

U.S. 30 MISSOURI VALLEY STUDY
FROM 280TH STREET TO INTERSTATE 29
IN
HARRISON COUNTY, IOWA
NHSX-030-1(175)--3H-43

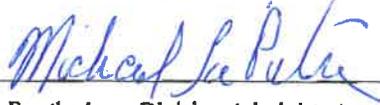
ENVIRONMENTAL ASSESSMENT

Submitted Pursuant to 42 USC 4332(2)(c)

By The

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
And
IOWA DEPARTMENT OF TRANSPORTATION
OFFICE OF LOCATION AND ENVIRONMENT

The signatures are considered acceptance of the general project location and concepts described in the environmental document unless otherwise specified by the approving officials. However, such approval does not commit to approve any future permits or grant requests to fund the preferred alternative.



For the Iowa Division Administrator
Federal Highway Administration

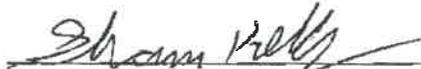


For the Location and Environment Bureau
Iowa Department of Transportation

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For the United States Army Corps of Engineers
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For the City of Missouri Valley, Iowa

4/20/2022

Date of Approval for Public Availability

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CONTENTS

CHAPTER 1	PURPOSE AND NEED FOR ACTION	1-1
1.1	History	1-1
1.2	Study Area.....	1-6
1.3	Purpose and Need.....	1-6
1.3.1	Improve US 30 Traffic Operations	1-6
1.3.2	Improve Commercial and Industrial Network Efficiency.....	1-10
1.3.3	Improve Traffic Safety	1-10
CHAPTER 2	ALTERNATIVES	2-1
2.1	Early Consideration and Elimination of Potential Alternatives	2-1
2.2	Initial Range of Alternatives	2-1
2.2.1	No-Build Alternative.....	2-4
2.2.2	Alternative 2: South of Canal Street	2-4
2.2.3	Alternative 3: North of Canal Street.....	2-4
2.2.4	Alternative 4: South of the City Lagoons	2-8
2.3	Alternatives Comparison.....	2-8
2.3.1	Initial Screening.....	2-8
2.3.2	Revised Range of Alternatives	2-10
2.3.3	Second Screening	2-10
2.4	Alternatives Carried Forward.....	2-13
2.4.1	No-Build Alternative.....	2-13
2.4.2	Build Alternative.....	2-13
2.5	Preferred Alternative.....	2-16
CHAPTER 3	AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES	3-1
3.1	Introduction.....	3-1
3.1.1	Resources Eliminated from Consideration.....	3-1
3.1.2	Resources that Underwent Detailed Analysis.....	3-1
3.2	Land Use	3-3
3.2.1	Existing Conditions	3-3
3.2.2	Impacts.....	3-5
3.2.3	Avoidance, Minimization, and Mitigation.....	3-5
3.3	Community Cohesion	3-5
3.3.1	Existing Conditions.....	3-5

	3.3.2	Impacts.....	3-6
	3.3.3	Avoidance, Minimization, and Mitigation.....	3-7
3.4		Churches and Schools	3-7
	3.4.1	Existing Conditions.....	3-7
	3.4.2	Impacts.....	3-7
	3.4.3	Avoidance, Minimization, and Mitigation.....	3-8
3.5		Environmental Justice	3-8
	3.5.1	Existing Conditions.....	3-8
	3.5.2	Impacts.....	3-12
	3.5.3	Avoidance, Minimization, and Mitigation.....	3-13
3.6		Economic.....	3-13
	3.6.1	Existing Conditions.....	3-13
	3.6.2	Impacts.....	3-15
	3.6.3	Avoidance, Minimization, and Mitigation.....	3-17
3.7		Acquisitions and Displacements/Relocations	3-17
	3.7.1	Existing Conditions.....	3-17
	3.7.2	Impacts.....	3-18
	3.7.3	Avoidance, Minimization, and Mitigation.....	3-19
3.8		Construction and Emergency Routes	3-19
	3.8.1	Existing Conditions.....	3-19
	3.8.2	Impacts.....	3-19
	3.8.3	Avoidance, Minimization, and Mitigation.....	3-20
3.9		Transportation	3-20
	3.9.1	Existing Conditions.....	3-20
	3.9.2	Impacts.....	3-23
	3.9.3	Avoidance, Minimization, and Mitigation.....	3-24
3.10		Cultural Resources.....	3-25
	3.10.1	Existing Conditions.....	3-25
	3.10.2	Impacts.....	3-26
	3.10.3	Avoidance, Minimization, and Mitigation.....	3-26
3.11		Cemeteries	3-27
	3.11.1	Existing Conditions.....	3-27
	3.11.2	Impacts.....	3-27
	3.11.3	Avoidance, Minimization, and Mitigation.....	3-27

3.12	Wetlands and Waters of the US	3-27
	3.12.1 Existing Conditions	3-27
	3.12.2 Impacts	3-28
	3.12.3 Avoidance, Minimization, and Mitigation	3-30
3.13	Water Quality	3-30
	3.13.1 Existing Conditions	3-30
	3.13.2 Impacts	3-31
	3.13.3 Avoidance, Minimization, and Mitigation	3-31
3.14	Floodplains	3-31
	3.14.1 Existing Conditions	3-32
	3.14.2 Impacts	3-32
	3.14.3 Avoidance, Minimization, and Mitigation	3-34
3.15	Wildlife and Habitat	3-34
	3.15.1 Existing Conditions	3-34
	3.15.2 Impacts	3-36
	3.15.3 Avoidance, Minimization, and Mitigation	3-37
3.16	Threatened and Endangered Species	3-37
	3.16.1 Existing Conditions	3-37
	3.16.2 Impacts	3-39
	3.16.3 Avoidance, Minimization, and Mitigation	3-39
3.17	Farmlands	3-39
	3.17.1 Existing Conditions	3-40
	3.17.2 Impacts	3-40
	3.17.3 Avoidance, Minimization, and Mitigation	3-42
3.18	Noise	3-42
	3.18.1 Existing Conditions	3-43
	3.18.2 Impacts	3-43
	3.18.3 Avoidance, Minimization, and Mitigation	3-46
3.19	Energy	3-46
	3.19.1 Existing Conditions	3-46
	3.19.2 Impacts	3-46
	3.19.3 Avoidance, Minimization, and Mitigation	3-47
3.20	Contaminated and Regulated Materials Sites	3-47
	3.20.1 Existing Conditions	3-47

3.20.2	Impacts.....	3-51
3.20.3	Avoidance, Minimization, and Mitigation.....	3-53
3.21	Visual.....	3-53
3.21.1	Existing Conditions.....	3-53
3.21.2	Impacts.....	3-54
3.21.3	Avoidance, Minimization, and Mitigation.....	3-54
3.22	Utilities.....	3-55
3.22.1	Existing Conditions.....	3-55
3.22.2	Impacts.....	3-55
3.22.3	Avoidance, Minimization, and Mitigation.....	3-56
3.23	Cumulative Impacts.....	3-56
3.23.1	Local Projects.....	3-56
3.23.2	Key Resources Affected.....	3-58
3.24	Permits and Related Approvals.....	3-61
CHAPTER 4	DISPOSITION.....	4-1
4.1	Federal Agencies.....	4-1
4.2	State Agencies.....	4-1
4.3	Local and Regional Units of Government.....	4-1
4.4	Other.....	4-1
4.5	Locations Where This Document Is Available for Public Review.....	4-1
CHAPTER 5	COMMENTS AND COORDINATION.....	5-1
5.1	Agency Coordination.....	5-1
5.1.1	MOU Signatory Agency Coordination.....	5-1
5.1.2	Early Agency Coordination and Scoping.....	5-2
5.1.3	NEPA/404 Merge Coordination.....	5-5
5.2	Public Involvement.....	5-6
5.2.1	Public Meetings.....	5-6
5.2.2	Correspondence.....	5-7
5.2.3	Future Public Involvement.....	5-7
5.3	Tribal Coordination.....	5-7
CHAPTER 6	REFERENCES.....	6-1

TABLES

Table 1-1: Traffic Projections between I-29 Southbound Ramps and 296th Street	1-9
Table 1-2: Potential for Crash Reduction at Intersections in the Study Area	1-11
Table 1-3: Potential for Crash Reduction on Roadway Segments in the Study Area.....	1-12
Table 2-1: Preliminary Impact Comparison with Desktop Data.....	2-9
Table 2-2: Preliminary Impact Comparison with Field Data	2-12
Table 3-1: Population Changes	3-9
Table 3-2: 2017 Minority Populations in Study Area	3-10
Table 3-3: 2017 Estimated Population Below Poverty Level	3-11
Table 3-4: 2017 English Proficiency	3-12
Table 3-5: 2017 Industry Sectors for Study Area	3-14
Table 3-6: 2017 Employment Status for Study Area.....	3-15
Table 3-7: US 30 Existing and Future Traffic Conditions.....	3-24
Table 3-8: Identified Wetlands.....	3-28
Table 3-9: Impacted Wetlands.....	3-28
Table 3-10: Federally Listed Threatened and Endangered Species in Harrison County, Iowa.....	3-38
Table 3-11: Predicted Noise Levels.....	3-45
Table 3-12: Regulated Materials Sites.....	3-47
Table 5-1: MOU Signatory Agency Coordination.....	5-1
Table 5-2: Agency Scoping Comments and Responses.....	5-4

FIGURES

Figure 1-1: Project Location.....	1-2
Figure 1-2: Alternatives Considered in 1983 Environmental Assessment	1-3
Figure 1-3: Alternatives Considered in 1991 Environmental Assessment	1-5
Figure 1-4: Study Area.....	1-7
Figure 1-5: Truck Traffic and On-Street Parking on US 30 in Missouri Valley	1-8
Figure 1-6: Truck Traffic, Vehicle Traffic, and Pedestrians on US 30 in Missouri Valley	1-9
Figure 1-7: Intersection and Roadway Segment Potential for Crash Reduction	1-13
Figure 2-1: Preliminary Study Areas.....	2-3
Figure 2-2: Range of Alternatives	2-5
Figure 2-3: Typical Two-Lane Roadway Section with Levee	2-6
Figure 2-4: Typical Two-Lane Roadway Section without Levee	2-7
Figure 2-5: Build Alternative	2-14
Figure 3-1: Build Alternative Impact Area	3-2
Figure 3-2: Human Environment.....	3-4
Figure 3-3: Transportation Network	3-21

Figure 3-4: Water Resources.....	3-29
Figure 3-5: 100-Year Floodplain	3-33
Figure 3-6: Farmland	3-41
Figure 3-7: Noise Receptors.....	3-44
Figure 3-8: Regulated Materials Sites.....	3-50
Figure 3-9: Cumulative Impacts.....	3-57

APPENDICES

Appendix A: Memorandum of Understanding

Appendix B: Resources Considered and Dismissed

Appendix C: Agency and Tribal Coordination

Appendix D: Farmland Conversion Impact Rating for Corridor Type Projects Form (NRCS-CPA-106)

ABBREVIATIONS

ADT	average daily traffic
AST	aboveground storage tank
CFR	Code of Federal Regulations
CIN	Commercial and Industrial Network
City	City of Missouri Valley
dB	decibel
dBA	A-weighted decibel
DOT	Department of Transportation
EA	environmental assessment
EIS	environmental impact statement
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act
I-29	Interstate 29
Iowa DNR	Iowa Department of Natural Resources
Iowa DOT	Iowa Department of Transportation
Iowa SHPO	Iowa State Historic Preservation Office
L _{dn}	day-night sound level
LEP	limited English proficiency
L _{eq}	equivalent sound level
LOS	level of service
LUST	leaking underground storage tank
MBTA	Migratory Bird Treaty Act
MOU	Memorandum of Understanding
mph	miles per hour
NAC	Noise Abatement Criteria
NEPA	National Environmental Policy Act of 1969
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service

NRHP	National Register of Historic Places
PCR	potential for crash reduction
PIM	Public Information Meeting
REC	recognized environmental condition
ROW	right of way
Section 106	Section 106 of the National Historic Preservation Act
UPRR	Union Pacific Railroad
US 30	US Highway 30
USACE	US Army Corps of Engineers
USC	United States Code
USEPA	US Environmental Protection Agency
USFWS	US Fish and Wildlife Service
UST	underground storage tank

Chapter 1 Purpose and Need for Action

The Iowa Department of Transportation (Iowa DOT), in coordination with the Federal Highway Administration (FHWA), is proposing to construct a US Highway 30 (US 30) bypass of the city of Missouri Valley in Harrison County, Iowa (see Figure 1-1). Section 2.4.2, Build Alternative, describes the proposed improvements, including the location, termini, and configuration of the project.

This environmental assessment (EA) has been prepared in compliance with the requirements of the National Environmental Policy Act of 1969 (NEPA). This EA informs the public and interested agencies of the proposed action and alternatives to the proposed action in order to gather feedback on the improvements under consideration.

1.1 History

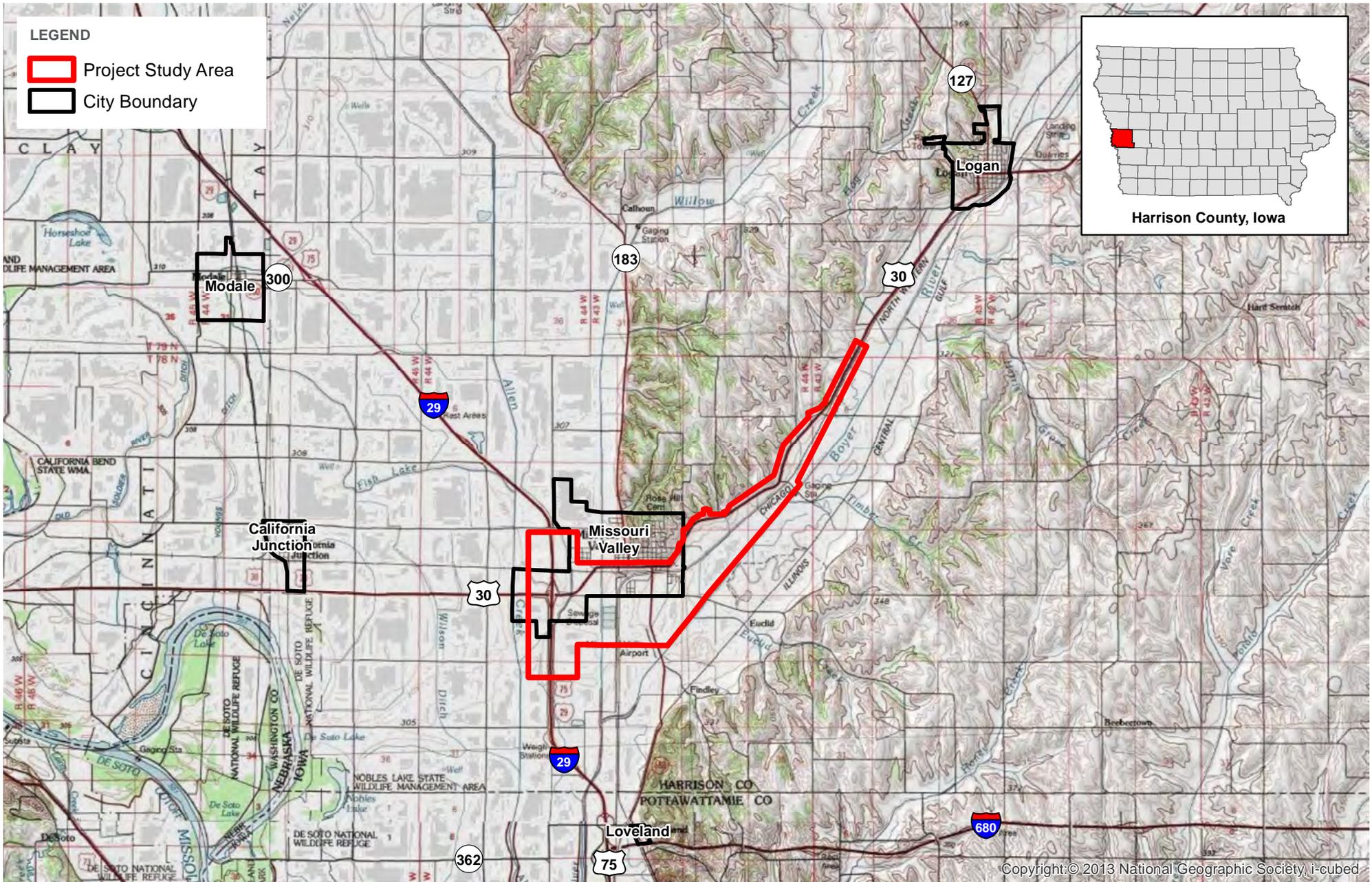
Evaluations of potential enhancement of the US 30 corridor near Missouri Valley began in 1979 and included preparation of EAs in 1983 and 1991, and Findings of No Significant Impact (FONSI) in 1987 and 1993. These EAs and FONSI are outdated and are superseded by this EA for the current project.

US 30 corridor enhancements were originally programmed in 1979. At that time, the enhancements considered involved the construction of a US 30 overpass at the Union Pacific Railroad (UPRR), formerly Chicago and Northwestern Railroad, crossing in Missouri Valley. Also included was the reconstruction of 0.7 mile of US 30 on the current alignment from the existing four-lane section just east of Interstate 29 (I-29) northeast to Morton Street. The railroad overpass was programmed because of the high number of accidents and vehicle delays occurring at the railroad crossing. The pavement reconstruction was included to provide continuity and improved roadway traffic service.

The 1979 Iowa Transportation Commission's approval of the railroad overpass project included a stipulation that on-street parking along US 30 through Missouri Valley be removed to provide a four-lane facility. However, the City of Missouri Valley (City) opposed the removal of on-street parking. Failure to resolve the on-street parking issue through the early 1980s hampered further project development, and the enhancements were not constructed.

Iowa DOT continued to evaluate enhancement options for the US 30 corridor. In January 1983, Iowa DOT distributed an EA with three construction alternatives: two with different alignments on the west outskirts of Missouri Valley and one south bypass (see Figure 1-2). At the February 1983 public hearing for the proposed enhancements, the City expressed a preference for a bypass alignment, again citing the on-street parking issue. Subsequently, the Iowa Transportation Commission decided to reprogram the original project as a US 30 bypass of Missouri Valley, as reflected in the 1985 to 1990 Transportation Improvement Program.

At a public information meeting in July 1986, proposed bypass alignments were discussed. In October 1986, the Iowa Transportation Commission approved the south bypass alignment supported by the City. A FONSI was distributed in January 1987, followed by FHWA location approval and environmental clearance in February 1987. The FONSI, which incorporated a slight alignment shift requested by the City to minimize conflict with sanitary sewer lines, was confirmed by FHWA in November 1987.



LEGEND
 Project Study Area
 City Boundary



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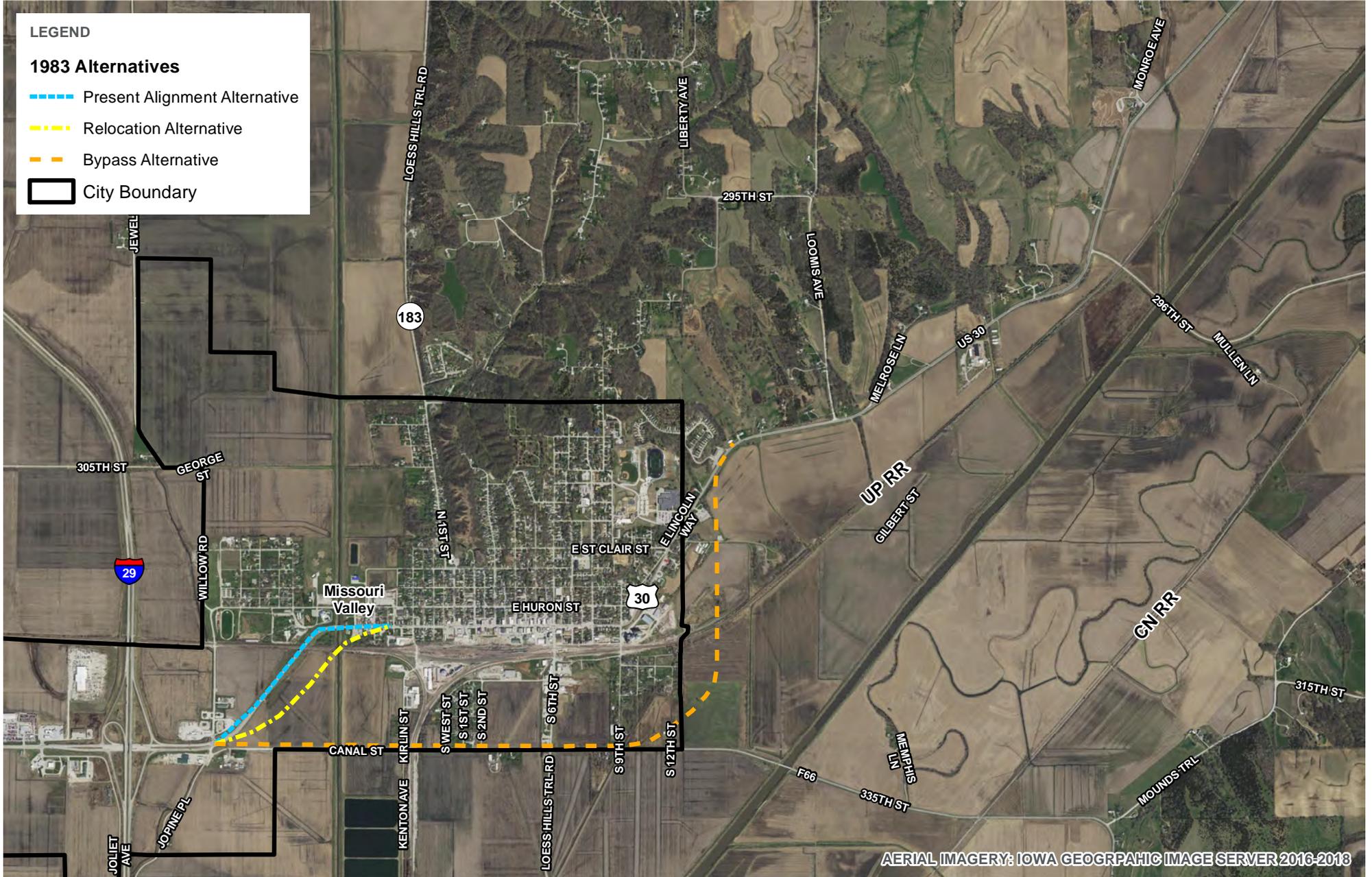
**PROJECT LOCATION
 HARRISON COUNTY, IOWA**

FIGURE 1-1

LEGEND

1983 Alternatives

-  Present Alignment Alternative
-  Relocation Alternative
-  Bypass Alternative
-  City Boundary



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ALTERNATIVES CONSIDERED IN 1983 ENVIRONMENTAL ASSESSMENT
HARRISON COUNTY, IOWA

FIGURE 1-2

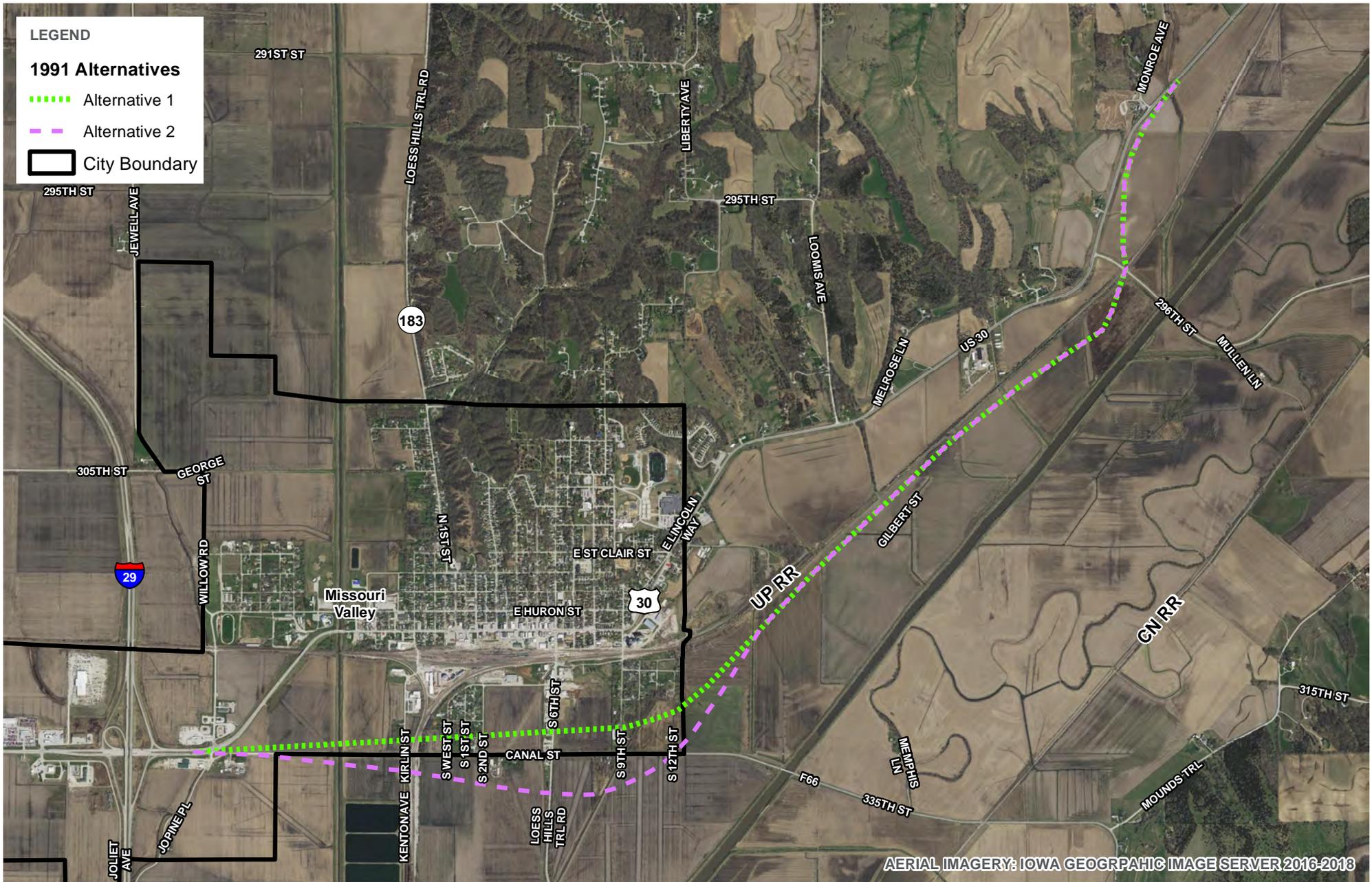
However, in June 1988, the project was put on hold pending the results of a US Army Corps of Engineers (USACE) flood study. Following the City's March 1990 decision not to participate in the successive USACE feasibility study, or the subsequent flood control project, USACE involvement was concluded.

As a result of the USACE flood study, it was determined that the US 30 alignment needed to be shifted away from the Boyer River to meet 100-year flood criteria. Revised bypass alternatives were coordinated with the Iowa Department of Natural Resources (Iowa DNR). In addition, Iowa DOT and FHWA staff assessed the revised alternatives based on the commercial and industrial transportation network. The revised US 30 bypass alignments were identified and evaluated in a 1991 EA (see Figure 1-3). In January 1993, a FONSI was issued noting that Alternative 2 was the preferred alternative. The FONSI also stated that the majority of the comments received during the comment period and at the public hearing were generally in opposition to the project. The primary concerns for area citizens were the economic impact of a bypass on downtown Missouri Valley, the need for a railroad overpass for local traffic, and the need for a flood control project. Due to the local opposition to the proposed bypass, the project was not prioritized.

Since the issuance of the 1993 FONSI, the at-grade crossing of the UPRR tracks on the west side of Missouri Valley was converted to a US 30 overpass as part of a separate, stand-alone project. While the overpass eliminated travel delays from the at-grade crossing, roadway traffic volumes have increased. These increased traffic volumes are now leading to traffic delays irrespective of the grade separation improvement. On August 8, 2017, the Iowa Transportation Commission voted to make the US 30 Missouri Valley Bypass a priority (Iowa Transportation Commission 2017). With this vote to make the US 30 Missouri Valley Bypass a priority, and with City support, Iowa DOT has re-initiated planning and preliminary design studies for a proposed US 30 bypass of Missouri Valley. This EA has been developed to reflect current conditions and to evaluate the currently proposed alternatives.

USACE is currently studying options for the construction of new levees to protect Missouri Valley from future flooding events. The timing of the Iowa DOT and USACE projects creates the potential to combine a portion of the new levees in the same location as the new US 30 corridor using a single embankment that combines the levees and roadway. This EA evaluates alternatives that include the roadway and levees being co-located as well as alternatives that are independent of the proposed USACE flood control improvements. Alternatives are discussed in Chapter 2.

Because of their ongoing interest in roadway and levee improvements in the Missouri Valley area, FHWA, Iowa DOT, USACE, Harrison County, and the City developed and signed a Memorandum of Understanding (MOU) at the beginning of the NEPA process for this project (see Appendix A). The MOU was signed by all parties between late December 2018 and February 2019. The MOU identifies roles and responsibilities of the parties for US 30 and flood improvements in Harrison County in and around Missouri Valley. The parties have continued collaboration in consideration of the MOU and in support of development of this EA, as summarized in Chapter 5, Section 5.1.1. In the future, there will be additional agreements between these and other parties for access control, pre-design, pre-construction, and other components of the project.



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**ALTERNATIVES CONSIDERED IN 1991 ENVIRONMENTAL ASSESSMENT
HARRISON COUNTY, IOWA**

FIGURE 1-3

1.2 Study Area

The Study Area for the project is shown in Figure 1-4. It was identified based on preliminary concepts as well as agency and public input. The process for identifying the Study Area is described in Chapter 2, Alternatives.

1.3 Purpose and Need

The purpose of the proposed project is to provide a safe, free-flowing route on US 30 between south of Logan, Iowa, and I-29 for the efficient transportation of people, goods, and services.

