The City's and MoDOT's standard specifications for street construction include, but are not limited to, air, noise, and water pollution

control measures, and traffic control and safety measures to minimize construction impacts. Pollution control measures, both temporary and permanent, would be enacted under the project construction specifications. If drilling and blasting are necessary for construction, a carefully planned and executed drilling and blasting program would be prepared to minimize vibration impacts. During construction of the project, construction methods and operations would be conducted in accordance with MDNR regulations. During all phases of construction, access will be maintained to residential housing and subdivisions in the study corridor.

### E. Commitments

The following sections include a list of commitments and permits necessary for implementation of the Selected Alternative. Chapter IV provides more detail on these commitments for further reference.

#### 1. PROPOSED PROJECT COMMITMENTS

The following is a summary of all project and regulatory commitments that will be implemented by the City of Wentzville. Federal authorization for construction will not be granted until the necessary regulatory obligations have been satisfactorily completed.

- The project will not be constructed until it is listed within the fiscally constrained element of the East-West Gateway Council of Government's long-range transportation plan for the St. Louis region, and the air quality conformity determination for the project has been updated.
- The City will acquire all properties needed for this project in accordance with the Uniform Relocation Assistance and Real Property Acquisition Act of 1970 as amended.
- The City will restore access to properties if impacted by the project.
- The City will construct a (minimum) 6-foot wide bicycle/pedestrian path adjacent to the roadway.
- The City will implement its Storm Water Management Plan (SWMP) and Best Management Practices (BMPs) to prevent or minimize adverse impacts to water quality.
- All construction activities will comply with the existing rules and regulations of governmental agencies having jurisdiction over streams and water supplies in the area.
- The City will complete updated wetland/waters of the U.S. field delineations and obtain jurisdictional determinations from the USACE prior to initiating final design.
- During the design phase, the Selected Alternative corridor will be evaluated for the
  presence of suitable roost trees for Indiana bats or northern long-eared bats. The City
  will coordinate with the USFWS and the MDC and only allow clearing of potentially
  suitable roost habitat outside the restriction dates specified by the USFWS and MDC.
- The extent of impacts to the two archaeological sites will be determined in the design phase. If impacted, further (Phase II) archaeological testing will be conducted to determine if they are eligible for the NRHP. If an archaeological site is determined eligible, appropriate procedures will be followed to comply with Section 106 of the National Historic Preservation Act of 1966.
- Any previously unknown hazardous waste sites that are found during project construction will be handled in accordance with federal and state laws and regulations.
- Painted structures to be removed shall be tested prior to demolition to determine proper disposal for the waste generated during the project.

- All structures that will be demolished will be inspected for asbestos. The City will ensure that these materials, depending on their condition and quantity, are removed and disposed of according to current regulations and procedures.
- If substantial changes in horizontal or vertical alignment occur during the stages of design and construction, noise abatement measures will be reviewed and a final Noise Report will be prepared, if needed. The final recommendations regarding noise abatement measures will be made after the final design and public involvement processes are complete. Upon completion of the public information meetings, should the majority of benefitted residents concur that noise walls are desired, the City will install the noise barriers that are feasible and reasonable adjacent to the project.
- A Traffic Management Plan (TMP) will be developed during project design and be included in the construction contract.
- Pollution control measures outlined in the Missouri Standard Specifications for Highway Construction will be used to minimize impacts associated with the construction of the project. Best management practices will be employed to minimize or mitigate potential impacts.
- Emissions from construction equipment will be controlled in accordance with emission standards prescribed under state and federal regulations.
- The City will send a news release out to local newspapers and radio stations giving local commuters information about construction activities that could impact their daily travels.
- It is expected that limited day- and/or night-time lane closures would be needed to make roadway tie-ins, but the City will require the contractor to utilize appropriate traffic control during these times and to keep back-ups to a minimum.
- Construction of bridge piers nearby the railroad will require flaggers for trains during construction operations. All flagging costs will be borne by the City.
- The City's utility engineers and representatives of the utilities will work out details of individual utility relocations on a case-by-case basis.
- The Contractor to the City will locate and protect all temporary storage facilities for petroleum products, other fuels, and chemicals to prevent accidental spills from entering the streams within the project vicinity. Petroleum products will be stored outside of the floodplain. The contractor will clean-up any such spills.
- The Contractor to the City will avoid disposing of construction-related materials into any location where water runoff has the potential to wash pollutants into streams or wetlands.
- The Contractor to the City will identify all borrow and waste sites prior to initiating construction, and obtain all necessary environmental clearances, approvals, and permits for use of all borrow and/or waste sites.

#### 2. PERMITS REQUIRED FOR CONSTRUCTION

Preliminary findings indicate that the only potential jurisdictional "Waters of the U.S." impacted by the proposed project are the streams that would be crossed. Fill material placed below the OHWM of these streams may require a Section 404 permit from the USACE and Section 401 Water Quality Certification from MDNR. If the loss of surface area of water resources is less than ½ acre, a project may qualify for authorization through a Section 404 Nationwide Permit number 14, which authorizes discharges in "waters of the U.S." as a result of linear transportation projects.

The National Pollutant Discharge Elimination System (NPDES) permit (Section 402 of the federal Clean Water Act and the Missouri Clean Water Act), administered by MDNR, requires that slopes and ditches be properly designed to prohibit or reduce erosion.

Portions of the proposed project occur in areas that are designated by FEMA as Special Flood Hazard Areas (SFHA). Any development associated with this project that occurs within a SFHA must meet the requirements of the State of Missouri Executive Order 98-03. This will require a "No-Rise" certification for development in a regulatory floodway, and obtaining a floodplain development permit from SEMA prior to construction or development.

The MDNR also requires a <u>Land Disturbance Permit</u> for projects that disturb an area of one acre or more.

#### F. Public Involvement

The public involvement process began with the development of the City of Wentzville's Comprehensive Plan, *A Community's Vision*, in 1999 and continued through the subsequent studies, including the I-70/US 61 Beltway Corridor Preservation Study and I-70 Break-in-Access/Access Justification Request Study. The public engagement initiated in those previous studies has continued throughout the David Hoekel Parkway EA study process.

The public involvement program for the EA was structured to: 1) maximize effectiveness in communicating with the public, 2) make record of and respond to the key issues and concerns of the various members of the public and stakeholders involved, and 3) achieve awareness of and informed consent on the Preferred Alternative recommended for the project. A wide range of public engagement tools were used for the project including public meetings held at key milestones throughout the project, newsletters/project fact sheets describing the project and its process and project materials posted on the City's web site.

#### 1. PUBLIC MEETINGS

Three public meetings were held throughout the study process to provide the general public an opportunity to review and provide comments on the study. An initial public meeting was held on August 23, 2007 at the Wentzville Law Enforcement Center to introduce the project's goals and purpose and need to the general public, as well as to explain how this project tied in with the previous studies that had been conducted for the David Hoekel Parkway. An open house format was used for the public meeting to allow attendees to review project information and ask questions of the study team representatives.

A second public meeting was then held on December 4, 2007, at the same location to share the project alternatives' development and analysis process with the local community.

The public and agency review and comment period on the Draft EA document began on November 9, 2009 and ended on December 18, 2009. A third public meeting was held during this comment period to discuss the Draft EA and share the Identified Preferred Alternative for the project. The meeting was held on December 8, 2009 at Wentzville Law Enforcement Center. In general, the public comments on the project have been favorable, indicating approval for the project and the Selected Alternative. More detail on the public comments at meetings and through project contact resources can be found in Chapter V, Comments and Coordination.

#### 2. PROJECT CONTACT RESOURCES

In order to provide the general public resources to contact the David Hoekel Parkway study team, a project post office box, telephone hotline and email address were developed. The project contact information for these resources is included below:

David Hoekel Parkway Team P.O. Box 447 Wentzville, MO 63385-0447 (866) 461-0062 DHParkwayEA@hntb.com

Project information is also posted as part of the City of Wentzville's official web site on <u>http://www.wentzvillemo.org/preservation-projects.aspx</u>. Postings included copies of newsletters and public meeting exhibits and the final public meeting transcript, which included relevant project information. A copy of the Draft EA was also posted to the website for public review and comment after FHWA approval of the Draft EA.

### G. Agency Coordination

Resource agency coordination has been ongoing throughout the development of the David Hoekel Parkway EA. A Resource Management Group (RMG) was formed for the project and agency coordination meetings to identify issues and concerns affecting the definition and evaluation of the alternative improvements occurred throughout the study.

On August 23, 2007, an environmental scoping meeting with various agencies and interested groups was held at the Wentzville Law Enforcement Center in Wentzville, Missouri. A second RMG meeting was then held on December 4, 2007, for the EA at the same location. The meeting focused on the alternatives development and screening process for the study. The resource agency's involvement for the meeting provided input on the study alternatives and screening matrix criterion that fell under their area of particular expertise. More detail on these meetings and agency comments on the study can be found in Chapter V, Comments and Coordination.

The FHWA sent correspondence to the following tribes in order to advise them of the proposed roadway and the preparation of the EA, and invite them as consulting parties: Otoe-Missouria Tribe of Indians, Oklahoma; Sac & Fox Nation, Oklahoma; Sac & Fox Nation of Missouri in Kansas and Nebraska; Omaha Tribe of Nebraska; Iowa Tribe of Oklahoma; Osage Tribe, Oklahoma; Iowa Tribe of Kansas and Nebraska; Kaw Tribe of Oklahoma; and Sac & Fox Tribe of the Mississippi in Iowa. Only the Osage Tribe and the Kaw Tribe returned letters indicating their acceptance of the invitation to be a consulting party.

The FHWA extended a special invitation to the USACE to serve as a cooperating agency for the project, which the USACE accepted.

#### H. Public and Agency Review

#### 1. PUBLIC REVIEW

The official comment period for public and agency review of the Draft EA commenced on November 9, 2009 and ended on December 18, 2009. A legal notice was placed in *The Wentzville Journal* on November 11, 2009 and the document was made available for public inspection and copying at the City of Wentzville Public Works Department, Wentzville City Hall,

and Corporate Parkway Library. In addition, the Draft EA was also made available online at: <u>http://www.wentzvillemo.org/preservation-projects.aspx</u>.

As described in Section F, the City of Wentzville conducted an open-house public meeting for the David Hoekel Parkway Draft EA on December 8, 2009 from 4:00 p.m. to 7:00 p.m. at the Wentzville Law Enforcement Center. The purpose of the meeting was to provide the public an opportunity to review and comment on the approved Draft EA and the Identified Preferred Alternative. Sixty people attended the meeting and comment forms were available for those that wanted to leave comments on the project.

Generally, those who attended the meeting were happy with the Identified Preferred Alternative alignment and want to see the project move forward to the design and construction phase. Six written comments were received the night of the public meeting, all of which were requests for pages from the Draft EA document. The requested pages were sent to those individuals. One additional person mailed in their comments to the project mailing address. This comment dealt with concern over additional flooding within the project area.

A public meeting transcript was also developed for the Draft EA final public meeting. The public meeting transcript is summarized in Chapter V, Comments and Coordination, and can be reviewed on the City of Wentzville's website at <u>http://www.wentzvillemo.org/preservation-projects.aspx</u>.

#### 2. AGENCY REVIEW

Two agencies provided comment letters during the public and agency review period: the Missouri Federal Assistance Clearinghouse and the Missouri Department of Natural Resources. Neither of the agencies provided substantive comments that would alter the recommendation of Alternative 2 as the Selected Alternative for the project. The two agency letters, a summary of public and agency Draft EA review comments and study team responses to the comments can be found in Chapter V, Comments and Coordination. The two agency comment letters can also be found in Appendix I.

Evaluation Factors	Units	No-Build	Alternative	Alternative	Alternative	
			1	2	3	
Engineering Issues						
Compliance with Purpose & Need	Yes/No	No	Yes	Yes	Yes	
Project Length	Miles	N/A	6.93	6.30	6.82	
Project Construction Costs (2013 Dollars)						
Roadway Construction (+ Interchanges I-70 and US 61	\$ Millions	\$0.0	\$61.0	\$48.6	\$60.8	
Bridge/Structures	\$ Millions	\$0.0	\$4.1	\$6.1	\$7.6	
Right-of-Way Acquisition	\$ Millions	\$0.0	\$11.9	\$7.0	\$8.7	
Miscelaneous Costs	\$ Millions	\$0.0	\$7.2	\$5.5	\$7.6	
Total Project Cost Estimate (+ 20% Contingency)	\$ Millions	\$0.0	\$97.2	\$78.1	\$98.4	
Constructability Issues						
Difficulty of Construction	Rating	1	4	6	4	
Traffic Accommodation During Construction	Rating	1	4	2	2	
Access Impacts to Adjacent Properties	Rating	0	4	2	6	
Impacts to Existing Utilities	Rating	0	4	6	6	
Environmental Issues	liding		-			
Prime Farmland Impacts	Acres	0	Q /	0.0	15.3	
Streem Impacts	Acres	0	9.4	9.9	15.5	
Stream impacts	Linear Feet	0	2,572	2,043	3,091	
Stream Crossings	NO.	0	9	11	15	
Wetland Impacts (NWI-Mapped)	Acres	0	0.4	0.6	0.6	
Pond Impacts (jurisdictional only)	Acres	0	2.22	0	0	
Floodplain Impacts	Acres	0	18.6	11.0	30.5	
Forest Impacts (wooded remnants)	Acres	0	37.7	40.3	41.9	
High Quality Natural Community Impacts	Acres	0	0	0	0	
Threatened & Endangered SpeciesCritical Habitat	No. Species	0	0	0	0	
Cultural Resources (Adverse Effect)						
NRHP Listed Architectural Resources	No.	0	0	0	0	
NRHP Listed Archeological Sites	No.	0	0	0	0	
NRHP Eligible Architectural Resources	No.	0	0	0	0	
NRHP Eligible Archeological Sites	No.	0	0	0	0	
Hazardous Material Sites (Med. or High Contamination)	No.	0	0	0	0	
Social and Economic Issues						
Right of Way Acquisition Impacts						
Single-Family Residential (Total Impacts)	No.	0	18	3	4	
Single-Family Residential (Partial Impacts)	No.	0	30	13	16	
Multi-Family Residential (Apts.) (Total Impacts)	No. Units	0	0	0	0	
Multi-Family Residential (Apts.) (Partial Impacts)	No.	0	1	1	0	
Businesses (Partial Impacts)	No.	0	3	1	1	
Public/Community Facilities (Total Impacts) *	No.	0	0	0	0	
Public/Community Facilities (Partial Impacts) *	No.	0	4	3	0	
Parkland Impacts - Section 4(f)/6(f)	Acres	0	0.2	0	0	
Minority or Low-Income Community Impacts	Rating	1	1	0	1	
Neighborhood/Community Cohesion	Rating	1	6	0	0	
Consistency with Community/Land Use Plans	Rating	6	6	0	6	
NOTE: Impacts are based on a 200-foot wide corridor for each alternative, and The 200-foot corridor includes roadway travel lanes, sidewalks on each side, ar Includes churches, cemeteries, schools and other public/semi-public propertie Selected Alternative	impacts could be n nd temporary const s. Parkland impact	ninimized as the ruction easemen s are given sepa	alternative movës ts on each side. rately.	forward into desi	gn.	
Rating Scale: 1 Low Impact 2 Low/Moderate Impact 3 Moder	ate Impact 🛛	Moderate/High	Impact 🧕 H	igh Impact		
Wentzville e Crossroads Of The Nation	David Hoekel Parkway E Reasonable Alternatives Screening Matrix					



## CHAPTER I Purpose and Need for Action

## A. Project Overview and Background

This chapter of the Environmental Assessment (EA) document provides a description of the purpose and need for the proposed David Hoekel Parkway project and the transportation-related issues addressed by the project.

The City of Wentzville, Missouri, in coordination with the Missouri Department of Transportation (MoDOT), and the Federal Highway Administration (FHWA), proposes to construct a new roadway connecting I-70 and US 61 in St. Charles County. The City has designated this project as the David Hoekel Parkway. As proposed by the City's Comprehensive Plan, the project would function as a four-lane divided arterial roadway with controlled access. This EA complies with the National Environmental Policy Act (NEPA) and evaluates viable alternatives developed to satisfy the purpose and need of the proposed project. The study area for the project is located within St. Charles County on the northwestern corner of the greater St. Louis metropolitan area, as shown in Figure I-1.



#### Figure I-1: Project Location Map

#### 1. PROJECT LIMITS AND TERMINI

The proposed David Hoekel Parkway project would provide a new four-lane divided roadway with controlled access on the western half of the City of Wentzville between I-70 and US 61. With an anticipated posted speed of 45 mph and 2040 ADTs in the range of 16,000 – 25,000 vehicles per day, the project would be designed to move higher volumes of traffic through the city, as well as to provide connectivity to the local and regional roadway network. At the same time, its design would include aesthetic considerations such as sidewalks, bicycle and pedestrian paths or lanes and landscaping to fit with the character of the study area. The study corridor is approximately 6.9 miles in length. About one mile of the study corridor to the east of US 61 is located within the city limits of Flint Hill, Missouri. The project limits are shown on the study area map in Figure I-2.

The logical termini for the project are shown to encompass the intersection just south of I-70 at Jackson Road/S. Point Prairie Road and the proposed tie-in just east of US 61 at Route P, in order to provide local access and connectivity within Wentzville and Flint Hill.



Figure I-2: Study Area Map

As part of the project, a new interchange connection would be located at I-70 and the proposed David Hoekel Parkway study corridor. This new interchange would be located halfway between the Route W/T interchange and the Wentzville Parkway interchange, maintaining over two miles spacing between each interchange. A new interchange connection would also be located at US 61 and the study corridor for the project near the existing at-grade crossings with Peine Road and Route P. Other access points along the study corridor would be provided at key roadways at-grade through signalized or stop-controlled intersections.

#### 2. PROJECT BACKGROUND

The proposed roadway location for the David Hoekel Parkway was first conceived within several previous plans and studies conducted by the City of Wentzville. Each of these studies included public involvement activities to get public input on the proposed project. The City first identified the need for a new roadway corridor for the western portion of the City in the City's Comprehensive Plan in 1999. In 2001 the City studied this potential new corridor further by conducting the I-70/US 61 Beltway Corridor Preservation Study. The study area for the Corridor Preservation Study primarily focused on connections between I-70 and US 61 within the western portion of the City of Wentzville. The study included recommendations for an Identified Preferred Alternative and defined the footprint for the corridor, allowing the City to coordinate with proposed and planned development to preserve right-of-way for a future roadway.

Following the outcomes of the Corridor Preservation Study, the City prepared an I-70 Break-in-Access (BIA) Study, also referred to as an Access Justification Request (AJR), for the proposed project's connection with I-70. This study analyzed the effect of adding a new interchange to the I-70 corridor within Wentzville. The City completed the initial BIA/AJR study in November 2004 with a recommendation to construct a new interchange connection at the proposed location. In 2006, based on feedback received from MoDOT, the City developed a VISSIM traffic supplement to the original 2004 BIA/AJR to provide more detailed traffic simulation analysis for the project, and specifically for the weigh station located within the study limits. In 2006, MoDOT reviewed the revised BIA/AJR and traffic supplement and provided a letter of conditional approval of the new I-70 interchange access to the City of Wentzville. At that time, the FHWA reviewed the BIA/AJR and its traffic supplement, but a decision was made that no approvals of the BIA/AJR could be granted prior to completion of the NEPA process. Subsequent to this decision, the City of Wentzville, in coordination with MoDOT and FHWA, initiated the David Hoekel Parkway EA.

This EA represents the next step in the project development process. The EA document builds upon the analysis and stakeholder coordination that was initiated within the previous studies. The City of Wentzville is participating in the environmental documentation for the EA with the Missouri Department of Transportation (MoDOT) and the Federal Highway Administration (FHWA). Although the ground work has been done by the City of Wentzville in previous studies to preserve a corridor, this EA document will evaluate the need for, location, and roadway configuration to determine the least environmentally damaging alternative and whether it is appropriate for federal funding.

In parallel with the EA, the BIA/AJR has been updated in 2014 to be consistent with the Selected Alternative for the EA and meet the most recent federal requirements of the AJR process. The revised BIA/AJR received conceptual approval from the FHWA on April 2, 2014 and the final approval will be concurrent with the completion of this National Environmental Policy Act (NEPA) process for the David Hoekel Parkway project and it's Finding of No Significant Impact (FONSI).

### B. Purpose and Need

The purpose of the David Hoekel Parkway is to provide the community with a safe and efficient roadway that is both cost-effective and environmentally sound. The new connection will:

- *Improve access and connectivity* between I-70 and US 61 in western Wentzville and the St. Louis region within St. Charles County,
- **Reduce congestion** and improve the travel capacity in the study area to meet future travel demands,
- *Improve traffic safety* to help address high crash locations within the study area.
- **Support local and regional growth** while addressing anticipated increases in local and regional travel demand and travel times that will accompany population and housing growth,
- **Support sustainable development** by providing and coordinating transportation connections with planned and proposed development, and
- **Promote a multimodal transportation system** by ensuring the project accommodates the needs of other transportation modes.

The goals identified for the project are consistent with the goals for the St. Louis region outlined within the East West Gateway Council of Government's (EWGCOG) Regional Transportation Plan 2040.

#### 1. IMPROVE ACCESS AND CONNECTIVITY

As envisioned by the City of Wentzville in their Comprehensive Plan, the David Hoekel Parkway would serve as an outer loop around the current and future city limits of Wentzville connecting I-70 to US 61. Once open to the public, it would serve the local traffic accessing the northwest land uses of Wentzville, but it would also carry a regional significance by providing new access between I-70 and US 61. In this manner, regional traffic has more access options throughout the region and system redundancy for incident management.

The project would also provide a new system linkage between residential housing in the Wentzville area of St. Charles County, and jobs and activity centers in the St. Louis region and central business district (CBD). An additional access option would help address anticipated increases in system congestion and commute times to and from Wentzville. Traffic is projected to grow by approximately 1.8 percent per year through 2040 on I-70, and three percent per year on US 61 within the study area through 2030, and then transition to more modest growth of 0.5 percent per year between 2030 and 2040.

In addition, the population of Wentzville has more than quadrupled between the U.S. Census 2000 and 2010, from a population of nearly 7,000 to approximately 29,000 people, making Wentzville one of the fastest growing cities in Missouri. In Section B.2, Reduce Congestion, the effects of these growth projections and projected traffic trends on the existing roadway network and commuting times are described.

Additionally, limited availability and affordability of housing options near major employment centers and major activity centers have led to the growth and expansion of the metropolitan area outside the St. Louis inner core, including growth within St. Charles County and the local Wentzville area. According to American Community Survey estimates for 2006-2010, about 71,000 St. Charles County resident workers commuted to St. Louis County for work. In St. Charles County, about 21 percent of workers traveled between 30 and 40 minutes to work,

compared to about 16 percent of workers statewide. As a result, there is a need to provide safe and efficient access to-and-from a number of major employment and activity centers to housing located within the Wentzville area of St. Charles County.

Major employment centers within St. Charles County are located along the US 40/I-64, I-70 and Route 94 corridors. The US 40/I-64 corridor consists mainly of high technical/technological businesses, as well as the GM plant located within Wentzville at the US 40/I-64/I-70 interchange. The I-70 corridor is mainly comprised of industrial employment centers on the north side of I-70, especially along the Route 370, Route 79 and Route A/Wentzville Parkway corridors. The south side of the I-70 corridor and the Route 94 corridor has heavy commercial and retail centers. Moving beyond St. Charles County to St. Louis County and the urban core of St. Louis, the major employment centers continue along the I-70 and US 40/I-64 corridors, as well as around the I-270 and I-44 corridors. Major employment centers for the region include the Earth City area and Boeing area located in close proximity to the I-70/I-270 connection; the Westport area located just south of this connection along I-270; and the Chrysler/Maritz/Fenton area located northwest of the I-270/I-44 connection. Other commercial and business employment centers include the Clayton and St. Louis CBD.

#### 2. REDUCE CONGESTION

It is an important goal of the proposed project to help alleviate anticipated congestion levels in the Wentzville area and provide a more efficient transportation network for the City of Wentzville and the surrounding region. Today, there are a limited number of transportation corridors that provide traveler mobility through Wentzville. As discussed above, Wentzville is one of the fastest growing cities in Missouri and the expectation is that existing corridors will be at or over capacity by the year 2040, which is the design year for this project.

Currently I-70 has four interchanges in the Wentzville area including Route A, US 61, Route Z, and Wentzville Parkway, as well as the Route W/T interchange in Foristell. I-70 is currently four lanes west of US 61; however I-70 is planned to be widened through the study area to six lanes as part of MoDOT's I-70 First and Second Tier Environmental Impact Statement (EIS), as well as within EWGCOG's *Regional Transportation Plan 2040*.

The conclusions from the I-70 Second Tier EIS were reevaluated within a Supplemental EIS between 2007-2009. The I-70 Supplemental EIS (Record of Decision in August 2009) was conducted by MoDOT to consider the potential of constructing truck-only lanes on I-70 between Kansas City and St. Louis to separate heavy trucks from passenger vehicles. This could result in the existing I-70 corridor through Wentzville being widened in the future to four lanes each direction – two lanes for trucks and two lanes for passenger vehicles each direction. Due to funding constraints, MoDOT is currently evaluating if the I-70 corridor would ultimately be widened with dedicated truck lanes or a general-capacity 6-lane widening improvement. Traffic analysis conducted in this EA assumes that I-70 will be widened to six lanes by 2040, which is consistent with the EWGCOG's *RTP 2040* fiscally constrained project list for the region, as well as the decisions made by FHWA and MoDOT within the I-70/David Hoekel Parkway AJR for the 2040 No-Build Alternative. However, a wide enough potential impact area was evaluated within the impact analysis in the EA in case a decision is made at a future time by MoDOT to move forward with the truck-only lanes concept rather than the six lane widening concept for I-70.

US 61, north of I-70, is a partially controlled four-lane expressway with some at-grade access. South of I-70, US 61 shares its alignment with I-64/US 40. Two interchanges are located along US 61 within the study area at I-70 and Route A/Wentzville Parkway. The US 61 corridor within Wentzville is not being considered for future widening by MoDOT at this time. However, within its long-term planning for the corridor, MoDOT is planning to convert some existing at-grade crossings along the corridor to grade-separated interchanges, J-turns or other geometric
improvements to address operational and safety concerns. The US 61/David Hoekel Parkway/Route P crossing location is one of the locations where MoDOT has committed to construct a grade-separated interchange as part of a cost share agreement between MoDOT, St. Charles County and the City of Wentzville.

The mainline and interchanges along I-70 within St. Charles County, especially the I-70/Wentzville Parkway interchange, are experiencing increased traffic growth and travel demand and are projected to be congested (e.g., interchange movements with level of service E or F operating conditions during the A.M. or P.M. peak hour) by year 2020 if no other improvements are made. In addition, the US 61 corridor within the Wentzville area is beginning to experience system congestion for traffic flow in and out of Wentzville due in part to the at-grade crossings located along the corridor. The existing at-grade crossings on US 61 at both Peine Road and Route P are operating at congested (level of service F) conditions today and will continue to worsen through 2040 if no improvements are made. By 2040, the US 61 corridor is projected to be operating near or at capacity on most segments and experiencing delays during the peak periods of the day.

The existing 2012 two-way average daily traffic (ADT) volumes (MoDOT, 2012) and forecasted volumes for 2040 at key locations along I-70 and US 61 within the general limits of the David Hoekel Parkway study area are shown in Table I-1. The study team prepared the 2040 travel demand forecasts for I-70 and US 61, in coordination with the EWGCOG's regional travel demand model, MoDOT's traffic projections from the I-70 Second Tier and Supplemental EIS and the I-70/David Hoekel Parkway AJR Study. Traffic projections were found to compare favorably among these data sources for the projections.

It can be seen in Table I-1 that traffic on I-70 is anticipated to grow by over 60 percent at the proposed I-70/David Hoekel Parkway interchange location through year 2040. US 61 traffic is anticipated to grow by roughly 30% between Route A and Route P (US 61/David Hoekel Parkway interchange location) through 2040. With the anticipated traffic growth rates intensifying existing traffic conditions, increased travel demand is expected through the year 2040 on these connecting corridors to the proposed project.

Location	2012 ADT	Projected 2040 No Build ADT
I-70 Corridor		
I-70 west of Route W/T	46,757	82,778
I-70 between Route W/T and Wentzville Pkwy.	51,588	84,666
I-70 between Wentzville Parkway and Route Z	72,154	100,829
I-70 between Route Z and Route 61	83,439	112,025
I-70 east of Route 61	74,679	110,722
US 61 Corridor		
US 61 between Route P and Route A	47,444	60,966
US 61 between Route A and I-70	48,844	69,585
US 61 south of I-70	46,451	73,790

# Table I-1: Existing (2012) and Forecasted (2040) Daily Two-Way Traffic Demand

Source: Existing 2012 ADT volumes provided by MoDOT.

Projected 2040 ADT volumes were developed by the study team using the East-West Gateway Council of Governments' travel demand model, the I-70/David Hoekel Parkway AJR Study, and the I-70 Second Tier and Supplemental EIS.

Traffic volumes are projected to grow by approximately 1.8 percent per year through 2040 on I-70, and 3.0 percent per year on US 61 within the study area through 2030, and then transition to more modest growth of 0.5 percent per year between 2030 and 2040.

The study team completed a Level of Service (LOS) analysis of roadway capacity and operations along the I-70 and US 61 corridors and at interchange ramps to assess existing and future projected levels of congestion. Traffic planners and engineers use LOS as a qualitative measure to characterize operational conditions and traveler perception of ease of travel. Traffic conditions are graded on a scale of LOS A through F. LOS A is the most favorable driving condition, LOS D or E is considered acceptable by MoDOT during peak travel times in urban settings, and LOS F represents a failure of traffic operations. Table I-2 provides a description of LOS characteristics.

			-
Level of Service	Characteristics	Level of Service	Characteristics
	Free flow; low volumes and high speeds; most drivers can select own speed		Approaching unstable flow; lower speeds
	Stable flow; speeds somewhat restricted by traffic; service volume used for design of rural highways		Unstable flow; low, varied speeds; volumes at or near capacity
	Stable flow; speed controlled by traffic; service volume used for design of urban highways		Forced flow; low speeds to stoppages; volume exceeds capacity

 Table I-2: Level of Service Characteristics for Freeways

Source: Highway Capacity Manual 2000, Transportation Research Board.

Table I-3 shows the I-70 mainline and interchange ramp locations and their associated levels of service in the existing year 2012 and the forecasted year 2040. The analysis reflects what is considered a No-Build condition for the study area, meaning it looks at what future traffic operational conditions are projected to be in the study area if the proposed project was not built. The LOS analysis looked at a future No-Build scenario where only committed (funded) projects are constructed by 2040. For the No-Build condition, the I-70 corridor was assumed to be widened to six lanes and the I-70 truck weigh station was assumed to remain open between Foristell and Wentzville, as shown in the EWGCOG's 2040 RTP.

It can be seen in Table I-3 that the I-70 corridor through the study area operates in good to fair levels of service today and through the design year 2040 during the peak periods if the I-70 corridor is widened to six lanes by 2040. However, If I-70 is not widened, there are projected to be traffic operational problems at the Wentzville Parkway interchange and along the I-70 corridor prior to 2040, which could impact regional and local traffic movements in the City of Wentzville. Increased commercial and business development at the Wentzville Parkway interchange and significant population growth within the City of Wentzville continues to place a greater traffic burden on the Wentzville Parkway interchange, irrespective of the I-70 corridor.

I-70 Location	Existing (2012)	No-Build (2040) 6-Lane I-70
	AM/PM	AM/PM
Eastbound		
EB W/T off-ramp	A / B	C / C
EB W/T off-ramp to W/T on-ramp	A / B	C/C
EB W/T on-ramp to weigh station off-ramp	A / A	B / B
EB Weigh station off-ramp to weigh station on-ramp	A / A	C / C
EB Weigh station on-ramp	A / A	B / B
EB Weigh station on-ramp to Wentzville Parkway off-ramp	B / B	C / C
EB Wentzville Pkwy off-ramp	A / B	C / B
EB Wentzville Pkwy off-ramp to Wentzville Pkwy on-ramp	A / A	C / B
EB Wentzville Pkwy on-ramp	B / B	E/D
Westbound		
WB Wentzville Pkwy off-ramp	B / D	C / F
WB Wentzville Pkwy off-ramp to Wentzville Pkwy on-ramp	A / B	B / C
WB Wentzville Pkwy on-ramp	A / B	B / B
WB Wentzville Pkwy on-ramp to Weigh Station off-ramp	A / B	C / C
WB Weigh station off-ramp	A / B	B / C
WB Weigh station off-ramp to weigh station on-ramp	A / B	B / B
WB Weigh station on-ramp	A / A	B / B
WB Weigh station on-ramp to W/T off-ramp	A / B	B / B
WB W/T off-ramp	A / B	B / B
WB W/T off-ramp to W/T on-ramp	A/B	С/В
WB W/T on-ramp	A / B	B / B

Table I-3: I-70 Mainline and Interchange Ramp Level of Service(Existing 2012 and Projected 2040)

Source: Study team VISSIM analyses for I-70AJR and EA.

Indicates at capacity during the peak times of the day.

Indicates failing during the peak time of the day.

The I-70/Wentzville Parkway interchange is heavily used today by travelers due to its central location in the City of Wentzville and due to new commercial and retail development near the interchange. The study team expects conditions at the freeway, ramps, and intersections at this interchange to worsen drastically by year 2040. By 2040, the Wentzville Parkway interchange is projected to be operating at capacity (LOS E) for the eastbound on-ramp in the morning and over capacity (LOS F) for the westbound off-ramp in the afternoon. Improvements such as additional turn lanes were considered at the Wentzville Parkway and Route W/T interchanges. While the congestion at Route W/T may be mitigated with the additional local improvements, the congestion at the Wentzville Parkway cannot be reasonably reduced to meet the purpose and need and improve area operational conditions during the peak hours. The westbound ramp and ramp terminal at the I-70/Wentzville Parkway interchange are unable to accommodate the traffic demand, resulting in congestion on I-70. Even with three right turn lanes, two left turn lanes,

and a two-lane exit, the off-ramp still backs up onto the I-70 mainline in the PM peak and results in queues for more than one mile (approximately 5,800 feet). It is anticipated that this congestion would persist for approximately three hours during the daily PM peak period.

Table I-4 shows the level of service results for the US 61 corridor in the existing year 2012 and the forecasted year 2040. Existing 2012 design hour data was provided by MoDOT for calculating the design hour LOS. Design hour is the peak hour on an average day in the peak direction of traffic flow. Roadways and traffic controls should be designed to adequately serve the design hour traffic volume where practicable.

US 61 Location	Existing (2012)	No-Build 4-Lane US 61 (2040)
	Design Hour	Design Hour
US 61 Mainline		
NB US 61 between Route P and Route A	С	D
SB US 61 between Route P and Route A	С	D
NB US 61 between Route A and I-70	С	E
SB US 61 between Route A and I-70	С	E
NB US 61 south of I-70	С	E
SB US 61 south of I-70	С	E

#### Table I-4: US 61 Mainline Level of Service (Existing 2012 and Projected 2040)

Source: Study team analyses for US 61 mainline; data provided by MoDOT and the East-West Gateway travel demand model.

Indicates at capacity during the peak times of the day.

It can be seen that the US 61 Corridor operates with acceptable levels of service on the mainline for existing conditions, but is approaching (LOS D) or at-capacity (LOS E) by year 2040.

# 3. IMPROVE TRAFFIC SAFETY

Crash statistics for I-70 and US 61 within the study area were reviewed over the latest available five-year period from 2007 to 2011. Crash information for this analysis was obtained through MoDOT's traffic management database and reports. Please review the traffic accident and safety data disclaimer in the Appendix K. Table I-5 shows the number of crashes on the I-70 and US 61 corridors by crash type. MoDOT categorizes their crash information by property damage only, injury and fatal crash types. Ten fatal crashes occurred in the study area over the five-year period. The greatest number of crashes occurred on I-70 between the Route W/T and Wentzville Parkway interchanges, but it should be noted that this is also the longest segment evaluated within the analysis. According to MoDOT's crash statistics, out of control, rear end, and passing were the most frequent types of crashes on I-70 and on US 61.

The US 61 Corridor also experienced 17 crashes related to turning movements and speed differentials at the at-grade crossings of Route P and Peine Road. Of these crashes, nine resulted in injuries, including one fatal crash. This indicates that the at-grade crossings on US 61 at Route P and Peine Road are safety issues for the study area that could be improved by a grade-separated interchange at US 61 and the proposed project. While crashes could still occur at interchange ramps, the severity of those crashes would likely be lessened due to the interchange because it will eliminate the at-grade crossings that exist today. The at-grade

crossings result in speed differentials between crossing vehicles and vehicles going through at speeds of 60 to 70 miles per hour on US 61. Additionally, due to the traffic volumes on US 61, especially during the a.m. and p.m. peak periods of the day, there are insufficient gaps for safe crossing of US 61.

Mainline Section	Property Damage	Injury	Fatal	Total
I-70 Corridor	EB/WB	EB/WB	EB/WB	EB / WB
I-70 Between Route W/T and Wentzville Parkway	136/172	32/28	2/3	170/203
I-70 Between Wentzville Parkway and Route Z	54/69	18/11	0/1	72/81
I-70 Between Route Z and US 61	73/34	15/14	2/1	90/49
US 61 Corridor	NB / SB	NB / SB	NB / SB	NB / SB
US 61 Between Route P and Route A	33/26	9/7	1/0	43/33
US 61 Between Route A and I-70	25/44	9/16	0/0	34/60
Total	666	159	10	835

## Table I-5: Existing Total Number of Crashes (Years 2007-2011)

Source: MoDOT crash data for 2007 to 2011

A review of historical crash information from the I-70 EA and AJR studies was also conducted to see what the trend in crashes has been for the study area along I-70. Table I-6 shows that the total number of crashes, including fatalities, increased during the mid-2000s in comparison with the previous five-year period. From 2007 to 2011, the total number of crashes decreased, but the number of fatal crashes tripled from the previous five-year period.

Years	Property Damage	Injury	Fatal	Total
1999-2003	642	172	1	815
2003-2007	707	151	3	861
2007-2011	538	118	9	665

#### Table I-6: Historical Crashes on I-70 (Years 1999-2011)

Based on the crash data presented in Table I-5, crash rates were calculated as shown in Table I-7. The five-year statewide average crash rate on similar urban interstate facilities is 121.87 for interstates and 147.86 for US highways, per hundred million vehicle miles traveled (MoDOT 2012). Crash rates are above the five-year statewide average rate for half of the sections along the I-70 mainline, particularly for the section between Wentzville Parkway and Route Z, which includes the heavily-utilized east-facing Wentzville Parkway ramps.

The US 61 corridor is below the statewide average rate; however, as stated above, a high percentage of the crashes are injury or fatal severity crashes due in large part to the conflicts with the existing at-grade crossings of US 61. In addition, MoDOT has established a *travel safe zone* along a five-mile section of US 61 between Route A and Dietrich Road near the Lincoln County line to promote greater awareness among travelers of the corridor's expressway configuration and fluctuating travel speeds due to the entering and exiting of vehicles at the at-grade crossings. This has helped improve the safety awareness of the US 61 corridor since the zone was established.

If the existing conditions are perpetuated, maintaining the existing transportation system would expose motorists to the same crash risk or rate that currently exists. The maintenance of the existing freeway "as is" is called the No-Build Alternative. Because the No-Build Alternative would keep the facility as is, no substantial improvements to safety would occur to reduce the crash rates. Because the rate at which the crashes occur remains the same as existing, but the amount of traffic using the facility increases, the total amount of crashes would be expected to increase over time for the No-Build Alternative.

Mainline Section	Crash Rate (HMVMT)	Crash Rate (HMVMT)	Compared to Statewide Average Rate	Compared to Statewide Average Rate
I-70 Corridor	EB	WB	EB	WB
I-70 Between Route W/T and Wentzville Parkway	94	112	0.8	0.9
I-70 Between Wentzville Parkway and Route Z	160	175	1.3	1.4
I-70 Between Route Z and US 61	204	114	1.7	0.9
Total I-70	123	123	1.0	1.0
US 61 Corridor	NB	SB	NB	SB
US 61 Between Route P and Route A	60	46	0.4	0.3
US 61 Between Route A and I-70	79	132	0.5	0.9
Total US 61	67	79	0.5	0.5

# Table I-7: Crash Rates for I-70 / US 61 MainlinesExisting Average Annual Rate of Crashes

(2007 – 2011)

Statewide Average equals 121.87 for interstates and 147.86 for US highways in urbanized areas. Number of crashes per hundred million vehicle miles traveled (HMVMT). Source: MoDOT, 2012.

# 4. SUPPORT LOCAL AND REGIONAL GROWTH

Planners expect the recent trend of aggressive population, housing and traffic volume growth to continue within the study area. St. Charles County is one of the fastest growing counties in the St. Louis metropolitan area, as well as in the state of Missouri with an average of 2.7 percent annual growth between 2000 and 2010 – almost four times the annual state percent increase. At the same time, the City of Wentzville has experienced significant growth, growing from a city of approximately 7,000 to over 29,000 between 2000 and 2010 (over 320 percent growth). Population and housing projections show that this trend will continue as the metropolitan area continues to expand outward and the housing demand continues to be strong. There is a need from both a local and regional standpoint to plan for the increased travel demand and travel times that will accompany this population and housing growth and provide new transportation options to accommodate this growth.

#### 5. SUPPORT SUSTAINABLE DEVELOPMENT

The Selected Alternative being considered in this EA document is building upon local planning efforts identified in the comprehensive plans of the City of Wentzville and the City of Flint Hill. Within their plan, Wentzville has developed a Thoroughfare Plan and Transportation Master Plan which identifies their ultimate roadway network. The City of Flint Hill has also developed a Transportation Plan in conjunction with their comprehensive plan. The Selected Alternative under consideration in this EA is considered to be the most vital element of these plans.

Residential and commercial development is planned within the majority of the study area. The northwest region is primarily planned for residential while the City plans for commercial uses on the north and south sides of I-70 within the southern portion of the study area and on each side of Meyer Road. Commercial use is also planned adjacent to the proposed US 61 interchange and on the east side of US 61, in the northeast portion of the study area (See Exhibits III-2 and III-3 in Chapter III). These plans and new land uses transform the predominately agricultural landscape and will require transportation access. It is important that the Selected Alternative be coordinated with the land use plans identified for the area and be developed in a way that supports managed and sustainable development for the area.

The City's proposed project has been coordinated with land developers in the Wentzville area since the identification of the potential project in the I-70/US 61 Beltway Corridor Preservation Study. Land developers, especially new residential subdivisions, have coordinated with the City's proposed plans for a future roadway between I-70 and US 61 within the study area to enable it to serve the planned development. The proposed project is needed in the western portion of the City of Wentzville to support the ongoing and planned development.

St. Charles County has coordinated with the City of Wentzville regarding the City's transportation and land use needs. The County's Master Plan contains the proposed roadway and acknowledges the population boom and land use changes Wentzville is projecting to undergo over the next ten to twenty years.

# 6. PROMOTE A MULTIMODAL TRANSPORTATION SYSTEM

The I-70 and US 61 corridors have statewide and national significance. This is a key reason why the City of Wentzville has adopted as their motto, *Crossroads of the Nation*. These facilities currently carry heavy truck traffic, with roughly 20 percent of I-70 traffic and 15 percent of US 61 traffic made up of heavy trucks on an average day in the study area. The David Hoekel Parkway is being considered in an area planned primarily for residential, with some commercial development, and has not been envisioned as a new freeway connection. Truck traffic on the proposed project is projected to be approximately five percent or less of the vehicle mix. While it is not the principal purpose of the proposed David Hoekel Parkway to carry truck traffic, it is important to ensure that any proposed new corridor would be designed and constructed to accommodate trucking and freight traffic through the area if needed to provide for incident management between I-70 and US 61.

At the same time, a new roadway connection would need to coordinate with planned and proposed transit and bicycle and pedestrian lanes/paths in the study area. Metro owns and operates the St. Louis region's public transportation system. The Metro System includes MetroLink, the region's light rail system; MetroBus, the region's bus system; and Metro Call-A-Ride, a paratransit van system serving the needs of the disabled and elderly. At the present time there are no bus or light rail routes available for St. Charles County in the Wentzville area. The MetroLink's most western connection is the Lambert-St. Louis International Airport and there are currently no plans to expand it to St. Charles County. There are currently no MetroBus or St. Charles Area Transit (SCAT) routes available to serve the study area. However, MetroBus does have plans to include a new fixed bus trunk line along the I-70 corridor to Wentzville in the future. In addition, the East West Gateway has also developed a 2007 report for St. Charles County that discusses future plans for local cities, such as Wentzville, to develop a city bus system like SCAT for their own areas that could serve local city transit needs and tie into the proposed MetroBus trunk line on I-70 to provide regional connectivity. This would provide the Wentzville area the opportunity to be part of a linked transit system for St. Charles County. If, in the future, Metro or SCAT expanded transit service to include the proposed David Hoekel Parkway, the project will be able to accommodate transit needs. The project is proposed to have signalized intersections that allow for the integration of transit stops.

The City of Wentzville Parks and Recreation Department has an Open Space Master Plan and St. Charles County has a Trails and Greenways Development Plan and map that include the project's study area. The Trails and Greenways Plan shows "planned" and "possible" bicycle and pedestrian lanes and separated paths in the study area that could parallel a new roadway corridor (See Exhibit III-1 in Chapter III). It is a component of the Purpose and Need for this project to coordinate with these planned and possible bicycle and pedestrian facilities to offer multimodal options to users as part of the project.

# C. Related Plans or Studies

# 1. WENTZVILLE COMPREHENSIVE PLAN

The City of Wentzville completed the Wentzville Comprehensive Plan, *A Community's Vision*, in 1999. The plan was a twenty-year plan, designed to be updated bi-annually to keep information current, for the future development of Wentzville. Its primary focus included making decisions on future land uses, determining the transportation networks needed to access future land uses, and providing essential utility systems/infrastructure to service land use activities. Within the plan, the City developed a Thoroughfare Plan and Transportation Master Plan that included the concept for the David Hoekel Parkway. Additionally, the City's land use plan showed primarily low to medium density residential use along the study area with some higher density residential and commercial development at the I-70 interchange location and the intersection with Meyer Road.

The 1999 Plan guided the development of Wentzville through October of 2001. In 2001, the plan was updated by an "Amendatory Supplement" and then again in 2006, 2010, 2012 and 2013. These plans are intended to guide the future development and redevelopment of Wentzville. The proposed David Hoekel Parkway project was reinforced in this plan update and the City considers the proposed project to be the most vital element of its Thoroughfare Plan.

In August of 1999, the City of Flint Hill completed a Comprehensive Plan, which was updated in 2009. The plan includes a Transportation Plan that identifies the proposed David Hoekel Parkway, and a Future Land Use Plan that shows mostly commercial and industrial use along the proposed project within Flint Hill (east of US 61).

# 2. I-70/US 61 BELTWAY CORRIDOR PRESERVATION STUDY

In 2001, the City of Wentzville completed a Corridor Preservation Study for a proposed beltway between I-70 and US 61. In the past, the City had experienced difficulties associated with the implementation of new transportation facilities in areas with recent or planned residential and commercial development. For this reason, the City decided to use a corridor preservation process to coordinate plans for a future roadway corridor with development plans for the area. The City coordinated plans for the corridor identified within the I-70/US 61 Beltway Corridor Preservation Study with land use planning by prohibiting and/or minimizing development in the anticipated corridor footprint.

The goals of the *I-70/US 61 Beltway Corridor Preservation Study* included:

- Identifying and developing technically sound solutions to the City's future transportation needs,
- Defining the corridor necessary for the future construction and operation of the identified solution(s),
- Preserving said corridor prior to future development, and
- Engaging citizens of Wentzville as project stakeholders throughout the study process.

The City conducted the Corridor Preservation Study in two phases. Phase 1 included the corridor from the southern terminus near I-70 to Meyer Road. Phase 2 included the corridor from Meyer Road to the northern terminus near US 61. The City considered several potential alignment alternatives within each corridor phase. Based on comparative analyses and public input, the City chose a preferred corridor and interchange type at I-70. The City of Wentzville Board of Alderman passed a formal resolution supporting the project, including a resolution in 2006 naming the roadway to memorialize a deceased Alderman.

This EA represents the next step in the project development process for the proposed David Hoekel Parkway envisioned in the City's Comprehensive Plan and Corridor Preservation Study. The EA document will build upon the analysis and stakeholder coordination that has been initiated within the previous studies.

# 3. I-70 BREAK-IN-ACCESS STUDY/ACCESS JUSTIFICATION REQUEST

Following the recommendations of the Corridor Preservation Study, the City prepared the I-70 Break-in-Access (BIA) Study for the project's Access Justification Request (AJR) with I-70. This study analyzed the effect of adding a new interchange to the I-70 corridor within Wentzville between the Route W/T interchange and the Wentzville Parkway interchange. The City completed the BIA/AJR study in November 2004 with a recommendation to construct a new interchange connection at the proposed location.

In 2006, based on feedback received from MoDOT, the City developed a VISSIM traffic supplement to the original 2004 BIA/AJR to provide more detailed traffic simulation analysis for the project and specifically for the I-70 weigh station located within the study limits. In 2006, MoDOT reviewed the BIA/AJR and traffic supplement and provided a letter of conditional approval of the new I-70 interchange access to the City of Wentzville. At that time, the FHWA reviewed the BIA/AJR and its traffic supplement, but a decision was made that no approvals of the BIA/AJR could be granted prior to completion of the NEPA process. Subsequent to this decision, the City of Wentzville, in coordination with MoDOT and FHWA, initiated the NEPA process for the project in 2007 by commencing the preparation of this Environmental Assessment document.

In parallel with the EA, the BIA/AJR has been updated in 2014 to be consistent with the Selected Alternative for the EA and meet the most recent federal requirements of the AJR process. The revised BIA/AJR received conceptual approval from the FHWA on April 2, 2014 and the final approval will be concurrent with the completion of this National Environmental Policy Act (NEPA) process for the David Hoekel Parkway project and it's Finding of No Significant Impact (FONSI).

# 4. **REGIONAL TRANSPORTATION PLAN 2040**

The study area for the proposed David Hoekel Parkway is located within the metropolitan planning boundary for the St. Louis region within St. Charles County (shown in Figure I-1). The *Regional Transportation Plan (RTP) 2040* is the EWGCOG's long-range transportation plan for the St. Louis metropolitan region. *RTP 2040* represents the fourth major update of the metropolitan transportation plan since it was initially adopted in 1994. Built upon the foundation established in the 1994 plan and subsequent updates, *RTP 2040* is a long-range vision for how the region's surface transportation system will develop over the next 25 years.

Every transportation project in the region financed with federal funds must be included in the long range transportation plan, or be consistent with the principles of the plan. This is because the EWGCOG, as the regional metropolitan planning organization (MPO), administers federal funds for projects to the local jurisdictions within the St. Louis metropolitan planning boundary.

The *RTP 2040* established a set of ten principles, challenging the region to make the connection between transportation and the broader society, which will guide the region's future growth and prosperity. The ten principles are as follows:

- Preserve and Maintain the Existing System
- Support Public Transportation
- Support Neighborhoods and Communities throughout the Region
- Foster a Vibrant Downtown
- Provide More Transportation Choices
- Promote Safety and Security
- Support a Diverse Economy throughout the Region
- Support Quality Job Development
- Strengthen Intermodal Connections
- Link Transportation Planning to Housing, Environment, Education and Energy

## 5. I-70 FIRST AND SECOND TIER ENVIRONMENTAL STUDIES

Sponsored by MoDOT, the I-70 First and Second Tier Environmental Studies assessed the need for improving and widening the 200-mile I-70 corridor between metropolitan St. Louis and Kansas City, Missouri. The portion of I-70 included in the David Hoekel Parkway EA was a part of the Second Tier Environmental Impact Statement (EIS) for Section of Independent Utility (SIU) 7 from Route 19 to Lake St. Louis Boulevard. The study concluded with a Record of Decision to widen the I-70 corridor to six lanes.

The conclusions from the I-70 First and Second Tier Environmental Studies were reevaluated within a Supplemental EIS between 2007-2009 (Record of Decision in August 2009). This I-70 Supplemental EIS (SEIS) was conducted to consider the potential of constructing truck-only lanes on I-70 between Kansas City and St. Louis to separate trucks from passenger vehicle traffic. This could result in the existing I-70 Corridor through Wentzville being widened in the future to four lanes each direction – two lanes for trucks and two lanes for passenger vehicles each direction. The David Hoekel Parkway EA coordinated with the I-70 SEIS to ensure that the proposed project and its proposed new interchange with I-70 was consistent with the plans for I-70 within the I-70 SEIS.

MoDOT currently has a Record of Decision on widening I-70 with dedicated truck lanes. The Department is reconsidering that decision and may be more likely to propose a general-capacity six-lane widening of I-70 in the future. The EWGCOG's RTP 2040 shows a six-lane widening of the I-70 Corridor through Wentzville by 2040 as a committed project.

# D. Planned and Committed System Improvements

Several other projects are planned for the St. Louis region, St. Charles County and within Wentzville. These projects include:

- Bicycle and Pedestrian Lanes/Paths The City of Wentzville Parks and Recreation Department has an Open Space Master Plan and St. Charles County has a Trails and Greenways Development Plan which identify planned bicycle and pedestrian lanes and/or separated paths in the project study area that could be located adjacent or parallel to the proposed roadway.
- US 61/Peine Road/Route P Interchange MoDOT recently approved a cost share agreement in March 2013 between MoDOT, the City of Wentzville and St. Charles County to construct a grade-separated interchange at US 61, Peine Road and Route P

to improve the at-grade crossings along the corridor. The project also includes safety and geometric improvements, such as J-turns, at other at-grade crossings on US 61 to the north and south of the interchange location. The project is included in the FY 2015-2019 Statewide Transportation Improvement Program (STIP) and the FY 2015-2018 Transportation Improvement Program (TIP) as a committed project.

- Route P Improvements Road and safety improvements for Route P, from US 61 to MO M, are planned but not funded.
- Wentzville Parkway Widening Improvements The FY 2014-2018 STIP/TIP includes improvements to the Wentzville Parkway to make it a five-lane section with a center turn lane and signal interconnection from William Dierberg Drive to Schroeder Creek Boulevard, just north of the I-70/Wentzville Parkway interchange. Construction is to be complete at the end of 2014.
- Interstate Drive Extensions The City of Wentzville has recently constructed the portion of Interstate Drive from Wilmer Road to Hepperman Road as a new three-lane arterial road with plans to widen it to a five-lane arterial road in the future. The extension of Interstate Drive from Hepperman Road to South Point Prairie Road, and from Route Z to Quail Ridge Parkway at I-64 has been funded. The City of Wentzville's Thoroughfare Plan shows a future extension of Interstate Drive, which will intersect with the David Hoekel Parkway, from South Point Prairie Road to Route T, although it is not yet funded.
- I-70 Improvements I-70 improvements listed in the 2040 Regional Transportation Plan (projects funded within the region's financial constraint) include adding lanes from Foristell (Route W/T) to Wentzville Parkway, and implementing upgrades from Wentzville Parkway to MO Z. This will result in the I-70 corridor being widened to six lanes within the study area for the project.

# E. Conclusions

The David Hoekel Parkway project has the support of the local communities of Wentzville, Flint Hill, Foristell, St. Charles County and the EWGCOG. The project is a needed improvement to provide the surrounding community with a safe and efficient roadway that is both cost-effective and environmentally sound. The proposed project's purpose is to improve access and connectivity; reduce congestion; improve traffic safety; support local and regional growth; support sustainable development; and promote a multimodal transportation system. This EA document builds upon the previous work efforts conducted by the City of Wentzville. The subsequent chapters of this EA provide the data and analysis of project alternatives and their social and environmental impacts, and determine the least environmentally damaging alternative for the proposed roadway and whether it is appropriate for federal funding.



# Chapter II Alternatives Considered

This chapter defines the range of alternatives considered for the proposed David Hoekel Parkway in Wentzville, Missouri. The information provides sufficient detail for the analysis and evaluation of the potential effects of the alternatives on the affected environment and their environmental consequences – as described in Chapter III. The chapter includes an overview of the alternatives development process, a description of the Initial and Reasonable Alternatives identified for the proposed project, and their associated design criteria, costs and traffic projections.

# A. Overview of Alternatives Development Process

The process identifies alignment alternatives for the proposed roadway that are reasonable and feasible from a technical, environmental and economic standpoint. It entails a screening of *Initial Alternatives* to determine which alternatives warrant further consideration for the project. Based on the screening of these Initial Alternatives, the alternatives development process then defines and evaluates the range of alternative alignments in sufficient detail to identify the feasible and prudent alternatives (i.e., Reasonable Alternatives). The Reasonable Alternatives are then carried forward and evaluated with regard to the acceptability of the environmental and social impacts, as presented in Chapter III - Affected Environment and Environmental Consequences. The more detailed evaluation of the Reasonable Alternatives in Chapter III then identifies the alternative alignment that best accomplishes the purpose and need for the proposed roadway while providing acceptable impacts to both the natural and man-made environment. This alternative is designated as the *Identified Preferred Alternative*. The Identified Preferred Alternative is then presented within the Draft EA and at the EA public meeting for agency and public review and comment. After all comments on the public meeting and Draft EA have been received and addressed, and pending a Finding of No Significant Impact (FONSI), the Identified Preferred Alternative is approved by the FHWA as the Selected Alternative for the project.

The process of alternatives screening and ascending level of detailed evaluation assures decision-makers of the fulfillment of the improvement's goals, while developing informed consent with the reviewing agencies, stakeholders and the general public. This screening process was performed in collaboration with the public and agency coordination program as defined in Chapter V – Comments and Coordination. The alternatives development process for the project is shown in Figure II-1.



#### Figure II-1 Alternatives Development Process

# B. No-Build Alternative

The No-Build Alternative is represented by not taking action to construct the proposed David Hoekel Parkway. Under the No-Build Alternative, the community would continue to rely on the existing roadway system that is currently serving the community in and around the proposed project corridor, plus any committed or reasonably anticipated transportation improvements in the study area. Routine operation and maintenance activities to the existing local road system would continue as scheduled. At this time, the forecasted improvements near the study area include the expansion of Interstate Drive along I-70 at the southern end of the study area (See Exhibit II-1). The City of Wentzville plans to design and construct a new five-lane arterial road for Interstate Drive, which would connect to the proposed project. The No-Build also assumes the future widening of I-70 to six lanes prior to 2040, as shown in the EWGCOG's *RTP 2040* on its fiscally constrained list of projects.

Through 2040, access and mobility would continue to worsen for travelers in northwestern Wentzville and for regional commuters who access I-70 and US 61 for travel between St. Charles County, St. Louis County and employment centers near the St. Louis City. With traffic on I-70 anticipated to grow by about 60 percent at the proposed I-70/David Hoekel Parkway interchange location by the year 2040 and traffic on US 61 anticipated to grow by roughly 30% between Route A and Route P (US 61/David Hoekel Parkway interchange location) through 2040 (Source: MoDOT St. Louis District and EWGCOG), current traffic congestion and traveler safety would continue to decline under the No-Build Alternative, resulting in increased traveler costs and safety concerns. Additionally, the existing I-70 interchanges with Wentzville Parkway and Routes W/T would not be relieved by a new interchange connection at I-70 with the proposed David Hoekel Parkway. As a result, economic and housing opportunities in the study area may not develop or be fully enhanced under the No-Build Alternative.

For these reasons, the No-Build Alternative would not address the improvement needs in the study area as identified in the purpose and need. However, the No-Build Alternative will serve as a basis for comparison for the analysis of the benefits and impacts of the build alternatives within the EA.

# C. Build Alternatives

The build alternatives under consideration for the proposed David Hoekel Parkway would involve a new connecting roadway, including interchanges and intersections, between I-70 and US 61 on the west side of Wentzville, Missouri. The alternatives were analyzed based on estimated project costs, facility type, design requirements, physical constraints and potential impacts to the human and natural environment. The build alternatives' potential alignments are constrained at the connection with I-70 due to the required spacing between interchanges located along the I-70 Corridor. Interstate standards require at least two miles of separation between each interchange in an urban area; therefore the build alternatives are shown to intersect with I-70 roughly two miles from the existing I-70/Route W/T interchange to the west and two miles from the existing I-70/Wentzville Parkway interchange to the east. This was also a consideration at US 61, in order to provide adequate spacing between the US 61/Route A/Wentzville Parkway interchange to the south and the proposed project interchange at US 61/Peine Road/Route P, while still serving the travel needs of the cities of Wentzville and Flint Hill.

# 1. FACILITY CONCEPT

Two concepts of roadway design were considered for the proposed David Hoekel Parkway: a limited access, freeway-type concept providing fast and efficient access between I-70 and US

61, and a more residential-type parkway concept providing greater access to population centers and key destination points throughout western Wentzville. The decision to construct a parkway verses a freeway-type concept was based on an evaluation of how effectively each facility satisfied the requirements of the project's purpose and need, and is summarized as follows:

- *Improve Access and Connectivity*. The parkway facility would provide direct access to cross roads, subdivisions, and key destination points. It would also provide access to I-70 and US 61, connecting the community with the regional transportation system.
- **Reduce Congestion**. The parkway facility would provide an alternative transportation corridor for rapidly expanding areas in Wentzville, relieve growing congestion at other I-70 and US 61 interchanges in the study area, and would reduce local traffic dependence on I-70 and US 61.
- *Improve Traffic Safety*. The project would help address high crash locations within the study area, especially the at-grade crossings of US 61 near Route P.
- **Support Local and Regional Growth**. A major portion of the growth currently occurring in and around Wentzville is taking place directly adjacent to the proposed project study area. A parkway, in comparison to a freeway, is the most suitable facility type to support the existing and projected local and regional population and housing growth in the study area. A parkway would provide new access and connectivity to serve the existing and planned residential and commercial land uses verses primarily serving pass-through traffic between I-70 and US 61.
- **Support Sustainable Development**. By virtue of the primarily residential land use development currently occurring in the study area, a parkway would support sustainable land use development as well as the development needs identified in the City of Wentzville's Comprehensive Plan.
- **Promote a Multimodal Transportation System**. In addition to the pedestrian/bikeway corridor that is included as part of the current design, a parkway facility would provide better access to future public transportation service.

The parkway concept was determined to better serve the City of Wentzville and surrounding communities. The parkway facility satisfies the purpose and need of the proposed project, aligns with the needs published in the City's Comprehensive Plan and Future Land Use Plan, avoids or minimizes effects to human and natural environments, and responds to engineering constraints ultimately affecting the cost of the project.

#### 2. DESIGN CRITERIA

The design criteria selected for the proposed David Hoekel Parkway were determined based on, (1) the need to satisfy the six elements of the project's purpose and need, (2) state and local roadway design requirements, and (3) land use plans for the study corridor. The design criteria were determined by assessing the current and future projected traffic volumes, the selection of facility type, the existing vertical and horizontal constraints of the corridor, and design criteria guidelines presented in the American Association of State Highway and Transportation Officials (AASHTO) design guidelines, MoDOT specifications within the Engineering Policy Guide (EPG) and City of Wentzville design standards.

The study team reviewed traffic forecasting data and evaluations conducted as part of the *I-70/David Hoekel Parkway Access Justification Request.* The study team evaluated link volume/capacity ratios for the proposed roadway facility and the adjacent freeway network on I-70 and US 61 for the proposed roadway. The study team also utilized the existing and future conditions operational analysis (No-Build and Build) of the relevant roadway network elements

within the proposed improvement corridor during AM and PM peak periods. The study team developed the following general design criteria shown in Table II-1 to be used as guidelines in establishing alternatives for the proposed project and associated roadways.

	MoDOT Jurisdiction		City of Wentzvill	e Jurisdiction
Design Criteria	I-70 & US 61	Ramp	Proposed David Hoekel Parkway	Connecting Roads
Design Speed (mph)	70	50	45	40
Lane Width (ft)	12	18	(4 Lanes) 12	(2 Lanes) 12
Median Width (ft)	I-70 - median barrier US 61 – 52 (grass)	N/A	18	N/A
Sidewalks (ft)	N/A	N/A	6	N/A
Shoulder Width (inside) (ft)	4	N/A	N/A; curb and gutter	varies
Shoulder Width (outside) (ft)	10	8	N/A; curb and gutter	varies
Min. ROW Requirement (ft)	250	N/A	100	70
Width Between Sidewalk and Shoulder (outside) (ft)	N/A	N/A	7.5	N/A
ROW beyond sidewalk (ft)(outside)	N/A	N/A	1	N/A
Max. Gradient (%) <sup>1</sup>	4	5	5	5

 Table II-1: General Design Criteria

1 Grades less than 500 feet long and one-way down grades may be one percent steeper. For extreme cases in urban areas, at underpasses and bridge approaches, steeper grades for relatively short lengths may be considered during final design.

The proposed David Hoekel Parkway would consist of four 12-foot lanes separated by an 18foot grass median allowing for left-turn lanes where necessary. The design would also incorporate six-foot sidewalks and/or bicycle/pedestrian paths approximately eight feet from the edge of pavement, and aesthetic treatments, such as landscaping. Construction involves all utility relocation, bridge and culvert placement, drainage structures, traffic signalization, lighting, signage, excavation, recontouring, reseeding, and landscaping. The design criteria identified within the EA is considered to be preliminary and will be reviewed and updated as necessary to meet the most current roadway standards during the design phase of the project.

Figure II-2 shows the proposed typical section for the proposed roadway.



Figure II-2 Proposed Typical Section

#### 3. INITIAL BUILD ALTERNATIVES

At the beginning of the NEPA process, initial build alternatives were developed and analyzed. To better organize and more easily analyze all alignment options within the entire six-mile study corridor, the corridor was separated into five distinct sections, as shown on Exhibit II-1.

- **Section A:** From south to north, Section A represents the entire north/south alignment of the corridor and extends from Jackson Road south of I-70 to approximately Scotti Road.
- **Section B:** With the corridor shifting to the northeast, Section B extends for a short distance from approximately Scotti Road to approximately Point Prairie Road.
- Section C: Continuing in a northeastern direction, Section C extends from approximately Pointe Prairie Road to a tributary of McCoy Creek.
- **Section D:** This section extends from approximately the tributary of McCoy Creek to US 61.
- **Section E:** Section E extends from US 61 to a connection back to existing Route P in Flint Hill.

#### 4. SCREENING OF INITIAL BUILD ALTERNATIVES

Within the Initial Alternatives' screening process, sections that did not meet the purpose and need for the project or resulted in significant impacts to the natural or man-made environment were eliminated. Sections that were deemed as viable to be considered further for the study area were then carried forward and combined into three full-corridor alternatives (Alternatives 1, 2 and 3) as Reasonable Alternatives. Table II-2 shows the sections carried forward as Reasonable Alternatives and those sections that were eliminated from further consideration. A description of the screening process for each Initial Alternative is provided in the following section.

Reasonable Alternatives	Section A	Section B	Section C	Section D	Section E
1	A1	B2	C2	D2	E3
2	A2W	В3	C3	D3, D5	E5
3	A2W	B1	C1	D1S	E1
Eliminated from Further Consideration	A2E			D1N, D4	E2, E4

 Table II-2: Initial Alternatives Carried Forward as Reasonable Alternatives

#### Section A

Three alignments within Section A were considered. A1 was the eastern most alignment generally following the existing alignment of Point Prairie Road. A1 represents an improvement to the existing roadway system rather than a build alternative on new alignment. A1 was carried forward as a Reasonable Alternative as part of Alternative 1; however it is anticipated to have greater constructability issues than A2W or A2E since it is located along an existing roadway alignment. A2 east (E) and A2 west (W) shared a majority of the Section A on new alignment,

separating east and west by approximately 1,000 feet between Peruque Creek and to approximately 2,000 feet north of Goodfellow Road. While A2W was carried forward as part of Reasonable Alternatives 2 and 3, A2E was eliminated from further consideration due to the high number of single-family residential impacts near Keenland Trails and the Bear Creek Golf Club and its resulting impacts on neighborhood cohesion, and higher stream impacts to Peruque Creek and Dry Branch as compared to the other alignments in *Section A*. A2W was considered to have fewer impacts to planned residential subdivisions than A2E because the City had been able to coordinate with developers to preserve property along this alignment through their Corridor Preservation Study.

# Sections B and C

Three alignments within *Sections B* and *C* were analyzed. B1/C1 was included as part of Reasonable Alternative 3, B2/C2 was included as part of Reasonable Alternative 1 and B3/C3 was included as part of Reasonable Alternative 2. All alignments within *Sections B* and *C* were carried forward as part of the full-corridor Reasonable Alternatives developed for the study.

#### Section D

Six alignments within Section D were analyzed. D1 north (N) and D1 south (S) shared an alignment until they split approximately 2,000 feet south of US 61 with D1N extending on the north side of Dry Branch creek and D1S extending on the south side of Dry Branch creek. D1N was eliminated from further consideration because it resulted in the greatest impacts to streams and greatest number of stream crossings, including Dry Branch creek, greatest impacts to multifamily residential units, and constructability issues due to the terrain. D1S was carried forward as part of Reasonable Alternative 3. D1S allowed the study to still have consideration of a southern alternative with fewer stream impacts than several of the other alignments within Section D. D2 and D3 shared a small section of the alignment just west of US 61 and were carried forward as part of Reasonable Alternatives 1 and 2, respectively. D4, the northern most alignment in Section D, was eliminated from further consideration due to increased impacts to wetlands and streams, impacts to prime farmland, and total project costs due to the terrain and required drainage structures. D5, in combination with D3, was included as a part of Alternative 2 to allow for the evaluation of an alternate with a shorter connection across US 61 to Route P.

# Section E

Five alignments within *Section E* were considered. *Section E* is interdependent with the sections carried forward in *Section D*. E1, the southernmost alignment, was carried forward as part of Reasonable Alternative 3. E2 was eliminated from further consideration due to impacts to residential and commercial units, the presence of existing utilities, and its connection to D1N, which was eliminated. E3 was carried forward as part of Reasonable Alternative 1. E4, the northern most alignment in *Section E*, was eliminated from further consideration due to impacts associated with McCoy Creek and Dry Branch, increased prime farmland impacts, construction costs, and the elimination of D4. E5 was carried forward as an alternate with a shorter connection to Route P as part of Alternative 2, which minimizes impacts to McCoy Creek and Dry Branch, in comparison with E3.

#### 5. REASONABLE BUILD ALTERNATIVES

Based on the purpose and need for the project, the facility type and design criteria established for the project, and a review of the natural and man-made constraints within the study area, three full-corridor alternatives were deemed viable to carry forward for further consideration within the EA as Reasonable Alternatives. Exhibit II-2 shows the Reasonable Alternatives for the project. Each Reasonable Alternative would improve access and connectivity for the traveling public. They would also meet the purpose and need for the project by reducing traffic

congestion, supporting regional growth and sustainable development, and promoting a multimodal transportation system. Located within the study area, each reasonable alternative begins at Jackson Road south of I-70. Alternatives 1 and 3 terminate approximately one mile beyond US 61 in Flint Hill, Missouri near Townview Drive and are approximately 6.9 miles in length. Alternative 2 terminates just east of US 61 at Route P and is approximately 6.3 miles in length. All of the alternatives are within approximately 2,000 feet of one another. Future grade-separated interchanges are anticipated at the intersection of the proposed project and I-70 and US 61. At-grade intersections, depending on the alternative, are anticipated at Jackson Road, Point Prairie Road south of Peruque Creek, the future Interstate Drive, Goodfellow Road, Meyer Road, Old Bear Run, Scotti Road, Point Prairie Road, Peine Road, the US 61 west outer road, Mette Road, and Route P, in addition to unidentified subdivision access points northeast of the proposed project's intersection with Point Prairie Road north of Meyer Road. A description of each Reasonable Alternative is included in the following section.

#### a. Build Alternative 1

Build Alternative 1 would follow the existing alignment of Point Prairie Road south of Scotti Road and a portion of the existing alignment of Peine Road north of Scotti Road. This alternative is considered to be the improvement to the existing roadway system. Beginning south of I-70 at Jackson Road, Alternative1 would avoid Peruque Valley Park to the east and would align with Point Prairie Road as the alignment crosses I-70. Horizontal and vertical alignments of Point Prairie Road would be revised to meet design criteria and provide for a safe facility for the traveling public. North of Scotti Road, the alignment would avoid impacts to a tributary of McCoy Creek and areas containing prime farmland as it crosses US 61. Alternative 1 does have the greatest constructability issues and impacts to existing residential development within the study area, since it impacts residences located in proximity to the existing Point Prairie Road and Peine Road alignments. It also could potentially impact the unnamed, planned park just north of Peruque Creek (See Exhibit II-2). However, the alternative has the least amount of impacts to streams, wetlands and forested areas within the study area.

#### b. Build Alternative 2

Build Alternative 2 would avoid direct impacts to Peruque Valley Park by traveling through an area specifically dedicated to the proposed David Hoekel Parkway at the northeast corner of the park. The alignment would extend north over I-70 and avoid the residential subdivisions immediately north of I-70 and west of Point Prairie Road. In an attempt to minimize impacts to a tributary and associated floodplain of McCoy Creek, Alternative 2 would involve greater constructability constraints, and associated costs in the portion located north of Scotti Road as compared to the other alternatives. The cost for Alternative 2 is less than the other two reasonable alternatives due to the shorter connection to Route P east of US 61. Alternative 2 was also identified as the City of Wentzville's locally preferred alternative from the previous Corridor Preservation Study and BIA/AJR Study, and the alternative's potential alignment has been coordinated with local developers as proposed new development is planned for the study area. This has allowed this alternative to have the least impacts on residential housing in the study area, due to this prior planning process, as well as minimal business impacts. It also has the least stream and floodplain impacts compared to the other alternatives.

#### c. Build Alternative 3

Build Alternative 3 would follow the same alignment from Jackson Road to Scotti Road as Build Alternative 2, thereby avoiding direct impacts to Peruque Valley Park. However, Alternative 3 splits east and extends along Scotti Road for approximately 3,000 feet before turning northeast and crossing Dry Branch creek at three different locations before reaching US 61 at Flint Hill, Missouri. As a result, this alternative has more significant impacts to the floodplain and

floodway of Dry Branch creek and greater stream impacts and number of stream crossings. The alternative avoids impacts to St. Theodore Park and Peine Road Park.

## d. Proposed Interchanges at I-70 and US 61

The City of Wentzville evaluated different interchange configurations for the I-70 and US 61 interchanges. These interchange configurations can be found in Appendix A. The range of interchange configurations evaluated for I-70 and US 61 are described in the following section.

#### I-70 Interchange

A modified diamond interchange and a single point diamond interchange were considered for the David Hoekel Parkway's connection with I-70. Following the I-70/David Hoekel Parkway BIA/AJR study for the I-70 interchange, a single point diamond interchange was selected for I-70 resulting from the need to limit the size of the interchange footprint and avoid impacts to the existing and future land uses. Generally, a single point diamond interchange is used in areas of high traffic congestion due to its ability to increase traffic flow and ease congestion in areas of limited right-of-way. Retaining walls would be required along both sides of the southern ramps and along the south side of the northern ramps. The southern retaining walls would be needed to keep the south outer road in service. In addition to the retaining walls, concrete barriers would be required near the eastern and western north outer road connections to keep adequate separation between the northern ramps and the outer road traffic. The single point diamond interchange would provide greater potential for land development north of the interchange, it would result in fewer impacts to nearby parcels, particularly the Crossroads Baptist Church, and would increase the efficiency of the anticipated traffic flow.

#### US 61 Interchange

At US 61, a tight diamond, modified diamond and a double roundabout (i.e., dog bone roundabout) interchange concept were considered for the David Hoekel Parkway's connection with US 61. Within the Draft EA, a tight diamond interchange concept using alignment option D3 and E3 was selected (See Exhibit II-1 and Appendix A for reference).

Subsequent to the preparation of the Draft EA, a decision was made to modify the original interchange concept to a modified diamond interchange using alignment option D5 and E5 (See Exhibit II-1 and Appendix A for reference). This is because there has been a growing safety issue at the proposed U.S. 61/David Hoekel Parkway interchange location due to the existing at-grade intersection crossing, which has accelerated this section of the project to first priority. As part of the revised Alternative 2, the alternate location would provide a shorter connection to Route P (nearly one mile shorter), would result in significant project cost savings, and would minimize impacts to McCoy Creek and Dry Branch. A cost share agreement between MoDOT, St. Charles County and the City of Wentzville to fund the US 61/David Hoekel Parkway interchange improvements was approved in March 2013 with construction identified for 2016. The previous interchange concept and location is still evaluated as a part of Alternative 1. Both interchange concepts would accommodate increased traffic volumes and would respond to safety needs at this location of US 61 that have already degraded as traffic volumes have increased.

# D. Construction Cost Estimates

A construction cost estimate for the project was estimated at a planning level from the proposed typical section, roadway alignment and right-of-way limits. The estimates are preliminary and are based on conceptual alignments for the David Hoekel Parkway. The construction estimates were calculated based on the cost of recent MoDOT projects, 2013 rates for time and materials,

and the best professional judgment of the designers. It should be noted that all construction and material costs provided are opinions of probable construction costs and are based on typical 2013 construction procedures. Right-of-way costs were estimated based on 2013 property value information from the City of Wentzville. While the cost estimates should be assumed to be accurate, contractor workloads, the local bidding environment and property values at the time of bidding may cause the costs to vary. The cost estimates shown in Table II-3 are shown in 2013 dollars for each reasonable alternative to provide a relative comparison in current dollars.

Item	No-Build Alternative	Alternative 1	Alternative 2	Alternative 3
Roadway Construction Cost Estimate *	\$0.0	\$31.3	\$21.1	\$31.1
Interchange Costs (I-70/US 61)	\$0.0	\$29.7	\$27.5	\$29.7
Bridge/Structures Costs	\$0.0	\$4.1	\$6.1	\$7.6
Right-of-Way Acquisition	\$0.0	\$11.9	\$7.0	\$8.7
Miscellaneous Costs **	\$0.0	\$7.2	\$5.5	\$7.6
Project Contingency (20%) ***	\$0.0	\$13.0	\$10.9	\$13.7
Total Project Cost Estimate	\$0.0	\$97.2	\$78.1	\$98.4

Table II-3: Estimated Construction Costs in 2013 Dollars (Millions)

 $^{\ast}$  Roadway construction includes base, surface, grading and drainage items.

\*\* Miscellaneous costs include the costs for mobilization, construction management and administration.

\*\*\* Includes a project contingency of 20% on roadway, interchange and bridge construction costs.

# E. Traffic Analysis

The traffic characteristics of the Build and No-Build alternatives were assessed in order to assist in the development and refinement of the alternatives. The results of this analysis are presented in the following sections.

#### 1. TRAVEL DEMAND METHODOLOGY

To evaluate the projected traffic for the Build Alternatives (proposed roadway) and the No-Build Alternative, the regional travel demand forecasting model developed and maintained by the East-West Gateway Council of Governments (EWGCOG) was used. This model was used to develop future year traffic volumes (year 2040) with and without the construction of the David Hoekel Parkway. The model was used in developing daily and AM and PM peak hour volume forecasts for the Build and No-Build alternatives.

Both the Build and No-Build condition assumed that the I-70 corridor would be widened to six lanes by 2040 within the study area for the project, as it is a committed project within the EWGCOG's RTP 2040.

While there were three different Reasonable Build Alternatives identified for the project, the traffic projections did not vary by alternative because the limits of the project were relatively fixed due to spacing constraints with adjacent interchanges on I-70 and US 61. Additionally,

each alternative provided the same overall connectivity and access to the local Wentzville transportation network.

The assigned year 2040 model volumes represent the daily number of vehicle trips at a specific point on the roadway network. The 2012 existing and year 2040 volumes for the Build and No-Build alternatives are shown in Table II-4.

Location	2012 ADT	No-Build 2040 ADT 6-Lane I-70	Build 2040 ADT 6-Lane I-70
I-70 Corridor			
I-70 West of Route W/T	46,757	82,778	82,778
I-70 Between Route W/T and Wentzville Pkwy.	51,588	84,666	84,666
I-70 Between Wentzville Parkway and Route Z	72,154	100,829	100,829
I-70 Between Route Z and Route 61	83,439	112,025	112,025
I-70 East of Route 61	74,679	110,722	110,722
US 61 Corridor			
US 61 Between Route P and Route A	47,444	60,966	60,966
US 61 Between Route A and I-70	48,844	69,585	69,585
US 61 South of I-70	46,451	73,790	73,790
David Hoekel Parkway Corridor			
David Hoekel Parkway North of Route N	-	-	16,000
David Hoekel Parkway South of Interstate Dr.	-	-	16,000
David Hoekel Parkway South of I-70	-	-	22,000
David Hoekel Parkway North of I-70	-	-	22,000
David Hoekel Parkway South of Meyer	-	-	20,000
David Hoekel Parkway North of Meyer	-	-	26,000
David Hoekel Parkway South of Dueneke	-	-	26,000
David Hoekel Parkway East of Dueneke	-	-	26,000
David Hoekel Parkway West of US 61	-	-	26,000
David Hoekel Parkway East of US 61	-	-	5,000

Table II-4: Existing (2012) and Forecasted (2040) Daily Two-Way Traffic Demand

Source: Existing 2012 ADT volumes provided by MoDOT.

Projected 2040 ADT volumes were developed by the study team using the East-West Gateway Council of Governments' travel demand model, the I-70/David Hoekel Parkway AJR Study, and the I-70 Second Tier and Supplemental EIS. Traffic volumes are projected to grow by approximately 1.8 percent per year through 2040 on I-70 and 3.0 percent per year on US.

Traffic volumes are projected to grow by approximately 1.8 percent per year through 2040 on I-70, and 3.0 percent per year on US 61 within the study area through 2030, and then transition to more modest growth of 0.5 percent per year between 2030 and 2040.

Average daily traffic projections for the proposed roadway are shown to be an average of 22,200 west of US 61 in Wentzville and approximately 5,000 east of US 61 in Flint Hill in 2040. Truck percents for the proposed roadway were assumed to be approximately five percent of the vehicle mix.

It can be seen in the table that there is not anticipated to be a notable change in through traffic volumes on I-70 or US 61 as a result of the proposed roadway. The Build and No-Build traffic projections are shown in the table to remain the same, indicating the change in projected volumes will be negligible. This is because the proposed roadway is anticipated to mainly change travel patterns within the city of Wentzville. The project will provide relief to the Wentzville Parkway interchange by shifting traffic to the new I-70/David Hoekel Parkway interchange. However, motorists' patterns along I-70 and US 61 are not anticipated to change, merely to change interchange entering and exiting locations. In addition, a significant amount of

bypass traffic between I-70 and US 61 along the proposed project is not anticipated. The project is planned to be a four-lane parkway with a posted speed of 45 mph and several signalized intersections. It will not be a freeway bypass and the City has proposed imposing truck restrictions through Wentzville in the near term.

The existing I-70 interchanges at Wentzville Parkway and Route W/T, as well as Point Prairie Road on the City's local roadway system, are anticipated to experience some traffic relief due to change in travel patterns. Table II-5, below, shows the anticipated change in average daily traffic demand at the two interchanges along I-70 and at Point Prairie Road as a result of the David Hoekel Parkway/I-70 interchange improvement.

# Table II-5: Change in 2040 Average Daily Traffic at Adjacent Interchanges with David Hoekel Parkway/I-70 Interchange

Roadway	Wentzville Parkway Interchange (North of I-70)	Route W/T Interchange (North of I-70)	Point Prairie Road (North of I-70)
4-Lane David Hoekel Parkway with new I-70 Interchange	-8,700 vpd (25%)	-1,300 vpd (7%)	-9,500 vpd (56%)

Source: I-70/David Hoekel Parkway AJR/BIA Study.

The most heavily used interchange in the study area, the I-70 interchange at the Wentzville Parkway, is anticipated to receive the greatest congestion relief from the proposed project, as the David Hoekel Parkway would provide an alternate north/south facility providing access to west Wentzville and other key destination points.

#### 2. STUDY CORRIDOR TRAFFIC IMPACTS

An analysis of the level of service (LOS) of freeway mainline segments located between interchanges at Route W/T and Wentzville Parkway for I-70 and Route P and I-70 for US 61 was completed for the AM and PM peak hours of travel. The *Highway Capacity Manual* methodology was used. Table II-6 illustrates the existing and future (year 2040) peak hour volume levels of service expected for the I-70, US 61 and the proposed David Hoekel Parkway.

Location	Existing (2012)	No-Build (2040) 6-Lane I-70	Build (2040) 6-Lane I-70	
	AM/PM	AM/PM	AM/PM	
I-70 Mainline				
EB W/T off-ramp	A/B	C/C	C/B	
EB W/T off-ramp to W/T on-ramp	A/B	C / C	C/C	
EB W/T on-ramp to weigh station off-ramp	A/A	B/B	B/B	
EB Weigh station off-ramp to weigh station on-ramp	A / A	C/C	C/C	
EB Weigh station on-ramp	A / A	B/B	B/B	
EB Weigh station on-ramp to David Hoekel Pkwy off-ramp	B/B	C/C	B/B	
EB David Hoekel Pkwy off-ramp	B/B	C/C	B/B	
EB David Hoekel Pkwy off-ramp to David Hoekel Pkwy on-ramp	B/B	C/C	C/B	
EB David Hoekel Pkwy on-ramp	B/B	C/C	C/C	
EB David Hoekel Pkwy on-ramp to Wentzville Pkwy off-ramp	B/B	C / C	C/C	
EB Wentzville Pkwy off-ramp	A/B	C/B	C / B	
EB Wentzville Pkwy off-ramp to Wentzville Pkwy on-ramp	A / A	C/B	C/C	

EB Wentzville Pkwy on-ramp	B/B	E/D	D/C
WB Wentzville Pkwy off-ramp	B / D	C / F	C / D
WB Wentzville Pkwy off-ramp to Wentzville Pkwy on-ramp	A / B	B/C	C / C
WB Wentzville Pkwy on-ramp	A/B	B/B	B/C
WB Wentzville Pkwy on-ramp to David Hoekel Pkwy off-ramp	A / B	C/C	C / C
WB David Hoekel Pkwy off-ramp	A/B	C/C	B/C
WB David Hoekel Pkwy off-ramp to David Hoekel Pkwy on-ramp	A / B	C/C	C / C
WB David Hoekel Pkwy on-ramp	A / B	C/C	B/B
WB David Hoekel Pkwy on-ramp to Weigh station off-ramp	A / B	C / D	B/B
WB Weigh station off-ramp	A / B	B/C	B/B
WB Weigh station off-ramp to weigh station on-ramp	A / B	B/B	B/B
B / BB / BWB Weigh station on-ramp to W/T off-ramp	A/B	B/B	B/B
B / BB / BWB W/T off-ramp to W/T on-ramp	A/B	C/B	B/B
WB W/T on-ramp	A/B	B/B	B/B
US 61 Mainline			
NB US 61 South of David Hoekel Pkwy /Route P	B/C	C/D	C/D
SB US 61 South of David Hoekel Pkwy /Route P	C/B		
NB US 61 Between Route A and I-70	B/C		D/F
SB US 61 Between Route A and I-70	C/B	E/D	E/D
NB US 61 South of 1-70	B/C		
SB US 61 South of I-70	C/B	E/D	E/D
Proposed Roadway (David Hoekel Parkway)	0,0		270
NB David Hoekel Pkwy, North of Route N	_	_	Δ/Δ
ND David Hoeker I kwy. North of Nodie N	_	_	
NB David Hoekel Pkwy South of Interstate Dr	_	_	$\Delta / \Delta$
NB David Hoekel Pkwy. South of Interstate Dr.	-	-	A/A B/B
NB David Hoekel Pkwy. South of Interstate Dr.           NB David Hoekel Pkwy. Between Interstate Dr. and I-70           NB David Hoekel Pkwy. North of I-70	-	-	A/A B/B B/B
NB David Hoekel Pkwy. South of Interstate Dr.         NB David Hoekel Pkwy. Between Interstate Dr. and I-70         NB David Hoekel Pkwy. North of I-70         NB David Hoekel Pkwy. South of Meyer		-	A/A B/B B/B
NB David Hoekel Pkwy. South of Interstate Dr.         NB David Hoekel Pkwy. Between Interstate Dr. and I-70         NB David Hoekel Pkwy. North of I-70         NB David Hoekel Pkwy. South of Meyer         NB David Hoekel Pkwy. North of Meyer		- - - -	A/A B/B B/B A/B B/B
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NB David Hoekel Pkwy. South of Interstate Dr.         NB David Hoekel Pkwy. Between Interstate Dr. and I-70         NB David Hoekel Pkwy. North of I-70         NB David Hoekel Pkwy. South of Meyer         NB David Hoekel Pkwy. North of Meyer         NB David Hoekel Pkwy. North of Meyer         NB David Hoekel Pkwy. South of Dueneke         EB David Hoekel Pkwy. East of Dueneke         EB David Hoekel Pkwy. East of US 61         EB David Hoekel Pkwy. East of US 61         WB David Hoekel Pkwy. East of US 61         WB David Hoekel Pkwy. East of US 61         WB David Hoekel Pkwy. East of Dueneke         SB David Hoekel Pkwy. South of Dueneke         SB David Hoekel Pkwy. East of US 61         WB David Hoekel Pkwy. East of US 61         WB David Hoekel Pkwy. East of Dueneke         SB David Hoekel Pkwy. South of Dueneke         SB David Hoekel Pkwy. South of Dueneke	- - - - - - - - - - - - - - - - - - -	- - - - - - - - - - - - - - - - -	A/A B/B B/B B/B B/B B/B B/B A/A A/A B/B B/B
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NB David Hoekel Pkwy. South of Interstate Dr.         NB David Hoekel Pkwy. Between Interstate Dr. and I-70         NB David Hoekel Pkwy. North of I-70         NB David Hoekel Pkwy. South of Meyer         NB David Hoekel Pkwy. North of Meyer         NB David Hoekel Pkwy. South of Meyer         NB David Hoekel Pkwy. North of Meyer         NB David Hoekel Pkwy. South of Dueneke         EB David Hoekel Pkwy. East of Dueneke         EB David Hoekel Pkwy. East of US 61         WB David Hoekel Pkwy. East of US 61         WB David Hoekel Pkwy. West of US 61         WB David Hoekel Pkwy. East of Dueneke         SB David Hoekel Pkwy. South of Meyer         SB David Hoekel Pkwy. North of Meyer         SB David Hoekel Pkwy. North of I-70         SB David Hoekel Pkwy. Between Interstate Dr. and I-70         Pa David Hoekel Pkwy. Between Interstate Dr. and I-70	- - - - - - - - - - - - - - - - - - -	- - - - - - - - - - - - - - - - - - -	A/A B/B B/B B/B B/B B/B B/B B/B B/B B/B
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Indicates at capacity during the peak times of the day.

Indicates failing during the peak time of the day.

As shown in Table II-6, the Build Alternative (David Hoekel Parkway) operates at acceptable LOS B or better along all mainline roadway segments.

The I-70 corridor through the study area also operates at acceptable LOS in the 2040 Build Alternative in both directions of travel. As shown in the 2040 No-Build analysis, the eastbound on-ramp at Wentzville Parkway operates at capacity (LOS E) during the peak period and the westbound off-ramp fails (LOS F) for approximately three hours during the PM peak period,

resulting in gueues more than one mile in length. The 2040 Build Alternative alleviates the AM and PM peak congestion at the Wentzville Parkway interchange that was caused by high ramp volumes. Enough traffic shifts from the Wentzville Parkway interchange to the new David Hoekel Parkway interchange to provide acceptable levels of service. However, as discussed in Chapter I, if the I-70 corridor is not widened from the existing four lanes to six lanes, the corridor will experience poor levels of service prior to 2040.

By 2040, the US 61 corridor is projected to be operating near capacity (LOS D) or at capacity (LOS E) on most segments and experiencing delays during the peak periods of the day both for the No-Build and Build condition. In addition, the existing at-grade crossings on US 61 at both Peine Road and Route P are operating at congested (LOS F) conditions today and will continue to worsen through 2040 if no improvements are made. While the Build Alternative does not include the widening of the US 61 corridor, it does propose a grade-separated interchange to address the at-grade crossing issues at Route P and Peine Road (Future David Hoekel Parkway) with US 61. As shown in Table II-7, the proposed US 61/David Hoekel Parkway interchange operates with acceptable level of service conditions (LOS B/B for east ramp terminal and LOS D/D for west ramp terminal) through the design year 2040 and improves safety conditions for the crossing of US 61. Table II-7 also shows the I-70 interchange ramp terminal levels of service in the existing year 2012 and the forecasted year 2040.

Table II-7					
I-70 and US 61 Interchange Ramp Terminal Level of Service					
(Existing 2012 and Future 2040)					

Interchange Ramp Terminals	Existing (2012)	No-Build (2040) 6-Lane I-70	Build (2040) 6-Lane I-70	
	AM/PM	AM/PM	AM/PM	
I-70				
Route W/T Interchange				
North Ramp Terminal (Westbound)	A / B	C / C	B/C	
South Ramp Terminal (Eastbound)	B/C	C / D	B/C	
Wentzville Parkway Interchange				
North Ramp Terminal (Westbound)	B/C	B/D	A/B	
South Ramp Terminal (Eastbound)	B/B	B/B	C/D	
I-70/David Hoekel Parkway Interchange			B/B	
Ramp Terminal (SPDI)				
US 61				
Peine Road At-Grade Crossing	F/F	F/F	N/A	
Route P At-Grade Crossing	F/F	F/F	N/A	
US 61/David Hoekel Parkway Interchange				
West Ramp Terminal; Unsignalized (Southbound)			D/D	
East Ramp Terminal; Signalized (Northbound)			B/B	
Source: HNTB VISSIM Model version 5.4 for I-70: HNTB Synchro Model vers	sion 8 for US 61			

Note: Assumes optimized signal timings at interchanges using Synchro software Indicates at capacity during the peak time of the day.

hdicates failing during the peak time of the day.

Within the 2040 No-Build analysis, improvements such as additional turn lanes were considered at the Wentzville Parkway and Route W/T interchanges with I-70. While the congestion at Route W/T may be mitigated with the additional local improvements, the congestion at the Wentzville Parkway cannot be reasonably reduced to meet the purpose and need and improve area operational conditions during the peak hours. The westbound ramp and ramp terminal at the I-70/Wentzville Parkway interchange are unable to accommodate the traffic demand,

resulting in congestion on I-70. The north ramp terminal (Westbound) at the Wentzville Parkway operates at LOS D in the PM peak period, but the analysis shows that it only operates that satisfactorily because traffic is congested at the westbound off-ramp from I-70. This causes a metering effect, which prevents the full demand of vehicles from reaching the ramp terminal during the peak period; instead they are slowed on mainline I-70 waiting to exit to Wentzville Parkway. A sensitivity analysis was performed which showed that if the off-ramp were not a constraint and the full demand of vehicles could reach the ramp terminal, it would fail as well. Even with three right turn lanes, two left turn lanes, and a two-lane exit, the off-ramp still backs up onto the I-70 mainline in the PM peak and results in queues for more than one mile (approximately 5,800 feet). It is anticipated that this congestion would persist for approximately three hours during the daily PM peak period.

Without the proposed roadway, the study team expects the LOS to worsen as development in the area continues. The proposed project (I-70/David Hoekel Parkway interchange) would alleviate congestion and provide relief to this and the other I-70 adjacent interchanges as the community of Wentzville continues to grow.

# F. Selected Alternative

The Selected Alternative for the project is Alternative 2. The Reasonable Alternatives Screening Matrix, shown in Exhibit II-3, provides comparisons of the No-Build and Reasonable Build Alternatives 1, 2 and 3. The Exhibit highlights Alternative 2 as the Selected Alternative. The Reasonable Alternatives were compared and screened based on a 200-foot corridor width for each alternative. The Selected Alternative (Alternative 2) is also shown on Exhibit II-4. Plan plates showing the Selected Alternative in greater detail are included in Appendix A, along with the interchange configurations for I-70 and US 61.

While all reasonable build alternatives would satisfy the purpose and need of the proposed project, Alternative 2 would result in the least overall impacts to the natural and man-made environment and is lower in cost in comparison to the other build alternatives. Alternative 2 would result in the least impacts to streams and floodplains, the least impacts to residential units, minimal impacts to businesses, and the least amount of constructability constraints throughout the alignment. The alternative would limit residential and business impacts, accommodate economic development plans, maintain neighborhood cohesion, and provide connections to existing facilities to improve traffic flow in the northwestern portion of Wentzville. In addition, this alternative has been coordinated with local land use planning and corridor preservation initiatives, and the local community has been supportive of this alternative through both the previous and current planning efforts for the David Hoekel Parkway. For these reasons, this alternative has been identified as the Selected Alternative.

As described in Section C.5., Alternative 1 would result in greater impacts to residential units and community cohesion compared to the other alternatives as a result of widening Point Prairie Road. Impacts would result in direct residential takes and problems associated with driveway access. Impacts to existing utilities along Point Prairie Road and Peine Road would also be required to a greater extent than that of Alternatives 2 and 3. The connection from the identified US 61/David Hoekel Parkway interchange to a connection back to Route P near Mette Road would be approximately one mile longer than Alternative 2 and have a higher cost to construct. It would also result in greater utility conflicts than the other build alternatives. While capable of fulfilling the purpose and need of the proposed project, residential displacements and constructability issues would result in greater impacts to the man-made (built) environment.

Build Alternative 3 would satisfy the purpose and need of the proposed project. While Alternative 3 shares the alignment with Alternative 2 south of Scotti Road, the alignment north of Scotti Road would result in greater impacts compared to the other alternatives. Alternative 3 would result in greater stream and floodplain impacts along Scotti Road and greater impacts to prime farmland and floodplains south of Peine Road as compared to Alternatives 1 and 2. While capable of fulfilling the purpose and need of the proposed project, Alternative 3 would result in greater impacts to the natural environment as compared to the other build alternatives.

More detailed information and study of the beneficial and adverse social, economic and environmental impacts of the Reasonable Alternatives and the Selected Alternative were conducted and summarized within Chapter III – Affected Environment and Environmental Consequences.

# G. Project Phasing

The entire David Hoekel Parkway, from I-70 to U.S. 61, would not be built all at once, but rather would be constructed in phases, as described in the funding and phasing plan shown on Exhibit II-5 and in Table II-8. Phase 1 of the project would include the U.S. 61/David Hoekel Parkway from Peine Road to Route P, as well as other complementary at-grade highway safety crossing improvements on U.S. 61. In recent years, there has been a growing, significant safety need at the proposed U.S. 61/David Hoekel Parkway interchange location, which has elevated this section of the overall corridor to first priority, as part of a 2013 City of Wentzville/St. Charles County/MoDOT cost share agreement. The cost share agreement was approved in March 2013 and the agencies have executed the interagency agreement. This cost share agreement secures committed funding for Phase 1 of the overall project and it is included in MoDOT's FY 2015-2019 STIP and EWGCOG's FY 2015-2018 TIP, with funding for construction in 2016.

The future phases of the project are inflated to year of expenditure dollars to account for inflation of construction costs of materials. The proposed new access at I-70/David Hoekel Parkway would be included as Phase 2 of the overall project and would include the David Hoekel Parkway from Meyer Road to the north of I-70, and Interstate Drive to the south of I-70, including the proposed I-70/David Hoekel Parkway interchange. In the funding and phasing plan in Table II-8 for the project, the City and St. Charles County demonstrate their fiscally constrained plan for completing this portion of the Parkway as Phase 2. The interchange would serve traffic volumes to the future parkway and adjacent land uses, and would relieve congestion at the two adjacent interchanges.

The City of Wentzville is committed to constructing all phases of the parkway and its proposed interchanges at I-70 and U.S. 61. The City plans to fund the project with local, city funding sources and through partnerships with St. Charles County. The City has designated the project for future funding within their City Improvement Plan. Additionally, approximately 28 acres of right of way have been dedicated to the future parkway by adjacent developers or purchased by the City of Wentzville as part of the Corridor Preservation Study efforts. This represents 30% of the overall right of way required for the corridor project.

All five phases of the project will be included within the EWGCOG's fiscally constrained element of the St. Louis regional long-range transportation plan prior to initiating construction of the project.

# Table II-8: David Hoekel Parkway Phasing and Funding Plan (Inflated to year of expenditure dollars)

Phase	Description	Length (Miles)	Funding Sources	Construction Year	Cos (Const.	t Estimate Year Dollars)
			Wentzville \$1.3M (2013)			
			Wentzville \$1.2M (2015)			
	Peine Road to Route P		St. Charles County \$3.5M (2013)			
	(Includes U.S. 61/David Hoekel Parkway	0.04	MoDOT Cost Share \$6.0M (2016)	0010	•	11 000 000
1	Interchange)	0.34	MODOT Safety Funds \$1.0M (2016)	2016	\$	11,900,000
			Interchange:			
			St. Charles County (60%) \$12.0M *			
			Wentzville (40%) \$8.0M *			
	Interstate Drive to Meyer Road		Roadway:			
	(includes I-70/David Hoekel Parkway		St. Charles County (80%) \$17.4M **			
2	Interchange)	1.91	Wentzville (20%) \$6.4M **	2017-2022	\$	41,800,000
			04 Objectus Osciety (000()) #44 0M **			
2	Deint Drairie Deed to Deine Deed	1.90	St. Charles County (80%) \$11.8M **	2022 2027	¢	11 700 000
3		1.60		2023-2027	Þ	14,700,000
			St. Charles County (80%) \$9.6M **/***			
4	Mever Road to Point Prairie Road	1.44	Wentzville (20%) \$2.4M **/***	2028-2032	\$	12.000.000
					, ,	,,
			St. Charles County (80%) \$10.2M **/***			
5	Jackson Road to Interstate Drive	0.78	Wentzville (20%) \$2.6M **/***	2033-2037	\$	12,800,000
Total		6.27			\$	93,200,000

\* Footnote: Anticipate seeking Federal and State Funds to off-set local costs shown above, as opportunities become available in the future as supplemental funding.

\*\* Footnote: Anticipate seeking Federal Funds to off-set local costs shown above, as opportunities become available in the future as supplemental funding.

\*\*\* Footnote: Subject to reauthorization of Wentzville City and St. Charles County 1/2 Cent Transportation Sales Tax.





			Alternative	native Alternative Altern		
Evaluation Factors	Units	No-Build	1	2	3	
gineering Issues						
ompliance with Purpose & Need	Yes/No	No	Yes	Yes	Yes	
oject Length	Miles	N/A	6.93	6.30	6.82	
oject Construction Costs (2013 Dollars)						
Roadway Construction (+ Interchanges I-70 and US 61	\$ Millions	\$0.0	\$61.0	\$48.6	\$60.8	
Bridge/Structures	\$ Millions	\$0.0	\$4.1	\$6.1	\$7.6	
Right-of-Way Acquisition	\$ Millions	\$0.0	\$11.9	\$7.0	\$8.7	
Miscelaneous Costs	\$ Millions	\$0.0	\$7.2	\$5.5	\$7.6	
Total Project Cost Estimate (+ 20% Contingency)	\$ Millions	\$0.0	\$97.2	\$78.1	\$98.4	
onstructability Issues						
Difficulty of Construction	Rating	1	4	6	4	
Traffic Accommodation During Construction	Rating	1	4	2	2	
Access Impacts to Adjacent Properties	Rating	0	4	2	6	
pacts to Existing Utilities	Rating	0	4	6	6	
wironmental issues	Rung					
ime Farmland Impacts	Acres	0	0.4	0.0	15.3	
	Lincer Feet	0	9.4 0.570	2.042	2 601	
		0	2,572	2,043	3,091	
ream Crossings	NO.	0	9	11	15	
etland Impacts (NWI-Mapped)	Acres	0	0.4	0.6	0.6	
ond Impacts (jurisdictional only)	Acres	0	2.22	0	0	
oodplain Impacts	Acres	0	18.6	11.0	30.5	
rest Impacts (wooded remnants)	Acres	0	37.7	40.3	41.9	
gh Quality Natural Community Impacts	Acres	0	0	0	0	
reatened & Endangered SpeciesCritical Habitat	No. Species	0	0	0	0	
Itural Resources (Adverse Effect)						
NRHP Listed Architectural Resources	No.	0	0	0	0	
NRHP Listed Archeological Sites	No.	0	0	0	0	
NRHP Eligible Architectural Resources	No.	0	0	0	0	
NRHP Eligible Archeological Sites	No.	0	0	0	0	
zardous Material Sites (Med. or High Contamination)	No.	0	0	0	0	
cial and Economic Issues			_			
ght of Way Acquisition Impacts						
Single-Family Residential (Total Impacts)	No.	0	18	3	4	
Single-Family Residential (Partial Impacts)	No.	0	30	13	16	
Multi-Family Residential (Apts.) (Total Impacts)	No. Units	0	0	0	0	
Businesses (Total Impacts)	No.	0	2	0	0	
Businesses (Partial Impacts)	No.	0	3	1	1	
Public/Community Facilities (Total Impacts) *	No.	0	0	0	0	
Public/Community Facilities (Partial Impacts) *	No.	0	4	3	0	
rkland Impacts - Section 4(f)/6(f)	Acres	0	0.2	0	0	
nority or Low-Income Community Impacts	Rating	1	1	0	0	
ighborhood/Community Cohesion	Rating	0	6	0	0	
onsistency with Community/Land Use Plans	Rating	6	6	0	6	
FE: Impacts are based on a 200-foot wide corridor for each alternative, and it 200-foot corridor includes roadway travel lanes, sidewalks on each side, an cludes churches, cemeteries, schools and other public/semi-public properties. Selected Alternative	impacts could be n d temporary consti s. Parkland impact	ninimized as the ruction easemen s are given sepa	alternative moves ts on each side. rately.	torward into desi	gn.	
ng Scale: 1 Low Impact 2 Low/Moderate Impact 3 Modera	ate Impact 🛛 🕘	Moderate/High	Impact 🟮 H	igh Impact		
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# CHAPTER III Affected Environment and Environmental Consequences

The Reasonable Alternatives Screening Matrix, shown in Exhibit II-3 in Chapter II, details comparisons and summarizes impacts of the No-Build and Reasonable Build Alternatives 1, 2 and 3. Descriptions of the alignments of the alternatives can be found in Chapter II, Alternatives Considered. The three Reasonable Alternatives were carried forward into Chapter III, Affected Environment and Environmental Consequences, in order to evaluate and compare their potential social, economic and environmental impacts. The impacts of each Reasonable Alternative are explained in the following sections, and those of the Selected Alternative corridor are discussed in more detail and shown on Plan Plates in Appendix A. The Reasonable Build Alternatives 1, 2 and 3 were compared and screened based on a 200-foot corridor width for each alternative. The 200-foot corridor includes the roadway travel lanes, sidewalks on each side, and construction easements on each side to allow for cut and fill operations.

Subsequent to the approval of the Draft EA in 2009, an alternate to the US 61 interchange location and type included with Alternatives 1 and 2 has been proposed. As part of the revised Selected Alternative (Alternative 2), the alternate location would provide a shorter connection to Route P, and would minimize impacts to McCoy Creek and Dry Branch. The previous interchange location is still evaluated as a part of Reasonable Alternative 1. The EA has been updated to include the evaluation of the new alternate as a part of the Selected Alternative.

# A. Social and Economic Characteristics

# 1. NEIGHBORHOOD AND COMMUNITY COHESION

Neighborhoods and communities are described as areas where residents share common geographic identities and other ties or interests. The study area is in a mostly rural setting; however it is located at the edge of an area that is experiencing a lot of new development. As such, there are old, as well as new neighborhoods (designated as subdivisions) among the agricultural and wooded areas. The subdivisions/neighborhoods and their general locations are shown on Exhibit III-1 and are as follows:

- *Prairie View Acres* an established single-family subdivision located south of I-70, east of Point Prairie Road
- *Glenhurst* a new single-family subdivision (not yet complete) located south of I-70, east of Point Prairie Road.
- Langtree Estates an established single-family subdivision located on the north side of I-70, east of Point Prairie Road.
- West Plains Estates an established single-family subdivision located on the east side of Point Prairie Road, just north of Goodfellow Road.
- Shannon Glen Estates an established single-family subdivision located on the east side of Point Prairie Road, just north of Goodfellow Road.
- The Fountains at Bear Creek a recently completed single-family subdivision located between Meyer Road and I-70, west of Point Prairie Road

- *Keeneland Trails* a new single-family subdivision (not yet complete) located between Meyer Road and I-70, west of Point Prairie Road
- Stonemoor a new single-family subdivision (not yet complete) located between Meyer Road and I-70, west of Point Prairie Road
- Shadow Ridge Estates a new single-family subdivision (not yet complete), located between Meyer Road and I-70, west of Point Prairie Road
- *Bear Creek* a single-family and duplex subdivision within the Bear Creek golf course, located between Meyer Road and I-70, east of Point Prairie Road
- Wentzville Senior Housing a new retirement village (not yet complete) located south of Scotti Road, west of Point Prairie Road
- Wynncrest a new single-family subdivision (not yet complete) located south of Scotti Road, east of Point Prairie Road
- *Liberty Grove* a new single-family subdivision (not yet complete) located south of Scotti Road, east of Point Prairie Road
- Autumn Valley Lakes a single-family subdivision located south of Scotti Road, east of Point Prairie Road
- *Villages at Huntleigh* construction is just beginning on this single-family subdivision with an area of multi-family attached units on the north side of Scotti Road, west of Point Prairie Road.
- Westhaven construction has not yet begun for this new single-family subdivision, which will be located west/northwest of Peine Road.
- The Villages at Prairie Bluffs a new single-family subdivision (not yet complete) located north of Scotti Road, west of Point Prairie Road
- Hannah Ridge Estates a new single-family subdivision (not yet complete) located west of US 61, northwest of Peine Road
- *Hickory Hollow* a newly completed single-family subdivision located west of US 61, north of Peine Road.
- An established single-family residential neighborhood, located on the north side of Peine Road, just west of US 61.
- *Majestic Oaks* a newly completed single-family subdivision located west of US 61, south of Peine Road
- *Peine Lake Estates* a new single-family subdivision (not yet complete) located west of US 61, south of Peine Road
- *Peine Lakes Apartments* a newly completed apartment complex located west of US 61, south of Peine Road
- *Timber Trace* construction is just beginning on this new single-family subdivision, located west of US 61, south of Dry Branch.
- *Town of Flint Hill* the downtown area of Flint Hill, along Highway P, is a "small-town" mixed-use area composed of residential, commercial, a church, and a school.
- *Town & Country Acres* an established single-family subdivision, located just to the east of downtown Flint Hill, south of Highway P.

# a. Reasonable Alternatives Impacts

#### No-Build Alternative

The No-Build Alternative would have no impacts to existing neighborhoods and community cohesion.

#### Alternative 1

Alternative 1 would have a moderate impact on existing neighborhoods and community cohesion. Although the majority of the alignment is on existing roads, and widening of Point Prairie Road and Peine Road would result in several residential impacts to adjacent houses, it would not bisect existing neighborhoods or impact community facilities. However, it would disrupt the existing Hickory Hollow subdivision adjacent to, and on the north side of Peine Road (about 3,600 feet west of US 61) by impacting a row of houses along Peine Road.

#### Alternative 2

Alternative 2 would have a low to moderate impact to existing neighborhoods and community cohesion. Although it would be aligned adjacent to new or proposed residential subdivisions, it would not sever or disrupt any existing established neighborhoods or communities. The new and proposed subdivisions have been planned to include a dedicated area for a future roadway. As a result, the homes on either side of the alignment are enveloped in their own separate neighborhoods as planned.

#### Alternative 3

Alternative 3 would also have a low to moderate impact to existing neighborhoods and community cohesion, as the south half of this alternative follows the same alignment as that of Alternative 2, thereby having the same impacts to the new subdivisions between Meyer Road and Goodfellow Road. The north half travels through mostly undeveloped land and along the south side of Flint Hill without severing any existing neighborhoods or impacting any community facilities.

## b. Selected Alternative Impacts (Alternative 2)

The Selected Alternative would not sever or disrupt any existing established neighborhoods or communities. It would, however, travel through three new residential subdivisions. Two are currently being developed (Keeneland Trails and Hannah Ridge Estates), and one (Westhaven) is platted but not yet under construction. All three of these subdivisions were planned in cooperation with the City of Wentzville to include a dedicated area for a future roadway. These subdivisions have been designed to accommodate a future roadway, as well as to provide residents access to this roadway. As a result, the homes on either side of the Selected Alternative alignment are enveloped in their own separate neighborhoods, as planned, but do have access to the Selected Alternative.

The Selected Alternative alignment would also travel between two separate developing residential subdivisions (Stonemoor and Shadow Ridge Estates), and adjacent to one developing residential subdivision (Villages at Huntleigh). All three of these areas have been planned to accommodate a future roadway in a dedicated area.

Based on the above considerations, the Selected Alternative would not have a negative impact on neighborhoods and community cohesion. It could have positive impacts on the neighborhoods by providing better access to other community facilities, as well as the regional transportation system including I-70 and US 61. In addition, the Selected Alternative would avoid impacts to the existing community of Flint Hill, as it would terminate at existing Route P just east of US 61. The proposed interchange at US 61 would aid the community of Flint Hill with safe and efficient access to US 61, as well as to the Selected Alternative.

# 2. CHANGES IN TRAFFIC PATTERNS

The Reasonable Alternatives would provide a new roadway connection between I-70 and US 61, thus providing a new route for travel within the western portion of the City of Wentzville that

does not currently exist. The David Hoekel Parkway is expected to improve existing traffic patterns by providing an important local north/south link for new residential housing to access the I-70 corridor, as well as an important east/west link to US 61. In addition, while the new roadway is not anticipated to carry a large amount of through traffic destined between I-70 and US 61, it does provide system redundancy, which can help with incident management. The David Hoekel Parkway is anticipated to attract an average of 26,000 vehicles per day (vpd) west of US 61 in Wentzville and approximately 5,000 east of US 61 in Flint Hill in 2040. (refer to Chapter II, Section E, Traffic Analysis, for further discussion on traffic circulation and analysis).

## a. Reasonable Alternatives Impacts

## No-Build Alternative

The No-Build Alternative would result in no changes to existing traffic patterns.

## Alternative 1

Most of the Alternative 1 alignment is improvement to the existing roadways and would, therefore, result in only minor changes in traffic patterns. One change would occur near Scotti Road where the alignment would curve to the east and provide a connection with existing Peine Road. Another change would occur at the proposed intersection of US 61/Peine Road where the alignment would travel to the north of Flint Hill and connect with existing Highway P at the eastern terminus of the project.

## Alternative 2

The Alternative 2 alignment would change traffic patterns by providing travelers of Point Prairie Road with an alternative north-south route, and an alternative to east-west Peine Road. At the proposed intersection of US 61/Peine Road/Route P, this alignment would provide access to the downtown area of Flint Hill.

# Alternative 3

The Alternative 3 alignment would result in similar changes in traffic patterns as those described for Alternative 2. At the proposed intersection of US 61, this alignment would travel to the south of Flint Hill and connect with existing Highway P at the eastern terminus of the project.

# b. Selected Alternative Impacts (Alternative 2)

Since the Selected Alternative would provide a new route for motorists to travel, some reductions in traffic demand can be expected in other corridors or at other interchanges. There is not anticipated to be a significant change in through-traffic volumes on I-70 or US 61 as a result of the new roadway. However, the existing I-70 interchanges at Wentzville Parkway (25 percent traffic reduction) and Route W/T (7 percent traffic reduction), as well as Point Prairie Road (56 percent traffic reduction) on the City's local roadway system, are anticipated to experience traffic relief due to change in travel patterns (refer to Table II-5 in Chapter II).

The Selected Alternative would also result in some changes in existing traffic patterns for the local roadway network throughout the study area. These changes are described in the following section:

- At the south end of the project, Point Prairie Road would intersect with the Selected Alternative just south of Peruque Creek, and the Selected Alternative would be aligned on existing Point Prairie Road to intersect with Jackson Road.
- The South Service Road adjacent to I-70 would terminate at Point Prairie Road if I-70 is
expanded for truck-only lanes in the future. Point Prairie Road would then intersect with planned Interstate Drive (a separate project). Interstate Drive will intersect with the Selected Alternative to provide access to the north side of I-70, and will also provide access to the west side of the Selected Alternative.

- On the north side of I-70, the North Service Road (W. Pearce Blvd.) would be realigned to merge with Point Prairie Road and then with Goodfellow Road which would intersect with the Selected Alternative.
- The Selected Alternative would provide new intersections with Meyer Road, Scotti Road, and Point Prairie Road (north of Scotti Road), in addition to a new intersection with the future Peine Road extension.
- Just west of US 61, the Selected Alternative would be aligned immediately adjacent to, and on the south side of existing Peine Road. Peine Road, on the south side of the Selected Alternative alignment, would "T" into the Selected Alternative where the two meet. Peine Road, on the north side of the Selected Alternative alignment, would then become an access road for most of the homes on the north side. The proposed interchange would be accessible from Peine Road and the nearby residential neighborhoods, and from the apartment complex to the southwest. The proposed interchange would also provide a connection to the west outer/service road, and connections on the east side of US 61 with the east outer/service road and with Highway P which leads to the downtown area of Flint Hill.
- On the east side of US 61, the service road would intersect with Highway P and be realigned on the north side of Highway P. Local access to Flint Hill would be maintained off of the east service road and from Highway P.

# 3. PUBLIC AND COMMUNITY FACILITIES, PARKS AND RECREATION AREAS

The public and community facilities located within the study area include the following: public parks, schools, churches, cemeteries, and public safety/emergency facilities. These are discussed below and are located on Exhibit III-1.

# a. Public Parks and Recreation Areas

Publicly-owned parks, recreation areas, and wildlife and waterfowl refuges have special status under the provisions of Section 4(f) of the U.S. Department of Transportation (USDOT) Act of 1966. Before a transportation project is allowed to proceed with any encroachment on a Section 4(f) property, a specific evaluation must be conducted that tests all proposed alternatives. Before a Section 4(f) property can be used, an evaluation must lead to a finding that there is no feasible and prudent alternative to the taking of that park, recreation area or refuge, and that all possible planning to minimize harm to the Section 4(f) resource has been undertaken. In addition, the National Park Service (NPS) administers the Land and Water Conservation Fund [LWCF, known as Section 6(f) funds] for recreational land acquisition and development.

A review of land use maps, the City/county park inventory map from the City's 2006 Comprehensive Plan, and a land use survey for the project corridor indicated that there are four public park lands (all of which are owned by the City of Wentzville) in or adjacent to the study area: Rotary Park, Peine Road Park, Peruque Valley Park, and an unnamed park. The FHWA has determined that all four of these parks are Section 4(f) eligible; however, none of them have been the recipient of Section 6(f) funds.

• Rotary Park is a City-owned, 72-acre developed park, located north of Meyer Road and west of the Selected Alternative corridor. It contains a playground, amphitheater,

restrooms, sand volleyball courts, horseshoe pits, picnic pavilions, a walking trail, and a lake. It also includes buildings and open areas that are used for the annual St. Charles County Fair.

- *Peine Road Park* is a City-owned, 15-acre undeveloped parcel, and is located east of the Scott Road/Point Prairie Road intersection, near Peine Road. It does not yet have an official name, and development of the park is in the future, as there is currently no funding available for development.
- Peruque Valley Park is a City-owned, 75-acre undeveloped parcel located west of S. Point Prairie Road (south of I-70), along Peruque Creek. Although there is currently no funding available for development, the conceptual plans for the park include amenities such as baseball fields, soccer fields, concessions, restrooms, walking trails, and fishing areas. This park land was recently acquired by the City and a corridor for the Selected Alternative has been dedicated along the eastern edge of the property through coordination with the Parks & Recreation Department (see plat in Appendix B).
- Unnamed park along Peruque Creek This city-owned, predominantly wooded park land is located along the north side of Peruque Creek, east of S. Point Prairie Road (south of I-70). Although there is currently no access to this property, future access may be provided off of S. Point Prairie Road. This park is shown on the park inventory map of the City's Comprehensive Plan, and the Parks and Recreation Department is planning for it to someday be used as a trailhead or a stopping place along a future trail that will travel along Peruque Creek.

Although the Golf Club of Wentzville (located at the south end of the study area), Bear Creek Golf Club (located on the east side of Point Prairie Road, south of Meyer Road), the Sandbox volleyball complex (located on the east side of US 61 in Flint Hill), and the soccer field complex (located northeast of the Highway P/US 61 intersection) are recreation areas, they are privately-owned and are, therefore, not Section 4(f) eligible properties. In addition, St. Theodore Park (located at the northeast terminus of the study area) contains two baseball fields, however, it is privately-owned, and therefore not Section 4(f) eligible.

*Impacts* – The only Reasonable Alternative that would have potential impacts to a public park is Alternative 1. It would impact a small (0.2 acre) portion of the southwest corner of the City's unnamed and undeveloped park, located east of Point Prairie Road at the south end of the study area. The minimal impacts could result in a 'de minimis' finding, thereby possibly avoiding a full Section 4(f) Evaluation. None of the public parks/recreation areas would be impacted by the Selected Alternative (Alternative 2). As stated above, the eastern edge of Peruque Valley Park has a corridor dedicated specifically for the Selected Alternative alignment (see plat in Appendix B). As such, there is no conversion of existing park use to transportation use, and thus no Section 4(f) impact. The soccer field complex would be partially impacted by the Selected Alternative, but it is privately-owned and there would be no Section 4(f) Evaluation required.

# b. Schools

There are two schools within or adjacent to the study area. St. Theodore Catholic School is a private K-8 school located at the east terminus of the study area, along Highway P in Flint Hill. There is also one public school, Peine Ridge Elementary School, located adjacent to, but outside of the study corridor, on the west side of Peine Road.

*Impacts* – None of the Reasonable Alternatives would have negative impacts on either of these schools; however, both of the schools would benefit from the improved access that the parkway would provide to the region.

In addition, the Peine Road extension (connecting to the Selected Alternative) would provide improved access for the Peine Ridge Elementary School.

# c. Churches

Three existing churches are located in the study area. The Crossroads Free Will Baptist Church is located just west of Point Prairie Road, on the north side of I-70. The Agape Word Center is located on the east side of Point Prairie Road, about 1/10 of a mile north of I-70. The St. Theodore Catholic Church is located just east of US 61, on the north side of Highway P in Flint Hill. There is also one property that is currently owned by the Faith United Church of Christ of Wentzville. It is located north of Peine Road (north of the Hickory Hollow subdivision), about one-half mile west of US 61. This property is currently vacant and there are no current plans filed with the City of Wentzville for a church to be constructed on the property.

*Impacts* – None of the Reasonable Alternatives would directly impact any of the existing churches, however, Alternative 1 would have partial impacts to three church properties. The Selected Alternative (Alternative 2) would cross an access road leading to the parcel that is owned by the Faith United Church of Christ, thereby removing access to the property. As stated in the paragraph above, the property is currently vacant. Access can be restored by providing a new access road from the church property that travels along the north side of the Selected Alternative and intersects with it at the proposed intersection with existing Peine Road (see Sheet 12 in Appendix A).

# d. Cemeteries

There are four known cemeteries in the study area. One is located behind (north of) St. Theodore Catholic Church at the north terminus of the study area, one is located east of US 61 and south of Highway P, one is located just southeast of the Point Prairie Road/Scotti Road intersection, and one is located at the east terminus of the study area north of Highway P.

*Impacts* – None of these cemeteries would be impacted by the Reasonable Alternatives.

# e. Public Safety/Emergency Facilities

The issue of public safety relates to potential disruptions and improvements to police, fire and emergency service delivery. The City's police facility is located outside of the study area, and all but one of the combined fire/ambulance facilities that serve the immediate area is located outside of the study area. The Wentzville Fire Protection District encompasses the entire project study area. There is one fire station (Fire Station No. 2) in the study area, located at the north terminus of the corridor off of Mette Road in Flint Hill. There is also a new Emergency Medical Service (EMS) facility on North Point Prairie Road (about 1/3 mile north of Meyer Road).

*Impacts* – None of the safety/emergency facilities would be directly impacted by any of the Reasonable Alternatives. In the long term, the Selected Alternative can be expected to improve local and regional area circulation. The roadway would enhance the overall public safety by providing more direct access to the developing area in which the study area is located. Fire Station No. 2 on Mette Road, and the new EMS facility on N. Point Prairie Road would benefit from improved access to US 61 and the Selected Alternative. Response times for emergency vehicles and police personnel would improve as a result of providing smoother flowing transportation facilities in the vicinity of the corridor.

Construction related activities may temporarily disrupt routes and travel patterns in the short term for police, fire and ambulance services responding to calls near intersections with the Selected Alternative. Communication between the City and their emergency services during construction would be imperative in order to facilitate the planning of temporary alternate routes for emergency vehicles.

# 4. PEDESTRIAN AND BICYCLIST CONSIDERATIONS

A major consideration in highway planning and design is the interaction among motorists, pedestrians and bicyclists. The City's Comprehensive Plan includes a map showing the St. Charles County Trails and Greenways Development Plan. This map indicates on-street bike lane routes and separated paths that are designated as either existing, planned, or possible (future) routes. These routes, in relation to the study area, are shown on Exhibit III-1.

No existing bike/pedestrian paths or bike lanes exist within or adjacent to the corridors of the Reasonable Alternatives, however, the trails/greenways plan identifies future separate paths and others that are designated as future bike lanes (on-street). The Trails and Greenways Development Plan shows a future separate path following Peruque Creek near the southern terminus of the project. In addition, future bike lanes are shown along Point Prairie Road (Alternative 1) beginning at Peruque Creek and traveling north. Near the northern terminus of the study area, on the west side of US 61, future separate paths are shown along the riparian corridors of McCoy Creek and Dry Branch. On the east side of US 61, future bike lanes are shown along McCoy Creek and Dry Branch. A trail is also planned to follow the Selected Alternative alignment. In addition, the City of Wentzville's future Comprehensive Land Use Plan shows a future trail traveling along Meyer Road to Rotary Park, thereby crossing the Reasonable Alternative corridors at Meyer Road. There are currently no sidewalks along any of the existing streets or roads that would be intersected by the Reasonable Alternatives.

The Reasonable Alternatives would include a 6-foot wide sidewalk and/or bicycle/pedestrian path on each side of the roadway, separated from the roadway by a 7.5-foot wide grass strip (refer to Figure II-2 in Chapter II). The proposed paths will connect with any future paths that are in place when the roadway is constructed.

# 5. DEMOGRAPHICS AND SOCIAL CHARACTERISTICS

Demographic and social characteristics were developed for this study based on the 2010 U. S. census data. Estimated figures are noted as such in a footnote for applicable tables. The majority of Wentzville's growth from 2000 to 2010 has been within and near the study area. The census data is presented in tables for the City of Wentzville, St. Charles County, the City of St. Louis, and the State of Missouri.

# a. Population

Between 2000 and 2010 the City of Wentzville's population increased approximately 321 percent. St. Charles County had a 27 percent increase from 2000 to 2010. Both growth rates were significantly higher than Missouri at seven percent, and the City of St. Louis which had a decline in population of about eight percent, for the same time period. Table III-1 shows the population from the Census 2010.

There was a higher percentage of individuals under the age of 18 in Wentzville in 2010 as compared to the county, St. Louis, and state figures. The percentage of individuals over 64 was lower for Wentzville than it was for the other demographic regions in 2010. Women were in the majority in all areas in 2010, but Wentzville and St. Louis had a slightly higher percentage than the other demographic areas.

	2010 Census Data				
Population, Gender and Age	Missouri	St Louis City	St. Charles County	Wentzville	
Total Population	5,988,927	319,294	360,485	29,070	
Change from 2000	+393,716	-28,895	+76,602	+22,174	
% Change from 2000	+7.0%	-8.3%	+27.0%	+321.5%	
% Male	49.0%	48.3%	49.1%	48.5%	
% Female	51.0%	51.7%	50.9%	51.5%	
% Under 18	23.8%	21.2%	28.4%	33.7%	
% 19-64	62.2%	67.8%	60.4%	41.2%	
% 65+	14.0%	11.0%	11.2%	7.5%	

Table III-1: Population (20
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Source: U. S. Census Bureau 2010

#### b. Education

Data on educational attainment for areas reviewed is shown in Table III-2. In estimates for 2010, the Wentzville area contained the lowest percentage, 3.7 percent, of adults over 25 years of age with less than a high school education. The remaining areas studied ranged from 5.3 to 12.9 percent of adults with no high school diploma in 2010.

	2010 Census Data			
Educational Attainment – Persons over 25	Missouri*	St Louis City*	St. Charles County*	Wentzville**
Over 25 years of age	3,984849	212,328	238,203	16,579
Less than 9th grade	4.4%	5.6%	2.5%	2.3%
9th thru 12th grade, no diploma	8.7%	12.9%	5.3%	3.7%
High school grad or GED	31.9%	26.2%	27.5%	23.4%
Some college, no degree	22.6%	20.6%	22.5%	30.4%
Associate's degree	6.8%	6.2%	8.2%	8.7%
Bachelor's degree	16.0%	15.9%	22.5%	22.7%
Graduate or professional degree	9.5%	12.6%	11.5%	8.8%

Table III-2: Education (2010 and 2008-2010 Estimates)

\* Source: U. S. Census Bureau, American Community Survey, 1-year estimate for 2010

\*\* Source: U. S. Census Bureau, American Community Survey, 3-year estimate for 2008-2010

An examination of higher education statistics for areas reviewed finds the number of adults over 25 years of age in Wentzville who had a bachelor's degree was estimated to be the highest at 22.7 percent in the year 2010. The other areas ranged from estimates of 15.9 to 22.5 percent of adults with a bachelor's degree in 2010.

### c. Minority Populations

The percentage of non-whites was somewhat similar for Wentzville and St. Charles County at 10 percent and 9.3 percent respectively in the year 2010. The City of St. Louis had the highest percentage of non-whites at about 56 percent, while the State of Missouri had a non-white population of about 17 percent.

	2010 Census Data				
Racial Characteristics	Missouri	St Louis City	St. Charles County	Wentzville	
Total Population	5,988,927	319,294	360,485	29,070	
White	4,958,770	140,267	327,018	26,122	
Black or African American	693,391	157,160	14,960	1,738	
American Indian & Alaskan Native	27,376	838	851	76	
Asian	98,083	9,291	7,850	356	
Native Hawaiian or Other Pacific Islander	6,261	74	173	1	
Other Race	80,457	4,102	3,323	239	
Two or More Races	124,589	7,562	6,310	538	
Hispanic or Latino (of any race)	212,470	11,130	9,983	788	
% Minority (non-white)	17.2%	56.1%	9.3%	10.0%	

# Table III-3: Minority Populations (2010)

Source: U. S. Census Bureau 2010

#### d. Housing Characteristics

The housing characteristics of the City of Wentzville are compared with St. Charles County, the City of St. Louis, and the State of Missouri characteristics in Table III-4.

	2010 Census Data				
Housing Characteristics	Missouri	St Louis City	St. Charles County	Wentzville	
Total Units	2,712,729	176,002	141,016	10,305	
Total Vacant Units	337,118	33,945	6,742	538	
Total Occupied Units	2,375,611	142,057	134,274	9,767	
% Occupied	87.6%	80.7%	95.2%	94.8%	
Owner Occupied	1,633,610	64,425	108,219	8,193	
Renter Occupied	742,001	77,632	26,055	1,574	
Percent Owner Occupied	68.8%	49.5%	80.6%	79.5%	
Average Household Size	2.45	2.47	2.64	2.98	
Median Home Value	\$134,500	\$119,900	\$196,900	\$210,900	
Median Gross Rent	\$682	\$684	\$835	\$666	

#### Table III-4: Housing Characteristics (2010)

Source: U. S. Census Bureau 2010

In the year 2010, the City of St. Louis and the State of Missouri had the lowest percentage of occupied housing units at 80.7 and 87.6 percent respectively. St. Charles County had the highest occupancy rate at 95.2 percent, while Wentzville had the next highest occupancy rate of 94.8 percent.

In the year 2010, the highest median home value was in Wentzville at \$210,900, while the lowest was in the City of St. Louis at \$119,900. The county had a median home value of \$196,900. Median gross rent was highest in St. Charles County at \$835 in 2010, and lower, but somewhat similar in the other three demographic areas.

# 6. ECONOMIC CHARACTERISTICS

#### a. Employment

The number of persons employed in an area provides a direct measure of economic activity. Employment in higher paying jobs will provide economic stimulus. Table III-5 provides a summary of employment characteristics.

		2010 Census	Data	
Employment Characteristics by Industry	Missouri*	St Louis City*	St. Charles County*	Wentzville**
Employed Person in CLF (civilian labor force)	2,733,876	143,572	183,021	13,774
Agriculture, Forestry, Fishing and Hunting, and Mining	47,689	190	1,476	77
Construction	161,710	5,094	11,997	903
Employed in Manufacturing	309,768	11,090	23,784	1,521
Wholesale Trade	78,608	2,965	6,027	842
Employed in Retail Trade	330,191	13,080	23,316	1,696
Transportation and Warehousing, and Utilities	139,157	6,670	7,955	738
Information	64,091	4,825	3,880	171
Finance, Insurance, Real Estate, and Rental and Leasing	190,905	8,841	18,062	1,627
Professional, Scientific, Management, Administrative, and Waste Management Services	240,638	15,818	19,141	1,234
Educational, Health and Social Services	660,567	39,784	37,559	2,565
Arts, Entertainment, Recreation, Accommodation and Food Services	248,691	20,117	16,770	1,135
Other Services (except public admin)	129,080	6,386	6,959	640
Public Administration	132,781	8,712	6,095	625

 Table III-5: Employment Characteristics (2010 and 2008-2010 Estimates)

\* Source: U. S. Census Bureau American Community Survey, 1-year estimate for 2010

\*\* Source: U. S. Census Bureau American Community Survey, 3-year estimate for 2008-2010

In all of the areas studied, the highest estimated percentage of employees was in the educational, health and social services category (see Table III-5). The other two industries that employed substantial numbers of people were estimated to be retail trade and manufacturing. In addition, Wentzville showed a substantial estimated number of people employed in the finance, insurance, and real estate industry. The industry with the lowest estimated number of employees across all of the areas was agriculture, forestry, fishing and hunting, and mining. This is not surprising considering the suburban nature of most of the areas. Table III-5 provides a summary of estimated employment by industry for 2010.

# b. Income and Poverty

Table III-6 identifies estimated income and poverty characteristics. As shown below, the City of St. Louis had the lowest median household income at \$32,688 in the year 2010 estimate, as well as having the highest percentage of persons below the poverty level at 27.8 percent. Wentzville had the highest median household income at an estimated \$69,339 and the lowest number of persons below poverty level at an estimated three percent. The lowest estimated per capita income in 2010 was in the City of St. Louis at \$21,069, and the highest was in St. Charles

County at \$29,170. The estimated per capita income for Wentzville was estimated as \$26,262.

	2010 Census Data				
Income and Poverty	Missouri*	St Louis City*	St. Charles County*	Wentzville**	
Population for whom poverty status is determined	5,818,852	311,381	358,980	27,101	
Median Household Income	\$44,301	\$32,688	\$64,608	\$69,339	
Per Capita Income	\$23,920	\$21,069	\$29,170	\$26,262	
Number of Persons Below Poverty Level	888,570	86,635	21,136	806	
% of Persons Below Poverty Level	15.3%	27.8%	5.9%	3.0%	

\* Source: U. S. Census Bureau, American Community Survey, 1-year estimate for 2010

\*\* Source: U. S. Census Bureau, American Community Survey, 3-year estimate for 2008-2010

# 7. ENVIRONMENTAL JUSTICE AND TITLE VI CONSIDERATIONS

The Executive Order on Environmental Justice 12898 states that, to the extent practicable and permitted by law, neither minority and/or low income populations may receive disproportionately high or adverse impacts as a result of a proposed project. The demographic baseline conditions, as noted in the following sections, were developed using existing sources of information available from the U.S. Bureau of the Census. This demographic baseline condition shows the racial and cultural affiliation, income and poverty levels, tenancy and housing valuation.

The City of Wentzville is committed to making relocation resources available to all residential and commercial displacees without discrimination. Property acquisition and relocation benefits will be made available to all affected property owners, residents and tenants as provided for by the Uniform Relocation Act.

The residents of Wentzville have a socio-economic profile containing racial and ethnic heritage populations and poverty levels that are lower than the State, and income and home ownership levels higher than the State. The Environmental Justice evaluation, which includes the census data presentation, indicates that the study area is not considered to have a low-income population or minority population that would require special considerations under the guidance of Environmental Justice procedures. None of the Reasonable Alternatives would result in disproportionately high or adverse effects for minority and/or low income populations within the project area. In addition, public meetings have been held in order to actively involve the residents in the NEPA process.

The Selected Alternative (Alternative 2) would acquire three single family residences. There are no multi-family or apartment buildings acquired for the Selected Alternative. The apartment complex, which would have a partial acquisition of undeveloped property, and located just west of US 61 and south of Peine Road, is not part of a government housing program.

# B. Land Use

# 1. LAND USE PLANNING

The study area of the Selected Alternative is located within the City limits of Wentzville, with the exception of a small portion at the north terminus which is located in the City of Flint Hill.

In April of 2006, the City of Wentzville approved and adopted a Comprehensive Plan which is intended to act as a guide toward the future development of the City, and which currently includes a 2013 update. The City's Thoroughfare Plan, which was included in the updated Comprehensive Plan, shows a proposed interchange with US 61 at Highway P. The City of Flint Hill relies on their updated Comprehensive Plan (prepared in 2009) to guide planning activities within their community. To ensure the implementation of the Wentzville and Flint Hill comprehensive plans, both cities also employ Zoning Ordinances and Land Use Regulations. The Official Zoning Map of Wentzville is a companion to the Future Land Use Plan, and together, the plan and map guide development and reflect Wentzville's minimum standards for development in the community. In the City of Flint Hill, planning and zoning-related issues are dealt with by the Planning and Zoning Commission.

Existing land use categories located within the study area (see Exhibit III-2) are mostly residential and agricultural/open space. The residential areas are predominantly single-family, with the exception of a multi-family (apartment) complex near the intersection of Peine Road and US 61. There are seven areas that are considered park and/or recreational use: two private golf courses, one private sand volleyball complex, and four areas that are used as public park land. There is a commercial area on the east side of US 61, between Peine Road and Highway P, and a commercial area in downtown Flint Hill along Highway P.

Zoning classifications in the corridor include Agricultural, Single Family Residential, Planned Development Residential, Planned Development Mixed, General Commercial, Highway Commercial, and Industrial. Zoning classifications are designated for only those portions of the study area that is in the corporate limits of Wentzville and Flint Hill. For the most part, existing land uses follow the general zoning classifications. However, the future commercial land uses around I-70 and the future industrial land uses in the Flint Hill area are currently zoned as Agricultural.

# 2. LAND USE PLANNING IMPACTS

#### a. Reasonable Alternatives Impacts

#### No-Build Alternative

The No-build Alternative would not be consistent with future land use plans as it would not allow the development of the David Hoekel Parkway, and development reliant on the parkway, to occur as shown in the future land use plans.

#### Alternative 1

Alternative 1 would be moderately inconsistent with future land use plans. The location of future commercial areas shown at I-70 is based on the location of a future interchange with the alignment of Alternative 2. With an I-70 interchange at the location of Alternative 1, the future commercial areas would most likely have to be shifted to the east to be consistent with the future land use plans, thereby resulting in the future removal of several existing residential areas on the east side of Point Prairie Road.

#### Alternative 2

The Alternative 2 alignment would be consistent with future land use plans, as it is shown as a proposed roadway corridor on future land use plans of the City of Wentzville and the City of Flint Hill.

### Alternative 3

The Alternative 3 alignment would be moderately inconsistent with future land use plans. The south half of Alternative 3 follows the same alignment as Alternative 2, but the north half is aligned to the south of the other two alternatives. Although it would travel through undeveloped land that is shown as future residential use, it would also travel through some existing residential areas east of US 61, in addition to several floodplain areas west of US 61 that are intended to remain natural.

# b. Selected Alternative Impacts (Alternative 2)

Wentzville's future Comprehensive Land Use Plan shows the Selected Alternative corridor as a "proposed road" on the map, as a result of a previous corridor preservation study prepared in April of 2000. Flint Hill's 2009 Comprehensive Land Use Plan has not yet been updated to show the new alternate interchange at Highway P and US 61, although an interchange at that location would be compatible with the adjacent future commercial land uses shown. Their plan currently shows the interchange alternate within the Draft EA and will be updated during their next update of the plan. The City of Flint Hill has provided a letter of support for the project, which is included in Appendix I.

The predominant future land uses within the corridor of the Selected Alternative are Medium Density Residential and Commercial. Other uses include High Density Residential (multi-family), Floodplain, Industrial, and Neighborhood Commercial (see Exhibit III-3). For the most part, the change that is planned to occur between existing land use and future land use would be the conversion of agricultural use to residential use and commercial use.

Regarding the areas within the Selected Alternative corridor and the areas adjacent to the corridor, there would be no anticipated major land use changes from those identified on the future land use plans as a result of implementing the Selected Alternative. Since the Selected Alternative corridor is an integral part of the Wentzville and Flint Hill future land use plans, the roadway is therefore consistent with the plans. The corridor is located in an area that is currently experiencing residential growth, and development will occur in the currently undeveloped areas according to the cities' plans.

# C. Farmland

The main land uses within the study area are agricultural, residential, and woodland. The agricultural lands are used for pasture or hay production (tall fescue, green foxtail, purple top), and cultivated crops such as soybeans and corn. No livestock was observed within the study area, with the exception of a couple of horse ranches.

# 1. FARMLAND SOILS

The Natural Resources Conservation Service (NRCS) defines <u>prime farmland</u> as "land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and that is available for these uses". It does not include urban or builtup land. According to the NRCS soil survey for St. Charles County, the soils within the study area that are classified as *prime farmland* soils, including those that are designated as *prime farmland if drained*, and soils classified as *farmland of statewide importance* are listed in Table III-7. The soils designated as *prime farmland* are situated adjacent to the streams, on the nearly level (0% to 2% slope) terraces (some of which are in the 100-year floodplain), and upstream of the floodplain on the nearly level terraces adjacent to the streams. The soils designated as *prime farmland if drained* are situated on ridges and gently sloping areas (0% to 4% slopes) in the south half of the study area, north of I-70, and at the eastern terminus of the corridor. The soils designated as *farmland of statewide importance* are situated on the moderate slopes of the hillsides throughout much of the corridor.

Soil Series Type	Farmland Soil Designation
Kennebec silt loam, 0 to 2% slopes, occasionally flooded	All Areas are Prime Farmland
Weller silt loam, 2 to 5% slopes	All Areas are Prime Farmland
Auxvasse silt loam, 0 to 2% slopes, rarely flooded	All Areas are Prime Farmland
Dockery silt loam, 0 to 2% slopes, occasionally flooded	All Areas are Prime Farmland
Sensabaugh silt loam, 0 to 2% slopes, occasionally flooded	All Areas are Prime Farmland
Westerville silt loam, 0 to 2% slopes, rarely flooded	All Areas are Prime Farmland
Haymond silt loam, 0 to 2% slopes, occasionally flooded	All Areas are Prime Farmland
Mexico silt loam, 1 to 4% slopes, eroded	Prime Farmland if drained
Two-mile silt loam, 0 to 2% slopes, rarely flooded	Prime Farmland if drained
Keswick silt loam, 9 to 14% slopes, eroded	Farmland of Statewide Importance
Armster silt loam, 5 to 9% slopes	Farmland of Statewide Importance
Hatton silt loam, 5 to 9% slopes	Farmland of Statewide Importance
Cedargap silt loam, 0 to 2% slopes, occasionally flooded	Farmland of Statewide Importance
Crider silt loam, 5 to 9% slopes, eroded	Farmland of Statewide Importance
Crider silt loam, 9 to 14% slopes, eroded	Farmland of Statewide Importance

# Table III-7: Farmland Soils

Some of the areas of mapped farmland soils within the study area were removed from the mapping for this project because they are now within the corporate limits, "urban or built-up land", or are "committed to urban development". According to information from the City of Wentzville and from field investigations, some areas in the study area that were used for agriculture have recently been developed or are currently being developed as residential areas, while other areas have been planned and are platted for residential development. Therefore, these areas are no longer considered prime farmland or statewide important farmland (see Exhibit III-4).

Through coordination with the St. Charles County NRCS, it was also determined that there are no lands involved in the Conservation Reserve Program (CRP) or the Wetlands Reserve Program (WRP) within the study area (see letter dated December 10, 2007, in Appendix I).

# 2. FARMLAND IMPACTS

#### a. Reasonable Alternatives Impacts

The screening for the Reasonable Alternatives within the 200-foot corridors involved impacts to only soils classified as Prime Farmland.

# **No-Build Alternative**

The No-Build Alternative would have no impacts to Prime Farmland.

# Alternative 1

Alternative 1 would result in impacts to 9.4 acres of Prime Farmland. Most of the Alternative 1 alignment is improvement to the existing roadways, and the remaining portions of the alignment follow property lines and travel through land that has been planned for other land use

development and has been, or will be, taken out of farm production. Therefore, farm severances are minimal.

#### Alternative 2

Alternative 2 would result in impacts to 9.9 acres of Prime Farmland. In order to minimize farm severances, this alignment follows property lines and travels through land that has been planned for other land use development and has been, or will be, taken out of farm production.