The needs for the proposed project are as follows:

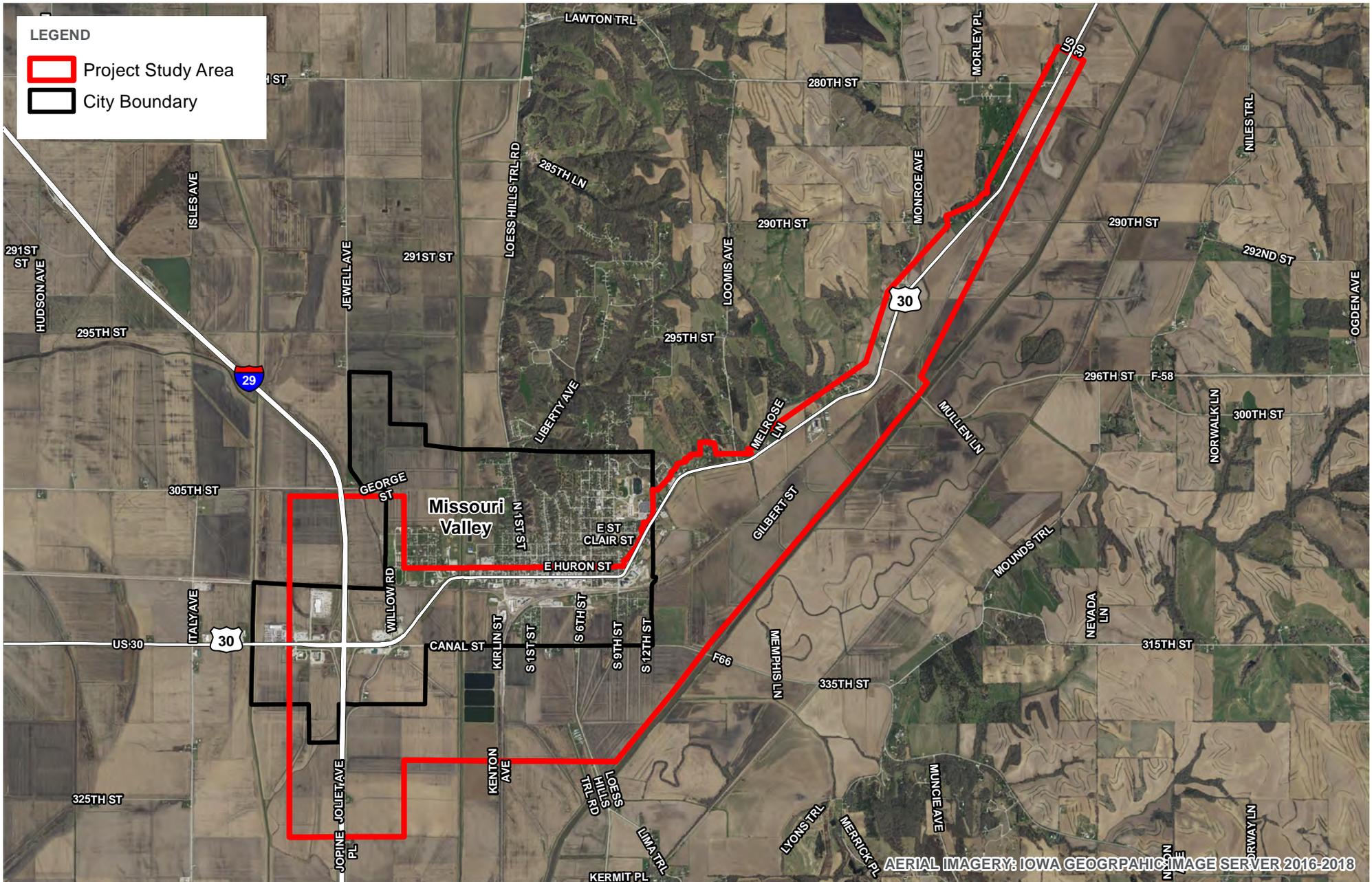
- Improve US 30 traffic operations
- Improve Commercial and Industrial Network (CIN) efficiency
- Improve traffic safety

The current issues associated with in-town operations, CIN efficiency, and traffic safety in the Study Area are explained in the following sections.

1.3.1 Improve US 30 Traffic Operations

US 30 through the central business district of Missouri Valley is a two-lane facility with parking on both sides of the street. It carries high traffic volumes, which contribute to travel delays for through traffic. Through traffic using this route often conflicts with vehicles attempting to negotiate the on-street parking. Pedestrians exiting parked vehicles further increase the potential for conflicts, especially if they are crossing the highway to access street-front businesses. Additionally, the Missouri Valley Fire and Rescue Station is located directly in this corridor, at 223 East Erie Street (the northwest corner of the US 30 and 3rd Street intersection). Fire and rescue personnel noted that getting through town is a problem for response times. Figure 1-5 and Figure 1-6 show weekday traffic on US 30 in Missouri Valley.

While US 30 traffic through the central business district conflicts with parking and pedestrians, areas outside the business district have traffic conflicts due to ingress to and egress from US 30. For example, traffic to and from the Missouri Valley Community Schools at the east edge of Missouri Valley includes buses carrying elementary, middle, and high school students, and vehicles driven by students and school staff. Local traffic also traverses the middle and high school access road to travel to and from US 30. Heavy truck traffic along US 30 disrupts traffic flow along the middle and high school access road from US 30. The trucks obscure vision of drivers following the trucks and increase the difficulty of turning movements to and from the access road.



LEGEND

- Project Study Area
- City Boundary

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STUDY AREA
HARRISON COUNTY, IOWA

FIGURE 1-4

Figure 1-5: Truck Traffic and On-Street Parking on US 30 in Missouri Valley



Note: Photo taken at approximately noon on December 4, 2019, at 4th Street and US 30 looking east.

Figure 1-6: Truck Traffic, Vehicle Traffic, and Pedestrians on US 30 in Missouri Valley



Note: Photo taken at approximately noon on December 4, 2019, at 4th Street and US 30 looking east.

Between the I-29 southbound ramps and 296th Street (Harrison County Road F-58), the average daily traffic (ADT) on US 30 through Missouri Valley is expected to increase from a range of 6,600 to 11,600 in 2016, to 8,200 to 13,700 in 2040 (see Table 1-1). While the ADT would increase by an average of approximately 20 percent, the number of daily trucks is projected to increase by an average of approximately 32 percent.

Table 1-1: Traffic Projections between I-29 Southbound Ramps and 296th Street

	2016	2040 No-Build
ADT	6,600–11,600	8,200–13,700
Truck Traffic		
Daily	900–1,300	1,400–1,500
AM Peak	100–130	140–150
PM Peak	40–70	60–80

At the March 13, 2018, public information meeting for the project, multiple attendees commented that the truck traffic through Missouri Valley backs up traffic, truck braking causes adjacent buildings to vibrate, and overall traffic volumes make turning onto US 30 difficult during peak hours. Residents were also concerned about traffic speeding through town.

1.3.2 Improve Commercial and Industrial Network Efficiency

Throughout Iowa, US 30 was designated as part of the CIN established in 1988 (Iowa DOT 1991). The purpose of the CIN is to improve the flow of commerce; to make travel more convenient, safe, and efficient; and to better connect Iowa with regional, national, and international markets. The Commercial and Industrial Improvement and Programming Policy, published by Iowa DOT in November 1991, established the CIN and summarizes a technical needs assessment for the CIN (Iowa DOT 1991). Within the Study Area, the policy identified the need for a US 30 bypass of Missouri Valley within the evaluated 20-year period, from 1991 and 2011, “to make travel more efficient by decreasing travel time, congestion, and delay” (Iowa DOT 1991).

In addition to the local traffic and on-street parking issues described in Section 1.3.1, the speed limits in Missouri Valley are not conducive to efficient commercial and industrial traffic movement. The average travel time through Missouri Valley in 2016 was nearly 7 minutes, 10 seconds and represents an average speed of approximately 37 miles per hour (mph) over the approximately 4.4-mile distance, or approximately 13 percent slower compared to the weighted average speed of 42.5 mph. The weighted average speed is based on the aggregate speed average over distance for contiguous segments that have different posted speed limits. Given increasing projected truck and overall traffic in the 2040 design year, speeds would decrease and travel time would increase. The speed limit from approximately 200 feet west of 1st Street to East Huron Street is 25 mph. There are also traffic lights at 1st Street, 4th Street, and 6th Street. These speeds are detrimental to the efficient movement of freight. In addition, the traffic lights require trucks to come to a complete stop, and the trucks do not come back up to speed quickly. These low speeds, stops, and increasing truck volumes would continue to hinder the flow of commerce as traffic volumes increase.

1.3.3 Improve Traffic Safety

Iowa DOT has recently developed a new methodology for identifying areas of traffic safety concern across the state. Instead of comparing local crash rates to statewide averages, Iowa DOT analyzes “existing conditions at a study area to determine the potential to reduce the total number of future crashes at that location” (Iowa DOT 2021a). As described in the draft Iowa DOT Safety Analysis Guide, the potential for crash reduction (PCR) analysis uses the Highway Safety Manual predictive method by taking the difference between the expected average crash frequency (using the Empirical Bayes method) and the predicted average crash frequency (derived from Iowa safety performance functions; Iowa DOT 2021a). The difference between these two numbers is the potential reduction in crashes, referred to as the PCR value. A positive PCR value means that there is a potential to reduce crashes, while a negative value means that the facility is performing better than predicted. PCR values are calculated for both intersections and roadway segments.

For intersections, PCR values are calculated both for all crashes and for injury crashes. Then the PCR values are used to categorize each intersection into one of three tiers. Tier 1 intersections

may qualify for safety funding, Tier 2 intersections have room for improvement but may not qualify for safety funds, and Tier 3 intersections are performing better than predicted. Table 1-2 summarizes the PCR analyses for intersections in the Study Area, and the results are shown in Figure 1-7.

Table 1-2: Potential for Crash Reduction at Intersections in the Study Area

Intersection with US 30	All Crashes			Injury Crashes		
	Total Crashes (2014–2018)	PCR	Tier	Total Crashes (2014–2018)	PCR	Tier
I-29 Southbound ramps	0	-0.45	3	0	-0.02	3
I-29 Northbound ramps	0	-0.73	3	0	-0.02	3
Willow Road	15	1.48	1	0	-0.08	3
Dean Dewaele Way	0	-0.15	3	0	-0.01	3
Blaine Street	0	-0.25	3	0	-0.01	3
Morton Street	0	-0.25	3	0	-0.01	3
Harrison Street	2	-0.01	3	1	0.03	2
West Street	1	-0.12	3	0	-0.01	3
1st Street	7	0.24	2	0	-0.03	3
2nd Street	0	-0.15	3	0	-0.01	3
3rd Street	4	0.30	2	0	0.00	3
4th Street	2	-0.56	3	1	0.02	2
5th Street	0	-0.60	3	0	-0.03	3
6th Street	10	0.25	2	0	-0.05	3
7th Street	0	-0.25	3	0	-0.01	3
8th Street	2	-0.12	3	0	-0.02	3
9th Street	1	-0.08	3	0	-0.01	3
E Huron Street	0	-0.07	3	0	0.00	3
E Saint Clair Street	2	0.00	3	0	-0.01	3
Loomis Avenue	2	0.07	2	0	-0.01	3
Melrose Lane	0	0.00	3	0	0.00	3
296th Street	2	0.05	2	0	-0.01	3
Monroe Avenue	0	-0.02	3	0	0.00	3
290th Street	0	0.00	3	0	0.00	3

Of the intersections within the Study Area, only the US 30 and Willow Road intersection is categorized as a Tier 1 intersection for all crashes. According to Iowa DOT’s “Potential for Crash Reduction (PCR) Ranking of Intersections” website, this intersection ranked 442 out of the 115,489 intersections across the state (Iowa DOT 2021b). Five other intersections in the Study Area are categorized as Tier 2 intersections for all crashes, which have room for improvement but may not qualify for safety funding. The remaining intersections are in Tier 3 for all crashes and have fewer crashes than predicted. For injury crashes, two intersections are categorized as Tier 2. Both intersections had only one injury crash over the 5-year period evaluated.

For roadway segments, Iowa DOT does not yet have a tier system. The roadway segments in the Study Area were assigned PCR values by Iowa DOT and compared to other roadway segments across the state. Table 1-3 summarizes the PCR analyses for roadway segments in the Study Area, and the results are shown in Figure 1-7.

Table 1-3: Potential for Crash Reduction on Roadway Segments in the Study Area

Roadway Segment	Length (miles)	Crashes (2014–2018)	PCR	Percent
I-29 Interchange	0.09	0	-0.09	100.0
I-29 Interchange to Willow Road	0.33	5	-1.00	100.0
Willow Road to 0.3 mile east of Willow Road	0.18	2	-0.45	100.0
0.3 mile east of Willow Road to North West Street	0.70	29	1.34	9.7
North West Street to Linn Street	1.11	52	4.79	2.2
Linn Street to Loomis Avenue	0.72	15	0.42	39.6
Loomis Avenue east	6.05	32	-4.67	100.0

Two of the US 30 roadway segments in the Study Area are in the top 10 percent compared to roadway segments across the state. The roadway segment from North West Street to Linn Street is in the top 2.2 percent with a PCR of 4.79. The roadway segment from the speed limit change 0.3 mile east of Willow Road to North West Street had a PCR of 1.34, which placed it in the top 9.7 percent of roadway segments across the state. The final roadway segment that had a positive PCR value was Linn Street to Loomis Avenue with a PCR of 0.42, ranking it in the top 39.6 percent of roadway segments across the state.



**INTERSECTION AND ROADWAY SEGMENT POTENTIAL FOR CRASH REDUCTION
HARRISON COUNTY, IOWA**

FIGURE 1-7

Chapter 2 Alternatives

This chapter discusses the alternatives considered to address the project's purpose and need. The initial range of alternatives and the alternatives comparison process, which resulted in a revised range of alternatives, are described below. In addition, the alternatives carried forward and the preferred alternative are identified.

2.1 Early Consideration and Elimination of Potential Alternatives

As noted in Section 1.1, evaluation of options for improving the US 30 corridor near Missouri Valley began in 1979 and included alternatives considered in EAs in 1983 and 1991. Although improvement of US 30 along its existing alignment through Missouri Valley was not specifically identified for review, it was not considered based on the extensive amount of residential and business acquisitions and relocations that would be required. Additionally, it would not likely demonstrably improve the efficiency of the CIN connection; the US 30 Missouri River crossing is approximately 10 miles west of Missouri Valley, and traffic through the City would be affected by multiple stop lights and reduced speeds. Consequently, it was not considered as a potential alternative for this EA.

During coordination with the City, Harrison County, and USACE during and subsequent to development of the MOU referenced in Section 1.1, the combination of the roadway and levee in a single location at 100-year flood design criteria was the fundamental factor for identifying reasonable alternatives. Having separate roadway and levee locations would approximately double the extent of environmental impacts, and independent construction of a roadway and levee would have additional costs. The levee would meet 100-year flood design criteria, and the roadway would be designed to the 50-year flood elevation. The roadway would be located on the dry side of the levee, which would reduce impacts from flooding events, but the additional land affected for both projects would be extensive (approximately double). Given that a combination roadway and levee alternative represents greatly reduced impacts and costs, alternatives with separate locations of the roadway and levee were not considered as reasonable alternatives.

2.2 Initial Range of Alternatives

The first step in identifying the range of alternatives was to determine the Study Area for the project. The Study Area needs to accommodate the following:

- A sufficient area to account for a range of alternatives during design
- Locations where field studies are to be conducted to more accurately evaluate the potential project location and impacts

At the public information meeting held on March 13, 2018, two study areas were presented that would allow for the bypass to be located either north or south of the existing US 30 alignment and Missouri Valley. As shown in Figure 2-1, the northern study area extends along Harrison County Road F-50 from I-29 to US 30. The southern study area is south of Missouri Valley and extends along US 30 from I-29 to 280th Street. While the northern study area passes through Loess Hills Special Landscape Area Number 7, which is protected under a Memorandum of Agreement between Iowa DOT and Iowa DNR,¹ the southern study area is mostly between

¹ If impacts on a Loess Hills Special Landscape Area cannot be avoided, Iowa DOT would need to advise Iowa DNR of the circumstances involved and Iowa DOT's efforts to avoid or minimize the effects of proposed

Special Landscape Areas Number 7 and Number 8, with only the most northern portion of the southern study area intersecting the Special Landscape Area Number 7 boundary. The boundary intersects US 30 in Missouri Valley and includes two blocks of the city to the north that have been graded and are relatively flat. The central portion of the northern study area is nearly 5 miles north of US 30 (a key freight corridor as part of the CIN) and would require out-of-distance travel along I-29 to connect to US 30 west of the interstate. The southern study area includes the Missouri Valley Airport (a public airport with restricted private use), which has restricted air operations with flight paths extending northwest and southeast from the runway.

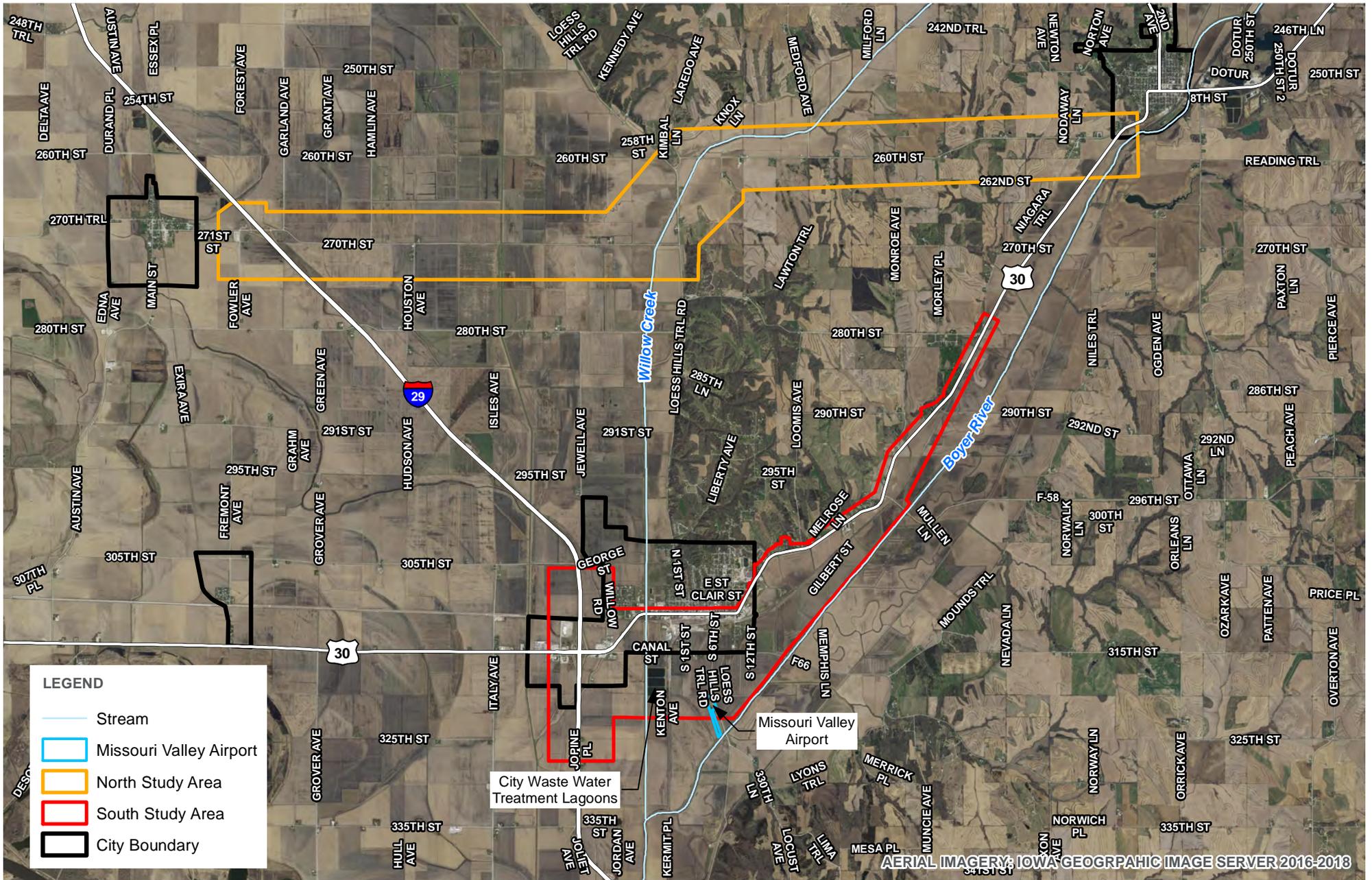
For potential impact comparison, one general alignment was identified in each study area. The alignment was identified as Alternative 1 in the northern study area and Alternative 2 in the southern study area. Then, benefits and concerns were reviewed for both study areas. While there was public support for both, the northern study area and Alternative 1 were ultimately dismissed from consideration. The benefits and concerns of the northern study area were as follows:

- Benefit:
 - Relocates US 30 outside of the Missouri Valley city limits
- Concerns:
 - Requires greater out-of-distance travel for US 30 traffic
 - Has no direct US 30 connectivity along the CIN to the US 30 Missouri River crossing
 - Has greater environmental impacts on a Loess Hills Special Landscape Area
 - Is double the length of the southern study area
 - Lacks the opportunity to combine the roadway and a levee in a single location around Missouri Valley

The southern study area was retained to identify the range of alternatives and is hereafter referred to as the Study Area. The Study Area has the following benefits and concerns:

- Benefits:
 - Relocates US 30 outside of the Missouri Valley business core
 - Has direct US 30 connectivity to the US 30 Missouri River crossing
 - Has alignments that could avoid environmental impacts on the Loess Hills Special Landscape Area
 - Allows for a potential combined roadway and levee alternative
- Concerns:
 - Includes Missouri Valley's wastewater lagoons
 - Is near the public Missouri Valley Airport, which has restricted private air operations with flight paths extending northwest and southeast from the runway

construction. The Memorandum of Agreement also includes a total avoidance policy regarding use of borrow materials within a special landscape area.



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PRELIMINARY STUDY AREAS
HARRISON COUNTY, IOWA

FIGURE 2-1

Following the decision to proceed with the southern Study Area, the next step in the process was to identify potential project alternatives. Alternative 2 was carried forward from the Study Area identification process. In addition, the alternatives evaluated in the 1991 EA were reviewed, and new alternative alignments were considered in the development of alternatives for this project. The alternatives were developed in consideration of the purpose of the proposed project and the need to improve US 30 traffic operations, CIN efficiency, and traffic safety.

All of the build alternatives include construction of a paved, two-lane roadway bypass, with grading for future expansion to an urban, four-lane roadway and have the potential for integration with a levee system. The range of build alternatives considered in both the initial screening and second screening is shown in Figure 2-2. The typical cross section of the two-lane roadway with and without an integrated levee is shown in Figure 2-3 and Figure 2-4, respectively. The typical section with an integrated levee including the embankment is approximately 10 feet wider than the typical section without a levee and is asymmetrical, with more of the section on the landward side of the levee. The typical section including the embankment without a levee is symmetrical from the centerline.

2.2.1 No-Build Alternative

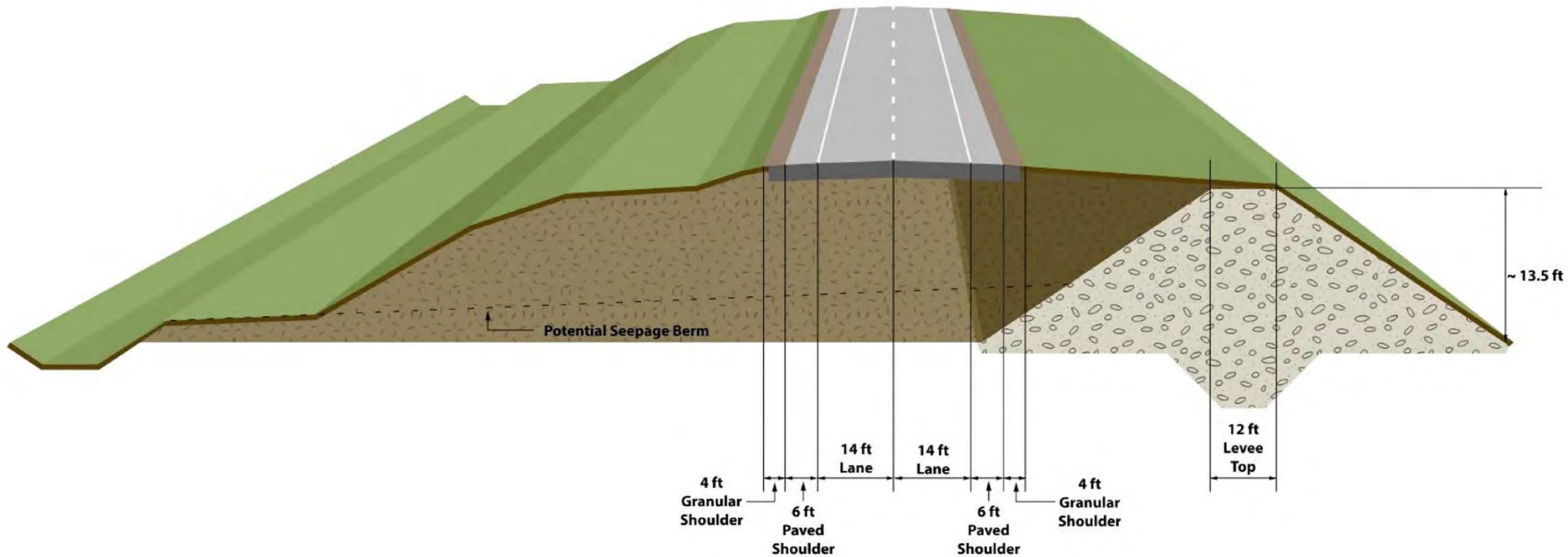
The No-Build Alternative consists of the existing US 30 with no change in transportation facilities and no levee construction. The No-Build Alternative would not involve the construction of a US 30 Missouri Valley Bypass. Under the No-Build Alternative, the transportation system would continue to function as under current conditions, with routine maintenance of US 30 when necessary. US 30 would remain a two-lane facility with on-street parking, multiple intersections, and multiple access points through Missouri Valley.

2.2.2 Alternative 2: South of Canal Street

Alternative 2 would begin at the existing I-29/US 30 interchange (Exit 75) and would extend southeast for approximately 1.5 miles on the south side of Canal Street. It then would turn northeast for 0.5 mile before turning slightly to run parallel to, and south of, the UPRR tracks for approximately 1.0 mile. Alternative 2 then would curve slightly toward the Boyer River before turning north for approximately 0.7 mile, crossing over the UPRR tracks and 296th Street (Harrison County Road F-58), and tying into US 30 near Monroe Avenue. The new US 30 would be designed for 60 mph, free-flowing traffic. Traffic coming from Missouri Valley on the existing US 30 would tie into the new alignment at a T-intersection. Traffic coming from Logan would be free flowing.

2.2.3 Alternative 3: North of Canal Street

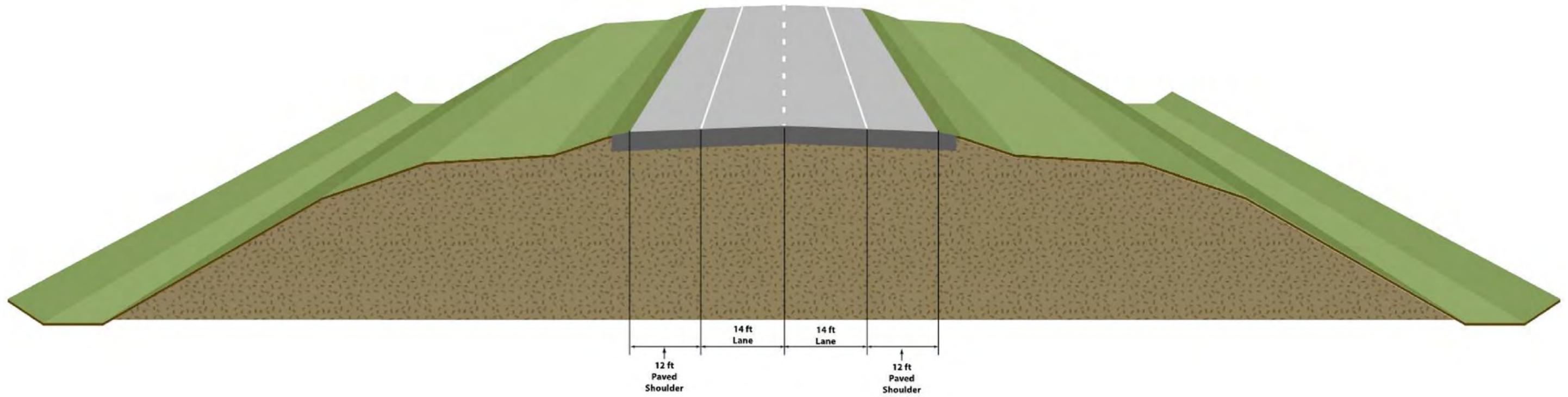
Alternative 3 would begin at the existing I-29/US 30 interchange (Exit 75) and would extend east for approximately 1.5 miles on the north side of Canal Street. It then would turn northeast for approximately 2.0 miles parallel to, and south of, the UPRR tracks. Alternative 3 then would curve slightly toward the Boyer River before turning north for approximately 0.7 mile, crossing over the UPRR tracks and 296th Street (Harrison County Road F-58), and tying into US 30 near Monroe Avenue. The new US 30 would be designed for 60 mph, free-flowing traffic. Traffic coming from Missouri Valley on the existing US 30 would tie into the new alignment at a T-intersection. Traffic coming from Logan would be free flowing.



NOT TO SCALE



TYPICAL TWO-LANE ROADWAY SECTION WITH LEVEE
HARRISON COUNTY, IOWA



NOT TO SCALE



TYPICAL TWO-LANE ROADWAY SECTION WITHOUT LEVEE
HARRISON COUNTY, IOWA

FIGURE 2-4
ENVIRONMENTAL ASSESSMENT

2.2.4 Alternative 4: South of the City Lagoons

Alternative 4 would begin at the existing I-29/US 30 interchange (Exit 75) and would extend southeast for approximately 0.5 mile. Once south of the city's wastewater treatment lagoons, this alternative would turn northeast for approximately 1.0 mile before turning north for 0.75 mile, crossing over the UPRR tracks, and nearing existing US 30. Alternative 4 then would turn northeast for approximately 0.5 mile and would tie into the existing US 30 near Melrose Lane. The new US 30 would be designed for 60 mph, free-flowing traffic. Traffic coming from Missouri Valley on the existing US 30 would tie into the new alignment at a T-intersection. Traffic coming from Logan would be free flowing.

2.3 Alternatives Comparison

The identified alternatives were initially screened using desktop data, as described in Section 2.3.1. During that screening, some alternatives were dismissed and new alternatives added. Those alternatives were then evaluated with data from field surveys, as described in Sections 2.3.2 and 2.3.3.

2.3.1 Initial Screening

To compare the initial alternatives, estimates of potential impacts were developed using available desktop data. Table 2-1 shows the impact comparison. These alternatives were then presented to permitting agencies for review and comment during the agency concurrence point process, as described in Chapter 5, Comments and Coordination.

Based on the impact comparison and agency comments, Alternatives 3 and 4 were eliminated from further consideration, as described below.

Alternative 3: North of Canal Street

Alternative 3 was dismissed for the following reasons:

- Impacts on homes and businesses
- Impacts on regulated materials sites
- Impacts on power poles and electrical substations
- Reduced area for city growth
- Wide and skewed railroad crossing near 296th Street
- Some residences left on the “wet” side of the levee

Alternative 4: South of the City Lagoons

Alternative 4 was dismissed for the following reasons:

- The connection near I-29, which is on a curve and to which it would be difficult to maintain local access
- The need to meet airport clearances
- Impacts on wetlands (Alternative 4 would have the largest wetland impact of the alternatives evaluated in the initial screening.)

Table 2-1: Preliminary Impact Comparison with Desktop Data

Resources	Units	No-Build	Alternative 2	Alternative 3	Alternative 4
Environmental					
Impact area	acres	0	320.11	304.66	247.70
Archeological resources	sites	0	3	2	0
Floodplains	acres	0	305.45	211.49	201.55
Historic structures	sites	0	0	0	0
Loess Hills / Special Landscape Areas	acres	0	222.05 / 0	214.98 / 0	127.18 / 0
Nationwide Rivers Inventory	feet	0	0	0	0
Northern long-eared bat habitat	acres	0	0	0	0
Prairies	acres	0	0	0	0
Recreational areas	acres	0	0.39	0.39	0
Refuge areas	acres	0	0	0	0
Regulated materials	sites	0	4	6	4
Sovereign lands	acres	0	0	0	0
Special rivers	feet	0	0	0	0
Streams	feet	0	6,708.41	6,397.15	3,193.20
Utilities (pipelines)	feet	0	821.3	821.3	670.63
Wetlands	acres	0	6.28	6.33	11.61
Wildlife Management Area / Wildlife Protection Area Land	acres	0	0	0	0
Woodlands	acres	0	0	0	0
Cemeteries	number	0	0	0	1
Farmland	acres	0	290.61	252.07	222.36
Structures					
Businesses	number	0	7	14	8
Churches	number	0	0	0	0
Homes	number / acres	0 / 0	2 / 5.14	30 / 12.27	7 / 3.36
Hospitals	number	0	0	0	0
Schools	number	0	0	0	0

2.3.2 Revised Range of Alternatives

The No-Build Alternative and Alternative 2 were carried forward into the second screening for additional evaluation. Two new alternatives, Alternative 5 and Alternative 6, were developed as a result of agency comments received during the initial screening. These alternatives are shown in previous Figure 2-2. Issues with Alternative 5 that led to its dismissal prior to the alternatives evaluation with field data are described below.

Alternative 5: On Canal Street

At the request of the US Environmental Protection Agency (USEPA), Alternative 5 was developed on the existing Canal Street alignment. Alternative 5 would begin at the existing I-29/US 30 interchange (Exit 75) and would extend east for approximately 1.5 miles on the existing Canal Street. Alternative 5 then would turn northeast for approximately 2.0 miles parallel to, and south of, the UPRR tracks. Alternative 5 then would curve slightly toward the Boyer River before turning north for approximately 0.7 mile, crossing over the UPRR tracks and 296th Street (Harrison County Road F-58), and tying into US 30 near Monroe Avenue. The new US 30 would be designed for 60 mph, free-flowing traffic. Traffic coming from Missouri Valley on the existing US 30 would tie into the new alignment at a T-intersection. Traffic coming from Logan would be free flowing.

After Alternative 5 was developed, local access concerns and impacts on the electrical substation and power poles were identified. Because of these concerns, Alternative 5 was dismissed from further consideration.

Alternative 6: Combination of Alternatives 4 and 5

Alternative 6 modifies and combines elements of dismissed Alternatives 4 and 5. Alternative 6 considers the constraints identified in the initial screening, field data, and comments from USACE and the City of Missouri Valley regarding Alternatives 2 through 5.

Alternative 6 would begin at the existing I-29/US 30 interchange (Exit 75) and would extend southeast and then east, parallel to Canal Street, for approximately 1.6 miles. Alternative 6 then would turn north for 0.75 mile, crossing over the UPRR tracks and nearing existing US 30. Alternative 6 then would turn northeast for approximately 0.75 mile and would tie into the existing US 30 near Melrose Lane. The new US 30 would be designed for 60 mph, free-flowing traffic. Traffic coming from Missouri Valley on the existing US 30 would tie into the new alignment at a T-intersection. Traffic coming from Logan would be free flowing.

2.3.3 Second Screening

The No-Build Alternative, Alternative 2, and Alternative 6 were evaluated with field data obtained subsequent to the initial alternative screening. During the second screening, potential impacts were evaluated for Alternative 2 and Alternative 6 both with and without an incorporated levee, as shown in Table 2-2.

Levee Integration

The increase in impacts resulting from incorporating a levee would be minimal. Without a levee, US 30 would be designed to 50-year flood design criteria where the granular subbase material elevation would need to be above the 50-year flood elevation. With a levee, the 100-year flood

design criteria would be used. Due to the local hydraulics and flat relative grades, the 50-year and 100-year flood elevations are within a 1-foot difference. The height difference in flood elevations would result in only an approximately 10-foot difference between footprints and impact areas whether a levee is included or not. Because the difference between footprints is so small and because the alternatives with a levee include the impact area for alternatives without a levee, the alternatives without a levee were removed from further consideration as independent alternatives.

Alternative Comparison

Alternatives 2 and 6 both have an elevated roadway in accordance with design criteria to build a sustainable and reliable roadway to a minimum of a 50-year flood event. As noted previously, a 100-year flood elevation would require only an additional 1-foot elevation of the roadway. Consequently, both Alternatives 2 and 6 would be designed to have the roadway and levee above the 100-year flood elevation. Section 2.1 addressed why a separate roadway and levee would not be a reasonable alternative.

Alternative 2 is approximately 5.25 miles long, while Alternative 6 is approximately 3.75 miles long. The additional 1.5-mile length is the primary reason Alternative 2 is estimated to cost approximately \$8 million more than Alternative 6. In addition, Alternative 2 would create a pinch point near the Boyer River that could lead to increased backwater flooding upstream (west) of the pinch point. Alternative 6 does not have this pinch point. Alternative 2 would have approximately 0.5 mile more levee separate from the roadway than Alternative 6. The impacts of the additional 0.5 mile of levee are not included in the impact calculations in Table 2-2 because those impacts would be accounted for in the USACE levee project. Impacts of the USACE levee project are discussed further in Section 3.23, Cumulative Impacts.

Alternative 2 would have more impacts on the resources evaluated with the exception of streams and homes (see Table 2-2). The wetland impacts of Alternative 6 are primarily on low-quality resources and would be mitigated as described in Section 3.12, Wetlands and Waters of the US. While more impacts on homes would occur with Alternative 6, as design progresses, efforts would be made to minimize home impacts, if possible. Acquisitions and relocations would be completed in compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 United States Code [USC] 4601 et seq.), the Civil Rights Act of 1964 (42 USC 2000 et seq.), and Iowa Code Chapter 316, Relocation of Persons Displaced by Highways. These impacts are discussed further in Section 3.7, Acquisitions and Displacements/Relocations.

Based on the longer roadway length, higher cost, more overall resource impacts, and additional length of separated levee, Alternative 2 was dismissed from further consideration. Alternative 6 is the preferred build alternative.

The No-Build Alternative and Alternative 6, hereafter referred to as the Build Alternative, were carried forward in this EA for detailed evaluation.

Table 2-2: Preliminary Impact Comparison with Field Data

Resources	Unit	No-Build	Alternative 2 with Levee	Alternative 2 No Levee	Alternative 6 with Levee	Alternative 6 No Levee
Environmental						
Impact area	acres	0	406.85	398.96	323.40	311.29
Archeological resources ^a	sites/acres	0	5/4.66	5/4.64	3/4.18	3/4.18
Floodplains	acres	0	333.56	325.70	224.21	212.00
Historic structures	sites/acres	0	0	0	0	0
Loess Hills / Special Landscape Areas	acres/acres	0	233.68/0	229.06/0	150.08/0	142.69/0
Nationwide Rivers Inventory	feet	0	0	0	0	0
Northern long-eared bat habitat	acres	0	0	0	0	0
Prairies	acres	0	0	0	0	0
Railroad (Union Pacific Railroad)	sites	0	1	1	1	1
Recreational areas	acres	0	0	0	0	0
Refuge areas	acres	0	0	0	0	0
Regulated materials ^b	sites	0	4	4	4	4
Sovereign lands	acres	0	0	0	0	0
Special rivers	feet	0	0	0	0	0
Streams	feet	0	6,666.09	6,519.55	7,892.92	7,889.70
Utilities (pipeline/substation) ^c	feet/sites	0	924.62/0	924.62/0	620.37/0	616.30/0
Wetlands	acres	0	59.99	59.56	15.55	15.13
Wildlife Management Area / Wildlife Protection Area Land	acres	0	0	0	0	0
Woodlands	acres	0	0	0	0.50	0.50
Cemeteries	sites	0	0	0	0	0
Farmland	acres	0	318.80	311.52	225.87	215.75
Structures						
Businesses	sites	0	4	4	3	3
Churches	sites	0	0	0	0	0
Homes	sites	0	1	1	5	5
Schools	sites	0	0	0	0	0

^a Archeological sites are all recommended as not eligible for listing in the National Register of Historic Places, but concurrence from the Iowa State Historic Preservation Office has not yet been received.

^b Regulated materials sites include three businesses and one substation.

^c Utilities include a Northern Natural Gas Company pipeline and valve field, and an Iowa Power & Light substation. Values in the table are pipeline and substation impacts reported as pipeline/substation.

2.4 Alternatives Carried Forward

2.4.1 No-Build Alternative

The No-Build Alternative does not meet the purpose and need for the project, but it was retained for detailed analysis to allow equal comparison of the build alternatives and to help decision makers and the public understand the consequences of taking no action. NEPA requires the consideration of no action to serve as a baseline for comparison with build alternatives.

2.4.2 Build Alternative

Subsequent to the alternatives screening process, the Build Alternative (a combined roadway and levee), shown in Figure 2-5, was refined as design was advanced for completion of this EA. The Build Alternative would begin at the existing I-29/US 30 interchange (Exit 75) and would extend southeast and then east, parallel to Canal Street, for approximately 1.6 miles. The Build Alternative then would turn north for 0.75 mile, crossing over the UPRR tracks and nearing existing US 30. The Build Alternative then would turn northeast for approximately 0.75 mile and would tie into the existing US 30 near Melrose Lane. The new US 30 would be designed for 60 mph, free-flowing traffic, and would include an integrated USACE levee.

The Build Alternative would include the grading to accommodate four lanes in the future, paving for a two-lane US-30, construction of an integrated levee and seepage berm, and access modifications. Previous Figure 2-3 shows the roadway, levee, and seepage berm, which is a supplemental volume of impervious soils adjacent to, and on the dry side of, a levee. A seepage berm reduces seepage pressure near the bottom of the levee that is caused by water on the wet side of the levee.

Roadway

The bypass would be graded for a four-lane highway but initially would be built as a paved two-lane highway (see Figure 2-3 for a cross section view). The roadway design reflects 12-foot-wide paved shoulders with 14-foot-wide lanes and would allow the shoulders to be converted to lanes in the future. New shoulders would be constructed if the roadway were converted to four lanes. If traffic volumes warrant a four-lane highway in the future, additional paved lanes can be added without significant grading or disruption of traffic during construction.

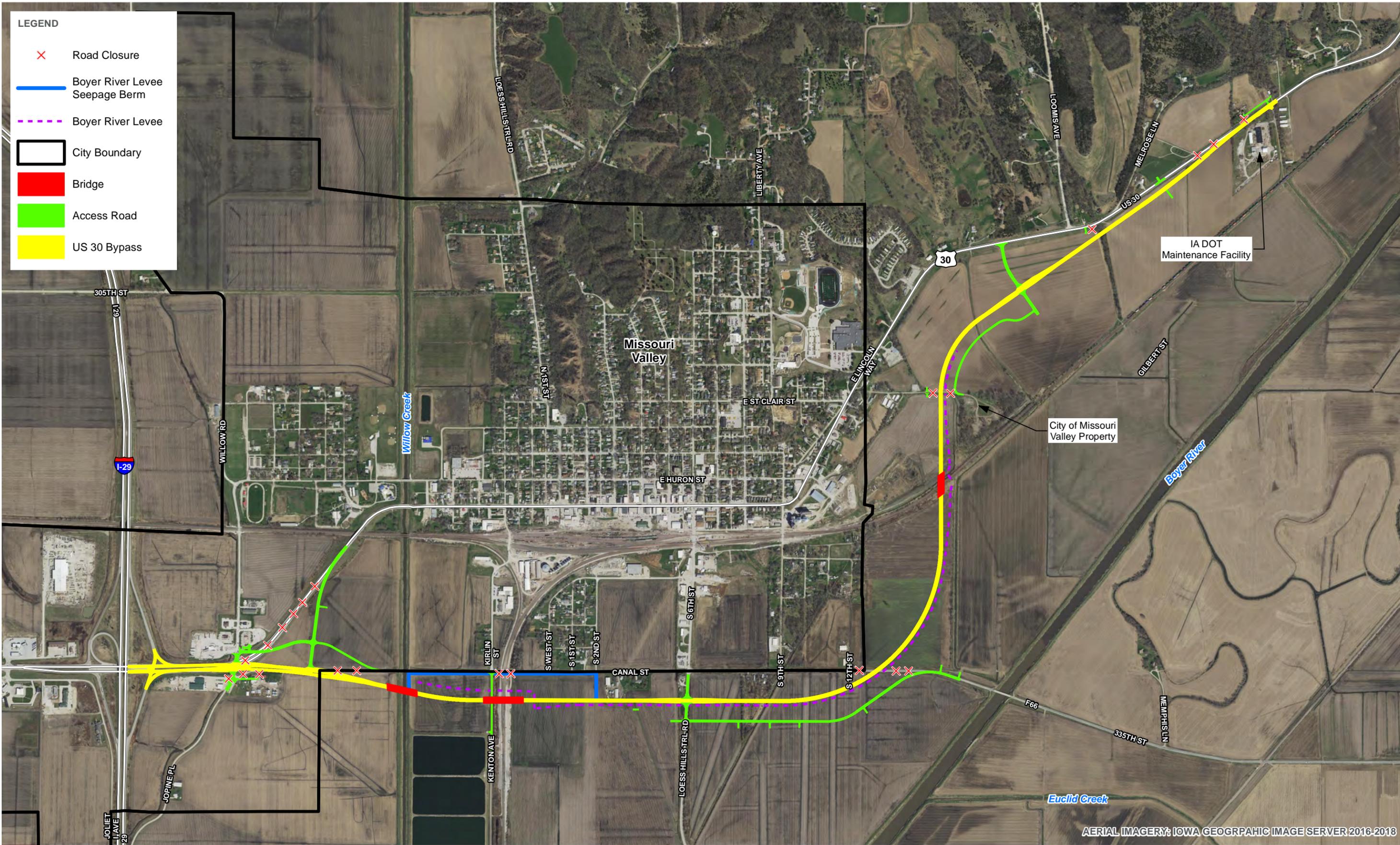
The new US 30 would be designed for 60 mph with a posted limit of 55 mph. Intersections on the US 30 bypass would be two-way stop-controlled, allowing for free-flowing traffic on the bypass. Traffic coming from Missouri Valley on the existing US 30 would tie into the new alignment at a T-intersection. Traffic coming from Logan would be free flowing.

Integrated Levee and Seepage Berm

Combining the roadway and levee into a single design alignment reduces the overall right-of-way footprint compared to independent roadway and levee alignments, ultimately reducing impacts by combining two independent footprints and making them one. The elevation of the roadway would be approximately 15 feet above existing ground level and designed to accommodate the levee. The levee would be designed for a 100-year flood event with an additional 3 feet of elevation, referred to as freeboard.

LEGEND

- ✕ Road Closure
- Boyer River Levee Seepage Berm
- - - Boyer River Levee
- City Boundary
- Bridge
- Access Road
- US 30 Bypass



AERIAL IMAGERY: IOWA GEOGRAPHIC IMAGE SERVER 2016-2018



**BUILD ALTERNATIVE
HARRISON COUNTY, IOWA**

FIGURE 2-5

The roadway including shoulders would be above the freeboard elevation. The levee would be within the roadway fill and on the river side. The eastbound foreslope of the roadway embankment would serve as the levee. The levee would begin at Willow Creek and extend east to approximately 2,000 feet north of the eastern UPRR bridge crossing.

An underseepage analysis was conducted along the proposed levee to determine if a seepage berm was needed. A seepage berm is an earthen berm attached landward of the levee that prevents water from passing through the soil under the levee. Seepage berms are only needed under certain soil conditions. Because of the soil conditions, the upward gradient at the landside toe of the levee was found to exceed the allowable factor of safety. To achieve an allowable factor of safety, a 400-foot-wide seepage berm would be constructed. The seepage berm would be located on the west end of the project extending from Willow Creek to approximately 800 feet east.

Access Modifications

Existing US 30 is a two-lane facility with multiple intersections and access points, on-street parking through town, and no defined access control. Where possible, the Build Alternative would maintain access spacing of 1 mile and access spacing of 0.5 mile is acceptable. Spacing is further reduced to approximately 0.2 mile in the western portion of the Build Alternative to maintain access to businesses. The US 30 bypass would be managed with predetermined access points to avoid operational issues in the future. Field access would not be provided directly from the US 30 bypass between the relocated US 30 intersections on the western and eastern city limits.

Access to the US 30 bypass would be provided at the following locations:

- I-29 ramp terminal intersections
- Willow Street / Jopine Place
- Relocated existing US 30 west of city limits
- South 6th Street / Loess Hills Trail
- Relocated existing US 30 east of city limits
- Field entrance to serve properties south of US 30 near the eastern limits of the project and east of the portion of US 30 with Priority II access control
- Entrance to Iowa DOT maintenance facility and residential access

The Build Alternative would include an overpass of Kirlin Street, which would not have direct access to the US 30 bypass. Harrison County Road F-66 (335th Street) would be relocated south of the US 30 bypass and the intersection with Loess Hills Trail via a new frontage road and intersection. The City of Missouri Valley property along East Saint Claire Street would be served by a new frontage road that is accessible from both the US 30 bypass and existing US 30 at the eastern city limits.

Construction Timing

Construction of the Build Alternative would include a grading and paving package spanning at least 2 years. The current plan is to begin construction of the Build Alternative after the USACE Willow Creek levee is constructed; however, the two projects could be constructed independently or concurrently. The Iowa DOT hydraulic analysis identified additional floodplain

mitigation requirements for the Build Alternative if the Willow Creek levee is not constructed at all or if the federal Willow Creek levee is constructed after the Build Alternative.

Since the Build Alternative is mostly on a new alignment, the majority of the roadway can be constructed with little or no impact on existing traffic. Where construction is on or near existing roads, sequencing details would be completed in final design and would include on site detours to maintain existing traffic.

Loess Hills Trail and Harrison County Road F-66 (335th Street) access would be maintained during construction because these roadways provide the primary access across the Boyer River to and from Missouri Valley. These roadways are required to stay open during construction because off-site detour routes are not available. On-site detours for Loess Hills Trail and Harrison County Road F-66 would be used to maintain traffic during construction.

2.5 Preferred Alternative

The preferred alternative for the project is the Build Alternative. The preliminary construction cost estimate for the Build Alternative is approximately \$88 million in 2020 dollars for constructing the roadway component of the project. The levee component of the project would be funded primarily through USACE and the City, and would not include FHWA funds. Cost sharing would be determined through an agreement by the signatory agencies of the MOU developed at the beginning of the NEPA process for this project. If an agreement cannot be reached to include the levee as part of the project, Iowa DOT and FHWA would move forward with the roadway project designed to 50-year flood design criteria. A future levee project would be determined by USACE and the City dependent on future funding availability.

Final selection of an alternative, including a construction scenario, will not occur until FHWA and Iowa DOT evaluate all comments received as a result of public and agency review of this EA and the public hearing on this document. Following public and agency review of this EA, FHWA and Iowa DOT will determine if an environmental impact statement (EIS) is required. If an EIS is required, then a preferred alternative will be selected through that process. If an EIS is not required, the selected alternative will be identified with a FONSI document for this EA.

Chapter 3 Affected Environment and Environmental Consequences

3.1 Introduction

This chapter describes the existing socioeconomic, cultural, natural, and physical environments in the Study Area that would be affected by the proposed project. Each resource section addressed in this chapter includes an analysis of the impacts of the two alternatives carried forward for detailed study: the No-Build Alternative and Build Alternative. A buffer was applied to the Build Alternative to include area that would incur temporary construction impacts (see Figure 3-1). For the purposes of impact analysis, the area within the buffer was assumed to be affected by construction activities and is referred to as the Build Alternative impact area. In addition, when warranted, each resource is evaluated for measures to avoid, minimize, or mitigate adverse effects.

3.1.1 Resources Eliminated from Consideration

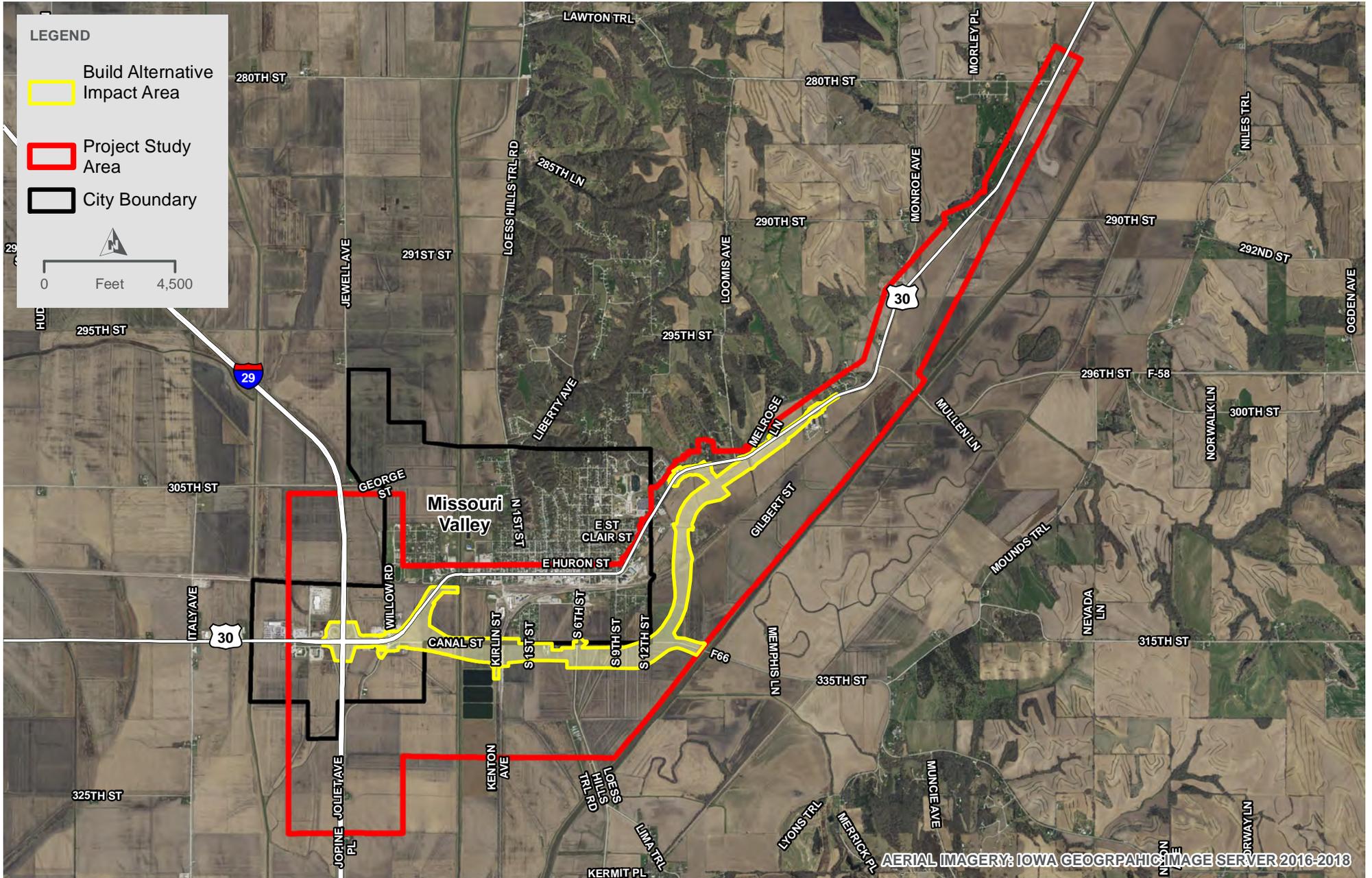
The following resources were eliminated from further consideration, with reasoning provided in Appendix B:

- Joint Development
- Bicycle and Pedestrian Facilities
- Wild and Scenic Rivers
- Air Quality
- Mobile Source Air Toxics
- Woodlands
- Parklands and Recreational Areas
- Section 4(f) Resources

3.1.2 Resources that Underwent Detailed Analysis

The following resources underwent detailed analysis in this chapter:

- Land Use
- Community Cohesion
- Churches and Schools
- Environmental Justice
- Economic
- Acquisitions and Displacements/
Relocations
- Construction and Emergency Routes
- Transportation
- Cultural Resources
- Cemeteries
- Wetlands and Waters of the US
- Water Quality
- Floodplains
- Wildlife and Habitat
- Threatened and Endangered Species
- Farmlands
- Noise
- Energy
- Contaminated and Regulated
Materials Sites
- Visual
- Utilities



AERIAL IMAGERY: IOWA GEOGRAPHIC IMAGE SERVER 2016-2018



BUILD ALTERNATIVE IMPACT AREA
HARRISON COUNTY, IOWA

FIGURE 3-1

3.2 Land Use

The land use evaluation considers direct and indirect effects on existing and future land uses, public zoning policy, and consistency with regional development and land use planning.

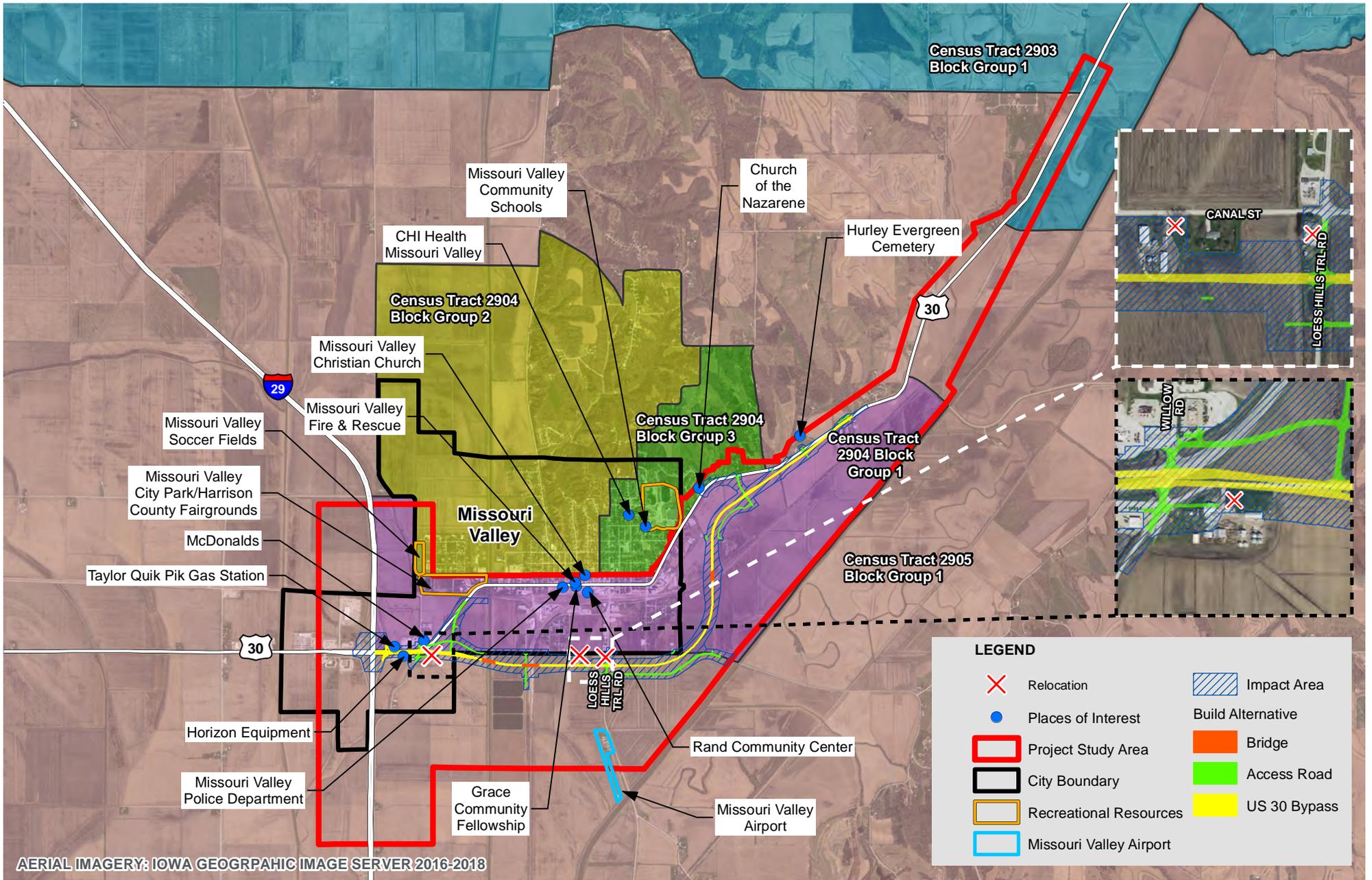
3.2.1 Existing Conditions

Existing land use in and around the Study Area is predominantly cultivated row cropland outside the city boundary of Missouri Valley. Additional land use in and adjacent to the Study Area includes commercial development near the I-29/US 30 interchange, low and medium intensity development (commercial and residential) between US 30 and Canal Street along the southern fringe of Missouri Valley, three sewage lagoons southwest of Canal Street and Kirlin Street, open water, and pasture (Schneider Geospatial 2019). Existing land use along US 30 within Missouri Valley includes Harrison County Fairgrounds, a park owned by the City, Rand Community Center (a senior citizens' center), the Missouri Valley Police Department headquarters, four gas stations, a variety of small businesses, a grain elevator, and residences (Harrison County 2017). Two of the gas stations in downtown Missouri Valley are along US 30 and two are located adjacent to the I-29/US 30 interchange at the west end of the city. A motel, several restaurants, and a car dealer are also located adjacent to the I-29/US 30 interchange. Most, if not all, of the small businesses along the existing US 30 in downtown Missouri Valley cater to local Missouri Valley residents. Figure 3-2 shows the location of the city and several places of interest. A UPRR rail yard is located approximately 500 feet south of US 30 in Missouri Valley. The Missouri Valley Airport is partially within the Study Area along Loess Hills Trail Road, approximately 1 mile south of US 30.