#### Alternative 3

Alternative 3 would result in impacts to 15.3 acres of Prime Farmland. In order to minimize farm severances, this alignment follows property lines and travels through land that has been planned for other land use development and has been, or will be, taken out of farm production.

#### b. Selected Alternative Impacts (Alternative 2)

The area within the corridor of the Selected Alternative would have the following impacts to farmland soils:

- Prime Farmland (including Prime Farmland if Drained) 9.9 acres
- Farmland of Statewide Importance 51.3 acres

In order to minimize farm severances and impacts to farmland, the majority of the Selected Alternative alignment follows property lines and travels through land that has been planned for other land use development and has been, or will be, taken out of farm production. There are two parcels of farmed land (one on the south side of I-70, and one about 1100 feet east of N. Point Prairie Road) that would be severed, which would result in a piece of property that would still be farmable, but would no longer be accessible. However, access could be provided to the property south of I-70 from another proposed road (Interstate Drive), and the parcel to the east of N. Point Prairie Road would require an access drive from N. Point Prairie Road. Some larger parcels of severed land had previously been farmed but are currently owned by development companies and, although not yet platted, are planned for future development that will be accessed from the Selected Alternative or from other roads. These parcels include the areas south and north of I-70, designated as Commercial on the Future Land Use plan (Exhibit III-3).

#### 3. FARMLAND CONVERSION IMPACT RATING

Impacts to farmland were also analyzed through coordination with the NRCS by utilizing the *Farmland Conversion Impact Rating for Corridor Type Projects* (Form SCS-CPA-106). The Total Points scored for the Reasonable Alternatives were as follows: Alternative 1 scored 84, Alternative 2 (Selected Alternative) scored 82, and Alternative 3 scored 93. None of these scores exceeded the 160-point threshold established for consideration of farmland protection measures under the Farmland Protection Policy Act (7 CFR, Part 658). The completed form and an explanation of the criteria used to complete the form are provided in Appendix C. (Note: The acreage totals that the NRCS provided on Form SCS-CPA-106 vary somewhat from the acreage totals shown in the text and impact tables of this document. As discussed above, some of the mapped soils were removed from the mapping for this analysis based on recent information from the City concerning new corporate limits and new or planned development. This information was too recent to be included in the NRCS data base).

# D. Right-of-Way Acquisition

# 1. **PROPERTY OWNERSHIP**

The various impacts of the construction of a major transportation improvement project include the acquisition of real property, including residential, commercial/business, public, and undeveloped land.

# a. Residential

The single-family residences in the study area are comprised of predominantly ranch and 2-story houses, with a few 1 ½-story houses and split-levels. Values of these homes (based on the City's parcel database) range from approximately \$72,800 to approximately \$782,000. The median value of the homes in the study area is around \$228,000, based on information from the City's parcel database. Census 2010 data showed a median value of \$210,900, showing that the median value has increased significantly since the Census 2000.

There is one multi-family residential (apartment) complex in the study area: the Peine Lakes Apartments (located at the southwest quadrant of Peine Road and US 61). This complex consists of 1, 2 and 3-bedroom units that lease in the range of \$570 to \$795 per month.

# b. Commercial/Businesses

Although the majority of the study area is residential and agricultural/open land, there are also a few scattered businesses in the study area, including the following:

- Nullynski Race Cars located just south of I-70, on the east side of S. Point Prairie Road
- *Hagenhoff Trucking Company* located 1400 feet west of N. Point Prairie Road, on the north side of Goodfellow Road
- Four-Stor (mini-storage) located 1800 feet east of N. Point Prairie Road, on the north side of I-70
- *Fanning and Sachs Drywall, Inc.* located in the northwest quad of the Peine Road, and US 61 intersection
- Gold Star Paving located 3500 feet west of N. Point Prairie Road, on the north side of I-70
- Peine Lake Estates Sales Office (model home/sales office for residential subdivision)\_located on the south side of Peine Road, about 1000 feet west of the Peine Road/US 61 intersection.
- Sachs Drywall, Inc. located on the north side of Peine Road, at the northwest quadrant of the Peine Road/US 61 intersection.
- *Bruns Excavating* located on the east side of US 61, at the northeast quadrant of the Peine Road/US 61 intersection.
- The Sandbox (sand volleyball privately-owned recreation area) located on the east side of US 61, at the Peine Road and US 61 intersection
- Flint Hill Soccer Group, LLC\_(seven various-sized soccer fields) located on the US 61 NE Service Road, on the north side of Highway P
- Amerigas (propane sales) located in the southeast quad of the Highway P and US 61 intersection
- *Hakenwerth Drywall Insulation\_-* located on the south side of Highway P, about 1400 feet east of the Highway P/US 61 intersection.

- Boehmer Brothers Utility Supply located just east of Hakenwerth Drywall Insulation.
- Bross Companies Land Development office located on the north side of Highway P, about 1600 feet east of the Highway P/US 61 intersection.
- *Mannino's Market Too* located on the north side of Highway P, about 2000 feet east of the Highway P/US 61 intersection.
- Back Yard Resale & Antiques located on the north side of Highway P, just east of Mannino's Market.
- Wentzville Park Associates, LLP located north of Highway P, behind Mannino's Market.

# c. Public and Community Facilities

The public and community properties include public parks, schools, churches, cemeteries, and public safety/emergency facilities, and are discussed in Section A.3.

# d. Undeveloped Land

The undeveloped properties consist of individually-owned agricultural land, and open land (planned to be developed) that is owned by development companies.

# 2. PROPERTY IMPACTS

The screening for the Reasonable Alternatives involved an estimate of impacts to properties affected by a 200-foot corridor that would accommodate temporary construction easements for grading operations and roadway embankment.

Right-of-way impacts can include *total acquisition* (i.e. the entire parcel or lot, or primary structure, is acquired for right-of-way), or *partial acquisition* (i.e. only a portion of the parcel or lot is acquired for right-of-way). With a *partial acquisition*, a habitable residence or viable commercial business would remain and the primary structure would not be acquired.

# a. Reasonable Alternatives Impacts

# No-Build

The No-Build Alternative would have no property impacts.

# Alternative 1

This alternative would have the potential of impacting approximately 48 single-family residential properties, which includes 18 total acquisitions and 30 partial acquisitions. One multi-family residential property would be partially impacted (land only). Five businesses would be impacted, including two by total acquisition (Peine Lake Estates Sales Office and The Sandbox) and three by partial acquisition (Bruns Excavating, Flint Hill Soccer Group LLC, and Wentzville Park Associates LLP). In addition, partial impacts would occur to the land of three church properties, and one property with a neighborhood pool. Impacts would also occur to a small (0.2 acre) portion of the southwest corner of the City's unnamed and undeveloped public park, located east of Point Prairie Road at the south end of the study area.

# Alternative 2

This alternative would have the potential of impacting approximately 16 single-family residential properties, which includes three total acquisitions and 13 partial acquisitions. One multi-family residential property would be partially impacted (land only). One business property would be

impacted by partial acquisition (Flint Hill Soccer Group LLC). In addition, partial impacts would occur to the land of one church property, and one property with a neighborhood pool.

### Alternative 3

This alternative would have the potential of impacting approximately 20 single-family residential properties, which includes four total acquisitions and 16 partial acquisitions. No impacts would occur to multi-family residential properties. There would be only one partial impact to a business property (Amerigas Propane), and no impacts to public or community properties.

### b. Selected Alternative Impacts (Alternative 2)

A summary of the property acquisition for the Selected Alternative can be found in Table III-8, and the property impacts can be seen on the plan plates in Appendix A.

In some locations within the study area (areas of new or planned development), as a result of coordination between the City and developers, land has been dedicated for the right-of-way of the Selected Alternative alignment. For the purposes of this environmental document, these areas were considered as partial acquisition impacts of undeveloped land.

### Total Acquisition

The Selected Alternative would require the total acquisition of the following properties:

- **Residential** Three single-family residences would be acquired. One residence is located at the corner of N. Point Prairie Road and W. Pearce Boulevard, which is the north service road (see Sheet 4 in Appendix A). A second residence is located on the south side of Scotti Road and is already owned by the City of Wentzville (see Sheet 8 in Appendix A). The third residence is located on the south side of Peine Road and north of Pine Needle Drive (see Sheet 12 in Appendix A). This residence's access drive would be taken away and there would be no other practical location where access could be provided.
- **Commercial/Business** No commercial/business properties would require total acquisition.

There would be no total acquisition of public/community properties or undeveloped properties.

# Partial Acquisition

The Selected Alternative would require the partial acquisition of the following properties:

- Residential Thirteen single-family residential properties and one multi-family residential property would be impacted by partial acquisition. Six of the single-family properties would require new access roads or drives, while the other seven properties would be impacted by only small portions of land acquisition (such as undeveloped edges along property lines or corners of properties). The one multi-family complex (Peine Lakes Apartments) would be impacted at the east edge by a small portion of land acquisition.
- Commercial/Business One business would be impacted by partial acquisition:
  - *Flint Hill Soccer Fields (owned by Flint Hill Soccer Group LLC)* only at the south corner where a portion of the largest soccer field in the complex would be impacted.

- **Public/Community** No public properties would require partial acquisition, however, three community properties would be impacted by small portions of land acquisition that would not affect any structures on the properties:
  - Faith United Church of Christ of Wentzville (vacant site) This parcel is not yet developed. The Selected Alternative would not acquire any of the developable parcel, but it would impact a portion of the access drive leading to the parcel. If it is not practical to provide access across the Selected Alternative, it could be possible to provide an access drive on the north side of it that would also serve two other residences whose current access would be impacted.
  - Peine Lake Estates (neighborhood swimming pool area) The northernmost portion of the parcel would be impacted, including an outdoor basketball court. The swimming pool, adjacent pool house, and parking area would remain.
  - Sewage Lift/Pump Station The property would be impacted by a small piece of land acquisition along the edge of existing Highway P. However, the entrance to the property would be retained.
- Undeveloped Land Nineteen undeveloped parcels would be impacted by partial acquisition, six of which have been dedicated or reserved for the Selected Alternative right-of-way. Two of the 19 properties would lose their current means of access, thereby requiring a new access location. One property, located on the south side of I-70, could obtain access from another proposed road (Interstate Drive) and the other parcel, located about 1,100 feet to the east of N. Point Prairie Road, would require an access drive from N. Point Prairie Road.

Residential	Commercial/ Business	Public/ Community Facilities	Undeveloped
Total Acquisition	on		
3	0	0	0
Partial Acquisit	tion		
14	1	3*	19

 Table III-8: Property Acquisition (Total and Partial)

\*Community properties

# Temporary and Permanent Easements

In addition to land acquisition, the project will require temporary or permanent easements for construction or utility location/re-location. A temporary construction easement is the right to use land for purposes of constructing the roadway. After construction is complete, the temporary easement expires, the area is restored to pre-construction or otherwise acceptable conditions, and the ownership remains with the existing property owner. For the Selected Alternative, temporary construction easements will be utilized for the side slopes of the roadway. Permanent construction easements at the end of culverts; have many of the same characteristics as a temporary construction easement except that the entity responsible for facility maintenance would have the right of access to maintain or repair its facilities within the easement, but it would not own the property. Ownership remains with the existing property owner.

# 3. MITIGATION

In an effort to make the property acquisition process as equitable as possible, regulations of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended

(42 U.S.C. 4601) and the requirements of Title VI of the Civil Rights Act of 1964, will be followed to ensure adequate consideration and compensation for the persons whose property is acquired for the project.

The Uniform Act requires that comparable, decent, safe, and sanitary replacement housing within a person's financial means be made available before that person may be displaced. The Uniform Act, as well as Missouri state laws, requires that just compensation be paid to the owner of private property taken for public use. The appraisal of fair market value is the basis of determining just compensation to be offered the owner for the property to be acquired. An appraisal is defined in the Uniform Act 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.

Any displaced business, farm operation, or nonprofit organization which qualifies as a displaced person is entitled to payment of their actual moving and related expenses, as the City determines to be reasonable and necessary. Parking losses will be discussed with the property owner or business owner to determine options for replacing the amount of lost parking spaces or providing fair compensation for the loss of parking.

# a. Available Housing

The single-family residences that would be acquired by the Selected Alternative range in value from \$93,000 to approximately \$325,000, according to the City's parcel database. An internet real estate search (http://www.homefinder.com/MO/Wentzville/ performed on January 24, 2014) of available residential properties in the Wentzville area indicated that, at that time, there were 7 residential properties on the market, priced from \$90,000 to \$100,000; 23 from \$100,000 to \$125,000; 64 from \$125,000 to \$150,000; 67 from \$150,000 to \$175,000; 70 from \$175,000 to \$200,000; 70 from \$200,000 to \$225,000; 44 from \$225,000 to \$250,000; 36 from \$250,000 to \$325,000; 25 from \$275,000 to \$300,000; 9 from \$300,000 to \$325,000; and 13 from \$325,000 to \$350,000.

# b. Available Commercial Property

There would be no commercial property impacted by total acquisition, therefore, data pertaining to available commercial properties is not necessary for this project.

# E. Geology

The study area is located within the Dissected Till Plains of the Central Lowlands physiographic province. The topography is characterized by glaciated, open rolling hills with steep valley slopes. Local relief in the area varies from elevation of 696 feet at the south near I-70 to 475 feet where McCoy Creek leaves the study area near the north. Drainage generally flows north and northeast north of I-70 and east south of I-70.

The land use in the study area is mixed, ranging from agricultural to rural, suburban and urban development. General subsurface conditions consist of varying thicknesses of glacial and alluvial soils. The soil thickness is 50 feet or less and consists mostly of glacially derived silty clay loam.

Relatively flat lying horizontally layered Mississippian Age sedimentary bedrock underlay the soils throughout the study area. Bedrock is of the Osagean Series, Burlington – Keokuk Formation overlain by Meramecian Series, Warsaw, Salem, and St. Louis Formations. Limestone and dolomite are the predominant rock types.

Carbonate rocks such as limestone and dolomite are subject to dissolutioning, and although no known caves, springs, sinkholes or other karstic features are noted in the study area, there is the possibility that karst features may be encountered during construction. The project is also within some areas that have the potential of being affected by earthquakes in the New Madrid Seismic Zone. Although there is no active mining or records of past mining in the study area, MDNR has indicated that there is the potential for the presence of unrecorded mines in the area (see letter dated December 18, 2009 in Chapter V.C.4). During the preliminary design phase of the project, an abandoned underground mine study will be performed along the alignment to determine whether or not underground mines are present. If an underground mine is found, and avoidance is not feasible or practical, the MDNR will be contacted to determine the most appropriate procedures for remediation, such as filling the mine with a suitable material.

# F. Water Resources

In the preliminary inventory of existing water resources within the study area, data was gathered from USGS 7.5 minute quadrangle maps, the U.S. Fish and Wildlife Service's (USFWS) National Wetlands Inventory (NWI) maps, the Natural Resources Conservation Service's (NRCS) Food Security Act (FSA) wetland mapping, aerial photography, and field investigations. The existing water resources include streams, potential wetlands, and ponds, and are presented on Exhibit III-4.

The NWI maps are based on a classification system known as the Cowardin System (named after its principal author, Cowardin et. al. 1979). This system classifies the types of ecosystems related to water resources which, in this region, include streams, lakes, ponds, and vegetated wetlands. After a review of the water resource data and aerial photography, it was determined that the Cowardin systems represented in the study area are the Riverine (R) stream system, the Palustrine Forested (PFO) vegetated wetland system, the Palustrine Scrub-Shrub (PSS) vegetated wetland system, the Palustrine Emergent (PEM) vegetated wetland system, and the Palustrine Unconsolidated Bottom (PUB) system of upland ponds.

Section 404 of the Clean Water Act regulates discharges of dredged or fill materials into "waters of the U.S." (streams, lakes, wetlands, and ponds that are connected to streams). This project will involve the discharge of fill material into waters of the U.S.; therefore a Section 404 Permit may be required. The U.S. Army Corps of Engineers (USACE) is the regulatory agency responsible for administering the Section 404 permit program. At the beginning of the EA process, the USACE was contacted and a representative attended the Resource Management Group meetings involving agency coordination.

The analysis for water resource impacts for the 200-foot wide corridors of the Reasonable Alternatives was performed using aerial photography, mapped data, and windshield surveys. Field investigations of the water resources of the Selected Alternative were then performed. Table III-9 presents a summary of the water resources impacts for the Reasonable Alternatives. The impacts of the Selected Alternative (Alternative 2) are explained and discussed in further detail in the subsequent text. The results of the field investigations for the Selected Alternative are summarized in Appendix D, including a USGS/NWI map, a soils map, and plan view enlargements at each water resource. Photographs and data forms for each water resource are included in the full *Waters of the U.S. and Preliminary Jurisdictional Wetland Determinations Summary Report*, which is available upon request.

The inventory and investigations for Waters of the U.S. also included the task of gathering data to analyze "Significant Nexus" for jurisdictional determination (see *Preliminary Jurisdictional* 

III-23

Wetland Determination Summary in Appendix D). The guidance on jurisdictional determination, as described in Appendix D, was utilized for each stream, wetland, and pond within the impact area of the Selected Alternative. The jurisdictional determination forms and data forms for each water resource are included in the full *Waters of the U.S. and Preliminary Jurisdictional Wetland Determinations Summary Report* (available upon request). The USACE has reviewed the Summary Report and has given a "preliminary" determination that all of the streams impacted by the Selected Alternative are jurisdictional (see letter dated September 18, 2008 in Appendix I).

Subsequent to the USACE letter, modifications were made to the design of the proposed US 61 interchange of the Selected Alternative resulting in the addition of one jurisdictional stream crossing (S-12, east of US 61), the elimination of a bridge crossing over Dry Branch (Stream S-10a), and the elimination of another stream crossing (S-11, north of Flint Hill). A subsequent jurisdictional determination will be made during the permitting process in the design stage.

Water Resource	Units	Alternative 1	Alternative 2	Alternative 3
Streams	No. / Lin. Ft.	9 / 2,572	11 / 2,043	15 / 3,691
Wetlands	Acres	0.4 (NWI)	0.6 (NWI)	0.6 (NWI)
Ponds (jurisdictional)	No. / Acres	1 / 2.2	0	0

 Table III-9: Water Resources Impacts

# 1. STREAMS

The streams within the study area that have discernible Ordinary High Water Marks (OHWM) include Peruque Creek and one of its unnamed tributaries, Dry Branch and two of its unnamed tributaries, and unnamed tributaries of McCoy Creek. According to the USGS map, Peruque Creek, McCoy Creek, and Dry Branch (east of US 61) are perennial streams and the other streams are intermittent. These streams have discernible channels with OHWMs and are preliminarily considered under USACE jurisdiction as "Waters of the U.S." The perennial streams are considered Relatively Permanent Waters (RPWs), and the intermittent and ephemeral streams are considered Non-RPWs. None of the streams within the study area are on the list of designated Wild and Scenic Rivers.

# a. Stream Impacts

# Reasonable Alternatives Impacts

The stream impacts for the Reasonable Alternatives would be in the form of fill material from culverts or embankment placed within the stream channel. Where streams are bridged, these types of impacts would be avoided or minimized.

- **No-Build** The No-Build Alternative would have no impacts to streams.
- Alternative 1 This alternative would impact 9 streams totaling 2,572 linear feet.
- Alternative 2 This alternative would impact 11 streams totaling 2,043 linear feet.
- Alternative 3 This alternative would impact 15 streams totaling 3,691 linear feet.

# Selected Alternative Impacts (Alternative 2)

The stream impacts for the Selected Alternative would be in the form of fill material from culverts or embankment placed within the OHWM of the stream. Where streams are bridged, these

types of impacts would be avoided or minimized. When compared with the floodplain impacts in section H, Alternative 2 would have the least amount of floodplain impacts, meaning that it would impact smaller streams than those of the other two alternatives.

Through field investigations, it was determined that the Selected Alternative would involve 11 preliminary jurisdictional streams with OHWMs. Two of those crossings would be bridged, which includes one at Peruque Creek and one at an unnamed tributary of McCoy Creek. These bridged stream crossings would not result in linear stream impacts from fill material.

A total of 2,043 linear feet of stream channel would be filled, equating to 0.49 surface acre of impacts, based on the average OHWMs of the streams impacted. However, the individual potential impacts (fill below the OHWM) at each separate stream crossing (see Table 1 in Appendix D) would exceed 1/10 acre of surface area at only one stream crossing (Dry Branch). The USACE has determined that a Section 404 Permit will be required. During the design phase and the permit process, when impacts are more specifically determined, coordination with the USACE will ascertain details of Section 404 Permit applicability.

### b. Deed Restriction Research

Since some of the stream crossings are adjacent to or within new residential developments, further investigation was conducted to determine if the stream corridors (adjacent to the impact area of the Selected Alternative) had deed restrictions associated with them because of mitigation for stream impacts under Section 404 permits. The Selected Alternative corridor is aligned through three new subdivisions that have the potential for containing mitigation areas directly adjacent to the parkway corridor: Keeneland Trails, Stonemoor, and Westhaven (Peine 240). Through research at the St. Charles County Recorder of Deeds office, it was determined that the properties that encompass the streams adjacent to the Selected Alternative preserved corridor do not have deed restrictions associated with them. The plat maps of these subdivisions show a preserved parkway corridor that is separate from the parcels containing the streams.

Although the Westhaven development plans show a mitigation area, the Selected Alternative would have no impact on it. The Keeneland Trails subdivision plat shows the preserved roadway corridor adjacent to Common Ground areas, but does not indicate those as mitigation areas, and thus is non-jurisdictional. However, through correspondence with the USACE, it was determined that the stream corridor located on the south end of the Stonemoor residential development was the subject of stream mitigation efforts through preservation and enhancement (tree plantings). Although the preserved roadway corridor is shown on the plat maps that were submitted with the Section 404 permit application, the stream mitigation area was shown going through the roadway corridor. Recent field investigations discovered that some mitigation trees had been planted within the preserved roadway corridor. At this location, the Selected Alternative would impact 178 linear feet of stream channel. Decisions on mitigation are described in Section F. 4, Compensatory Mitigation. Further discussion of these areas and associated plat maps can be found in the *Preliminary Jurisdictional Wetland Determination Summary* in Appendix D.

# 2. WETLANDS

Areas in the study area that are mapped as vegetated wetlands on the NWI maps (PEM – Palustrine Emergent, PSS – Palustrine Scrub-Shrub, PFO – palustrine forested) have the potential of being regulated as special aquatic sites by the USACE. The regulatory definition of wetlands, as adopted by the EPA and USACE to administer the Section 404 permit program is as follows:

(Wetlands are) those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, bogs, and similar areas (EPA, 40 CFR 239.2 and CE, 33 CFR 328.3).

This definition emphasizes the fact that wetlands must possess the following three essential characteristics before a positive determination of a wetland can be made: hydric soils, a prevalence of hydrophytic vegetation, and a persistent wetland hydrology. Jurisdictional wetland determinations performed for regulatory purposes are not dependent on the NWI Cowardin classification system, but on these three mandatory characteristics.

Within the study area, the areas shown on the NWI maps that are classified as vegetated wetlands occur along the riparian corridors of Peruque Creek and McCoy Creek (see Exhibit III-4). These areas are classified as the Palustrine Forested wetland system (PFO1A – Palustrine Forested, Broad-leaved Deciduous, Temporarily Flooded) and the Palustrine Scrub-Shrub wetland system (PSS1A – Palustrine Scrub-Shrub, Broad-leaved Deciduous, Temporarily Flooded). In addition, the NRCS FSA mapping indicated that there was one "artificial wetland" (AW) located on the south side of McCoy Creek, east of US 61.

#### a. Wetland Impacts

#### Reasonable Alternatives Impacts

For the Reasonable Alternatives analysis, wetlands were based on the NWI maps and were considered potential because they were not yet field delineated. The potential wetland impacts would be in the form of fill material from embankment placed within the wetland areas.

- **No-Build** The No-Build Alternative would have no impacts to potential wetlands.
- Alternative 1 This alternative would impact 0.4 acre of potential NWI wetlands.
- *Alternative 2* This alternative would impact 0.6 acre of potential NWI wetlands.
- *Alternative 3* This alternative would impact 0.6 acre of potential NWI wetlands.

#### Selected Alternative Impacts (Alternative 2)

Field determinations were performed at the NWI mapped areas that are within the impact zones of the Selected Alternative (NWI Wetlands 1 and 2 on the north and south sides of Peruque Creek). It was preliminarily determined that neither of these areas met all three of the wetland criteria parameters to be considered jurisdictional wetlands and the USACE concurred with these findings (see letter dated September 18, 2008 in Appendix I). The remainder of the alignment of the Selected Alternative was also checked for other potential wetland areas, however, no other areas above the OHWM of streams exhibiting wetland characteristics were found within the impact zone of the Selected Alternative, with the exception of hydrophytic emergent vegetation fringes around 6 upland ponds. The fringe wetlands range in size from 0.02 acre to 0.16 acre (see Table 2 in Appendix D). However, the ponds and their wetland fringes were preliminarily determined to be non-jurisdictional and the USACE concurred with that determination in a letter dated October 15, 2008 (see Appendix I).

Subsequent to the USACE letter, modifications were made to the design of the proposed US 61 interchange of the Selected Alternative resulting in the addition of one upland retention pond, with an emergent wetland fringe, adjacent to the Peine Lakes Apartments. This is an excavated retention pond collecting runoff from the apartment complex, and is preliminarily considered to be non-jurisdictional, as well as its wetland fringe. Total impacts to all of the non-jurisdictional wetland fringes would equal 0.27 acre.

In addition to the mapping sources listed above, data was also gathered from NRCS soil survey maps to determine the presence or absence of hydric soils. This data indicated that, in the impact area of the Selected Alternative, there were no soils in which the main component was considered hydric. However, some areas along some of the stream terraces contain soils with hydric inclusions (Peruque Creek, Dry Branch, tributaries of McCoy Creek). Coordination with the NRCS also indicated that there are no lands involved in the Wetlands Reserve Program (WRP) within the study area.

Based on the findings of the field determinations, the USACE has determined that there are no jurisdictional wetland areas within the limits of construction of the Selected Alternative; therefore, there would be no impacts to jurisdictional vegetated wetland areas. Although there would be impacts to 0.27 acre of fringe wetlands around six non-jurisdictional ponds, those fringe wetlands are also considered non-jurisdictional (see Table 2 in Appendix D).

# 3. PONDS

The NWI maps and aerial photography indicated several "palustrine unconsolidated bottom" (PUB) systems (upland ponds) within the study area. The USGS maps and aerial photography indicate that most of the ponds appear to have no connection to a "Water of the U.S".

#### a. Pond Impacts

### Reasonable Alternatives Impacts

For the Reasonable Alternatives analysis, only those ponds that appeared from the mapping and aerial photography to be potentially jurisdictional were considered as impacts. The pond impacts would be in the form of fill material from embankment placed within the ponds.

- **No-Build** The No-Build Alternative would have no impacts to ponds.
- **Alternative 1** This alternative would impact one potentially jurisdictional pond with an area of 2.2 acres.
- Alternative 2 This alternative would impact no potentially jurisdictional ponds.
- Alternative 3 This alternative would impact no potentially jurisdictional ponds.

# Selected Alternative Impacts (Alternative 2)

Based on the mapping and aerial photography, it was determined that eight ponds were located within the impact area of the Selected Alternative, two of which no longer exist. The open water areas of the six existing ponds range in size from 0.01 acre to 0.26 acre. During field investigations, the ponds within the impact area were checked to determine whether or not a connection to a Water of the U.S. existed. It was determined that none of those ponds had a discernible channel with an OHWM either coming into or going out of the pond. Therefore, it was preliminarily determined that these ponds were non-jurisdictional and the USACE concurred with that determination (see letter dated October 15, 2008 in Appendix I). As stated in the Wetlands section above, some of the ponds also exhibited a fringe of hydrophytic emergent vegetation around their perimeters. These "fringe wetlands" are also considered non-jurisdictional. This analysis includes the one upland retention pond adjacent to the Peine Lakes Apartments, which was discussed in the Wetlands section F.2.a) and is preliminarily considered to be non-jurisdictional.

The Selected Alternative would result in fill material being discharged into the open water areas of the six non-jurisdictional upland ponds, totaling 0.27 acre of impacts. These impacts would

range in area from 0.02 acre to 0.16 acre. The Pond impacts are summarized in Table 2 in Appendix D, and are indicated by surface area in acres. Two of the ponds would be impacted in their entirety, while the remaining four would be partially impacted.

# 4. COMPENSATORY MITIGATION

Construction activities requiring discharges into jurisdictional "Waters of the U.S.," which include streams, wetlands and other special aquatic sites, may require an individual Department of the Army Permit under Section 404 of the Clean Water Act (permits are discussed in more detail in Section O. of this chapter). Streams are regulated below the limits of the ordinary high water mark (OHWM). Impacts to Peruque Creek, Dry Branch, and a tributary of McCoy Creek would be minimized by bridging the creeks.

During the project design phase, specific impacts to "Waters of the U.S." will be assessed to determine if those impacts can be avoided or minimized, and to determine the applicability of the Section 404 Permit. At that time, if stream mitigation is required, an evaluation will be performed based on the Missouri Stream Mitigation Method, if appropriate, in order to determine mitigation credits required and appropriate mitigation options for stream impacts. In a letter dated September 18, 2008 (see Appendix I), the USACE stated that impacts to the mitigation area along the stream corridor at the south end of the Stonemoor residential development will require a 2:1 replacement ratio. Coordination will take place with the USACE and resource agencies during the permitting process to develop appropriate mitigation strategies. Where appropriate, possible mitigation strategies for stream impacts could include new channel construction (stream relocation to partially offset filled streams), utilizing in-stream grade control structures. stabilizing disturbed banks with a combination of live vegetation and riprap or erosion control mats (bioengineering techniques), incorporating native seeding and plantings along the stream banks and buffer zones, buying credits in a mitigation bank, or by providing an in-lieu fee for stream mitigation at other locations through programs such as the Stream Stewardship Trust Fund.

# 5. ONLY PRACTICABLE ALTERNATIVE FINDING

The Selected Alternative would have no effect on jurisdictional wetlands; however, it would include 11 stream crossings resulting in impacts to 2,043 linear feet of jurisdictional streams, equating to approximately 0.49 acre of surface area below the Ordinary High Water Mark. As discussed in this Environmental Assessment, there are no other practicable alternatives to the Selected Alternative, that would have less overall environmental impacts, and that would adequately serve the purpose and need of the Selected Alternative. Following coordination with the U.S. Army Corps of Engineers and other resource agencies, the City of Wentzville will compensate for unavoidable impacts to Waters of the U.S. by utilizing appropriate mitigation strategies such as mitigation banking, in-lieu fees, restoration, enhancement, or creation. Compensatory mitigation sites will be held in public ownership or in an ownership arrangement suitable to both the Army Corps of Engineers and Missouri Department of Natural Resources.

Based upon the above considerations, it is determined that there is no practicable alternative to the proposed construction in Waters of the U.S. and that the Selected Alternative includes all practicable measures to minimize harm to these water resources that may result from such action.

# G. Water Quality

# 1. SURFACE WATER QUALITY

The study area is located within the Peruque-Piasa watershed (Hydrologic Unit # 07110009) south of I-70, and within the Cuivre watershed (Hydrologic Unit # 07110008) north of I-70. The surface water resources in the study area were discussed previously in Section F. Water Resources Impacts. Surface water resources in the portion of the study area that lies within the Peruque-Piasa watershed include Peruque Creek and one of its unnamed tributaries. Peruque Creek eventually flows into the Mississippi River, approximately 25 miles to the east-northeast. Surface water resources in the portion of the study area that lies within the Cuivre watershed include Dry Branch and unnamed tributaries of McCoy Creek. McCoy Creek eventually flows to the Cuivre River and then to the Mississippi River, which is approximately 20 miles to the northeast. The study area also includes several upland ponds and some areas of potential wetlands adjacent to Peruque Creek and McCoy Creek. The quality of all of these water resources within the study area varies depending upon such factors as water permanence, type of shoreline/bank and surrounding vegetation, substrate, presence or absence of in-flowing streams, and surrounding land use.

The federal Water Pollution Control Act, section 303(d), requires that each state identify those waters that are not meeting the state's water quality standards (i.e. for which existing required pollution controls are not stringent enough to implement state water quality standards). For these waters, states are required to establish total maximum daily loads (TMDLs) according to a priority ranking. A TMDL is a calculation of the maximum amount of a pollutant that a water body can receive and still meet water quality standards.

The Environmental Protection Agency (EPA) Approved 2012 Missouri 303(d) List and the Missouri Department of Natural Resources' (MDNR) Proposed 2014 303(d) list of impaired waters (currently waiting EPA approval) were reviewed. It was determined that neither McCov Creek nor Dry Branch were on either of these lists. However, Perugue Creek was first listed on the EPA's 303(d) list in 2002. The MDNR published a Total Maximum Daily Load Information Sheet on Perugue Creek, which was revised October 2004. The information sheet stated that the basis for adding Peruque Creek to the 2002 303(d) list was that "rapid rates of sedimentation in upper Lake St. Louis suggest that excess erosion and high sediment loads are a problem in Perugue Creek upstream of the lake" (Lake St. Louis is located about 5.5 miles east of the study area). The pollutant present in the creek was "Non-Volatile Suspended Solids (silt, sand, or gravel associated with erosion and sedimentation) from urban and rural non-point sources (runoff)", and the impaired use was "protection of warm water aquatic life". In a letter dated December 18, 2009 (see Chapter V.C.4), the MDNR stated that "the 2004/2006 Clean Water Commission (CWC) and Environmental Protection Agency (EPA) approved 303(d) list and the 2008 CWC approved 303(d) list both identify Perugue Creek as being impaired for inorganic sediment due to urban and rural nonpoint source pollution".

A subsequent review of the EPA's approved 2012 303(d) list indicated that Peruque Creek is still on the list for the reasons stated above. In addition, MDNR's proposed 2014 303(d) list indicates that Peruque Creek is being retained on the list for sediment, based on analysis of fish community data. A TMDL is scheduled to be completed in 2017. As a result, the City of Wentzville will use best management practices to keep additional sediments from reaching the creek (see Section G.1.a., Surface Water Quality Impacts, and Section O.2., Water Quality, for more information on best management practices).

There is no Outstanding National or State Resource Waters within the study area.

#### a. Surface Water Quality Impacts

In this type of urban environment which is experiencing growth and land development, major concerns include construction site erosion (siltation), channelization or other alteration of natural stream channels, and residential and commercial use of pesticides and fertilizers. The MDNR was contacted via a letter requesting information concerning environmental considerations within the study area. The MDNR's response (dated November 16, 2007) in relation to water resources is located in Appendix I.

### No-Build Alternative

The No-Build Alternative would have no direct impacts to water quality; however, indirect impacts could occur as a result of the on-going operation and maintenance-related pollutants from roadways, and the runoff that will occur from adjacent existing and future land developments.

### Reasonable Alternatives and the Selected Alternative

Direct water quality impacts could occur with any of the alternatives under consideration including highway or bridge runoff, construction-related impacts, and operation and maintenance-related impacts.

Construction related impacts are primarily due to the erosion of cleared areas, operation of heavy earth-moving equipment, and storage of construction materials and supplies, and could include pollutants such as petroleum products and sedimentation, and nutrients that could leach from seeded and mulched bare areas. Temporary impacts to water resources in and adjacent to the study area can be prevented or minimized by following the management practices outlined by the Missouri Department of Conservation (MDC) when modifying channels or relocating streams, as appropriate.

In addition, the project will comply with specific conditions of Section 401 Water Quality Certification, which become conditions of the Section 404 permit. This includes, for example, the following methods to minimize impacts to Peruque Creek and other water resources: graded areas should be seeded and mulched as soon as possible using native planting and seeding; disturbance to the stream banks and riparian zones should also be minimized; work should be minimized between March 1 and June 15; and all standard erosion protection devices such as ditch checks and silt fences shall be installed at the outset of construction and maintained throughout the construction period.

The National Pollutant Discharge Elimination System (NPDES) permit, administered by the MDNR, requires that slopes and ditches be properly designed to prohibit or reduce erosion. To protect the environment from sedimentation and construction pollutants during the building phase, the control of water pollution is to be accomplished by the use of the City's and MoDOT's Best Management Practices (BMPs). The BMPs can include measures such as the use of temporary berms, ditch checks, slope drains, sediment basins, rain gardens, straw bales, silt fences, seeding and mulching. Temporary and permanent drainage (retention or detention) basins, if appropriate, may also be designed and installed to lessen water quality impacts by trapping sediment and other contaminants, while reducing erosive storm surges. The City of Wentzville will consider detention areas, where warranted, within the median to collect and filter roadway run-off. The MDNR regulates and permits the City of Wentzville to operate a "Municipal Separate Storm Sewer System" (MS4) (separate from the sanitary sewer system). For permit compliance, the City implements its Storm Water Management Plan (SWMP) to reduce pollutants from being carried by storm runoff into local water bodies.

In addition, the MDC (see letter dated November 29, 2007 in Appendix I) recommends that native vegetation be planted along the portions of the roadway that remain undeveloped to assist with water retention and reduce run-off rates, thereby minimizing erosion and mitigating for the increased run-off from impervious road surfaces. The City of Wentzville will consider utilizing native vegetation in disturbed areas where appropriate.

Potential operation and maintenance related impacts to water quality could include pollutants such as petroleum products, coolants, rubber debris, metals, and de-icing minerals/chemicals. There is also the possibility of collisions on any roadway, regardless of operating characteristics and traffic volumes. Collisions can contribute to pollutants, as chemicals spilled could run off or be flushed into drainage channels.

# 2. GROUNDWATER QUALITY

The study area is located within the Northeast Missouri Groundwater District. Groundwater is moderately transmissible through the fractures and bedding features of the rock. Moderate amounts of 5 to 10 gallons per minute may be obtained from the Mississippian bedrock. Recharge is local, although the relatively impermeable nature of the glacial soils makes it difficult to identify specific areas of recharge.

According to the MDNR, no springs, sinkholes, or caves exist within the study area; however, it appears to lie within a karst area with some potential for sinkhole collapse, caves, and other karst features (see MDNR letters, dated November 16, 2007 in Appendix I, and December 18, 2009, in Chapter V.C.4). The Center for Agricultural, Resource and Environmental Systems (CARES) website did not indicate any losing streams within the study area; however, the MDNR stated that all of the streams within the study area are classified as losing streams.

According to the MDNR (see MDNR letter, dated November 16, 2007, in Appendix I), there are three public drinking water wells located in the study area, including two south of I-70 and one just north of I-70, all of which are near Pointe Prairie Road. There are also approximately eight privately registered wells, 41 domestic water wells, 12 reconstructed wells, and three monitoring wells scattered throughout or adjacent to the study area. Most of these are assumed to be constructed in the Mississippian aquifer and are used for residential or limited agricultural use. The area is not in a wellhead protection area, or located in a sole source aquifer. The City of Wentzville purchases water from Public Water District #2 and then distributes it throughout the City and some adjacent areas, including most of the study area. There are no surface water intakes to public drinking water sources within the study area.

# a. Groundwater Quality Impacts

#### Reasonable Alternatives Impacts

Impacts to wells are based on mapping received from the MDNR and some discrepancies of the actual locations of the wells may exist, as they had not been field checked. The Reasonable Alternatives would have no direct impacts to the three public drinking water wells in the study area.

- **No-Build** The No-Build Alternative would have no direct impacts to wells or groundwater quality.
- **Alternative 1** This alternative would have the potential of impacting one domestic well and one reconstructed well along its alignment.
- **Alternative 2** This alternative would have the potential of impacting one reconstructed well along its alignment.

• **Alternative 3** – This alternative would have the potential of impacting two domestic wells along its alignment.

# Selected Alternative Impacts (Alternative 2)

The Selected Alternative would have the potential of impacting one reconstructed well along its alignment. If wells (mapped or unmapped) are discovered to be impacted during the construction of the roadway, mitigation measures will include proper sealing of the wells to prevent ground water pollution from construction and from future road maintenance. During the design phase of the project, it will be determined if karst features exist, and if so, care will be taken during construction activities to avoid spills or discharges in or near these areas. In addition, vegetated slopes and swales, and detention systems in appropriate locations can provide treatment of potentially polluted run-off from the roadway, thereby avoiding or minimizing impacts to groundwater quality.

# H. Floodplain

# 1. INTRODUCTION

Flood Insurance Rate Maps (FIRM), showing the 100-year floodplain and the regulatory floodway (dated Revised: August 2, 1996 and March 17, 2003) were collected and reviewed for the study area. Maps reviewed included 29183C0205 E, 29183C0185 E, and 29183C0195 E. The Federal Emergency Management Agency (FEMA) and FHWA guideline 23 CFR 650 has identified the base (100-year) flood as the flood having a one percent probability of being equaled or exceeded in any given year. The base floodplain is the area of 100-year flood hazard within a county or community. The regulatory floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 100-year flood discharge can be conveyed without increasing the base flood elevation more than a predetermined volume. FEMA has mandated that projects can cause no rise in the regulatory floodway, and a one-foot cumulative rise for all projects in the base (100-year) floodplain.

Some recreation areas or open space can be publicly owned as the result of "flood buyout" properties, which cannot be developed due to open space deed restrictions, which also prohibit the placement of fill for road construction or bridge abutments and piers. However, the Missouri Emergency Management Agency (SEMA) and the local and county floodplain managers were contacted, and it was determined that there were no flood buyout properties located within the study area.

# 2. FLOODPLAIN ENCROACHMENT

Streams located in the study area that have designated floodplains including Peruque Creek, a Peruque Creek Tributary, McCoy Creek, a McCoy Creek Tributary, and Dry Branch. Exhibit III-4 and Plan Plates in Appendix A show the extent of the base 100-year floodplain and the regulatory floodway boundaries that are available for these water bodies. The encroachments of the 100-year floodplain and the regulatory floodway would be the result of embankment fill for the roadway or fill at bridge abutments.

# a. Reasonable Alternatives Impacts

# No-Build

The No-Build Alternative would have no impacts to the floodplains of the streams in the study area.

# Alternative 1

This alternative would impact 18.6 acres of the 100-year floodplain.

### Alternative 2

This alternative would impact 11.0 acres of the 100-year floodplain.

### Alternative 3

This alternative would impact 30.5 acres of the 100-year floodplain.

### b. Selected Alternative Impacts (Alternative 2)

The anticipated 100-year floodplain encroachments of the Selected Alternative are described below and summarized in Table III-10, including surface acres of impact and linear feet of floodplain crossed. The floodplains of the Peruque Creek Tributary and McCoy Creek would not be impacted by the Selected Alternative.

Stream & Floodplain	100-Year Floodplain Crossing (linear feet)	100-Year Floodplain Encroachment (acres)
Peruque Creek	900	2.6
McCoy Creek Tributary	400	0.9
Dry Branch	950	7.5
Total	2250	11.0

#### Table III-10: Estimated 100-Year Floodplain Encroachments

# Peruque Creek

Peruque Creek is a large, meandering, entrenched stream that has a natural channel and a floodplain width of approximately 900 feet at the location of the proposed crossing. The floodplain consists of riparian woodland and grasses on both sides of the stream. The FIS (Map No. 29183C0195E) does not identify a regulatory floodway for this reach of the stream; however, the USACE conducted a Special Flood Hazard Information Study (dated September 19, 2007) for Peruque Creek in St. Charles County, Missouri. Encompassing the study area, data (base flood elevations and cross-sections) presented in the study were used to determine the span of the proposed bridge over Peruque Creek.

*Impacts* – The Selected Alternative would bridge over Peruque Creek, cross 900 linear feet of floodplain, and encroach on approximately 2.6 acres of the stream's floodplain with embankment fill.

# McCoy Creek Tributary

The Selected Alternative would cross the McCoy Creek Tributary, located approximately 3000 feet east of Point Prairie Road in the north half of the study area, as shown on the St. Charles County, Missouri FIRM map no. 29183C0185 E. This tributary has a natural channel and a floodplain which consists of a mix of open fields and woods. At the point where the Selected Alternative would cross the stream, the floodplain width is approximately 400 feet and consists of riparian woodland on both sides of the channel. A regulatory floodway exists within the floodplain measuring approximately 200 feet in width.

*Impacts* – Direct impacts resulting from the Selected Alternative would involve crossing approximately 400 linear feet of floodplain, 200 linear feet of which is regulatory floodway that

would be bridged. Floodplain encroachment from embankment fill would total approximately 0.9 acres.

### Dry Branch

Located near the north end of the study area, existing US 61 crosses Dry Branch via a double box culvert. The stream has a natural channel and a floodplain which is partially developed and partially wooded. From its crossing of US 61, Dry Branch flows in a northerly direction for a distance of approximately 2800 feet to its confluence with McCoy Creek. Within the study area, the Dry Branch floodplain has a width of approximately 1000 feet and a regulatory floodway measuring approximately 400 feet.

*Impacts* – Direct impacts resulting from the Selected Alternative would involve crossing 950 linear feet of floodplain at US 61. The width of the floodway, where existing US 61 crosses Dry Branch, is approximately 100 feet. Floodplain encroachment from embankment fill would total approximately 7.5 acres. These estimated impacts would include embankment fill from the Selected Alternative, outer roads, and ramps associated with the proposed interchange at US 61.

### 3. FLOODING RISKS

As noted, the Selected Alternative is located within the 100-year floodplains of Peruque Creek, McCoy Creek Tributary, and Dry Branch. The Selected Alternative would include a bridge that would span the regulatory floodway of the McCoy Creek Tributary. Dry Branch flows under US 61 through a triple box culvert. The bridge structure and culvert extensions would be designed to avoid a rise in the regulatory floodway. It is anticipated that the proposed crossing of Peruque Creek would consist of a bridge designed to avoid a rise in the 100-year regulatory flood elevation (if a floodway has not yet been established), or to avoid a rise in the floodway (if a floodway has been or will be determined).

At each stream crossing, it is anticipated that there could be some minor channel modifications and selective placement of stone revetment to improve flow conveyance through the structure and provide a stable bridge opening. Any fill placed below the Ordinary High Water Mark (OHWM) of the streams would be minimal and would comply with the U.S. Army Corps of Engineers Section 404 permit regulations.

# 4. IMPACTS ON NATURAL AND BENEFICIAL FLOODPLAIN VALUES

The footprint of the roadway fill placed in the floodplain is minimal when compared to the total floodplain area. The Selected Alternative would include three bridges at the stream crossings of the floodplains previously discussed. These bridges would be constructed to maintain 100-year floodway crossings free of critical hydraulic obstruction. Thus, long term, impacts on natural and beneficial floodplain values are anticipated to be minimal. Construction operations in the floodplains would not result in impacts to fish spawning and migration areas. New bridge structures would not increase the flow velocities in the streams.

There are riparian woodlands within the floodplains of the streams in the vicinity of proposed bridge structures and associated fill sections. Disturbance of these areas will include only the minimum necessary to construct the bridges and approaching roadway. Neither threatened or endangered plants or animals, nor their habitats have been identified in the floodplains. Measures would be taken to ensure that all appropriate turf establishment and erosion control measures are included in design specifications.

# 5. SUPPORT OF PROBABLE IMCOMPATIBLE FLOODPLAIN DEVELOPMENT

The Selected Alternative is within a developing area west and northwest of Wentzville, and would travel through some of the floodplain areas as discussed previously. However, the City's Comprehensive Land Use Plan indicates that the floodplain areas would remain undeveloped, and Chapter 415 of the City's Zoning Ordinances restricts certain land uses in the floodplain and floodway. The floodplains are currently being preserved as Common Space in new developments that occur near the floodplain.

#### 6. MEASURES TO MINIMIZE FLOODPLAIN IMPACTS AND MEASURES TO RESTORE AND PRESERVE THE NATURAL AND BENEFICIAL FLOODPLAIN VALUES

All practical measures to minimize impacts to the floodplain have been incorporated into the development of the Selected Alternative as discussed in Chapter II – Alternatives Considered. The project construction would incorporate those features necessary to meet NFIP, FEMA, SEMA, St. Charles County and City of Wentzville floodplain guidelines.

# 7. ONLY PRACTICABLE ALTERNATIVE FINDING

In order to provide travel lanes for the Selected Alternative, it is necessary to locate the travel lanes within the floodplains of Peruque Creek, McCoy Creek Tributary, and Dry Branch. A total of 11.0 acres of floodplain would be affected by the Selected Alternative. The Selected Alternative was determined to provide the best solution to accommodate community access and growth, and to have a lower environmental impact than other alternatives considered.

The crossings of all floodways would be designed and constructed in compliance with applicable floodplain regulations, including Executive Order 11988. Floodplains and floodways would be kept free of encroachment so that the 100-year flood discharge may be conveyed without increasing the base flood elevation more than a specified amount. The Selected Alternative would not result in a loss of regulatory floodway capacity or a one-foot cumulative rise resulting from all proposed activities conducted within the base floodplain. The Selected Alternative would conform to applicable State of Missouri and local floodplain protection standards, and the required floodplain development permits would be obtained during the design phase.

# I. Biological Resources

The study area south of I-70 is part of the *St. Charles County Prairie/Woodland Low Hills Eco-Region* while the study area north of I-70 is in the *Cuivre River Woodland/Forest Hills Eco-Region*. Historically, the area was a mixture of prairies, oak savannahs and woodlands which have since been converted to agricultural uses. The majority of the study area is now a mixture of both developed and undeveloped land. The undeveloped land includes remnant woodlands, open pasture, and open utility corridors. The open pasture areas are composed predominantly of grasses such as tall fescue (*Festuca arundinacea*), yellow foxtail (*Setaria glauca*), and purple top (*Tridens flavus*), with some various forms. The open utility corridors contain a mixture of tall fescue and forbs. A diversity of wildlife also exists in the study area.

# 1. FOREST COMMUNITIES

The forested areas within the study area are in the form of remnant woodlands that are the result of previous land clearing and development. They are generally found along streams and waterways and the associated sideslopes. This fragmentation by clearing was done in order to make way for pasture improvements, utility placement, and residential development.

The upland wooded areas above the floodplains of the streams consist of oak and oak-hickory woodlands. The mixed hardwood forest is most prevalent along the sideslopes of and valley floors of the drainageways and streams. Some of the more commonly encountered species include hickories (*Carya spp*), hackberry (*Celtis occidentalis*), shingle oak (*Quercus imbricaria*) American sycamore (*Platanus occidentalis*), white ash (*Fraxinus americana*), American elm (*Ulmus americana*), black walnut (*Juglans nigra*), honeylocust (*Gleditsia triacanthos*), black cherry (Prunus serotina), and white oak (*Quercus alba*).

The importance of these wooded areas in protecting water resources from runoff, stabilizing stream banks, inhibiting soil erosion, providing aesthetic value, wildlife habitat, and plant and animal diversity is evident, especially in areas where much of the forest has been cleared for development purposes. In addition, these wooded areas are important wildlife migration corridors.

### a. Reasonable Alternatives Impacts

Direct impacts to forested communities would occur where it is necessary to remove woodland vegetation for roadway and bridge construction. The majority of forest impacts would be to wooded areas that have already been fragmented rather than fragmentation of contiguous forested areas. The initial 200-foot corridor analysis represents a worst case scenario.

### No-Build

The No-Build Alternative would have no direct impact on the wooded communities within the study area.

### Alternative 1

This alternative would impact 37.7 acres of woodlands.

#### Alternative 2

This alternative would impact 40.3 acres of woodlands.

# Alternative 3

This alternative would impact 41.9 acres of woodlands.

# b. Selected Alternative Impacts (Alternative 2)

Based on the 200-foot corridor of the Selected Alternative, the amount of woodland that would be removed would be 40.3 acres. Secondary impacts of forest removal are discussed under the "Wildlife Impacts" section of this chapter.

As mitigation for woodland impacts, the City of Wentzville will consider incorporating tree plantings along the corridor where practicable. Tree species would be selected to complement and enhance the habitat and appearance of the affected areas.

# 2. HIGH QUALITY NATURAL COMMUNITIES

The Missouri Department of Conservation (MDC) has identified some high quality natural communities within the state that have been, for the most part, undisturbed and that possess defining characteristics of a specific type of natural community. These units have been located, mapped, and compiled in the MDC's Natural Heritage Database (NHD). According to the MDC (see Heritage Review Report dated August 31, 2007 and November 1, 2012 in Appendix I), there are no significant natural communities located in the study area.

### 3. WILDLIFE

The study area is located near the edge of an urban area that is becoming developed, and much of the natural habitat that previously occurred has been fragmented. Wildlife habitat in the study area includes grassland/open pasture, wooded areas, and the aquatic environments of streams and ponds.

Some of the species of birds that can be found within, and at the edges of the wooded areas include the northern cardinal (*Cardinalis cardinalis*), indigo bunting (*Passerina cyanea*), American goldfinch (*Carduelis tristis*), blue jay (*Cyanocitta cristata*), northern mockingbird (*Mimus polyglottos*), American robin (*Turdus migratorius*), great horned owl (*Bubo virginianus*), great crested flycatcher (*Myiarchus crinitus*), Baltimore oriole (*Icterus galbula*), wild turkey (*Meleagris gallopavo silvestris*), downy woodpecker (*Picoides pubescens*), and red-eyed vireo (*Vireo olivaceus*). Grassland and pasture can contain species such as brown-headed cowbird (*Molothrus ater*), killdeer (*Charadrius vociferous*), dickcissel (*Spiza Americana*), eastern meadowlark (*Sturnella magna*), field sparrow (*Spizella pusilla*), and savannah sparrow (*Passerculus sandwichensis oblitus*).

Some of the mammals that can be found in the study area include the Virginia opossum (*Didelphis virginiana*), striped skunk (*Mephitis mephitis*), red fox (*Vulpes fulva*), eastern cottontail rabbit (*Sylvilagus floridanus*), raccoon (*Procyon lotor hirtus*), deer mouse (*Peromyscus maniculatus*), prairie vole (*Microtus ochrogaster*), woodchuck (*Marmota monax*), fox squirrel (*Sciurus niger rufiventer*), gray squirrel (*Sciurus carolinensis*), and white-tailed deer (*Odocoileus virginianus*).

The streams in the study area can provide habitat for some common fish species such as the creek chub (*Semotilus atromaculatus*), bluntnose minnow (*Pimephales notatus*), central stoneroller (*Campostoma pullum*), red shiner (*Cyprinella lutrensis*), redfin shiner (*Lythrurus umbratilis*), orangethroat darter (*Etheostoma spectabile*), and yellow bullhead (*Ameiurus natalis*).

The damper environments in the study area can provide habitat for amphibians such as the eastern American toad (*Bufo americanus*), southern leopard frog (*Rana sphenocephala*), western chorus frog (*Pseudacris triseriata*), and spotted salamander (*Ambystoma maculatum*).

Some of the reptiles include the ornate box turtle (*Terrapene ornata*), western painted turtle (*Chrysemys picta bellii*), red-eared slider (*Trachemys scripta elegans*), common five-lined skink (*Eumeces fasciatus*), prairie kingsnake (*Lampropeltis calligaster*), eastern yellow-bellied racer (*Coluber constrictor flaviventris*), and eastern hog-nosed snake (*Heterodon platirhinos*).

#### a. Wildlife Impacts

Transportation improvement projects can impact aquatic and terrestrial habitat directly through right-of-way acquisition and indirectly through habitat modification and fragmentation. Right-of-way acquisition results in a direct loss of acreage and a reduction in habitat size. Streams and wetlands also provide habitat values and are considered in wildlife impacts. Not only do they serve as habitats for fish and some amphibious species, but they also provide drinking water for terrestrial wildlife. Direct impacts to the water resources in the study area were discussed previously in this chapter.

# No-Build

The No-Build Alternative would have no direct impacts to wildlife.

#### Reasonable Alternatives and Selected Alternative Impacts

Only those species with a high tolerance of humans and development are those that will survive and remain in this developing environment. Most of the wildlife species would attempt to relocate in response to the habitat impacts of the project. However, some impacts could occur because smaller, less mobile species may have difficulty moving to other areas with suitable habitat. Other species that are relatively mobile may also be impacted as suitable habitat in a developing area decreases, and the wildlife population could be at or near carrying capacity. As a result, some wildlife may have difficulty withstanding the loss of their limited habitat. In addition, there could also be a slight increase in wildlife mortality after construction, because of the addition of a new roadway. However, wildlife mortality may be reduced in the vicinity of the streams that would be bridged, thereby providing a means by which wildlife could more safely negotiate travel along the stream corridors. Wildlife in the area has or is beginning to adapt to the conditions of ongoing development in the area and the direct influence on mortality rates brought on by the Selected Alternative is not anticipated to be greater than that caused by current land use development.

# 4. THREATENED AND ENDANGERED SPECIES (Federal and State Listed)

Under the U.S. Endangered Species Act, the US Fish and Wildlife Service (USFWS) has primary responsibility in the protection of federally endangered and threatened species and designation of critical habitat areas for these species. All federally endangered and threatened plants and animals are protected by the Endangered Species Act of 1973 (ESA). The MDC determines species' state status in Missouri under constitutional authority (3CSR10-4.111 Endangered Species). Species that are listed in the Wildlife Code under 3CSR10-4.111 are protected by State Endangered Species Law 252.240.

At the beginning of the NEPA process, a letter was sent to the USFWS inviting them to a project scoping meeting and to participate in a Resource Management Group, and requesting input concerning species listed as federally endangered or threatened that could occur in or near the study area (no reply was received). Correspondence was also conducted with the MDC (see Heritage Review Report dated August 31, 2007 and January 24, 2014, in Appendix I) and information was obtained from the MDC's Natural Heritage Database concerning the federal and state listed threatened and endangered species that could occur in or near the study area. According to the MDC, there are no known locations, recorded occurrences or designated critical habitat of federal or state-listed species within the study area, nor any records of unlisted species/habitats of conservation concern. However, the MDC's Heritage Review Report (August 31, 2007) indicated that the federal and state-listed endangered Indiana bat could potentially occur in the area.

In the subsequent MDC Heritage Review Report (January 24, 2014), the Indiana bat was not included. However, a USFWS Information, Planning and Conservation (IPaC) review was generated through the USFWS Environmental Conservation Online System (ECOS) website on January 24, 2014 (see Appendix I). The official IPaC response listed seven federally listed species that should be taken into consideration. Two endangered species, the pallid sturgeon (*Scaphirhynchus albus*) and the least tern (*Sterna antillarum*) potentially use the Missouri River environs for habitat, which is not in the study area. Two plant species, running buffalo clover (*Trifolium stoloniferum* – federal and state endangered) and decurrent false aster (*Boltonia decurrens* – federally threatened and state endangered), were included on the list and have been known to occur in St. Charles County. These two species are discussed below.

• Running Buffalo Clover (*Trifolium stoloniferum*) – This plant can occur in savannas, grasslands, streambanks, floodplains, and shoals. In the past, it

flourished in open areas that were grazed by bison. Agriculture and land clearing in the study area have removed and fragmented potential habitat for this species, and the current development that is occurring in the project corridor is decreasing the chances for occurrences of the species.

Decurrent False Aster (Boltonia decurrens) – This plant can occur in old fields, riverbanks, roadsides, mudflats, and lake shores, and it requires periodic flooding or disturbance to eliminate competing vegetation in order for its seeds to germinate. St. Charles County is the only location where it is known to occur in Missouri. Although there are no river floodplains in the study area, the floodplains of Peruque Creek and Dry Branch may be areas where this species could potentially occur, if required flooding conditions were to take place.

The official IPaC response also indicated that gray bats (federal and state endangered), Indiana bats (federal and state endangered), and northern long-eared bats (federal proposed endangered as of October 2013) occur throughout Missouri and may occur within the project boundary. Habitat information for these bat species is provided below.

- **Gray Bat (Myotis grisescens)** Gray bats roost in caves or mines year-round and forage in riparian forested areas. Although there are no caves or mines in the study area, riparian forested areas exist.
- Indiana Bat (Myotis sodalis) and Northern Long-eared Bat (Myotis septentrionalis) The Indiana bat and the northern long-eared bat occupy caves or mines for hibernation in winter, but during spring and summer their maternity roost sites tend to be in living, injured (e.g. split trunks and broken limbs), dead or dying trees, with loose exfoliating bark or cracks or cavities. Preferred roost trees are generally located in riparian and upland forest openings, at the forest edge, or where the overstory canopy allows some sunlight exposure to the roost tree, and usually within 0.6 miles (one kilometer) of water. Preferred foraging habitats during the spring and summer are streams associated with floodplain forests and ponds, reservoirs and wetlands, and upland forests.

# Impacts

There are no known locations of running buffalo clover or decurrent false aster in the Selected Alternative corridor, and it is anticipated that there would be no impacts to these species.

There are no known locations or recorded occurrences of gray bat, Indiana bat, or northern long-eared bat within the Selected Alternative corridor. Although there are no caves or mines in the study area, potential roosting or foraging habitat exists in some of the wooded areas of the corridor. In general, there is not a substantial difference among the Reasonable Alternatives regarding impacts to potential habitat. The Selected Alternative has been aligned to avoid as much of the floodway and floodplain as practicable, thereby minimizing impacts to the wooded riparian areas. Most of the unavoidable impacts would be in areas that have already been fragmented by development, as the project is located within a growing urban area.

# J. Cultural Resources

# 1. INTRODUCTION

A cultural resource investigation was conducted in the study area in order to identify any significant cultural resources that could be impacted by the Selected Alternative construction, including prehistoric and historic archaeological sites, cemeteries, National Register properties,

and potentially significant architectural properties, structures, cultural landscapes, and bridges. Resources are considered significant according to the criteria (A, B, C and D) for nomination to the National Register of Historic Places (NRHP), which states:

The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and;

(a) That are associated with events that have made a significant contribution to the broad patterns of our history; or

(b) That are associated with the lives of persons significant in our past; or

(c) That embody distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

(d) That have yielded, or may be likely to yield, information important in history or prehistory.

(Federal Register 1974)

In addition, registered graves are protected by Missouri Statute 214.131-132, and unmarked human graves and burial mounds are protected by Missouri Statute RSMO 194.400-401 and the Native American Graves Protection and Repatriation Act of 1990.

### 2. ARCHIVAL REVIEW OF PREVIOUS INVESTIGATIONS

A records and literature search (archival review) was performed in August of 2007 at the Missouri Department of Natural Resources, State Historic Preservation Office (SHPO), in Jefferson City to identify any cultural resources previously reported within or near the approximately one-mile wide proposed study area. The archival search revealed that no properties on the NRHP exist within the study area and only a few cultural resource surveys have been conducted, resulting in the identification of nine archaeological sites and three architectural properties. A summary list of the 12 sites is located in Table 1, Appendix E. (Details of the archival review are included in the full report titled *Cultural Resources Investigation for the Proposed David Hoekel Parkway, City of Wentzville, St. Charles County, Missouri*)

The only potentially eligible site out of the 12 sites was 23SC41, located near the southwestern edge of the study area, just south of I-70, but outside of the study area. This site was reported in the *Wentzville Union* on June 1, 1934. The article discussed the presence of an "Indian Fort" marked by "a mound of earth and some stones". The fort had been torn down so that a school could be built in the late 1800s; this building has also since been razed. It was reported that many artifacts were found by those who farmed the field.

A list of bridges and culverts within the study area was provided by the Cultural Resource Section, Missouri Department of Transportation (see Table 2 in Appendix E). A total of seven bridges and three culverts exist within or near the study area. All of these are located along US 61, on the northeastern part of the study area, and none of the bridges or culverts has been determined to be significant.

Subsequent to the 2007 archival review, modifications have been made to the design of the proposed US 61 interchange of the Selected Alternative, resulting in changes to the project limits. As such, a subsequent records and literature search was performed in December of 2012 at the SHPO to identify any cultural resources reported since the original cultural resources survey was conducted in 2007-2008. The archival search revealed that no properties have been placed on the National Register of Historic Places (NRHP) and no cultural resource

surveys by other entities were conducted within the previous project area or the new proposed interchange area in the four years since the previous survey. In addition, a field survey with shovel testing and visual observations of the new areas in the current archaeological APE was performed. This survey indicated that these areas were previously disturbed and no additional archaeological sites were identified.

*Impacts* – No previously recorded archaeological or architectural resources listed on the NRHP occur within the study area. Based on the results of the archival reviews, none of the Reasonable Alternatives would impact any existing NRHP listed sites.

# 3. ARCHAEOLOGICAL SURVEY

The archaeological survey was performed for only the Selected Alternative construction limits. The initial survey was conducted by the Archaeological Research Center of St. Louis, Inc., between March 11 and 14, 2008. The proposed construction easement surveyed was approximately 215 feet (65 meters) wide and extended for a distance of 6.2 miles from the intersection of Jackson Road with South Point Prairie Road on the south, to State Route P, just east of the community of Flint Hill, on the north.

Field investigations involved a pedestrian survey by directly observing the ground for artifacts, and shovel tests at 15 meter intervals. Landowners of a few tracts denied access to the field crew, or the landowners could not be contacted (no phone number could be found or their homes were located behind locked gates) in order to obtain permission to conduct the archaeological survey. The archaeological survey did identify nine archaeological sites and two isolated finds within the Selected Alternative corridor (see Table 3 in Appendix E for a summary list of the sites). In a letter dated August 19, 2008 (see Appendix I), the SHPO stated that three of the archaeological sites <u>may be</u> eligible for inclusion in the NRHP, including one prehistoric site, 23SC2140, and two historic sites, 23SC2141 and 23SC2146 (further descriptions of these three sites can be found in Appendix E, and descriptions of all sites investigated during the archaeological survey are included in the full report titled *Cultural Resources Investigation for the Proposed David Hoekel Parkway, City of Wentzville, St. Charles County, Missouri*).

As stated previously in Section III.J.2., subsequent investigations were performed in 2012 in relation to modifications in the design of the proposed interchange at US 61. Shovel tests and visual observations of the new areas in the current archaeological APE, that were not surveyed in the original investigation, indicated that these areas were previously disturbed and no additional archaeological sites were identified.

*Site 23SC2140* – This site consisted of a moderate scatter of flaking debris across a portion of a ridge finger overlooking Peruque Creek to the southwest. The artifacts recovered from shovel tests indicate that tools were being manufactured at this site, as well as repaired. The number of artifacts indicates that this site may have been used as habitation, either as part of a seasonal round or on a more permanent basis by a small number of families. Thus, it is possible that features (e.g., fire hearths, earth ovens, storage pits, nut processing pits, or house structures), were constructed at this site.

**Site 23SC2141** – This farmstead site was first occupied circa 1840 and the farmstead continued to be used into modern times. Intact remains dating to the 19<sup>th</sup> and early 20<sup>th</sup> century likely exist and could provide important insights into the lives of the early farmers of this region. Thus, it would be significant according to Criterion D. The site represented the remains of a farmstead. All of the buildings have been razed except for a barn, still standing in the northeast quadrant of the property, beyond the proposed construction easement. The remains of two outbuildings, with cement foundations and slab floors, were discovered within the Selected Alternative
construction easement. Adjacent to the southern side of one building foundation was a deep (2-3 meters) rectangular depression. The building foundation most likely represents a barn, with the rectangular depression possibly representing an in-ground silo. About 12 meters to the southwest was another small cement foundation representing a small outbuilding.

About 17 meters to the east of the razed barn, outside of the Selected Alternative construction easement, were the remains of a house, represented by an L-shaped depression, and a cellar. A cistern is at the southwestern edge of the house remains covered by a concrete block slab. Approximately 13 meters to the northeast of the residence are two wells, both of which were of concrete block construction standing 1 to 1.5 meters above the ground. The remaining barn structure still standing to the northeast of the wells has the same cement foundation.

*Site 23SC2146* – This site consists of a farmstead dating back to 1834 when the Drummonds first established it. During the survey, it was discovered that the residence and a nearby outbuilding had recently been razed, although five other outbuildings continue to stand. The outbuilding was a double pen and based on its location, it likely served as a summer kitchen in one pen and a slave quarters in the other pen. According to the 1860 Slave Schedules, Shelti Ball, who acquired the property, had slaves living within one separate building. Inside of a barn located just southwest of the residence, is a smaller residence. It could have been occupied by slaves or used by another family who also helped with the farming operations in 1880.

Also present on the property is the family cemetery. The original tombstones have been replaced by a large tombstone marking the graves of 11 members of the Drummond family. It was also a common practice to bury slaves in unmarked graves outside of the family burial ground or in a separate unmarked grave that could exist on this property. Although the original residence and possibly the summer kitchen/slave quarters have been razed, it is likely that yard features and intact artifacts are still associated with this historic farmstead.

#### 4. ARCHITECTURAL SURVEY

An architectural survey was conducted in order to reevaluate previously recorded architectural resources, and to identify and document any unknown architectural resources (i.e., buildings, structures, objects, bridges, districts, landscapes, and cemeteries) that may exist within or immediately adjacent to the architectural study area, which was defined as the Selected Alternative construction limits plus an additional 150-foot buffer. The buffer is necessary for evaluating historic properties that would be affected by potential visual or noise impacts from the Selected Alternative. There were no architectural properties or districts currently listed on the National Register of Historic Places or currently recommended for the National Register in the architectural study area.

Landowner parcels were numbered consecutively from south to north. Photographs were taken of all properties constructed prior to 1963, with additional photographs taken of outbuildings and any significant architectural features. The potential significance of these resources was assessed according to National Register criteria. Any properties recommended eligible for the National Register, would have a Missouri State Historic Preservation Office Architectural/Historic Inventory Survey Form completed along with a sketch map and a history to determine specific eligibility under Criteria A, B, C, and D, as well as the direct or indirect impact on the property.

A historic bridge investigation identified all bridges and documented all bridge resources constructed prior to 1963. Bridges as defined included highway, railroad, pedestrian, viaducts, and culverts. Excluded from this survey were metal, plastic, concrete pipes, and most concrete bridges and culverts under 20 feet of roadway length. A total of nine (9) previously recorded,

non-significant bridges and culverts were evaluated and all were constructed or replaced after 1962. No previously unidentified bridges were located. Bridge information and evaluation was coordinated with MoDOT.

The initial architectural survey resulted in the evaluation of 255 previously unrecorded properties (see Table 4 in Appendix E for property categories). Of the 255 property numbers, access was denied on only ten properties, which were consequently not investigated. Only 18 properties constructed prior to 1963 were photographed and evaluated. The 18 properties included one Split-Level house, one I-house, one 4-Square house (one-story pyramid), one 4-Square house (two-story pyramid), five Minimal Traditional houses, six Ranch houses, and three out-buildings. Descriptions of these buildings can be found in Appendix E. Photographs for these properties are included in the full report titled *Cultural Resources Investigation for the Proposed David Hoekel Parkway, City of Wentzville, St. Charles County, Missouri.* All of the properties examined during the current architectural investigations lacked local, state, and national historic context. The SHPO concurred that none of the buildings or structures are eligible for the NRHP under Criteria A, B, C, or D (see letter dated August 19, 2008 in Appendix I).

One private cemetery was encountered during the architectural investigation. This family cemetery is on property C242, at the east terminus of the study area, just outside the architectural study area to the north. A memorial marker to the Drummond family is in the center of an iron fenced area, along with some broken and scattered pieces of tombstones. Outside of the fence are a few more broken tombstones (see Appendix E for further details).

In the subsequent architectural survey performed in 2012, six additional properties were located within the current architectural APE of the modified proposed interchange that were not surveyed in the original investigation (see Addendum in Appendix E). Only one of the additional parcels had a building within the current architectural APE that was 45 years or older. The building was a gabled Ranch residence constructed in 1960, with modern vinyl cladding, an asphalt roof with gable returns, and a concrete basement.

Due to the length of time that had passed between the original survey (2008) and the current study, a reevaluation was required of all properties within the original architectural APE that had reached the 45 year mark since 2008. Seven properties had been identified as modern in the original survey, but now had construction dates that were 45 years or older and therefore, are no longer given the designation of "M" for modern. Three of the properties did not contain buildings within or touching the APE, and the other four properties contained buildings that did not meet the criteria for being recommended as eligible for the NRHP.

#### 5. SUMMARY, IMPACTS, AND RECOMMENDATIONS

The archival searches revealed that no properties on the National Register of Historic Places (NRHP) exist within the study area.

Although there are three archaeological sites that may be eligible for the NRHP, the current alignment of the Selected Alternative (Alternative 2) would impact only sites 23SC2140 and 23SC2141.

*Site 23SC2140* – The entirety of this site would be impacted by the Selected Alternative alignment. It is recommended by the SHPO that this site be archaeologically tested prior to design in order to better determine the potential presence of subsurface features and to determine if this site is eligible for the NRHP.

**Site 23SC2141** – This site would be impacted by the Selected Alternative along its western edge. Although nearly all of the buildings have been razed, it is likely that the remains of the original residence used by Abington and more importantly yard features (e.g., wells, cisterns, and privies), used at various times and filled with artifacts reflecting different periods of use, could still exist on the property. Although these features are outside of the Selected Alternative construction limits, the SHPO has stated that this site should undergo subsurface archaeological testing prior to design to determine if this site is eligible for the NRHP.