Both the City and Harrison County have adopted zoning ordinances. The City's zoning ordinance, adopted in 1997, applies within the corporate boundary of the city, and the Harrison County zoning ordinance, adopted in 2004, applies to all areas outside of the city (City of Missouri Valley 2010; Harrison County 2004). Much of southern part of Missouri Valley is within the General Flood Plain District (City of Missouri Valley 2010). Most of the northern areas of Missouri Valley and areas to the northeast of the city are located in the Loess Hills Overlay District (Harrison County 2003).

The City has designated at least six urban renewal areas to encourage development through tax increment financing. A portion of the taxes collected in these areas is used to pay for planning and infrastructure development costs (City of Missouri Valley 2019a, 2013). Most of the area located within the city south of US 30 is in the South Urban Renewal Area. The area along US 30 west of I-29 is classified as the West Urban Renewal Area (Schneider Geospatial 2019). No development is currently planned for the urban renewal areas (City of Missouri Valley 2019a).

The Harrison County Comprehensive Plan designates an area south of Missouri Valley but north of the Missouri Valley Airport and areas east and northeast of Missouri Valley but south and east of US 30 for future light industrial development. The plan also indicates future residential development northeast of the Missouri Valley corporate boundary north and west of US 30. Future development in much of the Study Area is limited due to flooding concerns (Harrison County 2003, 2019).



AERIAL IMAGERY: IOWA GEOGRAPHIC IMAGE SERVER 2016-2018

LEGEND

	Relocation		Impact Area
	Places of Interest		Build Alternative
	Project Study Area		Bridge
	City Boundary		Access Road
	Recreational Resources		US 30 Bypass
	Missouri Valley Airport		



**HUMAN ENVIRONMENT
HARRISON COUNTY, IOWA**

FIGURE 3-2

3.2.2 Impacts

No-Build Alternative

The US 30 Missouri Valley Bypass would not be built under the No-Build Alternative. Impacts on existing land uses and zoning are not anticipated beyond those that could occur due to other projects. Economic conditions, flooding concerns, and zoning regulations would continue to be the main influences on land use.

Build Alternative

The Build Alternative includes the US 30 Missouri Valley Bypass as a new alignment of US 30 south of Missouri Valley. The existing US 30 would be turned over to the County and/or City for upkeep and maintenance. The Build Alternative would impact existing agricultural lands, businesses, and residential homes (see Section 3.7). The Build Alternative would cross the UPRR rail lines east of Kirlin Street in an area of triple track.

The Build Alternative aligns with City and County development plans. Development within the South Urban Renewal Area south of US 30 could eventually occur under favorable economic conditions.

The current extent of the General Flood Plain District could be reduced with bypass and levee construction. Additionally, the current restrictions on land use in this District could be modified, potentially opening areas to primarily commercial and light industrial development. Floodplain impacts are discussed in Section 3.14.

If an agreement cannot be reached to include a levee as part of the project, Iowa DOT and FHWA would move forward with the roadway project designed to 50-year flood design criteria. The project footprint would be smaller without the levee, and the project would impact less land. More land would be available for future land development but would not be protected from flood events exceeding a 50-year flood unless a future 100-year levee project would be constructed.

3.2.3 Avoidance, Minimization, and Mitigation

Impacts on, or avoidance of, residential homes and businesses would be determined during final design.

3.3 Community Cohesion

The community cohesion evaluation considers the potential disruption in access to, and use of, existing community facilities and services such as hospitals and schools. In addition, the evaluation considers likely benefits resulting from changes in traffic patterns in and near the Study Area.

3.3.1 Existing Conditions

US 30 runs through Missouri Valley's commercial downtown area and divides the city into two distinct communities. The community north of US 30 consists primarily of residential, school, and park areas. The community hospital (CHI Health Missouri Valley) and a grocery store are also located north of US 30, as are City Hall, the fire station, the three city parks, the aquatics center, and the Missouri Valley Public Library (City of Missouri Valley 2019b). The community south of US 30 consists primarily of commercial, industrial, and agricultural areas. However,

two small residential areas are located south of the UPRR tracks and rail yard. A low-income area has been identified south of US 30 (see Section 3.5, Environmental Justice). The area along US 30 in the Missouri Valley downtown area consists primarily of commercial businesses with limited parking, resulting in on-street parking along US 30 and pedestrian access along and across US 30. Community cohesion within Missouri Valley is currently inhibited by high traffic volume and travel delays on US 30. An increasing amount of the traffic volume is truck traffic, which adds to the delays.

3.3.2 Impacts

No-Build Alternative

The US 30 Missouri Valley Bypass would not be built under the No-Build Alternative. Traffic volumes, especially truck traffic, are projected to continue to increase. Increasing traffic volume on US 30 would have a long-term moderate to major adverse impact on community cohesion as travel delays increase. Potential conflicts between vehicular and pedestrian traffic would increase along US 30 in the Missouri Valley downtown area, with an increased potential for crashes. Commuting times from areas north of US 30 to areas south of US 30 would continue to increase. Emergency response times, including travel time from work areas south of US 30 to the community hospital (CHI Health Missouri Valley), would also increase. Community connections between the low-income population area south of US 30 and community facilities north of US 30 would continue to be disrupted by high traffic volumes and traffic delays along US 30. Community connections would continue to be impacted during flooding events that result in road closures.

Build Alternative

The Build Alternative would have a positive effect on community cohesion by removing much of the large truck traffic that travels through the Missouri Valley commercial downtown area and allow for more efficient vehicle transport of goods. Potential conflicts between vehicular and pedestrian traffic would decrease along US 30 in the Missouri Valley downtown area, with a decreased potential for crashes. After the bypass was built, Iowa DOT would transfer jurisdiction of US 30 outside of the bypass connection to the City and Harrison County. The City and Harrison County would become responsible for maintaining that segment of former US 30. The change in traffic patterns could result in the need for traffic signal modifications, which would be a local responsibility. Traffic delays between areas north and south of US 30 would decrease through traffic volume shifts to the proposed bypass. Community connections between the low-income population area south of US 30 and community facilities north of US 30 would improve. Emergency response times would also improve.

If an agreement cannot be reached to include a levee as part of the project, Iowa DOT and FHWA would move forward with the roadway project designed to 50-year flood design criteria. The project footprint would be smaller without the levee, and the project would impact less land. Community cohesion would be improved based on traffic using the bypass but could be impacted during flood events exceeding a 50-year flood unless a future 100-year levee project would be constructed.

3.3.3 Avoidance, Minimization, and Mitigation

No avoidance, minimization, or mitigation needs have been identified for community cohesion.

3.4 Churches and Schools

Churches and schools are two key facilities in communities where people gather. These facilities and their locations are identified and project impacts are considered because of their significance to community interactions.

3.4.1 Existing Conditions

Three churches are within the Study Area: Missouri Valley Christian Church (119 North 4th Street and 116 North 4th Street), Church of the Nazarene (2225 US 30), and Grace Community Fellowship (300 East Erie Street). Access to the Church of the Nazarene is primarily vehicular along US 30, with some pedestrian access through the residential area to the northwest of US 30 and the church. The downtown locations of the Missouri Valley Christian Church and Grace Community Fellowship are likely accessed from pedestrians as well as drivers. These churches are shown in Figure 3-2.

Missouri Valley has one public school district, the Missouri Valley Community School District. The elementary, middle, and high schools are located between North 9th Street and US 30 (Missouri Valley Community School District n.d.). Missouri Valley Elementary School is at 602 North 9th Street, Missouri Valley Middle School is at 607 East Lincoln Highway, and Missouri Valley High School is at 605 East Lincoln Highway. While the middle and high school buildings are adjacent to US 30, they are not within the Study Area, as shown in Figure 3-2. No private schools were identified in Missouri Valley.

The Missouri Valley Community School District uses seven buses each weekday during the school year, each carrying elementary, middle, and high school students. There are also as many as three to four additional buses on certain days for athletic, club, and school activities. The buses and a van access the middle and high school from US 30 and then return to US 30 for access to the elementary school through the adjacent residential area. There are also approximately 160 student drivers and 60 staff who access the schools. There is some pedestrian traffic to the schools through the residential area to the west, but no known pedestrian access along or crossing US 30 (City of Missouri Valley 2021a).

3.4.2 Impacts

No-Build Alternative

The US 30 Missouri Valley Bypass would not be built under the No-Build Alternative. Impacts on churches and schools are not anticipated beyond those that could occur due to other projects. Traffic volumes, especially truck traffic, are projected to continue to increase. Commute times from areas south of US 30 to areas north of US 30, where the majority of the churches and schools are located, would continue to increase. School (student and staff drivers) and commuter traffic in the area of the Missouri Valley Community Schools would be affected by the increased US 30 traffic, especially heavy trucks. Vehicular conflicts with pedestrians would increase along the downtown area where Missouri Valley Christian Church and Grace Community Fellowship are located.

Build Alternative

The Build Alternative has the potential to impact 0.64 acre of the Church of the Nazarene property. The church building would not be impacted. The parking lot and access may be temporarily impacted during construction, but access would be maintained during construction. No impacts on the school buildings are anticipated. The Build Alternative is expected to increase access to churches and schools within the Study Area by reducing traffic congestion and commute times. Vehicular conflicts with pedestrians would decrease in the downtown area where Missouri Valley Christian Church and Grace Community Fellowship are located.

If an agreement cannot be reached to include a levee as part of the project, Iowa DOT and FHWA would move forward with the roadway project designed to 50-year flood design criteria. Churches and schools would benefit from reduced vehicular conflicts along the downtown area but could be impacted during flood events exceeding a 50-year flood unless a future 100-year levee project would be constructed.

3.4.3 Avoidance, Minimization, and Mitigation

Actual impacts on or avoidance of the Church of the Nazarene would be determined during final design. Access to the Church of Nazarene would be maintained at all time during construction but may be disrupted temporarily at times due to construction activities. However, the church would not be closed during construction.

3.5 Environmental Justice

The Study Area was reviewed to determine whether minority or low-income communities are present and, if so, whether these communities would be disproportionately impacted. Minority populations may include, but are not limited to, African Americans, Hispanics, Asian Americans, and Native Americans. Low-income is defined as a person whose household income is at or below the US Department of Health and Human Services poverty guidelines. In addition, the environmental justice review addresses whether people with limited English proficiency (LEP) are present within or adjacent to the Study Area.

The review and evaluation of minority and low-income populations is in accordance with federal regulations and guidelines, including Title VI of the Civil Rights Act of 1964 (Title VI; 42 USC 2000d et seq.); NEPA (42 USC 4321 et seq.); environmental justice guidance from the Council on Environmental Quality (1997); Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (59 Federal Register 7629–7633); and US Department of Transportation (DOT) Order 5610.2(a), Final DOT Environmental Justice Order (2012). LEP populations are evaluated in accordance with Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency.

3.5.1 Existing Conditions

The Study Area is located within one county (Harrison), includes one city (Missouri Valley), and intersects five census block groups (see Figure 3-2). The Study Area is predominantly made up of cropland with residential, commercial, and industrial areas located in Missouri Valley and north of US 30. An environmental justice population (minority or low-income) is present when the environmental justice population percentage is either greater than 50 percent of the affected

area's population or exceeds the countywide environmental justice percentage by more than 50 percent (77 Federal Register 42077).

Population census data for the county, city, and block groups intersected by the Study Area are shown in Table 3-1. Census data for the State of Iowa is included for comparison purposes. Missouri Valley accounts for approximately 19 percent of the Harrison County population. Overall, the population within the Study Area has been decreasing steadily. The population within Missouri Valley decreased by 6 percent between 2010 and 2017. In comparison, the population for Harrison County decreased by 5 percent, and the population for Iowa increased by 2 percent over that same time period.

Table 3-1: Population Changes

Census Geography	Population			Percent Population Change		
	1970	2010	2017	1970–2010	1970–2017	2010–2017
State of Iowa	824,376	3,046,355	3,118,102	270	278	2
Harrison County	16,240	14,928	14,196	-8	-13	-5
Missouri Valley	--	2,838	2,661	--	--	-6
Census Tract 2903, Block Group 1	--	1,356	1,253	--	--	-8
Census Tract 2904, Block Group 1	--	664	724	--	--	9
Census Tract 2904, Block Group 2	--	1,431	1,297	--	--	-9
Census Tract 2904, Block Group 3	--	1,229	1,094	--	--	-11
Census Tract 2905, Block Group 1	--	1,190	1,118	--	--	-6

Sources: US Census Bureau 1971, 2000, and 2017a.

No minority environmental justice populations comprised 50 percent or more of an area, and no areas exhibited populations 50 percent greater than the countywide average. Minority residents make up only 0.5 to 5 percent of the five block groups within the Study Area. Census Tract 2904, Block Group 3 and Census Tract 2905, Block Group 1 have populations 20.6 percent and 38.5 percent greater than the countywide average, respectively, but are not 50 percent higher than the average. Missouri Valley and Harrison County also have minority populations less than 5 percent. Table 3-2 summarizes population by race.

Table 3-2: 2017 Minority Populations in Study Area

Census Geography	Total Population	White	Black	American Indian/ Alaska Native	Asian	Native Hawaiian/ Pacific Islander	Hispanic	Some Other Race	Two or More Races	Total Minorities		Raw % Compared to State or County Average ^a	Total % Compared to County Level ^a	Potential Environmental Justice Population (Y/N)
										Total	%			
State of Iowa	3,118,102	2,824,197	106,762	10,791	71,178	2,913	178,294	2,775	53,491	420,850	13.5	--	--	--
Harrison County	14,196	13,701	28	42	36	14	229	0	146	495	3.5	-10.0	-74.2	N
Missouri Valley	2,661	2,585	0	0	6	0	70	0	0	76	2.9	-0.6	-18.1	N
Census Tract 2903, Block Group 1	1,253	1,247	0	6	0	0	0	0	0	6	0.5	-3.0	-86.3	N
Census Tract 2904, Block Group 1	724	697	0	0	0	0	27	0	0	27	3.7	0.2	7.0	N
Census Tract 2904, Block Group 2	1,297	1,280	0	0	6	0	11	0	0	17	1.3	-2.2	-62.4	N
Census Tract 2904, Block Group 3	1,094	1,048	0	0	0	0	46	0	0	46	4.2	0.7	20.6	N
Census Tract 2905, Block Group 1	1,118	1,064	0	0	11	0	0	0	43	54	4.8	1.3	38.5	N

Source: US Census Bureau 2017b.

^a The county value is compared to the state value, and Missouri Valley and block group values are compared to the county value.

Low-income populations in the Study Area are shown in Table 3-3. Two areas of low-income populations were identified. Missouri Valley has a low-income population that is 83.7 percent greater than the countywide average, and Census Tract 2904, Block Group 1 has a low-income population that is 257.1 percent greater than the countywide average. The low-income population in Missouri Valley is primarily due to the large difference between Census Tract 2904, Block Group 1 and the countywide average. Other block groups that fall within the boundaries of Missouri Valley exhibit much smaller, or even negative, percent differences compared with the countywide average. No block group in the Study Area had a low-income population in excess of 50 percent of the total population.

Table 3-3: 2017 Estimated Population Below Poverty Level

Census Geography	Total 2017 Population for whom Poverty Status is Determined	2017 Estimated Population Below the Poverty Level		Raw % Compared to State or County Average ^a	Total % Compared to State or County Level ^a	Potential Environmental Justice Population (Y/N)
		Total	Percent			
State of Iowa	3,016,358	361,343	12.0	--	--	--
Harrison County	13,902	1,452	10.4	-1.5	-12.8	N
Missouri Valley	2,523	484	19.2	8.7	83.7	Y
Census Tract 2903, Block Group 1	1,253	111	8.9	-1.6	-15.2	N
Census Tract 2904, Block Group 1	724	270	37.3	26.8	257.1	Y
Census Tract 2904, Block Group 2	1,257	149	11.9	1.4	13.5	N
Census Tract 2904, Block Group 3	996	86	8.6	-1.8	-17.3	N
Census Tract 2905, Block Group 1	1,118	58	5.2	-5.3	-50.3	N

Source: US Census Bureau 2017c.

^a The county value is compared to the state value, and Missouri Valley and block group values are compared to the county value.

Although there is not a large LEP population within the Study Area, any members of the LEP population will be accommodated with translation services so that they may understand the project and provide meaningful input. A summary of LEP populations in the Study Area is provided in Table 3-4.

Table 3-4: 2017 English Proficiency

Census Geography	Total Population	Speak English Well		Speak English Less than Well	
		Population	Percent of Total Population ^a	Population	Percent of Total Population ^a
State of Iowa	2,921,617	176,886	6.1	46,533	1.6
Harrison County	13,406	138	1.0	15	0.1
Missouri Valley	2,506	24	1.0	14	0.6
Census Tract 2903, Block Group 1	1,182	4	0.3	0	0
Census Tract 2904, Block Group 1	642	9	1.4	0	0
Census Tract 2904, Block Group 2	1,259	6	0.5	8	0.6
Census Tract 2904, Block Group 3	1,052	9	0.9	6	0.6
Census Tract 2905, Block Group 1	1,023	7	0.7	0	0

Source: US Census Bureau 2017d.

^a Population 5 years and older.

3.5.2 Impacts

No-Build Alternative

The US 30 Missouri Valley Bypass would not be built under the No-Build Alternative. Impacts on existing environmental justice populations are not anticipated beyond those that could occur due to other projects. Connections between the city and the low-income population area south of US 30 would continue to be disrupted by high traffic volumes and traffic delays along US 30 as traffic is projected to increase. Additionally, the population within Census Tract 2904, Block Group 1 is located within the designated floodway for the Boyer River and experiences flooding. The No-Build Alternative would continue to allow flooding in this area.

Build Alternative

Areas with and without low-income populations would be affected by temporary construction noise, dust, and traffic impacts during construction of the Build Alternative. None of the potential residential relocations identified under the Build Alternative would occur within a low-income area. Consequently, no disproportionately high or adverse human health or environmental project effects were identified.

The Build Alternative would have a beneficial effect on the environmental justice populations within the Study Area. Connections between the city and the low-income population area south of existing US 30 would improve as the bypass would reduce traffic volumes and traffic delays along the existing US 30. The population within Census Tract 2904, Block Group 1 is located within the designated floodway for the Boyer River. Construction of the Build Alternative and the incorporated levee would reduce the flood risk to the area.

If an agreement cannot be reached to include a levee as part of the project, Iowa DOT and FHWA would move forward with the roadway project designed to 50-year flood design criteria. Environmental justice populations would benefit based on traffic using the bypass but could be

impacted during flood events exceeding a 50-year flood unless a future 100-year levee project would be constructed.

The public involvement process conducted by Iowa DOT was designed to effectively involve a broad cross-section of the public. A Public Information Meeting (PIM) was held on March 13, 2018, to obtain public input on the purpose and need, and the northern and southern study areas. Prior to the PIM, a public notice was published in the *Missouri Valley Times* and a meeting notification was placed on the Iowa DOT website to inform people about the project and PIM. The PIM was attended by 154 people. Informational materials about the northern and southern bypass options, including a series of information boards and a PowerPoint presentation, were presented to attendees. PIM attendees had the opportunity to learn about the project process, and to provide input and ask questions directly to Iowa DOT representatives. An online PIM was launched on August 29, 2019, to present the public with the new southern bypass alignments and to introduce possible combined levee options. Email notifications and letters were sent to officials, Indian tribes, utilities, and property owners to inform them of the online PIM. A notice was also placed in the *Missouri Valley Times* and on the Iowa DOT website. Chapter 5 of this EA provides more information about the public involvement process undertaken by Iowa DOT and summarizes comments received.

3.5.3 Avoidance, Minimization, and Mitigation

No avoidance, minimization, or mitigation needs have been identified for minority, low-income or LEP populations.

3.6 Economic

The economic environment evaluation considers industry sectors, population and employment, potential effects on commerce and on state, regional, and local economies.

3.6.1 Existing Conditions

Land use within an area drives its economy. As detailed in Section 3.2.1, the land uses (with associated buildings supporting those land uses) comprising the economic environment in the Study Area include commercial, residential, industrial, and row crop agriculture. The portions of the Study Area east and south of US 30 are mostly agricultural. The main commercial and residential areas are directly around and north of US 30. A small commercial area is located around the I-29/US 30 interchange. The industrial areas exist around the UPRR tracks and rail yard.

The employers in the Study Area are dominated largely by three industry sectors: educational services, health care, and social assistance; arts, entertainment, recreation, accommodation, and food services; and retail trade. Table 3-5 summarizes the industry sectors in the Study Area.

The employment status for the Study Area in 2017 is shown in Table 3-6. The Study Area has a lower rate of unemployment than the state average (4.1 percent). Missouri Valley; Census Tract 2904, Block Group 2; and Census Tract 2904, Block Group 3 have a slightly higher unemployment rate (2.0, 2.2, and 2.0 percent, respectively) than the county average (1.7 percent). According to the Public Works and Economic Development Act of 1965, an area is considered economically distressed if it has an unemployment rate that is at least 1 percent greater than the national average. As of October 2019, the national unemployment rate average

was 3.6 percent (US Department of Labor 2019). None of the block groups identified within the Study Area meet this unemployment criterion. In 2019, the unemployment rate in the Study Area was 2.9 percent, with unemployment in block groups ranging from 0.0 percent to 2.2 percent. The national average was 3.4 percent at that time (US Department of Labor 2019). The unemployment rate in Harrison County was 2.5 percent in 2019. In February 2021, the unemployment rate in Harrison County was 4.6 percent, while the national average was 6.2 percent (US Department of Labor 2021).

Table 3-5: 2017 Industry Sectors for Study Area

Census Geography	Agriculture, Forestry, Fishing, Hunting, and Mining (%)	Construction (%)	Manufacturing (%)	Wholesale Trade (%)	Retail Trade (%)	Transportation, Warehousing, and Utilities (%)	Information (%)	Finance, Insurance, Real Estate, and Rental and Leasing (%)	Professional, Scientific, Management, Administrative and Waste Management Services (%)	Educational Services, Health Care, and Social Assistance (%)	Arts, Entertainment, Recreation, and Accommodation and Food Services (%)	Other Services, Except Public Administration (%)	Public Administration (%)
State of Iowa	3.9	6.3	15.1	2.9	11.6	4.6	1.7	7.6	7.3	24.3	7.3	4.3	3.1
Harrison County	7.5	8.4	11.8	3.1	12.1	7.9	2.2	7.2	5.3	22.2	5.7	4.4	2.2
Missouri Valley	2.6	5.7	10.6	1.7	15.2	5.2	1.0	10.0	5.7	19.7	15.8	4.0	2.9
Census Tract 2903, Block Group 1	11.7	4.8	14.2	1.5	8.0	9.0	0	8.3	11.9	16.2	7.6	4.8	1.9
Census Tract 2904, Block Group 1	1.9	5.1	7.3	0	12.0	8.2	0	9.5	9.2	24.1	20.3	1.3	1.3
Census Tract 2904, Block Group 2	2.1	4.6	9.0	5.2	17.1	6.5	1.4	8.0	2.6	29.1	5.8	4.9	3.8
Census Tract 2904, Block Group 3	2.4	6.2	10.0	2.8	11.5	2.9	2.2	14.6	5.2	15.7	21.0	2.9	2.6
Census Tract 2905, Block Group 1	14.5	9.9	7.9	2.1	7.8	12.1	5.6	7.6	7.9	20.8	1.3	2.5	0

Source: US Census Bureau 2017e.

Table 3-6: 2017 Employment Status for Study Area

Geography	In Labor Force	Employed	Unemployed	Unemployment Rate (%)
State of Iowa	1,670,448	1,599,718	69,018	4.1
Harrison County	7,445	7,308	128	1.7
Missouri Valley	1,353	1,326	27	2.0
Census Tract 2903, Block Group 1	648	647	1	0.2
Census Tract 2904, Block Group 1	316	316	0	0
Census Tract 2904, Block Group 2	674	659	15	2.2
Census Tract 2904, Block Group 3	593	581	12	2.0
Census Tract 2905, Block Group 1	638	629	0	0

Source: US Census Bureau 2017f.

The taxable value of property in Harrison County was \$1.1 billion in 2019 (Iowa Department of Management 2020a). Valuations by property class include the following:

- residential property \$434.5 million
- agricultural land and buildings \$428.8 million
- commercial property \$82.8 million
- railroads \$72.8 million
- utilities \$26.1 million
- industrial \$8.9 million
- military exempt and other \$2.0 million

The assessed value of Harrison County property increased by approximately 51 percent from 2010 to 2019. Most of the valuation increase was in residential and agricultural land (Iowa Department of Management 2020a, 2011). Property tax revenue currently accounts for approximately 50 percent of the Harrison County and City budgets (Iowa Department of Management 2020b, 2019). Since 2010, the city's assessed value has increased from \$74.8 million to its current assessed value of \$91.0 million, an increase of 22 percent. Most of the valuation increase in the city was in residential and commercial land (Iowa Department of Management 2011, 2020a).

3.6.2 Impacts

No-Build Alternative

The US 30 Missouri Valley Bypass would not be built under the No-Build Alternative. Impacts on the existing economic environment are not anticipated beyond those that could occur due to other projects. Development would continue to be limited in the General Flood Plain District south and east of current development in and near Missouri Valley.

Build Alternative

From South Willow Road east to approximately 0.5 mile east of Melrose Lane the Build Alternative would move the existing US 30 alignment as much as 0.5 mile south and east of its current alignment. Six intersections with local roads would provide access to local areas. Building the US 30 Missouri Valley Bypass around the city would result in both short- and long-term impacts on the local economy.

Construction of the Build Alternative would create jobs and generate spending at local establishments such as retail stores, gas stations, motels, and restaurants. The bypass would benefit Missouri Valley through reduced travel times, reduced vehicle operating costs, and less congestion on local roads. Reduced congestion from through traffic, especially truck traffic, would improve access to local businesses.

The Build Alternative would not affect the highway-oriented businesses (motels, gas stations, restaurants, and car dealership) at the I-29/US 30 interchange. Other large businesses oriented with UPRR would not be affected by the Build Alternative. Under the Build Alternative, approximately half of the projected 2040 traffic flow is anticipated to use the US 30 Missouri Valley Bypass and approximately half of the traffic flow is anticipated along the existing US 30. Nearly 90 percent of the truck traffic would be diverted to the US 30 Missouri Valley Bypass. Businesses that depend on traffic flow for all or part of their sales would likely experience a short-term drop in revenue. However, most of the businesses along the existing US 30 in Missouri Valley serve the local economy and would not likely experience a substantial change in revenue. Most of the businesses along or near the existing US 30 are destination businesses that draw customers through their reputation or service provided and are not traffic dependent. Up to 1 mile of out-of-distance travel would not substantially affect these businesses.

A study completed by Wisconsin DOT found strong economic activity continued in bypassed communities with populations of 2,000 or more. All types of businesses, including traffic-dependent businesses, flourished after bypasses were completed. The study concluded that combined traffic on both the old and new routes grew at rates above the state average, indicating that original and bypass routes were both utilized for different markets and destinations. There was no significant change in population, employment, or retail trade trends in most communities after a bypass was opened. Communities viewed their bypasses as beneficial but realized that bypasses presented challenges that needed to be addressed proactively (Wisconsin DOT 1998).

Marketing campaigns to alert customers to their presence would benefit bypassed downtown businesses. A study completed by the Transportation Research Bureau concluded that economic impacts on most communities from bypasses were minor. Impacts on communities varied according to the strength of the economic base (industries and businesses that create employment) of the bypassed community. A bypass did not affect long-term ongoing economic and social changes on businesses in a community (Andersen et al. 1993).

Right of way (ROW) would be acquired for the Build Alternative. Based on the Build Alternative impact area, approximately 257.0 acres would be acquired from 47 agricultural parcels, 10.8 acres of commercial land would be acquired from 19 commercial parcels, and 11.5 acres would be acquired from 10 residential parcels. The portion of the parcels to be acquired has an assessed land value of \$1.0 million (approximately \$750,000 of assessed value from agricultural land, \$200,000 from commercial land, and \$50,000 from residential land). Based on the Build Alternative impact area, three residences with a combined value of \$400,000 would also be acquired. Only land area would be acquired from the commercial parcels; no businesses would be fully acquired. The value of the land and residential acquisitions (\$1.4 million) represents approximately 0.1 percent of the taxable value in Harrison County.