The Selected Alternative alignment will be further refined and determined after the design phase, and at that time, the extent of impacts to the archaeological sites will be determined. If any potentially eligible sites are impacted by the construction limits of the project, further (Phase II) archaeological testing will be conducted to determine if they are eligible for the NRHP. If an archaeological site is determined eligible, appropriate procedures will be followed to comply with Section 106 of the National Historic Preservation Act of 1966, including an assessment of adverse effects and, if appropriate, measures to avoid, minimize, or mitigate adverse effects through a Memorandum of Agreement (MOA), prior to the beginning of construction.

There were no architectural properties or districts currently listed on the National Register of Historic Places or currently recommended for the National Register in the architectural study area. The initial architectural survey of the Selected Alternative resulted in the identification of 255 previously unrecorded properties, no previously recorded architectural properties, nine previously recorded non-significant bridges and culverts, and no previously unrecorded bridges. All of the properties examined during the initial architectural investigations lacked local, state, and national historic context, and therefore it was determined by the SHPO that none of them are eligible for NRHP listing under Criteria A, B, C, or D. The subsequent architectural survey (2012) identified six additional properties and reevaluated four properties with buildings that had reached the 45 year mark since 2008. None of these properties were recommended for the NRHP. Three additional properties, reevaluated from the original survey, were now 45 years old, but were located outside the APE. The SHPO concurred with these recommendations in a letter dated June 4, 2013, which can be found in Appendix I.

For those properties where access was denied, on-site investigations will be conducted whenever permission is granted.

# K. Hazardous Material Sites

#### 1. SURVEY METHODOLOGY

A Phase I hazardous material assessment was performed to identify sites within the Study area that are contaminated or potentially contaminated with hazardous materials or waste. The intended scope of the screening was to identify properties which may require the time and expense of further site characterization or actual clean-up before construction can proceed. The study reflects the preferred method cited by the Federal Highway Administration (FHWA) and Missouri Department of Transportation (MoDOT).

The hazardous material assessment involved data collection efforts for the study area and an area one mile outside of the study area, including review of numerous government agency lists and files, review of current aerial photographs, and a field reconnaissance of the study area from public roads. The documents reviewed include the following: Federal (EPA) and State (MDNR) computer database search provided by Environmental Data Resources, Inc. (EDR) September 2007 (report is available upon request); EPA Region VII files, Kansas City, Kansas (see email dated September 24, 2007, in Appendix I); and MDNR Central office correspondence (see letter dated November 16, 2007, in Appendix I). The David Hoekel Parkway Hazardous

*Material Screening Report* is provided in Appendix F and includes a list of federal and state databases and a summary of the database search.

In addition, a field reconnaissance was performed in September of 2007, which included a visual inspection of the general study area to identify additional sites that could contain hazardous wastes, but may not have been recorded.

## 2. POTENTIAL HAZARDOUS MATERIAL SITES

The Phase I hazardous material assessment identified 20 records on various lists, representing 11 properties (separate addresses), 10 of which are located within the study area (see Exhibit III-4, and Table 1 in Appendix F). None of those sites were documented with serious environmental hazards, considered to pose a fatal flaw, or believed to require extensive time and cost to clean up. Seven of the eight sites involve permit compliance for water pollution control and/or resource assessment and monitoring. One site involved illegal drug lab material in a house that no longer exists. There are no known underground storage tanks located in the study area. In addition to the listed sites, there are also three sewage lift stations within the project area.

## 3. HAZARDOUS MATERIAL IMPACTS

#### a. Reasonable Alternatives Impacts

#### No-Build

The No-Build Alternative would have no impacts to hazardous material sites.

#### Alternative 1

This alternative would have no impacts to hazardous material sites. All of the hazmat sites shown on Exhibit III-4 adjacent to Alternative 1 involve permit compliance or resource assessment/monitoring, and the drug lab that no longer exists.

#### Alternative 2

This alternative would have no impacts to hazardous material sites, but would have a partial impact to the property on which a sewage lift station is located, adjacent to Highway P. One of the hazmat sites shown on Exhibit III-4 adjacent to Alternative 2 involves permit compliance or resource assessment/monitoring.

#### Alternative 3

This alternative would have no impacts to hazardous material sites; however, it would impact one sewage lift station located east of US 61.

#### b. Selected Alternative Impacts (Alternative 2)

The sites discussed above are screened as having a low potential for contamination and none of the sites would be totally impacted by the Selected Alternative. The only exception would be for the one site involving permit compliance or resource assessment/monitoring. In addition, the edge of the sewage lift station property would be partially impacted by the Selected Alternative. However, the entrance to the property would remain open.

All known and unknown hazardous materials encountered during roadway improvements would be handled per federal, state, and local laws and regulations. Where hazardous material or solid waste is identified in the required right-of-way, resolution with the property owner would be conducted prior to purchase. If an unknown site is encountered during construction, the local public works department and the Missouri Department of Natural Resources (MDNR) will be contacted and appropriate laws and EPA regulations would be followed to eliminate or minimize any adverse environmental consequences. If a pre-law or permitted landfill is encountered during construction, approval must be obtained from MDNR's Solid Waste Management Program prior to disturbing the buried waste for compliance information (for compliance information refer to MDNR's technical bulletin PUB2192 – *Managing Solid Waste Encountered During Excavation Activities* dated 12/2006, at <a href="http://www.dnr.mo.gov/pubs/pub2192.pdf">http://www.dnr.mo.gov/pubs/pub2192.pdf</a>). In the event that randomly dumped solid waste is encountered in the fields and ravines, proper procedures warrant collecting the material and properly disposing of it in a landfill.

Standard best management practices should be used for demolition, clearing and grubbing. It is recommended that homes and businesses that are identified for demolition be thoroughly inspected for hazardous materials. The inspections should cover both stored hazardous materials, and hazardous materials used in the construction of the building (i.e. asbestos, etc.). A Missouri certified asbestos inspector must sample for asbestos prior to demolition. Demolition activities must be conducted in accordance with local, state, and federal asbestos regulations (40 CFR Part 61, subpart M and State Regulations 10 CSR 10-6.241 and 10-6.250). For further details concerning asbestos abatement, see MDNR letter dated December 18, 2009 in Chapter V.C.4.

It is common for households to store and use small quantities of hazardous materials such as paints, batteries, fertilizers, herbicides, pesticides, gasoline, motor oil, and cleaners/solvents. Where evidence of improper waste handling practices is discovered, soil and/or groundwater sampling may be recommended during final design or pre-construction phases (Phase I and Phase II assessments).

Where electrical transmission lines, telephone facilities, pipelines, and other utilities are encountered or removed for the Selected Alternative, coordination with the applicable utility companies is recommended to identify chemical hazards present at specific locations. Further investigations may be required during final design based upon site specific data from the utility companies. Typically substations and intermittent power pole locations house transformers that may or may not contain Polychlorinated Biphenyls (PCBs). When this situation is involved with construction, further consideration may be necessary to include soil testing for PCBs near transformers.

# L. Air Quality

# 1. EXISTING AIR QUALITY

The Federal Clean Air Act Amendments (CAAA) of 1970 required the adoption of air quality standards. These were established to protect public health, safety and welfare from known or anticipated effects of sulfur dioxide (SO<sub>2</sub>), particulates ( $PM_{10}$ , 10 microns and smaller;  $PM_{2.5}$ , 2.5 microns and smaller), carbon monoxide (CO), nitrogen dioxide ( $NO_2$ ), ozone ( $O_3$ ), and lead (Pb). In addition to these pollutants, the state of Missouri has established additional criteria for hydrogen sulfide ( $H_2S$ ) and sulfuric acid ( $H_2SO_4$ ). The Missouri and National Ambient Air Quality Standards (NAAQS) for these pollutants are listed in Table III-11.

The CAAA of 1977 required all states to submit to the U.S. Environmental Protection Agency (EPA) a list identifying those air quality control regions, or portions thereof, which meet or exceed the NAAQS or cannot be classified because of insufficient data. Portions of air quality control regions that are shown, by monitored data or air quality modeling, to exceed the NAAQS for any criteria pollutant are designated "non-attainment" areas for that pollutant.

The 1990 CAAA established procedures for determining the conformity of state implementation plans with the requirements of the federal regulations. These procedures are published in 40 CFR Parts 51 and 93.

The Selected Alternative is located within the Metropolitan St. Louis Interstate Air Quality Control Region (Missouri – Illinois) (AQCR #70). The St. Louis Metropolitan Area is currently designated as a non-attainment area for particulates (annual  $PM_{2.5}$ ) and ozone (O<sub>3</sub>), and classified in attainment for all other criteria pollutants. The O<sub>3</sub> nonattainment is Subpart 2/Moderate. In addition, the area is designated as a maintenance area for carbon monoxide under the National Ambient Air Quality Standards.

Pollutant	Primary Stds.	Averaging Times	Secondary Stds.
Carbon Monoxide	9 ppm (10 mg/m³)	8-hour <sup>(1)</sup>	None
	35 ppm (40 mg/m <sup>3</sup> )	1-hour <sup>(1)</sup>	None
Lead	0.15 μg/m <sup>3</sup>	Running 3-Month Average	Same as Primary
Nitrogen Dioxide	0.053 ppm (100 μg/m <sup>3</sup> )	Annual (Arithmetic Mean)	Same as Primary
Particulate Matter (PM <sub>10</sub> )	Revoked <sup>(2)</sup>	Annual <sup>(2)</sup> (Arith. Mean)	Revoked <sup>(2)</sup>
	150 µg/m³	24-hour <sup>(3)</sup>	Same as Primary
Particulate Matter (PM <sub>2.5</sub> )	15.0 μg/m <sup>3</sup>	Annual <sup>(4)</sup> (Arith. Mean)	Same as Primary
	35 µg/m³	24-hour <sup>(5)</sup>	Same as Primary
Ozone	0.075 ppm	8-hour <sup>(6)</sup>	Same as Primary
	0.12 ppm	1-hour <sup>(7)</sup> (Applies only in limited areas)	Same as Primary
Sulfur Oxides	0.03 ppm	Annual (Arith. Mean)	
	0.14 ppm	24-hour <sup>(1)</sup>	
		3-hour <sup>(1)</sup>	0.5 ppm (1300 μg/m³)
Hydrogen Sulfide (H2S) <sup>(8)</sup>	70 μg/m <sup>3</sup> (0.05 ppm) 42 μg/m <sup>3</sup> (0.03 ppm)	One-half Hour <sup>(9)</sup> One-half Hour <sup>(10)</sup>	
Sulfuric Acid (H <sub>2</sub> SO <sub>4</sub> ) <sup>(8)</sup>	10 μg/m³ 30 μg/m³	Twenty-four Hour <sup>(11)</sup> One Hour <sup>(12)</sup>	

Table III-11: Missouri and Na	ational Ambient Air	<sup>•</sup> Quality	<sup>v</sup> Standards
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<sup>(1)</sup> Not to be exceeded more than once per year.

 $^{(2)}$  Due to a lack of evidence linking health problems to long-term exposure to coarse particle pollution, the agency revoked the annual PM<sub>10</sub> standard in 2006 (effective December 17, 2006).

 $^{\scriptscriptstyle (3)}$  Not to be exceeded more than once per year on average over 3 years.

 $^{(4)}$  To attain this standard, the 3-year average of the weighted annual mean PM<sub>2.5</sub> concentrations from single or multiple community-oriented monitors must not exceed 15.0  $\mu$ g/m<sup>3</sup>.

<sup>(5)</sup> To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed 35 μg/m<sup>3</sup> (effective December 17, 2006).

<sup>(6)</sup> To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.08 ppm.

<sup>(7)</sup> (a) The standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is  $\leq$  1.

(b) As of June 15, 2005 EPA revoked the <u>1-hour ozone standard</u> in all areas except the fourteen 8-hour ozone nonattainment <u>Early Action</u> <u>Compact (EAC) Areas.</u>

<sup>(8)</sup> Missouri Air Quality Standards.

<sup>(9)</sup> Not to be exceeded more than twice per year.

 $^{\rm (10)}\,\rm Not$  to be exceeded more than twice in any five consecutive days.

 $^{\mbox{(11)}}\mbox{Not}$  to be exceeded more than once in any ninety consecutive days.

 $^{\left( 12\right) }$  Not to be exceeded more than once in any two consecutive days.

Source: http://www.epa.gov/air/criteria.html last updated on Friday, February 8, 2008 and Missouri 10 CSR 10 - 6.010 Ambient Air Quality.

#### 2. CONFORMITY

As stated previously, the St. Louis Metropolitan Area is currently designated as a nonattainment area for particulates (annual  $PM_{2.5}$ ) and ozone (O<sub>3</sub>). The O<sub>3</sub> nonattainment is Subpart 2/Moderate. The conformity determinations for both air pollutants have been conducted by the East-West Gateway Council of Governments (EWGCOG) using the latest Missouri State Implementation Plan (SIP) submittals.

Under the provisions of the Clean Air Act Amendments (CAAA) of 1990, the EWGCOG, as the Metropolitan Planning Organization (MPO) for the region, is the agency responsible for making sure a transportation project conforms to the air quality goals stipulated in the Transportation Implementation Plan (TIP). If the projected motor vehicle emissions from the planned transportation project do not exceed the motor vehicle emissions budget established in the TIP, EWGCOG places the project in the TIP and the Missouri Highways and Transportation Commission (MHTC) incorporates the entire TIP by reference in the Statewide Transportation Improvement Program (STIP). This is done by EWGCOG issuing a "Determination of Conformity" ensuring that the predicted future mobile emissions resulting from the Selected Alternative fall below the 2007 and 2014 emission budget levels set out in the maintenance plans for the ozone producing volatile organic compounds (VOCs) and oxides of nitrogen (NOx). The 1997 ozone SIP submittal and/or the MDNR's Ozone Clean Data finding for the St. Louis area will establish the conformity budget to be used for the David Hoekel Parkway project.

The Selected Alternative for the David Hoekel Parkway project was evaluated within EWGCOG's Air Quality Conformity Determination modeling for the region, approved by the Federal Highway Administration on September 2, 2011. The Conformity Determination was made for the entire 1997 eight-hour ozone non-attainment area and PM2.5 non-attainment area. Ozone non-attainment counties include: Franklin, Jefferson, St. Charles and St. Louis Counties and the City of St. Louis in Missouri; and Madison, Monroe, St. Clair and Jersey Counties in Illinois. The annual PM2.5 non-attainment area consists of: Franklin, Jefferson, St. Charles and St. Louis Counties and the City of St. Louis in Missouri; and Madison, Monroe and St. Charles and St. Louis Counties and the City of St. Louis in Missouri; and Madison, Monroe and St. Clair Counties and Baldwin Township in Randolph County, in Illinois.

Based on the conformity analysis conducted as part of the long-range plan development, the projects and programs included in the *Regional Transportation Plan 2040* and the *Federal Fiscal Year 2012-2015 Transportation Improvement Program* (FY 2012-2015 TIP) are found to be in conformity with the requirements of the Clean Air Act Amendments of 1990, the relevant sections of the Final Conformity Rule 40 CFR Part 93, and the Missouri State Conformity Regulations 10 CSR 10-5.480. The finding is documented in the *Air Quality Conformity Determination and Documentation (8-Hour Ozone & PM2.5)* for the *Regional Transportation Plan 2040* and *2012-2015 Transportation Improvement Program.* The conformity analysis for the project has been incorporated into subsequent updates of the RTP 2040, TIP and Air Quality Conformity Determination within the Amendment to the FY 2014-2017 TIP.

(<u>http://www.ewgateway.org/pdffiles/library/AQ/AQConformityDoc/AQConformityDoc-FY2014.pdf</u> (David Hoekel Parkway project listed on page A-46)). The EWGCOG will update and reanalyze the project's air quality conformity modeling within the next air quality conformity determination for the St. Louis region in order to reflect the final project description of roadway and interchange improvements for the Selected Alternative. The project will not be constructed until the new air quality conformity determination for the region, with inclusion of the project, is approved. As with the 2011 air quality conformity determination, it is anticipated that the project will not adversely impact the air quality for the region and that the region will remain in conformity with the requirements of the Clean Air Act Amendments of 1990, the relevant sections of the Final Conformity Rule 40 CFR Part 93, and the Missouri State Conformity Regulations 10 CSR 10-5.480 since the project has not changed significantly since that time.

#### a. Particulates

The EPA and the FHWA issued a joint guidance on March 29, 2006 on how to perform qualitative hot-spot analyses in  $PM_{2.5}$  and  $PM_{10}$  nonattainment and maintenance areas. This guidance was developed to provide information for State Highway Administrations, local air control agencies and Metropolitan Planning Organizations (MPO) to meet the  $PM_{2.5}$  and  $PM_{10}$  hot-spot analysis requirements established in the March 10, 2006, final transportation conformity rule (71 FR 12468). Based on an analysis of the final rule, 40 CFR 93.123(b)(1), and criteria recently adopted by the interagency group, it was determined that the Selected Alternative was not considered a "project of air quality concern" and does not meet the criteria stipulated for requiring either project-level conformity analysis or a PM2.5 or PM10 hot-spot analysis as defined in the final rule. A more detailed discussion of how a "project of air quality concern" is defined can be found in Appendix G.

The following items were considered in determining whether the Selected Alternative is a project of air quality concern:

- The Study Area is non-attainment for PM<sub>2.5</sub>;
- Maximum Build ADT in 2040 for the project is projected to be 22,000 vpd;
- Diesel truck percentage, two-axle 6 tire and 3 or more axles are 5.0% for the project ;
- There are not a significant number of diesel trucks at existing intersections that operate between LOS C and LOS E. The Selected Alternative will not create an increase in trucks such that LOS decreases; and
- The Selected Alternative will not create a significant increase in the number of diesel transit busses and/or diesel trucks in the study area.

Therefore, this project is not considered to be a project of air quality concern and does not require a hot-spot analysis.

#### b. Mobile Source Air Toxics

In addition to the criteria air pollutants for which there are National Ambient Air Quality Standards (NAAQS), the EPA also regulates air toxics. Most air toxics originate from human-made sources, including on-road mobile sources, non-road mobile sources (e.g., airplanes), area sources (e.g., dry cleaners) and stationary sources (e.g., factories or refineries). Mobile Source Air Toxics (MSATs) are a subset of the 188 air toxics defined by the Clean Air Act (CAA). The MSATs are compounds emitted from highway vehicles and non-road equipment. Some toxic compounds are present in fuel and are emitted to the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion products. Metal air toxics also result from engine wear or from impurities in oil or gasoline.

Technical shortcomings of emissions and dispersion models and uncertain science with respect to health effects prevent meaningful or reliable estimates of MSAT emissions and effects of this project (see Appendix G for a detailed discussion). However, even though reliable methods do not exist to accurately estimate the health impacts of MSATs at the project level, it is possible to qualitatively assess the levels of future MSAT emissions under the project. Although a qualitative analysis cannot identify and measure health impacts from MSATs, it can give a basis for identifying and comparing the potential differences among MSAT emissions—if any—from the various alternatives. The qualitative assessment presented below is derived in part from a study conducted by the FHWA entitled *A Methodology for Evaluating Mobile Source Air Toxic Emissions Among Transportation Project Alternatives*, found at:

www.fhwa.dot.gov/environment/airtoxic/msatcompare/msatemissions.htm

## 3. AIR QUALITY IMPACTS

The amount of MSATs emitted in the study area would be proportional to the vehicle miles traveled, or VMT, assuming that other variables such as fleet mix are the same for each alternative. Emissions in the study area will likely be lower than present levels in the design year as a result of EPA's national control programs that are projected to reduce MSAT emissions by 57 to 87 percent from 2000 to 2020. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future in virtually all locations.

Because of the specific characteristics of the Selected Alternative, there may be localized areas where VMT would increase. Therefore it is possible that localized increases in MSAT emissions may occur. The localized increases in MSAT emissions would likely be most pronounced along the Selected Alternative that would be built between US 61 and I-70. However, even if these increases do occur, they too will be substantially reduced in the future due to implementation of EPA's vehicle and fuel regulations.

In summation, in the design year (2040) it is expected there would be reduced MSAT emissions in the study area due to EPA's MSAT reduction programs. MSAT levels could be higher in some locations than others, but current tools and science are not adequate to quantify them. However, on a regional basis, EPA's vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause region-wide MSAT levels to be significantly lower than today.

# M. Noise Analysis

# 1. MEASURED AND MODELED EXISTING NOISE LEVELS

Existing noise level measurements were conducted for only the Selected Alternative on October 29 and 30, 2007 at seven representative sites in the study area. The noise measurements were conducted for a period of ten or twenty minutes at each site. Traffic visible from each site was counted and classified during each measurement. The data collected at the seven sites are presented in Table III-12. The noise measurement sites are identified on Figures 1,2 and 3 in Appendix H. All traffic noise levels in this analysis are expressed in decibels [dBA  $L_{eq}(h)$ ]. (See Appendix H for further explanation of the noise measurements and analysis.)

The noise analysis discussed in this section, and the Noise Study in Appendix H, were prepared based on a US 61 interchange at Peine Road and an alignment segment east of US 61 that was similar to the Alternative 1 alignment. However, subsequent modifications were made to the design of the proposed US 61 interchange of the Selected Alternative. The noise sensitive

receptors in the vicinity of the new proposed interchange remain the same as those of the previous interchange design, and the conclusions at the end of this section are still applicable to the modified interchange area. Figure 4 in Appendix H has been added to show the interchange modifications in relation to noise sensitive receptors.

The FHWA Traffic Noise Model, V. 2.5 (TNM<sup>®</sup>)<sup>1</sup> was used to model the field measurements, using the traffic data counted during the measurements, to determine the applicability of the model to the specific project environment. Comparing the modeled noise levels to the measured noise levels confirms the applicability of the computer model to the specific project. Traffic volumes were counted and classified concurrently with the noise measurements at five of the seven field sites. The five modeled sites compared within 0-3 dBA of the measured levels. This represents reasonable correlation since the human ear can barely distinguish a 3-dBA change in a natural setting. The site-by-site comparison is presented in Table 2 in Appendix H.

					Traffic''			Noise				
Field Site #	Site Description and Distance From Road	Date	Start Time	Duration	Roadway	A	МТ	нт	Buses	МС	Speed mph	Level, dBA Leq(h)
1	Cemetery at St. Theodore's Church and School, 5059 Route P, 453 ft north of Route P and 1,055 ft west of Mette Rd.	10/29/07	14:28	10 min.								47
2	Residence, 1301 Forest Way, 79 ft south of Peine Rd. and 30 ft east of Forest Way	10/29/07	14:55	20 min.	Peine Rd.	41	2	2	-		35	56
3	Residence, 28 Hickory Ct., 367 ft north of Peine Rd.	10/29/07	15:25	20 min.	Peine Rd.	43					45	40
4	Residence, 128 Prairie Bluffs Dr., 110 ft west of N Point Prairie Rd. and 1,460 ft north of Scotti Rd.	10/29/07	16:13	20 min.	Prairie Bluffs Dr.	28	1		-		35	45
5	Residence, 210 ft south of Meyer Rd. and 5 ft west of Golden Gate Parkway	10/29/07	17:01	20 min.	Meyer Rd.	53	2				35	45
6	Residence, 2522 Bear Creek Dr., 2180 ft west of N. Point Prairie Rd.	10/29/07	17:44	10 min.								47
7	Residence, 1473 Cedar Branch Ln., 235 ft west of Point Prairie Rd. and 585 ft north of Jackson Rd.	10/30/07	7:21	20 min.	S. Point Prairie Rd.	11	1		1		45	46

Table III-12: Measured Existing Noise Levels

 Autos (A) defined as 2-axle, 4-tire; medium trucks (MT) as 2-axle, 6-tire; heavy trucks (HT) as 3 or more axles; buses as more than nine passengers; motorcycles (MC) as two or three tires, open-air driver/passenger compartment.

Source: HNTB Corporation, October, 2007

<sup>&</sup>lt;sup>1</sup> Michael C. Lau, Cynthia S. Y. Lee, Gregg G. Judith L. Rochat, Eric R. Boeker, and Gregg C. Fleming. FHWA Traffic Noise Model<sup>®</sup> Users Guide (Version 2.5 Addendum). Federal Highway Administration, April 2004.

#### 2. NOISE ABATEMENT CRITERIA

The FHWA's Noise Abatement Criteria (NAC) and MoDOT's FHWA-approved interpretation of the NAC, as detailed in MoDOT's Traffic Noise Policy<sup>2</sup>, were used in the analysis of the acoustic impact of the Selected Alternative. The analysis was conducted according to the guidelines as presented in the Code of Federal Regulation, Title 23 Part 772, which provides procedures whereby the acoustic impact of the Selected Alternative can be assessed and the needs for abatement measures determined. Although MoDOT's current noise policy has incorporated changes that were made to 23 CFR 772 by FHWA, which went into effect July 13, 2011; MoDOT's previous noise policy that was in effect prior to that date was used for this noise analysis because this proposed project had reached the practicable alternatives stage prior to that date.

The FHWA and MoDOT's NAC for various types of land uses are presented in Table III-13. The noise level descriptor used is the equivalent sound level,  $L_{eq}(h)$ , defined as the steady state sound level in a one hour period which contains the same sound energy as the actual time-varying sound.

Noise mitigation measures for traffic noise impacts will be considered when the predicted noise levels approach or exceed those values shown for the appropriate activity category of the Noise Abatement Criteria, Table III-13, or when the predicted traffic noise levels substantially exceed the existing noise levels.

MoDOT has defined the NAC approach or exceed criteria for Activity Category "B" as being equal to or greater than 66 dBA  $L_{eq}(h)$  for noise sensitive receivers such as residences, churches, schools, libraries, hospitals, nursing homes, apartment buildings, condominiums, etc. The criteria for Activity Category "C" is 71 dBA  $L_{eq}(h)$  or greater. MoDOT has defined an increase of 15 decibels or more over the existing noise as being substantial. Title 23 CFR, Section 772.11(a) states, "In determining and abating traffic noise impacts, primary consideration is to be given to exterior areas. Abatement will usually be necessary only where frequent human use occurs and lower noise level would be of benefit".

Activity Category	L <sub>eq</sub> (h) (1 Hr)	Description of Activity Category / Land Uses
A	57 dBA (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the lands are to continue to serve their intended purpose.
В	67 dBA (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries and hospitals.
С	72 dBA (Exterior)	Developed lands, properties or activities not included in Categories A or B above.
D		Undeveloped lands.
E	52 dBA (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals and auditoriums.

#### Table III-13: Noise Abatement Criteria Hourly A-Weighted Sound Level-Decibels (dBA)

Source: Code of Federal Regulations, Title 23 Part 772, Revised April 2005 MoDOT Traffic Noise Policy, September 1997

<sup>&</sup>lt;sup>2</sup> Traffic Noise Policy, Missouri Department of Transportation, MoDOT Preliminary Studies Group, Environmental Section, September 1997.

## 3. TRAFFIC NOISE MODELING

The FHWA Traffic Noise Model,  $(TNM^{\circledast} 2.5)^3$  was used to model design year 2030 L<sub>eq</sub> noise levels. Existing noise levels were developed from field measurements, as described above. The design year noise levels were compared to the existing noise levels and to the NAC, Table III-13. The design year noise levels were also used in the noise mitigation analysis to analyze the feasibility of abatement measures for locations projected to experience a noise impact. Inputs such as volume, speed, and truck percentages were modeled to reflect the traffic characteristics "which yield the worst hourly traffic noise impact on a regular basis for the design year"<sup>4</sup>. The following parameters were used in this model to calculate an hourly L<sub>eq</sub>(h) at a specific receiver location:

- Distance between roadway and receiver;
- Relative elevations between roadway and receiver;
- Hourly traffic volumes for light-duty (two axles, four tires), medium-duty (two axles, six tires), and heavy-duty (three or more axles) vehicles;
- Vehicle speed;
- Roadway grade; and
- Topographic features, including retaining walls and berms.

One hundred eighteen (118) representative receiver locations, labeled N1 through N111 (modeled), and FS-1 through FS-7 (field site), were selected to illustrate the potential noise impacts adjacent to the Selected Alternative. Based on MoDOT's Traffic Noise Policy the traffic noise analysis was conducted for both developed lands and undeveloped lands for which development has been planned, designed and programmed. Development will be deemed to be planned, designed and programmed if a building permit for a noise sensitive land use (including, but not limited to a residence, school, church, hospital or library) has been approved by the local agency with jurisdiction at the time of the noise analysis. Therefore, receiver locations selected included existing residences; platted subdivisions; St. Theodore's Church/School, Parish Center and cemetery. Noise modeling and field measurement sites are identified on Figures 1, 2, 3, and 4 in Appendix H.

Future 2030 design hour traffic data was used to model the design year  $L_{eq}(h)$  noise levels. These noise levels were compared to the existing noise levels to determine if MoDOT's 15 decibel increase criteria would be exceeded and to the NAC noise levels in Table III-13. Exceeding either criterion is, by definition, an impact. Therefore, mitigation measures must be reviewed to determine if they are both feasible and reasonable for the Selected Alternative.

Existing design year  $L_{eq}(h)$  noise levels within the project study area ranged from 40 to 64 dBA  $L_{eq}(h)$ . The results of the peak hour traffic noise modeling are presented in Table 4 in Appendix H.

Future design hour noise levels would exceed the NAC at sixteen (16) of the 118 representative receivers, as shown in Table 4 in Appendix H. These receivers represent one (1) clubhouse, one swimming pool, 10 apartments, and 19 residences. Future  $L_{eq}(h)$  noise levels at these receivers would range from 66 to 71 dBA. The change in noise levels at these locations would be an increase in a range of four to 28 decibels.

<sup>&</sup>lt;sup>3</sup> Michael C. Lau, Cynthia S. Y. Lee, Gregg G. Judith L. Rochat, Eric R. Boeker, and Gregg C. Fleming. FHWA Traffic Noise Model® Users Guide (Version 2.5 Addendum). Federal Highway Administration, April 2004.

<sup>&</sup>lt;sup>4</sup> 23 CFR, Section 772.17(b).

In addition to those receivers that would be exposed to noise levels above the NAC, 16 additional receivers would be exposed to future design hour noise levels that would substantially exceed existing noise levels, as shown in Table 4 in Appendix H. These receivers represent 39 existing and permitted residences. Future  $L_{eq}(h)$  noise levels at these receivers would range from 55 to 65 dBA. The noise levels at these locations would increase in a range of 15 to 25 decibels.

# 4. ABATEMENT MEASURES

Various methods were reviewed to mitigate the noise impact of the Selected Alternative. Among these were reduction of speed limits, restriction of truck traffic to specific times of the day, a total prohibition of trucks, alteration of horizontal and vertical alignments, property acquisition for construction of noise walls or berms, acquisition of property to create buffer zones to prevent development that could be adversely impacted, noise insulation of public use or nonprofit institutional structures, the use of berms, and the use of noise walls.

Restriction or prohibition of trucks is adverse to the project purpose. Reduction of speed limits, although acoustically beneficial, is seldom practical unless the design speed of the Selected Alternative is also reduced. Design criteria and recommended termini for the Selected Alternative prevent substantial horizontal and vertical alignment shifts that would produce significant changes in the projected acoustical environment. The desire to minimize right-of-way takings prohibits the acquisition of buffer zones or the construction of earth berms. Noise insulation is not necessary since no public use or nonprofit institutional structures were identified as being affected by the project. Therefore, only the construction of noise walls was considered as a possibility for noise mitigation.

When the noise criterion is exceeded or a substantial increase occurs, noise abatement procedures are to be reviewed to determine if they are feasible and reasonable. Feasibility deals with the engineering considerations of noise abatement, for example, topography, access, drainage, safety, maintenance, and if other noise sources are present. MoDOT requires at least a five dBA noise loss for first-row receivers for noise abatement to be considered feasible.

Reasonability of proposed noise abatement mitigation measures is more subjective than evaluation of feasibility. It implies the use of good engineering judgment and is based on a number of factors. These factors include, but are not limited to:

- Noise wall must provide noise reduction of at least five dBA for all primary receivers. Primary receivers are those which are closest to the highway.
- Noise wall must provide attenuation for more than one receiver.
- Noise wall must be 18' (5.5m) or less in height above normal grade.
- Noise wall must not interfere with normal access to the property.
- Noise wall must not pose a traffic safety hazard.
- Noise wall must not exceed a cost of \$30,000 per benefited receiver. A benefited receiver is defined as a receiver, which obtains a noise reduction of five dBA or more.
- The majority of the affected residents (primary and benefited receivers) must concur that a noise wall is desired."<sup>2</sup>

In areas where noise impacts would occur, noise abatement (i.e. barriers) would have to be constructed between the road and the receiver to effectively abate the noise being produced by the traffic.

Seven noise barriers were analyzed for existing and permitted residences within the project limits. It should be noted that MoDOT's noise policy requires mitigation only for existing receivers, not for receivers in buildings constructed after a proposed roadway is built. The results of the barrier analysis, including barrier location, future  $L_{eq}(h)$  noise levels without and with a barrier, barrier length and height, estimated cost (based on \$18.00/square foot), the number of residential units benefited, the noise reduction provided by the barrier, and the cost per residential unit, and whether the noise barrier is feasible and reasonable are presented in Table III-14. Five of the seven noise barriers listed in Table III-14 meet MoDOT's feasibility and reasonability criteria. This indicates that noise barriers could be considered for these locations.

As discussed at the beginning of this section, modifications have been made to the design of the proposed US 61 interchange of the Selected Alternative. The noise sensitive receptors in the vicinity of the new proposed interchange remain the same as those of the previous interchange design, and the potential still exists for the consideration of feasible and reasonable noise barriers (#6 and #7) in the vicinity of the US 61 interchange (see Figure 4 in Appendix H).

There are nine individual receivers along the corridor that would exceed the NAC: Receivers FS-2, N14, N15, N23, N29, N35, N36, N56 and N71 in the design year (See Figures 1, 2, 3, and 4 in Appendix H). Due to local access requirements and the proximity to local street intersections, it is not possible to design a noise barrier that would meet MoDOT's feasibility criteria. In addition, it is not possible to design a barrier for single receivers that would meet MoDOT's cost criteria of \$30,000. As a result, noise barriers would not be considered for these locations.

Barrier	Barrier No. a) Range of Future Leq Noise Levels, (dBA)		Noise Reduction	Barrier Characteristics		Cost <sup>b)</sup>	Number of Units	Cost/ Benefited	Feasible and
NO. '	W/O barrier	With barrier	(dB)	Length ft	Height ft		Attenuated	Receiver	Reasonable
1	65	59	6	650	8	\$93,600	5	\$18,720	Y
2	65	59	6	920	8	\$132,480	4	\$33,120	N
3	55-65	50-54	5-11	1,626	10-4	\$336,971	7	\$48,139	N
4	52-63	47-58	5	1,444	10-12	\$293,218	11	\$26,656	Y
5	59-68	54-59	5-9	1,462	9-12	\$250,358	20	\$12,518	Y
6	67-68	61-63	5-6	1,300	8	\$187,156	7	\$26,737	Y
7	68	62-63	5-6	1,000	16-18	\$301,677	11	\$27,425	Ý

Table III-14: Acoustical Mitigation - Noise Barrier Analysis

a) Barriers 1 – 7 are shown on Figures 1 through 3 in Appendix H. b) Based on \$18.00 per square foot.

# 5. CONSTRUCTION NOISE

As directed by 23 CFR 772.19, the effects of the temporary increased noise levels during construction were considered. These noise impacts would occur within the immediate vicinity of the construction activities and generally be limited to working hours. Although noise impacts during project construction are of short duration, a large number of combustion engine powered equipment will be required to construct the Selected Alternative. This equipment is expected to be the main contributor to the sound levels from highway construction. Table 6 in Appendix H lists some typical peak operating noise levels at a distance of 50 feet, grouping construction equipment according to mobility and operating characteristics.

The major construction elements of this project are expected to be earth removal, hauling, grading and paving. General construction impacts such as temporary speech interference for passersby and those individuals living and working near the project can be expected,

particularly from earth moving equipment during grading operations. Overall, construction noise impacts are expected to be minimal since construction noise is of relatively short duration.

# 6. UNDEVELOPED LANDS

The 66 dBA  $L_{eq}(h)$  setback distance along the Selected Alternative would range from 100 feet to 144 feet. The range of distances is a function of traffic volumes and roadway elevation adjacent to the vacant lands. The setback distance indicates that noise levels within the setback distance, measured perpendicular to the centerline in either direction, is 66 dBA  $L_{eq}(h)$  or greater. This setback distance was developed to assist local planning authorities in developing land use control over the remaining undeveloped lands along the project in order to prevent further development of incompatible land use.

# 7. CONCLUSION

Based on the noise study completed for the Selected Alternative, only five of the seven noise barriers presented in Table III-14 meet MoDOT's definition for feasible and reasonable noise mitigation. This indicates that noise barriers could be considered for the project.

Public informational meetings, both formal and informal, will be conducted throughout the project development process, from planning, to design, to construction, to solicit comments, opinions and concerns from local officials and the public. Upon completion of the public information meetings, should the majority of benefitted residents concur that noise walls are desired, the City of Wentzville will install the noise barriers that are feasible and reasonable adjacent to the Selected Alternative. It is noted that MoDOT's noise policy requires mitigation only for existing receivers and planned development with building permits. Proposed or planned development that is permitted and constructed after the Selected Alternative has been approved through the NEPA process would not qualify for noise mitigation. The City has also been providing a public disclosure informational brochure titled Topics to Consider While You Search for Your Home, which is required by City Ordinance No. 1884 to be prominently displayed and clearly made available by developers to prospective home or property purchasers who shall be personally advised about the brochure. This brochure includes instructions on how to obtain information contained in the City's Comprehensive Plan and its Thoroughfare Plan, which includes the location of the David Hoekel Parkway preserved corridor in relation to planned and existing development. A copy of Ordinance No. 1884 and the informational brochure can be found in Appendix J.

If substantial changes in horizontal or vertical alignment occur during the remaining stages of design and construction, noise abatement measures will be reviewed. A final Noise Report will be prepared, if needed, during final design and following all receipt of public comments. The Noise Report analysis will re-model the noise barriers with final roadway alignment and finished grade elevations at the right-of-way resulting in design level data for construction plans. The final recommendations will be made after the final design and public involvement processes are complete.

# N. Visual Quality and Aesthetic Considerations

# 1. EXISTING VISUAL ENVIRONMENT

The corridor of the Selected Alternative is located in an area of Wentzville that is experiencing growth and development. Most of the existing areas consist of either residential development or agricultural/open land use. Some of the residential areas are relatively new and most of the undeveloped land will be developed with residential and commercial uses in the near future.

Within the project corridor, the most notable visual resources that are scenically significant are the Peruque Creek and McCoy Creek riparian corridors. The characteristics of the streams and their adjacent riparian woodland contribute to the visual identity of the environment and provide a sharp contrast with the developing urban/suburban environment.

The areas within a project corridor can be visually distinct, can exhibit unique and consistent visual characteristics, and can possess varying degrees of visual quality. The project corridor can be divided into separate areas or units within which there are consistent visual characteristics and a uniform visual experience. These areas are called "Visual Assessment Units," the boundaries of which occur where there is a change in visual character. The strongest determinations of the visual boundaries are *topography* (physical land form of the surface) and *landscape components* (natural land cover elements or structures).

The following visual assessment units were determined by analyzing the topography of the study area, studying the major landscape components, studying aerial photography, and through windshield surveys:

- Agricultural / Open Land pasture/grassland and cultivated crops
- *Riparian Corridors* running water courses and adjacent low-lying woodlands
- Upland Woods woodlands above stream terraces and on side slopes of hills
- Residential new housing subdivisions, new apartment complex and some older houses
- Commercial businesses, mostly concentrated on the east side of US 61
- *Flint Hill* community characteristic of "small town Main Street", with a mix of residential, commercial, a church, and a school

# 2. VISUAL QUALITY RATING

The "visual assessment units" described above were studied to determine a visual quality rating. The quality of the visual environment can be collectively defined using the attributes of *vividness*, *intactness*, and *unity*. *Vividness* is the relative strength of the seen image, *intactness* is the visual integrity of the natural or man-made landscape and its freedom from encroaching elements, and *unity* is the overall visual harmony of a composition and the degree to which the various elements combine in a coherent way. The identified visual assessment units present within the study area and the relative existing visual quality rating of each (on a scale of low, moderate, or high) is presented in Table III-15.

Visual Assessment Units	Visual Quality Rating	Relative Concentration of Sensitive Visual Receptors			
Agricultural / Open Land	Low to Moderate	Low			
Riparian Corridors	High	Low			
Upland Woods	High	Low			
Residential	Moderate to High	High			
Commercial	Low	Low			
Flint Hill	Moderate to High	High			

# 3. VISUAL IMPACTS

The visual impacts of a project may be quite varied in different areas of a project corridor because the areas themselves can be visually distinct, can exhibit unique and consistent visual characteristics, and can possess varying degrees of visual quality.

Visual quality impacts are determined by the degree of <u>change</u> in the visual environment as related to viewer response. For the purpose of highway project assessment, there are two distinct categories of viewers or viewer response to be considered in regard to the visual environment: (1) viewers who are users of the project facility and who have views of the surrounding environment (views <u>from</u> the road), and (2) the "visual receptors" or people who can observe the roadway from an adjacent vantage point (views <u>of</u> the road). Individuals that have the potential for undesirable views of the road (from residential areas) are referred to in this discussion as "Sensitive Visual Receptors." As shown in Table III-15, the relative concentration of sensitive visual receptors is high in the residential areas and the Flint Hill community, and low in all other areas of the project corridor.

## a. Reasonable Alternatives Impacts

## No-Build

The No-Build Alternative would not physically alter the existing visual quality of the environment. Since there would be no new roadway traveling through the area, there would be no views of the road or *from* the road, and the existing visual environment would essentially remain the same as current conditions until inevitable new development occurs.

## Reasonable Build Alternatives 1, 2 & 3

All of the Reasonable Build Alternatives would have similar impacts regarding views *from* the road and views *of* the road (see the description of the impacts for the Selected Alternative below).

# b. Selected Alternative Impacts (Alternative 2)

The Selected Alternative would have the following impacts:

- Views <u>From</u> the Road The most notable high quality views from the road would occur in the areas where the new roadway crosses the riparian corridors of Peruque Creek, tributaries of McCoy Creek, and Dry Branch where the elevated roadway would provide views of the streams and adjacent woodlands. High quality views from the road would also occur at the upland wooded areas. However, when new development takes place in those areas, much of the woodland would most likely be removed.
- Views <u>Of</u> the Road and Visual Quality Impacts The existing visual environment is of high quality along the riparian corridors and wooded uplands, however, the Selected Alternative would have an overall moderate visual impact on these visual environments. The visual "change" would be moderate since these areas have already been altered by fragmentation and clearing, and will continue to be altered as new development occurs. The sensitive visual receptors that are, and will be, concentrated in the existing and future residential developments will be subject to undesirable views of the road, since no road has previously existed there. In the residential areas adjacent to I-70, US 61, and Highway P, those residents are already accustomed to views of the roadways and associated traffic, and the proposed project would not result in a substantial change from the existing visual conditions.

## 4. AESTHETIC CONSIDERATIONS / VISUAL ENHANCEMENTS

In areas where the roadway is visible to residences, if practicable, landscaping with evergreen trees and shrubs will be considered in order to screen and soften the views of the road in addition to providing enhanced views *from* the road. Where appropriate and practicable, the City of Wentzville will consider incorporating landscaping and aesthetic design elements in the design phase of the project, and in an integrated fashion to ensure that the roadway and any bridges will visually complement the character of the corridor. Most of the roadway will include a landscaped median to visually separate opposing lanes of traffic. In addition, native plants will be considered for landscaping in appropriate areas of the project.

# **O.** Construction Impacts

Potential construction impacts are described in this section. While construction impacts would be more fully known when more detailed design plans have been completed, the City will work with the public to address concerns during the final design of the project and would provide further coordination with impacted parties and individuals.

The City of Wentzville's and MoDOT's standard specifications for street construction include, but are not limited to, air, noise, and water pollution control measures, and traffic control and safety measures to minimize construction impacts. Pollution control measures, both temporary and permanent, would be enacted under the project construction specifications. If drilling and blasting are necessary for construction, a carefully planned and executed drilling and blasting program would be prepared to minimize vibration impacts.

During construction of the project, construction methods and operations would be conducted in accordance with MDNR regulations, particularly concerning batch plant operations and clearing and grubbing functions. The use or application of liquefied cutback asphalt in paving and maintenance operations on highways, roads, parking lots, and driveways is restricted in certain counties, including St. Charles County, during April and October, except as otherwise exempted from the regulations (State Regulation 10 CSR 10-5.310). In addition, the Volatile Organic Compounds content of traffic coatings is restricted by State Regulation 10 CSR 10-5.450.

# 1. WASTE DISPOSAL

Specifications and procedures for the disposal of wastes resulting from construction activity would be developed with consideration given to the MDNR Solid Waste Management Program. This program emphasizes the need to develop uses and markets for recycled and recyclable materials in construction activities. These materials include, but are not limited to, waste tires, rubberized asphalt, ground glass subgrade, structural steel, plastic lumber, and paints that utilize recycled glass. Furthermore, any potential hazards in the right-of-way would be identified and handled in accordance with all applicable regulations. If solid waste is encountered during construction, it will be handled according to the Missouri Solid Waste Management Law and regulations (refer to MDNR's technical bulletin PUB2192 – *Managing Solid Waste Encountered During Excavation Activities*, dated 12/2006, at http://www.dnr.mo.gov/pubs/pub2192.pdf).

Two of the ponds in the project area have the possibility of being old sewage lagoons. Prior to construction, the St. Charles County Department of Health and Senior Services and/or the MDNR St. Louis Regional Office will be contacted to determine jurisdiction. The small lagoon located at the east end of the project is no longer in use and will be properly closed prior to construction according to the regulations of the agency having jurisdiction (see MDNR letter dated December 18, 2009 in Chapter V.C.4). The lagoon located just north of Meyer Road appears to be active, however, impacts would be at the eastern tip of the pond and would be of such a minor amount that it could remain in place and still function (see P-3 on Map 5 in

Appendix D). In addition, the construction specifications would include requirements to prohibit the contractor from disposing of any pollutants, such as fuels, lubricants, raw sewage, or other harmful substances inappropriately.

Impacts would be mitigated by adherence to construction permit and contract conditions. Materials resulting from clearing and grubbing, demolition, or other operations (except materials to be retained) would be removed from the project, or otherwise properly disposed of by the contractor.

# 2. WATER QUALITY

Construction impacts on water resources include both direct and indirect impacts. Water quality impacts during construction activities could include increased sediment load with resulting increased turbidity levels in streams. The sediment increase could be due to runoff from cleared areas within the construction limits, earthmoving, and construction activities in or near stream channels. Disturbance of a stream channel during culvert or bridge construction could cause short-term increases in turbidity. Spillage of fuels, lubricants and other toxic materials during construction can impact the water quality of the streams. Turbid water and suspended solids may be discharged directly to streams from pumps used in de-watering activities during construction. Best Management Practices (BMPs) will be used to minimize the turbidity of the waters caused during construction. The implementation of standard sedimentation and erosion control measures and the careful handling of foundation spoils and toxic materials can reduce the potential for these construction impacts.

MDNR has noted that nutrients leached from project areas that have been hydro seeded and mulched can result in increased phosphorous levels in streams and adjacent water bodies, such as creeks and reservoirs. The Missouri Department of Conservation (MDC) has stated that the following best management practices should reduce impacts to the aquatic environment to a minimal level:

- Grade and seed disturbed areas as soon as possible and in compliance with the MDC seeding and planting recommendations;
- Minimize disturbances to the stream banks and riparian zones; and
- Avoid work in stream channels from the beginning of March to mid June as much as possible and practicable; and undertake all necessary precautions to prevent petroleum products from entering streams.

These best management practices, as outlined by the MDC, also include conformance to the State Channel Modification Guidelines when altering channels or relocating streams. Measures would be taken to ensure that proper flow conditions are maintained in the creeks and tributaries during construction. In addition, restoration work would include cleanup, shaping, replacement of topsoil, and establishment of vegetative cover on all disturbed bare areas, as appropriate.

# 3. AIR

Construction activity would cause temporary air quality impacts. These short-term effects would include the following:

• Increased emissions from heavy diesel construction vehicles and equipment. Emissions from construction vehicles and equipment would be controlled in accordance with emission standards prescribed under state and federal regulations. To the extent

practicable, the use of heavy construction equipment should be limited on days with orange or red air quality indices. If practical, off-road construction equipment can be retrofitted with diesel oxidation catalysts or other pollution control devices.

- Increased emissions from vehicles as a result of decreased speeds through work zones. Efforts would be made to minimize these impacts by maintaining smooth traffic flow during construction periods. In addition, heavy duty diesel vehicles with a gross vehicle weight greater than 10,000 pounds that operate in certain counties, including St. Charles County, are restricted from idling more than five (5) minutes in any sixty (60)-minute period, except as exempted from State Regulation 10 CSR 10-5.385.
- Increase in dust resulting from grading operations and exposed soils. Dust generated by construction activities would be minimized by the implementation of dust control measures, such as water sprinkling and applications of calcium chloride to prevent dust and other airborne particulates from leaving the property where it originated (State Regulation 10-CSR 10-6.170).

Contractors would be required to comply with Missouri's statutory regulations regarding air pollution control, which are designed to minimize air quality impacts by reducing air pollutants during construction. Air quality impacts would be mitigated by adherence to construction permit and contract conditions, which include prohibitions against burning of construction debris, and control measures to limit pollution if tree trunks and limbs are permitted to be burned on site. Open burning of vegetative debris from land clearing activities is subject to State Regulation 10 CSR 10-6.045 that prohibits the open burning of tires, petroleum-based products, asbestos containing materials, and trade wastes except as otherwise allowed by the rule. Open burning of vegetative debris is only allowed outside the city limits of an incorporated area or municipality, at a distance of more than 200 yards from the nearest inhabited dwelling, and should not be burned during ozone season (April – October). For open burning of vegetative waste that does not meet these restrictions, the MDNR's St. Louis Regional Office must be notified to determine if a permit can be issued.

The emission of odorous matter is not allowed in concentrations and frequencies, or for durations, that odor can be perceived (State Regulation 10 CSR 10-5.160 for St. Louis). For further details see MDNR letter dated December 18, 2009 in Chapter V.C.4.

# 4. NOISE

Noise from heavy construction equipment and haul trucks would result in unavoidable short-term impacts. Residents adjacent to the roadway would be most impacted by construction noise. In an effort to minimize the effects during construction, contractors may be required to equip and maintain muffling equipment for trucks and other machinery in order to minimize noise emissions. Operations with high temporary noise levels such as pile driving may need to have abatement restrictions placed upon it such as work-hour controls and maintenance of muffler systems.

#### 5. VIBRATION

Due to the proximity of the alignment to residential areas, if drilling and blasting are necessary for construction, a carefully planned and executed drilling and blasting program would be prepared during the design development phase, which would place limits or controls on drilling and blasting activities. The requirements of this program will be governed by local, state, and federal regulations, and coordination with affected groups will continue during the detailed design phase.

# 6. TRAFFIC IMPACTS

The Selected Alternative will be constructed in phases due to funding constraints. During all phases of construction, access will be maintained to residential housing and subdivisions in the study area. The bridge over I-70 and US 61 at the interchange locations will be constructed in stages in order to retain two lanes of I-70 and US 61 in each direction, except for short intervals during the night time hours. Prior to each phase of construction, emergency service agencies will be contacted and emergency vehicle access routes will be coordinated. Construction will need to be limited during peak traffic hours.

# 7. UTILITY RELOCATION

Most utilities in the study area are located in utility easements. Utilities located within the study area include overhead power transmission lines, underground power lines, gas lines, storm sewer, sanitary sewer, underground telephone/fiber optic lines, and water lines. Although utilities would have to be relocated, impacts are expected to be minor and proper coordination with utility companies will take place.











# CHAPTER IV Commitments

The following sections include a list of commitments and permits necessary for implementation of the Selected Alternative.

# A. Proposed Project Commitments

The following is a compiled list of all project and regulatory commitments that will be implemented by the City of Wentzville. Federal authorization for construction will not be granted until the necessary regulatory obligations have been satisfactorily completed.

- The project will not be constructed until it is listed within the fiscally constrained element of the East-West Gateway Council of Government's long-range transportation plan for the St. Louis region, and the air quality conformity determination for the project has been updated.
- The City will acquire all properties needed for this project in accordance with the Uniform Relocation Assistance and Real Property Acquisition Act of 1970 as amended (Uniform Act; 42 U.S.C 4601), Title VI of the Civil Rights Act of 1964, and other regulations and policies as appropriate.
- The City will restore access to properties if impacted by the project.
- The City will construct a (minimum) 6-foot wide bicycle/pedestrian path adjacent to the roadway, separated from the roadway by a 7.5-foot to 8-foot wide grass strip. The proposed path will connect with any future paths that are in place when the roadway is constructed.
- The City will implement its Storm Water Management Plan (SWMP) and Best Management Practices (BMPs) to prevent or minimize adverse impacts to the water quality of streams, water courses, lakes, ponds, or other water impoundments within and adjacent to the project area. The City of Wentzville will also consider detention areas, where warranted, within the median to collect and filter roadway run-off.
- All construction activities will comply with the existing rules and regulations of governmental agencies having jurisdiction over streams and water supplies in the area.
- The City will complete updated wetland/waters of the U.S. field delineations and obtain jurisdictional determinations through coordination with the USACE St. Louis District prior to initiating final design. This information will be used to obtain a Section 404 Permit for construction of the project.
- The Selected Alternative corridor will be evaluated during the design phase, and if suitable roost trees for Indiana bats or northern long-eared bats are present and need to be removed for construction, the City will coordinate with the US Fish and Wildlife Service (USFWS) and the Missouri Department of Conservation (MDC), and only allow clearing of potentially suitable roost habitat outside the restriction dates specified by the USFWS and MDC.
- The Selected Alternative alignment will be further refined in the design phase, and at that time, the extent of impacts to the two archaeological sites will be determined. If any

potentially eligible sites are impacted by the construction limits of the project, further (Phase II) archaeological testing will be conducted to determine if they are eligible for the NRHP. If an archaeological site is determined eligible, appropriate procedures will be followed to comply with Section 106 of the National Historic Preservation Act of 1966, including an assessment of adverse effects and, if appropriate, measures to avoid, minimize, or mitigate adverse effects through a Memorandum of Agreement (MOA), prior to the beginning of construction.

- Any previously unknown hazardous waste sites that are found during project construction will be handled in accordance with federal and state laws and regulations. If regulated solid or hazardous wastes are found during construction activities, the City construction inspector will direct the contractor to cease work at the suspect site. The construction inspector will contact the Missouri Department of Natural Resources (MDNR) to discuss options for remediation. An MDNR environmental specialist, the City's construction office, and the contractor will develop a plan for sampling, remediation, and continuation of project construction. Independent consulting, analytical and remediation services will be contracted if necessary.
- Painted structures to be removed shall be tested prior to demolition to determine proper disposal for the waste generated during the project. The inspection reports must be included in the construction bid proposal. No paint will be removed from the existing structures prior to demolition.
- All structures that will be demolished will be inspected for asbestos. The reports from these hazardous material inspections must be included in the construction bid proposal. Demolition or renovation is a three step process under the asbestos regulations. All structures that meet the criteria as described above must be inspected by an Asbestos Building Inspector. Following the inspection, regardless of whether asbestos is present or not, an Asbestos Demolition Notification shall be made to MDNR no fewer than 10 working days prior to beginning the project. If regulated amounts of asbestos are present, an Asbestos Project Notification will also be submitted and an Asbestos Post-Notification will be filed after the work is completed. If abatement is necessary, a certified Contractor Supervisor will be present during the abatement and a licensed asbestos contractor will perform the abatement. The City will ensure that these materials, depending on their condition and quantity, are removed and disposed of according to current regulations and procedures.
- If substantial changes in horizontal or vertical alignment occur during the stages of design and construction, noise abatement measures will be reviewed. A final Noise Report will be prepared, if needed, during final design and following all receipt of public comments. The Noise Report analysis will re-model the noise barriers with final roadway alignment and finished grade elevations at the right-of-way, resulting in design level data for construction plans. The final recommendations regarding noise abatement measures will be made after the final design and public involvement processes are complete. Upon completion of the public information meetings, should the majority of benefitted residents concur that noise walls are desired, the City will install the noise barriers that are feasible and reasonable adjacent to the project.
- A Traffic Management Plan (TMP) will be developed during project design and be included in the construction contract. A TMP will lay out a set of coordinated traffic management strategies to manage the work zone impacts.
- Pollution control measures outlined in the Missouri Standard Specifications for Highway Construction will be used to minimize impacts associated with the construction of the project; these measures pertain to air, noise, and water pollution as well as traffic control

(e.g., detours) and safety measures. Best management practices will be employed to minimize or mitigate potential impacts.

- Emissions from construction equipment will be controlled in accordance with emission standards prescribed under state and federal regulations.
- The City will send a news release out to local newspapers and radio stations giving local commuters information about construction activities that could impact their daily travels.
- It is expected that limited day- and/or night-time lane closures will be needed to make roadway tie-ins, but the City will require the contractor to utilize appropriate traffic control during these times and to keep back-ups to a minimum.
- Construction of bridge piers nearby the railroad along I-70 will require flaggers for trains during construction operations.
- The City's utility engineers and representatives of the utilities will work out details of individual utility relocations on a case-by-case basis.
- The Contractor to the City will locate and protect all temporary storage facilities for petroleum products, other fuels, and chemicals to prevent accidental spills from entering the streams within the project vicinity. Petroleum products will be stored outside of the floodplain. The contractor will clean-up any such spills to prevent the possibility of pollution due to runoff.
- The Contractor to the City will avoid disposing of cement sweepings, washings, concrete wash water from concrete trucks, and other concrete mixing equipment, treatment chemicals, or grouting and bonding materials into streams, wetlands, or into any location where water runoff has the potential to wash pollutants into streams or wetlands.
- The Contractor to the City will identify all borrow and waste sites prior to initiating construction. The Contractor shall be responsible for obtaining all necessary environmental clearances, approvals, and permits for use of all borrow and/or waste sites.

# B. Permits Required for Construction

Permits applicable to the Selected Alternative may be categorized into two groups: regulatory permits and construction permits. Regulatory permits assist government agencies in the administration and implementation of federal, state or local statutes or initiatives. These permit programs are processed through planning and design phases of the proposed project. Construction permits serve as regulators of construction activities to protect the adjacent environs. The following permits and approvals will be required for construction of the proposed project:

# 1. **REGULATORY PERMITS**

#### a. Section 404 (USACE) and Section 401 (MDNR) of the Clean Water Act

Section 404 of the Clean Water Act prohibits the discharge of dredged or fill material into "waters of the U.S." unless exempted or authorized by the US Army Corps of Engineers (USACE). Fill material placed below the Ordinary High Water Mark of wetlands or other waters of the U.S. (such as streams) may require a Section 404 permit. It is anticipated that a Nationwide Permit (NWP) #14 (Linear Transportation Projects) will be issued to authorize construction of the roadway. The USACE, St. Louis District, has an agreement with the Missouri Department of Natural Resources (MDNR) to process requests for Section 401 water quality certifications jointly with the Section 404 permit application. Specific conditions of Section 401 Water Quality Certification also become conditions of the Section 404 permit. During the design phase and the permit

process, when impacts are more specifically determined, coordination with the USACE will ascertain Section 404 Permit applicability.

# b. NPDES Permit – Section 402 of the Clean Water Act

The National Pollutant Discharge Elimination System (NPDES) permit (Section 402 of the federal Clean Water Act and the Missouri Clean Water Act), administered by MDNR, requires that slopes and ditches be properly designed to prohibit or reduce erosion from the discharge of storm water from construction activities. The MDNR regulates and permits the City to operate a "Municipal Separate Storm Sewer System" (MS4) (separate from the sanitary sewer system). For permit compliance, the City will implement its Storm Water Management Plan (SWMP) to reduce pollutants from being carried by storm runoff into local water bodies.

#### c. Floodplain Development Permit and "No-Rise" Certification

Portions of the Selected Alternative occur in areas that are designated by FEMA as Special Flood Hazard Areas (SFHA). The State of Missouri is a participant in the National Flood Insurance Program (NFIP), and any development associated with this project that occurs within a SFHA must meet the requirements of the State of Missouri Executive Order 98-03. This requires obtaining a floodplain development permit from SEMA's local floodplain administrator prior to construction or development. In addition, some portions of the Selected Alternative occur within a regulatory floodway, and as such, a "No-Rise" certificate and statements as to the effects of possible flooding are required. The municipalities are responsible for providing a no-rise certificate to SEMA prior to its issuance of the Floodplain Development Permit for the project, which will occur during the design phase. In addition, a hydraulic study will be required that will show that there are no effects on the floodway elevations.

#### 2. CONSTRUCTION PERMITS

In order to protect the adjacent environment from sedimentation and construction material pollutants discharged from construction activities, erosion and sedimentation control procedures and specifications (BMPs) will be utilized for the highway construction. The MDNR requires a Land Disturbance Permit for projects that disturb an area of one acre or more.

Other construction related permits could include temporary batch-plant permits issued by MDNR. Borrow and batch plant sites, although the locations are not known at this time, will be reviewed for environmental and cultural impacts once they are known. Mitigation plans will be done to comply with the specific permit requirements. Additional construction permits may be required from local governments.



# CHAPTER V Comments and Coordination

The City of Wentzville, in coordination with the Missouri Department of Transportation (MoDOT) and the Federal Highway Administration (FHWA) have provided several methods and opportunities for the general public and local, county, state and federal governmental and resource agencies to participate in the project development process within the David Hoekel Parkway Environmental Assessment (EA). This chapter summarizes the public involvement and agency coordination programs that have taken place during project development.

# A. Public Involvement

The David Hoekel Parkway has a long history of public engagement. The public involvement process began within the City of Wentzville's Comprehensive Plan, *A Community's Vision*, in 1999 and continued through the subsequent studies, including the I-70/US 61 Beltway Corridor Preservation Study and I-70 Break-in-Access Study. The public engagement process, initiated in those previous studies, has continued throughout the David Hoekel Parkway EA study. In addition, the City has also been providing a public disclosure informational brochure titled *Topics to Consider While You Search for Your Home*, which is required by City Ordinance No. 1884 to be prominently displayed and clearly made available by developers to prospective home or property purchasers who shall be personally advised about the brochure. This brochure includes instructions on how to obtain information contained in the City's Comprehensive Plan and its Thoroughfare Plan, which includes the location of the proposed David Hoekel Parkway project in relation to planned and existing development. A copy of Ordinance No. 1884 and the informational brochure can be found in Appendix J.

The public involvement program for the EA was structured to: 1) maximize effectiveness in communicating with the public, 2) make record of and respond to the key issues and concerns of the various members of the public and stakeholders involved, and 3) achieve awareness of the Identified Preferred Alternative for the project.

A wide range of public engagement tools were used for the project including public meetings held at key milestones throughout the project, newsletters/project fact sheets describing the project and its process and project materials posted on the City's web site.

Details of the public involvement program are described in the following sections.

# 1. MEETINGS

a. Public Meetings

# August 23, 2007

An initial public meeting was held on August 23, 2007, from 4:00 pm to 7:00 pm to share study information with the local community. The meeting was held at the Wentzville Law Enforcement Center. This meeting introduced the project's goals and purpose and need to the general public, as well as explained how the project tied in with the previous studies that had been conducted for the David Hoekel Parkway. At this meeting, public comments were solicited regarding the purpose and need for the project and what the public perceived to be transportation-related problems on US 61 and I-70 that needed to be addressed through the project.

An open house format was used for the public meeting to allow attendees to review project information at their own pace and ask questions of the study team representatives on a one-on-one basis. Stations included project purpose and need; information on the previous related studies; a description of the EA process and how it fits into the overall project development process; an overview of social, environmental and engineering issues to be considered within the project; aerial mapping of the study area for the project; and examples of what the David Hoekel Parkway connection might look like after construction is completed.

Prior to accessing the information stations, attendees were asked to sign in. The official sign-in sheet reflects that 80 people signed the sign-in sheet at the first Public Meeting.

#### Summary of Comments

Comment forms were available at the public meeting so that people could comment and provide their input on the project. In addition to providing written comments at the meeting, comments from the public could also be submitted through the project email address and project post office address, described in greater detail in section A.2 – Project Correspondence.

One written comment was received subsequent to the public meeting using the project comment form. The comment was received via the project post office box. The comment dealt with the decision for the future name of the project and its designation as a parkway. The commenter wanted to be sure that the David Hoekel Parkway will not be confused with the Wentzville Parkway since they are both located in Wentzville.

#### December 4, 2007

A second public meeting was held on December 4, 2007, from 4:00 pm to 7:00 pm to share the project alternatives' development and analysis process with the local community. This meeting was also held at the Wentzville Law Enforcement Center. This meeting introduced the range of alternatives considered for the project, from the early development of the initial project alternatives, to their screening and refinement as reasonable alternatives, to the recommendation of the Identified Preferred Alternative for the project. At this meeting, public comments were solicited regarding the screening of the project alternatives and the Identified Preferred Alternative for the project alternative for the project.

The format for the meeting followed the same approach as the initial public meeting and used an open house format. The stations developed for the initial public meeting were re-introduced at the second public meeting, along with new stations regarding the alternatives development and screening process for the initial, reasonable and Identified Preferred Alternative; and the proposed typical section and example graphics showing what the David Hoekel Parkway is envisioned to look like when construction is completed.

The official sign-in sheet reflects that 62 people signed the sign-in sheet at the second Public Meeting.

#### Summary of Comments

During or subsequent to the public meeting on December 4, 2007, the study team received four written comments related to this public meeting. Three of the comments were received at the public meeting and one was received via the project post office box. One of the comments expressed support for the Identified Preferred Alternative, Alternative 2, and expressed their interest in seeing the project completed. Another comment expressed support for Alternative 3 since it avoided impacts to their property. Three of the comments discussed maintaining access for property owners, especially along Peine Road to the north and South Point Prairie Road and

Jackson Street to the south. One of the comments also expressed that if residences or real property were taken by the project, fair market value should be given to property owners.

#### December 8, 2009 – Draft EA Public Meeting

A third public meeting to discuss the Draft EA was held on December 8, 2009, from 4:00 pm to 7:00 pm at the Wentzville Law Enforcement Center. The description of the Draft EA public meeting is included in Section C.2. below.

#### b. Other Meetings

In addition to the public meetings, the study team made itself available to other groups and project stakeholders interested in learning more about the David Hoekel Parkway project. One such occasion was a meeting with the City of Flint Hill on August 9, 2007, to discuss their portion of the proposed project, east of the parkway's interchange connection with US 61. At this meeting, members of the David Hoekel Parkway study team presented project information and preliminary alternatives to representatives of the City of Flint Hill and discussed their role as a Resource Management Group member for the project.

#### 2. PROJECT CORRESPONDENCE

#### a. Meeting Notices

Meeting notices were prepared and sent to the project contact database as a meeting announcement mailer two weeks prior to each public meeting. The project contact database includes 349 members of the public that live or own property within the project study area, as well as local governmental officials and stakeholders that have an interest in the project. The meeting notice mailers included a general project description and meeting topic overview, meeting location and format, and contact resources for the project.

In addition, a legal notice was prepared for the Draft EA public meeting on December 8, 2009 to inform the public that the Draft EA was available for review and comment and advertise the upcoming public meeting. Copies of meeting and legal notices for the project are included in Appendix J.

#### b. Newsletters

Project newsletters were created for distribution at key project milestones and provided as a handout at the public meetings and at the City of Wentzville's Public Works office. Additional copies were distributed as a mailer to the general public upon request and were provided in electronic .pdf format on the City of Wentzville's website.

The first newsletter was coordinated with the initial public meeting and provided an overview of the project and its purpose and need. The second newsletter provided an overview of the project alternatives development and screening process and was provided in coordination with the second public meeting. A third newsletter was prepared after publication of the Draft EA for use at the third public meeting and discussed the EA process, the Identified Preferred Alternative and the overall findings for the project. The newsletters include contact information on how to forward written, verbal or e-mail input or questions to the David Hoekel Parkway study team. A copy of the project newsletters can be found in Appendix J.

#### c. Internet

Project information was posted as part of the City of Wentzville's official web site on <u>http://www.wentzvillemo.org/preservation-projects.aspx</u>. Postings included copies of newsletters and public meeting exhibits, which included relevant project information. A copy of the Draft EA

was also posted to the website for public review after FHWA approval of the Draft EA. Following the Draft EA public meeting and comment review period, the public meeting transcript was also posted to the city's website.

# 3. PROJECT CONTACT RESOURCES

In order to provide the general public resources to contact the David Hoekel Parkway study team, a project post office box, telephone hotline and email address were developed. The project contact information for these resources is included below:

David Hoekel Parkway Team P.O. Box 447 Wentzville, MO 63385-0447 (866) 461-0062 DHParkwayEA@hntb.com

#### Summary of Public Comments

In addition to public comments received at the public meetings, several public comments were received via the project email, post office box, or verbally through the phone hotline. A summary of the comments is included in the following section:

- **Email:** Nine comments were received via the project email address. The majority of the comments dealt with questions about right-of-entry for project field reviews or what the potential impacts to specific properties might be as a result of the project. These comments were addressed by the study team and project study area maps and other information was provided to those who requested more information about where the project was located in relation to their properties.
- **Post Office Box:** There were two comment forms from the first two public meetings provided to the project post office address (described above in Section A.1), one comment form from the Draft EA public meeting on December 8, 2009 and approximately 150 returned right of entry forms related to permission to access property for the project field reviews.
- **Phone Hotline:** There were 18 calls to the project phone hotline. The majority of the phone calls were requests for information related to the public meetings and requests for information on what the potential impacts to specific properties might be as a result of the project. There were also some calls requesting more information about right of entry needed for properties for the project field reviews. These phone calls were returned by the study team and project study area maps and other information were provided to those who requested more information about the project.

# B. Agency Coordination

Resource agency coordination has been ongoing throughout the development of the David Hoekel Parkway EA. A Resource Management Group (RMG) was formed for the project and agency coordination meetings to identify issues and concerns affecting the definition and evaluation of the alternative improvements occurred throughout the study. In addition to a project scoping meeting, RMG meetings at key milestones were held with the resource agencies to discuss environmental issues and concerns in more detail. Copies of written agency correspondence regarding the EA are provided in Appendix I.

### 1. ENVIRONMENTAL SCOPING MEETING

On August 23, 2007, an environmental scoping meeting was held for the EA at the Wentzville Law Enforcement Center in Wentzville, Missouri. Prior to the meeting, special invitations were issued to public agencies inviting them to serve as RMG members during the study (see Appendix I). Accompanying the invitation was an information packet about the project, including an itinerary, the meeting agenda, a project study area map, an overview of the Purpose and Need for the project, and a list of RMG invitees. The agencies and groups invited to attend the meeting are listed below (see Appendix I for a detailed list). All agencies and groups were provided the documentation from the meeting and any materials handed out at the meeting. An "X" after the agency name indicates they attended the scoping meeting.

## • Federal Agencies

U.S. Army Corps of Engineers (USACE), St. Louis District (**X**) U.S. Fish and Wildlife Service (USFWS) U.S. Environmental Protection Agency (EPA) Federal Motor Carrier Safety Administration, Federal Highway Administration Federal Highway Administration (FHWA), Environmental (**X**) US Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS)

• State Agencies

Missouri Department of Transportation (MoDOT) (X) Missouri Department of Conservation (MDC) (X) Missouri Department of Natural Resources (MDNR) (X) State Emergency Management Agency (SEMA)

#### • Local Agencies

City of Flint Hill (X) City of Foristell (X) St. Charles County (X) Wentzville Chamber of Commerce East-West Gateway Council of Governments (EWGCOG) (X) (X) – attended scoping meeting

At the scoping meeting, an overview of the study was presented including a presentation of the proposed study area, purpose and need for the project, project schedule and socio-economic and environmental considerations in the study area. The meeting also discussed how the study team planned to coordinate with the resource agencies and what their roles and responsibilities were throughout the study process. A site tour was also held at the conclusion of the scoping meeting to provide the resource agencies an opportunity to visit and become familiar with the study area for the project.

# Agency Comments

The agencies that attended the Scoping Meeting raised some questions related to the proposed project. There were questions about how much traffic the proposed project was anticipated to remove from other existing routes, including the Wentzville Parkway, I-70 and US 61. There were questions about the level of congestion at the existing interchanges along I-70 today. It was discussed that the majority of the traffic wanting to access western Wentzville will shift to the proposed roadway. It is not anticipated that a large percentage of cut-through highway traffic will use the proposed roadway for traveling between I-70 and US 61 since it is anticipated to be

a parkway with a 45 mph speed limit and signalized intersections. Truck traffic is anticipated to be within a range of five to seven percent of the vehicle mix.