Twenty-five of the parcels to be acquired, with a value of approximately \$300,000, are located within Missouri Valley. The remainder are located outside of Missouri Valley. One of the residences to be acquired, with a value of \$100,000, is located within Missouri Valley. The land

and residential acquisitions represent approximately 0.4 percent of the taxable value in Missouri Valley.

Some of the residences acquired for ROW could potentially be relocated on the same parcel of land, or onto another parcel in the general vicinity of the acquisitions, which could offset some of the tax revenue decrease. Any reductions in taxable value would be offset by increases in taxable value for commercial property in the vicinity of the US 30 Missouri Valley Bypass and by further development in the area after completion of the Build Alternative.

Businesses along the Build Alternative would be affected by temporary access restrictions during construction as well as the long-term access route modifications required to comply with access control restrictions along the highway. Some existing downtown businesses may relocate along the US 30 Missouri Valley Bypass and new businesses may also develop along the bypass. The extent of business relocation and development would depend on local economic conditions and individual business decisions. Construction of the proposed levee would allow development in the areas north and west of the proposed bypass and levee, which are currently restricted due to flooding potential.

If an agreement cannot be reached to include a levee as part of the project, Iowa DOT and FHWA would move forward with the roadway project designed to 50-year flood design criteria. The project footprint would be smaller without the levee, and the project would require less property acquisition and cause fewer direct economic impacts. However, flood events exceeding a 50-year flood could cause additional economic impacts unless a future 100-year levee project would be constructed.

3.6.3 Avoidance, Minimization, and Mitigation

Efforts would be made to minimize property acquisitions, business and residential relocations, and the resulting economic impact as the design is refined and finalized.

3.7 Acquisitions and Displacements/Relocations

Property acquisition, displacement, and relocation assessments include consideration of current property ownership and each alternative's impact on potential areas where additional ROW would be required. The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 USC 4601 et seq.), the Civil Rights Act of 1964 (42 USC 2000 et seq.), and Iowa Code Chapter 316, Relocation of Persons Displaced by Highways, comprise the regulatory framework pertaining to acquisitions, displacements, and relocations related to the project.

3.7.1 Existing Conditions

The Study Area encompasses 3,759 acres and 959 parcels of land. Approximately 3,113 acres (893 parcels) of that land is privately owned. The parcels consist of residential, commercial, industrial, row crop agriculture, and open space. The majority of the residential parcels are located north of US 30. Parcels south of US 30 are dominated by industrial and agricultural areas, but two small residential areas are located south of the UPRR tracks and rail yard. Other residential land in the Study Area's southern portion are associated with agricultural farmsteads.

3.7.2 Impacts

No-Build Alternative

The US 30 Missouri Valley Bypass would not be built under the No-Build Alternative. Impacts on existing land and parcels are not anticipated beyond those that could occur either due to other projects or destruction of properties or relocations due to future flooding events.

Build Alternative

The Build Alternative would require the acquisition of approximately 256.89 acres of agricultural lands. Three businesses would be impacted by the Build Alternative. They are the Taylor Quik Pik gas station, the McDonald's restaurant, and the Horizon Equipment business located along US 30 near its intersection with South Willow Street / Willow Road. The businesses themselves would be avoided, but there may be changes to their access and parking lots. A total of 19 commercial properties (10.80 acres) would be affected by partial acquisition under the Build Alternative. A portion of the properties would be converted to highway roadbed, access roads, or ROW along the US 30 Missouri Valley Bypass.

A total of 10 residential-zoned properties (11.53 acres) would be affected by the Build Alternative. A portion of these properties would be converted to highway roadbed, access roads, or ROW along the US 30 Missouri Valley Bypass. Three residences located south of Canal Street would be displaced by the Build Alternative (see Figure 3-2). One is located east of the intersection of Canal Street and Willow Road, while the other two homes are located west of the intersection with Loess Hills Trail Road. One residential home displacement is located on residential-zoned property and is one of the 10 residential-zoned properties affected. The other two residential home displacements are located on agricultural-zoned properties and are in addition to the 10 residential-zoned properties affected. The relocations would occur within Census Tract 2905, Block Group 1, which is not a defined environmental justice low-income or minority population.

The Build Alternative would result in changing access to several parcels, but none would permanently lose access.

The three potentially affected residences are currently assessed at approximately \$400,000 total. Some of the residences acquired for ROW could potentially be relocated on the same parcel of land or onto another parcel in the general vicinity of the acquisitions. Special assistance in finding suitable and/or ADA-accessible housing would be provided to any person with special disability needs or special low-income needs. ROW acquisition and relocations would be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 USC 4601 et seq.).

If an agreement cannot be reached to include a levee as part of the project, Iowa DOT and FHWA would move forward with the roadway project designed to 50-year flood design criteria. The project footprint would be smaller without the levee, and the project would impact less land. It is likely that the three residential relocations would still be required. However, flood events exceeding a 50-year flood could cause additional land impacts unless a future 100-year levee project would be constructed.

3.7.3 Avoidance, Minimization, and Mitigation

Actual impacts on residences and businesses would be determined during final design.

3.8 Construction and Emergency Routes

Emergency services locations and routes taken by emergency responders are identified for evaluation regarding how they could potentially be affected during and after construction. Detours are evaluated if they are identified.

3.8.1 Existing Conditions

Emergency services within the Study Area are provided by the City and are located along US 30 (see Figure 3-2). Missouri Valley Fire and Rescue is located at 223 East Erie Street and the Missouri Valley Police Department is located at 120 East Erie Street. The route used by these entities varies based on the location of an incident. The nearest hospital (CHI Health Missouri Valley) is located approximately 0.5 mile north of US 30 on North 8th Street and would be the destination for local medical emergencies. If a medical emergency is larger than could be handled locally, the emergency route would be US 30 to I-29 and then to either the city of Council Bluffs for a Level III trauma center or the city of Omaha for Level I and II trauma centers.

3.8.2 Impacts

No-Build Alternative

The US 30 Missouri Valley Bypass would not be built under the No-Build Alternative. Impacts on existing emergency routes are not anticipated beyond those that could occur due to other projects. Traffic volumes, especially truck traffic, are projected to continue to increase. Commute times from areas north of US 30 to areas south of US 30 would continue to increase. Emergency response, including travel time from work areas south of US 30 to the community hospital (CHI Health Missouri Valley), would also increase.

Build Alternative

The Build Alternative would be constructed in an undeveloped and agricultural area and would require new accesses to existing north-south roadways. Build Alternative construction would be staged so that traffic and access to property would be maintained along the existing US 30. Loess Hills Trail Road and Harrison County Road F-66 (335th Street) access would be maintained during construction because these roadways provide the primary access to and from the city across the Boyer River. These roadways are required to stay open during construction because off-site detour routes are not available. On-site detours for Loess Hills Trail Road and Harrison County Road F-66 would be used to maintain traffic during construction. A detailed staging plan would be developed during final design.

Build Alternative construction would not likely disrupt emergency routes with the implementation of on-site detours for Loess Hills Trail Road and Harrison County Road F-66. When completed, the Build Alternative may have a beneficial impact on response times in the area due to the addition and location of the proposed roadways as well as reduced traffic congestion in the city, especially for the businesses located east of the interstate. Responders would be able to bypass the city for medical emergencies that originate east of city limits,

resulting in improved response time to and from I-29. In addition, all emergency services locations are outside the Build Alternative impact area.

If an agreement cannot be reached to include a levee as part of the project, Iowa DOT and FHWA would move forward with the roadway project designed to 50-year flood design criteria. Impacts on construction and emergency routes would be similar to impacts under the roadway with a levee. However, flood events exceeding a 50-year flood could cause additional emergency services impacts unless a future 100-year levee project would be constructed.

3.8.3 Avoidance, Minimization, and Mitigation

Iowa DOT would communicate the emergency vehicle construction access to the fire and police departments prior to the start of construction. Iowa DOT would develop a staging plan to maintain traffic on Loess Hills Trail Road and Harrison County Road F-66 (335th Street) during construction.

3.9 Transportation

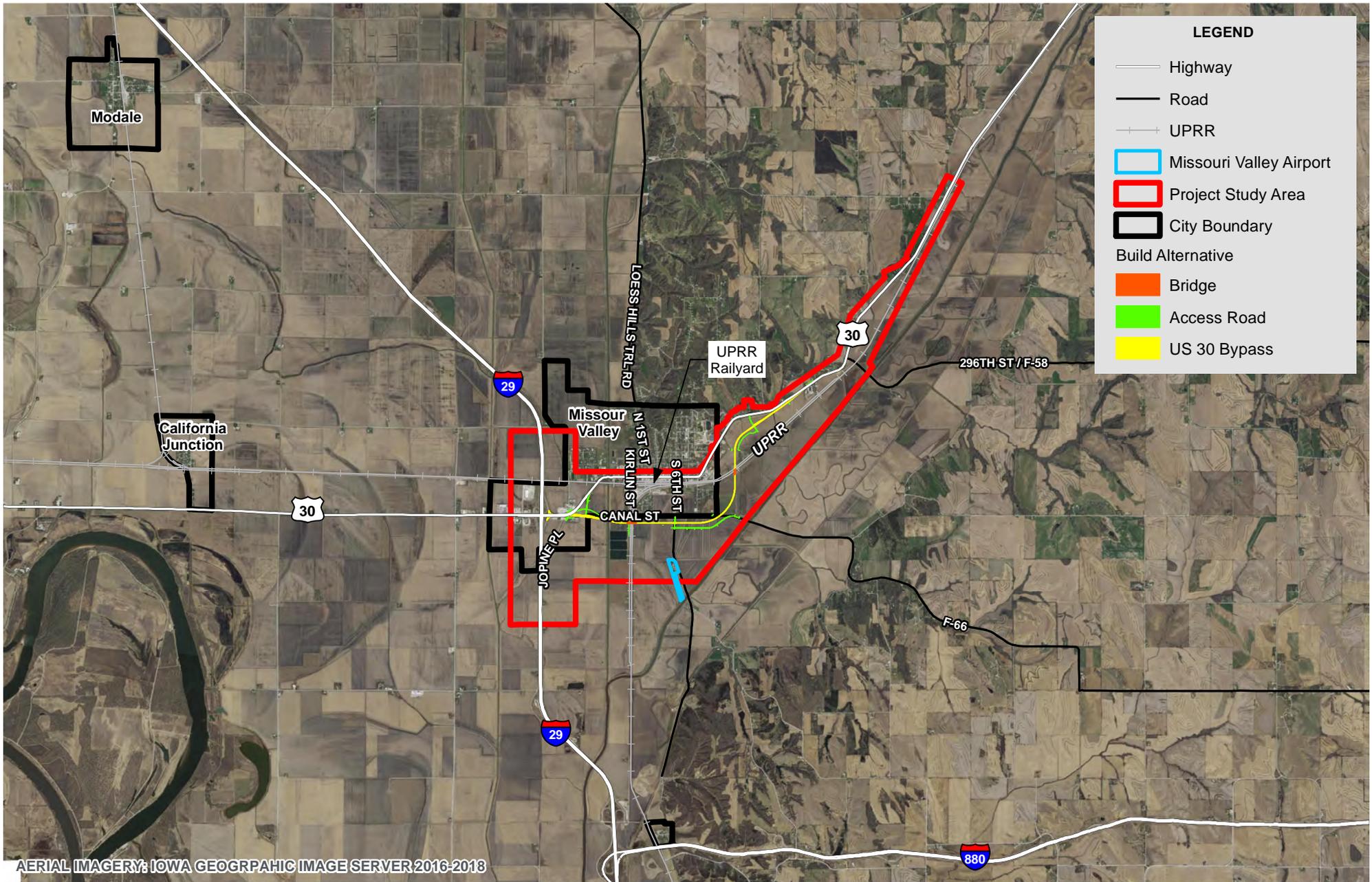
The transportation analysis includes a description of the existing transportation systems in the Study Area and considerations of how changes to US 30 would affect the regional transportation network. The analysis includes considerations for the health and safety of residents and communities, the level of protection that would be provided in relation to construction activities, and long-term operations associated with the alternatives.

3.9.1 Existing Conditions

The existing transportation network within the Study Area is shown in Figure 3-3 and consists of freight rail service, air service, and interstate, highway, and county road networks. No passenger rail or public bus systems were identified within the Study Area.

There is a UPRR rail yard and a double-track rail line through the Study Area. The rail line enters the Study Area on the west side, just north of the I-29/US 30 interchange. From there, the rail line enters Missouri Valley and splits into three sections. The first section consists of seven side tracks for car swapping within the UPRR rail yard. The second section turns south and parallels Kirlin Street out of the Study Area. The third section continues eastbound and turns northeast just outside of Missouri Valley. The line then parallels US 30 northeast out of the Study Area.

One airport, Missouri Valley Airport, is located within the Study Area. The airport is approximately 0.60 mile south of US 30 on Loess Hills Trail Road and is owned by the City. According to the Iowa DOT Office of Aviation and the Federal Aviation Administration (FAA), the airport is a privately owned airport that is not open for public use (Iowa DOT n.d.; FAA 2019).



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**TRANSPORTATION NETWORK
HARRISON COUNTY, IOWA**

FIGURE 3-3

Five main roadways are within the Study Area: one interstate (I-29), one highway (US 30), and three county roads (Canal Street [Harrison County Road F-66], Loess Hills Trail Road, and 296th Street [Harrison County Road F-58]). I-29 is located on the west side of the Study Area and is a major south-north roadway in the region. It begins in Kansas City, Missouri, and continues north to the Canadian border. US 30 traverses the Study Area from west to east and is a major west-east roadway in the region. Canal Street (Harrison County Road F-66) is located on the south side of the Study Area. It enters the Study Area east of I-29 as Jopine Place before extending northeast and becoming Canal Street (Harrison County Road F-66). The roadway then proceeds east and exits the Study Area at the Boyer River. Loess Hills Trail Road enters the Study Area from the south and extends north, becoming South 6th Street. From there, the roadway proceeds to US 30, where it turns west and follows US 30 to North 1st Street. It turns north on North 1st Street and continues north, exiting the Study Area. 296th Street (Harrison County Road F-58) is located in the northeast portion of the Study Area; the roadway begins at US 30 and extends southeast out of the Study Area.

Overall, US 30 is efficient at moving traffic in an east-west direction, but north-south roads connecting to US 30 operate poorly due to heavy volume on US 30. See Section 1.3.1 for a discussion of the existing and projected traffic volume in Missouri Valley and the effectiveness of US 30 and local streets in carrying this traffic.

As noted in Section 1.3.2, US 30, including the segment through Missouri Valley, has been designated as part of the 2,331-mile-long Commercial and Industrial Network (CIN) in Iowa. US 30 in Missouri Valley does not currently provide efficient commercial and industrial connectivity due to a low speed limit, several traffic signals, and high truck traffic volumes. The segment of US 30 traversing Missouri Valley has been programmed for a bypass as part of CIN (Iowa DOT 1991, 2018a).

Safety-related conditions within the Study Area coincide with the relationship between the roadway transportation network in the area, pedestrian traffic, and potential pedestrian-vehicular conflict. US 30 runs west to east through Missouri Valley and serves as an important travel corridor for vehicle and truck traffic in the area. US 30 traffic through Missouri Valley includes approximately 3,300 to 5,700 vehicles per day. Vehicle and pedestrian traffic are forced to negotiate busy roadways and intersections in the city, where motorized vehicles are given precedence. Currently, 15 intersections along US 30 are within the city, with only three having pedestrian-accommodating traffic signals. These intersections serve as enhanced conflict points for pedestrian-vehicle collisions and motor vehicle accidents.

Section 1.3.3 addresses traffic safety along US 30 and identifies the US 30 and Willow Road intersection as a Tier 1 intersection, indicating a higher than predicted number of crashes. All of the Tier 2 intersections also have a higher than predicted number of crashes, but may not meet the threshold of qualifying for safety funding. The roadway segments from 0.3 mile east of Willow Road to Linn Street are within the top 10 percent PCR for comparable roadway segments across the state of Iowa, also indicating a higher than predicted number of crashes.

The total number of trains per day at crossings in and near Missouri Valley ranges from 32 at South 6th Street, South 9th Street, and County Road F-58, to 60 at 290th Street. There was one reported train-motor vehicle collision reported in or near Missouri Valley from 2015 through 2019. The collision occurred at the UPRR crossing at North Willow Road. The probability of a train-motor vehicle collision ranges from 0.008 at 290th Street to 0.071 at North Willow Road

(Federal Railroad Administration 2020). A US 30 bridge provides grade separation for the only UPRR-US 30 crossing in Missouri Valley.

Because the Missouri Valley Airport is for private use, current air traffic statistics are no longer maintained by FAA. The last available statistics, the 12-month-period ending January 25, 1993, noted an average of 28 flights per day, with no commercial service (AirNav 2021). The airport manager was contacted and indicated that compiled data on the number of flights per day is not available, but typically ranges from approximately 10 to 50 flights per month. The northwest-southeast trending runway supports takeoffs and landings in either direction depending on route and wind conditions. Aircraft generally bank to the left if taking off northwest to avoid the Loess Hills north of the airport (City of Missouri Valley 2021b).

3.9.2 Impacts

No-Build Alternative

The US 30 Missouri Valley Bypass would not be built under the No-Build Alternative. Impacts on the transportation network are not anticipated beyond those that could occur due to other projects. US 30 would remain a two-lane facility with parking on both sides of the street throughout the city. Under the 2040 No-Build scenario, ADT is projected to increase to between 8,200 to 13,700 vehicles per day, including approximately 1,400 to 1,500 trucks. Traffic under the No-Build Alternative would continue to increase along US 30, and delays would increase as additional vehicles interact with the signals and turning traffic in town. Vehicle and pedestrian safety concerns would remain as drivers attempt to negotiate on-street parking under congested traffic. Increased traffic through the city would enhance the risk of pedestrian-vehicle collisions, as well as motor vehicle accidents, at the 15 intersection conflict points. The increase in traffic would also decrease the frequency and duration of suitable gaps that would allow pedestrians to cross at unsignalized intersections. The No-Build Alternative would not affect the probability of train/motor vehicle collisions in Missouri Valley or current aircraft operations.

The existing flooding potential would continue to be a risk to the transportation network. Vehicle and train traffic would be adversely affected during flood conditions.

Build Alternative

Shifting traffic to the new US 30 Missouri Valley Bypass would extend the portion of US 30 with free-flowing traffic, limiting the impacts of bottlenecks and fluctuating travel speeds through downtown.

The new US 30 Missouri Valley Bypass would improve freight travel time reliability by attracting the majority of the truck traffic, and reducing traffic on the existing US 30. The bypass would provide an efficient CIN segment. The US 30 Missouri Valley Bypass would improve travel time reliability for drivers that are not destined for Missouri Valley by allowing them to avoid downtown Missouri Valley. Based on traffic modeling results, traffic traveling along the bypass in 2040 at the posted speed would require 4 minutes, 55 seconds of travel time, and traffic traveling along the current US 30 route through downtown Missouri Valley would require 6 minutes, 38 seconds. For comparison purposes, current traffic along the US 30 route has an average travel time of 7 minutes, 4 seconds.

The proposed bypass would also help increase the reliability of the corridor through Missouri Valley by lowering the volume of traffic along the existing US 30, particularly truck traffic, and thereby reducing the potential for crashes. The bypass would also reduce intersection-related crashes along this corridor and would alleviate travel time reliability issues. The proposed bypass would provide another route for vehicles if there are delays, closures, or construction on the existing US 30.

Both of the UPRR crossings with the new US 30 Missouri Valley Bypass would be grade-separated. Because no new at-grade intersections would be added, the probability of a train-motor vehicle collision would remain the same as under existing conditions.

Access to the airport would continue to be provided throughout construction of the Build Alternative by Loess Hills Trail. The Build Alternative would not affect access to the Missouri Valley Airport, or airport operations. The runway trends northwest-southeast, but the northwest operations toward the proposed bypass are already affected by east-west trending electric power lines and a substation north of Canal Road, as well as the Loess Hills located further north. The bypass with lighting in select locations would have a similar height to existing power lines, would be lower than existing transmission lines, and would not affect flight operations. Because the airport is neither a public use airport nor a privately owned airport open for public use, filing with FAA for the project is not required.

With the construction of the proposed US 30 Missouri Valley Bypass, 5,800 vehicles per day would be diverted from the business district, including more than 900 trucks, as shown in Table 3-7. Delays for bypass traffic on US 30 would decrease due to traffic avoiding all of the signals and turning traffic at all other intersections through Missouri Valley. This is especially true for truck traffic with slower acceleration rates. Traffic operations would also improve for Missouri Valley traffic, which would no longer have to compete with the bypass traffic.

Table 3-7: US 30 Existing and Future Traffic Conditions

	Average Daily Traffic	Truck Traffic		
		Daily	AM Peak	PM Peak
2016	6,600–11,600	900–1,300	100–130	40–70
No-Build Alternative (2040)	8,200–13,700	1,400–1,500	140–150	60–80
Build Alternative – Existing US 30 (2040)	4,300–6,700	175–300	10–40	10–35
Build Alternative – US 30 Bypass (2040)	5,800	900	100	45

Note: The range in values for the first three rows of data account for multiple access points along roadways, giving a low to high value. No range is provided for the proposed bypass because the bypass would have minimal access points and none that would draw much traffic.

If an agreement cannot be reached to include a levee as part of the project, Iowa DOT and FHWA would move forward with the roadway project designed to 50-year flood design criteria. Impacts on transportation networks would be similar to impacts under the roadway with a levee. However, flood events exceeding a 50-year flood could cause additional transportation impacts unless a future 100-year levee project would be constructed.

3.9.3 Avoidance, Minimization, and Mitigation

No avoidance, minimization, or mitigation needs have been identified for transportation resources.

3.10 Cultural Resources

The evaluation of cultural resources includes both archeological resources (primarily subsurface) and historic architectural resources (primarily aboveground structures). The consideration of impacts on cultural resources is subject to several federal laws, regulations, and guidelines. Principal among these are NEPA and Section 106 of the National Historic Preservation Act (Section 106). Section 106 is implemented through adherence to the regulations codified in 36 Code of Federal Regulations (CFR) 800, issued by the Advisory Council on Historic Preservation. FHWA, as lead federal agency, is responsible for compliance with both NEPA and Section 106. NEPA and the National Historic Preservation Act encourage federal agencies to coordinate their efforts for compliance with both statutes.

Under Section 106, states are required to coordinate with Indian tribes if a project could affect lands with cultural or religious significance. Consultation with the tribes was initiated in March 2018 and is summarized in Chapter 5.

3.10.1 Existing Conditions

The Study Area was reviewed for potential cultural resources through a data review from past surveys, a Phase I archeological survey and geomorphological investigation, and a historic architectural survey.

A Phase I Archeological Survey of the Study Area was conducted in October 2019 (Bear Creek Archeology, Inc. 2019). Approximately 52 percent of the Study Area had been previously surveyed, and five twentieth-century archeological sites were identified. None of the identified sites were determined to be eligible for listing in the National Register of Historic Places (NRHP).

A geomorphological investigation of the Study Area was conducted as part of the Phase I Archeological Survey. Soil cores were collected and analyzed for the potential for buried cultural resources. The majority of the floodplains west and south of the city were interpreted to have a generally low potential, but landforms along the valley wall along the existing US 30 east of the city indicated a moderate to high potential for archeological resources. A surface examination and subsurface testing of the locations with a moderate to high potential did not identify any new archeological sites. No archeological sites in the Study Area are listed in, or recommended for listing in, the NRHP. No additional archeological investigations of the Study Area are recommended (Bear Creek Archeology, Inc. 2019).

An intensive level architectural resource survey was conducted between May 2018 and August 2019 (Bear Creek Archeology, Inc. 2020). A total of 354 historic resources were evaluated for their potential NRHP eligibility. Three previously inventoried properties, all extant, were recommended as eligible for listing in the NRHP:

- 102 South 7th Street (house; 43-00153/43-00180/43-00429)
- Shawmutt / city park (miniature steam train; 43-00437)
- 405 East Erie Street (theater; 43-00441)

A visual inspection of the house and theater were made, and they were found to be in good condition. Access to the miniature train was not available during the field survey because it was stored in a building in a city park.

Two previously inventoried properties with undetermined NRHP eligibility were reexamined and recommended eligible:

- 122 North 7th Street (house; 43-00155)
- 806 East Erie Street (house; 43-00176)

Four properties inventoried during the current survey are recommended as eligible for listing in the NRHP:

- 216 West Erie Street (house; 43-00847)
- 223 East Erie Street (government building; 43-00920)
- 123 North 6th Street (church; 43-00970)
- 122 North 8th Street (house; 43-01028)

The remaining architectural properties evaluated are recommended as not eligible for nomination to the NRHP.

3.10.2 Impacts

No-Build Alternative

The US 30 Missouri Valley Bypass would not be built under the No-Build Alternative. Impacts on existing cultural resources are not anticipated beyond those that could occur due to other projects.

Five NRHP-eligible properties—102 South 7th Street (house), 405 East Erie Street (theater), 806 East Erie Street (house), 216 West Erie Street (house), and 223 East Erie Street (government building)—are located along the existing US 30. Traffic and noise along US 30 would continue to increase. As development momentum continues, it is possible that impacts on architectural properties of historical significance could occur along US 30.

Build Alternative

None of the nine NRHP-eligible properties are located within the Build Alternative impact area.

Iowa DOT prepared an effect determination indicating No Historic Properties Affected on October 30, 2020. The effect determination requested that the Iowa State Historic Preservation Office (Iowa SHPO) concur with the finding, and Iowa SHPO responded with concurrence on December 3, 2020 (Appendix C).

If an agreement cannot be reached to include a levee as part of the project, Iowa DOT and FHWA would move forward with the roadway project designed to 50-year flood design criteria. Impacts on cultural resources would be the same as impacts under the roadway with a levee; the effect determination of No Historic Properties Affected would still apply to the project.

3.10.3 Avoidance, Minimization, and Mitigation

If unanticipated discoveries are found during construction, Iowa DOT would notify Iowa SHPO and the Indian tribes for review and next steps.

3.11 Cemeteries

Cemetery evaluations consider potential impacts on community visitations and ceremonies at cemeteries in the Study Area.

3.11.1 Existing Conditions

One cemetery, Hurley Evergreen Cemetery, is within the Study Area (see Figure 3-2). Hurley Evergreen Cemetery is privately owned and is located between US 30 and Melrose Lane, with access from US 30.

3.11.2 Impacts

No-Build Alternative

The US 30 Missouri Valley Bypass would not be built under the No-Build Alternative. Impacts on the Hurley Evergreen Cemetery are not anticipated beyond those that could occur due to other projects.

Build Alternative

Under the Build Alternative, the Hurley Evergreen Cemetery property would be impacted. Impacts include a new entrance on the west side of the property that would also serve as a maintenance turnaround for City and County maintenance vehicles. The existing access from the existing US 30 would remain. The existing US 30 access would be turned over to the cemetery and serve as an access to the new and existing entrances. The Build Alternative would acquire approximately 0.71 acre of temporary easement to construct the access drive with a long-term access agreement. Construction of the new drive would not impact any existing burials.

3.11.3 Avoidance, Minimization, and Mitigation

Access to the Hurley Evergreen Cemetery would be maintained throughout construction. Actual impacts on or avoidance of the cemetery would be determined during final design.

3.12 Wetlands and Waters of the US

Waters of the US, including wetlands, streams, rivers and other drainages, lakes, natural ponds, and impoundments, are regulated by USACE under Section 404 of the Clean Water Act.

Section 404 requires a permit from USACE before dredged or fill material may be discharged into waters of the US (33 USC 1344). Executive Order 11990, Protection of Wetlands, requires federal agencies (including FHWA) to implement “no net loss” measures for wetlands (42 Federal Register 26951). These no net loss measures include a sequenced approach to wetland impact avoidance, impact minimization if wetlands cannot be avoided, and mitigation for unavoidable impacts.

3.12.1 Existing Conditions

Field investigations were performed in September, October, and November 2018 to identify any waters of the US, including wetlands, located within the Study Area. Wetland delineations were performed using methods outlined in the 1987 *Corps of Engineers Wetlands Delineation Manual* and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest*

Region (Environmental Laboratory 1987, 2010). Determinations for wetlands occurring in agricultural fields were made using the Food Security Act methodology for off-site determination for agricultural lands, which provided for the review of 5 years of aerial photography. Jurisdictional stream determinations were made based on guidance received from USACE, and in accordance with USACE *Regulatory Guidance Letter 05-05* (2005).

The wetland investigations identified a total of 317.17 acres of wetlands and 13 streams, totaling approximately 61,514 linear feet, within the Study Area. Broken down by type, the wetlands include 315.22 acres of emergent wetland, 1.68 acres of forested wetland, 0.12 acre of scrub-shrub wetland, and 0.15 acre of excavated pond (see Table 3-8). Of the 315.22 acres of emergent wetland that were identified, approximately 288.92 acres are wetlands located within farm fields that were identified using the Food Security Act methodology and 26.29 acres are emergent wetlands possessing natural vegetation that were identified using the USACE 1987 manual and 2010 regional supplement. Of the 61,514 linear feet of streams identified within the Study Area, approximately 6,613 linear feet consist of the Willow Creek channel, and the remaining 59,901 linear feet are small, unnamed streams or drainage ditches. The wetlands and streams identified within the Study Area are shown in Figure 3-4.

Table 3-8: Identified Wetlands

Wetland Type	Area (acre)
Emergent	315.22
Forested	1.68
Scrub-shrub	0.12
Excavated pond	0.15
Total (acre)	317.17

3.12.2 Impacts

No-Build Alternative

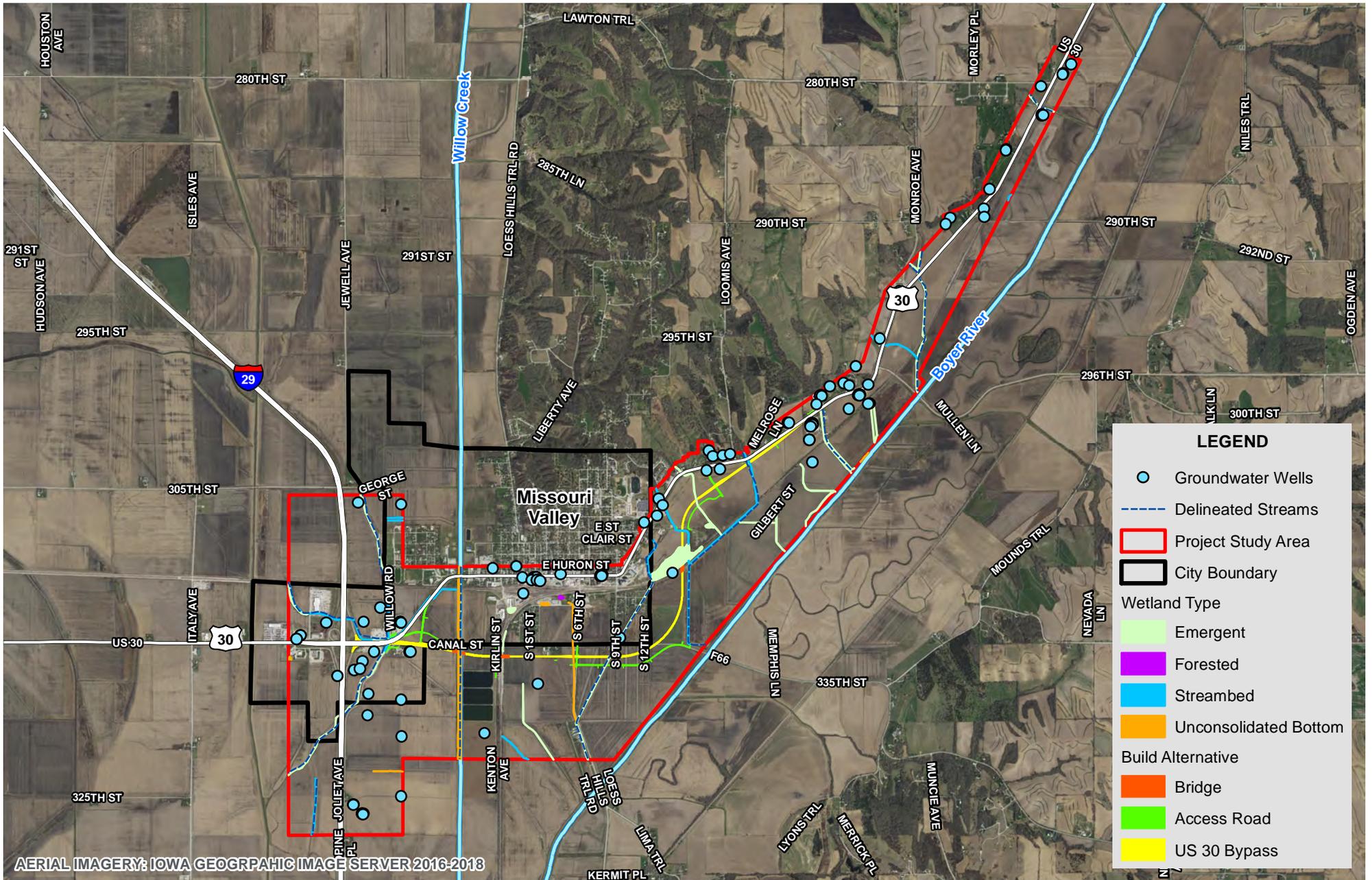
The No-Build Alternative would not expand the bypass or expand the highway within the Study Area. No construction activities would occur, and no new ROW would be needed. Therefore, the No-Build Alternative would not impact any adjacent wetlands or streams.

Build Alternative

A total of 15.47 acres of wetlands and seven streams totaling 7,627 linear feet would be impacted by the Build Alternative. Impacted wetlands would include emergent wetland, scrub-shrub wetland, and excavated pond while forested wetlands would be avoided (see Table 3-9). Willow Creek and other small, unnamed streams or drainage ditches would be impacted.

Table 3-9: Impacted Wetlands

Wetland Type	Area (acre)
Emergent	15.20
Forested	0.00
Scrub-shrub	0.12
Excavated pond	0.15
Total (acre)	15.47



AERIAL IMAGERY: IOWA GEOGRAPHIC IMAGE SERVER 2016-2018



**WATER RESOURCES
HARRISON COUNTY, IOWA**

FIGURE 3-4

If an agreement cannot be reached to include a levee as part of the project, Iowa DOT and FHWA would move forward with the roadway project designed to 50-year flood design criteria. Impacts on waters of the US could potentially be less than impacts under the roadway with a levee. However, flood events exceeding a 50-year flood could cause additional waters of the US impacts unless a future 100-year levee project would be constructed.

3.12.3 Avoidance, Minimization, and Mitigation

The Build Alternative was evaluated using the project impact area with the understanding that adjustments can be made later in the design process to minimize wetland and stream impacts. Consequently, the actual impacts on waters of the US, including wetlands, are expected to be less than what is described herein. During final design, potential minimization of wetland and stream impacts under the Build Alternative would be evaluated and the design would be altered to minimize impacts where practical.

For unavoidable impacts on waters of the US, including wetlands, an Individual Section 404 Permit would be obtained from USACE prior to construction, in compliance with the Clean Water Act. Unavoidable impacts on waters of the US would be mitigated in accordance with state and federal regulations at the Pony Creek Mitigation Bank, located in Pottawattamie County.

3.13 Water Quality

Water quality refers to the potential effects of sediment erosion and chemical pollution on surface water resources (such as streams, lakes, ponds, and wetlands) and groundwater resources (such as aquifers and springs). The water quality analysis includes a description of the existing conditions in the Study Area and considerations of how changes to US 30 would affect water quality.

3.13.1 Existing Conditions

Two major waterways are within and adjacent to the Study Area. The first is Willow Creek, which is located perpendicular to US 30 approximately 0.75 mile east of I-29 (see Figure 3-4). The second is the Boyer River, located adjacent to the southeast side of the Study Area. Both waterways are heavily channelized with little to no meander within the Study Area.

Willow Creek is not listed as impaired. However, the Boyer River is listed as a category 5 impaired waterway for high levels of *E. coli* affecting the waterway's recreation abilities (Iowa DNR 2016). As of December 2019, sources of contamination had not been identified, and a water quality improvement plan has not been developed for the Boyer River.

Iowa DNR has records of 175 wells within the Study Area. The approximate locations of these wells are shown in Figure 3-4. Two City-owned water treatment facilities are within the Study Area (Schneider Geospatial 2019; City of Missouri Valley 2019c; USEPA 2019a). The first facility is a water treatment facility located along Kirlin Street approximately 0.60 mile south of US 30. The facility has three sewage treatment lagoons. The second water treatment facility is located north of Huron Street adjacent to Willow Creek. The facility consists of a water treatment building and one storage lagoon.

3.13.2 Impacts

No-Build Alternative

The US 30 Missouri Valley Bypass would not be built under the No-Build Alternative. Impacts on water quality are not anticipated beyond those that could occur due to other projects. Missouri Valley would remain vulnerable to flooding events and subsequent water quality impacts from the adjacent Boyer River and nearby Missouri River.

Build Alternative

The Build Alternative would permanently impact approximately 7,627 linear feet of streams, including portions of Willow Creek, but would have no direct impact on the two City water treatment facilities or their lagoons. A single domestic or household private well is in the Build Alternative impact area.

The Build Alternative would require a State 401 Water Quality Certification issued by Iowa DNR pursuant to Section 401 of the Clean Water Act. State Certification is required by USACE before a Section 404 permit can be issued. Section 401 Certification represents the Iowa DNR's concurrence that the project certified is consistent with the Water Quality Standards of the state of Iowa as set forth in Chapter 61, Iowa Administrative Code 567.

The Build Alternative would require a National Pollutant Discharge Elimination System (NPDES) Construction General Permit because more than 1 acre would be graded.

The Build Alternative would alleviate the potential for flooding in Missouri Valley and the surrounding rural landscape. Fewer flooding events and a decrease in flooding event intensity would have a positive effect on the water quality of the surface waters in the Study Area.

If an agreement cannot be reached to include a levee as part of the project, Iowa DOT and FHWA would move forward with the roadway project designed to 50-year flood design criteria. Impacts on water quality could potentially be less than impacts under the roadway with a levee. However, flood events exceeding a 50-year flood could cause additional water quality impacts unless a future 100-year levee project would be constructed.

3.13.3 Avoidance, Minimization, and Mitigation

Iowa DOT would avoid or minimize impacts on streams, where possible, as the Build Alternative design is advanced. Iowa DOT would implement best management practices to avoid erosion, sedimentation and runoff into the waterways, and adhere to the requirements of a Storm Water Pollution Prevention Plan associated with the NPDES Construction General Permit.

Impacts on or avoidance of the domestic or household private well would be determined during final design.

3.14 Floodplains

Floodplains are areas with a 1 percent annual chance of flooding (100-year floodplain) as defined by the Federal Emergency Management Agency (FEMA) in accordance with 44 CFR 49.1. The floodplains analysis includes a description of the existing conditions in the Study Area and considerations of how changes to US 30 would affect floodplains.

3.14.1 Existing Conditions

Approximately 3,759.97 acres of the Study Area are located within the Zone A floodplains for Willow Creek and the Boyer River, as shown in Figure 3-5. The Willow Creek floodplain, which flows north to south through the Study Area, is generally bounded on the west by I-29 and Jopine Place and on the east by Loess Hills Trail Road / North 1st Street. The Boyer River floodplain is generally centered 0.5 mile to 1 mile off of the river. Both floodplains converge in Missouri Valley just north of the UPRR tracks.

Missouri Valley is located north of the confluence of Willow Creek and the Boyer River. Both waterways have been channelized, and spoil bank levees have been constructed to reduce damage to adjacent agricultural land and the city during frequent flooding events. The spoil bank levees are not built to current levee standards and have the capacity to only protect the city from floods that have a 10 percent chance of occurring annually. None of the levees are USACE-sponsored levees, and none are accredited by FEMA.

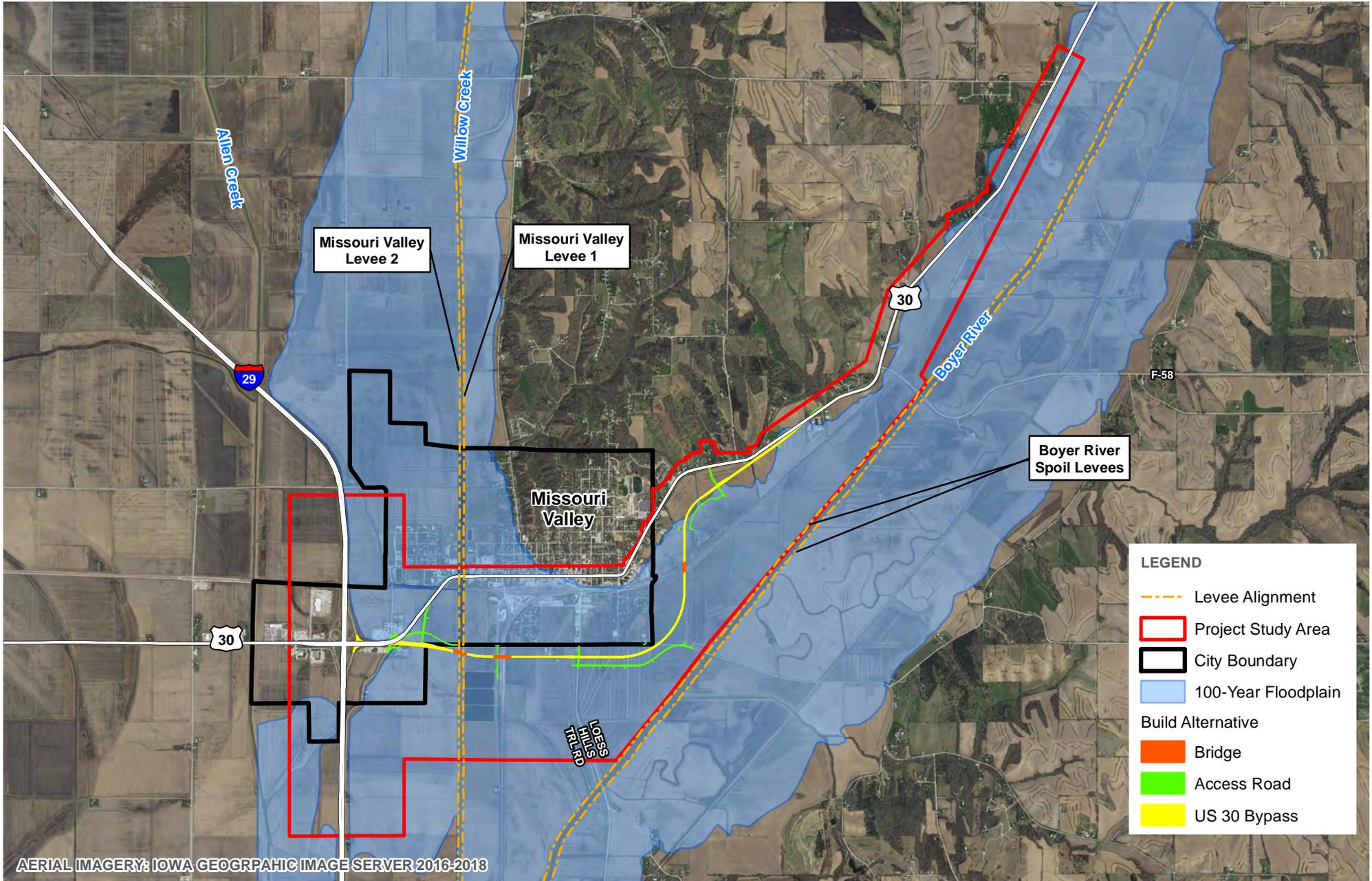
According to the National Levee Database, the two levees along Willow Creek are named. Missouri Valley Levee 1 and Missouri Valley Levee 2 parallel Willow Creek for the entirety of the Study Area (see Figure 3-5; USACE 2019). Missouri Valley Levee 1 is located on the east bank of Willow Creek and protects the majority of the city of Missouri Valley between Willow Creek and the Boyer River. Missouri Valley Levee 2 is located on the west bank of Willow Creek and protects the city of Missouri Valley between Willow Creek and Allen Creek. Allen Creek is located approximately 0.56 mile west of I-29. The spoil levees along the Boyer River are unnamed and do not have protection areas listed within the National Levee Database (USACE 2019).

The levee system currently keeps 2-year and 5-year return period floods in the channel, but 10-year return period floods have occurred multiple times. There have been five floods at the Boyer River gage in Logan, Iowa, located northeast of Missouri Valley, in the last 24 years, several of which have included spoil bank levee failures. According to USACE, spoil bank levees along Willow Creek failed upstream of Missouri Valley in May 2007 and resulted in homes and business flooding, which contributed to an estimated \$3 million in damages (USACE 2015). During a September 2014 high flow event, a spoil bank levee along the Boyer River breached approximately 2 miles east of the city near US 30. Roughly 70 people along a four-block stretch of the city were forced to evacuate. The current condition of the existing levees does not protect the city and surrounding area from flooding events.

3.14.2 Impacts

No-Build Alternative

The US 30 Missouri Valley Bypass would not be built under the No-Build Alternative. Impacts on floodplains are not anticipated beyond those that could occur due to other projects. Frequent flooding events and corresponding levee breaches are expected to continue to threaten portions of the city along, and south of, US 30.



AERIAL IMAGERY: IOWA GEOGRAPHIC IMAGE SERVER 2016-2018



**100-YEAR FLOODPLAIN
HARRISON COUNTY, IOWA**

FIGURE 3-5

Build Alternative

The combined roadway/levee design under the Build Alternative offers flood protection for the city of Missouri Valley by raising the road grade. The levee would establish flood protection over a large area. Levees would reduce year flood types, probability of flooding events, and duration of flooding in both hours and days through downtown Missouri Valley. The combined design also creates an opportunity for longer bridges, which would allow more flood water conveyance. This would greatly improve the economic impact on the regional transportation system and help avoid costly social and economic impacts on the residents and businesses in Missouri Valley during flood events.

Approximately 365.21 acres of the Build Alternative impact area are located within the Zone A floodplains for Willow Creek and the Boyer River.

Iowa DOT coordinated flood mitigation efforts with USACE and has incorporated a levee section within the proposed embankment of the Build Alternative. The proposed federal levee would tie into the leveed section of the proposed US 30 embankment near the intersection of Canal Street and Kirlin Street on the south side of the city.

Iowa DOT is coordinating with FEMA to determine if a Conditional Letter of Map Revision or a Letter of Map Revision would be required as a result of the project. Section 408 permission from USACE does not apply to the initial construction of the Build Alternative. USACE, the City, Harrison County, and Iowa DOT are developing a Memorandum of Understanding for addressing roadway maintenance or improvements in the co-located levee/roadway section.

If an agreement cannot be reached to include a levee as part of the project, Iowa DOT and FHWA would move forward with the roadway project designed to 50-year flood design criteria. Impacts on floodplains could potentially be less than impacts under the roadway with a levee. However, flood events exceeding a 50-year flood could cause additional floodplain impacts unless a future 100-year levee project would be constructed.

3.14.3 Avoidance, Minimization, and Mitigation

Iowa DOT and Iowa DNR are participating in ongoing coordination on a hydrologic and hydraulic analysis approach for floodplain permitting. Iowa DOT would obtain a floodplain permit prior to Build Alternative construction.

3.15 Wildlife and Habitat

Wildlife and habitat refer to various types of natural terrestrial and aquatic habitats and the wildlife that use these habitats. Natural areas may be lands designated by Congress or by federal or state agencies as wildlife refuges, waterfowl production areas, nature preserves, and wildlife sanctuaries. On the state level, natural areas are public lands managed by Iowa DNR.

3.15.1 Existing Conditions

Intensive agriculture and development have fragmented and reduced the amount of woodland and prairie habitat available for wildlife and have decreased the quality of wildlife habitat that remains within and adjacent to the Study Area. The Study Area is composed of agricultural fields, with pockets of commercial and residential development along the south and southeast fringe of the city of Missouri Valley. Most treed habitat within or adjacent to the Study Area is

associated with farmsteads or residential development. One sizable, forested area is located west of US 30 and north of Walnut Road Drive. This and other forested areas provide suitable foraging habitat for an array of mammals, as well as nesting and roosting habitat for migratory birds. The Study Area is located in the north-south trending bird migration route through Iowa, known as the Mississippi Flyway, which is used yearly by land birds, shore birds, and waterfowl. The area also contains potentially suitable nesting habitat for raptors and bald eagle. A bald eagle nest has been identified along the east bank of the Boyer River, approximately 1.70 miles northeast of the northernmost point of the Study Area. The Study Area does not contain mesic prairies, wet prairies, or sedge meadows because of a sustained high level of disturbance from agricultural production.

The Study Area includes two perennial waterways: Willow Creek and the Boyer River. Willow Creek serves as a tributary to Boyer River, and the Boyer River converges with the Missouri River approximately 7 miles south of the Study Area. Both Willow Creek and the Boyer River are severely channelized and lack any natural meanders or variable habitat characteristics such as riffles or pools. Willow Creek and the Boyer River provide natural habitat for fish, mussels, small mammals, birds, and insects. Narrow bands of wetlands parallel the banks of both Willow Creek and the Boyer River but provide minimal wildlife habitat due to the channelized banks of the waterways.

The Loess Hills landform is north, south, and east of the Study Area. It is discussed in detail in Section 3.21, Visual. The Loess Hills of western Iowa exhibit a unique diversity and abundance of wildlife species. The Hills, once home to black bear, elk, buffalo, antelope, and wolves, now support populations of smaller animals (Iowa DNR 2021a). The wildlife that inhabit the Loess Hills would not use the Study Area due to the pronounced difference in habitat.

Although not an all-inclusive list, some of the most common wildlife species that can be seen inhabiting the Study Area and surrounding region generally include the following (Iowa Association of Naturalists 1998):

- Mammals – opossum, raccoon, cottontail rabbit, red fox, gray squirrel, and white-tailed deer
- Birds – cardinal, blue jay, purple martin, robin, wild turkey, ruffed grouse, quail, mallard duck, and Canada goose
- Insects – stag beetle, acorn weevil, Nebraska conehead grasshopper, deer fly, honeybee, yellow jacket (hornet), silver-spotted skipper, and green lacewing
- Reptiles – eastern garter snake, bull snake, and ornate box turtle
- Amphibians – spotted salamander and northern leopard frog
- Snails – garden snail
- Fish – green sunfish, smallmouth bass, channel catfish, and flathead catfish
- Mussels – giant floater mussel and common mucket

Iowa DNR has assembled a list of nature preserves and wildlife management areas throughout the state and none are within or adjacent to the Study Area (Iowa DNR 2018a, 2018b). One privately owned pheasant hunting area is located south of Canal Street and east of Loess Hills Trail Road/South 6th Street (Iowa DNR 2019a). Hunting in the area is permitted from September 1 through May 31. No designated state forests, past forest stands, or present forest stands are located within the Study Area.

3.15.2 Impacts

No-Build

The US 30 Missouri Valley Bypass would not be built under the No-Build Alternative. Impacts on wildlife and existing habitat are not anticipated beyond those that could occur due to other projects or from future flood events. Missouri Valley would remain vulnerable to flooding events and subsequent water quality impacts from the adjacent Boyer River and nearby Missouri River. Floods could cause wildlife to seek new habitat and species may or may not return after floodwaters recede. Floods may also cause the deaths of individuals or populations.

Wildlife species that may be present within and near the Study Area would continue to be exposed to vehicle traffic by varying degrees. Existing environmental conditions such as erosion and sedimentation and potential pollutant runoff and spills from adjacent agricultural, commercial, and residential operations would continue to affect any natural habitat and wildlife species that may be present within or adjacent to the Study Area.

Build Alternative

The Build Alternative would impact wetlands and waterways as described in Section 3.12. A total of 0.06 acre of woodlands are within the Build Alternative impact area. In accordance with Iowa DOT Policy 11A030, woodland impacts do not occur if the area of impact is less than 2 acres. Because most of the land impacts result in impacts on commercial properties, residential properties, and agriculture, the species that use these habitat types would be considered generalists. The wildlife species are mobile and would be able to find habitat elsewhere. Construction noise, vibration, and the addition of traffic would impact wildlife in the area.

The known bald eagle nest is more than 1.7 miles from the Build Alternative. The construction noise and future vehicle noise are not anticipated to disturb eagles using the nest. The privately owned pheasant hunting area located south of Canal Street and east of Loess Hills Trail Road / South 6th Street is within the impact area and is included as a residential impact in Section 3.2, Land Use.

Vegetation clearing would be kept to a minimum and provisions of the Migratory Bird Treaty Act (MBTA) would be adhered to as applicable. Tree clearing would not be conducted between April 1 and September 30 to minimize impacts on nesting migratory birds. If tree clearing is proposed to occur during the primary nesting season or at any other time that may result in the “take” of nesting migratory birds, a qualified biologist would need to conduct a preconstruction field survey of the affected habitats to determine the presence or absence of nesting migratory birds. If nesting migratory birds are present, no tree clearing would occur until the young birds have left the nest. If no nesting migratory birds are present, the proposed tree clearing may proceed as planned. In the event that pre-construction surveys have been conducted, no migratory bird nesting activities have been discovered, construction has begun, and an occupied nest of a species protected by MBTA is then observed, construction would be stopped and consultation with the US Fish and Wildlife Service (USFWS) would be initiated to ensure compliance with MBTA. Construction would not re-start until consultation has been completed and the possibility of impacting nesting migratory birds has passed.

If an agreement cannot be reached to include a levee as part of the project, Iowa DOT and FHWA would move forward with the roadway project designed to 50-year flood design criteria.

Impacts on wildlife and habitat would be less because less land would be disturbed. However, flood events exceeding a 50-year flood could cause additional wildlife and habitat impacts unless a future 100-year levee project would be constructed.

3.15.3 Avoidance, Minimization, and Mitigation

The Build Alternative avoids all impacts on prairies, nature preserves, and wildlife management areas. No special habitats are being impacted.

The Build Alternative was evaluated using the project impact area with the understanding that adjustments can be made later in the design process to minimize wetland and stream impacts. Consequently, the actual impacts on waters of the US, including wetlands, are expected to be less than what is described herein. Potential minimization of wetland and stream impacts under the Build Alternative would be evaluated during final design, and the design would be altered to minimize impacts where practical.

For unavoidable impacts on waters of the US, including wetlands, an Individual Section 404 Permit would be obtained from the USACE prior to construction, in compliance with the Clean Water Act. Unavoidable impacts on waters of the US. would be mitigated in accordance with state and federal regulations at the Pony Creek Mitigation Bank, located in Pottawattamie County.

Tree clearing would not be conducted between April 1 and September 30 to the extent practicable. Iowa DOT would survey farmstead buildings for active nesting if structures are removed between April 1 and September 30.

Iowa DOT would coordinate with Iowa DNR regarding the Loess Hills landform upon known final impacts.

3.16 Threatened and Endangered Species

Threatened and endangered species evaluations include consideration of species listed as threatened or endangered by USFWS and their designated critical habitats, as well as state-listed threatened and endangered species. The consideration of impacts on threatened and endangered species is subject to the federal Endangered Species Act (16 USC 1531 et seq.). Along with the Endangered Species Act, Iowa DNR and the Natural Resource Commission are responsible for administering Iowa's program to protect state-listed threatened and endangered species per Iowa Code Chapter 481B, Endangered Plants and Wildlife.

3.16.1 Existing Conditions

The data for federally listed and state-listed threatened and endangered species in Harrison County were reviewed, and each species was assessed individually to determine the potential presence or absence of suitable habitat within the Study Area.

The USFWS website provides information on federally listed threatened and endangered species and designated critical habitats. The list of USFWS federally listed threatened and endangered species for Harrison County is provided in Table 3-10.

Table 3-10: Federally Listed Threatened and Endangered Species in Harrison County, Iowa^a

Common Name	Scientific Name	Federal Status	Habitat Description
Northern long-eared bat	<i>Myotis septentrionalis</i>	Threatened	Hibernates in caves and mines (hibernacula); swarms in wooded areas surrounding hibernacula in autumn. Roosts and forages in upland forests and small stream corridors with well-developed riparian woods during late spring and summer.
Pallid sturgeon	<i>Scaphirhynchus albus</i>	Endangered	Uses large, turbid, free-flowing riverine habitat; occurs in strong currents over firm gravel or sandy substrate. Prefers main channel areas with braided channels, islands, or sandbars that create variable velocities and depths.
Prairie bush clover	<i>Lespedeza leptostachya</i>	Threatened	Grows in dry to mesic prairies with gravelly soil.
Western prairie fringed orchid	<i>Platanthera praeclara</i>	Threatened	Grows in wet prairies and sedge meadows.

Source: USFWS 2021.

^a The monarch butterfly (*Danaus plexippus*) is listed by USFWS as a candidate species. As a candidate for listing, the monarch is not afforded protection under the Endangered Species Act at this time.

While the Study Area is primarily agricultural land, wooded areas exist within and adjacent to the Study Area that contain suitable roosting habitat for northern long-eared bat (*Myotis septentrionalis*); therefore, suitable habitat for the species is present within the Study Area.

The pallid sturgeon prefers large, silty rivers with a diversity of depths and velocities formed by braided channels, sandbars, and gravel bars. The heavily channelized Willow Creek and Boyer River are devoid of any suitable habitat characteristics for the pallid sturgeon.

The prairie bush clover (*Lespedeza leptostachya*) prefers tallgrass prairie with well-drained soils. Prairie habitat is absent within the Study Area. The western prairie fringed orchid (*Platanthera praeclara*) occurs most often in mesic to wet unplowed tallgrass prairies and meadows. No suitable habitat is present because of the cultivated nature of the Study Area.

In addition to the federally listed species identified by USFWS, there are threatened, endangered, and species of special concern listed by the State of Iowa for Harrison County. The Iowa DNR website provides data relating to state-listed threatened and endangered species by county. The Iowa DNR list for Harrison County includes 16 plant species, 7 insect species, 4 bird species, 3 reptile species, 2 mammal species, and 1 fish species (Iowa DNR 2021b). However, the Study Area is largely devoid of any suitable habitat for most of the state-listed threatened and endangered species. The Study Area does provide potentially suitable habitat for the state-listed endangered barn owl (*Tyto alba*). Barn owls are a generalist habitat species that will use a variety of open habitats such as grasslands and agricultural fields (Iowa Audubon 2008) but require about 200 acres of quality grasslands (Iowa DNR 2021c). Historically, barn owls nested in tree cavities, specifically in silver maple, American sycamore, and white oak. Today, barn owls are often found roosting and nesting in old barns or abandoned buildings. Barn owls hunt in grassland habitats along field edges, fencerows, and wetland edges where their favored prey is most available (Iowa DNR 2021c).

There are no documented occurrences of federally or state-listed threatened or endangered species within 1 mile of the project Study Area (Iowa DOT 2018b). Coordination with Iowa

DNR in July 2018 confirmed the absence of any records of threatened or endangered species or significant natural communities within the Study Area (Iowa DNR 2018c).

3.16.2 Impacts

No-Build Alternative

The US 30 Missouri Valley Bypass would not be built under the No-Build Alternative. Impacts on existing threatened and endangered species are not anticipated beyond those that could occur due to other projects. The No-Build Alternative would have no direct impacts on the designated critical habitat of any federally or state-listed threatened or endangered species. There are no records of rare species or designated critical habitat areas for any species in or near the Study Area.

Build Alternative

The Build Alternative would impact approximately 0.06 acre of bat habitat that meets Iowa Code 314.23. Northern long-eared bats and their pups use trees during the maternal roosting period from June 1 to July 31, and barn owls use trees for roosting and nesting. The Build Alternative also would remove buildings associated with farmsteads that could be used for roosting and nesting by barn owls. Potentially suitable bat habitat may be impacted. Consultation with USFWS regarding a Not Likely to Adversely Affect determination on northern long-eared bat would occur. The project would not impact grasslands. The Build Alternative would have no effect on any other threatened or endangered species or their habitat.