Within the environmental constraints discussion, a question was asked about old landfills or hazardous waste sites in the study area. The City of Wentzville indicated that there were no known sites within the study area. There was also a comment about the possibility of deed restricted land within the study area due to the new development. It was discussed that the study team will coordinate with the U.S. Army Corps of Engineers (USACE) on the locations of deed restricted property and make sure these properties are considered when developing the conceptual alignments. The study team will also coordinate with new USACE regulations on streams and wetland information for the study area.

A question was asked about how transit ties in with the study. It was discussed that the proposed roadway will be designed to accommodate transit service if it was determined to be needed for the study area. The East-West Gateway Council of Governments (EWGCOG) discussed the possibility of a bus trunk line along I-70 that would connect local City transit service to a trunk line along I-70 to destinations in St. Charles County and the St. Louis metropolitan area.

There were also comments asking how the general public feels about the project. It was discussed that within the previous studies, there had been no organized groups opposed to the project. Many people view the proposed roadway as an important project for the City of Wentzville because there is very limited access today to the western portion of Wentzville.

#### 2. OTHER AGENCY MEETINGS

On December 4, 2007, a second RMG meeting was held for the EA at the Wentzville Law Enforcement Center in Wentzville, Missouri. The meeting focused on the alternatives development and screening process for the study. The resource agency's involvement for the meeting encompassed providing input on the study alternatives and screening matrix criterion that fell under their area of particular expertise. The range of project alternatives from Initial Alternatives, to Reasonable Alternatives, to the Identified Preferred Alternative was discussed at the meeting. The Reasonable Alternatives screening matrix (Exhibit II-3) was shared at the meeting and the RMG members gave input on the study evaluation and findings.

#### Agency Comments

The agencies that attended the second RMG meeting raised some questions related to the alternatives development and screening process for the project. It was discussed that the City of Flint Hill had done some previous studies for the portion of the project including the US 61 interchange and the roadway connection east of US 61 at Route P. The study team agreed to review the previous study when determining the proposed alternatives on the Flint Hill portion of the alignment.

The USACE indicated that they will still need to review identified NWI wetlands and decide on the status of the wetlands before making a jurisdictional determination on the wetlands.

Questions were asked about how the study team anticipated the public to react to the Reasonable Alternatives. The City of Wentzville's experience from past studies for the roadway was that people were in favor of a new roadway and just want to make sure that the alternative had not changed from previous meetings. The public has been aware of the proposed David Hoekel Parkway and where it is being considered. Developers have coordinated with the City to leave property for a proposed roadway and the proposed roadway has been disclosed to potential buyers so they are aware of the project.

There were also questions as to the timeline of constructing this proposed roadway. It was discussed that a final design contract would probably be expected in 2014. The project would likely be phased because of the large construction costs and the limited budget available for the project.

## 3. COOPERATING AGENCY

The FHWA extended a special invitation to the USACE to serve as a cooperating agency for the project, which the USACE accepted. Correspondence from FHWA and the USACE is located in Appendix I.

## 4. TRIBAL COMMUNICATIONS

The FHWA sent correspondence to the following tribes in order to advise them of the proposed David Hoekel Parkway and the preparation of the EA, and invite them as consulting parties: Otoe-Missouria Tribe of Indians, Oklahoma; Sac & Fox Nation, Oklahoma; Sac & Fox Nation of Missouri in Kansas and Nebraska; Omaha Tribe of Nebraska; Iowa Tribe of Oklahoma; Osage Tribe, Oklahoma; Iowa Tribe of Kansas and Nebraska; Kaw Tribe of Oklahoma; and Sac & Fox Tribe of the Mississippi in Iowa. Only the Osage Tribe and the Kaw Tribe returned letters indicating their acceptance of the invitation to be a consulting party. Correspondence from FHWA and the tribes is located in Appendix I.

# C. Public and Agency Review

# 1. OFFICIAL COMMENT PERIOD

The official comment period for public and agency review of the Draft EA commenced on November 9, 2009 and ended on December 18, 2009. A legal notice was placed in *The Wentzville Journal* on November 11, 2009 to advertise the viewing and comment period of the Draft EA document, as well as the scheduled date and time of the Draft EA public meeting. The document was made available for public inspection and copying at the City of Wentzville Public Works Department, Wentzville City Hall, and Corporate Parkway Library. In addition, the Draft EA was also made available online at: <u>http://www.wentzvillemo.org/preservation-projects.aspx</u>.

# 2. DRAFT EA PUBLIC MEETING

The City of Wentzville conducted an open-house public meeting for the David Hoekel Parkway Draft EA. An ad was placed in The Wentzville Journal on November 11, 2009 to advertise the scheduled date and time of the public meeting, and meeting announcement postcards were also mailed to the project mailing list on November 20, 2009. The meeting was held on December 8, 2009 from 4:00 p.m. to 7:00 p.m. at the Wentzville Law Enforcement Center, located at 1019 Schroeder Creek Blvd.

The purpose of the Draft EA public meeting was to provide the public an opportunity to review the approved Draft EA and present the Identified Preferred Alternative for the project. Sixty people attended the meeting. The meeting was an open-house style public meeting with exhibit boards displaying project purpose and need, the EA process, schedule, graphics and an evaluation matrix of the reasonable alternatives, the Identified Preferred Alternative and typical section, along with the recommended conceptual design for the public to review. Comment forms were available for those that wanted to leave comments. An informational handout newsletter was also provided to those who attended the meeting. There were also several members of the project team available to answer questions.
#### 3. PUBLIC COMMENTS AND RESPONSES

Generally, those who attended the meeting were supportive of the project and the Identified Preferred Alternative alignment and want to see the project move forward to the design and construction phase. Most of those people in attendance were concerned about their individual properties and wanted to check that the alignment would not follow existing Point Prairie Road.

Six written comments were received the night of the public meeting, all of which were requests for pages from the Draft EA document. The requested pages were sent to those individuals. One additional person mailed in their comments to the project address, P.O. Box 447, Wentzville, MO 63385. A summary of that comment and a response are as follows:

**Comment:** The existing intersection of Scotti Road and North Point Prairie Road already experiences severe flooding and there is a concern that the significant increase in impervious area resulting from the new road will increase the runoff problem. The problem has already increased during the past 6 or 7 years due to new subdivisions in that area.

**Response:** The control of surface runoff is to be accomplished by the use of the City's and MoDOT's Best Management Practices (BMPs). The BMPs can include measures such as the use of temporary berms, ditch checks, slope drains, sediment basins, and rain gardens. Temporary and permanent drainage (retention or detention) basins, if appropriate, may also be designed and installed to reduce erosive storm surges in addition to trapping sediment and other contaminants. The City of Wentzville will also consider detention areas, where warranted, within the median to collect and filter roadway run-off. (Applicable Reference: Chapter III.G.1.a, pg. 29).

The Selected Alternative will include a bridge that spans the regulatory floodway of the McCoy Creek Tributary downstream of the Scotti Road/N. Prairie Point Road intersection. The structure will be designed to avoid a rise in the regulatory floodway elevation and be kept free of encroachment so that the 100-year flood discharge may be conveyed without increasing the base flood elevation more than a specified amount. The crossing will be designed and constructed in compliance with applicable floodplain regulations, including Executive Order 11988. (Applicable Reference: Chapter III.H.3. & 7., pgs. 33-34).

#### 4. **RESOURCE AGENCY COMMENTS AND RESPONSES**

The following section provides the agency review comments received for the Draft EA. The comment period on the Draft EA ended on December 18, 2009. The first section provides a copy of the agency letters received, and the following section provides the study team's response to agency comments. Comment codes are used in this section to reference the specific agency and/or organization letters to which the responses correspond.

The following agency letters were received on the Draft EA:

- Missouri Federal Assistance Clearinghouse November 18, 2009
- Missouri Department of Natural Resources December 18, 2009

<b>38</b> .'	IOV.18.20093511:53AM, Mail		NO.4641 P. 1/2 <sup>182</sup>
*	<b>Jeremiah W. (Jay) Nixon</b> Governor	State of Missouri OFFICE OF ADMINISTRATION Post Office Box 809 Jefferson City, Missouri 65102 Phone: (573) 751-1851 Fax: (573) 751-1212	Kelvin L. Simmons Commissioner
	November 18, 2009		
	Gretchen Ivy HNTB 715 Kirk Drive Kansas City, MO 64105-1310 816-472-4060		
	Dear Ms. Ivy:		
	Subject: 1005014		
	The Missouri Federal Assistance interested or possibly affected, h	Clearinghouse, in cooperation with state a has completed the review on the above proj	nd local agencies ect application.
1	None of the agencies involved in time. This concludes the Clearin	the review had comments or recommenda ghouse's review.	tions to offer at this
	A copy of this letter is to be attac Clearinghouse requirements.	hed to the application as evidence of comp	liance with the State
	Please be advised that I am the c requests to the following addres Capitol, Room 125, and Jefferson	contact for the Federal Funding Clearinghou is: Sara VanderFeltz, Federal Funding Clear 1 City, Missouri 65101.	ise. You can send future inghouse, 201 West
		Sincerely,	
		(Deix)	Wardertests
		Sara VanderF Administrativ	eltz ve Assistant
	cc:		

Letter No. 1 - Missouri Federal Assistance Clearinghouse



Ms. Peggy Case Mr. Kevin Keith December 18, 2009 Page 2 Peruque Creek as being impaired for inorganic sediment due to urban and rural nonpoint source pollution. Extra care should be taken during construction to not further impair **2**C Peruque Creek According to the city's Comprehensive Land Use Plan, the floodplain area would remain undeveloped. In the Final EA, project planners should specify what guarantees are in place to assure a lack of floodplain development - possibly permanent riparian or real estate protections by the property owner or the city, or a city ordinance regulating protection of floodplains. The Final EA should also state how the floodplains are defined - whether they are regulated or 100-year floodplains. The Department agrees with the Missouri Department of Conservation on the use of native plants. We might also encourage the use of more natural or aesthetically pleasing 2D best management practices (BMPs), such as rain gardens or treatment wetlands with native plants to help settle out or filter pollutants. Native plants help reduce maintenance and are more adaptive to local climate, in addition to providing more water infiltration and groundwater recharge. On page 7 of Appendix D: Water Resources, ponds P-3 and P-8 were identified as "old sewage lagoons." According to the Department's National Pollutant Discharge Elimination System (NPDES) permits GIS layer, there does not appear to be a permitted **2E** facility in those locations. Single-family residential on-site sewage lagoons are regulated by the local Department of Health and Senior Services. Prior to construction, these lagoons must be properly closed. Please contact the Department's St. Louis Regional Office at 314-416-2960 to ensure these sites are not regulated by the Department or, if regulated, to ensure they are closed according to our regulations. Should they not be regulated by the Department, please contact the St. Charles County Health Department to ensure proper closure of sewage lagoons under their jurisdiction. Geology The presence of Osagean and Meramecian carbonate rocks, which are noted for karst development in this area, combined with the presence of a known cave within 1,000 feet of the study area, suggest that karst features may be encountered within the study area. 2F Work in this area may encounter previously unknown caves, sinkholes or other karst features. This will need to be considered by project planners during construction, including all water discharge related to construction. The presence of existing structure within less than one mile of the study area implies that other, currently unmapped structures may be present within the study area. Geologic structures, including faulting and folding, can increase the potential for karst development, especially in the units present in this area.

#### Letter No. 2 - Missouri Department of Natural Resources

	Ms. Peggy Case Mr. Kevin Keith December 18, 2009 Page 3
2G	In addition, the study area is within areas that may be affected by earthquakes in the New Madrid Seismic Zone, with possibly severe effects occurring in areas with thick surficial materials. This must be considered by project planners.
	While no current or known inactive mines are included in the Inventory of Mines, Occurrences, and Prospects (IMOP) database, potential exists for the presence of unrecorded mines in the area.
2H	Solid Waste A reference to solid waste should be added to Section K, page III-47. The Final EA should mention that the disturbance of either a pre-law or permitted landfill requires notice to and approval from the Department's Solid Waste Management Program prior disturbing the buried waste (sites of this nature were required to be recorded with the county recorder of deeds). This notification requirement does not pertain to illegally dumped solid waste. Also, the Final EA should reference the department's technical bulletin "Managing Solid Waste Encountered during Excavation Activities" as a means
	of demonstrating how project planners will comply with discovery of unexpected buried wastes. The bulletin is PUB2192, dated 12/2006 and can be found on the department's web site at <u>http://www.dnr.mo.gov/pubs/pub2192.pdf</u> .
_	In Section P, page III-57, the Final EA should reference proper management of solid waste per the Missouri Solid Waste Management Law and regulations.
- ja meta	<u>Air Ouality</u> The Department recommends that project planners include the following information in the Final EA or in guidance provided prior to construction.
21	<u>Ambient Air Quality</u> A determination has been made that the project is located in an area designated as a nonattainment area for ozone and particulate matter 2.5 (PM <sub>2.5</sub> ) and a maintenance area for carbon monoxide under the National Ambient Air Quality Standards. Construction- related activities associated with the project should not significantly affect local or regional air quality.
2J	The Department recommends, to the extent practicable, that the use of heavy construction equipment should be limited on days with orange or red Air Quality Indices. This action will ensure that construction equipment does not contribute to future ozone exceedances. Additionally, if practical, the use of off road construction equipment that has been retrofitted with a diesel oxidation catalyst or other air pollution control device would further reduce the $NO_x$ and particulate emissions related to the project.
2К	<u>Asbestos</u> Any renovation or demolition activities undertaken as part of this project must be conducted in accordance with local, state, and federal asbestos regulations (40 CFR Part

Ms. Peggy Case Mr. Kevin Keith December 18, 2009 Page 4

61, subpart M and State Regulations 10 CSR 10-6.241 and 10-6.250). These regulations require that prior to renovation or demolition that all regulated structures must be inspected by a Missouri certified asbestos inspector.

If during the course of the asbestos inspection, it is determined that the total amount of asbestos containing material (both friable asbestos containing material and asbestos containing material that would be rendered friable during the course of the renovation or demolition) exceeds 160 square feet, 260 linear feet, or 35 cubic feet, then the asbestos would have to be removed by a Missouri registered asbestos abatement contractor and disposed of in accordance with the National Emissions Standards for Hazardous Air Pollutants.

If there are less than these threshold amounts, then the material would not have to be removed prior to renovation or demolition. However, if materials are contaminated with asbestos, regardless of the amount, the sanitary landfill may have special packaging requirements for disposal.

Notice of an asbestos abatement project above the threshold limits stated above and all demolition projects, regardless of whether asbestos is present, affecting regulated structures must be provided to the Department's Air Pollution Control Program on the department form at least 10 days prior to commencement of the asbestos abatement or demolition project and approval must be granted by the Department.

#### Asphalt Paving

2L State regulation 10 CSR 10-5.310 restricts the use of or application of liquefied cutback asphalt in paving and maintenance operations on highways, roads, parking lots, and driveways in the counties of Franklin, Jefferson, St. Charles and St. Louis, and the City of St. Louis during the months of April through October except as otherwise exempted from the regulations.

#### Fugitive Dust

2M State regulation 10 CSR 10-6.170 restricts particulate matter emissions from leaving the premises of origin. Efforts must be made to prevent any fugitive dust that may result from any construction or demolition activities associated with this project from leaving the property where it originated.

#### Heavy Duty Diesel Idling

State regulation 10 CSR 10-5.385 restricts heavy duty diesel vehicles with a gross vehicle weight greater than 10,000 pounds that operate in the counties of Franklin, Jefferson, St. Charles and St. Louis, and the City of St. Louis from idling more than five (5) minutes in any sixty (60)-minute period except as otherwise exempted from the rule.

Open Burning

#### Letter No. 2 - Missouri Department of Natural Resources

Ms. Peggy Case Mr. Kevin Keith December 18, 2009 Page 5 Land clearing activities requiring the open burning of vegetative debris is subject to State Regulation 10 CSR 10-6.045 that prohibits the open burning of tires, petroleum-based products, asbestos containing materials, and trade wastes except as otherwise allowed by the rule. Open burning that causes or contributes to a public health hazard, nuisance, or a hazard to vehicular or air traffic is not allowed. State Regulation 10 CSR 10-6.045 only allows for open burning of vegetative debris from land clearing operations outside the city limits of an incorporated area or municipality and outside of the St. Louis Metropolitan Area and at a distance of more than 200 yards from the nearest inhabited dwelling. For open burning of vegetative waste that does not meet these restrictions, the Department's St. Louis Regional Office, which is responsible for the area, must be notified to determine if a permit to allow the burning can be issued. Please contact Tom Sims at 314-416-2960. Odor No person may cause, permit, or allow the emission of odorous matter in concentrations and frequencies or for durations that odor can be perceived when the air is diluted to 7.1 volumes of odor-free air to odorous air for two separate trials not less than 15 minutes apart within 1 hour. Specific requirements can be found in State Regulation 10 CSR 10-5.160 for St. Louis. Traffic Coatings 2N State regulation 10 CSR 10-5.450 restricts the Volatile Organic Compounds content of traffic coatings that may be used within the area of applicability. Transportation Conformity Transportation conformity applies in this situation as indicated in the study. The 20 applicable rules would be the Federal Transportation Conformity Rule (Determining Conformity of Federal Actions to State or Federal Implementation Plans-Title 40 Code of Federal Regulations Part 93 Subpart A) and the Missouri Transportation Conformity Rule (10 CSR 10-5.480 St. Louis Area Transportation Conformity Requirements). Specific Comments To Environmental Assessment Document: The air quality summation on pages 44-47 of Section III should be revised to include the **2P** following under Section 3 - Conformity: "The St. Louis area is nonattainment for both ozone and particulate matter (annual PM2.5). The conformity determinations for both air pollutants will be conducted by the East-West Gateway Council of Governments (St. Louis' Metropolitan Planning Organization) using the latest Missouri State Implementation Plan (SIP) submittals." The document provides only a discussion of ozone conformity and, incorrectly, says the 2Q 1-hour ozone maintenance plan is the measure for conformity in St. Louis. The 1997 ozone SIP submittal and/or the department's ozone Clean Data finding for the St. Louis

	Ms. Peggy Case Mr. Kevin Keith December 18, 2009 Page 6
	area will establish the conformity budget to be used for this project. The same comment applies to Appendix G of the document.
2R	The department strongly recommends that vegetative waste not be burned especially during ozone season (April - October) as indicated on page III-58.
28	Table III-11: <u>Missouri and National Ambient Air Quality Standards</u> should be revised to add the following to the existing standards: Lead15 µg/m3, Running Three-month Average Ozone - 0.075 ppm
	We appreciate the opportunity to provide comments on the Draft Environmental Assessment, David Hoekel Parkway, Wentzville, Missouri. If you have any questions or need clarification, please contact me or Ms. Jane Beetem, phone number 573-751-3195. The address for correspondence is Department of Natural Resources, P.O. Box 176, Jefferson City, MO 65102. Thank you.
	Sincerely,
	DEPARTMENT OF NATURAL RESOURCES
	Dru Bustin
	Dru Buntin Deputy Director for Policy
	DB:jb

## Letter No. 2 - Missouri Department of Natural Resources

COMMENT CODE: 1

**SOURCE:** Missouri Federal Assistance Clearinghouse **RESPONSE:** Comment noted. **APPLICABLE REFERENCE:** None.

#### COMMENT CODE: 2A

**SOURCE:** Missouri Department of Natural Resources **RESPONSE:** Comment noted. MDNR's Section 401 Water Quality Certification Unit will be notified when the 404 permit is applied for in relation to the project. **APPLICABLE REFERENCE:** Final EA, Chapter IV.B.1.a., page IV-3.

#### COMMENT CODE: 2B

**SOURCE:** Missouri Department of Natural Resources

**RESPONSE:** The text in the document refers to the *Total Maximum Daily Load Information Sheet* rather than a "TMDL study". The wording has been changed to more clearly reflect the general information in the Information Sheet. Text has also been added that reflects the updated 303(d) list information.

**APPLICABLE REFERENCE:** Final EA, Chapter III.G.1., page III-28.

#### COMMENT CODE: 2C

SOURCE: Missouri Department of Natural Resources

**RESPONSE:** Text has been added regarding the City's Zoning Ordinance for floodway and floodplain fringe districts. The Introduction (III.H.1.) defines the 100-year floodplain and the regulatory floodway. In addition, the *Impacts* section for each major stream discusses the impacts/avoidance of the floodplain and floodway at each location.

APPLICABLE REFERENCE: Final EA, Chapter III.H., pages III-31-34

COMMENT CODE: 2D

**SOURCE:** Missouri Department of Natural Resources

**RESPONSE:** The words "rain gardens" have been added to the text in the discussion of Best Management Practices.

**APPLICABLE REFERENCE:** Final EA, Chapter III.G.1.a., page III-29.

#### COMMENT CODE: 2E

**SOURCE:** Missouri Department of Natural Resources

**RESPONSE:** The reference to the two ponds as possibly being old sewage lagoons is related to how they appeared based on their location in relation to buildings on the property and their situation on the terrain. The comments regarding sewage lagoons and procedures on dealing with them have been incorporated into the text. They will be properly closed prior to construction.

**APPLICABLE REFERENCE:** Final EA, Chapter III.O.1., page III-58.

#### COMMENT CODE: 2F

**SOURCE:** Missouri Department of Natural Resources **RESPONSE:** Comments regarding karst features have been incorporated into the text. **APPLICABLE REFERENCE:** Final EA, Chapter III.E., page 21; and III.G.2., page III-30.

#### COMMENT CODE: 2G

**SOURCE:** Missouri Department of Natural Resources **RESPONSE:** Comments regarding mines and earthquakes have been incorporated into the text. **APPLICABLE REFERENCE:** Final EA, Chapter III.E., page III-21-22.

#### COMMENT CODE: 2H

**SOURCE:** Missouri Department of Natural Resources **RESPONSE:** Comments regarding solid waste have been incorporated into text **APPLICABLE REFERENCE:** Final EA, Chapter III.K.3.b., page III-44-45; and III.O.1., page III-58.

#### **COMMENT CODE: 21**

**SOURCE:** Missouri Department of Natural Resources **RESPONSE:** Comments regarding Ambient Air Quality have been incorporated into text. **APPLICABLE REFERENCE:** Final EA, Chapter III.L.1., page III-45-46.

#### COMMENT CODE: 2J

**SOURCE:** Missouri Department of Natural Resources

**RESPONSE:** Comments regarding heavy construction equipment have been incorporated into text.

APPLICABLE REFERENCE: Final EA, Chapter III.O.3., page III-59-60.

#### COMMENT CODE: 2K

**SOURCE:** Missouri Department of Natural Resources **RESPONSE:** Comments regarding asbestos have been incorporated into text and MDNR letter has been referenced for details. **APPLICABLE REFERENCE:** Final EA, Chapter III.K.3.b., page III-45.

#### COMMENT CODE: 2L

**SOURCE:** Missouri Department of Natural Resources **RESPONSE:** Comments regarding asphalt paving have been incorporated into text. **APPLICABLE REFERENCE:** Final EA, Chapter III.O., page III-58.

#### COMMENT CODE: 2M

**SOURCE:** Missouri Department of Natural Resources **RESPONSE:** Comments regarding fugitive dust, heavy duty diesel idling, open burning, and odor have been incorporated into text. **APPLICABLE REFERENCE:** Final EA, Chapter III.O.3., pages III-59-60.

#### COMMENT CODE: 2N

**SOURCE:** Missouri Department of Natural Resources **RESPONSE:** Comment regarding traffic coatings has been incorporated into text. **APPLICABLE REFERENCE:** Final EA, Chapter III.O., page III-58.

**COMMENT CODE:** 20 **SOURCE:** Missouri Department of Natural Resources **RESPONSE:** Comment noted. **APPLICABLE REFERENCE:** None.

#### **COMMENT CODE: 2P**

**SOURCE:** Missouri Department of Natural Resources **RESPONSE:** Text has been added to clarify. **APPLICABLE REFERENCE:** Final EA, Chapter III.L.2., page III--47.

#### **COMMENT CODE: 2Q**

**SOURCE:** Missouri Department of Natural Resources

**RESPONSE:** The Existing Air Quality table (Table III-11) indicates, in footnote 7b, that the EPA revoked the 1-hour standard in all areas except for the fourteen 8-hour ozone nonattainment EAC Areas (the St. Louis area, including St. Charles County, is not one of these EAC areas). The text has been edited to include the comment regarding the ozone SIP submittal and the Clean Data finding.

APPLICABLE REFERENCE: Final EA, Chapter III., Table III-11 and L.3., pages III-46-49.

#### **COMMENT CODE: 2R**

**SOURCE:** Missouri Department of Natural Resources

**RESPONSE:** Comment on burning restrictions has been incorporated into Construction Impacts text.

**APPLICABLE REFERENCE:** Final EA, Chapter III.O.3., page III-59-60.

#### **COMMENT CODE: 2S**

**SOURCE:** Missouri Department of Natural Resources **RESPONSE:** Incorporated revisions in Table III-11 accordingly. **APPLICABLE REFERENCE:** Final EA, Chapter III.L.1., Table III-11, page III-46.



## CHAPTER VI Circulation List

## A. Federal Agencies

Mr. Karl Brooks - Administrator U.S. Environmental Protection Agency, Region VII 11201 Renner Blvd. Lenexa, Kansas 66219 Attn: Mr. Jeff Robichaud – NEPA Environmental Services

Mr. David Sire Natural Resources Management Team Office of Environmental Policy and Compliance U.S. Department of Interior Room MS-2462-MIB 1849 "C" Street, N.W. Washington, DC, 20240

Mr. James Heard – Field Office Director Environmental Officer U.S. Department of Housing & Urban Development (HUD) St. Louis Field Office 1222 Spruce Street, Suite 3.203 St. Louis, MO 63103-2836

Mr. Harold Deckerd USDA, Natural Resources Conservation Service Parkade Center, Suite 250 601 Business Loop 70 West Columbia, MO 65203-2546

Mr. Danny D. McClendon Chief, Regulatory Office U.S. Army Corps of Engineers 1222 Spruce Street St. Louis, MO 63103-2833 Attention: Ms. Jaynie Doerr

Ms. Amy Salveter Field Supervisor U.S. Fish & Wildlife Service 101 Park De Ville Drive, Suite A Columbia, MO 65203-0057

Mr. Steve Taylor U.S. Department of Energy 2000 East 95<sup>th</sup> Street Kansas City, MO 64131 J. R. Flores – State Conservationist USDA, Natural Resources Conservation Service Parkade Center, Ste. 250 601 Business Loop 70 West Columbia, MO 65203-2546

### B. State Agencies

Ms. Sara Vanderfeltz Missouri Federal Assistance Clearinghouse Office of Administration Commissioner's Office Capitol Building, Room 125 P.O. Box 809 Jefferson City, MO 65102

Mr. Alan Leary Missouri Department of Conservation P.O. Box 180 2901 W. Truman Road Jefferson City, MO 65109

Mr. Shannon Cave Missouri Department of Conservation P.O. Box 180 2901 W. Truman Road Jefferson City, MO 65109

Ms. Sara Parker Pauley, Director Missouri Department of Natural Resources 1101 Riverside Drive Jefferson City, Missouri 65101 Attn: Ms. Jane Beetem

Mr. Jason Schneider – Floodplain Management Engineer Missouri Emergency Management Agency P.O. Box 116 2302 Militia Drive Jefferson City, MO 65102

Mr. Gregory Steinhoff Missouri Department of Economic Development Truman State Office Bldg., Room 680 301 W. High Street P.O. Box 1157 Jefferson City, MO 65102

## C. Local Agencies

#### 1. CITY OF WENTZVILLE

Mr. Nick Guccione – Mayor Wentzville City Hall 310 West Pearce Blvd. Wentzville, MO 63385

Robert J. Bartolotta - City Administrator Wentzville City Hall 310 West Pearce Blvd. Wentzville, MO 63385

#### 2. CITY OF FLINT HILL

Mr. Doug Wynn – Mayor P.O. Box 196 Flint Hill, MO 63346-0196

Ms. Becky McCollum – City Clerk P.O. Box 196 Flint Hill, MO 63346-0196

Mr. Tom Rothermich – Engineering Consultant Flint Hill Engineering LLC 192 Mexico Road Wentzville, MO 63385

#### 3. CITY OF FORISTELL

Ms. Wanda Donnelly – Mayor 121 Mulberry Street Foristell, MO 63348

Ms. Sandy Stokes – City Administrator 121 Mulberry Street Foristell, MO 63348

Mr. John D. Pickering – Alderman, Ward 2 121 Mulberry Street Foristell, MO 63348

### 4. ST. CHARLES COUNTY

Mr. Wayne Anthony – Community Development Director County Administration Building 201 N. Second Street St. Charles, MO 63301

Steve Ehlmann St. Charles County Executive 100 North 3rd Street St. Charles, MO 63301

#### 5. OTHERS

Mr. Jerry Blair – Director of Transportation East-West Gateway Council of Governments Gateway Tower One Memorial Drive, Ste. 1600 St. Louis, MO 63102

Mr. Jim Wild - Assistant Executive Director East-West Gateway Council of Governments Gateway Tower One Memorial Drive, Ste. 1600 St. Louis, MO 63102

Mr. Tony Mathews – Executive Director Wentzville Chamber of Commerce 113 E Pearce Blvd Wentzville, MO 63385

## D. Tribal Consultation List

Mr. Tim Rhodd Chairman Iowa Tribe of Kansas and Nebraska 3345 B Thrasher Road White Cloud, Kansas 66094

Mr.Gary Pratt Chairperson Iowa Tribe of Oklahoma 335588 E. 750 Rd. Perkins, Oklahoma 74059

Mr. Clifford Wolfe, Jr. Chairman Omaha Tribe of Nebraska P.O. Box 368 Macy, Nebraska 68039

Mr. Scott Bighorse Principal Chief Osage Tribe, Oklahoma P.O. Box 779 Pawhuska, Oklahoma 74056

Mr. John R. Shotton Chairman Otoe-Missouria Tribe of Indians, Oklahoma 8151 Highway 77 Red Rock, Oklahoma 74651 Mr. George Thurman Principal Chief Sac & Fox Nation, Oklahoma Administration Building 920883 S. Hwy 99 Bldg A Stroud, Oklahoma 74079

Ms. Brigette Robidoux Chairperson Sac & Fox Nation of Missouri in Kansas and Nebraska 305 N. Main Street Reserve, Kansas 66434

Ms. Judith Bender Chairwoman Sac & Fox Nation of the Mississippi in Iowa 349 Meskwaki Road Tama, Iowa 52339

Mr. Guy Munroe Chairman Kaw Tribe of Oklahoma Drawer 50 Kaw City, Oklahoma 74641

### E. Copies Available for Public Viewing

Wentzville City Hall 310 West Pearce Blvd. Wentzville, MO 63385

Corporate Parkway Library 1200 Corporate Pkwy Wentzville, MO 63385

City of Wentzville Public Works Department 200 E. Fourth St. Wentzville, MO 63385

## **Appendices**

- A Plan Plates and Interchange Concepts
- B Public Parks
- C Farmland Conversion Impact Rating
- D Water Resources
- E Cultural Resources
- F Hazardous Materials
- G Air Quality
- H Noise Analysis
- I Agency Correspondence
- J Public Involvement

## **Appendix A**

Selected Alternative Plan Plates and Interchange Concepts





























# **Appendix A**

Eliminated Reasonable Alternative Interchange Concepts








## Appendix B Public Parks



CITY OF WE	INTZVILLE,	<u>,</u>	1	!
BY:	Var	10	Ja	min
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DATE	SEPT	20	200	7

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# **Appendix C** Farmland Conversion Impact Rating

U.S. DEPARTMENT OF AGRICULTURE Natural Resources Conservation Service

FARMLAND CONVERSION IMPACT RATING FOR CORRIDOR TYPE PROJECTS

PART I (To be completed by F		3. Date of Land Evaluation Request				4. Sheet 1 c	of		
1. Name of Project David He	*****	5. Federal Agency Involved Federal Highway Administration							
2. Type of Project Payland Hallan	1 4 A	6. County and State St. Charles County Misson -i							
PAPT II /To be completed by A	1. Date Request Received by NRCS 2. Person Completing Form								
PART II (10 be completed by NRCB)				12/23/01					
<ol> <li>Does the corridor contain prime, u (If no, the FPPA does not apply -</li> </ol>	portant farmland? parts of this form	). YES I NO I 4. Acres inigated A							
5. Major Crop(s)		6. Farmable Land Acres: 2.9	d in Gover $3, 94^{\circ}$	nment Jurisdiction	7.3	7. Amount of Farmland As Defined in FPPA Acres: 291, 930 %71.2			
8. Name Of Land Evaluation System	Used	9. Name of Local	Site Asse	sessment System 10. D			Date Land Evaluation Returned by NRCS		
PART III /To be completed by A	adaral Aganew			Alternat	ive Corri	dor For S	iegment		
	succes Ageney/		<b></b>	Corridor 1 Corrie		dor 2	Corridor 3		
A. Total Acres To Be Converted Di	rectly			167	16	7	165		
B. Total Acres To Be Converted In	directly, Or To Receive S	ervices		0	0		0		
C. Total Acres In Corridor				167	16	7	165		
PART IV (To be completed by	NRCS) Land Evaluation	on Information		a sta			·		
A. Total Acres Prime And Unique	Farmland	n sa na sa		17.5	23	.1	36.4		
B. Total Acres Statewide And Loc	al Important Farmland		dire e	77	78	Par de la composición de la composición Par de la composición d	34		
C. Percentage Of Farmland in Co	unty Or Local Govt. Unit	To Be Converted	l e e	0.0001	0.0001		6.0001		
D. Percentage Of Farmland in Gov	t. Jurisdiction With Same	Or Higher Relativ	/e Value	43.6	63	.6	57.4		
PART V (To be completed by NRC value of Farmland to Be Serviced	CS) Land Evaluation Infor 1 or Converted (Scale of	mation Criterion 0 - 100 Points)	Relative	58	47		59		
PART VI (To be completed by Fe	deral Agency) Corridor		faximum Deinte						
	ena are explained in 7 d		Folitis	)wag		>	P3		
Area In Nonurban Use     Desimator in Nonurban Use			15	/	<u></u>		<u> </u>		
3 Percent Of Corridor Being F	armed		20						
4. Protection Provided By State	e And Local Government		20		0	}	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		
5. Size of Present Farm Unit C	ompared To Average		10			3	<u> </u>		
6. Creation Of Nonfarmable Fa	rmland		25	<i>0</i>	0		0		
7. Availablility Of Farm Support	t Services		5	0			0		
8. On-Farm Investments			20	Ż.	2	2	12m		
9. Effects Of Conversion On Fa	arm Support Services		25	Õ	0		0		
10. Compatibility With Existing	Agricultural Use		10	Ś	8		8		
TOTAL CORRIDOR ASSESS	MENT POINTS		160	26	31	5	34		
PART VII (To be completed by F	ederal Agency)								
Relative Value Of Farmland (From		100	58	4	7	59			
Total Corridor Assessment (From Part VI above or a local site assessment)				26	35		-34		
TOTAL POINTS (Total of abov		260	84	82		93			
1. Corridor Selected: Corridor Z	2. Total Acres of Farml Converted by Project	ands to be 3. t:	Date Of S	election:	4. Wasi	A Local Site	e Assessment Used	1?	
101.1				2008		YES	s 🔲 NO 🕅		

5. Reason For Selection: Corridor Alternative Z would have the least impact on the natural environment as a whole, would have minimal residential and business impacts, would improve traffic flow, and would be the most compatible with local landuse planning.

2-8-2008 DATE Signature of Person Completing this Rart.

NOTE: Complete a form for each segment with more than one Alternate Corridor

## NRCS-CPA-106

(Rev. 1-91)

#### **CORRIDOR - TYPE SITE ASSESSMENT CRITERIA**

The following criteria are to be used for projects that have a linear or corridor - type site configuration connecting two distant points, and crossing several different tracts of land. These include utility lines, highways, railroads, stream improvements, and flood control systems. Federal agencies are to assess the suitability of each corridor - type site or design alternative for protection as farmland along with the land evaluation information.

How much land is in nonurban use within a radius of 1.0 mile from where the project is intended?
 More than 90 percent - 15 points
 90 to 20 percent - 14 to 1 point(s)
 Less than 20 percent - 0 points

(2) How much of the perimeter of the site borders on land in nonurban use?
 More than 90 percent - 10 points
 90 to 20 percent - 9 to 1 point(s)
 Less than 20 percent - 0 points

(3) How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last
 10 years?
 More than 90 percent - 20 points

90 to 20 percent - 19 to 1 point(s) Less than 20 percent - 0 points

(4) Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland? Site is protected - 20 points

Site is not protected - 0 points

(5) Is the farm unit(s) containing the site (before the project) as large as the average - size farming unit in the County ? (Average farm sizes in each county are available from the NRCS field offices in each state. Data are from the latest available Census of Agriculture, Acreage or Farm Units in Operation with \$1,000 or more in sales.) As large or larger - 10 points

Below average - deduct 1 point for each 5 percent below the average, down to 0 points if 50 percent or more below average - 9 to 0 points

(6) If the site is chosen for the project, how much of the remaining land on the farm will become non-farmable because of interference with land patterns?

Acreage equal to more than 25 percent of acres directly converted by the project - 25 points Acreage equal to between 25 and 5 percent of the acres directly converted by the project - 1 to 24 point(s) Acreage equal to less than 5 percent of the acres directly converted by the project - 0 points

(7) Does the site have available adequate supply of farm support services and markets, i.e., farm suppliers, equipment dealers, processing and storage facilities and farmer's markets?
 All required services are available - 5 points
 Some required services are available - 4 to 1 point(s)
 No required services are available - 0 points

(8) Does the site have substantial and well-maintained on-farm investments such as barns, other storage building, fruit trees and vines, field terraces, drainage, irrigation, waterways, or other soil and water conservation measures? High amount of on-farm investment - 20 points Moderate amount of on-farm investment - 19 to 1 point(s) No on-farm investment - 0 points

(9) Would the project at this site, by converting farmland to nonagricultural use, reduce the demand for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area? Substantial reduction in demand for support services if the site is converted - 25 points Some reduction in demand for support services if the site is converted - 1 to 24 point(s) No significant reduction in demand for support services if the site is converted - 0 points

(10) Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of surrounding farmland to nonagricultural use? Proposed project is incompatible to existing agricultural use of surrounding farmland - 10 points Proposed project is tolerable to existing agricultural use of surrounding farmland - 9 to 1 point(s) Proposed project is fully compatible with existing agricultural use of surrounding farmland - 0 points



Phone: 636-789-2441 ext. 3

#### Subject: David Hoekel Parkway

Date: December 26, 2007

To: Tim Flagler HNTB Corporation 715 Kirk Drive Kansas City, MO 64105

Mr. Flagler:

Enclosed find the AD-1006, Farmland Conversion Impact Rating for the three alternatives. Lists of Hydric soils, Prime and State Important soils, and Hazards for Roads and Streets are also included for your reference.

My calculations of acreage don't agree with what was in your letter and wonder if your using the updated soils information from January, 2007.

Call if you need further assistance.

David Skaer NRCS-Area Resource Soil Scientist

The Natural Resources Conservation Service provides leadership in a partnership effort to help people conserve, maintain, and improve our natural resources and environment. U.S. DEPARTMENT OF AGRICULTURE Natural Resources Conservation Service NRCS-CPA-106 (Rev. 1-91)

#### FARMLAND CONVERSION IMPACT RATING FOR CORRIDOR TYPE PROJECTS

PART I (To be completed by I	3. Date	of Land Evaluation	on Request	4. Sheet 1 of				
1. Name of Project David H	5. Federal Agency Involved Federal Highway Administration							
2. Type of Project Paved 4-La	6. County and State St. Charles County Missouri							
PART II (To be completed by	1. Date Request Received by NRCS 2. Person Completing Form							
3. Does the corridor contain prime, (If no, the FPPA does not apply -	<i>1∕_∉</i> nd? prm).	YES 7 NO [	Irrigated Average	e Farm Size				
5. Major Crop(s)	and in Gove	rnment Jurisdiction	7.3	7. Amount of Farmland As Defined i				
8. Name Of Land Evaluation System	ocal Site Asso	essment System		Land Evaluation R	and Evaluation Returned by NRCS			
PART III (To be completed by	Federal Agency)			Alterna Corridor 1	tive Corri Corri	dor For S dor 2	egment Corridor 3	
A. Total Acres To Be Converted D	Directly			167	16	7	165	1
B. Total Acres To Be Converted In	ndirectly, Or To Receive	Services		0	0		0	T
C. Total Acres In Corridor	· · · · · · · · · · · · · · · · · · ·			167	16	7	165	
PART IV (To be completed by	NRCS) Land Evaluat	tion Informatio	оп					
A. Total Acres Prime And Unique	Farmland	ta deserva		17.5	23	$\overline{J}$	36.4	
B. Total Acres Statewide And Loc	al Important Farmland			77	78		84	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
C. Percentage Of Farmland in Co	ounty Or Local Govt. Un	it To Be Conver	ted	0.0001	0.0001		6.0001	<b></b>
D. Percentage Of Farmland in Go	vt. Jurisdiction With Sam	e Or Higher Rel	ative Value	43.6	63	.6	57.4	
value of Farmland to Be Service PART VI (To be completed by F Assessment Criteria (These crit	d or Converted (Scale ederal Agency) Corrid teria are explained in 7	of 0 - 100 Points or CFR 658.5(c))	s) Maximum Points	38	4		37	***
1. Area in Nonurban Use			15					
2. Perimeter in Nonurban Use			10					
3. Percent Of Corridor Being F	Farmed		20					
4. Protection Provided By Stat	te And Local Governmen	ıt	20		1			
5. Size of Present Farm Unit C	Compared To Average		10					
6. Creation Of Nonfarmable Fa	armland		25					
7. Availablility Of Farm Support	rt Services		5					
8. On-Farm Investments			20					
9. Effects Of Conversion On F	arm Support Services		25					
10. Compatibility With Existing	Agricultural Use		10					·
TOTAL CORRIDOR ASSESS	MENT POINTS		160					
PART VII (To be completed by I		-						
Relative Value Of Farmland (Fro	100			Ī				
Total Corridor Assessment (Fror assessment)	160				~			
TOTAL POINTS (Total of abo	260							
1. Corridor Selected:	2. Total Acres of Farn Converted by Proje	nlands to be ect:	3. Date Of S	Selection:	4. Was A Local Site Assessment Us			1
						YES 🗌	NO 🗌	

5. Reason For Selection:

Signature of Person Completing this Part:

DATE

NOTE: Complete a form for each segment with more than one Alternate Corridor

# Appendix D Water Resources

### Appendix D

#### DAVID HOEKEL PARKWAY St. Charles County, Missouri City of Wentzville

#### WATERS OF THE U.S. and PRELIMINARY JURISDICTIONAL WETLAND DETERMINATIONS SUMMARY

#### I. INTRODUCTION

The City of Wentzville, in cooperation with the Missouri Department of Transportation (MoDOT) and the Federal Highway Administration (FHWA), is preparing an Environmental Assessment for the proposed I-70/US-61 Beltway project, known as the David Hoekel Parkway, located west and northwest of Wentzville. The study corridor, which is approximately 6 miles in length, extends from the intersection of Pointe Prairie Road and Jackson Road (southern terminus) to Route P, just east of US-61 (northern terminus). The proposed action will provide improved access to an area that is experiencing new development by constructing a four-lane divided roadway on new alignment, with new interchanges at I-70 and US-61 (see Exhibit 1, Vicinity Map).

The following overview provides an environmental summary of the field investigations performed to assess Waters of the U.S. that would be impacted by the construction of the Preferred Alternative (Proposed Action) alignment. This information is compiled for the purpose of providing data for a Clean Water Act (CWA) Section 404 permit application in the design phase of the project. The City and MoDOT requested the investigation to include the results in the project's Environmental Assessment (EA) document. The field work was conducted by HNTB Corporation environmental personnel on September 10 and 11, 2007.

Subsequent to the preparation of this report in 2007, changes were made to the design of the proposed US 61 interchange of the Selected Alternative alignment resulting in some changes to the water resource analysis discussed in this report. Those changes are discussed within each applicable section below.

The Project Proponent and the Consultant for the project, and the respective contact persons, are as follows:

#### PROJECT PROPONENT

City of Wentzville Mr. Scott Smith Public Works Director 200 Fourth Street Wentzville, MO 63385 (636) 327-5102

#### **CONSULTANT**

HNTB Corporation Mr. Tim Flagler, ASLA Mr. Dan Van Petten, AICP 715 Kirk Drive Kansas City, MO. 64105 (816) 472-1201

#### A. Purpose of and Need for the Project

The purpose of the David Hoekel Parkway is to provide the community with a safe and efficient roadway that is both cost-effective and environmentally sound. The new connection will:

• *Improve access and connectivity* between I-70 and US 61 in western Wentzville and the St. Louis region within St. Charles County,

- *Reduce congestion* and improve the travel capacity in the study area to meet future travel demands,
- *Improve traffic safety* to help improve high crash locations within the study area.
- **Support local and regional growth** while addressing anticipated increases in local and regional travel demand and travel times that will accompany population and housing growth,
- **Support sustainable development** by providing and coordinating transportation connections with planned and proposed development, and
- **Promote a multimodal transportation system** by ensuring the project accommodates the needs of other transportation modes.

#### B. Regulatory Background

Section 404 of the CWA prohibits the discharge of dredged or fill material into "Waters of the U.S." unless exempted or authorized by the U.S. Army Corps of Engineers (USACE). Section 404 is the primary Federal statute that implements federal regulatory policies concerning the protection of wetlands and other waters of the U.S. as specified in various orders and regulations. The St. Louis District USACE maintains jurisdiction over the water resources in the area in which the David Hoekel Parkway corridor is located.

The inventory and investigations for Waters of the U.S. included the task of gathering data to analyze "Significant Nexus" for jurisdictional determination. The classes of water bodies that are automatically jurisdictional under the CWA are Traditional Navigable Waters (TNWs) and their adjacent wetlands, Relatively Permanent Waters (RPWs) that flow directly or indirectly into TNWs, and wetlands directly abutting RPWs that flow directly or indirectly into TNWs. According to the EPA and USACE, an RPW (or perennial stream) is a tributary that is not a TNW and that typically flows year-round or has continuous flow at least seasonally (typically 3 months). Other water bodies that require a "Significant Nexus" finding in order to assert jurisdiction include:

- Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs.
- Non-RPWs that flow directly or indirectly into TNWs (a Non-RPW is an intermittent or ephemeral waterway, i.e., one that does not flow year-round and typically less than 3 months.
- Wetlands adjacent to Non-RPWs that flow directly or indirectly into TNWs.

For isolated (interstate or intrastate) waters, including isolated wetlands, the USACE will elevate the action to USACE Headquarters for a review based on the USACE/EPA Memorandum Regarding *CWA Act Jurisdiction Following Rapanos*.

The USACE/EPA jurisdictional determination guidance also indicates that swales and erosional features, such as gullies and small washes characterized by low volume, infrequent, and short duration flow, "are generally not Waters of the U.S. because they are not tributaries or they do not have a significant nexus to TNWs." The same holds true for "ditches (including roadside ditches) excavated wholly in and draining only uplands, and that do not carry a relatively permanent flow of water."

#### II. METHODS

The MoDOT Wetland Protocol, dated January 2002, outlined the criteria that were used to identify streams and sites of potential jurisdictional wetlands. References included aerial photography; U.S. Geological Survey (USGS) maps; U.S. Fish and Wildlife Service National

Wetlands Inventory (NWI) maps (see Exhibit 2); Natural Resources Conservation Service (NRCS) county soil survey maps (see Exhibit 3); the county hydric soils lists; and the 1987 USACE Wetlands Delineation Manual.

The stream crossings evaluated in this report include USGS blue line streams within the impact area of the Proposed Action and other streams that exhibited a discernible channel (bed & bank) with an OHWM. Streams were photographed and were field-checked to determine the presence or absence of a discernible Ordinary High Water Mark (OHWM), and to determine the average width of the OHWM. In addition, the adjacent vegetation and the composition of the stream channel were also noted, as well as other pertinent data which is indicated on each stream data form in Appendix A. Field work at each stream also included observations to check for ponding or saturation on the terraces above the OHWM.

The NWI maps were reviewed to determine locations of potential "vegetated wetlands" within the impact area of the Proposed Action. On-site, Level 2 delineations were conducted at potential wetland areas using the Routine Method of the 1987 USACE Wetland Delineation Manual. Potential wetland areas were photographed and delineation forms were filled out to determine which wetland criteria (hydric soils, hydrophytic vegetation, wetland hydrology), if any, were met. Soil samples were taken, hydrology was evaluated, vegetation was characterized and listed, and data collection points were located. If wetlands were determined to be present, on-site measurements were taken to determine the location and extent of wetland boundaries.

Ponds were photographed and were analyzed to determine whether or not there was a hydrologic connection to a Water of the U.S in the form of a discernible channel with an OHWM coming into or going out of the pond. Ponds were also checked for the existence of hydrophytic vegetation around the fringe.

The guidance on jurisdictional determination, as described above under "Regulatory Background", was utilized for each stream, wetland, and pond within the impact area of the Proposed Action. The jurisdictional determination forms are included in the full report titled *Waters of the U.S. and Preliminary Jurisdictional Wetland Determinations Summary Report* (available upon request). The jurisdictional determinations are preliminary in nature until the USACE/EPA make a final determination.

A GIS program (ArcGIS) was used to determine the length of stream and surface area of potentially jurisdictional streams, wetlands, and ponds lying within the impact area, and the length and surface area that could potentially be impacted by the Proposed Action. These were determined from field investigations, and from topographic base maps and aerial photographs overlain with a digital file of the proposed impact area (see Plan View sheets of each water resource).

#### III. RESULTS AND DISCUSSION

The water resources within the David Hoekel Parkway study corridor that were investigated in the field included streams, ponds, and potential wetlands.

#### A. Streams

Within the study corridor, field investigations were performed at 9 USGS-mapped streams (stream S-10 is crossed at two separate locations) and 3 field-identified streams within the proposed impact area (see Exhibits 2 & 3, and Plan View maps). Based on preliminary determinations, streams S-1 and S-10 are perennial, i.e. RPWs (Relatively Permanent Waters); and streams S-2, S-3, S-4, S-5, S-6, S-7, S-8, S-9, and S-11 are intermittent/ephemeral, i.e. Non-RPWs. All of these streams had an established channel (bed and bank) with an OHWM

and are preliminarily considered to be jurisdictional Waters of the U.S. Photographs and pertinent information about each stream and adjacent riparian area are presented in the full report titled *Waters of the U.S. and Preliminary Jurisdictional Wetland Determinations Summary Report* (available upon request). The Plan View sheets in this summary show the Proposed Action alignment's impact area in relation to the water resources.

Subsequent to the preparation of this report in 2007, changes were made to the design of the proposed US 61 interchange of the Selected Alternative alignment resulting in the addition of one jurisdictional intermittent stream crossing (S-12, east of US 61), the elimination of a bridge crossing over Dry Branch (Stream S-10a), and the elimination of another stream crossing (S-11, north of Flint Hill).

Table 1 presents potential impacts at each separate stream crossing within the Proposed Action, stream length impacted, type of impact, OHWM width, surface area impacted, and project totals. Other information in the table includes the latitude/longitude, section/township/range, the USGS designation, the preliminary jurisdictional determination, and indication of mapped hydric soil presence or absence.

**Deed Restriction Research** – Since some of the stream crossings are adjacent to or within new residential developments, further investigation was conducted to determine if the stream corridors (adjacent to the impact area of the Proposed Action) had deed restrictions associated with them because of mitigation for stream impacts under Section 404 permits. Through research at the St. Charles County Recorder of Deeds office, it was determined that the properties encompassing the stream corridors apparently do not have deed restrictions associated with them based on mitigation. The Proposed Action corridor is aligned through three new subdivisions that have the potential for containing mitigation areas directly adjacent to the parkway corridor.

The plat map for the Keeneland Trails subdivision (involving Streams S-3 and S-4), located just north of Goodfellow Road, shows "Common Ground" along the stream segments that are being preserved, however, the plat map also shows a preserved corridor for the Proposed Action alignment (see plat map for Keeneland Trails after Plan View Map 3), indicating that the parcels of the Common Ground areas are separate from the preserved parkway corridor. This was confirmed by the latest City parcel information. The information at the Recorder of Deeds office showed that the Keeneland Trails Homeowners Association is the owner of the Common Ground on each side of the parkway corridor, but no deed restrictions on the parcels were found.

The situation and results of the research were the same for Stream S-5 in the Stonemoor subdivision (formerly the Crossroads/Meyer Road Tract subdivision), located south of Meyer Road. The plat map of this subdivision also shows a preserved parkway corridor for the Proposed Action that is aligned across the stream corridor that was proposed for restoration/mitigation (see plat map for Stonemoor/Meyer Road Tract after Plan View Map 4). Information associated with the Section 404 permit indicated that the restoration/mitigation area would be 50 feet on each side of the stream, measured from the top of the bank. The City's current parcel maps and the information at the Recorder of Deeds office indicate that the Stonemoor Homeowners Association owns separate parcels encompassing the stream on each side of, and separate from, the preserved parkway corridor, but no deed restrictions on the parcels were found.

One other subdivision (Peine 240, also known as Westhaven), located about 1.25 miles west of US-61, northwest of Peine Road, contains a mitigation area along a tributary of Stream S-9, directly adjacent to the <u>original</u> preserved parkway corridor, however, the Proposed Action alignment was adjusted to avoid excessive stream and floodway impacts.

The adjustment results in an increased distance between the parkway corridor and the proposed mitigation area (see plat map for Peine 240 after Plan View Map 10). The alignment adjustment also results in more "common ground" adjacent to the mitigation area and the residential lots, rather than having the common ground separated from the residential areas by the parkway, as it was with the original parkway corridor.

#### B. Wetlands

The NWI maps were reviewed and showed one designated area of potential "vegetated wetland" (<u>NWI-1 and NWI-2</u>) within the Proposed Action impact area (see Exhibits 2 & 3, and Plan View Map 1). This area is located on the north and south sides of Peruque Creek (stream S-1), in the 100-year floodplain where a riparian woodland area is designated as PFO1A (Palustrine Forested, Broad-leaved Deciduous, Temporarily Flooded). After a routine wetland determination was performed, it was preliminarily determined that this area (above the OHWM) did not meet all three of the criteria to be considered a jurisdictional wetland.

During field investigations, it was observed that the areas adjacent to, and above the OHWM of the remainder of the streams are adequately drained and are not subject to ponding or saturation for long duration. Due to these conditions, there is an absence of long-duration hydrology and no wetlands were present in the Proposed Action impact area along these streams. However, 6 upland ponds in the impact area contained hydrophytic emergent vegetation fringes around their perimeters. The fringe wetlands range in size from 0.02 acre to 0.16 acre (see Table 2). However, the ponds and their wetland fringes were preliminarily determined to be non-jurisdictional (see discussion on Ponds below).

Subsequent to the preparation of this report in 2007, changes were made to the design of the proposed US 61 interchange of the Selected Alternative alignment resulting in the addition of one upland retention pond (P-9), with an emergent wetland fringe, adjacent to the Peine Lakes Apartments. This is an excavated retention pond collecting runoff from the apartment complex, and is preliminarily considered to be non-jurisdictional, as well as its wetland fringe.

#### C. Ponds

There were 8 upland ponds within the Proposed Action impact area, all of which had an NWI designation of PUBGh – Palustrine Unconsolidated Bottom, Intermittently Exposed, Diked/ Impounded (see Exhibits 2 & 3, and Plan View maps). Two of those ponds (P-1 and P-2) no longer exist. The remainder of the ponds are fed by sheet overland flow and have no discernible channels, with an OHWM, either coming into or going out of the ponds. Therefore, these ponds are preliminarily determined to be non-jurisdictional. Ponds P-3, P-6, P-7, and P-8 also had fringe areas with hydrophytic emergent vegetation around the perimeter. Ponds P-4 and P-5 were mostly dry, but had hydrophytic emergent vegetation growing within a portion of the pond area (see "Wetlands" discussion above). The excavated retention pond (P-9) also had an emergent wetland fringe. This pond collects runoff from an adjacent apartment complex, and is preliminarily considered to be non-jurisdictional. The open water areas of the ponds are greated in size from 0.01 acre to 0.26 acre. Table 2 provides information about each pond.

#### IV. CONCLUSIONS

A total of 2043 linear feet of stream channel would be filled, equating to 0.49 surface acre of impacts. However, the individual potential impacts (fill below the OHWM) at each separate stream crossing (see Table 1) would exceed 1/10 acre of surface area at only Stream 10b/10c, which is the threshold for the requirement of a Pre-Construction Notification for a Section 404 Nationwide Permit #14 (Linear Transportation Projects) application. During the design phase

and the permit process, when impacts are more specifically determined, coordination with the USACE will ascertain Section 404 Permit applicability.

As shown in Table 2, the Proposed Action would result in the discharge of fill material into 6 upland ponds, preliminarily determined to be non-jurisdictional, the open water areas of which range in size from 0.01 acre to 0.26 acre. Impacts from fill material being discharged in open water will range in area from 0.02 acre to 0.16 acre, resulting in a total of 0.26 acre. These ponds also contain fringe wetlands in the form of hydrophytic emergent vegetation around their perimeters. The fringe wetlands range in size from 0.02 acre to 0.16 acre. Impacts from fill material being discharged in fringe wetlands will range in area from 0.01 acre to 0.08 acre, resulting in a total of 0.27 acre (see Table 2). Two of the ponds (Ponds 5 & 6, and their fringe wetlands) will be impacted in their entirety, while the remaining four (Ponds 3, 4, 7, & 9) will be partially impacted. The ponds that are partially impacted are situated in the landscape such that their source of hydrology will not be critically altered. The ponds and their wetland fringes were preliminarily determined to be non-jurisdictional, therefore, the discharge of fill material into these ponds, or portions of them, would not be subject to Section 404 Permit regulations if the USACE concurs with the preliminary findings.

Stream #	Stream Name	USGS Desig.	Prelim. Juris. Determ.	Soil Mapping	Impact Type	OHWM Width (ft)	Impact Length (ft)	Impact Area (acres)	Latitude/ Longitude
S-1*	Peruque Creek	Bln-P	Yes RPW	HI	Bridge	51	0	0.00	38.7950° N 90.9118° W
S-2	Unnamed Trib. Of Peruque Crk.	Bln-l	Yes Non- RPW	NH	Relocate/ Fill	7	244	0.04	38.8050° N 90.9133° W
S-3	Unnamed Trib. Of Dry Branch	None	Yes Non- RPW	NH	Culvert	6	238	0.03	38.8136° N 90.9144° W
S-4	Dry Branch	Bln-l	Yes Non- RPW	NH	Culvert	8	218	0.04	38.8154° N 90.9143° W
S-5	Unnamed Trib. Of Dry Branch	Bln-l	Yes Non- RPW	н	Culvert	8	178	0.03	38.8180° N 90.9130° W
S-6	Unnamed Trib. Of Trib.of McCoy Creek	None	Yes Non- RPW	NH	Culvert	6	242	0.03	38.8295° N 90.9107° W
S-7	Unnamed Trib. Of McCoy Creek	Bln-I	Yes Non- RPW	NH	Culvert	12	260	0.07	38.8374° N 90.9108° W
S-8	Unnamed Trib. Of Trib.of McCov Creek	None	Yes Non- RPW	н	Culvert	5	253	0.03	38.8418° N 90.9100° W
S-9*	Unnamed Trib. Of McCoy Creek	Bln-l	Yes Non- RPW	н	Bridge	14	0	0.00	38.8463° N 90.8945° W
S-10a	Dry Branch	Bln-P	Yes RPW	НІ	None	50	0	0.00	38.8556° N 90.8691° W
S-10b**	Dry Branch	Bln-P	Yes RPW	н	Culvert Extension	24	298	0.16	38.8532° N 90.8687° W
S-10c**	Dry Branch	Bln-P	Yes RPW	НІ	Culvert Extension	18	88	0.04	38.8521° N 90.8698° W
S-11	Unnamed Trib. Of McCoy Creek	Bln-P	Yes Non- RPW	NH	None	8	0	0.00	38.8579° N 90.8644° W
S-12	Unnamed Trib. Of Dry Branch	Bln-I	Yes Non- RPW	NH	Culvert Extension	24	24	0.01	38.8534° N 90.8676° W
TOTALS	,						2043	0.49	

Table 1 – Stream Crossing Impacts

\* Indicates bridged stream crossing. Length of stream is considered NOT impacted.

 $^{\star\star}S\mbox{-}10b$  and S-10c are at one crossing, but on opposite sides of US-61.

BIn-I = Blueline Intermittent; BIn-P = Blueline Perennial; NH = Non-hydric soil; H = Hydric Soil; HI = Hydric Inclusions RPW = Relatively Permanent Water (Perennial); Non-RPW = Non-Relatively Permanent Water (Intermittent/Ephemeral)

Pond #	NWI	Prelim. Juris. Determ.	Isolated (Interstate or Intrastate)	Adjacent Waterway	Pond Type	Open Water Size (ac.)	Open Water Impact (ac.)	Fringe Wetland Size (ac.)	Fringe Wetland Impact (ac.)	Impact Type	Latitude/ Longitude
P-1*	PUBGh										38.8212° N 90.9104° W
P-2*	PUBGh										38.8212° N 90.9104° W
P-3	PUBGh	Non-J	No	None	Old sewage lagoon	0.10	0	0.06	0.01	Fill	38.8255° N 90.9111° W
P-4	PUBGh	Non-J	No	None	Excavated	0.01	0	0.04	0.01	Fill	38.8267° N 90.9109° W
P-5	PUBGh	Non-J	No	None	Excavated	0.02	0.02	0.05	0.05	Fill	38.8355° N 90.9107° W
P-6	PUBGh	Non-J	No	None	Excavated	0.16	0.16	0.07	0.07	Fill	38.8430° N 90.9063° W
P-7	PUBGh	Non-J	No	None	Excavated	0.16	0	0.16	0.08	Fill	38.8425° N 90.9049° W
P-8	PUBGh	Non-J	No	None	Old sewage lagoon	0.08	0	0.02	0	None	38.8552° N 90.8648° W
P-9	None	Non-J	No	None	Excavated Retention Pond	0.26	0.09	0.15	0.05	Fill	38.8526° N 90.8706° W
TOTAL						0.79	0.27	0.55	0.27		

#### Table 2 – Pond & Fringe Wetland Impacts

\*Ponds 1 & 2 are shown on NWI maps, but no longer exist.

Non-J = Non-jurisdictional







### Map Unit Legend

St Charles County, Missouri

Map symbol	Map unit name
13534	Hodge loamy fine sand, 0 to 2 percent slopes, frequently flooded
36020	Kennebec silt loam, 0 to 2 percent slopes, occasionally flooded
50008	Keswick silt loam, 5 to 9 percent slopes, eroded
50009	Keswick silt loam, 9 to 14 percent slopes, eroded
50040	Lindley loam, 14 to 20 percent slopes
50054	Armster silt loam, 5 to 9 percent slopes
50058	Mexico silt loam, 0 to 2 percent slopes
50059	Mexico silt loam, 1 to 4 percent slopes, eroded
54005	Twomile silt loam, 0 to 2 percent slopes, rarely flooded
60001	Menfro silt loam, 5 to 9 percent slopes
60003	Menfro silt loam, 9 to 14 percent slopes, eroded
60004	Menfro silt loam, 14 to 20 percent slopes, eroded
60005	Menfro silt loam, 20 to 35 percent slopes
60030	Winfield silt loam, 5 to 9 percent slopes
60055	Winfield silt loam, 2 to 5 percent slopes
60081	Crider silt loam, 14 to 20 percent slopes
60083	Crider silt loam, 5 to 9 percent slopes
60086	Crider silt loam, 9 to 14 percent slopes, eroded
60091	Edinburg silty clay loam, 0 to 1 percent slopes, frequently ponded
60097	Gasconade channery silty clay loam, 5 to 9 percent slopes, rubbly
60101	Gasconade-Rock outcrop complex, 14 to 50 percent slopes, rubbly
60104	Gatewood-Gasconade-Crider complex, 15 to 50 percent slopes
60112	Goss gravelly silt loam, 14 to 45 percent slopes
60115	Goss silt loam, 5 to 14 percent slopes
60124	Harvester-Urban land complex, 2 to 9 percent slopes
60125	Harvester-Urban land complex, 9 to 14 percent slopes
60129	Hatton silt loam, 5 to 9 percent slopes
60130	Herrick silt loam, 2 to 5 percent slopes
60132	Holstein loam, 14 to 35 percent slopes
60165	Menfro silt loam, 2 to 5 percent slopes
60175	Menfro silt loam, karst, 5 to 20 percent slopes
60186	Menfro-Goss silt loams, 9 to 14 percent slopes
60234	Weller silt loam, 2 to 5 percent slopes
60244	Winfield silt loam, 5 to 9 percent slopes, eroded
60245	Winfield silt loam, 9 to 14 percent slopes
60249	Winfield silty clay loam, 14 to 20 percent slopes, eroded
60260	Weller silt loam, 5 to 9 percent slopes
60267	Marion silt loam, 0 to 2 percent slopes
64001	Freeburg silt loam, 0 to 3 percent slopes, rarely flooded
64004	Auxvasse silt loam, 0 to 2 percent slopes, rarely flooded
64016	Blase silty clay loam, 0 to 2 percent slopes, rarely flooded
64024	Lomax loam, 0 to 2 percent slopes, rarely flooded
64034	Weller silt loam, terraces, 0 to 2 percent slopes
64040	Weller silt loam, terraces, 2 to 5 percent slopes
66009	Hayne silt loam, 0 to 2 percent slopes, occasionally flooded
66029	Dockery silt loam, 0 to 2 percent slopes, occasionally flooded
66030	Kampville silt loam, U to 2 percent slopes, occasionally flooded
66033	Haynie-Blake complex, 0 to 2 percent slopes, occasionally flooded
66036	Hodge-Blake complex, 0 to 2 percent slopes, frequently flooded

### Map Unit Legend

St Charles County, Missouri

Map symbol	Map unit name
66039	Hurst silt loam, 0 to 2 percent slopes, rarely flooded
66059	Blake silty clay loam, 0 to 2 percent slopes, occasionally flooded
66063	Booker clay, 0 to 2 percent slopes, frequently flooded, frequently ponded
66066	Carlow silty clay loam, 0 to 2 percent slopes, occasionally flooded
66069	Carr fine sandy loam, 0 to 2 percent slopes, occasionally flooded
66072	Cedargap silt loam, 0 to 2 percent slopes, occasionally flooded
66073	Chequest silt loam, 0 to 2 percent slopes, occasionally flooded
66082	Dockery silty clay loam, 0 to 2 percent slopes, frequently flooded
66085	Dupo silt loam, 0 to 2 percent slopes, frequently flooded
66092	Fishpot-Urban land complex, 0 to 5 percent slopes
66100	Portage clay, 0 to 2 percent slopes, occasionally flooded, frequently ponded
66105	Sensabaugh silt loam, 0 to 2 percent slopes, occasionally flooded
66112	Waldron silty clay, 0 to 2 percent slopes, occasionally flooded
66115	Westerville silt loam, 0 to 2 percent slopes, rarely flooded
66116	Haymond silt loam, 0 to 2 percent slopes, occasionally flooded
99000	Pits, quarry
99001	Water
99003	Miscellaneous water
99007	Arents, earthen dam
99032	Urbanland-Orthents complex, 1-9 percent slopes















STONEMOOR DEVELOPMENT

ų.
















# **Appendix E** Cultural Resources

# APPENDIX E Cultural Resources

## A. Introduction

A cultural resource investigation was conducted in order to identify any significant cultural resources that could be impacted by the proposed parkway construction, including prehistoric and historic archaeological sites, cemeteries, National Register properties, and potentially significant architectural properties, structures, cultural landscapes, and bridges. Resources are considered significant according to the criteria for nomination to the National Register of Historic Places, which states:

The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and;

(a) That are associated with events that have made a significant contribution to the broad patterns of our history; or

(b) That are associated with the lives of persons significant in our past; or

(c) That embody distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

(d) That have yielded, or may be likely to yield, information important in history or prehistory. (Federal Register 1974)

This criteria was used to evaluate the cultural resources present within the proposed David Hoekel Parkway study area.

In addition, registered graves are protected by Missouri Statute 214.131-132, and unmarked human graves and burial mounds are protected by Missouri Statute RSMO 194.400-401 and the Native American Graves Protection and Repatriation Act of 1990.

The full report of the cultural resources investigation, including photographs, maps, and bibliography is titled *Cultural Resources Investigation for the Proposed David Hoekel Parkway, City of Wentzville, St. Charles County, Missouri* 

## **B.** Archival Review of Previous Investigations

A records and literature search (archival review) was performed at the Missouri Department of Natural Resources, State Historic Preservation Office (SHPO), in Jefferson City on August 31, 2007 to identify any cultural resources previously reported within or near the approximately onemile wide proposed study area. The archival search revealed that no properties on the National Register of Historic Places exist within the study area and only a few cultural resource surveys have been conducted, resulting in the identification of 9 archaeological sites and 3 architectural properties. A listing of the 12 sites is located in Table 1.

The only potentially eligible site out of the 12 sites was 23SC41, located at the southwestern edge of the study area, just south of I-70. This site was reported in the *Wentzville Union* on

June 1, 1934. The article discussed the presence of an "Indian Fort" marked by "a mound of earth and some stones". The fort had been torn down so that a school could be built in the late 1800s; this building has also since been razed. It was reported that many artifacts were found by those who farmed the field. This site is not located within the construction limits of the Proposed Action.

Site#	Topography	Cultural Affiliation	Site Type	Recommendation
23SC41	hill top	Unknown Prehistoric Period Historic: late 1800s-early 1900s	"Indian Fort" & School	potentially eligible
23SC906	hill top	Historic: early-mid 1900s	building	not eligible
23SC945	ridge top	Historic: mid-late 1800s	farmstead	not eligible
23SC947	ridge top	Historic-mid 1900s	barn	not eligible
23SC1023	ridge top	Unknown Prehistoric Period	lithic scatter	not eligible
23SC1024	hill top	Unknown Prehistoric Period	lithic scatter	not eligible
23SC1025	ridge top	Unknown Prehistoric Period	lithic scatter	not eligible
23SC2058	ridge top	Unknown Prehistoric Period	lithic scatter	not eligible
23SC2059	ridge top	Unknown Prehistoric Period	lithic scatter	not eligible
23SC2063	terrace	Unknown Prehistoric Period	lithic scatter	not eligible
23SC2066	terrace	Unknown Prehistoric Period	lithic scatter	not eligible
23SC2067	ridge top	Unknown Prehistoric Period	lithic scatter	not eligible

 
 Table 1: Summary of Previously Reported Archaeological Sites Identified within the Study Area

A list of bridges and culverts within the study area was provided by the Cultural Resource Section, Missouri Department of Transportation (see Table 2). A total of seven bridges and three culverts exist within or near the study area. All of these are located along Route 61, on the northeastern part of the study area, and none of the bridges or culverts has been determined to be significant.

Bridge#	Location	Built Date	Туре	Significance
A2698	US 61 S - McCoy Creek	1973	3-span steel girder/stringer	Non-significant
H0141	US 61 N - McCoy Creek	1961/1992	3-span steel girder/stringer	Non-significant
H0149	US 61 S - Dry Branch	1961/1973	Triple concrete box culvert	Non-significant
A4524	Rte P E - Branch of McCoy Creek	1987	Triple concrete box culvert	Non-significant
A4634	Grothe Street - Branch of McCoy Creek	1987	Double concrete box culvert	Non-significant
0220014	Mette Road - McCoy Creek	1993	1-span steel girder/stringer	Non-significant
0140001	Point Prairie Road - Tributary of McCoy Creek	1967/1986	1-span steel girder/stringer	Non-significant
3390006	Schaper Road - Peruque Creek	1993	3-span concrete tee beam	Non-significant
4535001	Point Prairie Road - Peruque Creek	1995	2-span concrete girder	Non-significant
3340002	Point Prairie Road – Sam's Creek	1988	3-span concrete tee beam	Non-significant

 Table 2: Summary of Bridges and Culverts within the Study Area

# C. Archaeological Survey

The archaeological survey of the Proposed Action construction easement was conducted by the Archaeological Research Center of St. Louis, Inc., between March 11 and 14, 2008. The proposed construction easement surveyed was approximately 65 meters (215 feet) wide and extended for a distance of 6.2 miles from the intersection of Jackson Road with South Point Prairie Road on the south, to State Route P, just east of the community of Flint Hill, on the north.

Field investigations involved a pedestrian survey by directly observing the ground for artifacts, and shovel tests at 15 meter intervals. Each shovel test measured 35 x 35 cm and was excavated to the first soil change, approximately 15-30 cm below the surface. Deeper shovel tests were placed within the larger creek floodplains to a depth of about 1 meter. A number of disturbed areas were encountered due to the previous construction of Interstate 70 and U.S. Route 61, and more recent disturbance was caused by new subdivision development. The disturbed areas were walked to determine if this activity had destroyed any existing sites. Landowners of a few tracts denied access to the field crew, or the landowners could not be contacted (no phone number could be found or their homes were located behind locked gates) in order to obtain permission to conduct the archaeological survey. The archaeological survey did identify 9 archaeological sites and 2 isolated finds (see Table 3 for a summary list of the sites), of which there are three sites that are recommended for further study prior to construction, if impacted: Site 23SC2140, Site 23SC2141 and Site 23SC2146.

Site#	Topography	Cultural Affiliation	Site Type	Recommendation
23SC2138	ridge top	Historic: ca. 1900-1920	farmstead	No further work
23SC2139	shelf on ridge slope	Unknown Prehistoric Period	lithic scatter	No further work
23SC2140	shelf on ridge slope	Unknown Prehistoric Period	lithic scatter/ potential habitation	Move alignment or do further testing
23SC2141	ridge top	Historic: 1840s-1980s	farmstead	No further work unless alignment shifts
23SC2142	hill top	Unknown Prehistoric Period	Habitation, but destroyed	No further work
23SC2143	hill top	Historic: ca. 1860-1910	farmstead	No further work
23SC2144	ridge slope	Unknown Prehistoric Period	chert qarry pit	No further work
23SC2145	ridge top	Unknown Prehistoric Period	lithic scatter	No further work
23SC2146	ridge top	Historic: 1840-2007	farmstead	If well is impacted, remove contents prior to construction
IF* 1	low creek terrace	Unknown Prehistoric Period	chert flake	No further work
IF* 2	creek terrace	Unknown Prehistoric Period	lithic scatter	No further work

\*IF = Isolated Find

#### Site 23SC2140

This site consisted of a moderate scatter of flaking debris across a portion of a ridge finger overlooking Peruque Creek to the southwest. Surface visibility was poor as this pasture contained a low, but thick grass, affording only 0-10% visibility. The soils do not appear to have been severely deflated consisting of a typical profile for the glacially derived Keswick silt loam with brown (10YR4/3) silt loam about 20 cm deep over a dark yellowish brown (10YR4/4) silty clay (Tummons 1982). Shovel tests implemented across the area in 10

meter intervals produced one to five artifacts per test. Artifacts recovered from the shovel tests included 2 (16.8g) percussion flakes, 3 (27.5g) thinning flakes, 4 (0.4g) sharpening flakes, 6 (6.1g) broken flakes, 2 (8.8g) angular shatter, 1 (10.8g) core fragment, 1 (68.4g) biface II fragment, and 1 (60.5g) utilized flake. The utilized flake was used more than once, with two portions serving as gravers for incising or etching wood or bone to produce tools or artwork, and a third area possibly as a gouge for shaping wood or bone, but it more than likely also served as a graver, whose tip was broken during use. The presence of a core fragment, biface II, and percussion flakes, indicate that tools were being manufactured at this site, as well as repaired (thinning and sharpening flakes). This site could represent a habitation site occupied as part of a seasonal round or an isolated farmstead.

The number of artifacts found from shovel tests, despite the poor surface visibility, suggests that this site contained a moderate scatter of materials. The number of artifacts indicates that this site may have been used as habitation either as part of a seasonal round or on a more permanent basis by a small number of families. This long term occupation is further suggested by the utilized flake, which had been used at least three different times, indicating that the inhabitants were around this site long enough to have reused this tool numerous times. Thus, it is possible that features (e.g., fire hearths, earth ovens, storage pits, nut processing pits, or house structures), were constructed at this site. The shovel tests further revealed that the soils have not been deflated by past farming activities, so it is likely that these features remain intact. It is recommended that this site be avoided by the proposed roadway construction by moving the construction easement either to the west or east of this location, or that this site be archaeologically tested prior to design in order to better determine the potential presence of subsurface features. The SHPO has not yet concurred on the recommendation for this site.

#### Site 23SC2141

#### Historical Information

This site was first acquired by Joseph Abington who lived at this location by 1840 (U.S. Census 1840). The original residence existed just outside the proposed parkway construction easement, either to the east where house remains were found during this survey or to the west as suggested by earlier atlases. Joseph Abington had three slaves according to the 1850 U.S. Census, a female age 42, a female age 16, and a new born male child who was mulatto. Joseph apparently died before the 1860 U.S. Census and by that time his property was split equally between his sons, Oliver, age 29, whose real estate was valued at \$1,600 with another \$600 in personal assets, and George, age 23, whose real estate was also valued at \$1,600 with \$400 in personal assets. A third son, Alan, age 20, received a smaller share of the property with his real estate valued at \$800 and having \$200 in personal assets. All three, however appear to have resided within their father's home. Living with them was George's twin sister, Jane Abington. The sons appear to have no longer favored slavery as they are not listed as owning 16 slaves (U.S. Census 1860, Slave Schedule). but instead hired two laborers, Alfred Fanning, age 18, born in Missouri of European American ancestry, and Alen Mense, age 29, who was an immigrant from Germany. Mense also had \$300 in personal assets. The laborers would have assisted the Abington brothers in the operation of their farm.

After the Civil War, the value of Abington real estate increased to \$7000, and Oliver's personal assets had increased to \$800. By that time, Oliver had married. He and his wife, Jane, had 5 children between the ages of 7 and 1 years old. Only his brother, George (who was unmarried), continued to reside with them, with his personal assets listed as a low \$150. Either his lands had been acquired by his brother, Oliver, or more likely, the census taker just failed to account for George's nearly equal split of the property.

Shortly before 1905, the Abington property was acquired by August Panhorst. In 1880, he was residing with the O.G and Johanna Weinenick family in Callaway Township working as a servant, at the age of 16 (U.S. Census 1880). By 1900, he had been married to Amelia for 8 years, who was his second wife. They had one child, Olando, age 11. Both his Amelia and August's parents had been born in Germany, although both of them were born in Missouri (U.S. Census 1900). They appear to have resided within the original Abington residence, outside of the present project area. By 1930, the property was acquired by J.C. Halter, but it is unclear if he resided at this location. The 1920 census places a Jan C. Halter (a male) at another location within Cuivre Township and he is not listed at the site area on the 1930 census. Halter may have been using this as rental property or just been farming the land. By 1977, Lee D. Harrison is listed as the owner. His residence is just east of the proposed parkway. It is possible that this is the same location as the earlier Abington and Panhorst home and that the residence was just misplaced on earlier atlases. It is also possible that this is another residence constructed by Harrison.

#### **Description**

This site represented the remains of a farmstead. All of the buildings have been razed except for a barn, still standing beyond the proposed construction easement to the northeast. The remains of two outbuildings were discovered within the proposed David Hoekel Parkway construction easement. These buildings, however, appear to have been constructed during the 1920s or 1940s with a cement foundation and slab floor. The cement contained numerous pieces of large gravel suggesting it dated to the early 20th century. One building measured 11 by 11 meters. Adjacent to its southern side was a deep (2-3 meters) rectangular depression measuring 8 by 11 meters. This building probably represented a barn with the rectangular depression possibly representing an in-ground silo. About 12 meters to the southwest was another small outbuilding, with the same cement foundation, that measured 4 by 5 meters. These buildings appear to have been constructed by J.C. Hatler or by the next landowner, Harrison.

About 17 meters to the east of the razed barn, outside of the proposed roadway construction easement, was the remains of a house represented by an L-shaped 17 depression. This depression, measured 6 by 8 meters and was approximately 3 meters deep, probably representing the remains of a cellar. A cistern is at the southwestern edge of the house remains covered by a concrete block slab. Approximately 13 meters to the northeast of the residence are two wells, spaced about 4 meters apart, measuring 1.5 by 1.5 meters and 2 by 2 meters. Both wells were of concrete block construction and stand 1 to 1.5 meters above the ground. A barn still standing to the northeast of the wells has the same cement foundation.

Since the wells and cisterns are encased in cement, it suggests that these were both constructed about the same time as the outbuildings within the construction easement, during the 1920s or 1940s. The residence could also have been of later construction replacing the earlier one occupied by Abington and Panhorst. The atlases suggest that the original residence was located to the west of the current project area, possibly where an outbuilding is shown on the Foristell USGS quadrangle.

#### **Recommendations**

Although nearly all of the buildings have been razed, it is likely that the remains of the original residence used by Abington and more importantly yard features (e.g., wells, cisterns, and privies), used at various times and filled with artifacts reflecting different periods of use, could still exist on the property. These features, however, are outside of the

proposed construction easement. No further archaeological work is recommended at this site, however, since intact yard features could exist nearby, if plans are changed then the new plans need to be evaluated to determine if it will impact yard features.

#### Site 23SC2146

#### Historical Information

The archival research revealed that this farmstead was first utilized by James and Margaret Drummond (U.S. Census 1840). James Drummond Jr. was born in Fauquier County, Virginia. His father James Drummond Sr. came to the U.S. from England and served with the patriot army during the American Revolution. Drummond Jr. also served as a soldier during the War of 1812 and later married Martha Lucas (also from Virginia). They moved to St. Charles County in 1834 (Bryan and Rose 1876), where they established a farmstead at site 23SC2146. With them were seven children and six slaves according to the 1840 slave schedule; a male between 50 and 100 years old, three boys under the age of 10, a female between the ages of 10 and 24, and a girl under the age of 10 (U.S. Census 1840). Soon after the Drummonds arrived, however, Margaret died in 1843 followed shortly by James Drummond Jr. in 1845. The property was inherited by his son Harrison Drummond, age 40 by 1850, who was living within the same residence with his wife Elizabeth, age 41, and their 5 children, ages 15 to 3/12 (U.S. Census 1850). In 1850, he is listed as owning two slaves a male 68 and a female age 58, the ages would suggest that these were different slaves than owned by his father (U.S. Census 1850: slave schedule).

Either living on the same property or immediately adjacent to it was Shelti (sometimes spelled Sheltial) Ball. In 1850, his real estate was valued at \$2,000, while Drummond is not listed as owning real estate, which suggests that he was living with Ball (U.S. Census 1850). Ball was 38 in 1850 and living with his wife Ann and three children, ages 12 to 8/12. He held three slaves, two males, ages 28 and 4, and a female, age 25 (U.S. Census 1850: slave schedule).

By 1860, the Drummond property (including site 23SC2146) had definitely been acquired by Shelti Ball. Drummond is no longer listed as living near Flint Hill, although his youngest son, William Drummond, is listed as residing and working at the Flint Hill tobacco factory, despite being only 13 years old (U.S. Census 1860). With Drummond's wife having died in 1856, it is likely that William either moved in with one of his children or his sister, Mary, who was married to William E. Jackson and lived in St. Charles County since 1835. In 1866, both Drummond and William Jackson had died with Mary surviving until 1876. All three of them are buried within the family plot that was now owned by Ball. By 1860, Ball's (age 48) real estate value had risen to \$6,000 and his personal assets had also risen to \$6,000. Living with him was his wife, Anna (age 37), and their 6 children, who ranged in age from 21 to 1 years old. Also residing with them was Harriet Cordell, age 27, who had \$400 in personal assets. It is not clear, if she was a relative of the Ball family or worked as a house servant. Since the census does not indicate, it is likely that she was a relative. The Ball's also used slaves to work the property now having five slaves two males ages 52 and 16, and three females ages 49, 7, and 6. The slaves were residing within a separate residence (U.S. Census 1860: slave schedule).

After the Civil War, Ball's real estate values dropped slightly to \$5,000 as did his personal assets, which was evaluated at \$2,950 (U.S. Census 1870). Living with him and Anna were all 8 of their children, including the oldest daughter, Mary, who was 31, and the oldest son, Mehlville, age 20. Mehlville assisted his father in operating the farm as did a H. Cordell, but this was not the Harriet Cordell listed in the 1860 census, but a man, age 50, possibly further indicating that the Cordells were related to the Balls, possibly his wife's family. Ball's

wife died around 1870 and he continued to reside on the property according to the 1880 U.S. Census with the six younger children. Mary had apparently married and moved away. Mehlville had also married, Carry, who was 20 years old at the time of the 1880 Census. Living with them were two children, Goodrich age 1 and infant Anna. African Americans, Rachael Cooper, age 6, and William Corsberry, age 20, also resided with the family, with William assisting Mehlville with the farming operations. Mehlville, however, is listed just before Shelti's name on the census and could have owned an adjacent property, but it is more likely that he lived within a separate household on his father's land. Shelti also had an African American family living on his property, including Robert Cosby, age 77, who assisted in farming operations, his wife Polly and their 7 children, between the ages of 21 and 8. They most likely lived within another residence also located on the property.

On June 26, 1883, Shelti Ball died. Shortly after his death the family sold the property to Thomas Feldewert, age 55 at the time of the 1900 U.S. Census. Feldewert had immigrated to the U.S. in 1852. He continued to use the Drummond/Ball residence, living at this location with his wife, Philomena, whom he had married in 1871, she was 51 in 1900, and six of the youngest surviving children whose ages ranged between 25 and 9. By 1905, the property was taken over by the second oldest son, Theodore (Northwest Publishing Company 1905). Theodore is still listed on the 1930 atlas as owning this property, but his name does not appear on the 1920 or 1930 census near this location. It's possible that he rented out the farmstead at that time. By 1977, Jerome Galbiers had acquired the property.

#### Description

During the survey, it was discovered that the residence and a nearby outbuilding had recently been razed, although five other outbuildings continue to stand, which are described in the Architectural Evaluation section (Property 246). The 2007 aerial photograph of the residence suggest that it was an I-house (Figure 28). The outbuilding was a double pen and based on its location, it likely served as a summer kitchen in one pen and a slave quarters in the other pen. According to the 1860 Slave Schedules, Shelti Ball had slaves living within one separate building. Inside of a barn located just southwest of the residence, is a smaller residence. It could have been occupied by slaves or used by the Cosby family in 1880. In addition to the buildings, there is a good possibility that subsurface yard features are still intact around this farmstead. These subsurface features include a well located just southeast of the residence, which is within the proposed easement.

Also present just north of the proposed construction easement is the Drummond/Ball cemetery. The original tombstones have been replaced by a large tombstone marking the graves of the Drummond family including:

James Drummond Died 1845 Margaret Drummond Died 1843 Harrison Drummond Died 1866 Elizabeth Drummond Died 1856 Mary Drummond Died 1841 Ann Marie Drummond Died 1841 William Drummond Died 1863 William E. Jackson Died 1866 Mary Ann Jackson Died 1876 Katherine Ryan Died 1891 Rachel Drummond Died 1859 The area has also been covered by concrete. The Ball family is not mentioned on this headstone. Their headstones were found displaced at the southern edge of the graveyard. It was also a common practice to bury slaves in unmarked graves outside of the family burial ground or in a separate unmarked grave that could exist on this property.

#### **Recommendations**

Although the original residence and possibly the summer kitchen/slave quarters have been razed, it is likely that yard features and intact artifacts are still associated with this historic farmstead. These remains could provide insights into the lives of slave holding families and of slaves prior to the Civil War and the changes brought on as a result of this conflict. All of these remains, including the familiy cemetery, are situated to the north, outside of the current construction corridor; however, a well located southeast of the residence is within the proposed construction easement. If this well will be impacted by the proposed construction, then its contents should be removed prior to being destroyed. The SHPO has not yet concurred on the recommendation for this site.

## D. Architectural Survey

The main objective of the David Hoekel Parkway architectural study is to reevaluate previously recorded architectural resources and to identify any unknown architectural resources (i.e., buildings, structures, objects, bridges, districts, landscapes, and cemeteries) that may exist within or immediately adjacent to the proposed road improvements to the Wentzville David Hoekel Parkway architectural study area. The potential significance of these resources was assessed according to National Register criteria and recommendations were made on the future management of cultural resources.

#### 1. METHODOLOGY

The architectural study was conducted between March 11 and 14, 2008 by Janet Kneller and Robin Machiran of the Archaeological Research Center of St. Louis, Inc. The architectural study are was defined as the proposed construction corridor plus a 150-foot buffer, which could have visual or sound impacts due to the construction of the proposed David Hoekel Parkway. Landowner parcels within the architectural study area were numbered consecutively from south to north; starting at the Jackson Road and South Pointe Prairie Road intersection; the numbering continued consecutively from south to north along South Pointe Road and veered west to parallel South Pointe Road; then from west to east along the North Service Road; then south to north on North Pointe Prairie Road; then from west to east on Goodfellow Road and curve south to intersect North Service Road: and then north from Goodfellow Road and then curving east to join Peine Road west of Highway 61 continuing across the highway and intersecting County Road P east of Flint Hill. An additional designation was placed in front of certain property numbers; "AD" for access denied; "C" for cemetery; "CL" for commuter lot; "M" for modern resources constructed after 1962; "P" for parcels in the study area, but the associated buildings are outside the study area; "R" for roads inadvertently numbered; and "V" for parcels with no buildings, structures, or objects. If it was discovered that a parcel was missed during the numbering, that parcel took the adjacent parcel number followed by a lower case letter "a". There were no properties or districts currently listed on the National Register of Historic Places or recommended for the National Register in the architectural study area.

In accordance with the scope of services, all properties or districts constructed before 1963 and recommended for the National Register will have at least two photographs taken from different angles. Additional photographs will be taken of outbuildings and any significant architectural features. For those properties recommended eligible for the National Register, a Missouri State Historic Preservation Office Architectural/Historic Inventory Survey Forms will be completed

along with a sketch map and a history to determine specific eligibility under criteria A, B, C, and D, as well as the direct or indirect impact on the property. At least one photograph will be taken of all properties constructed prior to 1963, but not eligible for the National Register. No photographs will be taken of buildings constructed after 1962. All property construction dates, updated as of January 21, 2008 were acquired from the St. Charles County Assessor's site (http://assessors.sccmo.org/assessor).

A historic bridge investigation identified all bridges and documented all bridge resources constructed prior to 1963. Bridges as defined included highway, railroad, pedestrian, viaducts, and culverts. Excluded from this survey were metal, plastic, concrete pipes, and most concrete bridges and culverts under 20 feet of roadway length. All pre-1963 bridges will be photographed, mapped on the aerial maps with the standard MoDOT Transportation Management System (TMS) bridge number. State Historic Preservation Office/Historic Bridge Inventory Forms will be completed only for bridges recommended as eligible for the National Register. Bridge photographs will also be numbered with TMS numbers. Bridge information and evaluation was coordinated with Randy Dawdy at MoDOT.

Residential architectural styles were identified and categorized using: A Field Guide to American Houses by Virginia and Lee McAlester; What Style Is It? A Guide to American Architecture by John C. Poppeliers, S. Allen Chambers, Jr., and Nancy B. Schwartz; Identifying American Architecture: A Pictorial Guide to Styles and Terms, 1600-1945 by John J. G. Blumenson; Ozark Vernacular Houses: A Study of Rural Homeplaces in the Arkansas Ozarks 1830-1930 by Jean Sizemore; The Visual Dictionary of American Domestic Architecture by Rachel Carley; A Field Guide to American Architecture by Carole Rifkind; American Architecture Since 1780: A Guide to the Styles by Marcus Whiffen; and Folk Architecture in Little Dixie; A Regional Culture in Missouri by Howard Wight Marshall. Architectural styles for commercial buildings were identified and categorized according to The Buildings of Main Street by Richard Longstreth and Vernacular Architecture in Rural and Small Town Missouri: An Introduction by Howard Wight Marshall. Barns and outbuildings were identified and categorized using: Old Barns in the New World: Reconstructing History by Richard W. Babcock and Lauren R. Stevens; The Old Barn Book: A Field Guide to North American Barns & Other Farm Structures by Allen G. Noble and Richard K. Cleek; and Barns of the Midwest by Allen G. Noble and Hubert G. H. Wilhelm.

#### 2. RESULTS OF THE ARCHITECTURAL STUDY

The architectural study resulted in the evaluation of 255 Properties. No previously unidentified bridges were located and those previously identified were all constructed or reconstructed after 1962. They were also previously considered as non-significant. Of the 255 properties there were the following:

Number of Properties	Designated Category
10	Access Denied Properties (AD)
1	Cemeteries (C)
1	Commuter Lot (CL)
95	Modern Properties constructed after 1962 (M)
17	Properties in the study area with buildings outside the survey area (P)
2	Roads that were inadvertently given a property number (R)
111	Properties with no buildings (V)
18	Number of properties constructed before 1963

Table 4: Architectural Survey Property Categories

Aerial maps showing the identification number and location of each property within the architectural study area are located at the end of this appendix.

#### a. Access Denied Properties

Access denied properties include land owners that returned an HNTB letter, those that denied access at the time of the survey, and those that could not be reached after multiple attempts that took place two days before the survey and everyday until the survey was completed. None of the properties in the study area were considered significant using the criteria established for nominating properties to the National Register of Historic Places. Of the 255 property numbers, only ten properties denied access (46, 156, 188, 188a, 226, 226a, 234, 234a, 234b, 234c, 236).

#### b. Cemeteries

One private cemetery was encountered in the study area, property C242, located at the east terminus of the project, just to the north outside the study area. A memorial marker to the Drummond family is in the center of an iron fenced area. Also scattered around are a few broken pieces of tombstones. Outside of the fence are a few more broken tombstones. One of the engravings may possibly read as Shelty Ball.

The farmstead was first utilized by James and Margaret Drummond (U.S. Census 1840). Living with them were seven children and six slaves (U.S. Census 1840). Margaret Drummond died in 1843 followed shortly by James Drummond Jr. in 1845. The property was inherited by his son Harrison Drummond, but by 1850, either a part or all of the property had been acquired by Shelti (sometimes spelled Sheltial) Ball. Living with him was his wife, Anna (age 37), and their 6 children, who ranged in age from 21 to 1 years old. Also residing with them was Harriet Cordell, probably a relative, and five slaves (U.S. Census 1860). On June 26, 1883, Shelti Ball died and shortly after his death, the family sold the property to Thomas Feldewert. More information on the Drummond/Ball farmstead is described in the Archaeological Survey section (Site 23SC2146) of this Appendix.

#### c. Commuter Lot

Also found within the architectural study area was property CL231a, a commuter lot. This lot is a Missouri Department of Transportation community service that allows people to park their cars and car pool or take public transportation.

#### d. Modern Buildings

Throughout the study area are 95 properties with modern buildings constructed after 1962. The buildings are a mixture of mostly residential, with a few agricultural out buildings and light industrial. This mixture reflects the cultural change from a few remnants of rural agricultural to a suburban community. The majority of these buildings are ranch housing and a few Butler buildings. The Ranch of the modern movement originated in California in the 1930s, the popular ascendance of this style was closely linked to the automobile. In the 1940s, following the war, Ranch housing became the desired expression of the population's move out of the cities and onto large sprawling tracts of land. Borrowing from a Spanish Colonial topology as well as from both the Prairie and Craftsman housing, these buildings typically have low-pitch roofs that are either hipped, cross-gabled, or side-gabled. The eaves have modest overhangs and may be either boxed or open. Ranch houses stretch across their site and normally have long front facades often with attached garages. Among the prime difference between this type and the prior housing models of the late 19<sup>th</sup> and early 20<sup>th</sup> century are the lack of front and/or side porches. Instead, patios placed to the rear of the house take the place of these outdoor areas. This pattern has since become well ingrained into the fabric of society (McAlester

1996:479). Many of these modern Ranch homes are now designed with Colonial Revival or Neoclassical attributes.

As Wentzville transitions to a suburban community, commercial and some light industry has developed with most along Highway 61. Some of these enterprises have constructed Butler buildings with brick or stone facade veneers to enhance their business image. Butler buildings are steel buildings that are constructed more quickly and cheaply than more conventional types of construction. Many of these buildings have a rigid or web frame with pre-punched truss purlins and rod braces in the walls and roof (Butler n.d.).

#### e. Properties with Buildings Outside Study Area

There are 17 "P" designated properties in the study area. A portion of each "P" parcel is in the study area, although none of the associated property buildings are in the study area.

#### f. Roads Given a Property Number

Two properties are designated "R". R22 and R36 were inadvertently given a number but they are roads.

#### g. Properties with No Buildings (Vacant)

There are no buildings in the study area on properties designated with a "V". A majority of the 111 with this designation are composed of platted but not constructed subdivisions. The remaining few are agricultural parcels that have no buildings on the property.

#### h. Properties Constructed Before 1963

Of the 255 properties in the study area, only 18 buildings were constructed prior to 1963. Photographs for these buildings are included in the full report titled *Cultural Resources Investigation for the Proposed David Hoekel Parkway, City of Wentzville, St. Charles County, Missouri.* All of these buildings are vernacular and forms of the buildings are listed below:

- 3 Outbuildings
- 1 I-house
- 1 4-square (one story pyramid)
- 1 4-square (two story pyramid)
- 5 Minimal traditional
- 6 Ranch
- 1 Split level

The study of vernacular buildings owes a debt to the "cultural geographer, Fred Griffen who pioneered the description of common house forms. He was also the first to grapple systematically with house classification using structural criteria" (Jakle et al 1989:5). Temporarily, he mentally stripped the buildings of there variations until he arrived at their "central themes" (Kniffen 1936:179). Henry Glassie, the folklorist also contributed by changing the emphasis to the culture and history of the builder and the person occupying the home giving purpose to the study of house forms. Social historians concentrated more on the archival, and the social implications of housing and the patterns of historical development. Geographers contributed by bringing an understanding of the spacial and geographic housing patterns (Jakle et al 1989:1-10; Upton 1981:60). This combination of academic fields makes vernacular architecture the most interdisciplinary studied field in American studies (Upton 1981:58).

Folk vernacular and vernacular mainly differ because during the building process the Folk builder and client knew each other and their reputations. Although, decisions would be made by

both the builder and the client, they are both rooted in the same regional culture. In vernacular housing of the late 19<sup>th</sup>, 20<sup>th</sup>, and 21<sup>st</sup> centuries, the builder and client rarely know each other and the client has little input in the outcome of the building (Bisher 1986:448). The building process is steeped in the commercialization of popular culture accepted by the majority of the community or regional area. Resulting buildings borrow a mix of decorative style to give the impression of wealth and success.

Studying vernacular architecture places the emphasis on identifying different kinds of housing on structural form and away from the traditional emphasis on decorative detailing. It uses the house as an artifact that reflects the social and cultural variety in the region. The idea is to try and visualize structural details as the builder did and then visually/mentally put them together to remake the building.

**Outbuildings** – The study area is an example of a rural suburban linkage, where the rural link has almost completely converted to suburban. The three examples of properties with only outbuildings constructed before 1963 exemplifies this linkage. Properties 19 and 20 have modern main buildings with old outbuildings, while the main building on Property 246 has been demolished and only the outbuildings remain. Property 19, the 1987 Cross Roads Free Baptist Church, at 2349 Pearce Boulevard has a modern cross gabled roof with a large addition on the east side. Also on the property are two older frame outbuildings, one outbuilding is a front gabled rectangular shed with horizontal siding and an asphalt roof. The other is a square frame privy with a gabled asphalt roof.

On Property 20, Building 1, 67 North Pointe Prairie Road is a modern vinyl sided Ranch with a gabled asphalt roof constructed in 1979. All the remaining buildings on the property were built in the 1930s. Building 2 is a barn that has a concrete foundation, board and batten siding along with some sheet metal siding. It has a gambreled asphalt roof and a shed asphalt roofed drive through addition. Building 3 is a frame and pole shed on a concrete foundation with a gabled metal roof and horizontal siding. Building 4 is a chicken house/shed with a concrete foundation, vertical board siding and a gabled asphalt roof. It has several pole and frame additions. Some of the additions have asphalt roofs while others are metal. Building 5 is a frame front gabled garage on a concrete foundation with asbestos siding and asphalt sheeting on the roof. Two six light windows are on the east and west sides of the building. Just to the west and beside Building 5 is Building 6, a small cedar shingled gable roofed frame shed set on wooden skids.

The original residence on Property 246 has been demolished, leaving a shallow depression and remnants of a limestone foundation. Building 1 appears to be a vertical board barn with shed additions around the entire circumference, but inside is a two room house. This is a frame house on a concrete foundation. After use as a home, it was probably converted to a granary and the outer additions were used to house cattle. The board and batten sided frame Building 2 sits on a concrete foundation and has a metal gabled roof. This building shows that over time it has been converted to at least three uses, chicken house, hog house, and machine shed. Building 3 is a metal sided and gabled shed with an open front gable sited on concrete blocks. Building 4, a frame privy on a concrete foundation has a metal shed roof and is also on. Building 5 is a frame barn on a concrete foundation with a pole addition on the south side. It has vertical board siding with some of the siding covered over with metal sheeting and a metal gabled roof. None of the outbuildings on these three properties are recommended for the National Register of Historic Places under criteria A, B, C, or D.

I-house - In 1936, Fred Kniffen coined the term I-house in recognition of the building forms presence throughout the states of Indiana, Illinois, and Iowa (Kniffen 1936:185-These buildings were recognized as a dominant form throughout the Upland 186). South region during the 19<sup>th</sup> century (Kniffen 1965:551-555). I-houses have a linear plan that is typically one room deep, two rooms long, and two stories high, with tall exterior chimneys on the gable ends. There is one two-story 1890 constructed I-house in the study area (Property 43). The original portion of the residence at 180 North Pointe Prairie Road has a limestone foundation, an entrance door with a multiple light surround, weatherboard siding, replacement 1/1 light windows, a modern fixed octagon window in the second floor hallway, an asphalt roof, and an interior brick chimney at each gable end. A two-story asphalt gabled addition extends across the entire rear of the I-house. Mirrors are located on the south side of the gable to collect the energy from the sun. There is a smaller rectangular addition on the south side and a Queen Anne styled turret asphalt roofed octagon addition on the southeast corner. A wraparound porch is completed in the Queen Anne decor on the west and south sides of the building. Although in excellent repair condition, the property lacks integrity and is not significant under criteria A, B, C, or D, therefore, is not recommended for the National Register of Historic Places.

Four-Square (One-Story Pyramid) - The only massed plan pyramid in the study area is Property 58, at 102 Langtree Drive. Square shaped massed plan housing with pyramid roofs are more complicated and less costly to construct. The roof has more intricate framing but uses a smaller number of long spanned rafters thereby reducing the According to the St. Charles County database, the residence was building cost. constructed in1950. It is more likely that the large addition was constructed in 1950 and the original portion of the house and the garage were built in the early 1900s. Both the original house and garage have a concrete foundation, wood siding, 4/4 light hung sash windows, and metal pyramid roofs. Sears Roebuck sold 4/4 light windows from "1908-1935 and most companies sold 6/6 from the beginning of the century to 1940" (Jennings & Gottfried 1988:14-15). The original portion of the residence has a concrete basement. A shed dormer with a pair of two light windows is on the front of the original portion, a brick chimney on the east side, and a metal chimney on the north side. The two-car garage has a ventilator on the center of its pyramid roof. The large addition on the east side of the residence has a concrete foundation, wood siding, picture window with side lights, metal awnings, and a metal pyramid roof. This property has been altered by an addition on the side almost as large as the original house and it also has a smaller addition on the rear of the original section. It completely lacks integrity under criterion C and also lacks significance under criteria A, B, and D. It is not recommended for the National Register of Historic Places.

*Four-Square (Two-Story Pyramid)* – Building 1, of Property 38 is the only two-story, four square pyramid in the study area. This residence at 2427 Goodfellow Road was constructed in 1930 and has a two-story bay extension on the front facade. This fame building has a concrete foundation and basement, vinyl siding, replacement 1/1 light hung sash windows, an asphalt pyramid roof, and a centered brick chimney. It also has two additions. One is a one-story rectangular addition on the east side with a concrete foundation, metal siding, an asphalt gabled roof, and a concrete and brick chimney. A fixed picture window with narrow 1/1 light hung sash on each side is on the front facade. A large two-story addition is on the rear of the building. A concrete porch with square posts and a hipped asphalt roof is across the front of the main portion of the house. Building 2, a barn, was constructed at approximately the same time as the residence. It has a concrete foundation, vertical board siding, and a metal gabled roof. Building 3 is a rectangular shed with metal siding, metal gabled roof and 1/1 sliding windows on the

south and east sides. A gabled asphalt roofed addition is attached to the north side. Building 4 is a gabled frame shed with multiple additions. Building 5 is a pole machine shed that has been converted to an automobile garage and storage shed. This property is not recommended for the National Register of Historic Places under criteria A, B, C, or D.

*Minimal Traditional* – The modern period of housing construction began in the mid 1930s and continues to the present. Modern housing forms in the study area include Minimal Traditional, Ranch, and Split Level. Resulting from the economic difficulties of the Great Depression, the Minimal Traditional houses reflected the immediately preceding styles such as Craftsman, Tudor, and Prairie, but lacked their exterior detailing. The roof pitches were lower and both the eaves and the rake were shallow, having little or no overhang. Following World War II, in the late 1940s, this style of housing became the dominant building type. Typically Minimal Traditional houses were built in tract developments. Occasionally, the houses in these developments were constructed to a unique character, more often, they followed an identical floor plan and resulted in the appearance of stereotypical "cookie cutter" housing (McAlester 1996:478).

The five Minimal Traditional properties constructed prior to 1963 are Properties 25, 123, 209, 210, and 213. Property 25 at 2577 Goodfellow Road is a 1945 frame house with a concrete foundation and basement, asbestos siding, 1/1 light hung sash windows, an asphalt gabled roof, and a brick chimney. The front entrance door has 15 fixed lights and metal scroll patterned posts on the porch. An addition has been added on the east end of the residence, giving the house the overall appearance of a Ranch. There is also another small addition on the rear. This property is not recommended for the National Register of Historic Places under criteria A, B, C, or D.

The residence (Building 1) at 2501 Meyer Road on Property 123, was built in 1954. This Minimal Traditional house has a concrete foundation, asbestos siding, 8/8 light hung sash windows with shutters, and an asphalt gabled roof. The entrance door has four fixed side lights on each side. Constructed at the same time was the garage with concrete foundation, asbestos siding, 6/6 light hung sash windows, and asphalt gables roof. At a later date, an enclosed breezeway was built to connect the residence with the garage. It has 1/1 light hung sash windows. A small addition was also added on the rear of the house. Building 2 is a front gabled concrete block chicken house with two banks of three 4/4 light hung sash windows, a metal roof and ventilator. Building 3 is a metal covered frame machine shed that was probably previously used as a barn. Building 4 is a front gabled shop with vertical board, plywood and corrugated metal siding, 8 light door, a brick external chimney on the gable end next to the door, and a metal roof. Property 123 lacks integrity for criterion A and is not significant under criteria B, C, or D, therefore is not recommended for the National Register of Historic Places.

Property 209, at 1975 Peine Road, is a Minimal Traditional constructed in 1949. It has a concrete foundation, vinyl siding, and an asphalt gabled roof. All of the windows are 1/1 light hung sash windows except for the original 4/1 light hung sash window in the gable. Built at a later date are the two car garage and the breezeway that connects the residence to the garage. Both of these additions are sided the same as the house and have asphalt gabled roofs. Behind the garage are two gabled sheds. The one directly behind the garage has asbestos siding and an asphalt roof, while the other one is metal sided with a metal roof. This property is not recommended for the National Register of Historic Places under criteria A, B, C, or D.

The residence at 1987 Peine Road (Property 210) is a Minimal Traditional constructed in 1946. The side gabled and wing form sits on a concrete foundation and is clad in aluminum siding with 4/1 light hung sash windows, aluminum shutters, concrete block chimney, and a metal roof. Windows with 4/1 lights were most popular from 1916-1926 (Jennings & Gottfried 1988:13). Decorative metal posts support a metal shed roof on the front porch. This porch is concrete with a metal railing. An enclosed porch like addition is clad the same as the home with a hipped metal roof on the west end of the house. The upper half is a continuous row of one light fixed windows on three sides of the addition. Also clad and roofed the same as house is a two car garage built near the house but not attached. This property is not considered significant under criteria A, B, C, or D for the National Register of Historic Places.

At 1997 Peine Road is Property 213, a Minimal Traditional house constructed in1950. This residence has a concrete basement, fixed basement windows, vinyl siding, 3/1 light hung sash windows, an asphalt gabled roof, and a brick chimney. Windows with 3/1 lights were most popular from 1920-1935 (Jennings & Gottfried 1988:13). Asphalt gabled dormers are on the front and rear of the building. The asphalt gabled porch roof is supported by decorative metal posts anchored in a concrete foundation with a metal railing. This property has no garage or out buildings and is not recommended under criteria A, B, C, or D for the National Register of historic Places.

**Ranch** – Concurrent with the Minimal Traditional was the Ranch, of which there are six Ranch homes in the study area constructed before 1963 (Properties 42, 214, 216, 217, 219, & 222). Property 42 at 2323 Goodfellow Road is a Ranch house constructed in 1961. It has a concrete foundation and basement, asbestos siding, sliding windows, and an asphalt gabled roof. The garage is incorporated into the east end of the residence. At the front entrance is a concrete slab supported by plain wooden posts and protected from rain by the roof extended over the slab. A modern gabled metal Butler Building machine shed on a concrete foundation is also on the property. This property is not recommended for the National Register under criteria A, B, C, or D.

At 1970 Hill Road is a residence that was constructed in 1962 (Property 214). The House has a concrete foundation and basement, drop siding, replacement 1/1 light hung sash windows, and aluminum shutters, and a gabled asphalt roof. Wood posts and railing delineate the front entrance and the roof extends over the front entrance and the entrance to the garage. Property 214 is not significant under criteria A, B, C, or D and is not recommended for the National Register of Historic Places.

The residence at 2011 Peine Road was built in 1961 (Property 216). It has a concrete foundation and basement with weatherboard siding, replacement 1/1 hung sash windows and garage door, aluminum shutters, and a hipped asphalt roof. The garage is incorporated in the west end of the Ranch house. A concrete slab is at the front entrance and the asphalt roof extends over the slab. The overhanging roof is supported by vinyl posts and vinyl railing. There is a vinyl porch addition on the rear of the residence. This property is not recommended for the National Register of Historic Places under criteria A, B, C, or D.

Property 217, at 2017 Peine Road, is a Ranch home constructed in 1961. The residence has a concrete foundation, weatherboard siding, a picture window with1/1 light hung sash windows on both sides. All other windows are 1/1 light hung sash. Asphalt shingles are on the hipped roof. The concrete slab in front of the entrance is covered by a pent roof supported by vinyl posts and a vinyl sunburst railing. An outbuilding behind the home has vertical board siding, an asphalt shed roof and an asphalt shed roof

addition. The addition is sided with vertical board and has two square fixed one light windows on the south side. This property lacks integrity for criterion C and is not significant under criteria A, B, or D. It is not recommended for the National Register of Historic Places.

The residence at 2023 Peine Road is a Ranch built in 1961 (Property 219). This property has a concrete foundation, asbestos siding, a picture window with 1/1 light hung sash window on each side. All other windows are 1/1 light hung sash and some of the windows have aluminum shutters. The asphalt hipped roof extends over the house and concrete carport. Square wooden posts support the west side of the carport roof. Just west of the carport is a religious shrine and a flag pole is in front of the entrance. This property is not recommended for the National Register of Historic Places under criteria A, B, C, or D.

Property 222, at 2035 Peine Road, was constructed in 1961. This Ranch has concrete foundation and basement, asbestos siding, a picture window with 1/1 light hung sash windows on either side, and a hipped asphalt roof. The rest of the windows on the residence are 1/1 light hung sash. A concrete slab is in front of the entrance and overhead is a pent asphalt roof supported by braced posts. Attached to the east end of the buildings is an addition with board and batten siding and an asphalt gabled roof. It is not recommended for the National Register under criteria A, B, C, or D.

**Split Level** – In the mid 1950s, the Split Level house became a popular house style, as a two-story modification of the Ranch house. This style maintains the overhanging eaves, roof pitches, and horizontal lines of the Ranch style but adds a two-story section and places the one-story wing at a mid-height level to create three separate floor levels. This modification allows rooms to be grouped by function on separate levels of the house (McAlester 1996:481). Property 39, at 2383 Goodfellow Road, is the only Split Level constructed prior to 1963 in the study area. This residence has a concrete foundation and basement. Wall treatment consists of brick veneer on the lower portion and the upper portion has vinyl siding. There are a variety of windows including: sliding, 2/2 vertical hung sash, and 3/1 hung sash. The asphalt gabled roof is in the T form. The front entrance has a 21 light door. An asphalt shed roof protects the entrance and is supported by square posts over a concrete slab. This property is not significant under criteria A, B, or D and lacks integrity for criterion C, therefore, is not recommended for the National Register of Historic Places.

#### 3. SUMMARY, IMPACTS, AND RECOMMENDATIONS

The architectural study area of the David Hoekel Parkway resulted in the evaluation of 255 properties, although 10 properties could not be accessed because of failure to obtain landowner permission. None of these properties had been previously recorded. Also evaluated were nine previously recorded non-significant bridges and culverts; no previously unrecorded bridges were identified within the study area. These bridges were all constructed or replaced after 1962 and none were considered significant. The potential significance of the cultural resources was assessed as part of these investigations based on criteria established for nominating properties to the National Register of Historic Places (Federal Register 1974:5907).

During the evaluation, one cemetery was encountered. The cemetery at Property C242 was the Drummond/Ball family plot on Highway P at the east terminus of the project. This family cemetery should be avoided during construction and is not impacted by the proposed action.

None of the architectural resources examined during the current investigations were recommended for Criteria A, B, C, or D. All of them lacked local, state, and national historic

context and had no association to historic events (Criterion A). Under Criterion B, none of the properties were associated with any person of individual significance. All of the resources also lacked integrity and significance for physical design or architectural construction (Criterion C). None of the architectural resources have or ever had any information to contribute to our understanding of human prehistory or history (Criterion D). For these reasons, project clearance is recommended for all areas of the David Hoekel Parkway architectural study area, except for those properties where access was denied.

The archaeological survey resulted in the identification of five prehistoric sites. Sites 23SC2139 and 23SC2145 appeared to be special function camps occupied by only a small number of people for short durations. Few remains were probably left at these locations and further work would provide little new information.

Site 23SC2144 is a small Burlington chert quarry. Although few of these sites have been identified in St. Charles County and little work has been performed at these locations, little new information would probably come from conducting further work at this small (ca. 3 by 3 meter) quarry pit. Larger quarry pits likely exist in the area, nearer to McCoy Creek and the proposed construction easement did not include the associated lithic processing station, where the excavated chert was further worked before being brought to habitation sites, and where other activities were probably performed. These stations probably exist on the ridge top or at the base of the ridge to the north, nearer to McCoy Creek. Since little new information will be gained from excavating this quarry, no further work is recommended.

Site 23SC2142 appears to have been a larger, possibly residential camp due to the presence of a diversity of tools (a gouge, a wood scraper, and a graver). This habitation site would have been significant as it was located near the drainage divide some distance from a permanent source of water. Waterways not only provided people with fresh water to drink and use, but also supported the greatest diversity of plant and animal species as well as served as the main avenues of travel, communications, and commerce. Unfortunately, site 23SC2142 had been severely disturbed due to grading associated with a new subdivision. Any intact features and other remains have been destroyed, so no further work is recommended at this location.

Site 23SC2140, however, appears to be intact and produced at least one flake in nearly every shovel test conducted across this site. The number of artifacts recovered despite the poor visibility suggests that subsurface remains could still exist at this site and it could have served as a residential site. Information available at this site is significant according to Criterion D as it could provide information for understanding prehistoric use of the area. It is recommended that either the construction easement be altered to avoid site 23SC2140 or that this site be tested prior to design to better assess its significance according to Criterion D.

The archaeological survey also resulted in the identification of four historic sites. Site 23SC2138 was occupied shortly before 1900 until about 1930. This area has been scraped destroying most of the house remains, but it is possible that subsurface yard features (privies, wells, and cisterns) could still exist, although these features were probably located behind the residence and outside of the proposed construction easement. Site 23SC2143 was occupied between 1850 and 1910; this area has been also scraped and a pond was recently constructed near the house location. Although it is possible that subsurface yard features could still exist, better examples of 19<sup>th</sup> and early 20<sup>th</sup> century farmsteads exist in the area. No further work is recommended at either of these sites.

Site 23SC2141 was first occupied by at least 1840 and the farmstead continued to be used into modern times. Intact remains dating to the 19<sup>th</sup> and early 20<sup>th</sup> century likely exist and could provide important insights into the lives of the early farmers of this region. Thus, it would be

significant according to Criterion D. However, the older homes are located just outside the proposed construction easement. It is recommended that no further work is necessary at this location, but if construction plans change an evaluation of the potential impact to the older sections of this farmstead will need to be determined.

Site 23SC2146 consists of a farmstead dating back to 1834 when the Drummonds first established it. During the survey, it was discovered that the residence and a nearby outbuilding had recently been razed, although five other outbuildings continue to stand. Although the original residence and possibly the summer kitchen/slave quarters have been razed, it is likely that yard features and intact artifacts are still associated with this historic farmstead. All of these remains, including the family cemetery, are situated to the north, outside of the proposed current construction easement; however, a well located southeast of the residence is within the proposed construction easement. If this well would be impacted by the Proposed Action, it is recommended that its contents should be removed prior to being destroyed.

There are two archaeological sites that are preliminarily recommended for further work, depending on concurrence by the SHPO: Site 23SC2140 and Site 23SC2146, which will need to be tested to determine their prehistoric significance. Construction should be granted in the other portions of the study area, with the exception of the few areas which could not be surveyed. When access is possible, these places should be surveyed to determine if any significant cultural resources exist. Also, due to the presence of potentially significant cultural resources, just outside the proposed David Hoekel Parkway construction easement, it is further recommended that if construction plans are changed that a determination should be made concerning the need for further fieldwork.

#### **RECENT SHPO CORRESPONDENCE**

A copy of the full Cultural Resources report (from which the text in this appendix was excerpted) titled *Cultural Resources Investigation for the Proposed David Hoekel Parkway, City of Wentzville, St. Charles County, Missouri,* was submitted to the State Historic Preservation Office (SHPO) for review and request for determination. The SHPO sent a letter dated August 19, 2008 (see Appendix I), stating that only archaeological sites 23SC2140, 23SC2141 and 23SC2146 may be eligible for the NRHP and should undergo further archaeological subsurface testing. The SHPO also concurred that none of the buildings or structures included in the report were eligible for the NRHP.

### ADDENDUM TO CULTURAL RESOURCE INVESTIGATIONS FOR THE PROPOSED DAVID HOEKEL PARKWAY, CITY OF WENTZVILLE, ST. CHARLES COUNTY, MISSOURI

#### Prepared for: HNTB, CITY OF WENTZVILLE, MISSOURI DEPARTMENT OF TRANSPORTATION MISSOURI DEPARTMENT OF NATURAL RESOURCES STATE HISTORIC PRESERVATION OFFICE

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Research Report #686

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#### INTRODUCTION

HNTB and the City of Wentzville in St. Charles County, Missouri have changed the design concept of the Peine Road and U.S. Highway 61 interchange with the proposed David Hoekel Parkway (Figure 1). The new proposed location of the interchange requires an update of the previous cultural resource investigations reported in the *Cultural Resource Investigations for the Proposed David Hoekel Parkway, City of Wentzville, St. Charles County, Missouri* by Harl & Kneller in 2008. This update includes an archaeological field survey, an architectural survey, and an addendum report of the new proposed interchange. In addition, all properties in the original report that have reached 45 years old since 2008 were revisited and reevaluated.

The methodology used for this report is the same as the original report except that all new property lines are outlined in yellow and all reevaluated properties are numbered in red. Any properties without a number were given a number sequential to the last one in the original report. Designations were placed in front of certain property numbers, which were the same as from the original report. These designations were "AD" for properties where access was denied; "CL" for commuter lots; "M" for modern resources constructed after 1967; "P" for parcels in the study area but associated buildings and structures outside of the architectural area of potential effect (APE); and "V" for parcels with no buildings, structures, or objects. Property numbers with no letter designation were constructed before 1968 (Figure 2; Table 1; Harl & Kneller 2008:56).

Photos of areas and structures investigated in the field survey were included in the full Addendum report, but are excluded from this appendix.

#### RESULTS

A records and literature search was performed at the Missouri Department of Natural Resources, State Historic Preservation Office (SHPO), in Jefferson City on December 7, 2012 to identify any cultural resources reported since the original David Hoekel Parkway report was completed in June of 2008. The archival search revealed that no properties have been placed on the National Register of Historic Places (NRHP) and no cultural resource surveys were conducted within the project area in the four years since the 2008 survey.

The archaeological area of potential effect (APE) was defined as the proposed construction limits (Figure 2). The archaeological survey was conducted on December 6, 2012 by Janet Kneller and Meredith Hawkins Trautt. It was a partly cloudy day with the temperature between 40-50 degrees Fahrenheit. Visibility within Areas A, B, D, E, and F was only 0-10% (Figure 3). Area A obviously was landscaped and disturbed by the construction of a retention pond and U.S. 61. Area B was covered with grass and weeds. Three shovel tests were conducted in this area which revealed that subsoil, dark yellowish brown (10YR 4/4) clayey loam, was on surface. This indicated Area B had been disturbed. Access was not possible for Area C because it was surrounded by a fence with a locked gate. From the road, however, this area appeared to have been clearly disturbed by landscaping for a soccer field, the construction of utility lines, the construction of Highway 61, and a gravel road running parallel to the highway. Area D also was landscaped. Two shovel tests were placed in this area which

identified that the soil was a dark brown (10YR 3/3) silty loam about 5 centimeters deep. Under this was a layer of gravel, indicating that the area was disturbed. No shovel tests were performed in Areas E and F, which were visibly disturbed by the construction of roadways (Figure 3).

The architectural APE was defined as the archaeological APE plus 150 feet on either side of the archaeological APE to accommodate for any visual impacts resulting from the construction of the new interchange (Figure 2). Six properties (P248, 249, P250, V251, P252, and V253) were located within the current architectural APE that were not surveyed in the original report (Figure 2; Table 1; Harl & Kneller 2008). Property 249 was the only new parcel that had a building within the current architectural APE that was 45 years or older. The building was a gabled Ranch residence with modern vinyl cladding, an asphalt roof with gable returns, and a concrete basement constructed in 1960. The basement was only under the main portion of the house. Windows on the building were a combination 1/1 light double hung sash and 1/1 light sliding and the majority of the windows were covered with aluminum storm windows. It had a large asphalt gabled roof and vinyl sided garage addition and two smaller asphalt gabled vinyl additions and as a result it no longer retains its original integrity, and is not recommended for the NRHP.

Due to the length of time that had passed between the original report and the current study, Bob Reeder of the Missouri Department of Transportation (MoDOT) requested a reevaluation of all properties within the original David Hoekel Parkway architectural APE that had reached the 45 year mark since 2008. Seven properties (M6, M13, M17, M211, M215, M220, and M233) had been identified as modern in the original survey (Harl &Kneller 2008), but now had construction dates that were 45 years or older and therefore, are no longer given the designation of "M" for modern (Table 1).

Property 211 at 1993 Peine Road was constructed in 1963. It was a horizontally massed Ranch with a concrete basement, drop siding, overhanging eaves and an asphalt hipped roof. The asymmetrical fenestration had 6/6 and 1/1light double hung sash windows with vinyl storm windows and vinyl shutters and a four panel entrance door with a four light decorative fan fixed window in the upper portion. An asphalt pent roof on the west half of the residence sheltered the sidewalk and entrance. The property had an asphalt gabled carport and an all metal gabled shed with a concrete block pier foundation. This property did not have any of the defining characteristics of a Ranch, such as a combination of siding, a wide and prominent chimney, accents of a different material, or an attached carport and is not recommended for the NRHP (Transportation Board of the National Academies 2012:35, 41, 103).

Property 215 house located at 2005 Peine Road, constructed in 1964 was horizontally massed with an attached garage on the northwest end and a massive addition on the northeast end of the building. The concrete basement was only under the original portion of the residence. Modern vinyl siding covered the upper portion of the original residence and the entire large addition. The lower portion of the original section was clad in brick veneer. Fenestration was asymmetrical with 9/6 and 1/1 light double hung sash and two light sliding windows with vinyl shutters and storm windows. The entrance was a four panel door with a four light fixed fan light in the upper portion and a 12 light vinyl storm door. An asphalt hipped roof covered both the original portion and the addition. Also on the property was a shed with vinyl siding, an asphalt

gabled roof, and a railroad tie foundation. Due to the lack of original integrity and the large addition that changes the overall form and the modern vinyl on the building, it is not recommended for the NRHP.

The Property 220 home at 2029 Peine Road was an asphalt gable roofed Ranch with an attached carport and a concrete basement built in 1963. The residence had the original vinyl siding except for the vinyl vertical board in the gabled northwest side of the carport and the vinyl vertical board carport addition. An asymmetrical fenestration consisted of a fixed picture window with 2/2 light double hung sash windows on each side covered with 1/1 light storm windows, an original four panel door with a four light fixed fan, and 1/1 light double hung sash windows with 1/1 light storm windows. Vinyl shutters embellish all the windows on the front façade. A two light vinyl storm door covered the original door. The asphalt gabled shed was vertical wood sided and sat on concrete pier pads. This property is not recommended for the NRHP because it lacks original integrity and some of the defining characteristics of a Ranch, such as a combination of siding materials, a prominent chimney, planters or colonnaded porch facade (Transportation Board of the National Academies 2012:35, 41, 103).

Property 233 located at 5167 Highway P had a concrete foundation and an asphalt-hipped roof with an overhang. The residence and the attached double garage were clad in brick veneer and the garage doors were vinyl. An asphalt gabled roof supported by fluted columns sheltered a concrete slab porch. Its gable had eave returns and was in-filled with vinyl siding. A single oval light entrance door was covered with a two light storm door. All windows had concrete sills and the picture window had a row of brick headers below the concrete sill. On the front facade, the fixed picture window was covered by three light fixed storm windows and the two 1/1 light double hung sash windows were covered with single light fixed storm windows with vinyl shutters. Also with vinyl shutters were the two windows on the west side, all other windows lacked shutters. The rest of the windows on the house were 1/1 light double hung sash with 1/1light double hung sash storm windows except for the basement that had two light fixed windows and there were no storm windows on the garage. Behind the residence was an all metal shed (Photo 15) with boarded up windows and a concrete foundation that sat on an earlier limestone foundation. This property lacked some of the distinctive characteristics of a Ranch such as combinations of siding materials, a wide and prominent chimney, and planters, therefore, it is not recommended for the NRHP (Transportation Board of the National Academies 2012:35, 41, 103).

Property 6 at 1409 South Pointe Prairie Road was constructed in 1967. It only had a gravel turnaround pad that touched the APE and all buildings were outside the APE. Property 13 at 2749 West Pearce Boulevard was built in 1967 and Property 17 at 2591 West Pearce Boulevard was constructed in 1965. These properties were revisited to make sure there were no buildings in or touching the APE. Since no buildings or structures existed in the APE, these properties are now designated as "P" (Table 1).

#### RECOMMENDATIONS

The records and literature search of the new proposed Peine Road and U.S. Highway 61 interchange with the proposed David Hoekel Parkway revealed that there were no properties added to the NRHP and no cultural resource surveys conducted since 2008. During the archaeological survey of the new interchange, it was discovered that all areas were previously disturbed and no archaeological sites were identified. The architectural survey of the new interchanges identified six new properties and reevaluated four properties with buildings that had reached the 45 year mark since 2008. None of these properties were recommended for the National Register of Historic Places. Three additional properties reevaluated from the original report were now 45 years old, but were located outside the APE. It is recommended that if construction plans move forward as planned. It is further recommended that if construction plans change a determination should be made concerning the need for further fieldwork.

ARC #	Owner Name	Street Address	Year Built	Architectural Form	Comments
P6	WALSH JAMES P WALSH CAROL M	1409 S POINTE PRAIRIE RD	1967		Formerly M6; (Harl & Kneller 2008:Aerial 1)
P13	WETZEL FAMILY LIVING TRUST	2749 W PEARCE BLVD	1967		Formerly M13; (Harl & Kneller 2008:Aerial 3)
P17	SCHUMAN BETTY L REVOCABLE	2591 W PEARCE BLVD	1965		Formerly M17; (Harl & Kneller 2008:Aerial 3)
211	FELDEWERTH NORMA JEAN	1993 PEINE RD	1963	Ranch	Formerly M211
215	MENNE WALTER MENNE TERESA	2005 PEINE RD	1964	Ranch	Formerly M215
220	NIEDERER ALICE	2029 PEINE RD	1963	Ranch	Formerly M220
M229	WENTZVILLE ECONOMIC DEVELOPMEN T COUNCIL INC	5025 HWY P			Formerly V229
233	SCHULTE ADELE L	5167 HWY P	1966	Ranch	Formerly M233
P248	KING MARTIN J COOPER LYNETT S	HWY 61 S	1995		
249	HAKENEWERT H KENNETH E	1969 N HWY 61 SERVICE RD	1960	Ranch	
P250	UNION ELECTRIC CO	NE HWY 61 SERVICE RD			
V251	HAKENEWERT H MELVIN C HAKENEWERT H MARY ANN TRUSTEES	HWY 61			
P252	ROTHERMICH ELVERA M TRUSTEE	5100 HWY P	1963		
V253	CENTURYTEL OF MISSOURI LLC	HWY P			

 Table 1: New and Revisited Properties Database

#### **REFERENCES CITED**

Harl, Joseph and Janet Kneller

2008 Cultural Resource Investigations for the Proposed David Hoekel Parkway, City of Wentzville, St. Charles County, Missouri. Report on file at the Missouri Department of Natural Resources, State Historic Preservation Office, Jefferson City, Missouri.

Transportation Board of the National Academies

2012 A Model for Identifying and Evaluating the Historic Significance of Post-World War II Housing. Transportation Research Board, Washington, D.C.



Figure 1: Location of Project Area



Figure 2: Map of Architectural and Archeological APEs



Figure 3: Archaeological Sketch Map (Not to Scale)

# **Appendix F** Hazardous Materials

# Appendix F – Hazardous Materials

#### Table 1: Hazardous Materials Sites (from database search)

Map ID*	Site/Property Address	Name	Federal Records	State/Local Records
1	1904 Peine Road	Peine Summit Hornet Properties	FINDS (NPDES permit compliance)	NPDES Permit
2	1776 Peine Rd	Adobe Development Co., LLC	ICIS (Clean Water Act compliance), FINDS (Resource Assessment & Monitoring Program)	
3	1603 Peine Road	Woods Mill Dev. Co., LLC	FINDS (Resource Assessment & Monitoring Program)	
4	1066 N. Point Prairie Rd	Grayhawk Land Planners, LLC	FINDS (NPDES permit compliance and Resource Assessment & Monitoring Program)	
5	750 Ryan Lane	Ryan's Place	FINDS (NPDES permit compliance)	NPDES Permit
6a	2728 S. Service Rd	Waste Management of St. Louis, MO	FINDS (NPDES permit compliance and Resource Assessment & Monitoring Program)	NPDES Permit
6a	2730 S. Service Rd East	(Plant Operations)	ERNS (wastewater & diesel overflow from holding lagoons)	SPILLS (sewage discharge from breached lagoon, and radiation in load of solid waste)
6b	Point Prairie Rd. & W. Pearce Blvd	Casper Homes & Development	FINDS (NPDES permit compliance and Resource Assessment & Monitoring Program)	
7	2681 W. Pearce Blvd.	Gold Star Paving - Wentzville	FINDS (air pollutant emissions)	
8 (no house exists)	1066 Point Prairie Rd	(private residence in 2005 – no house currently exists at this location)	CDL (illegal drug lab)	SPILLS, CDL (illegal drug lab material)
OUT	2365 N. Service Rd		ERNS (release of oily water to soil)	SPILLS (release of oily water to soil)

\*See Exhibit III-4 – Environmental Considerations

# **Appendix F**

# David Hoekel Parkway St. Charles County, Missouri HAZARDOUS MATERIAL SCREENING REPORT

for

**MISSOURI DEPARTMENT OF TRANSPORTATION** 

By HNTB CORPORATION KANSAS CITY, MISSOURI

September 2007

### TABLE OF CONTENTS

#### Section

- 1.0 EXECUTIVE SUMMARY
- 2.0 INTRODUCTION
  - 2.1 PROJECT DESCRIPTION
  - 2.2 METHODOLOGY
  - 2.3 LIMITATIONS
- 3.0 DOCUMENT REVIEW
  - 3.1 EDR INC., DATABASE
    - 3.1.1 EDR Database
    - 3.1.2 Federal Records
    - 3.1.3 State Records
- 4.0 FIELD RECONNAISSANCE
  - 4.1 GENERAL
  - 4.2 LAND USES WITHIN THE STUDY AREA
  - 4.3 UTILITIES
  - 4.4 RESIDENTIAL PROPERTIES
- 5.0 CONCLUSIONS AND RECOMMENDATIONS
  - 6.1 CONCLUSIONS
  - 6.2 RECOMMENDATIONS

ATTACHMENT A: FEDERAL AND STATE DATABASE REPORT (EDR)

## **1.0 EXECUTIVE SUMMARY**

The purpose of this report is to describe the findings of the Preliminary Hazardous Material Screening for the David Hoekel parkway Corridor. The study focuses on an area of northwest St Charles County, northwest of Wentzville, Missouri. The proposed parkway will connect I-70 to US 61 west of Wentzville.

The purpose of the hazardous material screening was to identify sites within the area which;

- are known to be contaminated with hazardous substances including petroleum,
- contain, produce, emit, or store hazardous materials,
- are currently operating or formerly operated above or below ground petroleum storage tanks,
- are solid waste disposal facilities,
- structures which may or may not contain asbestos containing material (ACM)
- involve the unpermitted dumping of solid waste in various quantities.

The intended scope of the screening was to identify properties which may require the time and expense of further site characterization or actual clean-up before construction could proceed. The study reflects the preferred method cited by the Federal Highway Administration (FHWA) and Missouri Department of Transportation (MoDOT).

Risks and potential impacts related to hazardous wastes are known as part of the decision making process and have an impact on construction schedule. Hazardous materials may also have an impact on the value of a property. Further site characterization or remediation of a property may be desirable before acquiring a property or commencing construction.

Where sites are identified, discussions of the impact to the facility as well as possible associated costs may be developed. Recommendations for further action regarding these sites may also be indicated.

The hazardous material screening for the David Hoekel Parkway Corridor involved data collection efforts, and a limited field reconnaissance taken from public traveled ways.

In all, no properties have been identified as possibly impacted by construction of the project. The regulatory database search and field reconnaissance has identified 20 properties on various lists.

None of the regulated sites were documented with serious environmental hazards, pose a fatal flaw, and are believed to require extensive time and cost to clean.

This hazardous material screening is limited to the information retrieved through document review, and observation of readily viewed area within the study area.
#### **2.0 INTRODUCTION**

#### 2.1 PROJECT DESCRIPTION

The David Hoekel Parkway is a planned connection of I-70 to US 61 along the northwest perimeter of Wentzville, Missouri. Construction may include grading, paving, bridges, culverts, retaining walls, and adding interchanges at I-70 and US 61.

#### Topography

The study area is located in Northwest St. Charles County, Missouri. The study area is located near the southern boundary of the Dissected Till Plains of the Central Lowlands physiographic province. The topography is characterized by glaciated, open rolling hills with steep valley slopes. Local relief in the area varies from elevation of 696 at the south near I-70 to elevation 475 where McCoy Creek leaves the study area near the north. Drainage generally flows north and northeast north of I-7- and east south of I-70.

The land study area is mixed us ranging from agricultural to rural, suburban and urban development. General subsurface conditions consist of varying thicknesses of glacial and alluvial soils. The soil thickness is 50 feet or less and consists mostly of glacially derived silty clay loam.

Relatively flat lying horizontally layered Mississippian Age sedimentary bedrock underlay the soils throughout the study area. Bedrock is of the Osagean Series, Burlington – Keokuk Formation overlain by Meramecian Series, Warsaw, Salem, and St. Louis Formations. Limestone and dolomite are the predominant rock types.

Carbonate rocks such as limestone and dolomite are subject to dissolutioning, but no know caves, springs or other karstic features are noted in the study area.

#### Groundwater

Relatively small amounts of groundwater may be perched within any granular materials of the glacial till overburden. Otherwise the clayey glacial till is considered to be rather impermeable. Below the overburden, groundwater can be found in the underlying Mississippian carbonate bedrock. The water bedrock is moderately transmissible with flow through bedding and fractures. Approximately 40 wells registered through the Missouri Department of Natural Resources are located throughout the study area. (Missouri Environmental Geology Atlas, 2003). These wells are most likely low production wells of 25 gallons per minute or less. Greater groundwater production is available in the deeper Ordovician aquifer.

#### Utilities

Most of the study area relies on public water supplies. As the area develops public water will likely be available to the entire area. Water is supplied by the Public Water District No. 2. Electricity and natural gas is provided by Ameren UE. Major utility relocation and construction is required for the project. Sanitary and storm sewers serve or are planned to serve the entire area and are provided by the City of Wentzville.

#### General

For the purposes of this screening, hazardous wastes and materials are defined as products or wastes regulated by the US Environmental Protection Agency (USEPA) or the Missouri Department of Natural Resources. These include substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund), the Resource Conservation and Recovery Act (RCRA), the Toxic Substances Control Act (TSCA), the Federal Insecticide, Fungicide, and Rodneticide Act (FIFRA), and the underground storage tank regulations (UST). Solid waste is defined as solid materials that are not hazardous under RCRA and which are regulated under solid waste management laws.

This report presents methodology and limitations of the hazardous waste assessment including:

- Findings of the document review, field reconnaissance.
- Discussions on the significance of the findings.
- Conclusions and recommendations.

#### 2.2 METHODOLOGY

The methodology employed for this waste screening included the following tasks:

- Document review.
- Field reconnaissance

• Data evaluation, analysis and reporting.

The document review consisted of obtaining and evaluating a profile database from Environmental Data Resources (EDR), Milford, Connecticut. These reports are the result of a computer search of existing databases to identify environmental sites of concern within the entire study area.

The field reconnaissance included a visual inspection of the general project area to identify potential hazardous and solid waste areas. The screening is an attempt to identify sites which may contain hazardous wastes. Hazardous wastes are defined as substances included in the lists of regulations and/or toxic, reactive, ignitable, or corrosive. Areas of unusual amounts of solid waste were also noted. Sewage lagoons or septic fields were not considered in the study unless noted otherwise. No environmental samples were collected as part of this study.

The data evaluation, analysis, and reporting tasks included the analysis of file information and field data collected and the preparation of the screening report. A site is considered to be impacted by the project if it is purchased and/or taken for construction by MoDOT. The judgment is in accordance with the accuracy of the plans at the time of the screening.

#### 2.3 LIMITATIONS

This screening was limited to the review of readily available reports and documents and visual observations of surface conditions within the study area. No sampling or laboratory analysis of waste materials or media was undertaken as part of this screening. The regulatory database is limited to the information provided to the regulatory authorities and the geographical extent identified in the report. The field reconnaissance was limited to available view from publicly traveled roadways. Inspection or site walk-overs were not conducted. No property ownership was established, nor were titles reviewed for hazardous material documentation or liens imposed. No building interiors were viewed nor were fire insurance maps obtained or reviewed. No guarantee of the conditions is intended

The screening addresses the likelihood of hazardous substance contamination resulting from past and current uses within the study area. As a result of certain conditions, such as, but not limited to, those listed below, the presence of hazardous materials may not have been revealed:

- Naturally occurring toxins in the soil, rock, water, or flora
- Toxicity of substances common in current habitable environments such as stored household products, building materials, and consumables.
- Biological pathogens
- Unknown site contamination which may occur following this investigation
- Contaminant plumes below the ground surface.
- Historic disposal practices not defined in the readily available information or apparent through visual observation.

#### 3.0 DOCUMENT REVIEW

To identify known and potential waste sites within the study area, available public records were reviewed and/or requested. The documents reviewed include the following:

• EDR computer database search (September 2007).

#### 3.1.1 EDR Database

EDR is a private environmental information company that has access to federal and state databases listing potential environmental problem areas and/or activities. EDR was given the study location as identified in September 2007. As a result, EDR produced a report and maps detailing the sites/facilities that have been identified within the databases for the specified area. The EDR report and maps allows for early identification and concentration of efforts on those sites/facilities that may be potential environmental problem areas and consequently affect the selection of a particular alignment alternative. In some cases, the locations of sites/facilities cannot be mapped by EDR due to incomplete database information such as a missing number in an address or a rural location. An attempt was made to identify the unknown locations of these facilities in relation to the study area. The results of the EDR database search is included.

#### 3.1.2 Federal Records

The EDR Federal Records Summary is extracted from USEPA records and is included in this document. USEPA has the following databases available for access:

- CERCLIS Comprehensive Environmental Response, Compensation and Liability Information System.
- CERCLIS-NFRAP CERCLIS No further Remedial Action Planned
- NPL National Priorities List (Superfund)
- Proposed NPL
- Delisted NPL
- CORRACTS Corrective Action Report
- ERNS Emergency Response Notification System.
- RCRA TSD
- RCRA LGG Resource Conservation and Recovery Information System Large Quantity Generators (>1000 kg per month).
- RCRA SQG Resource Conservation and Recovery Information System Small Quantity Generators (100kg - 1000kg per month).
- CONSENT Superfund (CERCLA) Consent Decrees
- ROD Record of Decision
- DELISTED NPL National Priority List Deletions
- FINDS Facility Index System/Facility Initiative Program Summary Report
- HMIRS Hazardous Materials Information Reporting System
- US ENG CONTROLS
- US INST CONTROL
- MLTS Material Licensing Tracking System
- MINES Mines Master Index File
- NPL LIENS Federal Superfund Liens
- PADS PCB Activity Database System
- DOD Department of Defense Sites
- FUDS
- UMTRA
- ODI

- LUCIS
- DOT OPS
- ICIS
- US BROWNFIELDS A listing of Brownfield Sites
- RAATS RCRA Administrative Action Tracking System
- TRIS Toxic Chemical Release Inventory System
- TSCA Toxic Substances Control Act
- FTTS
- HISTORIC FTTS
- CDL
- RAD INFO
- LIENS 2
- PADS
- MLTS
- MINES
- SSTS Section 7 Tracking Systems

The CERCLIS database is a list of all sites that the USEPA has investigated or is currently investigating under CERCLA, none were identified in the study area. Sites on the CERCLIS list are not necessarily on the NPL but may be considered for inclusion in the future. Most of the CERCLIS sites once evaluated receive a finding of no further action by the regulatory agencies but remain on the database. The NPL list includes sites listed or proposed for the Superfund National Priorities List of which none were identified in the study area.

The ERNS database identifies information on reported releases of oil or hazardous substances. The database contains information from spill reports made to federal authorities including the USEPA, the US Coast Guard, and the National Response Center and the Department of Transportation. The RCRIS database is a list of the facilities that generate and/or store hazardous waste regulated under RCRA (Resource Conservation and Recovery Act). The TSD database is a list of facilities that treat, store or dispose of hazardous waste regulated under RCRA. The Federal Records Summary

identified the following 12 sites/facilities within the total possible build area of the improvement:

Total number in search	Facility type	Number alignment	adjacent	to
2	ERNS	0		
1	ICIS	0		
1	CDL	0		
8	FINDS	1		

Note: A particular location may be included in multiple lists.

The single site on the regulatory list adjacent to the proposed alignment is Hornet Properties 1904 Peine Rd.

There were no NPL (Superfund) CERCLIS (Comprehensive Environmental Response, Compensation, and Liability Information System) and RCRIS (Resource Conservation and Recovery Information System

Of the 12 Federal Records Sites, none have a potential effect on the construction of the facility.

#### 3.1.3 STATE RECORDS

EDR State Records Summary is a database similar to the Federal Records for information extracted from the MDNR records and is included in the Attachment B of this document. MDNR has the following databases available for access:

- SHWS Registry of Confirmed, Abandoned or Uncontrolled Hazardous Waste Disposal Sites
- SWF/LF Solid Waste Facility List.
- HIST LF
- LUST Leaking Underground Storage Tanks.
- UST Petroleum Storage Tanks.
- LAST
- VCP Sites Participating in Voluntary Cleanup Program.
- AST Aboveground Storage Tanks
- RRC Certified Hazardous Waste Resource Recovery Facilities

- SPILLS Environmental Response Tracking Database
- DEL SHWS Registry Sites Withdrawn or Deleted
- AUL Sites with Controls
- CDL Environmental Emergency Response System
- Dry Cleaners
- Brownfields
- NPDES

The Missouri Department of Natural Resources Leaking Underground Storage Tank (LUST) inventory is a listing of underground storage tank facilities and locations where a leak has occurred, while the Underground Storage Tank (UST) list is a listing of underground storage tank locations regulated and permitted by MDNR. The MDNR Solid Waste Facilities (SWF) are lists of the names and locations of landfills, solid waste processing facilities, and solid waste recycling facilities, either currently operating or closed. The MDNR (SHWS) includes sites considered to be actually or potentially contaminated and presenting a possible threat to human health and the environment. These sites are listed by the state to warn the public as part of an investigation and clean-up program managed by the state.