If an agreement cannot be reached to include a levee as part of the project, Iowa DOT and FHWA would move forward with the roadway project designed to 50-year flood design criteria. Impacts on threatened and endangered species or their habitat would be the same as impacts under the roadway with a levee; the effect determinations of the roadway with a levee would still apply to the project. However, flood events exceeding a 50-year flood could potentially cause additional impacts on northern long-eared bat habitat.

3.16.3 Avoidance, Minimization, and Mitigation

Iowa DOT would not remove trees from June 1 to July 31 to avoid the northern long-eared bats maternal roosting period. As noted above in Section 3.15, Wildlife and Habitat, Iowa DOT would adhere to MBTA requirements for tree removal, structure removal, and nesting; these would protect barn owls.

3.17 Farmlands

The evaluation of farmlands includes consideration of prime farmland as designated by the US Department of Agriculture's Natural Resources Conservation Service (NRCS). Prime farmland is "land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses" (NRCS n.d.). The evaluation also gives consideration to farmland of statewide importance and farmland of local importance. These types of farmland do not meet the criteria to be prime farmland but have been designated as important by their respective state and local agencies. NRCS also offers easement programs and financial assistance to organizations and landowners who maintain or enhance their land in a way that is beneficial to agriculture and the environment.

3.17.1 Existing Conditions

A federal project, program, or other activity that requires conversion of farmland to nonagricultural uses must comply with the provisions of the Farmland Protection Policy Act (FPPA). The FPPA's purpose is to "minimize the extent to which Federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses; encourage alternative actions, if appropriate, that could lessen the adverse effects on farmland; and to assure that Federal programs are administered in a manner that, to the extent practicable, will be compatible with State, unit of local government, and private programs and policies to protect farmland" (7 USC 4201(b)). The FPPA governs impacts on farmland only. The FPPA defines farmland as prime farmland, unique farmland, or farmland that is of state or local importance. Land that is already in or committed to urban development or water storage does not qualify as farmland and is therefore not subject to the FPPA.

The Study Area is comprised of urban and rural areas. The areas where agriculture is prevalent are primarily on the south and east sides of the Study Area. A few smaller crop fields are also located west of I-29, north of US 30, and east of Missouri Valley. Approximately 3,759 acres of land are within the Study Area. Approximately 1,018 acres of that land are urban and not considered farmland. Of the remaining 2,741 acres, 1,147 acres are prime farmland, 49 acres are prime farmland if drained, 1,468 acres are farmland of statewide importance, 22 acres are farmland of local importance, and 55 acres are not considered prime farmland, farmland of statewide importance, or farmland of local importance (NRCS 2020). There is no land under NRCS easement within the Study Area. Farmlands within the Study Area are shown in Figure 3-6.

3.17.2 Impacts

No-Build Alternative

The US 30 Missouri Valley Bypass would not be built under the No-Build Alternative. Impacts on existing farmland are not anticipated beyond those that could occur due to other projects. The risk of damage to agricultural fields and farmstead buildings within the Willow Creek and Boyer River floodplains would continue.

Build Alternative

Prime farmland data from the NRCS Soil Survey Geographic Database for Harrison County, Iowa (NRCS 2020) was used to determine the acreage of prime farmland and soils of statewide importance in the Study Area. The NRCS Farmland Conversion Impact Rating for Corridor Type Projects form (NRCS-CPA-106) was completed for the Build Alternative corridor to assess the effects of this conversion on farming and farm-related services in the area (Appendix D). This assessment considers the effects that the project's conversion of farmland would have on existing and future land use, the amount of existing farmable land in the county, the creation of economically non-farmable parcels, impacts on other on-farm investments, and effects on local farm services. The Build Alternative would result in a conversion of approximately 257 acres of farmland to ROW. The project received a score of 57 out of the possible 100 points for Part VI (see Appendix D). Sites receiving a score of less than 60 points for Part VI need not be sent to NRCS for further consideration because the total score for Parts V and VI would be less than 160 points (Part V, which NRCS would complete, is worth a maximum of 100 points). Sites receiving less than 160 total points do not warrant an in-depth site review, and the project is cleared from significant concerns in conjunction with the FPPA.

The Build Alternative would potentially create approximately 4 acres of non-farmable land due to diagonal severance creating parcels too small to farm economically. All of the farmland in the Study Area would still be accessible from existing roads or access roads constructed for the Build Alternative.

If an agreement cannot be reached to include a levee as part of the project, Iowa DOT and FHWA would move forward with the roadway project designed to 50-year flood design criteria. Impacts on farmland would be less because less land would be disturbed. However, flood events exceeding a 50-year flood could cause additional farmland impacts unless a future 100-year levee project would be constructed.

3.17.3 Avoidance, Minimization, and Mitigation

Efforts would be made to minimize the amount of ROW acquired and the impacts on farmland to the extent practicable as design advances.

3.18 Noise

A traffic noise study was completed for the proposed US 30 Missouri Valley Bypass (Iowa DOT 2019a). The study was conducted in accordance with Iowa DOT's noise policy 500.07 (2011) and the requirements set forth in the FHWA Noise Standard at 23 CFR 772. Noise screening measurements and noise modeling were conducted, and noise impact criteria were identified.

Noise is generally defined as unwanted or excessive sound. Sound becomes unwanted when it interferes with normal activities such as sleep, speech, or recreation. Sound is what is heard when fluctuations in air pressure occur above and below the standard atmospheric pressure. Three variables define noise characteristics: level (or amplitude), frequency, and time pattern (Federal Transit Administration 2006).

Sound pressure level is expressed in decibels (dB) on a logarithmic scale. Typical sound levels generally fall between 20 and 120 dB, similar to the range of human hearing (Federal Transit Administration 2006). Most sounds consist of a broad range of sound frequencies. The average

human ear does not perceive all frequencies equally. Therefore, the A-weighted decibel (dBA) scale was developed to approximate the way the human ear responds to sound levels.

Two primary noise measurement descriptors, the equivalent sound level (L_{eq}) and the day-night sound level (L_{dn}), are used to assess noise impacts. The L_{eq} is often used to describe sound levels that vary over time, typically for a 1-hour period. The L_{dn} is a 24-hour, cumulative, A-weighted noise level that includes all noise that occurs throughout a 24-hour period, with a 10 dBA penalty on noise that occurs during nighttime hours (between 10 p.m. and 7 a.m.) when sleep interference might be an issue. The 10 dBA penalty makes the L_{dn} useful when assessing noise in residential areas or other land uses where overnight sleep occurs (Federal Transit Administration 2006).

3.18.1 Existing Conditions

A detailed noise study modeled the existing noise levels at 11 representative locations within the Study Area using FHWA's Traffic Noise Model, Version 2.5 (Iowa DOT 2019a). Figure 3-7 shows the representative locations used for the noise study. The existing and predicted noise levels are presented in Table 3-11.

Existing noise levels for each location were compared to Iowa DOT's Noise Abatement Criteria (NAC). NAC establishes an appropriate noise level based on activities associated with a given location. An impact occurs if the modeled noise level approaches or exceeds the NAC. Iowa DOT defines "approaching" as being within 1 dBA of the NAC (Iowa DOT 2019a).

Out of the 11 locations studied, noise receptor #4, a commercial location (the Pizza Ranch located along the current US 30 route through Missouri Valley at 104 West Erie Street) had an existing noise level of 70.4 dBA, which is slightly lower than the 72.0 dBA NAC for commercial locations. The noise monitored at this commercial location is representative of the existing noise levels in downtown Missouri Valley. The remaining 10 locations are associated with residential land use and are well below the NAC of 67.0 dBA for residential locations (Iowa DOT 2019a).

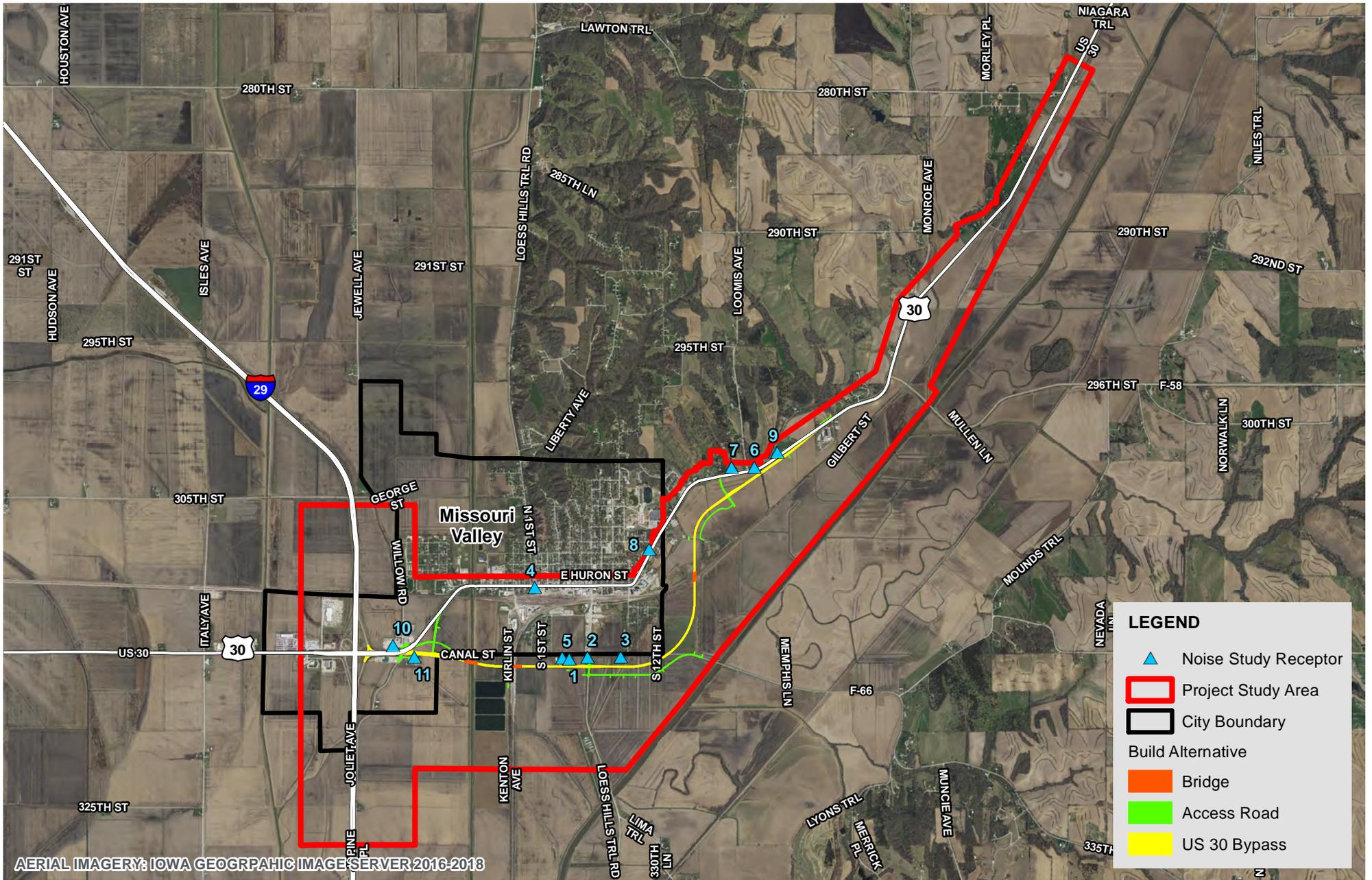
3.18.2 Impacts

No-Build Alternative

The US 30 Missouri Valley Bypass would not be built under the No-Build Alternative. Impacts on noise are not anticipated beyond those that could occur due to other projects.

Build Alternative

Iowa DOT identifies noise impacts by meeting one of two criteria: receptors have predicted noise levels of 10 dBA or more above existing levels or have predicted noise levels approaching or exceeding the NAC. Six noise receptors are considered impacted for the 2040 Build Alternative. Five of the noise impacts are due to relative noise increases and one of the noise impacts is due to the modeled noise level being above 66 dBA, which approaches the NAC for residences. While this modeled receptor showed a modeled noise level approaching the NAC, the modeled 2040 Build Alternative sound level is significantly less than the existing condition. The predicted 2040 Build Alternative noise levels were between -5.3 lower and 14.5 dBA higher than the existing noise levels. The predicted noise levels by location are detailed in Table 3-11.



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**NOISE RECEPTORS
HARRISON COUNTY, IOWA**

FIGURE 3-7

Table 3-11: Predicted Noise Levels

Receiver	Noise Abatement Criteria	Existing ^a	2040 Build Alternative ^a	Increase Over Existing Level	>10 dBA Increase over Existing Noise Level	> Iowa DOT Approaching NAC?
#1 - 401 E Canal Street	66	45 ^b	59.5	14.5	Yes	No
#2 - 3153 Loess Hills Trail	66	45 ^b	57.2	12.2	Yes	No
#3 - 880 E Canal Street	66	45 ^b	57.4	12.4	Yes	No
#4 - 104 W Erie St. - Pizza Ranch ^c	71	70.4	66.4	-4.0	No	Yes
#5 - 301 E. Canal Street	66	45 ^b	57.4	12.4	Yes	No
#6 - 2263 Highway 30	66	57.3	57.9	0.6	No	No
#7 - 3020 Loomis Avenue	66	51.5	57.9	2.2	No	No
#8 - 975 Sunnyside Avenue ^c	66	55.3	50.0	-5.3	No	No
#9 - 2279 Highway 30	66	54.3	60.8	6.5	No	No
#10 - 103 N. Willow Road - Shell	66	56.3	59.4	3.1	No	No
#11 - 1200 W. Canal Street	66	53.8	65.3	11.5	Yes	No

Source: Iowa DOT 2019a.

^a Bold numbering indicates a noise level approaching or exceeding the noise abatement criteria or a “substantial increase” above existing conditions.

^b Due to TNM limitations, noise monitoring experience was used to estimate the existing condition noise level for receptors far from any traffic noise source. 45 dBA is a typical rural ambient background sound level and would be comparable to a quiet office setting.

^c Receivers are representative of resulting downtown Missouri Valley noise levels when the bypass is complete.

Not all sensitive noise receptors were modeled in the downtown area. Modeling in the downtown area was conducted to give an indication of how much the noise level would drop due to the project. Pizza Ranch would realize a reduction in sound level and would therefore benefit from the Build Alternative. This receptor is representative of the through town existing condition and is one of many properties that would experience a reduction in sound due to the Build Alternative.

Noise receptor #8 - 975 Sunnyside Avenue is also representative of the existing condition through Missouri Valley. Modeled results for this receptor location indicate an approximate 5 dBA reduction is predicted when comparing the existing noise levels. The predicted traffic noise reduction through town is due entirely to the estimated traffic decrease following the construction of the Build Alternative.

Iowa DOT considered reducing noise levels with noise abatement in the form of a solid noise barrier. However, the impacted residences are not near one another and the cost to construct a noise barrier would be substantially higher than the “reasonable” cost per benefitted receptor allowed by Iowa DOT’s noise policy. Since the impacted noise receptors do not meet noise abatement feasibility and reasonableness criteria at this time, noise abatement for the Build Alternative’s noise impacts is considered unlikely for this project (Iowa DOT 2019a).

If an agreement cannot be reached to include a levee as part of the project, Iowa DOT and FHWA would move forward with the roadway project designed to 50-year flood design criteria. Traffic noise impacts would be equivalent because the roadway alignment would be the same, and it would only be 1 foot lower in elevation.

3.18.3 Avoidance, Minimization, and Mitigation

No avoidance, minimization, or mitigation strategies are proposed for noise at this time.

3.19 Energy

Energy includes fuel use and the relative energy use for various modes of transportation. All transportation modes require various forms of energy resources, and each of these resources has different implications on energy use. The energy evaluation considers transportation energy use and potential impacts of the No-Build Alternative and the Build Alternative.

3.19.1 Existing Conditions

As discussed in Section 3.11.1, the average daily traffic between the I-29 southbound ramps and 296th Street (Harrison County Road F-58) within Missouri Valley is approximately 3,300 to 5,700 vehicles per day. Traffic along US 30 consists of cars and trucks, large commercial trucks, and pedestrian foot traffic. On-street parking is located along US 30 in Missouri Valley. Through traffic using this route often conflicts with vehicles attempting to negotiate the on-street parking. Pedestrians exiting parked vehicles further increase the potential for conflicts. Through traffic must increase and decrease speeds according to traffic conditions. Constant slowing and accelerating burns additional fuel, especially for large commercial trucks, which comprise 10 to 15 percent of existing traffic. The US Department of Energy reports that excessive idling, such as sitting at stoplights, can reduce fuel efficiency by a quarter of a gallon per hour (US Department of Energy n.d.). Additionally, rapid acceleration and braking can cause a loss of between 10 and 40 percent in gas mileage.

3.19.2 Impacts

No-Build Alternative

The US 30 Missouri Valley Bypass would not be built under the No-Build Alternative. Impacts on energy are not anticipated beyond those that could occur due to other projects. Traffic and associated congestion along this segment of US 30 are expected to increase under the No-Build Alternative. This increase in congestion would further reduce fuel efficiencies and increase vehicle energy use.

Build Alternative

The Build Alternative would require natural resources and energy (concrete, timber, metals, water, and oil products) to build, including the materials used in the roadway and the equipment used to construct it.

However, after the roadway is built, the Build Alternative would provide vehicle fuel efficiencies with more free-flowing traffic. Table 3-7, above, provides the current and future traffic on US 30. The Build Alternative would reduce vehicle emissions due to bypass traffic no longer needing to stop at traffic signals or slow down through town due to vehicles turning onto or off of US 30.

If an agreement cannot be reached to include a levee as part of the project, Iowa DOT and FHWA would move forward with the roadway project designed to 50-year flood design criteria. Energy impacts would be slightly less because of a smaller construction footprint. However,

flood events exceeding a 50-year flood could cause additional energy impacts for roadway repair unless a future 100-year levee project would be constructed.

3.19.3 Avoidance, Minimization, and Mitigation

No avoidance, minimization, or mitigation strategies are proposed for energy at this time.

3.20 Contaminated and Regulated Materials Sites

Regulated materials include hazardous materials sites and hazardous waste sites, either from the presence of stored materials or because of past spills or leaks. A hazardous material or hazardous waste is any chemical, biological, or physical substance (liquid, solid, gas, or sludge) that can be potentially harmful to public health or the environment. Hazardous materials or hazardous wastes can be substances such as solvents, pesticides, or discarded commercial, industrial, or medical waste. The regulated materials evaluation considers the presence of hazardous materials sites and hazardous waste sites and potential impacts resulting from the proposed US 30 Missouri Valley Bypass.

3.20.1 Existing Conditions

On December 12, 2017, Iowa DOT conducted a preliminary review of the Study Area for the potential or known presence of regulated materials. The presence or likely presence of a hazardous material is referred to as a recognized environmental condition (REC). The review was based on Iowa DNR, USEPA, and Harrison County Assessor online databases, historic aerial photos, and Google Earth imagery. Properties were also verified through a windshield review of the Study Area. A total of 37 properties were identified within and near the Study Area, with 22 identified as having potential RECs and 15 identified as having known RECs (Iowa DOT 2017). These properties are summarized in Table 3-12. The locations of the high and moderate risk sites are shown in Figure 3-8.

Table 3-12: Regulated Materials Sites

Property Name	Address	Hazard ^a	REC	Notes	Risk
Iowa DOT	2308 Hwy 30, Missouri Valley	UST, LUST	Known	Iowa DNR “No Action Required”	Low
Former Sunnyside Café	2225 Hwy 30, Missouri Valley	UST, LUST	Known	Iowa DNR “No Action Required”	Moderate
Kum & Go #430/White Oak Station 59	717 E. Erie St, Missouri Valley	UST, LUST	Known	Iowa DNR “No Action Required”	Moderate
Dale Vallier Property	718 E. Erie St, Missouri Valley	UST, LUST	Known	Iowa DNR “No Action Required”	Moderate
Mos Mini Mart/C&K Country Store	614 E. Erie St, Missouri Valley	UST, LUST	Known	Iowa DNR “No Action Required”	Moderate
Gerhold Concrete/Wilson Concrete/Valley Redi Mix	116 E. Erie St, Missouri Valley	UST, Tier II Chemical Storage Facility ^b	Known	Iowa DNR “No Action Required”	Moderate
Casey’s General Store #2612/ Former Collier Oil	106 E. Erie St, Missouri Valley	UST, Priority Level 3 Site ^c	Known	--	Moderate

Property Name	Address	Hazard ^a	REC	Notes	Risk
Union Pacific Railroad Railyard	Between S. Harrison St and S. 6th St, Missouri Valley	--	Known	Iowa DNR Contaminated Sites investigation	High
Former Coberly Oil	101 W. Erie St, Missouri Valley	UST, LUST	Known	Iowa DNR “No Action Required”	Moderate
Ericon/Quik-Pik/Speedee Mart	502 W. Erie St, Missouri Valley	UST, LUST	Known	Iowa DNR “No Action Required”	Moderate
Andy’s 66	3153 Jopine Pl, Missouri Valley	UST, LUST	Known	Iowa DNR “No Action Required”	Moderate
Taylor Quik Pik	103 N. Willow Rd, Missouri Valley	UST, LUST	Known	Iowa DNR “Low Risk”; documented spill in 2012	High ^d
Petromart/Kopper Kettle/Ratigan Motor Center	1961 Hwy 30, Missouri Valley	UST, LUST	Known	Iowa DNR “No Action Required”; 2015 spill has yet to be designated	High
Yesway 1005/I-29 Country Store	3153 Joliet Ave, Missouri Valley	UST, LUST	Known	Iowa DNR “No Action Required”; 2017 leak received a “High Risk” designation	High
Harrison County Shop	282 S. 6th St, Missouri Valley	UST, LUST	Known	Iowa DNR “No Action Required”	Low
Union Pacific Railroad	2204 Hwy 30, Missouri Valley	--	Potential	USEPA Hazardous Waste Generator	Low
Schwertley Residence	973 Sunnyside, Missouri Valley	UST	Potential	--	Low
Heartland Coop/Terra International/Valley Fertilizer	220 E. Hwy 30, Missouri Valley	Tier II Chemical Storage Facility ^b	Potential	USEPA compliance activity	Low
Heartland Coop	112 S. 9th St, Missouri Valley	Tier II Chemical Storage Facility ^b	Potential	--	Moderate
Collier’s Automotive Service	901 E. Erie St, Missouri Valley	UST	Potential	--	Moderate
Eugene Vallier Property	101 S. 6th St, Missouri Valley	UST	Potential	--	Moderate
Staska Automotive	107 N. 6th St, Missouri Valley	UST	Potential	--	Moderate
Missouri Valley Tire	101 E. Erie St, Missouri Valley	--	Potential	No records	Moderate
Motion Auto & Repair/The Car Lot	503 W. Erie St, Missouri Valley	--	Potential	No records	Moderate
Huff Tire Repair	516 W. Erie St, Missouri Valley	--	Potential	No records	Moderate
Horizon Equipment/John Deere	3151 Jopine Pl, Missouri Valley	--	Potential	No records	Low
Carry-On Trailer Corp	1965 Hwy 30, Missouri Valley	Tier II Chemical Storage Facility ^b	Potential	--	Low
Anderson Auto Group/Woodhouse Buick Chevrolet	1951 Hwy 30, Missouri Valley	--	Potential	USEPA Hazardous Waste Generator	Low

Property Name	Address	Hazard ^a	REC	Notes	Risk
Missouri Valley Implement/Case Power & Equipment	1907 Hwy 30, Missouri Valley	UST	Potential	--	Low
Missouri Valley Airport	3211 Loess Hills Trl, Missouri Valley	UST	Potential	--	Low
City of Missouri Valley	Kenton Ave, Missouri Valley	Wastewater Lagoons	Potential	--	Low
Vulcan Industries	212 S. Kirlin St, Missouri Valley	--	Potential	USEPA Hazardous Waste Generator	Low
Former Carry-On Trailer Corp	311 E. 1st Ave, Missouri Valley	--	Potential	USEPA Hazardous Waste Generator	Low
MidAmerican Energy	339 S. 6th St, Missouri Valley	Electrical Substation	Potential	--	Moderate
Ironmanz Collision Repair	226 S. 6th St, Missouri Valley	--	Potential	No records	Low
Mary Barney Property	2614 260th St, Logan	UST	Potential	--	Low
Robert Tamisiea Property	2703 Houston Ave, Missouri Valley	AST	Potential	No records	Low

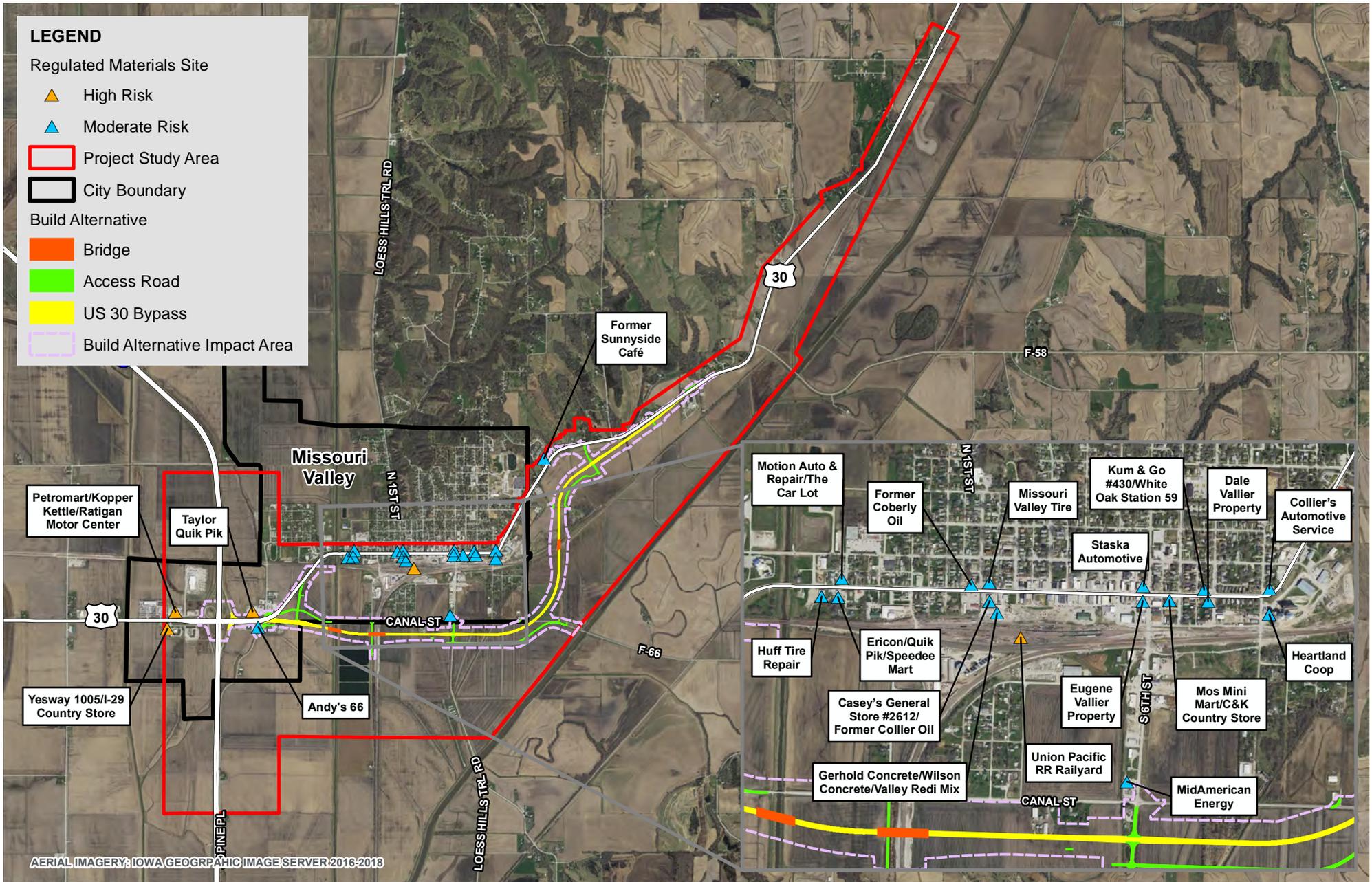
Source: Iowa DOT 2017.

- ^a UST = Underground Storage Tank; LUST = Leaking Underground Storage Tank; AST = Aboveground Storage Tank
- ^b Tier II Chemical Storage Facilities are facilities that store hazardous chemicals in quantities equal to or greater than 10,000 pounds, Extremely Hazardous Substances in quantities equal to or greater than 500 pounds, or the threshold planning quantity, whichever is lower. Tier II Chemical Storage Facilities are required to submit an annual emergency and hazardous chemical inventory in accordance with the Emergency Planning and Community Right-to-Know Act of 1986, Section 311/312 (USEPA 2017).
- ^c A Priority Level 3 site is a designation given by Iowa DNR for sites that show some degree of groundwater or soil contamination with concentrations exceeding the state-level requirements to some degree but are not an immediate threat to the public or immediate environment (Iowa DNR 2019b).
- ^d Iowa DNR low risk is based on an analysis of the risk of contamination spreading to groundwater used for drinking water. Iowa DOT high risk is based on several factors, including free product in groundwater and an observed spill at the site.

One wastewater treatment facility owned by the city of Missouri Valley is within the Study Area (USEPA 2019b). The facility is located along Kirlin Street approximately 0.60 mile south of US 30. The facility has three lagoons for sewage treatment.

The UPRR rail line is located within the Study Area. Creosote and other contaminants associated with the preservation of rail ties, as well as spills occurring in association with the historical use of the railroad, may have affected the Study Area.

No Superfund National Priorities List sites are located within or adjacent to the Study Area (USEPA 2021).



LEGEND

- Regulated Materials Site
 - ▲ High Risk
 - ▲ Moderate Risk
- Project Study Area
- City Boundary
- Build Alternative
 - Bridge
 - Access Road
 - US 30 Bypass
 - Build Alternative Impact Area

**REGULATED MATERIALS SITES
HARRISON COUNTY, IOWA**



FIGURE 3-8

3.20.2 Impacts

No-Build Alternative

The US 30 Missouri Valley Bypass would not be built under the No-Build Alternative. Impacts on regulated materials are not anticipated beyond those that could occur due to other projects.