The following 7 entries were identified from state records as being located within the potential improvement area:

Total number in search	Facility type	Number in study area
4	SPILLS	0
1	CDL	0
3	NPDES	0

There were no State Hazardous Waste Sites, Landfills, Underground or Above Ground Storage Tanks in the study area

Of the 8 state record sites, none is a fatal flaw to the project.

#### **Tribal Records**

The following Tribal Records were also searched

- Indian Reserv
- Indian LUST

• Indian UST

#### **EDR Proprietary Records**

The following proprietary records were also searched

• Manufactured Gas Plants

#### **Orphan Sites**

EDR reported the presence of 25 orphan (unmapped) sites. None of the orphan sites were identified as being located within the study area.

#### 4.0 FIELD RECONNAISSANCE

#### 4.1 GENERAL

#### Methodology

A field reconnaissance was carried out for the study area in September of 2007. This reconnaissance consisted of visually inspecting properties within the study corridor for evidence of uncontrolled solid waste and possible hazardous waste contamination. Visual inspection involved driving all passable public roads within the corridor. Examples of evidence of solid waste and hazardous waste contamination include the presence of drums; abandoned aboveground or underground storage tanks; paint fuel of lubricant containers, piles of debris; operating or abandoned landfills; ponds of liquid waste; or noticeable stress on vegetation or unusual staining.

Land uses and abandoned or former uses of buildings were also observed.

#### 4.2 LAND USES WITHIN THE STUDY CORRIDOR

Land use within the study corridor consists primarily of small commercial, light industrial, and mostly suburban/rural residential.

#### 4.3 UTILITIES

Associated with the electrical transmission grid is the use of transformers. Typically substations and intermittent power pole locations house transformers that may or may not contain Polychlorinated Biphenyl's (PCB's). Currently there are no regulatory or economic incentives for utilities to remove and replace PCB transformers. Standard practice is to remove and replace these during routine maintenance. Further consideration may be necessary when this situation is involved with construction, to include soil testing for PCB's near transformers. Actual transformer removal is typically performed by the utility company except for private transformers owned by business.

#### **4.4 RESIDENTIAL PROPERTIES**

Numerous residential and a few small commercial properties were observed within the study area. It is common for households to store and use small quantities of hazardous materials such as paints, batteries, fertilizers, herbicides, pesticides, gasoline, motor oil,

and cleaners/solvents. Residences and small buildings may have been constructed with asbestos containing material (ACM) such as insulation, roofing, siding and ceiling tile. It is possible that contaminants are present on these properties and inspections may be required to identify areas of concern. During the field reconnaissance, a few residences and commercial sites were noted for general poor housekeeping practices by storing large than usual quantities of items considered to be scrap or solid waste.

#### **5.0 CONCLUSIONS AND RECOMMENDATIONS**

#### 5.1 CONCLUSIONS

The review of environmental agency lists and files, along with a limited field reconnaissance revealed the no potential hazardous waste or solid waste sites which may affect the construction of the facility.

#### 5.2 RECOMMENDATIONS

- Conduct further investigations of commercial sites acquired for right of way and subsequently involved with demolition - Perform Phase I investigations including inspection for the presence of asbestos containing material.
- For residential structures taken for the facility, inspections for hazardous materials are recommended. The inspections should include determination of asbestos containing material. Proper removal of asbestos containing material should be accomplished before demotion commences. Proper time should be allowed for the inspection, permitting and removal process. The inspections should be accomplished and asbestos containing material removed prior to allowing owner salvaging of construction materials or before structures are moved to offsite locations. Household hazardous waste such as paints, cleaners and automotive products may be present. Abandoned containers (full or empty) of these materials may be encountered at these locations. Characterization and proper disposal of these materials are recommended. A public agency of private contractor should be available to dispose of the expected household hazardous materials left by the present owners.
- Where utility or pipelines are encountered, relocated, or removed for the proposed project, coordination with the applicable companies is recommended to identify hazards present at the specific locations. Further investigations may be necessary based upon site-specific data from the utility.

# Appendix G Air Quality

## Appendix G – Air Quality

#### CONFORMITY

The St. Louis Metropolitan Area is currently designated as a non-attainment area for particulates (annual  $PM_{2.5}$ ) and ozone (O<sub>3</sub>). The O<sub>3</sub> nonattainment is Subpart 2/Moderate. The conformity determinations for both air pollutants have been conducted by the East-West Gateway Council of Governments (EWGCOG) using the latest Missouri State Implementation Plan (SIP) submittals.

Under the provisions of the Clean Air Act Amendments (CAAA) of 1990, the EWGCOG, as the Metropolitan Planning Organization (MPO) for the region, is the agency responsible for making sure a transportation project conforms to the air quality goals stipulated in the State Implementation Plan (SIP). If the projected motor vehicle emissions from the planned transportation project do not exceed the motor vehicle emissions budget established in the SIP, EWGCOG places the project in the Transportation Improvement Program (TIP) and the Missouri Highways and Transportation Commission (MHTC) incorporates the project in the Statewide Transportation Improvement Program (STIP), allowing it to go forward. This is done by EWGCOG issuing a "Determination of Conformity" ensuring that the predicted future mobile emissions resulting from the proposed transportation project fall below the 2007 and 2014 emission budget levels set out in the maintenance plans for the ozone producing volatile organic compounds (VOCs) and oxides of nitrogen (NOx). The 1997 ozone SIP submittal and/or the MDNR's ozone Clean Data finding for the St. Louis area will establish the conformity budget to be used for the David Hoekel Parkway project.

The Selected Alternative for the David Hoekel Parkway project was evaluated within EWGCOG's Air Quality Conformity Determination modeling for the region, approved by the Federal Highway Administration on September 2, 2011. The Conformity Determination was made for the entire 1997 eight-hour ozone non-attainment area and PM2.5 non-attainment area. Ozone non-attainment counties include: Franklin, Jefferson, St. Charles and St. Louis Counties and the City of St. Louis in Missouri; and Madison, Monroe, St. Clair and Jersey Counties in Illinois. The annual PM2.5 non-attainment area consists of: Franklin, Jefferson, St. Charles and St. Louis Charles and St. Louis Counties and the City of St. Louis in Missouri; and Madison, Monroe and St. Clair Counties and Baldwin Township in Randolph County, in Illinois.

Based on the conformity analysis conducted as part of the long-range plan development, the projects and programs included in the *Regional Transportation Plan 2040* and the *Federal Fiscal Year 2012-2015 Transportation Improvement Program* (FY 2012-2015 TIP) are found to be in conformity with the requirements of the Clean Air Act Amendments of 1990, the relevant sections of the Final Conformity Rule 40 CFR Part 93, and the Missouri State Conformity Regulations 10 CSR 10-5.480. The finding is documented in the *Air Quality Conformity Determination and Documentation (8-Hour Ozone & PM2.5)* for the *Regional Transportation Plan 2040* and *2012-2015 Transportation Improvement Program.* The conformity analysis for the project has been incorporated into subsequent updates of the RTP 2040, TIP and Air Quality Conformity Determination within the Amendment to the FY 2014-2017 TIP.

(<u>http://www.ewgateway.org/pdffiles/library/AQ/AQConformityDoc/AQConformityDoc-FY2014.pdf</u> (David Hoekel Parkway project listed on page A-46)).

#### 1. Particulates

The EPA and the FHWA issued a joint guidance on March 29, 2006 on how to perform qualitative hot-spot analyses in  $PM_{2.5}$  and  $PM_{10}$  nonattainment and maintenance areas. This guidance was developed to provide information for State Highway Administrations, local air control agencies and Metropolitan Planning Organizations (MPO) to meet the  $PM_{2.5}$  and  $PM_{10}$  hot-spot analysis requirements established in the March 10, 2006, final transportation conformity rule (71 FR 12468). Based on an analysis of the final rule, 40 CFR 93.123(b)(1), and criteria recently adopted by the interagency group, it was determined that the Selected Alternative was not considered a "project of air quality concern" and does not meet the criteria stipulated for requiring either project-level conformity analysis or a PM2.5 or PM10 hot-spot analysis as defined in the final rule.

The final rule defines the projects of air quality concern that require a PM2.5 or PM10 hot-spot analysis in 40 CFR 93.123(b)(1) as:

"(i) New or expanded highway projects that have a significant number of or significant increase in diesel vehicles;

(ii) Projects affecting intersections that are at Level-of-Service D, E, or F with a significant number of diesel vehicles, or those that will change to Level-of-Service D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project;

(iii) New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location;

(iv) Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location; and

(v) Projects in or affecting locations, areas, or categories of sites which are identified in the PM2.5 or PM10 applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

Some examples of projects of air quality concern that would be covered by 40 CFR 93.123(b)(1)(i) and (ii) are:

- A project on a new highway or expressway that serves a significant volume of diesel truck traffic, such as facilities with greater than 125,000 annual average daily traffic (AADT) and 8% or more of such AADT is diesel truck traffic;
- New exit ramps and other highway facility improvements to connect a highway or expressway to a major freight, bus, or intermodal terminal;
- Expansion of an existing highway or other facility that affects a congested intersection (operated at Level-of-Service D, E, or F) that has a significant increase in the number of diesel trucks; and,
- Similar highway projects that involve a significant increase in the number of diesel transit busses and/or diesel trucks.

One of the first steps in this process is to determine whether a project is considered as one of the "projects of air quality concern" as defined in the final rule by 40 CFR 93.123(b)(1). The following items were considered when determining whether the David Hoekel Parkway was a project of air quality concern:

• The Study Area is non-attainment for PM<sub>2.5</sub>;

- Maximum Build ADT in 2040 for the project is projected to be 22,000 vpd;
- Diesel truck percentage, two-axle 6 tire and 3 or more axles are 5.0% for the project;
- There are not a significant number of diesel trucks at existing intersections that operate between LOS C and LOS E. The proposed project will not create an increase in trucks such that LOS decreases; and
- The project will not create a significant increase in the number of diesel transit busses and/or diesel trucks in the study area.

Therefore, this project was not considered to be a project of air quality concern and does not meet the criteria stipulated for requiring a PM2.5 or PM10 hot-spot analysis. MoDOT, in cooperation with the City of Wentzville, submitted the project to EWGCOG for inclusion in the modeling for regional air quality emission data and the project was found to be in conformity with the requirements of the Clean Air Act Amendments of 1990, the relevant sections of the Final Conformity Rule 40 CFR Part 93, and the Missouri State Conformity Regulations 10 CSR 10-5.480.

#### 2. Mobile Source Air Toxics

In addition to the criteria air pollutants for which there are National Ambient Air Quality Standards (NAAQS), the EPA also regulates air toxics. Most air toxics originate from human-made sources, including on-road mobile sources, non-road mobile sources (e.g., airplanes), area sources (e.g., dry cleaners) and stationary sources (e.g., factories or refineries).

Mobile Source Air Toxics (MSATs) are a subset of the 188 air toxics defined by the Clean Air Act (CAA). The MSATs are compounds emitted from highway vehicles and non-road equipment. Some toxic compounds are present in fuel and are emitted to the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion products. Metal air toxics also result from engine wear or from impurities in oil or gasoline.

The EPA is the lead Federal Agency for administering the Clean Air Act and has certain responsibilities regarding the health effects of MSATs. The EPA issued a Final Rule on Controlling Emissions of Hazardous Air Pollutants from Mobile Sources, 66 FR 17229 (March 29, 2001). This rule was issued under the authority in Section 202 of the CAA. In its rule, EPA examined the impacts of existing and newly promulgated mobile source control programs, including its reformulated gasoline (RFG) program, its national low emission vehicle (NLEV) standards, its Tier 2 motor vehicle emissions standards and gasoline sulfur control requirements, and its proposed heavy duty engine and vehicle standards and on-highway diesel fuel sulfur control requirements. The FHWA has projected that even with a 64 percent increase in VMT between 2000 and 2020, these programs would reduce on-highway emissions of benzene, formaldehyde, 1,3-butadiene, and acetaldehyde within a range of 57 percent to 65 percent, and would reduce on-highway diesel PM emissions by 87 percent.

The EPA has also issued Final Rules on Control of Hazardous Air Pollutants from Mobile Sources (72 FR 8427, February 26, 2007) under Title 40 Code of Federal Regulations Parts 59, 80, 85 and 86. The rule changes were effective April 27, 2007. As a result of this review, EPA adopted the following new requirements to significantly lower emissions of benzene and the other MSATs by: (1) lowering the benzene content in gasoline; (2) reducing non-methane hydrocarbon (NMHC) exhaust emissions from passenger vehicles operated at cold temperatures (under 75 degrees Fahrenheit); and (3) reducing evaporative emissions that permeate through portable fuel containers. Beginning in 2011, petroleum refiners must meet an

annual average gasoline benzene content standard of 0.62 percent by volume, for both reformulated and conventional gasolines, nationwide. Along with the vehicle exhaust standards, EPA also adopted more stringent evaporative emission standards for new passenger vehicles, which are equivalent to California's standards and codify the approach that manufacturers are already taking for 50-state evaporative systems.

#### Unavailable Information for Project Specific MSAT Impact Analysis

This EA includes a basic analysis of the likely MSAT emission impacts of this project. However, technical tools presently available do not enable project-specific health impacts of the emission changes associated with the proposed project in this EA to be predicted. Evaluating the environmental and health impacts from MSATs on a proposed highway project would involve several key elements, including emissions modeling, dispersion modeling in order to estimate ambient concentrations resulting from the estimated emissions, exposure modeling in order to estimate human exposure to the estimated concentrations, and then final determination of health impacts based on the estimated exposure. Each of these steps is encumbered by technical shortcomings or uncertain science that prevents a more complete determination of the MSAT health impacts of this project. Because of these uncertainties, a quantitative assessment of the effects of air toxic emissions impacts on human health cannot be made at the project level. Therefore, the relevance of the unavailable or incomplete information is that it is not possible to make a determination of whether any of the alternatives would have "significant adverse impacts on the human environment."

www.fhwa.dot.gov/environment/airtoxic/msatcompare/msatemissions.htm

# Appendix H Noise Analysis

## APPENDIX H Noise Study

#### 1. INTRODUCTION

Noise is defined as unwanted sound. It is a form of vibration that causes pressure variations in elastic media such as air and water. The ear is sensitive to this pressure variation and perceives it as sound. The intensity of these pressure variations causes the ear to discern different levels of loudness. These pressure differences are most commonly measured in decibels.

The decibel (dB) is the unit of measurement for noise. The decibel scale audible to humans spans from zero to approximately 140 dB. A level of zero decibels corresponds to the threshold of hearing, while 140 decibels is considered to be the threshold of pain. The decibel scale is a logarithmic rather than a linear representation of the actual sound pressure variations. As a result, the human ear would not detect a change in sound level of one dB. Another example of this characteristic of sound is that a doubling of the energy level would result in a three dB increase in the sound level, which would be barely perceptible to the human ear in the natural environment. Likewise, a tripling in energy level would result in a clearly noticeable change of approximately five dB in the sound level, and a ten-fold increase in sound level is generally perceived as a doubling of the apparent loudness of the original source.

The human ear has a non-linear sensitivity to the frequency spectrum of noise. Electronic weighting scales are used in noise measurements to define the relative loudness of different frequencies. The "A" weighting scale is the acceptable weighting scale used in environmental work because it closely resembles the non-linearity of human hearing. Therefore, the unit of measurement for an A-weighted noise level is dBA.

Traffic noise is not constant. It varies as each vehicle passes a point. The time-varying characteristics of environmental noise are analyzed statistically to determine the duration and intensity of noise exposure. The equivalent sound pressure level ( $L_{eq}$ ) is the equivalent steady-state sound level having the same A-weighted sound energy as that contained in the time-varying sound over the same period of time. The time period used for traffic noise is one hour. The abbreviation then becomes  $L_{eq}(h)$ . All traffic noise levels in this analysis are expressed in dBA  $L_{eq}(h)$ .

#### 2. MEASURED AND MODELED EXISTING NOISE LEVELS

Existing noise level measurements were conducted on October 29 and 30, 2007 at seven representative sites in the study area. The measurements were conducted for a period of ten or twenty minutes at each site. Traffic visible from each site was counted and classified during each measurement.

The measurements were made in accordance with FHWA guidelines using an integrating sound level analyzer meeting ANSI and IEC Type 1 specifications. The data collected at the seven sites are presented in Table 1. The noise measurement sites are identified on Figures 1-4.

The FHWA Traffic Noise Model, V. 2.5 (TNM<sup>®</sup>)<sup>1</sup>was used to model the field measurements, using the traffic data counted during the measurements, to determine the applicability of the model to

<sup>&</sup>lt;sup>1</sup> Michael C. Lau, Cynthia S. Y. Lee, Gregg G. Judith L. Rochat, Eric R. Boeker, and Gregg C. Fleming. FHWA Traffic Noise Model<sup>®</sup> Users Guide (Version 2.5 Addendum). Federal Highway Administration, April 2004.

the specific project environment. The following parameters were used in this model to calculate an hourly Leq(h) at a specific receiver location:

- Distance between roadway and receiver;
- Relative elevations between roadway and receiver;
- Hourly traffic volumes for light-duty (two axles, four tires), medium-duty (two axles, six tires), and heavy-duty (three or more axles) vehicles;
- Vehicle speed;
- Roadway grade; and
- Topographic features, including retaining walls and berms.

Comparing the modeled noise levels to the measured noise levels confirms the applicability of the computer model to the specific project. Traffic volumes were counted and classified concurrently with the noise measurements at five of the seven field sites. The five modeled sites compared within 0-3 dB of the measured levels. This represents reasonable correlation since the human ear can barely distinguish a 3-dB change in a natural setting. The site by site comparison is presented in Table 2.

Field	Site Description		Start	ion	Traffic <sup>1)</sup>							Noise		
Site #	and Distance from Road	Date	Date Time		Date Time		Roadway	Α	мт	нт	Buses	мс	Speed mph	dBA Leq(h)
1	Cemetery at St. Theodore's Church and School, 5059 Route P, 453 ft north of Route P and 1,055 ft west of Mette Rd.	10/29/07	14:28	10								47		
2	Residence, 1301 Forest Way, 79 ft south of Peine Rd. and 30 ft east of Forest Way	10/29/07	14:55	20	Peine Rd.	41	2	2			35	56		
3	Residence, 28 Hickory Ct., 367 ft north of Peine Rd.	10/29/07	15:25	20	Peine Rd.	43					45	40		
4	Residence, 128 Prairie Bluffs Dr., 110 ft west of N Point Prairie Rd. and 1,460 ft north of Scotti Rd.	10/29/07	16:13	20	Prairie Bluffs Dr.	28	1				35	45		
5	Residence, 210 ft south of Meyer Rd. and 5 ft west of Golden Gate Parkway	10/29/07	17:01	20	Meyer Rd.	53	2				35	45		
6	Residence, 2522 Bear Creek Dr., 2180 ft west of N. Point Prairie Rd.	10/29/07	17:44	10								47		
7	Residence, 1473 Cedar Branch Ln., 235 ft west of Point Prairie Rd. and 585 ft north of Jackson Rd.	10/30/07	7:21	20	S. Point Prairie Rd.	11	1		1		45	46		

Table 1 MEASURED EXISTING NOISE LEVELS

1) Autos (A) defined as 2-axle, 4-tire; medium trucks (MT) as 2-axle, 6-tire; heavy trucks (HT) as 3 or more axles; buses as more than nine passengers; motorcycles (MC) as two or three tires, open-air driver/passenger compartment.

Source: HNTB Corporation, October, 2007

Table 2
COMPARISON BETWEEN MEASURED AND MODELED DATA

	Noise Level,	dBA Leq(h)	Difference in Noise
Field Site <sup>1)</sup>	Measured	Modeled	dBA Leq(h) (Modeled Minus Measured)
2	56	56	0
3	40	39	-1
4	45	47	2
5	45	43	-2
7	46	43	-3

<sup>1)</sup> Sites 1, and 6 (traffic was not visible).

Source: HNTB Corporation, October 2007

#### 3. NOISE ABATEMENT CRITERIA

The FHWA's Noise Abatement Criteria (NAC) and MoDOT's FHWA approved interpretation of the NAC, as detailed in MoDOT's Traffic Noise Policy<sup>2</sup>, were used in the analysis of the acoustic impact of the proposed project. The analysis was conducted according to the guidelines as presented in the Code of Regulation, Title 23 Part 772, which provides procedures whereby the acoustic impact of the proposed action can be assessed and the needs for abatement measures determined. The FHWA and MoDOT's NAC for various types of land uses are presented in Table 3. The noise level descriptor used is the equivalent sound level,  $L_{eq}(h)$ , defined as the steady state sound level in a one hour period which contains the same sound energy as the actual time-varying sound.

Noise mitigation measures for traffic noise impacts will be considered when the predicted noise levels approach or exceed those values shown for the appropriate activity category of the Noise Abatement Criteria, Table 3, or when the predicted traffic noise levels substantially exceed the existing noise levels.

MoDOT has defined the NAC approach or exceed criteria for Activity Category "B" as being equal to or greater than 66 dBA  $L_{eq}(h)$  for noise sensitive receptors such as residences, churches, schools, libraries, hospitals, nursing homes, apartment buildings, condominiums, etc. The criteria for Activity Category "C" is 71 dBA  $L_{eq}(h)$  or greater. MoDOT has defined an increase of 15 decibels or more over the existing noise as being substantial. Title 23 CFR, Section 772.11(a) states, "In determining and abating traffic noise impacts, primary consideration is to be given to exterior areas. Abatement will usually be necessary only where frequent human use occurs and lower noise level would be of benefit".

<sup>&</sup>lt;sup>2</sup> Traffic Noise Policy, Missouri Department of Transportation, MoDOT Preliminary Studies Group, Environmental Section, September 1997.

#### Table 3 NOISE ABATEMENT CRITERIA HOURLY A-WEIGHTED SOUND LEVEL-DECIBELS (dBA)

Activity Category	L <sub>eq</sub> (h) (1 Hr)	Description of Activity Category / Land Uses
A	57 dBA (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the lands are to continue to serve their intended purpose.
В	67 dBA (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries and hospitals.
С	72 dBA (Exterior)	Developed lands, properties or activities not included in Categories A or B above.
D		Undeveloped lands.
E	52 dBA (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals and auditoriums.

Source: Code of Federal Regulations, Title 23 Part 772, Revised April 2005 MoDOT Traffic Noise Policy, September 1997

#### 4. TRAFFIC NOISE MODELING

The FHWA Traffic Noise Model,  $(TNM^{\ensuremath{\mathbb{B}}} 2.5)^3$  was used to model design year 2030 L<sub>eq</sub> noise levels. Existing noise levels were developed from field measurements. The design year noise levels were compared to the existing noise levels and to the NAC, Table 1. The design year noise levels were also used in the noise mitigation analysis to analyze the feasibility of abatement measures for locations projected to experience a noise impact. Inputs such as volume, speed, and truck percentages were modeled to reflect the traffic characteristics "which yield the worst hourly traffic noise impact on a regular basis for the design year"<sup>4</sup>. The following parameters were used in this model to calculate an hourly L<sub>eq</sub>(h) at a specific receiver location:

- Distance between roadway and receiver;
- Relative elevations between roadway and receiver;
- Hourly traffic volumes for light-duty (two axles, four tires), medium-duty (two axles, six tires), and heavy-duty (three or more axles) vehicles;
- Vehicle speed;
- Roadway grade; and
- Topographic features, including retaining walls and berms.

One hundred eighteen (118) representative receiver locations, labeled N1 through N111 (modeled), and FS-1 through FS-7 (field site), were selected to illustrate the potential noise impacts adjacent to the proposed project. Based on MoDOT's Traffic Noise Policy, the traffic noise analysis was conducted for both developed lands and undeveloped lands for which development has been planned, designed and programmed. Development will be deemed to be planned, designed and programmed if a building permit for a noise-sensitive land use (including

<sup>&</sup>lt;sup>3</sup> Michael C. Lau, Cynthia S. Y. Lee, Gregg G. Judith L. Rochat, Eric R. Boeker, and Gregg C. Fleming. FHWA Traffic Noise Model® Users Guide (Version 2.5 Addendum). Federal Highway Administration, April 2004.

<sup>&</sup>lt;sup>4</sup> 23 CFR, Section 772.17(b).

but not limited to a residence, school, church, hospital or library) has been approved by the local agency with jurisdiction at the time of the noise analysis. Therefore, receiver locations selected included existing residences; platted subdivisions; St. Theodore's Church/School, Parish Center and cemetery. Noise modeling and field measurement sites are identified on Figures 1-4.

Future 2030 design hour traffic data were used to model the design year  $L_{eq}(h)$  noise levels. These noise levels were compared to the existing noise levels to determine if MoDOT's 15 decibel increase criteria would be exceeded and to the NAC noise levels in Table 3. Exceeding either criterion is, by definition, an impact. Therefore, mitigation measures must be reviewed to determine if they are both feasible and reasonable for the proposed project.

Existing design year  $L_{eq}(h)$  noise levels within the project study area ranged from 40 to 64 dBA  $L_{eq}(h)$ . The results of the peak hour traffic noise modeling are presented in Table 4.

Future design hour noise levels would exceed the NAC at sixteen (16) of the 118 representative receivers as shown in Table 4. These receivers represent 1 clubhouse, 1 swimming pool, 10 apartments, and 19 residences. Future  $L_{eq}(h)$  noise levels at these receivers would range from 66 to 71 dBA. The change in noise levels at these locations would be an increase in a range of four (4) to twenty-eight (28) decibels.

In addition to those receivers that would be exposed to noise levels above the NAC, 16 additional receivers would be exposed to future design hour noise levels that would substantially exceed existing noise levels as shown in Table 4. These receivers represent 39 existing and permitted residences. Future  $L_{eq}(h)$  noise levels at these receivers would range from 55 to 65 dBA. The noise levels at these locations would increase in a range of fifteen (15) to twenty-five (25) decibels.

				No	ise Level, d	2030 dB		
Receiver I.D. <sup>(1)</sup>	Land Use <sup>(2)</sup>	# of Units <sup>(3)</sup>	NAC Category	NAC Level	Existing	2030 Build without Noise Walls	Increase over Existing	Impact <sup>(4)</sup>
N1	Res.	1	В	67	55	64	9	N
N2	Res.	1	В	67	50	51	1	N
N3	Res.	1	В	67	51	54	3	N
N4	Res.	1	В	67	51	53	2	N
N5	Res.	1	В	67	49	49	0	N
N6	Com.	1	С	72	53	53	0	N
N7	Res.	1	В	67	52	58	6	N
N8	Res.	1	В	67	52	55	3	N
N9	Res.	1	В	67	48	50	2	N
N10	Cemetery	1	В	67	47	54	7	N
FS-1	Cemetery	1	В	67	47	51	4	N
N11	School Church	1 1	B B	67 67	48	52	4	Ν
N12	Res.	1	В	67	48	55	7	N
N13	Res.	1	В	67	50	55	5	N
N14	Res.	1	В	67	62	67	5	Y
N15	Res.	1	В	67	60	66	6	Y
N16	Res.	2	В	67	60	65	5	N
N17	Res.	3	В	67	60	67	7	Y
N18	Res.	2	В	67	60	68	8	Y

## Table 4DESIGN HOUR NOISE LEVELS, dBA Leq(h)

				Noise Level, dBA L <sub>eq</sub> (h)			2030 dB	
Receiver	Land $U_{00}^{(2)}$	# of	NAC			2030 Build	Increase	Impoct <sup>(4)</sup>
I.D. <sup>(1)</sup>	Lanu Use	Units <sup>(3)</sup>	Category	NAC	Existing	without	over	impact
				Level	_	Noise Walls	Existing	
N19	Res.	2	В	67	60	68	8	Y
N20	Res.	1	В	67	54	59	5	N
N21	Res.	4	В	67	54	62	8	N
N22	Res.	5	В	67	49	59	10	N
N23	Clubhouse	1	B	67	56	68	12	Y
N24	Ants	1	B	67	60	64	4	N
N25	Ants	6	B	67	64	68	4	Y
N26	Ante	1	B	67	64	68		· ·
N27	Apts.	-	D	67	55	59		N
N27	Apis.	<u> </u>	D	67	55	50	5	IN NI
N20	Res.		D	07	54	00	0	IN X
FS-2	Res.	2	В	67	56	71	15	Y Y
N29	Swimming Pool	1	В	67	55	67	12	Y
N30	Res.	1	В	67	53	61	8	N
N31	Res.	1	В	67	58	62	3	N
N32	Res.	1	В	67	58	59	1	N
N33	Res.	2	В	67	50	56	6	N
N34	Res.	3	В	67	53	55	2	N
N35	Res.	1	В	67	53	67	14	Y
N36	Res.	1	В	67	53	67	14	Y
N37	Res.	1	В	67	40	61	21	Y
N38	Res.	1	В	67	53	65	12	N
N39	Res.	1	B	67	46	63	17	Y
N40	Res	3	B	67	40	68	28	Y
N41	Res	6	B	67	40	60	20	v v
N/12	Res.	1	B	67	40	63	20	I V
ES 3	Res.	1	B	67	40	61	23	
F3-3	Res.	1		67	40	66	21	I V
IN43	Res.	2	D	07	40	50	20	ř V
N44	Res.	2	В	67	40	59	19	Y
N45	Res.	3	В	67	40	54	14	N
N46	Res.	2	В	67	40	61	21	Y
N47	Res.	2	В	67	40	61	21	Y
N48	Res.	8	В	67	48	56	8	N
N49	Res.	3	В	67	48	51	3	N
N50	Res.	5	В	67	40	52	12	N
N51	Res.	1	В	67	47	50	3	N
N52	Res.	1	В	67	40	52	12	N
N53	Res.	1	В	67	40	52	12	N
N54	Res.	1	В	67	40	54	14	N
N55	Res.	1	В	67	40	46	6	N
N56	Res.	1	В	67	40	68	28	Y
N57	Res.	1	В	67	44	55	11	N
N58	Res.	1	B	67	46	58	12	N
FS-4	Res	1	B	67	45	55	10	N
N59	Res	3	R	67	45	57	12	N
N60	Res	-6	R	67	43	52	0	N
N61	Res.	2	P	67	40	63	22	
NIGO	Doc	2	D	67	40	60	20	
NG2	Res.	2	D	67	40	57	17	
NO3	Res.	3	D D	67	40	57	1/	T NI
N04	Kes.	1	В	67	45	50	11	IN N
N65	Res.	1	В	67	42	50	8	N
N66	Res.	1	B	67	50	56	6	N
FS-5	Res.	1	В	67	45	47	2	N
N67	Res.	1	В	67	45	51	6	N
N68	Res.	1	В	67	45	57	12	N

			Noise Level, dBA L <sub>eq</sub> (h) 2030 dB	Noise Level, dBA L <sub>eq</sub> (h)			2030 dB	
Receiver	Land Use <sup>(2)</sup>	# of	NAC	NAC		2030 Build	Increase	Impact <sup>(4)</sup>
I.D. <sup>(1)</sup>	Lana 000	Units <sup>(3)</sup>	Category	Level	Existing	without	over Evicting	impuot
NICO	Dee	4	D	67	40		Existing	X
N69	Res.	1	B	67	42	57	15	Y NI
N70	Res.	1	D	67	40	51	11	
N/ I	Res.		В	07	40	00	20	ř
N/2	Res.	-	В	67	40	57	17	NI
N73	Res.	1	В	67	40	47	7	N
N74	Res.	1	В	67	40	46	6	N
N75	Res.	-	В	67	40	56	16	
N76	Res.	-	В	67	40	56	16	
N//	Res.	1	В	67	43	51	8	N
N/8	Res.	4	В	67	43	54	11	N
N79	Res.	6	В	67	43	55	12	N
N80	Res.	1	В	67	47	58	11	N
FS-6	Res.	1	В	67	47	60	13	N
N81	Res.	7	В	67	43	54	11	N
N82	Res.	2	В	67	45	56	11	N
N83	Res.	1	В	67	52	55	3	N
N84	Res.	1	В	67	52	54	2	N
N85	Res.	1	В	67	60	61	1	N
N86	Res.	1	В	67	44	55	11	N
N87	Res.	1	В	67	45	51	6	N
N88	Res.	1	В	67	44	56	12	N
N89	Res.	1	В	67	44	54	10	N
FS-7	Res.	1	В	67	46	56	10	N
N90	Res.	1	В	67	47	56	9	N
N91	Res.	-	В	67	40	57	17	
N92	Res.	-	В	67	40	58	18	
N93	Res.	4	В	67	40	65	25	Y
N94	Res.	-	В	67	40	66	26	
N95	Res.	-	В	67	40	60	20	
N96	Res.	9	В	67	40	65	25	Y
N97	Res.	1	В	67	40	57	17	Y
N98	Res.	1	В	67	40	55	15	Y
N99	Res.	-	В	67	40	57	17	
N100	Res.	-	В	67	40	62	22	
N101	Res.	-	В	67	40	59	19	
N102	Res.	-	В	67	40	65	25	
N103	Res.	-	В	67	40	68	28	
N104	Res.	-	В	67	40	64	24	
N105	Res.	-	В	67	40	60	20	
N106	Res.	-	В	67	40	58	18	
N107	Res.	-	В	67	40	64	24	
N108	Res.	-	В	67	40	66	26	
N109	Res.	-	В	67	40	55	15	
N110	Res.	-	В	67	40	64	24	
N111	Res.	-	В	67	40	59	19	

(1) Receiver Number on Figures 1 through 4.
(2) Res. – Residence, Com. – Commercial
(3) # of units includes existing and permitted residences. Residences without a unit # indicates property planned, designed and programmed but without a building permit.
(4) Y = Impact, N = No Impact

#### 5. ABATEMENT MEASURES

Various methods were reviewed to mitigate the noise impact of the proposed improvements. Among these were reduction of speed limits, restriction of truck traffic to specific times of the day, a total prohibition of trucks, alteration of horizontal and vertical alignments, property acquisition for construction of noise walls or berms, acquisition of property to create buffer zones to prevent development that could be adversely impacted, noise insulation of public use or nonprofit institutional structures, the use of berms, and the use of noise walls.

Restriction or prohibition of trucks is adverse to the project purpose. Reduction of speed limits, although acoustically beneficial, is seldom practical unless the design speed of the proposed roadway is also reduced. Design criteria and recommended termini for the proposed project prevent substantial horizontal and vertical alignment shifts that would produce significant changes in the projected acoustical environment. The desire to minimize right-of-way takings prohibits the acquisition of buffer zones or the construction of earth berms. Noise insulation is not necessary since no public use or nonprofit institutional structures were identified as being affected by the project. Therefore, only the construction of noise walls is possibly being considered for noise mitigation.

When the criterion is exceeded or a substantial increase occurs, noise abatement procedures are to be reviewed to determine if they are feasible and reasonable. Feasibility deals with the engineering considerations of noise abatement, for example, topography, access, drainage, safety, maintenance, and if other noise sources are present. MoDOT requires at least a five dBA noise loss for first-row receivers for noise abatement to be considered feasible.

Reasonability of proposed noise abatement mitigation measures is more subjective than evaluation of feasibility. It implies use of good engineering judgment and is based on a number of factors. These factors include, but are not limited to:

- Noise wall must provide noise reduction of at least five dBA for all primary receivers. Primary receivers are those which are closest to the highway.
- Noise wall must provide attenuation for more than one receiver.
- Noise wall must be 18' (5.5m) or less in height above normal grade.
- Noise wall must not interfere with normal access to the property.
- Noise wall must not pose a traffic safety hazard.
- Noise wall must not exceed a cost of \$30,000 per benefited receiver. A benefited receiver is defined as a receiver, which obtains noise reduction of five dBA or more.
- The majority of the affected residents (primary and benefited receivers) must concur that a noise wall is desired."<sup>2</sup>

In areas where noise impacts would occur, noise abatement (i.e. barriers) would have to be constructed between the road and the receiver to effectively abate the noise being produced by the traffic.

Seven (7) noise barriers were analyzed for existing and permitted residences within the project limits. The results of the barrier analysis, including barrier location, future  $L_{eq}(h)$  noise levels without and with a barrier, barrier length and height, estimated cost (based on \$18.00/square

foot), the number of residential units benefited, the noise reduction provided by the barrier, the cost per residential unit, and whether the noise barrier is feasible and reasonable are presented in Table 5. Five (5) of the seven (7) noise barriers listed in Table 5 meet MoDOT's feasibility and reasonability criteria.

There are nine (9) individual receivers along the corridor that would exceed the NAC, Receivers FS-2, N14, N15, N23, N29, N35, N36, N56 and N71, in the design year. Due to local access requirements and the proximity to local street intersections, it is not possible to design a noise barrier that would meet MoDOT's feasibility criteria. In addition, it is not possible to design a barrier for single receivers that would meet MoDOT's cost criteria of \$30,000. As a result, noise barriers would not be considered for these locations.

Barrier	Range Leq Noi (d	of Future se Levels, IBA)	Noise	Barrier Characteristics		Cost <sup>b)</sup>	Number	Cost/	Feasible and
No. <sup>a)</sup>	w/o barrie r	With barrier	(dB)	Length ft	Height ft	COSI	Attenuated	Receiver	Reasonable
1	65	59	6	650	8	\$93,600	5	\$18,720	Y
2	65	59	6	920	8	\$132,480	4	\$33,120	N
3	55-65	50-54	5-11	1,626	10-4	\$336,971	7	\$48,139	N
4	52-63	47-58	5	1,444	10-12	\$293,218	11	\$26,656	Y
5	59-68	54-59	5-9	1,462	9-12	\$250,358	20	\$12,518	Ý
6	67-68	61-63	5-6	1,300	8	\$187,156	7	\$26,737	Y
7	68	62-63	5-6	1,000	16-18	\$301,677	11	\$27,425	Y

 Table 5

 ACOUSTICAL MITIGATION - NOISE BARRIER ANALYSIS

a)Barriers 1 – 7 are shown on Figures 1 through 4. b) Based on \$18.00 per square foot.

#### 6. CONSTRUCTION NOISE

As directed by 23 CFR 772.19, the effects of the temporary increased noise levels during construction were considered. These noise impacts would occur within the immediate vicinity of the construction activities and generally be limited to working hours. Although noise impacts during project construction are of short duration, a large number of combustion engine powered equipment will be required to construct the proposed roadway. This equipment is expected to be the main contributor to the sound levels from highway construction. Table 6 lists some typical peak operating noise levels at a distance of 50 feet, grouping construction equipment according to mobility and operating characteristics.

The major construction elements of this project are expected to be earth removal, hauling, grading and paving. General construction impacts such as temporary speech interference for passerby and those individuals living and working near the project can be expected, particularly from earth moving equipment during grading operations. Overall, construction noise impacts are expected to be minimal since construction noise is of relatively short duration.

		NOISE LEVEL (dBA) AT 15m (50ft)					
		60	70	80	90	100	110
<b>Equipment Powered</b>	by Internal Combustion Engin	es					
Earth Moving	Compacters (Rollers)		•				
	Front Loaders						
	Backhoes						
	Tractors						
	Scapers, Graders						
	Pavers				•		
	Trucks						
Materials Handling	Concrete Mixers			_			
	Concrete Pumps			•			
	Cranes (Movable)			_			
	Cranes (Derrick)				•		
Stationary	Pumps		•				
	Generators						
	Compressors			_			
Impact Equipment							
	Pnuematic Wrenches						
	Jack Hammers, Rock Drills						
	Pile Drivers (Peaks)						•
Other Equipment							
	Vibrator						
	Saws						

Table 6 CONSTRUCTION EQUIPMENT SOUND LEVELS

SOURCE: U.S. Report to the President and Congress on Noise, February, 1972.

#### 7. UNDEVELOPED LANDS

The 66 dBA  $L_{eq}(h)$  setback distance along the proposed David Hoekel Parkway would range from 100 feet to 144 feet. The range of distances is a function of traffic volumes and roadway elevation adjacent to the vacant lands. The setback distance indicates that noise levels within the setback distance, measured perpendicular to the centerline in either direction, is 66 dBA  $L_{eq}(h)$  or greater. This setback distance was developed to assist local planning authorities in developing land use control over the remaining undeveloped lands along the project in order to prevent further development of incompatible land use.

#### 8. CONCLUSION

Based on the noise study completed for the David Hoekel Parkway EA, only 5 of the 7 noise barriers presented in Table 5 would meet MoDOT's definition for feasible and reasonable noise mitigation. Public informational meetings, both formal and informal, will be conducted throughout the project development process, from planning, to design, to construction, to solicit comments, opinions and concerns from local officials and the public. Upon completion of the public information meetings, should the majority of affected residents concur that noise walls are desired, the City of Wentzville/MoDOT would consider installing the noise barriers adjacent to the proposed project that are feasible and reasonable. If substantial changes in horizontal or vertical alignment occur during the remaining stages of design and construction, noise abatement measures will be reviewed. A final Noise Report will be prepared, if needed, during final design and following all receipt of public comments. The Noise Report analysis will remodel the noise barriers with final roadway alignment and finished grade elevations at the right-of-way resulting in design level data for construction plans.



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### **David Hoekel Parkway EA**

**Noise Receivers and Barriers** 

Figure 1 of 4



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## David Hoekel Parkway EA

**Noise Receivers and Barriers** 

Figure 2 of 4



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## **David Hoekel Parkway EA**

**Noise Receivers and Barriers** 

Figure 3 of 4



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### **David Hoekel Parkway EA**

**Noise Receivers and Barriers** 

Figure 4 of 4

# **APPENDIX I**

**Agency Correspondence** 



### David Hoekel Parkway EA Resource Management Group

City of Wentzville – 200 Fourth Street Wentzvi	lle, MO 63385
Scott Smith – Public Works Director	Scott Hitchcock – Engineering Division
(636) 639-2049	(636) 327-5102
scott.smith@wentzvillemo.org	<u>scott.hitchcock@wentzvillemo.org</u>
Doug Forbeck – Community Development Director	Dennis Walsh – Interim City Administrator
(636) 639-2031	(636) 327-5101
<u>doug.forbeck@wentzvillemo.org</u>	Dennis.Walsh@wentzvillemo.org
Federal Highway Administration – 3220 W. Ed	dgewood, Suite H Jefferson City, MO 65109
Peggy Casey – Environmental Coordinator (573) 636-7104 peggy.casey@fhwa.dot.gov	Joe Boyd – Federal Motor Carrier Safety Admin, Division Administrator (573) 636-3246 Joseph.Boyd@dot.gov
MoDOT Central Division – 105 W. Capitol Ave.	(P.O. Box 270) Jefferson City, MO 65102
Kelly R. Cox (Retired)	Richard (Mac) Finley – Traffic
(573) 526-6682	(573) 751-4994
<u>Kelly.cox@modot.mo.gov</u>	<u>Mac.Finley@modot.mo.gov</u>
Gayle Unruh	Mark Zacher – Railroad Coordination
(573) 526-6676	(573) 526-3577
<u>Gayle.unruh@modot.mo.gov</u>	Mark.zacher@modot.mo.gov
Jan Skouby – Motor Carriers	Michelle Teel – MCS
(573) 751-4021	(573) 522-5202
Jan.skouby@modot.mo.gov	<u>michelle.teel@modot.mo.gov</u>
MoDOT District 6 – 1590 Woodlake Drive Ches	sterfield, MO 63017
Jeanne Olubogun	James R. Gremaud – St. Charles Area Engineer
(314) 340-4550	(636) 240-5277
<u>Jeanne.Olubogun@modot.mo.gov</u>	James.Gremaud@modot.mo.gov
East-West Gateway Council of Governments	– Gateway Tower
One Memorial Drive, Ste. 1600 St. Louis, Mis	souri 63102
Marty Altman (Retired)	Jerry Blair
(314) 421-4220	(314) 421-4220
<u>Marty.altman@ewgateway.org</u>	<u>Jerry.Blair@ewgateway.org</u>
Wentzville Chamber of Commerce – P.O. Box	11 Wentzville, MO 63385
Erin Williams (636) 327-6914 <u>info@wentzvillechamber.com</u>	

<b>St. Charles County</b> – County Administration Building, 201 N. Second Street St. Charles, MO 63301
Wayne Anthony - Community Development (636) 949-7335
City of Flint Hill – P.O. Box 196 Flint Hill, MO 63346-0196
Doug Wynn – Mayor         Melissa Burton – City Clerk           (636) 332-3355         (636) 327-4441
George Butler Associates, Inc 225 S. Main, Ste. 200, O'Fallon, MO 63366-2892
Dan Shane – City of Flint Hill Engineering Consultant (636) 240-2444 <u>dshane@gbutler.com</u>
Jim Dunajcik – City of Flint Hill Engineering Consultant (636) 240-2444 jdunajcik@gbutler.com
City of Foristell – No. 10 Highway T, Foristell, MO 63348
Wanda Donnelly – Mayor Sandy Stokes – City Administrator (636) 463-2123
John D. Pickering – Representative from City
Missouri Department of Natural Resources – 205 Jefferson St. Jefferson City, Missouri 65102
Jane Beetem (573) 522-2401 jane.beetem@dnr.mo.gov
Missouri Department of Conservation – 2901 W. Truman Blvd. Jefferson City, MO 65109
Shannon CaveBill Goodwin(573) 522-4115 ext. 3250(573) 522-4115 ext. 3209Shannon.cave@mdc.mo.govwilliam.goodwin@mdc.mo.gov
Missouri Emergency Management Agency – 2302 Militia Dr. Jefferson City, MO 65102
Jason Schneider - Floodplain Management Engineer (573) 526-9119 jason.schneider@sema.dps.mo.gov
U.S. Environmental Protection Agency – Region 7 901 N. 5 <sup>th</sup> Street Kansas City, KS 66101
Joe Cothern (913) 551-7148 <u>cothern.joe@epamail.epa.gov</u>
U.S. Fish and Wildlife Service – 101 Park De Ville Dr. Columbia, MO 65203-0007
Charlie Scott (573) 876-1911 ext. 104 <u>Charlie_scott@fws.gov</u>
#### U.S. Army Corps of Engineers – Regulatory Office 1222 Spruce Street St. Louis, MO 63103

Jaynie Doerr (314) 331-8581 Jaynie.G.Doerr@usace.army.mil

**USDA, Natural Resources Conservation Service** – 601 Business Loop 70 West Parkade Center, Ste. 250 Columbia, Missouri 65203

Roger Hansen - State Conservationist (573) 876-0901

HNTB Corporation – 10 South Broadway, Ste. 400 St. Louis, MO 63102

Gretchen Ivy – Project Manager (816) 527-2561; 472-4086FAX givy@hntb.com

Brian Langenbacher – Preliminary Engineering (314) 242-2228; 241-1914FAX <u>blangenbacher@hntb.com</u> Tim Flagler – Environmental (816) 527-2415; 472-4086FAX <u>tflagler@hntb.com</u>

Steve Wells – QA/QC (816) 527-2775; 472-4086FAX srwells@hntb.com

Katie Summy – Public Involvement (816) 527-2760 ksummy@hntb.com



The City of Wentzville is a community of neighbors working together to build a better future.

(Name) (Address)

### Subject: Dave Hoekel Parkway Environmental Assessment Resource Management Group Invitation

Dear (Name):

The City of Wentzville in coordination with the Missouri Department of Transportation and the Federal Highway Administration is initiating an Environmental Assessment for the Dave Hoekel Parkway. The Dave Hoekel Parkway study will focus on a new connection between I-70 and US 61 in St. Charles County within the Wentzville, Missouri area. The project has been studied previously within a Corridor Preservation Study, an I-70 Break-In-Access Study, and the City of Wentzville's Comprehensive Plan. The parkway is proposed to be a four-lane divided arterial on new alignment from the intersection of Pointe Prairie Road and Jackson Road (southern terminus) to Highway P in Flint Hill, Missouri, approximately 1,000 feet north of Mette Road (northern terminus). A map of the project study area is attached to this letter.

We would like to invite your agency to participate in the Resource Management Group (RMG) that is being assembled for the project. The RMG is being formed to inform and receive input from resource agencies that may have an interest in this project. Your agency's involvement would encompass providing input in those areas under your expertise. No direct writing or analysis is expected for preparation of the environmental documents. The following activities will be implemented to maximize interagency cooperation and coordination:

- 1. Invitation to coordination meetings,
- 2. Consultation on any relevant technical studies that will be required for the project,
- 3. Organization of any appropriate joint field reviews with the resource agency,
- 4. Provision of project information including study results, and
- 5. Encouragement of the use of the above documents to express your views on subjects within your expertise.

To achieve the optimum benefits of resource agency involvement for this project, we are proposing to enhance the process by combining a project informational meeting with a project site field visit. The initial project informational meeting is scheduled for 10:30 a.m. on August 23, 2007 at the Wentzville Law Enforcement Center with lunch and a tour of the project study area immediately following the meeting for those interested. The package enclosed with this letter includes an itinerary, the meeting agenda, a project study area map, an overview of the Purpose and Need for the project, and a list of RMG invitees for your use in preparing for both the field visit and your submission of views.

City Hall	Municipal Court	Police Department	Parks Department	Public Works
310 West Pearce Blvd.	1019 Schroeder Creek Blvd.	1019 Schroeder Creek Blvd.	968 Meyer Road	200 Fourth Street
Wentzville, Missouri 63385	Wentzville, Missouri 63385	Wentzville, Missouri 63385	Wentzville, Missouri 63385	Wentzville, Missouri 63385
636.327.5101 • 636.332.5101	636.327.5141	636.327.3109	636.327.7665 • 636.332.9236	636.327.5102 • 636.332.5102
fax: 636.639.2017	fax: 636.639.6217	fax: 636.327.5896	fax: 636.327.3066	fax: 636.327.4892



The City of Wentzville is a community of neighbors working together to build a better future.

We look forward to your response to this request and your role in the RMG. If you have any questions or would like to discuss in more detail the project or our agencies' respective roles and responsibilities during preparation of the Environmental Assessment, please contact me at (636) 327-5102 or contact Luis Porrello with HNTB Corporation at (314) 242-2265.

Sincerely yours,

**Bill Bensing** Director of Public Works, City of Wentzville

City Hall	Municipal Court	Police Department	

310 West Pearce Blvd. Wentzville, Missouri 63385 636.327.5101 • 636.332.5101 fax: 636.639.2017

----

1019 Schroeder Creek Blvd. Wentzville, Missouri 63385 636.327.5141 fax: 636.639.6217

Mandalanal Count

1019 Schroeder Creek Blvd. Wentzville, Missouri 63385 636.327.3109 fax: 636.327.5896

968 Meyer Road Wentzville, Missouri 63385 636.327.7665 • 636.332.9236 fax: 636.327.3066

**Parks Department** 

**Public Works** 

200 Fourth Street Wentzville, Missouri 63385 636.327.5102 - 636.332.5102 fax: 636.327.4892



The City of Wentzville is a community of neighbors working together to build a better future.

(Name) (Address)

### Subject: David Hoekel Parkway Environmental Assessment Resource Management Group Meeting - Invitation to Discuss Project Alternatives

Dear (Name):

The City of Wentzville, in coordination with the Missouri Department of Transportation and the Federal Highway Administration, are hosting the second Resource Management Group meeting on the development of the Environmental Assessment for the David Hoekel Parkway in Wentzville, Missouri. The meeting will focus on the alternatives development and screening process for the study.

We would like to invite your agency to participate in the Resource Management Group meeting to be held on December 4<sup>th</sup> at 1:00 p.m. at the Wentzville Law Enforcement Center. Directions and a map to the meeting location are attached. Your agency's involvement would encompass providing input on the study alternatives and screening matrix criterion that falls under your area of expertise.

The package enclosed with this letter includes the meeting agenda, a map showing the Reasonable Alternatives for the project study area, and the Alternatives Screening Matrix.

We look forward to your response to this request and your role in the RMG. Please RSVP to Gretchen Ivy with HNTB Corporation at (816) 527-2561 or <u>givy@hntb.com</u>. If you have any questions or would like to discuss in more detail the project or our agencies' respective roles and responsibilities during preparation of the Environmental Assessment, please contact me at (636) 327-5102.

Sincerely yours,

Bill Bensing Director of Public Works, City of Wentzville

City Hall	Municipal Court	Police Department	Parks Department	Public Works
310 West Pearce Blvd.	1019 Schroeder Creek Blvd.	1019 Schroeder Creek Blvd.	968 Meyer Road	200 Fourth Street
Wentzville, Missouri 63385	Wentzville, Missouri 63385	Wentzville, Missouri 63385	Wentzville, Missouri 63385	Wentzville, Missouri 63385
636.327.5101 • 636.332.5101	636.327.5141	636,327,3109	636.327.7665 • 636.332.9236	636.327.5102 • 636.332.5102
fax: 636.639.2017	fax: 636.639.6217	fax: 636.327,3896	fax: 636.327.3066	fax: 636.327.4892

# **On-line LEVEL 1 Report**

# Your project information

First Name: Tim

Last Name: Flagler

Email Address: tflagler@hntb.com

Business: HNTB Corporation

Project: Road or Highway

# Your query information



# Details

Cautions related to species/habitats of concern or project type. Please reflect these concerns and recommendations in your plans:

• Even if records of species/habitats of concern <u>do not exist</u>, there is a possibility that your project will encounter a species of concern that is not on record. In Missouri, 93% of the land is in private ownership, and most of that has never been checked for endangered species. Animals move over varying ranges, and in time both animal and plant populations can move.

• If your project encounters and potentially affects a federally-listed species, immediately report it to the U.S. Fish and Wildlife Service or Missouri Department of Conservation.

No further consultation with the U.S. Fish and Wildlife Service or the Missouri Department of Conservation is necessary. Print this document to establish compliance with requirements to consult with U.S. Fish and Wildlife Service and the Missouri Department of Conservation about this project.

If you need additional information, please contact:

MDC Natural Heritage Review	or	U.S. Fish and Wildlife Service Ecological
<b>Resource Science Division</b>		Services
P.O. Box 180		101 Park Deville Drive , Suite A
Jefferson City , MO 65102-0180		Columbia , Missouri 65203-0007
(Phone 573-522-4115 ext. 3182)		(Phone 573–234–2132)
www.mdc.mo.gov		

A HERITAGE REVIEW provides information about species and habitats of concern that could be affected by the project. Heritage records note things that were positively identified at some date and time, marked at a location that may be more or less precise. Animals move quickly but plant communities can move also. To say "there is a record" does not mean the species/habitat is still there. To say that "there is no record" does not mean the project may not encounter something. Because of this, reports include information about records near but not necessarily on the project site. Three different kinds of information are provided.

• FEDERAL Concerns are species/habitats protected under the Federal Endangered Species Act and that have been known near enough to the project site to warrant consideration. For these, project managers must contact the U.S. Fish and Wildlife Service Ecological Services (101 Park Deville Drive Suite A, Columbia, Missouri 65203-0007; Phone 573-234-2132; Fax 573-234-2181) for consultation.

• STATE Concerns are species/habitats known to exist near enough to the project site to warrant concern and protected under the Wildlife Code of Missouri (RSMo 3 CSR 10). "State Endangered Status" is determined by the Missouri Conservation Commission under constitutional authority, with requirements expressed in the Missouri Wildlife Code, rule 3CSR10-4.111. "State Rank" is numeric rank of relative rarity, protected under general provisions of the Wildlife Code but not endangered.

• "Concerns & management recommendations" are things for which one might prudently look. There is no specific heritage record, but our knowledge of the surrounding landscape suggests consideration. 93% of Missouri 's land is in private ownership, so most sites have never been carefully inspected by conservation professionals

This report is not a site clearance letter. Rather, it provides an indication of whether or not public lands and sensitive resources are known to be (or are likely to be) located close to the proposed project. Incorporating information from our Heritage Database into project plans is an important step that can help reduce unnecessary impacts to Missouri's sensitive natural resources. However, the Heritage Database is only one reference that should be used to evaluate potential adverse impacts. Other types of information, such as wetland and soils maps and on-site inspections or surveys, should be considered. Reviewing current landscape and habitat information and species biological characteristics would additionally ensure that species of conservation concern are appropriately identified and addressed.

Additional information on rare, endangered and watched species may be found at <a href="http://mdc.mo.gov/discover-nature/field-guide/endangered-species">http://mdc.mo.gov/discover-nature/field-guide/endangered-species</a>. Detailed information about species mentioned may be accessed at <a href="http://mdc4.mdc.mo.gov/applications/mofwis/mofwis\_search1.aspx">http://mdc4.mdc.mo.gov/applications/mofwis/mofwis\_search1.aspx</a>. If you would like printed copies of best management practices cited as internet URLs, please contact us.



# **United States Department of the Interior**

FISH AND WILDLIFE SERVICE Columbia Ecological Services Field Office 101 PARK DEVILLE DRIVE, SUITE A COLUMBIA, MO 65203 PHONE: (573)234-2132 FAX: (573)234-2181



Consultation Tracking Number: 03E14000-2014-SLI-0158 Project Name: David Hoekel Pkwy - EA January 24, 2014

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project.

To Whom It May Concern:

This response has been generated by the Information, Planning, and Conservation (IPaC) system in order to provide information on natural resources that could be affected by your project. The response is provided by the U.S. Fish and Wildlife Service (Service) under the authority of the Endangered Species Act of 1973 (16 U.S.C. 1531-1543), the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d), the Migratory Bird Treaty Act (16 U.S.C. 703-712), and the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.).

### **Threatened and Endangered Species**

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact our office if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

For assistance in determining if suitable habitat for listed, candidate, or proposed species occurs within your project area or if species may be affected by project activities, please visit species profiles at http://www.fws.gov/midwest/endangered/section7/s7process/lifehistory.html. Indiana bats, gray bats, and northern long-eared bats occur throughout Missouri and the information below may help in determining if your project may affect these species.

<u>Gray bats</u> - Gray bats roost in caves or mines year-round and use forest riparian areas for foraging. If your project will impact caves or mines or will involve tree removal around these areas (particularly within stream corridors, riparian areas, or associated upland woodlots), gray bats could be affected.

<u>Indiana and northern long-eared bats</u> - These species hibernate in caves or mines only during the winter. The rest of the year they roost under loose tree bark in tree crevices or cavities during the day and forage around tree canopies of floodplain, riparian, and upland forests at night. Trees which should be considered potential roosting habitat include those exhibiting loose or shaggy bark, crevices, or hollows. Tree species often include, but are not limited to: shellbark or shagbark hickory, white oak, cottonwood, and maple. If your project will impact caves or mines or will involve clearing forested habitat containing suitable roosting habitat, Indiana bats or northern long-eared bats could be affected. If your project will involve removal of over 5 acres of forested habitat, you may wish to complete a Summer Habitat Assessment prior to contacting our office in order to expedite the consultation process. The Summer Habitat Assessment Form is available in Appendix A of the most recent version of the Range-wide Indiana Bat Summer Survey Guidelines, located at

www.fws.gov/midwest/Endangered/mammals/inba/ under the heading Summer Survey Guidance.

If no suitable habitat for any federally-listed, candidate, or proposed species is present, and no species or their critical habitat will be affected, then no further consultation or coordination is required. However, if any of the following apply, please contact our office for further consultation:

- 1. Designated critical habitat is present within the project area,
- 2. Suitable habitat for listed, candidate, or proposed species is present within the project area (see above for habitat descriptions for bat species), or
- 3. You determine that project activities may affect these species or their critical habitat (e.g., project occurs upstream or within a distance such that the species or habitat could be affected).

The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. For additional conservation measures that may benefit species identified in the enclosed list, please contact our office.

#### **Other Considerations**

<u>Bald and Golden Eagles</u> - Although the bald eagle has recently been removed from the endangered species list, this species and the golden eagle are protected by the Bald and Golden

Eagle Act and the Migratory Bird Treaty Act. Should bald or golden eagles occur within or near the project area please contact our office for further coordination. For communication and wind energy projects, please refer to additional guidelines below.

<u>Migratory Birds</u> - The Migratory Bird Treaty Act (MBTA) prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the Service. The Service has the responsibility under the MBTA to proactively prevent the mortality of migratory birds whenever possible and we encourage implementation of recommendations that minimize potential impacts to migratory birds. Such measures include clearing forested habitat outside of the nesting season (generally March 1 to August 31) or conducting nest surveys prior to clearing to avoid injury to eggs or nestlings.

<u>Communication Towers</u> - Construction of new communications towers (including radio, television, cellular, and microwave) creates a potentially significant impact on migratory birds, especially some 350 species of night-migrating birds. However, the Service has developed voluntary guidelines for minimizing impacts and these can be found at http://www.fws.gov/habitatconservation/communicationtowers.html.

<u>Transmission Lines</u> - Migratory birds, especially large species with long wingspans, heavy bodies, and poor maneuverability can also collide with power lines, In addition, mortality can occur when birds, particularly hawks, eagles, kites, falcons, and owls, attempt to perch on uninsulated or unguarded power poles. In order to minimize these risks, please refer to guidelines developed by the Avian Power Line Interaction Committee&rsquo;s and the Service at http://www.aplic.org/uploads/files/2634/APPguidelines\_final-draft\_Aprl2005.pdf. Implementation of these measures is especially important along sections of lines adjacent to wetlands or other areas known to support large numbers of raptors and migratory birds.

<u>Wind Energy</u> - To minimize impacts to migratory birds and bats, wind energy projects should follow guidelines located at http://www.fws.gov/windenergy. In addition, please refer to the Service's Eagle Conservation Plan Guidance, located at http://www.fws.gov/windenergy/eagle\_guidance.html, which provides guidance for conserving bald and golden eagles in the course of siting, constructing, and operating wind energy facilities.

#### **Next Steps**

Should you determine that project activities may impact any of the natural resources described herein, please contact our office for further coordination. Letters with requests for consultation or correspondence about your project should include the Consultation Tracking Number in the header.

If you have not already done so, please contact the Missouri Department of Conservation (Policy Coordination, P. O. Box 180, Jefferson City, MO 65102) for information concerning Missouri Natural Communities and Species of Conservation Concern.

We appreciate your concern for threatened and endangered species and please feel free to contact our office with questions or for additional information.

Amy Salveter

Attachment



Project name: David Hoekel Pkwy - EA

# **Official Species List**

### **Provided by:**

Columbia Ecological Services Field Office 101 PARK DEVILLE DRIVE SUITE A COLUMBIA, MO 65203 (573) 234-2132

Consultation Tracking Number: 03E14000-2014-SLI-0158

**Project Type:** Transportation

**Project Description:** MoDOT and the FHWA, propose constructing a new 6.9-mile roadway connection between I-70 and US 61 in St. Charles County. The City has designated this project as the David Hoekel Parkway. The proposed project would function as a four-lane divided roadway with limited access.



Project name: David Hoekel Pkwy - EA

### **Project Location Map:**



Project Coordinates: MULTIPOLYGON (((-90.9096022 38.7881221, -90.9123488 38.7882559, -90.9118252 38.7946782, -90.9130269 38.7980229, -90.9149237 38.8007053, -90.914752 38.8138146, -90.9140654 38.8158143, -90.9128638 38.8171518, -90.9118338 38.8183555, -90.9109755 38.8394778, -90.9108038 38.8408149, -90.9101172 38.8421519, -90.9085722 38.8429542, -90.9063406 38.8436227, -90.9032507 38.8437564, -90.9005042 38.8440238, -90.8970709 38.8451, -90.8943243 38.8452337, -90.8910628 38.8467044, -90.8853923 38.8495557, -90.8828174 38.8500838, -90.8797275 38.8510196, -90.8768092 38.8522228, -90.871316 38.8543617, -90.8690845 38.8550301, -90.8668529 38.8551638, -90.8649646 38.8539606, -90.8659945 38.8523565, -90.8685695 38.8514207, -90.8702861 38.8515543, -90.8721744 38.8518217, -90.874406 38.851287, -90.8795558 38.8487469, -90.8826457 38.8479448, -90.8838473 38.84741, -90.893117 38.8435328, -90.8967219 38.8432654, -90.9011851 38.8419284, -90.9056483 38.8419284, -90.9082232 38.8408587, -90.9094249 38.8182589, -90.91104548 38.8163864, -90.9119998 38.8142463, -90.9125148 38.8107686, -90.9123431 38.8087622, -90.9089099 38.8055517, -90.9092532 38.8046153, -90.9119998 38.8038127, -90.9123431



Project name: David Hoekel Pkwy - EA

38.8014047, -90.9116565 38.7993979, -90.9102832 38.7967222, -90.9095965 38.7945816, -90.9096022 38.7881221)))

Project Counties: St. Charles, MO



Project name: David Hoekel Pkwy - EA

# **Endangered Species Act Species List**

There are a total of 7 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed on the **Has Critical Habitat** lines may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Decurrent False aster (Boltonia decurrens) Listing Status: Threatened

Gray bat (Myotis grisescens) Population: Entire Listing Status: Endangered

Indiana bat (Myotis sodalis) Population: Entire Listing Status: Endangered

Least tern (*Sterna antillarum*) Population: interior pop. Listing Status: Endangered

northern long-eared Bat (Myotis septentrionalis) Listing Status: Proposed Endangered

Pallid sturgeon (Scaphirhynchus albus) Population: Entire Listing Status: Endangered

Running Buffalo clover (*Trifolium stoloniferum*) Listing Status: Endangered



Project name: David Hoekel Pkwy - EA



Project name: David Hoekel Pkwy - EA

# Critical habitats that lie within your project area

There are no critical habitats within your project area.



June 4, 2013

Tim Flagler HNTB<sup>\*</sup> 715 Kirk Drive Kansas City, Missouri 64105

Re: David Hoekel Parkway Addendum (FHWA) Wentzville, St. Charles County, Missouri

Dear Mr. Flagler:

Thank you for submitting information on the above referenced project for our review pursuant to Section 106 of the National Historic Preservation Act (P.L. 89-665, as amended) and the Advisory Council on Historic Preservation's regulation 36 CFR Part 800, which requires identification and evaluation of cultural resources.

We have reviewed the January 2013 report entitled Addendum to Cultural Resource Investigations for the Proposed David Hoekel Parkway, City of Wentzville, St. Charles County, Missouri by the Archaeological Research Center of St. Louis, Inc. Based on this review it is evident that a thorough and adequate cultural resources survey has been conducted of the project area. We concur with the investigator's recommendation that there will be **no historic properties affected** and, therefore, we have no objection to the initiation of project activities.

Please be advised that, should project plans change, information documenting the revisions should be submitted to this office for further review. In the event that cultural materials are encountered during project activities, all construction should be halted, and this office notified as soon as possible in order to determine the appropriate course of action.

If you have any questions, please write Judith Deel at State Historic Preservation Office, P.O. Box 176, Jefferson City, Missouri 65102 or call 573/751-7862. Please be sure to include the SHPO Log Number (**107-SC-13**) on all future correspondence or inquiries relating to this project.

Sincerely,

STATE HISTORIC PRESERVATION OFFICE

Park a Mile

Mark A. Miles Director and Deputy State Historic Preservation Officer

MAM:jd

c Raegan Ball, FHWA Michael Meinkoth, MoDOT Jane Beetem, DNR/DO Janet Kneller, ARC







Jeremiah W. (Jay) Nixon Governor State of Missouri OFFICE OF ADMINISTRATION Post Office Box 809 Jefferson City, Missouri 65102 Phone: (573) 751-1851 Fax: (573) 751-1212 Kelvin L. Simmons Commissioner

November 18, 2009

Gretchen ivy HNTB 715 Kirk Drive Kansas City, MO 64105-1310 816-472-4060

Dear Ms. Ivy:

Subject: 1005014

The Missouri Federal Assistance Clearinghouse, in cooperation with state and local agencies interested or possibly affected, has completed the review on the above project application.

None of the agencies involved in the review had comments or recommendations to offer at this time. This concludes the Clearinghouse's review.

A copy of this letter is to be attached to the application as evidence of compliance with the State Clearinghouse requirements.

Please be advised that I am the contact for the Federal Funding Clearinghouse. You can send future requests to the following address: Sara VanderFeltz, Federal Funding Clearinghouse, 201 West Capitol, Room 125, and Jefferson City, Missouri 65101.

Sincerely,

Sax Unixhiles

Sara VanderFeltz Administrative Assistant

¢¢:



## Jeremiah W. (Jay) Nixon, Governor • Mark N. Templeton, Director T OF NATURAL RESOURCES

www.dnr.mo.gov

December 18, 2009

Ms. Peggy Casey Environmental Projects Engineer Federal Highway Administration 3220 W. Edgewood, Ste. H Jefferson City, MO 65109 Mr. Kevin Keith MoDOT Chief Engineer 105 W. Capitol Avenue P.O. Box 270 Jefferson City, MO 65102

Re: Draft Environmental Assessment, David Hoekel Parkway, Wentzville, Missouri

Dear Ms. Ivy:

The Missouri Department of Natural Resources (Department) appreciates the opportunity to provide comments on the Draft Environmental Assessment (DEA), for the David Hoekel Parkway in Wentzville, Missouri. The Department offers the following comments for consideration.

#### Water **Ouality**

The indentified preferred alternative is documented as Build Alternative #2, and is approximately 6.9 miles in length. An estimated 2,057 linear feet on 11 jurisdictional streams will be impacted. One area located in Stonemoor Development (USACE #MVS-2005-1270) was previously mitigated with riparian preservation and enhancement (tree planting) for impacts during the residential construction of Stonemoor. If truly impacted, the United States Army Corps of Engineers (USACE) noted that this previously mitigated area will have a required compensatory mitigation ratio of 2:1. It was estimated that approximately 178 linear feet could be impacted at this previously mitigated site.

The Department concurs with the USACE that the impact to a previously mitigated area should be greater than typical mitigation ratios, especially for forested areas. Soon after the Missouri Department of Transportation (MoDOT) and the City of Wentzville apply for the project's Section 404 permit, the Department's Section 401 Water Quality Certification Unit requests notification in order to provide assistance as needed. Please contact Carrie Schulte at 573-751-7023.

It was noted in the DEA that Department staff completed a Total Maximum Daily Load study (TMDL) on Peruque Creek in October 2004. This is incorrect, as a TMDL has not been completed on this creek. The TMDL is scheduled to be worked on in 2012. The 2004/2006 Clean Water Commission (CWC) and Environmental Protection Agency (EPA) approved 303(d) list and the 2008 CWC approved 303(d) list both identify



Peruque Creek as being impaired for inorganic sediment due to urban and rural nonpoint source pollution. Extra care should be taken during construction to not further impair Peruque Creek

According to the city's Comprehensive Land Use Plan, the floodplain area would remain undeveloped. In the Final EA, project planners should specify what guarantees are in place to assure a lack of floodplain development - possibly permanent riparian or real estate protections by the property owner or the city, or a city ordinance regulating protection of floodplains. The Final EA should also state how the floodplains are defined – whether they are regulated or 100-year floodplains.

The Department agrees with the Missouri Department of Conservation on the use of native plants. We might also encourage the use of more natural or aesthetically pleasing best management practices (BMPs), such as rain gardens or treatment wetlands with native plants to help settle out or filter pollutants. Native plants help reduce maintenance and are more adaptive to local climate, in addition to providing more water infiltration and groundwater recharge.

On page 7 of Appendix D: Water Resources, ponds P-3 and P-8 were identified as "old sewage lagoons." According to the Department's National Pollutant Discharge Elimination System (NPDES) permits GIS layer, there does not appear to be a permitted facility in those locations. Single-family residential on-site sewage lagoons are regulated by the local Department of Health and Senior Services. Prior to construction, these lagoons must be properly closed. Please contact the Department's St. Louis Regional Office at 314-416-2960 to ensure these sites are not regulated by the Department or, if regulated, to ensure they are closed according to our regulations. Should they not be regulated by the Department, please contact the St. Charles County Health Department to ensure proper closure of sewage lagoons under their jurisdiction.

### **Geology**

The presence of Osagean and Meramecian carbonate rocks, which are noted for karst development in this area, combined with the presence of a known cave within 1,000 feet of the study area, suggest that karst features may be encountered within the study area. Work in this area may encounter previously unknown caves, sinkholes or other karst features. This will need to be considered by project planners during construction, including all water discharge related to construction.

The presence of existing structure within less than one mile of the study area implies that other, currently unmapped structures may be present within the study area. Geologic structures, including faulting and folding, can increase the potential for karst development, especially in the units present in this area.

In addition, the study area is within areas that may be affected by earthquakes in the New Madrid Seismic Zone, with possibly severe effects occurring in areas with thick surficial materials. This must be considered by project planners.

While no current or known inactive mines are included in the Inventory of Mines, Occurrences, and Prospects (IMOP) database, potential exists for the presence of unrecorded mines in the area.

#### Solid Waste

7

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A reference to solid waste should be added to Section K, page III-47. The Final EA should mention that the disturbance of either a pre-law or permitted landfill requires notice to and approval from the Department's Solid Waste Management Program prior disturbing the buried waste (sites of this nature were required to be recorded with the county recorder of deeds). This notification requirement does not pertain to illegally dumped solid waste. Also, the Final EA should reference the department's technical bulletin "Managing Solid Waste Encountered during Excavation Activities" as a means of demonstrating how project planners will comply with discovery of unexpected buried wastes. The bulletin is PUB2192, dated 12/2006 and can be found on the department's web site at <a href="http://www.dnr.mo.gov/pubs/pub2192.pdf">http://www.dnr.mo.gov/pubs/pub2192.pdf</a>.

In Section P, page III-57, the Final EA should reference proper management of solid waste per the Missouri Solid Waste Management Law and regulations.

#### **Air Quality**

The Department recommends that project planners include the following information in the Final EA or in guidance provided prior to construction.

#### Ambient Air Quality

A determination has been made that the project is located in an area designated as a nonattainment area for ozone and particulate matter 2.5 ( $PM_{2.5}$ ) and a maintenance area for carbon monoxide under the National Ambient Air Quality Standards. Construction-related activities associated with the project should not significantly affect local or regional air quality.

The Department recommends, to the extent practicable, that the use of heavy construction equipment should be limited on days with orange or red Air Quality Indices. This action will ensure that construction equipment does not contribute to future ozone exceedances. Additionally, if practical, the use of off road construction equipment that has been retrofitted with a diesel oxidation catalyst or other air pollution control device would further reduce the  $NO_x$  and particulate emissions related to the project.

#### Asbestos

Any renovation or demolition activities undertaken as part of this project must be conducted in accordance with local, state, and federal asbestos regulations (40 CFR Part

61, subpart M and State Regulations 10 CSR 10-6.241 and 10-6.250). These regulations require that prior to renovation or demolition that all regulated structures must be inspected by a Missouri certified asbestos inspector.

If during the course of the asbestos inspection, it is determined that the total amount of asbestos containing material (both friable asbestos containing material and asbestos containing material that would be rendered friable during the course of the renovation or demolition) exceeds 160 square feet, 260 linear feet, or 35 cubic feet, then the asbestos would have to be removed by a Missouri registered asbestos abatement contractor and disposed of in accordance with the National Emissions Standards for Hazardous Air Pollutants.

If there are less than these threshold amounts, then the material would not have to be removed prior to renovation or demolition. However, if materials are contaminated with asbestos, regardless of the amount, the sanitary landfill may have special packaging requirements for disposal.

Notice of an asbestos abatement project above the threshold limits stated above and all demolition projects, regardless of whether asbestos is present, affecting regulated structures must be provided to the Department's Air Pollution Control Program on the department form at least 10 days prior to commencement of the asbestos abatement or demolition project and approval must be granted by the Department.

#### Asphalt Paving

State regulation 10 CSR 10-5.310 restricts the use of or application of liquefied cutback asphalt in paving and maintenance operations on highways, roads, parking lots, and driveways in the counties of Franklin, Jefferson, St. Charles and St. Louis, and the City of St. Louis during the months of April through October except as otherwise exempted from the regulations.

#### **Fugitive Dust**

State regulation 10 CSR 10-6.170 restricts particulate matter emissions from leaving the premises of origin. Efforts must be made to prevent any fugitive dust that may result from any construction or demolition activities associated with this project from leaving the property where it originated.

#### Heavy Duty Diesel Idling

State regulation 10 CSR 10-5.385 restricts heavy duty diesel vehicles with a gross vehicle weight greater than 10,000 pounds that operate in the counties of Franklin, Jefferson, St. Charles and St. Louis, and the City of St. Louis from idling more than five (5) minutes in any sixty (60)-minute period except as otherwise exempted from the rule.

#### **Open Burning**

Land clearing activities requiring the open burning of vegetative debris is subject to State Regulation 10 CSR 10-6.045 that prohibits the open burning of tires, petroleum-based products, asbestos containing materials, and trade wastes except as otherwise allowed by the rule. Open burning that causes or contributes to a public health hazard, nuisance, or a hazard to vehicular or air traffic is not allowed.

State Regulation 10 CSR 10-6.045 only allows for open burning of vegetative debris from land clearing operations outside the city limits of an incorporated area or municipality and outside of the St. Louis Metropolitan Area and at a distance of more than 200 yards from the nearest inhabited dwelling. For open burning of vegetative waste that does not meet these restrictions, the Department's St. Louis Regional Office, which is responsible for the area, must be notified to determine if a permit to allow the burning can be issued. Please contact Tom Sims at 314-416-2960.

#### <u>Odor</u>

No person may cause, permit, or allow the emission of odorous matter in concentrations and frequencies or for durations that odor can be perceived when the air is diluted to 7:1 volumes of odor-free air to odorous air for two separate trials not less than 15 minutes apart within 1 hour. Specific requirements can be found in State Regulation 10 CSR 10-5.160 for St. Louis.

#### **Traffic Coatings**

State regulation 10 CSR 10-5.450 restricts the Volatile Organic Compounds content of traffic coatings that may be used within the area of applicability.

#### Transportation Conformity

Transportation conformity applies in this situation as indicated in the study. The applicable rules would be the Federal Transportation Conformity Rule (Determining Conformity of Federal Actions to State or Federal Implementation Plans-Title 40 Code of Federal Regulations Part 93 Subpart A) and the Missouri Transportation Conformity Rule (10 CSR 10-5.480 St. Louis Area Transportation Conformity Requirements).

#### Specific Comments To Environmental Assessment Document:

The air quality summation on pages 44-47 of Section III should be revised to include the following under Section 3 - Conformity:

"The St. Louis area is nonattainment for both ozone and particulate matter (annual PM<sub>2.5</sub>). The conformity determinations for both air pollutants will be conducted by the East-West Gateway Council of Governments (St. Louis' Metropolitan Planning Organization) using the latest Missouri State Implementation Plan (SIP) submittals."

The document provides only a discussion of ozone conformity and, incorrectly, says the 1-hour ozone maintenance plan is the measure for conformity in St. Louis. The 1997 ozone SIP submittal and/or the department's ozone Clean Data finding for the St. Louis

area will establish the conformity budget to be used for this project. The same comment applies to Appendix G of the document.

The department strongly recommends that vegetative waste not be burned especially during ozone season (April - October) as indicated on page III-58.

Table III-11: <u>Missouri and National Ambient Air Quality Standards</u> should be revised to add the following to the existing standards: Lead - .15 μg/m3, Running Three-month Average Ozone - 0.075 ppm

We appreciate the opportunity to provide comments on the Draft Environmental Assessment, David Hoekel Parkway, Wentzville, Missouri. If you have any questions or need clarification, please contact me or Ms. Jane Beetem, phone number 573-751-3195. The address for correspondence is Department of Natural Resources, P.O. Box 176, Jefferson City, MO 65102. Thank you.

Sincerely,

DEPARTMENT OF NATURAL RESOURCES

Dru Buntin

Dru Buntin Deputy Director for Policy

DB:jb



#### DEPARTMENT OF THE ARMY ST. LOUIS DISTRICT CORPS OF ENGINEERS 1222 SPRUCE STREET ST. LOUIS, MISSOURI 63103-2833

October 15, 2008

Regulatory Branch File Numbers: MVS-2007-543

Mr. Tim Flagler HNTB Corporation 715 Kirk Drive Kansas City, Missouri 64105

Dear Mr. Flagler:

This letter is in reference to your email dated October 2, 2008, requesting written determination on whether the ponds labeled 1-8 in your David Hoekel Parkway May 2008 report and their fringe wetlands are considered jurisdictional waters of the United States. The Secretary of the Army has authority to administer a permit program to regulate the placement of dredged or fill material into waters of the U.S. The placement of any dredged or fill material into waters of the U.S. below ordinary high water elevation, or in wetlands adjacent to these waters, must be authorized by a Section 404 permit.

We concur with your findings that ponds labeled 1 and 2 no longer exist and those ponds numbered 3-8 were excavated wholly in uplands, therefore are not considered waters of the U.S. and are not subject to Section 404 of the Clean Water Act jurisdiction.

If you have any questions concerning this matter, do not hesitate to contact me at (314) 331-8581. Please refer to the file numbers above. The St. Louis District Regulatory Branch is committed to providing quality and timely service to our customers. In an effort to improve customer service, please take a moment to complete the enclosed postage paid card or go to our Customer Service Survey found on our web site at http://per2.nwp.usace.army.mil/survey.html.

Sincerely,

Jāynie G. Doerr Project Manager Missouri Permits Region

Copies Furnished:



DEPARTMENT OF THE ARMY ST. LOUIS DISTRICT CORPS OF ENGINEERS 1222 SPRUCE STREET ST. LOUIS, MISSOURI 63103-2833

REPLY TO ATTENTION OF:

September 18, 2008

Regulatory Branch File Number: MVS-2007-543

Mr. Bill Bensing City of Wentzville Public Works Director 200 Fourth Street Wentzville, Missouri 63385

Dear Mr. Bensing:

We have reviewed your submittal, dated May 2008, and submitted on your behalf by HNTB Corporation, requesting a jurisdictional determination for the proposed David Hoekel Parkway in Wentzville, St. Charles County, Missouri. The study corridor is approximately 6 miles in length and extends from the intersection of Pointe Prairie Road and Jackson Road (southern terminus) to Route P, just east of US -61 (northern terminus). The project is located within the McCoy Creek and Peruque Creek watersheds. McCoy Creek flows to the Cuivre River and Peruque Creek flows to the Mississippi River.

Section 404 of the Clean Water Act assigns responsibility to the Secretary of the Army to administer a permit program to regulate the placement of dredged or fill material into waters of the United States. The placement of any dredged or fill material into waters of the United States below ordinary high water elevation, or in wetlands adjacent to these waters, must be authorized by a Section 404 permit.

Based upon a review of the U.S. Geological Survey 7.5-minute topographical map, soil survey, National Wetland Inventory maps, and the submittal, we determined that eleven tributaries (identified in your submittal as S1-S11) are jurisdictional waters of the United States. Tributaries S3, S6 and S8 are ephemeral streams; tributaries S2, S4, S5, S7, S9 and S11 are intermittent streams; and tributaries S2 and S10 are perennial streams. We concur with your delineation that no wetlands are located within the study corridor. As a result of this determination, a **Department of the Army, Section 404 permit would be required** for the construction of the proposed David Hoekel Parkway. According to your submittal, the proposed route will impact a mitigation area associated with a previous permit action for the Stonemoor Development (COE# MVS-2005-1270). If this area is to be impacted, we will require a 2:1 replacement ratio for that mitigation. Please submit a mitigation plan in your permit application.

The **jurisdictional determination** for this project is considered a **Preliminary** jurisdictional determination in accordance with Corps regulations at 33 CFR Part 331 (see attached). A preliminary jurisdictional determination is not appealable. If you wish, you may request an Approved Jurisdictional Determination (which may be appealed) by contacting our office for further instruction.

If you have any questions please contact me at (314) 331-8581. Please refer to file number 2007-543. Also, we appreciate any feedback that you are able to offer. Please consider going to the following link <u>http://per2.nwp.usace.army.mil/survey.html</u> to complete a quick, on-line survey regarding the Corps' Regulatory Program.

Sincerely,

Jaynie M. Oven

Jaynie Doerr Project Manager Missouri Permit Region Regulatory Branch

Enclosure

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Copy Furnished:

Mr. Tim Flagler HNTB Corporation 715 Kirk Drive Kansas City, Missouri 64105 STATE OF MISSOURI Matt Blunt, Governor • Doyle Childers, Director DEPARTMENT OF NATURAL RESOURCES R471

www.dnr.mo.gov

August 19, 2008

Janet Kneller Archaeological Research Center of St. Louis, Inc. 2812 Woodson Road St. Louis, Missouri 63114

Re: Proposed David Hoekel Parkway (FHWA) St. Charles County, Missouri

Dear Ms. Kneller:

Thank you for submitting information on the above referenced project for our review pursuant to Section 106 of the National Historic Preservation Act (P.L. 89-665, as amended) and the Advisory Council on Historic Preservation's regulation 36 CFR Part 800, which requires identification and evaluation of cultural resources.

We have reviewed the June 2008 report entitled *Cultural Resource Investigations for the Proposed David Hoekel Parkway, City of Wentzville, St. Charles County, Missouri.* Based on this review it is evident that a thorough and adequate cultural resources survey has been conducted of the project area. We concur with your recommendation that archaeological sites 23SC2140, 23SC2141 and 23SC2146 may be eligible for inclusion in the National Register of Historic Places. We also concur that 23SC2138, 23SC2139, 23SC2142, 23SC2143, 23SC2144 and 23SC2145, and the forty (40) buildings and structures listed in Appendix A are not eligible.

If at all possible, the proposed project should be designed to avoid archaeological sites 23SC2140, 23SC2141 and 23SC2146. Plans detailing the redesign of the project corridor should be submitted to this office in order to document the successful avoidance. If avoidance is not feasible, subsurface archaeological testing should be conducted in order to determine if these sites are eligible for inclusion in the National Register of Historic Places. The results of the evaluation should be submitted to the State Historic Preservation Office in accordance with the Council's regulations. Pending completion of this process, no actions should be taken that would foreclose consideration of alternatives to avoid or satisfactorily mitigate any adverse effects to historic properties.

If you have any questions, please write Judith Deel at State Historic Preservation Office, P.O. Box 176, Jefferson City, Missouri 65102 or call 573/751-7862. Please be sure to include the SHPO Log Number (062-SC-07) on all future correspondence or inquiries relating to this project.

Sincerely,

STATE HISTORIC PRESERVATION OFFICE

Mark A. Miles Director and Deputy State Historic Preservation Officer

C	Peggy Casey, FHWA
	Bob Reeder, MoDOT
	Jane Beetem, DNR/OD





TRIBAL HISTORIC PRESERVATION OFFICE

Date: April 22, 2008 File: 0708-309MO-4

RE: David Hoekel Parkway, Wentzville, Missouri St. Charles County Invitation to Become a Consulting Party

Missouri Department of Transportation Peggy J. Casey, Environmental Projects Engineer 3220 W. Edgewood, Suite H Jefferson City, Missouri 65109

Dear Ms. Casey,

The Osage Nation Tribal Historic Preservation Office received your letter dated February 5, 2008 regarding the proposal for a new connection between I-70 and US 61 in St. Charles County, Missouri. The Osage Nation appreciates the invitation to be a participating agency on this project and accepts the invitation.

In accordance with the National Historic Preservation Act, (NHPA) [16 U.S.C. 470 §§ 470-470w-6] 1966, undertakings that are subject to the review process are referred to in S101 (d)(6)(A), which clarifies that historic properties may have religious and cultural significance to Indian tribes. Additionally, Section 106 of NHPA requires Federal agencies to consider the effects of their actions on historic properties (36 CFR Part 800) as does the National Environmental Policy Act (43 U.S.C. 4321 and 4331-35 and 40 CFR 1501.7(a) of 1969).

The Csage Nation has a vital interest in protecting its historic and ancestral cultural resources. The Osage Nation, therefore, requests to be a consulting party under Section 106 of the NHPA for the proposed new connection between I-70 and US 61 in St. Charles County, Missouri.

Should you have any questions or need any additional information please feel free to contact me at the number and/or email address listed below. Thank you for consulting with the Osage Nation on this matter.

Dr. Andrea A. Hunter Tribal Historic Preservation Officer

Phone: (918) 287-5671 \* Email: ahunter@osagetribe.org

DA ADA Planning ROW Env Review Env Pro Fin Mgr Fin Spec Fin Tech Bridge **Civil Rights** Safety Operations TE1 TE2 TE3 TE4

FHWA MO DIV RECEIVED



Department

**Federal Highway** 

of Transportation

Administration

Missouri Division Allen Masuda, Division Administrator

3220 W. Edgewood, Suite H Jefferson City, Missouri 65109 (573) 636-7104 Fax (573) 636-9283 Missouri.FHWA@fhwa.dot.gov

February 5, 2008

Mr. Guy Munroe Chairman Kaw Tribe of Oklahoma Drawer 50 Kaw City, Oklahoma 74641

Subject: David Hoekel Parkway, Wentzville, Missouri St. Charles County Invitation to Become a Consulting Party

Dear Chairman Monroe:

The Federal Highway Administration (FHWA), in cooperation with the Missouri Department of Transportation (MoDOT and the City of Wentzville is initiating an Environmental Assessment (EA) for the David Hoekel Parkway. The project will focus on a new connection between I-70 and US 61 in St. Charles County, Missouri within the Wentzville area. We expect to have a preliminary draft of the EA within the next few months.

The purpose of the project is to provide a safe, environmentally sound, cost-effective and efficient roadway connection that improves access and mobility between I-70 and U.S. 61, reduces congestion, supports local and regional growth, supports sustainable development, and promotes a multi-modal transportation system. The parkway is proposed to be a four-lane divided arterial on new alignment, from the intersection of Pointe Prairie Road and Jackson Road (southern terminus) to Highway P in Flint Hill, approximately 1,000 feet north of Mette Road (northern terminus). Enclosed are maps of the project study area on an aerial photo base and a USGS quad base.

As a tribal government you are entitled to become a consulting party under Section 106 of the National Historic Preservation Act of 1966. As a consulting party you would have the right to participate in identification of properties of interest to the tribe and/or that are eligible for the National Register of Historic Places and the evaluation of effects on those properties that are eligible.

We look forward to your response to this request, hopefully by March 7, 2008. If you have questions or would like to discuss in more detail the project or our respective roles and







DA

ADA Planning ROW

Epv Review Env Pro Fin Mgr Fin Spec Fin Tech

Bridge

TE1

TF2

TE3 TE4

Civil Rights Safety Operations

responsibilities during preparation of the EA, please contact me at (573) 638-2620 or peggy.casey@fhwa.dot.gov.

Sincerely, Peggy Cásev. P.E

**Environmental Projects Engineer** 

Enclosures Copies: MoDOT, Environmental Section, Gayle Unruh HNTB, Tim Flagler

Administration of Historic files find no properties documented within project area that meet criteria of traditional value. Archaeological materials or Human remains could likely be encountered which requires immediate notification. Date: Project ID # Approved By: KAW NATION INDIAN TRIBE oggi Please Keep Me inde Jamp ~ Should un carrier a the randing Archeolog



From:	<u>Mike Buford</u>
То:	Tim Flagler
Subject:	Re: Flood Buyout Properties
Date:	Wednesday, January 16, 2008 8:20:21 AM

#### Tim,

Our records do not show any flood property in the aforementioned property. I have researched your proposal and found no conflicts with our county owned properties. If you have any additional questions please contact me directly thanks.

### **RECORD OF TELEPHONE CALL**

Job #	<u>39784 (David Hoekel Parkway)</u>	[
Call From	Tim Flagler	(
Call To	Jim Dunajcik	(
Ву	<u>Tim Flagler</u>	

#### Subject Discussed

I previously contacted the City of Flint Hill city clerk, Melissa Burton, to inquire about the possibility of flood buyout properties in the city limits. She passed the information on to Jim Dunajcik of GBA, the City's engineering consultant. I called Jim to ask if he had reviewed the information. He said he was not aware of any flood buyout properties located in the City of Flint Hill.

Date	January 8, 2008
Of	HNTB Corporation
Of	GBA (Flint Hill engineering consultant)

#### Action to be Taken

This information will be included in the Environmental Assessment document.





Telephone: 636-922-2833, ext. 3 FAX: 636-922-2840

December 10, 2007

Tim Flagner HNTB Corporation 715 Kirk Drive Kansas, MO 64105

Reason: David Hoekel Parkway- Environmental Assessment WRP, CRP, & Food Security Act (FSA)/Food, Agriculture, Conservation and Trade Act (FACTA) Mapped Wetlands

Dear Mr. Flagner:

I apologize for the delay in providing the written response to your request. This is to inform you that there are no WRP or CRP areas in David Hoekel Parkway Study Corridor. There has only been one landowner request for a certified FSA/FACTA wetland determination in the study corridor. This request led to a certified artificial wetland determination (see enclosed aerial photo and wetland information sheet).

There is a potential for other FSA/FACTA wetlands in the study corridor however, they have not been field delineated or certified. According to FSA/FACTA policy, we do not field delineate wetlands and complete certified wetland determinations without a request from the landowner.

If you have any questions or need further information, please don't hesitate to contact me.

Sincerely,

Sener 2. Cook

Rénee L. Cook District Conservationist


From:	Phil Yocum
То:	Tim Flagler
Subject:	RE: Flood Buyout Properties
Date:	Monday, December 10, 2007 6:52:24 AM

Tim

I have not been able to talk to our flood plain manager directly, but from a voice mail that he sent me he stated that he did not know of any property that was in the flood plain that was owned by other than private individuals. For the most part all of the creeks in the area are relatively small and are mostly wet weather creeks. If you need further information the flood plain manager for the city is Doug Forbeck Ph. 636-639-2031.

Please let me know if I can be of further assistance.

Phil Yocum Wentzville Emergency Management Director Office: 636-639-2131 Cell: 314-605-0376 Fax: 636-639-2164

From: Tim Flagler [mailto:TFLAGLER@HNTB.com] Sent: Friday, December 07, 2007 2:19 PM To: Phil Yocum Subject: RE: Flood Buyout Properties

Mr. Yocum,

Have you heard anything from the Floodplain Manager yet concerning flood buyout properties in our project area (see email below)?

### **Tim Flagler**

Senior Environmental Planner / Landscape Architect

### **HNTB Corporation**

715 Kirk Drive Kansas City, MO 64105

Tel: 816-527-2415 Fax: 816-472-4086 www.hntb.com

> -----Original Message----- **From:** Phil Yocum [mailto:phily@wentzvillemo.org] **Sent:** Thursday, November 29, 2007 1:54 PM **To:** Tim Flagler **Subject:** RE: Flood Buyout Properties

#### Mr Flagler

I am sorry for the delay in responding to your request, I have contacted our flood plain manager for the city and have requested his input.

I personally do not know of anything that would be affected but I may be wrong.

I will try to have an answer for you the first of next week.

Phil Yocum Emergency Management Director City of Wentzville, Mo. Office: 636-639-2131 Cell: 314-605-0376 Fax: 636-639-2164

From: Tim Flagler [mailto:TFLAGLER@HNTB.com] Sent: Friday, November 16, 2007 4:41 PM To: Phil Yocum Subject: Flood Buyout Properties

Phillip Yocum Director, Wentzville Emergency Management Agency

Mr. Yocum:

The City of Wentzville and the Missouri Department of Transportation (MoDOT) are initiating an Environmental Assessment for the proposed I-70/US-61 Beltway project, known as the David Hoekel Parkway, located west and northwest of Wentzville. The study area, which is approximately 6 miles in length, extends from the intersection of Pointe Prairie Road and Jackson Road (southern terminus) to Route P in Flint Hill, just east of US-61 (northern terminus). The parkway is proposed to be a four-lane divided roadway on new alignment, with new interchanges at I-70 and US-61.

HNTB Corporation is currently working as a consultant for the City and MoDOT in the preparation of an Environmental Assessment for the project. Attached is an aerial photo map showing the location and extent of the study area. We are in the process of gathering environmental data and would appreciate your input on this project. We have already contacted SEMA, and they suggested we coordinate with you regarding "Flood Buyout Properties". Would you please review the map and determine if there are any areas designated as "Flood Buyout Properties" in or near the study area? If so, would you please email, or send by ground mail, a map showing those locations, or draw them on the attached map and return it to me. Any assistance you could give on this matter is greatly appreciated. If you have any questions, please call or email.

Sincerely,

### **Tim Flagler**

Senior Environmental Planner / Landscape Architect

### **HNTB** Corporation

715 Kirk Drive Kansas City, MO 64105



Matt Blunt, Governor . Doyle Childers, Director

## DEPARTMENT OF NATURAL RESOURCES

www.dnr.mo.gov

NOV 16 2007

Tim Flagler, Senior Environmental Planner / Landscape Architect **HNTB** Corporation 715 Kirk Drive Kansas City, MO 64105

Dear Mr. Flagler:

Re: David Hoekel Parkway

Thank you for providing information on the David Hoekel Parkway for review by the Missouri Department of Natural Resources (department). The department offers the following comments.

### Geoloav

According to the department's databases, no springs, caves, or sinkholes are known to exist in the study area. All streams within the study area are classified as losing streams. Therefore, due to the losing nature of the local streams, the existence of one known cave (Race Track Cave) immediately outside of the study area, and the characteristics of the Burlington-Keokuk Limestone bedrock, the study area appears to lie within a karst area with some sinkhole collapse potential.

### Water Resources

A water pollution land disturbance permit will be needed before project construction begins, if not covered by existing Missouri Department of Transportation permits. The project planners will need to contact regulatory staff at the U.S. Corps of Engineers about what may need to be done to address any wetland impacts resulting from the project, and if project specific 401 and 404 permits are needed.

According to the department's databases, there are a total of 67 wells in the study area (64 water wells and 3 environmental monitoring wells), which are shown on the attached map. Of these, 41 are considered domestic wells, 12 are reconstructed wells (drilled prior to existing laws and since updated), 3 are monitoring wells, 3 are public drinking water wells, and 8 are private wells. These well locations were not field checked, but are listed as reported by the driller and owner on well records, and some location discrepancies may exist. Wells whose location information placed them near the edge of the study area were included. There are also several permitted National Pollutant Discharge Elimination System (NPDES) outfall locations within or near the study area. as indicated on the attached map.



Prior to 1987, registry of private wells was not required, so some existing older wells may not be included in the database. Also, well drillers do not always submit proper registration. Because of these exceptions, the databases may not accurately depict water well usage in this area. Since a public water supply district does not cover the entire study area, most residential homes and businesses outside of the City of Wentzville are likely to have a private well.

### Hazardous Waste

Known hazardous waste sites within the study area are marked on an enclosed map. There are three lift stations within the study area. No known underground storage tanks are located within the study area.

### <u>Cultural</u>

The department has determined that there is a moderate to high potential for the presence of archaeological sites near and within the area of the proposed project. This moderate to high potential is indicated by the topographic location, and the presence of previously recorded sites in portions of the corridor that have been surveyed. These sites are identified in the State Historic Preservation Office database and in Cultural Resource Management reports as 23SC943, 23SC945, 23SC946, 23SC947, 23SC997, 23SC1023, 23SC1024 and 23SC1025. We recommend that an archaeological survey should be conducted within the portion of the project corridor that has not yet been investigated. This survey should be completed prior to the initiation of project-related construction activities.

### Parks

The department has determined that this project will have no impact on State Parks or federally funded parks located in the area.

Thank you for the opportunity to review information on this project. If you have any questions regarding these comments, or need clarification, please contact me, phone number 573-751-3195. My address for correspondence is Department of Natural Resources, P.O. Box 176, Jefferson City, MO 65102. Thank you.

Sincerely, DEPARTMENT OF NATURAL RESOURCES

Chance Butem

Jane Beetem, Planner Office of the Director

JB



## **MISSOURI DEPARTMENT OF CONSERVATION**

### Headquarters

2901 West Truman Boulevard, P.O. Box 180, Jefferson City, Missouri 65102-0180 Telephone: (573) 751-4115 ▲ Missouri Relay Center: 1-800-735-2966 (TTY)

JOHN D. HOSKINS, Director

November 29, 2007

HNTB Corporation Mr. Luis Porrello 715 Kirk Drive Kansas City, MO 64105

Dear Mr. Porrello

The Missouri Department of Conservation is charged with conservation of the fish, forest and wildlife resources of Missouri. Missouri is blessed with an abundance of stream resources. Protecting the health of those stream resources is of prime concern. The proposed David Hoekel Parkway has potential to have significant direct impacts to tributaries of two relatively stable high quality urban stream systems, Peruque Creek and McCoy Creek. Upper reaches of the stream channels will be eliminated or restricted by road crossings. Flows in Peruque Creek and McCoy Creek will be flashier and flooding higher and more frequent.

Healthy streams are important in urban watersheds and are worthy of efforts to maintain them. Changes to urban water sheds created by the increase in impervious surfaces results in increased storm water run-off and sedimentation. Run-off rates after storm events caused by water shed alterations aggravate flooding, destabilize stream banks and contribute to stream sediment loads. The use of innovative practices to minimize changes to the peak flows in the streams located in the watershed traversed by the David Hoekel Parkway during construction and after completion is essential. State of the art methods of storm water management like swale retention and on-site infiltration allowing slow release of water coupled with more conventional wetland/pond retention basins is essential. The use of native plant species in right of ways and open areas can assist with water retention and slowing water runoff rates. Native plants as ground cover are adapted to the Missouri climate. Natives offer aesthetic and wildlife habitat value while reducing maintenance and upkeep unlike that of traditional non-native ground covers.

Preservation of tree and shrub cover during construction as well as planning for generous planting of replacement trees after construction can serve to deflect erosive rainfall and assist with infiltration. Due to temporal impacts of removing mature trees and replacing with saplings a higher replacement planting ration is desirable where clearing is required. In areas where the highway directly intersects with streams and at storm water outlets installation of channel protection, riparian buffers and grade stabilization structures that maintain stream channel stability and integrity are imperative. Maintenance of stable stream gradients helps maintain stream substrate that support aquatic organism.

COMMISSION

DON R. JOHNSON Festus CHIP McGEEHAN Marshfield LOWELL MOHLER Jefferson City BECKY L. PLATTNER Grand Pass Mr. Luis Porrello November 29, 2007 Page Two

Thank you for the opportunity to participate in the process. Progress does not preclude sound natural resource preservation. Efforts to maintain healthy streams and watersheds benefit everyone and contribute to quality of life. Forestry, Fisheries, and Private Land specialist located in the Missouri Department of Conservation regional office in St. Charles are available as a local source of information and assistance. They can be reached at (636) 300-1953.

Sincerely,

BILL GOODWIN ENVIRONMENTAL COMPLIANCE SPECIALIST

BG:pb

Matt Blunt Governor Ronald Reynolds Director



## **EMERGENCY MANAGEMENT AGENCY**

### DEPARTMENT OF PUBLIC SAFETY

PO Box 116, Jefferson City, Missouri 65102 Phone: 573/526-9100 Fax: 573/634-7966 E-mail: mosena@mail.state.mo.us



October 1, 2007

Tim Flagler HNTB Corportation 715 Kirk Drive Kansas City, MO 64105

### Re: David Hoekel Parkway Project in Wentzville, MO

Dear Mr. Flager

We very much appreciate your notice of the public meeting on the proposed road project in Wentzville, Missouri. Please accept this letter as comment on the proposed plan in lieu of attendance at the public hearing.

The State of Missouri is a participant in the National Flood Insurance Program (NFIP). Any development associated with this project located within a special flood hazard area (SFHA), as identified by the Federal Emergency Management Agency (FEMA), must meet the requirements of the State of Missouri Executive Order 98-03. This would require obtaining a floodplain development permit for the proposed project. This permit must be obtained prior to the commencement of any construction/development activities. This permit would be obtained from this agency.

If the proposed development is also located within a regulatory floodway, a "No-Rise" Certificate and statement as to the effects of possible flooding, is required before the development can be permitted. This analysis must be performed by a licensed engineer and to current FEMA standards.

Please check with the local EMD or designated official to inquire about Flood Buyout Properties since the community is the owner of these properties.

If you have any questions concerning this letter or the requirements of Executive Order 98-03, please feel free to contact me a (573) 526-9119.

Sincerely Jason Schneider

Floodplain Management Engineer

cc: Connie Wisniewski, Mitigation Specialist, FEMA R-VII Floodplain Administrator, Wentzille Wentzville Community File



U.S. Department of Transportation

Federal Highway Administration Missouri Division Allen Masuda, Division Administrator

3220 W. Edgewood, Suite H Jefferson City, Missouri 65109 (573) 636-7104 Fax (573) 636-9283 Missouri.FHWA@fhwa.dot.gov

September 27, 2007

Mr. Danny D. McClendon Chief, Regulatory Office U.S. Army Corps of Engineers 1222 Spruce Street St. Louis, MO 63103-2833

Subject: David Hoekel Parkway, Wentzville St. Charles County, Missouri Cooperating Agency Invitation

Dear Mr. McClendon:

The Federal Highway Administration, in cooperation with the City of Wentzville and the Missouri Department of Transportation has initiated an Environmental Assessment for the David Hoekel Parkway in the Wentzville, Missouri area. The David Hoekel Parkway study will focus on a new connection between I-70 and U.S. 61 in St. Charles County. The southern terminus will be at the intersection of Pointe Prarie Road and Jackson Road. The northern terminus will be Highway P in Flint Hill, approximately 1,000 feet north of Mette Road. The parkway is proposed to be a four-lane divided arterial on new alignment approximately six miles in length.

The purpose of the study is to provide a safe, environmentally sound, cost-effective and efficient roadway connection that improves access and mobility between I-70 and U.S. 61 in St. Charles County. The purpose and need for the study is to: (1) improve access and connectivity, (2) reduce congestion, (3) support local and regional growth, (4) support sustainable development, and (5) promote a multimodal transportation system.

Your agency's involvement should include those areas under your jurisdiction and area of expertise, with no direct writing or analysis necessary for the EA preparation, other than for review and comment purposes. The following are activities that the Project Team will take to ensure interagency cooperation:

- 1) Invite you to Resource Management Group coordination meetings,
- 2) Consult with you on any relevant technical studies that will be required for the project;
- 3) Organize joint field reviews, as appropriate;
- 4) Provide you with project information, including study results;



- 5) Encourage your agency to use the above documents to express your views on subjects within your jurisdiction or expertise: and
- 6) Include information in the project environmental documents that you need to engage your National Environmental Policy Act (NEPA) responsibilities and any other requirements regarding jurisdictional approvals, permits, licenses, and/or clearances.

As part of the scoping process for the project, a Resource Management Group coordination meeting was held with federal, state, and local agencies on August 23, 2007 at the Wentzville Law Enforcement Center. A representative from your office attended the meeting.

We look forward to your response to this request and your role as a cooperating agency on this project. We would appreciate it if you would let us know your willingness to participate as a cooperating agency by October 19, 2007. If you have questions or would like to discuss in more detail the project or our agencies' respective roles and responsibilities during preparation of this EA, please contact me at (573) 638-2620 or at peggy.casey@fhwa.dot.gov.

Sincerely yours, . Casey, P

Environmental Projects Engineer

Enclosure CC: MoDOT Environmental Section PJC/DJS



Cothern.Joe@epamail.epa.gov From: To: Tim Flagler Subject: Fw: Dave Hoekel Parkway Project Date: Monday, September 24, 2007 2:29:25 PM Attachments: St.CharlesMasterplan2015.pdf St. Louis - Legacy 2030.pdf pic21047.jpg pic01594.gif pic21487.gif pic24326.gif pic03276.gif

Tim,

Below is some info that I generated in response to your early August meeting notice. Please let me know if the resource agency meeting or other means has identified significant issues that we can assist with.

Best Regards,

Joe

Joseph E. Cothern NEPA Team Leader U.S. Environmental Protection Agency Region 7 - Kansas City (913) 551-7148 cothern.joe@epa.gov ----- Forwarded by Joe Cothern/R7/USEPA/US on 09/24/2007 02:22 PM -----

> Joe Cothern/R7/USEPA /US To Joshua Tapp/ARTD/R7/USEPA/US, 08/07/2007 02:43 Vicky Johnson/WWPD/R7/USEPA/US, PM Monica Espinosa/R7/USEPA/US cc Kim-O Johnson/ARTD/R7/USEPA/US@EPA Subject Dave Hoekel Parkway Project

Wentzville, MODOT, and Federal Highway Admin are proposing a 4 lane parkway around the western side of Wentzville conncecting I-70 and US 61. They are starting the NEPA process with a "Resource Agency" meeting on August 23rd in Wentzville.

The Google map below shows the study area within the white lines. The next map is from our R-7 GIS holdings (nothing of note within the corridor). Please let me know if there are issues that need analysis

from your program's point of view and we'll make sure that they are included in our scoping letter. I am also including a couple of county/regional planning documents that are relevant to this project.

Thanks! Joe

(See attached file: St.CharlesMasterplan2015.pdf) (See attached file: St. Louis - Legacy 2030.pdf)

Joseph E. Cothern NEPA Team Leader U.S. Environmental Protection Agency Region 7 - Kansas City (913) 551-7148 cothern.joe@epa.gov (Embedded image moved to file: pic21047.jpg)

|-----> Wentzville -----> >-----| | | | ----->

(Embedded image moved to file: pic21487.gif)

NOTE: The Environmental Protection Agency does not guarantee the accuracy, completeness, or timeliness of the information shown, and shall not be liable for any loss or injury resulting from reliance upon the information shown. ----->

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Herita Se	i Department of ( Ge Revie) ptember 5, 2007 Pa	Conservation W Report age 1 of 2	Policy Coordination Unit P. O. Box 180 Jefferson City, MO 65102 Prepared by: Shannon Cave shannon.cave@mdc.mo.gov 573-522-4115X3250
To: TFLAGLER@HNTB.com	Project type:	Road/Highway Environn	nental Assessment
im Flagler	Location/Scope:	See map and comment	below
INTB Corporation	County:	St. Charles	
15 Kirk Drive	Query reference:	David Hoekel Parkway	N
(ansas City, MO 64105	Query received:	August 31, 2007	Shame line
		Authenticity of this report may be confirmed	by contacting the Policy Coordination Un
his NATURAL HERITAGE REVIEW is not a	site clearance letter.	Rather, it indicates whether or i	not public lands and
oncern are appropriately identified and addressed. This review applies to the study are ncluded corner sections area T48	ea and to all land v N R01E Section 0	within in an approximately 6, T48N R02E Section 31	square area whose , T47N R02E Section
31 and T47N R01E Section 31. Records of federal listed or site: NONE	state endange	red species/habitats	near the project
31 and T47N R01E Section 31. Records of federal listed or site: NONE EDERAL LIST species/habitats are protected under the Fede Missouri 65203-0007; Phone 573-234-2132). STA Records of unlisted species	state endange al Endangered Species Act. Co ITE ENDANGERED species are /habitats of co	red species/habitats nsult with the U.S. Fish and Wildlife Service Insted in and protected under the Wildlife Code onservation concern:	near the project (101 Park Deville Drive Suite A. Columbi of Missouri (3CSR10-4.111). NONE
31 and T47N R01E Section 31. Records of federal listed or site: NONE EDERAL LIST species/habitats are protected under the Fede Missiour 65203-0007; Phone 573-234-2132). STJ Records of unlisted species The state tracks many species not listed as endangered. Recommendations related t	state endange al Endangered Species Act. Co ITE ENDANGERED species are /habitats of co ut sufficientlyat-risk that special o this project o	red species/habitats nsult with the U.S. Fish and Wildlife Service listed in and protected under the Wildlife Code onservation concern: efforts to conserve them may be important to the or site (not to specific he	near the project (101 Park Deville Drive Suite A, Columbia of Missouri (3CSR10-4.111). NONE heir survival and to avoid future listing. writage records):

and rivers may be found at http://www.mdc.mo.gov/documents/nathis/endangered/streams.pdf.

Please help prevent the spread of invasive species by inspecting and cleaning equipment thoroughly before moving between project sites.

These recommendations are ones s project managers might prudently consider based on a general understanding of species heeds and landscape conditions. Heritage records largely reflect only sites visited by specialists in the last 30 years. This means that many privately owned tracts could host remnants of species once but no longer common.

Contact the Policy Coordination Unit for printed copies of best management practices. More information, see <u>http://www.mdc.mo.gov/nathis/endangered/</u> and <u>http://mdc4.mdc.mo.gov/applications/mofwis/mofwis</u> search1.aspx.

Project managers can pre-screen heritage review requests at <u>http://mdcgis.mdc.mo.gov/heritage/</u>. A "Level 1 response" will result in a printable document that will make further submission to MDC or USFWS unnecessary.



# **APPENDIX I**

Agency Letters of Project Support



Creating Solutions Across Jurisdictional Boundaries

Chair Francis G. Slay Mayor, City of St. Louis Vice Chair Mark A. Kern Chairman, St. Clair County Board 2nd Vice Chair Charlie A. Dooley County Executive St. Louis County Executive Committee Alan Dunstan Chairman, Madison County Board Steve Ehlmann County Executive St. Charles County John Griesheimer Presiding Commissioner Franklin County Ken Waller County Executive Jefferson County **Delbert Wittenauer** Chairman, Board of Commissioners Monroe County Members Mark Eckert Vice President Southwestern Illinois Council of Mayors John Hamm III President, Southwestern Illinois Metropolitan & Regional Planning Commission Ted Hoskins St. Louis County Mike Livengood Franklin County John Miller President, Southwestern Illinois Council of Mayors Jack Minner Madison County Roy Mosley St. Clair County Alvin L. Parks, Jr. Mayor, City of East St. Louis Lewis Reed President, Board of Aldermen City of St. Louis Thomas P. Schneid St. Louis County Municipal Leag John White St. Charles County Regional Citizens **Richard Kellett** John A. Laker Brandon Perry

James A. Pulley Dave Stoecklin Non-voting Members Charles Ingersoli Illinois Department of Transportation Edie Koch

Illinois Department of Commerce and Economic Opportunity John Nations Metro Doug Nelson

Missouri Office of Administration

Assistant Executive Director

Dave Nichols

Ed Hillhouse

James M. Wild

Missouri Department of Transportation

**Executive Director** 

February 13, 2014 Mr. Douglas Forbeck

Community Development Director City of Wentzville 310 West Pearce Boulevard Wentzville, MO 63385

Dear Mr. Forbeck:

The David Hoekel Parkway is consistent with the Council's long-range transportation plan principle to support neighborhoods and communities throughout the metropolitan area. We understand that in the upcoming months the Missouri Department of Transportation intends to amend the project's first phase – the US 61/MO P interchange – into the region's Transportation Improvement Program (TIP), based on a cost-sharing agreement between the Department, the City of Wentzville, and St. Charles County. As a result of being included in the TIP, the first phase project will be amended into the region's long-range plan. As financial commitments and agreements are completed for subsequent phases of the Parkway, the Council will also advance those projects to the long-range plan's fiscally-constrained priority list.

Sincerely,

zy le ce

Jerry Blair Director of Transportation Planning

Gateway Tower One Memorial Drive, Suite 1600 St. Louis, MO 63102-2451

314-421-4220 618-274-2750 Fax 314-231-6120

webmaster@ewgateway.org www.ewgateway.org



## St. Charles County Government

Director of Transportation John Greifzu, R.G., P.E.

April 15, 2013

Mr. Doug Forbeck City of Wentzville 5 West Pearce Boulevard Wentzville, MO 63385

Dear Mr. Forbeck,

Please accept this letter of support for the David Hoekel Parkway project including a new I-70 interchange. This project is an important project for the region and will result in a better distribution of traffic and avoid unacceptable conditions at the Wentzville Parkway interchange.

The purpose of this letter is to outline the County's support of this project.

Sincerely,

John Drify

John Greifzu, R.G., P.E. Director of Transportation St. Charles County

201 North Second Street • Suite 423 • St. Charles, MO 63301 Telephone 636-949-7490 • Fax 636-949-7307 • E-mail:jgreifzu@sccmo.org County website: www.sccmo.org CITY OF FLINT HILL P.O. BOX 196 FLINT HILL, MO 63346 636-327-4441 cityofflinthill@centurytel.net

April 9, 2013

Ray LaHood Secretary of Transportation U.S. Department of Transportation 1200 New Jersey, SF Washington, D.C. 20590

### RE: David Hoekel Parkway Project City of Wentzville, MO - St. Charles County, MO

Dear Secretary LaHood:

Please consider this correspondence as the City of Flint Hill's commitment and support for the proposed David Hoekel Parkway Project. Our community lies in St. Charles County, MO and is one of the fastest growing counties in the United States. Our State of Missouri, Department of Transportation, in cooperation with local City governments; has committed and dedicated its support to insuring that the growth of St. Charles County has been supported by the necessary transportation infrastructure to meet current and future needs.

The Mayor and Board of Aldermen of the City of Flint Hill fully support the City of Wentzville's David Hoekel Parkway Project. This projects' goal of establishing transportation connectivity, and improving future traffic flow between Hwy 61 and Interstate 70 in western St. Charles County, will meet the transportation needs of this growing area of Missouri.

Sincerel Tough Wigne

Mayor Douglas Wynn City of Flint Hill, MO

## CITY OF FORISTELL



CITY OF FORISTELL **121 MULBERRY STREET** FORISTELL, MISSOURI 63348

PHONE: (636) 463-2123 FAX: (636) 673-2701 WWW.CITYOFFORISTELL.ORG

March 25, 2013

Ray LaHood Secretary of Transportation U.S. Department of Transportation 1200 New Jersey Avenue, SF Washington, D.C. 20590

### Re: David Hoekel Parkway Roadway Project Wentzville, Missouri

Dear Secretary LaHood:

Consider this correspondence as the City of Foristell's commitment and support of the David Hoekel Parkway Roadway Project. St. Charles County Missouri is one of the fastest growing counties in the United States, in part due to our very aggressive dedication to insuring transportation throughout the region not only meets our current needs, but also to insure our commitment to the motoring public to allow for future growth and sustainability.

The City of Wentzville has seen unprecedented growth, a trend that continues to move westward in St. Charles County. To keep ahead of not only the transportation needs in the City of Wentzville but to also allow for continued growth throughout the area, the City of Wentzville has committed to a project that will meet our needs today and well into the future. Establishing connectivity between Interstate 70 and US 61 in Wentzville will greatly reduce congestion and improve the flow of traffic throughout the area.

The Mayor and Board of Aldermen of the City of Foristell fully support the City of Wentzville's Plans for the David Hoekel Parkway Project.

Sincerely,

Tale indra L. Stokes

City Administrator

cc: Jim Smith. Missouri Department of Transportation Gregory Budd, Federal Highway Administration Doug Forbeck, City of Wentzville

# **APPENDIX J** Public Involvement

### **COVENANTS AND INDENTURES.**

Please read and become familiar with your covenants, conditions and restrictions (Indentures) for your residential project. Your indentures are privately regulated and Indentures are not City enforced. requirements, but are typically designed to match or mirror City standards. Your indentures serve to establish trustees of the subdivision and establish their duties and responsibilities, establish requirements for the use and maintenance of common areas, including the establishment of any subdivision fees. Your covenants and restrictions also privately regulate the use of land within your subdivision, by placing restrictions upon land via the document. Your restrictions may be stricter than City ordinances and are administered by your subdivision trustees, not the City. Your covenants are in place to protect your investment and property value. If you have any questions, ask your subdivision sales person or trustee.

### **NEIGHBORHOOD IMPROVEMENT DISTRICTS.**

A NID is a forward funding financing option, which normally relates to a public infrastructure improvement project for such things as water and/or sewer infrastructure, roadway improvements or similar area goals. The City of Wentzville currently has one (1) NID, which applies to Bear Creek Subdivision. An assessment is charged to property/home owners within the area of the NID to repay the forwarded monies that were used to build the infrastructure.

## How are inspections and my occupancy permit handled?

Wentzville inspects all new and existing structures within the City. For new home construction the City Building Department will review and approve your building plans and conduct inspections at various stages during construction. Permits are required for fences, decks, pools, additions, etc. The Building Department issues Occupancy Permits for new home, point of sale and rental structures. For questions concerning building inspections and/or services provided, contact the Building Department at the Public Works Department at 636-327-5102.

### CITY WEB SITE AND E-MAIL CAPABILITY.

City's site The web address is www.wentzvillemo.org. The City site offers a full range of information regarding the City, including City G.I.S. mapping, the Comprehensive Plan, City ordinances, services provided by City departments, parks and recreation programs, guality of life features, etc... The City site also allows e-mail contact with City Officials if you have questions, comments or concerns.

#### QUESTIONS OR COMMENTS....CALL US AT: City Hall Offices - 636-327-5101

- Mavor
- City Administrator
- City Clerk
- Economic Development Department
- Finance Department

### Public Works Offices - 636-327-5102

- Public Works Director
- Building Department
- Engineering Department
- Planning Department
- Street Department
- Water and Wastewater Department

### Police Department - 636-327-5105

- Chief of Police
- Police Records
- Detectives
- Police Officers

### PLEASE NOTE:

This brochure is intended for general use and information purposes only, and should not be relied upon for the legality of its contents. Please contact the Public Works Department for specific code and ordinance requirements relating to the information provided in this informational brochure. City of Wentzville Public Works 200 E. Fourth St. Wentzville, MO 63385

## City of Wentzville



# Thinking about moving to Wentzville?



Topic's to consider while you search for... a home...

### City of Wentzville Public Works Department 200 E. Fourth St. Wentzville, MO 63385

Ordinance #1884 Revised January 2007 The City of Wentzville has created this informational brochure to aid you in your decision making towards the purchase of a new home, which may be one of the largest decisions and the biggest investments that you will make in your lifetime. Topics you will find are intended to offer you the opportunity to make an informed decision and be aware of your surroundings, as well as provide you general information, which may aid you in your decision to purchase property and or a home in the City of Wentzville. Please read on.

#### WHY WENTZVILLE...

The City of Wentzville is one of the fastest growing communities in St. Charles County, and continues to expand and retain guality of life as we grow. The City has welcomed additional business with our expanding population, which provides goods and services and employment, which use to require a drive to the east. The location of Wentzville at the intersection of two (2) interstate highways will continue to attract business, housing and employment opportunities while providing excellent transportation access in all directions. The City Parks and Recreation Department provides guality facilities and a wealth of programs for residents. City services available are:

- police protection,
- water and sewer utility services (owned and operated by the City),
- parks and recreation amenities and programs,
- street maintenance and repair,
- snow removal service,
- building, planning and economic development services,
- trash services, and
- animal control services.

A full time staff of 160 employees is provided to respond to and maintain City services to its residents. The City also offers opportunity for citizen participation via governmental boards.

#### GENERALLY SPEAKING...

Knowing what to expect after you purchase your home can be just as important as the information you need to buy the home. In April of 2006, the City of Wentzville adopted a "Comprehensive Plan", sometimes referred to as the "Master Plan", which is titled "A Community's Vision". This publicly approved document establishes the framework for the growth of our community and guides land use development, the expansion of City utilities, transportation, community facilities, parks, and City finances. It is important to note that the Comprehensive Plan is a policy document and a guide. Components of the plan are impacted daily by the growth of the City. Wentzville will monitor its components as our community grows. The general focus of this brochure is to provide you the opportunity to be aware of your surroundings and Wentzville's growth potential while searching for and purchasing a home. The document is available on the City's website at www.wentzvillemo.org.

While this brochure will not answer every question, this brochure intends to help you understand your future property's restrictions, requirements, drainage and related surrounding land use issues. Knowing this type of information will help you evaluate your future plans to expand and use your property. A well-informed buyer will ask questions of the parties to the transaction before putting a contract on real estate. The following are topics of interest and questions to ask by the prospective homebuyer.

#### WHAT CAN HAPPEN ON THE VACANT LAND ADJACENT TO OR NEAR MY HOUSE?

It is practical and reasonable to expect, that undeveloped property adjacent to your home/subdivision may one day be graded and developed for other uses. If property adjacent to you is not another lot in your subdivision, common ground, or property owned by you, it is likely to be developed in the City of Wentzville by someone else. Wentzville has planned for future growth through the previously mentioned Comprehensive Plan. The Land Use Plan, within the Comprehensive Plan intends to forecast future land uses, and guide the type and intensity of development. You may look at this Plan at the Public Works Department, City Hall or the Corporate Parkway Library in Wentzville. If property remains in unincorporated St. Charles County, development is regulated by St. Charles County Government, who can be reached at 636-949-7335. The City can provide you a copy of the Wentzville Land Use Plan, and you may contact the County to obtain a copy of their long-range plan. These plans are not set in stone, but outline potential growth in your area.

#### WHAT ARE THE FUTURE PLANS FOR ROADWAY IMPROVEMENTS NEAR MY HOUSE?

Approval of development plans in the City, in many cases, plan for street connections to vacant adjacent property. Thereby, a stub street, or dead end street, which stubs upon adjacent vacant property is planned to continue and provide access and/or optional means to reach the public roadway system. In addition, the City has plans for future public streets to connect and improve the current road system. The Public Works Department can inform you of future road plans, as supported by the Comprehensive Plan, and residential connection points in the area of your home.

#### **ROADWAY CORRIDOR PRESERVATION:**

The Comprehensive Plan contains a "Thoroughfare Plan" in Chapter Two (2). This Chapter and plan indicates future roadways, and improvements to existing roadways. Subdivisions, which front on existing roads planned for improvement, dedicate the needed right of way for expansion/improvement of these roads. Wentzville is also preserving two (2) future roadway corridors at this time, indicated on the plan, known as the "David Hoekel Parkway" and Interstate Drive.

#### HOW STORMWATER IS HANDLED IN YOUR AREA.

Wentzville reviews and approves development plans to regulate stormwater runoff from developing property. The flow of stormwater is directed via project grading to a piping system or directly to the project detention basin, to be released slowly. Residential projects are designed for typical heavy rainstorms. Some rain episodes exceed the subdivision's design and water may temporarily collect in low spots and within streets. Take note of the lay of the land in the area of your home relating to how storm water drainage will occur. The predeveloped condition of property can be very different than developed property.

#### WHAT ARE YOUR FUTURE PLANS?

Evaluate any plans you have for potential room additions, deck or porch additions, swimming pools or accessory storage buildings for your property. Make sure your future plans will meet City Zoning and Building Code requirements. Request and read your Subdivision Covenants and Restrictions to insure your future plans will comply with your private subdivision requirements. BILL NO. 1952

ORDINANCE. NO. 1884

### AN ORDINANCE RELATING TO THE REQUIREMENT OF PROVIDING PUBLIC DISCLOSURE INFORMATION BY SELLERS TO PURCHASERS OF REAL PROPERTY WITHIN THE CITY OF WENTZVILLE, MISSOURI AND MATTERS RELATING THERETO.

- WHEREAS, the City of Wentzville is experiencing significant growth in its residential neighborhoods and community growth and development as a whole; and
- WHEREAS, the City desires to keep current and future residents informed of the affects of local regulations and the potential for the development of adjacent properties, or in the local vicinity of their property; and
- WHEREAS, the City is committed to see that purchasers and lessees of residential properties within the City are given the opportunity to know what may affect their home environment; and
- WHEREAS, the City has produced an informational brochure containing information to consider before they purchase property.

**NOW, THEREFORE** be it ordained that the Board of Aldermen of the City of Wentzville as follows:

- SECTION 1: In new and existing developments where the developer or developers maintain an active sales office, or display home for sales in that development of any kind, there shall be maintained copies of the disclosure document titled *"Topic's to consider while you search for your home..."* be clearly made available to the visiting public in the City of Wentzville to offer potential home or property purchasers the opportunity to be aware of development and local regulations in their home environment;
- **SECTION 2:** That the above described document shall be prominently displayed in the sales office for the public to access and retain, without written or verbal request and perspective purchasers shall be personally advised about this document.
- **SECTION 3:** That the Public Works Department will make available multiple copies of the above document and shall conduct periodic inspections to verify compliance with this ordinance.
- **SECTION 4:** Any person, corporation, or developer violating the provisions of this ordinance, upon conviction, shall be subject to a fine not less than \$100.<sup>00</sup> dollars and not to exceed \$500.<sup>00</sup> dollars.
- SECTION 5: That this ordinance shall be in full force and effect immediately upon its enactment and approval.

BILL NO. 1952

ORDINANCE. NO. 1884

READ TWO TIMES AND PASSED BY THE BOARD OF ALDERMEN OF THE CITY OF WENTZVILLE, MISSOURI THIS 14 DAY OF Quart 2002.

chie Boeken

MAYOR, VICKIE BOEDEKER

ATTEST:

ellman

CITY CLERK, VITULA SKILLMAN

APPROVED BY THE MAYOR OF THE CITY OF WENTZVILLE, MISSOURI, THIS <u>14</u> DAY OF <u>lugust</u>, 2002.

0 AI MAYOR, VICKIE BOEDEKER

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### Continued from first page

the EA process and issuing a Finding of No Significant Impact (FONSI) approving the selected alternative. The City anticipates the EA concluding in the fall of 2008 with FHWA approving the project with a FONSI. The project will receive a FONSI if the City demonstrates it can construct the project with minimal impacts to the natural environment and the community. This approval is necessary for a project to use federal funds for design, right of way acquisition and construction.

## How long will the EA take?

The study is just getting started with the initial public meeting. The City and study team need public comment to help identify community issues and concerns with the project. The study team will consider this input when identifying the key criteria for developing and screening alternatives. The criteria become increasingly detailed and stringent as the study team rules out some alternatives and focuses more closely on others. The study team anticipates completing the screening this winter. The EA documents the process of selecting a preferred alternative and its impacts on the natural environment and community. The study team will submit a draft EA for review in spring of 2008. A public hearing will take place in conjunction with the draft EA. The study team will incorporate and respond to public and agency comments in a final EA. The schedule calls for the study team submitting the final EA for approval in the fall of 2008.

## Stay Involved

What's the best way to stay up to date on the study process? Simply request that we add you to our project mailing list. To join the project mailing list, please contact the project hotline toll-free:

1 (866) 461-0062

### or by e-mail:

## DHParkwayEA@hntb.com

Handouts and exhibits from the public meetings will be available on the web:

### www.wentzvillemo.org

### David Hoekel Parkway Team P.O. Box 447 Wentzville, MO 63385-0447



Contact Us:

call toll-free
1 (866) 461-0062

or by email **DHParkwayEA@hntb.com** 

on the web
www.wentzvillemo.org

## David Hoekel Parkway Environmental Assessment August 2007

## **Project Overview**

The City of Wentzville is planning a new roadway for western Wentzville and St. Charles County. The proposed roadway, referred to as the David Hoekel Parkway, would provide a new connection between I-70 and US 61. Beginning just south of I-70 at Pointe Prairie Road and Jackson Road, the parkway passes north and east through parts of Wentzville before ending near Mette Road and Highway P in Flint Hill. The enclosed map shows the study area that the City is considering for locating the parkway.

# Why do we need the David Hoekel Parkway?

The Wentzville area needs the David Hoekel Parkway to improve personal and freight mobility and to reduce traffic congestion in ways that are safe and reliable. If the parkway is not built, traffic congestion will continue to increase in the study area and access and connectivity for new development will remain limited.

The purpose of the project is to provide a safe, environmentally sound, cost-effective and efficient roadway connection that will:

- **Improve access and connectivity** between I-70 and US 61 in western Wentzville and the St. Louis region within St. Charles County,
- **Reduce congestion** and improve the travel capacity in the study area to meet future travel demands,
- **Support local and regional growth** while addressing anticipated increases in local and regional travel demand and travel times that will accompany population and housing growth,
- **Support sustainable development** by providing and coordinating transportation connections with planned and proposed development, and
- **Promote a multimodal transportation system** by ensuring the project accommodates the needs of other transportation modes.



### When will construction take place?

Several things must happen before the City can construct this project. The City began the process in 2001, with a Corridor Preservation Study. That study developed several alternatives for the parkway. The City

- e used the study and the selected conceptual corridor (now known as the David Hoekel Parkway) as a tool to preserve the corridor and incorporated it into the city's Comprehensive Plan. The City then conducted
- r a Break-in-Access study that considered the feasibility of constructing a new interchange to link the parkway with I-70. Now that the City has a corridor in mind, it must assess the parkway's effect on the natural and social environment. This type of study is an Environmental Assessment (EA). The City must complete an EA before starting any design and construction work.

# What Is An Environmental Assessment?

The National Environmental Policy Act (NEPA) of 1969 requires a detailed assessment for any transportation improvement project that will use federal funds and/or federal permits for construction. The NEPA process helps agencies and the public make well-informed decisions about transportation investments in their

community.

An **Environmental Assessment** documents the NEPA decision-making process and answers the following basic questions:

- What is the **purpose and need** for the improvement?
- How would the proposed roadway function?
- How might the roadway affect the **natural and man-made environment**?
- Which alternative **best meets the purpose and need** while minimizing impacts?

The City coordinates the EA process with the Federal Highway Administration (FHWA) and the Missouri Department of Transportation (MoDOT). The Federal Highway Administration is responsible for overseeing



## **Public Open House**

## Thursday, August 23, 2007

4:00 p.m. to 7:00 p.m. Wentzville Law Enforcement Center 1019 Schroeder Creek Blvd. Wentzville, MO 63385

This meeting will be an open house format so you can come and go as you please and talk to project team members – there will be no formal presentations.

The City of Wentzville, along with Missouri Department of Transportation and Federal Highway Administration is conducting an Environmental Assessment (EA) on the David Hoekel Parkway. While other studies have been



completed within this corridor, the EA is the next step in the planning process.

We need your help!

Your input will help the study team determine the best possible location for the proposed David Hoekel Parkway.

## Please join us!

If you are a disabled person and need reasonable accommodation to participate, please call (866) 461-0062.

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David Hoekel Parkway Team P.O. Box 447 Wentzville, MO 63385-0447





David Hoekel Parkway Team P.O. Box 447 Wentzville, MO 63385-0447



### Continued from first page

The study team has considered many different alternative alignments for the new roadway. Through an initial alternative screening process, the most feasible alternatives were narrowed down to a variation of three different reasonable alternatives based on engineering issues, environmental issues and social and economic issues. From these three reasonable alternatives, the study team has identified a preliminary preferred alternative. The identified preferred alternative will continue to be refined based on agency and public input as the EA progresses. The public is being asked to review the alternatives and provide feedback which will be incorporated into the next step in the project development process.

### Next Steps

Based on agency and public feedback on the identified preferred alternative, it will be refined and carried forward for further environmental review and analysis within the EA document. The study team anticipates that the EA will be ready for formal public review and comment in the summer of 2008. A public meeting will be held at that time for the public to have an opportunity to review and comment on the preferred alternative and EA document. Then, once funding is in place, design work can begin for the project. The project could be designed and constructed in phases, as funding becomes available.





The David Hoekel Parkway is envisioned to be a fourlane divided roadway with vehicle access limited to key intersections along the corridor. The roadway is approximately 6.2 miles in length and would be designed to move higher volumes of traffic through the city, as well as to provide connectivity to the local roadway network. The roadway's design would include aesthetic considerations such as bicycle and pedestrian paths and landscaping to fit with the residential nature of the study area.



### **Stay Involved**

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## DHParkwayEA@hntb.com

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## David Hoekel Parkway Environmental Assessment December 2007

### **Project Overview**

The City of Wentzville, in coordination with the The study team has several critical constraints and goals Missouri Department of Transportation and the Federal in the development of project alternatives: Highway Administration, is planning a new roadway to serve the community's future transportation needs. **Safety** – Safety is a critical element in planning a new The proposed roadway, designated as the David Hoekel roadway. Local and national design criteria dictate Parkway, would provide a new connection between how much a road can curve, how steep hills can be I-70 and US 61 in the western portion of the City of and from what distance drivers must be able to see Wentzville. Beginning just south of I-70 near the approaching intersections based on design speed. The intersection of Point Prairie Road and Jackson Road, width of roadway, shoulders, and the location of any the roadway passes north and east through parts of medians, sidewalks or bike paths are also important Wentzville before ending near Highway P in Flint Hill. considerations.

The first step in moving this project forward is an Environmental Assessment (EA), which focuses on determining the impacts and alternatives available to meet the following needs:

- Improve access and connectivity between I-70 and US 61,
- **Reduce congestion** and improve travel capacity in the study area,
- **Support the anticipated growth** in the local and regional population and economy,
- **Promote sustainable development** by coordinating transportation with planned and proposed development, and
- **Promote a multi-modal transportation system** by accommodating the needs of other transportation modes

## What Is An Environmental Assessment (EA)?

An EA is one type of formal environmental study. These studies are required by the federal government for projects that will use federal funds and/or require federal permits for construction. The EA must be completed in accordance with the National Environmental Policy Act of 1969 (NEPA).

NEPA requires that before design and construction, projects must be evaluated in terms of the impacts, benefits and costs of possible effects on the environment, both natural and man-made. That process is designed to help agencies, elected officials and the public make sound decisions about federally approved or funded investments.



## **Developing Alternatives**

**Connections** – Once open to the public, the David Hoekel Parkway would serve the local traffic accessing the northwest land uses of Wentzville, but it would also carry a regional significance by providing new access between I-70 and US 61. In this manner, regional traffic has more access options throughout the region, and the existing I-70 and US 61 highway corridors are expected to receive some traffic relief by this connectivity.

**Environment** – Minimizing or avoiding impacts to the natural and man-made environment is an important consideration when developing the project alternatives. Environmental constraints such as stream crossings, wetlands, floodplains and threatened and endangered species habitat, as well as man-made impacts such as displacing homes and businesses, noise, and parkland impacts are important components in the decisionmaking process.

Continued on last page



## **Public Open House**

## Tuesday, December 4, 2007

4:00 p.m. to 7:00 p.m. Wentzville Law Enforcement Center 1019 Schroeder Creek Blvd. Wentzville, MO 63385

This meeting will be an open house format so you can come and go as you please between the listed times and talk to project team members– there will be no formal presentations.

Local input is a critical component of the planning and evaluation

process. The study team held a public meeting this past August to hear feedback on the project's Purpose and Need and to gather information on other key community concerns. Based on the community's input, the study team has performed an evaluation of alternatives for the study area and has identified a preferred alternative.

### We need your input!

Your participation is important in planning for the future of the David Hoekel Parkway. Please join us on December 4<sup>th</sup> to review and comment on the identified preferred alternative.

## Please join us!

If you are a disabled person and need reasonable accommodation to participate, please call (866) 461-0062.

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Your participation is important in planning for the future of the David Hoekel Parkway. Please join us on December 4<sup>th</sup> to review and comment on the identified preferred alternative.

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David Hoekel Parkway Team P.O. Box 447 Wentzville, MO 63385-0447

JOIN US! Public Open House December 4 4 – 7 pm



David Hoekel Parkway Team P.O. Box 447 Wentzville, MO 63385-0447

JOIN US! Public Open House December 4 4 – 7 pm

### Continued from first page

### Identifying a Preferred Alternative

The study team has considered many different alternative alignments for the new roadway. Through an initial alternative screening process, the most feasible alternatives were narrowed down to a variation of three different Reasonable Alternatives based on engineering issues, environmental issues and social and economic issues. From these three Reasonable Alternatives, the study team identified a preliminary Preferred Alternative. The identified Preferred Alternative has been refined based on agency and public input. The public is being asked to review the preferred alternative and provide feedback.

Of the Reasonable Alternatives considered within the EA. the identified Preferred Alternative would result in the least impacts to the natural and man-made environment. The alternative would limit residential and business impacts, accommodate economic development plans, maintain neighborhood cohesion, and provide connections to existing facilities to improve traffic flow in the northwestern portion of Wentzville. In addition, the alternative has been coordinated with local land use planning and corridor preservation initiatives and the local community has been supportive of this alternative through both the previous

and current planning efforts for the David Hoekel Parkway. For these reasons, this alternative has been identified as the Preferred Alternative for the David Hoekel Parkway.

The identified Preferred Alternative is comparable in cost to the other reasonable build alternatives. The proposed four-lane roadway is estimated to cost approximately \$81.2 million. The corridor is estimated to carry approximately 16,000 vehicles per day near its southern terminus; approximately 22,000 to 26,000 vehicles per day between I-70 and US 61; and approximately 5,000 vehicles per day at its northern terminus in Flint Hill, Missouri.

### Next Steps

The preferred alternative is selected as a result of agency and public feedback, along with environmental review and analysis, within the EA document. The Draft EA is currently available for formal public review and comment through December 18, 2009. The study team will respond to public and agency comments in the Final EA. Then, once funding is in place, design work can begin for the project. The project could be designed and constructed in phases, as funding becomes available.

## **Example Roadway Section**



The David Hoekel Parkway is envisioned to be a four-lane divided roadway with vehicle access limited to key intersections along the corridor, as well as interchanges at I-70 and US 61. The roadway is approximately 6.9 miles in length and would be designed to move higher volumes of traffic through the city, as well as to provide access and

connectivity to the local and regional roadway network. The roadway's design would include aesthetic considerations such as bicycle and pedestrian paths and landscaping to fit with the residential nature of the study area.



- Mail to P.O. Box 447, Wentzville, MO 63385-0447
- e-mail us at DHParkwayEA@hntb.com
- on the Web at www.wentzvillemo.org/ public\_works

## **David Hoekel Parkway Environmental Assessment** December 2009

## **Project Overview**

The City of Wentzville, in coordination with the Missouri Department of Transportation and the Federal Highway Administration, is planning a new roadway to serve the community's future transportation needs. The proposed roadway, designated as the David Hoekel Parkway, would provide a new connection between I-70 and US 61 in the western portion of the City of Wentzville. Beginning near I-70 and Pointe Prairie Road, the parkway passes north and east through parts of Wentzville and St. Charles County before ending near Jackson Road and Highway P in Flint Hill.

The first step in moving this project forward is an Environmental Assessment (EA), which focuses on determining the impacts and alternatives available to meet the following needs:

- Improve access and connectivity between I-70 and US 61,
- Reduce congestion and improve travel capacity in the study area,



### Your Input Matters!

We appreciate your time and interest. All comments on the Draft EA document will be accepted with a postmark by December 18, 2009. If you have questions about the project, please contact the David Hoekel Parkway team:



- Improve traffic safety to help improve high crash locations in the study area,
- Support the anticipated growth in the local and regional population and economy,
  - **Promote sustainable development** by coordinating transportation with planned and proposed development, and
  - Promote a multi-modal transportation system by accommodating the needs of other transportation modes

## What Is An Environmental Assessment (EA)?

An EA is one type of formal environmental study. These studies are required by the federal government for projects that will use federal funds and/or require federal permits for construction. The EA must be completed in accordance with the National Environmental Policy Act of 1969 (NEPA).



Please join the City of Wentzville for an open house style Public Meeting to see the recommended alignment for The David Hoekel Parkway, between I-70 and US-61 through Wentzville.

Tuesday, December 8, 2009 4-7 p.m. Open House Wentzville Law Enforcement Center 1019 Schroeder Creek Blvd, Wentzville, MO



The Environmental Assessment (EA) Document has been completed and is available for your review and comments at the Wentzville City Hall, Wentzville Public Works and Corporate Parkway Library. You may also fina a copy online at http://www.wentzvillemo.org/public\_works.htm

# **JOIN US!**

Public Open House December 8 4 - 7 pm Wentzville Law Enforcement Center

If you are a disabled person and need reasonable accommodation to participate, please call (866) 461-0062.



David Hoekel Parkway Team P.O. Box 447 Wentzville, MO 63385-0447

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### **NOTICE OF AVAILABILITY** and PUBLIC MEETING

Draft Environmental Assessment (EA)

The City of Wentzville, Missouri, in coordination with the Missouri Department of Transportation and the Federal Highway Administration, proposes to construct a new roadway connecting I-70 and US 61 in St. Charles County. Known as the David Hoekel Parkway, the project would provide a new four-lane divided roadway with limited access on the western half of the City of Wentzville with new interchanges at I-70 and US 61. The study limits for the project are shown to encompass the intersection just south of I-70 at Jackson Road/S. Point Prairie Road and the proposed tie-in just east of US 61 at Route P near Mette Road, in order to provide local access and connectivity within Wentzville and Flint Hill.

Draft Document Review Period: November 9, 2009 through December 18, 2009 Public Meeting: December 8, 2009 The public meeting will be an open house with no formal presentation.

Beginning November 9, 2009, the Draft Environmental Assessment for the David Hoekel Parkway, prepared by the City of Wentzville, the Federal Highway Administration, the Missouri Department of Transportation and its consultants, will be available for public inspection and copying at the City of Wentzville, Public Works Department, 200 E. Fourth Street, Wentzville, MO 63385. Additionally, the document will be available at the following locations through December 18, 2009:

#### WENTZVILLE, MISSOURI

Wentzville City Hall 310 West Pearce Blvd. Wentzville, MO 63385

Corporate Parkway Library 1200 Corporate Pkwy Wentzville, MO 63385

You may also view the Draft EA on-line at: http://www.wentzvillemo.org/public\_works.htm. For additional information on how to view the document, contact the study team toll-free at 866-461-0062.

Comments on the Draft EA may be submitted to the City of Wentzville, Federal Highway Administration and the Missouri Department of Transportation:

•Via mail to: David Hoekel Parkway EA, P.O. Box 447, Wentzville, MO 63385-0447 •Via e-mail to: DHParkwayEA@hntb.com In person at the public meeting

#### PUBLIC MEETING

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A copy of the Draft EA will be available, and the meeting will display maps and other pertinent information and gather public comments. The meeting will be held in an open house format, allowing interested persons to come and go at any time.

Interested citizens are encouraged to ask questions and make their comments known. All comments received will be evalu ated by the City of Wentzville, the Federal Highway Administration, and the Missouri Department of Transportation staff in determining the Preferred Alternative for the David Hoekel Parkway. For information on the project, translation services or other special accommodation, please call the City of Wentzville, Public Works Department, at (636) 327-5102.

Bill Bensing, Director of Public Works CITY OF WENTZVILLE

PLEASE READ ALL COPY CAREFULLY. CHECK SPELLING AND PHONE NUMBERS. Once proof is approved Newspapers will not accept responsibility for incorrect copy or layout. If changes and or approval have not been submitted by deadline your ad will run as is.




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