Build Alternative

Seven sites on eight parcels of land with known or potential RECs are located partially within the Build Alternative impact area. These sites are listed in Table 3-12 and shown in Figure 3-7. Two sites were rated as moderate risk, one site was rated as high risk, and four sites were rated as low risk. Each site was reviewed for their latest status in April 2021 using the Iowa DNR Facility Explorer. The latest status of these sites and the extent of potential impact are summarized in the following paragraphs.

Taylor Quik Pik at 103 North Willow Road, located northwest of US 30 and Willow Street near the northeast quadrant of the I-29/US 30 interchange, reported a leaking underground storage tank (LUST) in 1990. An unknown amount of gasoline and diesel were leaked. Site cleanup began in 1994. There is no record of underground storage tank (UST) removal (Iowa DNR 2021d). There has been a history of free product (there is no documentation available online indicating if the free product is gasoline or diesel) in groundwater at this site. A September 2019 letter indicates that the free product is minimal, but groundwater monitoring wells are still in operation (Iowa DNR 2019c). Iowa DNR classified this site as low risk on February 10, 2015, based on the risk of contamination spreading to groundwater used for drinking water (Iowa DNR 2021d). Iowa DOT rated this site as a high risk of encountering contamination during construction based on the LUST with free product in groundwater, and a documented spill in 2012 (Iowa DOT 2017). Currently, four USTs containing gasoline are in operation at the site: one 12,000-gallon tank and three 10,000-gallon tanks. All of these tanks were installed in 1987 (Iowa DNR 2021d). The tanks are located at the southern end of the property, within the Build Alternative impact area (Iowa DNR 2021d).

Andy's 66, located at 3153 Jopine Plaza (southwest of US 30 and Willow Road near the southeast quadrant of the I-29/US 30 interchange), reported a LUST in 1990. Site cleanup began in 2000. An unknown amount of gasoline was leaked. Four gasoline USTs were installed in 1969 and removed in 1990. Three gasoline USTs were installed in 1990 and removed in 2011. Iowa DNR classified this site as no further action required on November 19, 2014 (Iowa DNR 2021e). Iowa DOT rated this site as a moderate risk based on Andy's 66 being a former gas station pre-dating Iowa DNR's Risk-based Corrective Action rules, which were established in 1996 (Iowa DOT 2017). The former USTs were located approximately 100 feet west of the entrance to the site and north of the existing building. The site of the former USTs is within the Build Alternative impact area (Google Earth Pro 2020).

The former Sunnyside Café (now Church of the Nazarene) at 2225 Highway 30 (northwest of US 30 and Sunnyside Court) reported a LUST in 1991. Site cleanup began in 1995. Based on historic aerial photography (1980s and 1990s) from the Iowa State University Geographic Information Systems Support & Research Facility and the location given in the Iowa DNR Facility Explorer, the tanks appeared to be located in the northwest corner of the site, just outside of the Build Alternative impact area (Iowa State University Geographic Information Systems Support & Research Facility n.d.; Iowa DNR 2021f). Four USTs (two diesel and two gasoline)

were installed in 1960. Iowa DNR classified this site as no further action required on October 17, 1996 (Iowa DNR 2021f). Iowa DOT rated this site as moderate risk based on the former gas station pre-dating Iowa DNR's Risk-based Corrective Action rules (Iowa DOT 2017). Both diesel tanks and one of the gasoline USTs were removed in 1991; the other gasoline UST was closed in place (Iowa DNR 2021f).

The remaining regulated material sites partially within the Build Alternative impact area were rated as low risk by Iowa DOT. A brief synopsis of these sites follows:

- Horizon Equipment/John Deere at 3151 Jopine Place. The northern portion of the Horizon Equipment/John Deere parking lot is within the Build Alternative impact area.
- The City's wastewater lagoons along Kenton Avenue. The portion of the sewage lagoon property within the Build Alternative impact area is undeveloped and has not been developed as a sewage lagoon.
- Vulcan Industries at 212 S. Kirlin Street. The southern tip of the Vulcan Industries property within the Build Alternative impact area is an undeveloped area approximately 700 feet south of the building and parking lot.
- The Iowa DOT yard at 2308 Highway 30. It appears that the UST tank filling area at the Iowa DOT yard is within the Build Alternative impact area (Google Earth Pro 2020). The location of the USTs is not available online; however, given the location of what appears to be the tank filling area, the USTs are likely within the impact area.

The Mid American Energy site, an electrical substation, is a moderate risk site located adjacent to the Build Alternative impact area at the corner of 6th Street and Canal Street. No spills or leaks have been reported at the substation (Iowa DNR 2021g). The risk of encountering contamination within the Build Alternative impact area would be low.

There would be a low risk of encountering contamination at existing and former farmsteads with USTs, aboveground storage tanks (AST), and farm dumps. The risk of encountering contamination in agricultural fields outside of farmsteads would be minimal. Solid waste from animal operations could be encountered. These facilities, if affected, would be demolished in accordance with Iowa Administrative Code 567-65. All manure would be removed from the facility within 6 months of closure and properly disposed of through land application. Solid wastes would be properly handled and disposed of in accordance with Iowa DNR requirements to prevent adverse impacts on surface waters.

As part of ROW acquisition, three residences (one rural residence and two dwellings on farmsteads) would be relocated. Regulated materials that could be encountered during demolition of the current residential structures on these properties include fuel storage tanks, asbestos, lead-based paint, light ballasts with polychlorinated biphenyls, mercury in thermostats and other electrical components, and refrigerants in appliances and air conditioning units. Any fuel or lubricants would be recycled or disposed of as hazardous waste. All storage tanks would be cleaned and recycled. All buildings to be demolished would be inspected for asbestos-containing materials. In accordance with the National Emission Standards for Hazardous Air Pollutants and the Iowa Clean Air Act, Iowa DNR would be notified 10 working days before demolition begins. All building debris and waste material would be recycled or disposed of in a licensed facility in accordance with applicable regulations.

Two former gas station sites (Andy's 66 and the former Sunnyside Café, both with former LUSTs) and one operating gas station and convenience store (Taylor's Quik Pik with a former LUST) are within the Build Alternative impact area. Contamination associated with LUSTs (primarily benzene, toluene, ethylbenzene, and xylenes) could be encountered in the soil or groundwater depending on the proximity of construction relative to the LUSTs and the depth of excavation or grading activities. The risk of encountering soil contamination is moderate during clearing, grubbing, and grading. The contractor would be informed of the potential for encountering contaminated soil. The air in the vicinity of grading would be monitored for volatile organic compounds to determine the need for worker protection. If any contamination above regulatory limits is encountered, the proper agencies would be notified and any contaminated soil (including equipment contamination) would be handled and disposed properly.

All potential impacts are anticipated to be short-term (during construction activities) as any necessary cleanup and disposal would take place. Long-term impacts are not anticipated.

If an agreement cannot be reached to include a levee as part of the project, Iowa DOT and FHWA would move forward with the roadway project designed to 50-year flood design criteria. Impacts on regulated material sites could potentially be less because less land would be disturbed. However, flood events exceeding a 50-year flood could cause additional regulated material site impacts unless a future 100-year levee project would be constructed.

3.20.3 Avoidance, Minimization, and Mitigation

Actual impacts on or avoidance of regulated material sites would be determined during final design. If any contamination above regulatory limits were encountered near any of these sites, work would be stopped, and Iowa DOT would be notified. Proper handling and disposal of any contaminated soil (including equipment decontamination) would be warranted.

3.21 Visual

The visual resources and aesthetics evaluation considers both natural and human-built visual scenic resources within the Study Area and the general aesthetic quality of the visual environment.

3.21.1 Existing Conditions

The Study Area consists of row crop agriculture and commercial, residential, and industrial areas. The commercial and industrial areas are centered around I-29 and US 30 and the buildings located in these areas include new construction and older brick structures. Industrial areas south of US 30 consist of grain elevators and rail lines. The visual aesthetic of the land south and east of US 30 is rolling row crop agriculture. The Study Area north of US 30 primarily consists of residential areas. The residences within Missouri Valley are smaller and closer together than the residential areas northeast of Missouri Valley, which consist of isolated medium and large farmsteads.

One large visual feature north of US 30 is the Loess Hills landform, which is listed as a National Natural Landmark. While loess soils are common throughout the Midwest, the Loess Hills contain soils over 60 feet in depth, with some areas reaching depths of 200 feet (Iowa DNR 2019d; Iowa Geological Survey 2017; US Geological Survey 1999). The terrain that results from such thick deposits of loess is unique, occurring in only two places in the world (Iowa

Geological Survey 2017; US Geological Survey 1999). The hills were formed approximately 10,000 to 20,000 years ago by windblown silt from glacial deposits left in the Missouri River valley (Iowa DNR 2019d). In addition to being unique, the Loess Hills are also fragile because of the soil's high erodibility. The erosion of the Loess Hills has been spurred naturally by rain events and wind and by human activities such as mining and farming (US Geological Survey 1999). The visual aesthetic of the hills near the Study Area ranges from rolling to steep and jagged. Vegetation is typical for the central plains and includes prairies, oak savannas, and stands of eastern red cedar. The Loess Hills are home to some of the largest remnant prairies in Iowa, which provide habitat for unique plant and animal species (Iowa DNR 2019d).

3.21.2 Impacts

No-Build Alternative

The US 30 Missouri Valley Bypass would not be built under the No-Build Alternative. Impacts on visual resources and aesthetics are not anticipated beyond those that could occur due to other projects.

Build Alternative

Build Alternative construction would change the visual nature of the existing rural landscape by adding a highway alignment and connecting access roads through the Build Alternative impact area. The topography in the rural area is relatively flat. The Build Alternative would be visible from surrounding residential homes, farmsteads, and businesses. The new roadway would be visible from overlooking vantage points in the Loess Hills, but the Build Alternative impact area is not within the Loess Hills. As development momentum continues, it is likely that the visual characteristics would change over time from a rural agricultural setting to a more industrial, commercial, and rural residential setting.

Additionally, businesses and residents in the city center would experience a visual impact from a reduction in large trucks carrying freight passing through the community toward their final destination. Some freight trucks would divert to the bypass, and their absence would have beneficial visual effects on downtown Missouri Valley, and improve the overall livability within the city limits.

If an agreement cannot be reached to include a levee as part of the project, Iowa DOT and FHWA would move forward with the roadway project designed to 50-year flood design criteria. Visual impacts would likely be perceived the same as impacts under the roadway with a levee because the height would only be 1 foot less.

3.21.3 Avoidance, Minimization, and Mitigation

No avoidance, minimization, or mitigation strategies have been identified for visual resources and aesthetics.

3.22 Utilities

The utilities analysis identifies and reviews potential impacts on electrical facilities (including substations and transmission lines), natural gas facilities, telecommunication facilities, and water supply and wastewater facilities within the Study Area. The Iowa Utilities Board rules comprise the regulatory framework pertaining to utilities in Iowa.

3.22.1 Existing Conditions

Several utilities are present within the Study Area, including electrical, natural gas, telecommunications, water, and sewer.

Electrical utilities within the Study Area consist of above- and belowground power lines and one substation. Numerous power lines are located within the Study Area and are generally along streets and roadways. A MidAmerican Energy electrical substation is located in the northwest corner of Canal Street (Harrison County Road F-66) and Loess Hills Trail Road/South 6th Street.

A Northern Natural Gas Company gas pipeline is located on the east side of the Study Area. The pipeline enters the Study Area 0.60-mile northeast of 296th Street (Harrison County Road F-58) and immediately crosses under the UPRR tracks. From there, the pipeline heads southwest between US 30 and the UPRR tracks. The pipeline ends at the Northern Natural Gas substation along East St. Clair Street.

Two fiber optic telecommunications lines are located within the Study Area. The first is a Sprint fiber optic line. The line enters the Study Area from the west, adjacent to the UPRR tracks. It continues east until Kirlin Street, where it turns south following the UPRR tracks out of the Study Area. The second is an Iowa Communications Network fiber optic line located on the east side of the Study Area. The line enters the Study Area along Canal Street (Harrison County Road F-66) at the Boyer River. The line proceeds east to South 9th Street where it turns north toward US 30. From US 30, the line follows the highway northeast out of the Study Area.

The city has various water and sewer lines throughout the Study Area. Three City sewage lagoons are located on Kirlin Street just south of Canal Street. The Missouri Valley wastewater treatment plant is located just north of US 30 along Windom and West Huron Streets.

3.22.2 Impacts

No-Build Alternative

The US 30 Missouri Valley Bypass would not be built under the No-Build Alternative. Impacts on existing utilities are not anticipated beyond those that could occur due to other projects. Flooding would continue to occur along Willow Creek and the Boyer River. The wastewater treatment facility and sewage lagoons would be prone to flooding during future events because of their location in the Willow Creek and Boyer River floodplain.

Build Alternative

The Build Alternative approaches the Northern Natural Gas substation along East St. Clair Street, impacting approximately 0.02 acre of their parcel. The Build Alternative impact area includes approximately 795 feet of a Northern Natural Gas pipeline immediately north of East St. Clair Street. Any impact on or relocation of the pipeline would be determined during final design and in coordination with Northern Natural Gas. However, the wastewater treatment

facility and sewage lagoons in the Willow Creek and Boyer River floodplain would continue to be prone to flooding during future events because they are located on the Boyer River side of the Build Alternative.

If an agreement cannot be reached to include a levee as part of the project, Iowa DOT and FHWA would move forward with the roadway project designed to 50-year flood design criteria. Impacts on utilities could potentially be less because less land would be disturbed. However, flood events exceeding a 50-year flood could cause additional utility impacts unless a future 100-year levee project would be constructed.

3.22.3 Avoidance, Minimization, and Mitigation

Actual impacts on or avoidance of the Northern Natural Gas substation and the pipeline would be determined during final design.

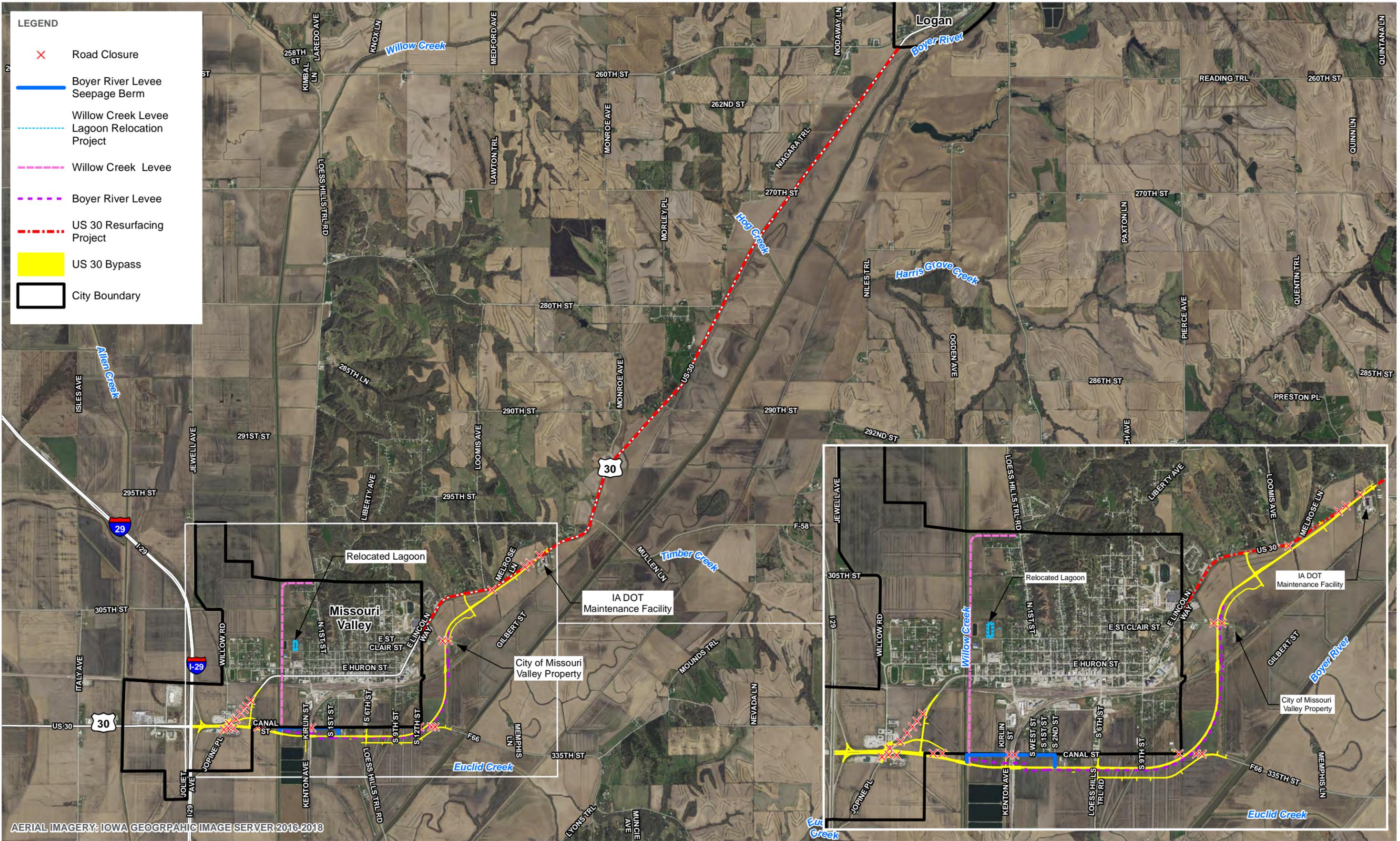
3.23 Cumulative Impacts

The Council on Environmental Quality defines a cumulative impact as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions” (40 CFR 1508.7). Additional projects were identified in and near the Study Area through coordination with the City and USACE. In addition, other transportation-related projects in the area were identified using the Iowa DOT Statewide Transportation Improvement Plan.

3.23.1 Local Projects

The following projects were evaluated because of their potential impacts or their ability to affect one or more of the resources being analyzed in Section 3.23.2 (see Figure 3-9):

- The Iowa DOT US 30 resurfacing project is located along US 30 beginning at the eastern city limits of Missouri Valley and extending to the Boyer River in Logan. The project resurfaced US 30 and was completed in 2020.
- The USACE-sponsored Willow Creek Levee project would be located near the existing non-USACE-sponsored Missouri Valley Levee 1 on the east side of Willow Creek. The project’s intent is to further protect the north side of Missouri Valley from future Willow Creek flood events. USACE is currently developing and analyzing alternatives for the levee. The construction schedule for the levee has not yet been determined.
- The USACE-sponsored Boyer Levee project would be a USACE-constructed project on the south side of the Study Area. Location and construction of the levee would be dependent on the outcome of this NEPA document because a portion of the levee is incorporated in the Build Alternative.



AERIAL IMAGERY: IOWA GEOGRAPHIC IMAGE SERVER 2016-2018



CUMULATIVE IMPACTS
HARRISON COUNTY, IOWA

FIGURE 3-9

3.23.2 Key Resources Affected

The cumulative impacts analysis focused on the resources potentially affected by the Build Alternative and other past, present, and reasonably foreseeable actions in the Study Area with impacts that overlap those of the Build Alternative. Resources that could experience cumulative impacts from the US 30 Missouri Valley Bypass and the above-listed projects include land use, community cohesion, churches and schools, environmental justice, economic, acquisitions and displacements/relocations, construction and emergency routes, transportation, cultural resources, cemeteries, wetlands and waters of the US, water quality, floodplains, wildlife and habitat, threatened and endangered species, farmlands, noise, energy, contaminated and regulated materials sites, visual, and utilities.

If an agreement cannot be reached to include a levee as part of the project, Iowa DOT and FHWA would move forward with the roadway project designed to 50-year flood design criteria. Impacts on most resources would be slightly less because less land would be disturbed. However, flood events exceeding a 50-year flood could cause additional impacts unless a future 100-year levee project would be constructed.

Land Use

Construction of the Build Alternative would convert agricultural and residential property to roadway ROW. Additional levee construction projects would have a similar impact. The Build Alternative aligns with City and County plans for development south of Missouri Valley. While this project is not intended to induce development, additional flood protection from levee construction would protect agricultural, business, and residential infrastructure and new development could occur from other projects.

Community Cohesion

The Build Alternative would improve community cohesion in Missouri Valley and in adjacent rural areas and communities through improved traffic flow, reduction in vehicular and pedestrian conflicts, and reduction in delays. Additional levee construction would further reduce the risk of flooding and the disruption of the community cohesion that results from flood events.

Churches and Schools

While the Build Alternative has the potential to impact property belonging to the Church of the Nazarene, the overall impact would be improved access to churches and schools by reducing traffic congestion and commute times. Churches and schools rely on roadways, as well as pedestrian pathways, for connection and access. Additional levee construction would reduce the flooding risk and the disruption of the community cohesion that results from flood events. Therefore, the cumulative effect of the Build Alternative and other local projects would be beneficial.

Environmental Justice

The Build Alternative would have a beneficial impact on environmental justice populations through improved traffic flow and reduction in delays. Environmental justice populations typically rely on roadways, as well as pedestrian pathways, for a connection between jobs and

housing. Construction of additional levees would reduce the flooding risk and the disruption of the community for the entire community, including environmental justice populations.

Economic

The Build Alternative would have a beneficial short-term economic impact through job creation and associated spending during construction. The long-term impacts would be negligible because most businesses along the existing US 30 are destination businesses that are not traffic dependent. Improved traffic flow and the reduction in delays resulting from the proposed project and additional levee construction would reduce the flooding risk and the disruption of the community for the entire community.

Acquisitions and Displacements/Relocations

The Build Alternative requires conversion of over 250 acres of agricultural land, physical effects on three businesses, and the displacement of three residences. The Willow Creek and Boyer River levee projects would result in additional land acquisition, but the acreage and information on displacements are not yet available. With continued development along US 30, the existing agricultural land uses could convert to commercial and industrial uses. Roadway traffic continues to grow and would require additional repair to the existing roads and bridges, and construction of new roads and bridges, potentially leading to land use conversion. Construction of additional levees could also require additional land acquisition.

Construction and Emergency Routes

Construction phasing to keep roadways open for the Build Alternative would prevent a negative impact on emergency response and routes. If future levee construction causes roadway closures, a plan would be developed to allow for emergency response and would be coordinated with local fire, police, county sheriff, and emergency responders.

Transportation

The Build Alternative would improve the transportation system in Missouri Valley and in adjacent rural areas and communities through improved traffic flow, reduction in vehicular and pedestrian conflicts, and reduction in delays. Communities rely on roadways for connectivity between residences, work, schools, churches, and retailers. Levee construction would reduce the flooding risk and the disruption to the transportation network that result from flood events.

Cultural Resources

The Build Alternative has a “No Historic Properties Affected” determination. The levee projects would also consult with Iowa SHPO and Indian tribes to determine their effect. All construction projects have a potential for unanticipated discoveries. Proper coordination with Iowa SHPO and tribes should occur if unanticipated discoveries are revealed.

Cemeteries

While the Build Alternative would have an impact on the access to Hurley Evergreen Cemetery, none of the other projects have the potential to impact cemeteries in the area. The construction of new levees would lessen the impact of floodwaters on cemeteries in the area.

Wetlands and Waters of the US

The Build Alternative and other projects would have a moderate impact on wetlands and other waters of the US from the construction of a new roadway and the potential for follow-on development. Impacts on wetlands and waters of the US due to additional levees and future planned development would be regulated by USACE under applicable Section 404 permits and mitigated as warranted.

Water Quality

The Build Alternative and other projects would cause a minor impact on the water quality in the area as development continues to occur and additional pavement is added to the area. The NPDES construction general permits and storm water pollution prevention plans required for every project that disturbs more than 1 acre would minimize potential for cumulative water quality impacts.

Floodplains

As more development occurs in the Missouri River floodplain, structures and infrastructure would be at increased risk of flooding. The Build Alternative would have a positive effect on probability and length of flooding in the city of Missouri Valley. Other levee projects being coordinated in the Study Area by USACE would also lead to decreased risk of flooding.

Wildlife and Habitat

The Build Alternative would have a limited effect on wildlife and habitat with the implementation of some tree removal restrictions. The Build Alternative converts agricultural and residential property to roadway ROW, and additional levee construction would have a similar impact. Wildlife that live in agricultural and residential properties are typically generalist species that can relocate to adjacent habitat.

Threatened and Endangered Species

Implementation of timing restrictions for tree removal, structure removal, and nesting seasons would limit impacts on threatened and endangered species. The future road resurfacing and levee projects would also consult with USFWS and Iowa DNR to determine their effect on listed species.

Farmlands

The Build Alternative requires conversion of over 250 acres of agricultural land. With continued development along US 30, the existing agricultural land uses could convert to commercial and industrial uses. Roadway traffic continues to grow and would require additional repair of existing roads and construction of new roads and bridges, potentially leading to conversion of agricultural land. Additional levee construction could also require additional farmland acquisition.

Noise

The Build Alternative would result in noise level increases along the new alignment, but a decrease in noise levels along the existing US 30. Levee and road resurfacing projects would

cause a temporary noise increase during construction but would not change long-term noise levels for receptors.

Energy

All construction projects require an input of energy from the use of materials and fuel. In the long term, roadway construction and roadway resurfacing projects lead to increased fuel efficiencies for vehicles that use them. Increased protection from levees could lead to a decrease in energy use because fewer flood events correlates with fewer rebuilding events.

Contaminated and Regulated Materials Sites

The Build Alternative has the potential to impact contaminated and regulated material sites with high, medium, and low risk. The Build Alternative may also encounter hazardous materials that are undocumented during construction. Additional levee projects may encounter similar risks. All projects would incorporate proper handling and disposal of any contaminated materials.

Visual

The Build Alternative would convert a small portion of agricultural landscape to roadway ROW. Levee construction would convert adjacent property to levee footprint. While the conversions would be noticeable from the Loess Hills landform, none of the projects occur within Loess Hills.

Utilities

Utilities often occur within project limits. The Build Alternative has the potential to impact a gas pipeline. Most utility impacts can be avoided or minimized in final design. Any future levee or roadway resurfacing projects would assess their impact on utilities and coordinate with each utility if an impact is unavoidable.

3.24 Permits and Related Approvals

The anticipated federal, state, and local permits and/or approvals that may be required for the US 30 Missouri Valley Bypass are identified below and are based on a review of federal and state agency databases. The need for these permits and approvals was discussed in relevant resource sections in this chapter.

The US 30 Missouri Valley Bypass would not be built under the No-Build Alternative, and no permits or approvals would be needed except those for separate and independent projects.

Construction of the Build Alternative would likely require the following permits and approvals:

- Iowa DNR Floodplain Development Permit
- Iowa DNR NPDES Stormwater Construction Permit (General Permit No. 2, Construction Activities – Section 402 of Clean Water Act)
- Section 106 National Historic Preservation Act Compliance
- Section 401 Water Quality Certification
- Section 404 Permit (Clean Water Act)

If an agreement cannot be reached to include a levee as part of the project, Iowa DOT and FHWA would move forward with the roadway project designed to 50-year flood design criteria. The aforementioned permits and approvals would still be needed for the project.

Chapter 4 Disposition

This EA is being distributed to the agencies and organizations listed in this chapter. Individuals receiving the document are not listed for privacy reasons.

4.1 Federal Agencies

The following federal agencies are receiving this EA:

- Federal Emergency Management Agency
- Federal Railroad Administration
- Federal Transit Administration
- Small Business Administration
- Surface Transportation Board
- US Army Corps of Engineers, Omaha District, Planning
- US Army Corps of Engineers, Rock Island District
- US Department of Agriculture, Natural Resources Conservation Service
- US Department of Health and Human Services, Centers for Disease Control and Prevention
- US Department of Housing and Urban Development
- US Department of the Interior, Office of Environmental Policy and Compliance
- US Environmental Protection Agency, Region 7
- US Fish and Wildlife Service, Rock Island Field Office

4.2 State Agencies

The following state agencies are receiving this EA:

- Iowa Department of Natural Resources, Atlantic Field Office
- Iowa Department of Natural Resources, Environmental Services
- State Historical Society of Iowa, Department of Cultural Affairs

4.3 Local and Regional Units of Government

The following local and regional units of government are receiving this EA:

- City of Missouri Valley, Iowa
- Harrison County, Iowa

4.4 Other

The following other entities are receiving this EA:

- Missouri Valley Library

4.5 Locations Where This Document Is Available for Public Review

This EA is available for review at the following locations:

- Missouri Valley City Hall
223 East Erie Street
Missouri Valley, IA 51555

- Federal Highway Administration
105 6th Street
Ames, IA 50010
- Iowa Department of Transportation
2210 East 7th Street
Atlantic, IA 50022
- Iowa Department of Transportation
800 Lincoln Way
Ames, IA 50010
- Iowa Department of Transportation website
<https://iowadot.gov/ole/NEPA-Compliance/NEPA-documents>

Chapter 5 Comments and Coordination

This chapter summarizes the agency coordination, public involvement, and tribal coordination that have occurred during the development of this EA. This chapter also discusses future public involvement efforts that are planned for the project. Appendix C contains agency and tribal comment letters received in response to Iowa DOT's coordination letters to initiate the NEPA process for the project.

5.1 Agency Coordination

5.1.1 MOU Signatory Agency Coordination

At the beginning of the NEPA process for this project, FHWA, Iowa DOT, USACE, Harrison County, and the City developed and signed an MOU. The MOU was signed in late December 2018 to February 2019. The MOU identifies roles and responsibilities of the parties for US 30 and flood improvements in Harrison County in and around Missouri Valley. The parties have continued collaboration in consideration of the MOU (attached as Appendix A) and in support of development of this EA, as shown in Table 5-1.

Table 5-1: MOU Signatory Agency Coordination

Meeting Date	Agencies in Attendance	Meeting Purpose
November 6, 2017	Iowa DOT City of Missouri Valley	Kick off the project and discuss a draft MOU, the project timeline, and NEPA considerations.
July 23, 2018	Iowa DOT USACE	Hold a levee workshop to consider the design details of a combined roadway/levee alternative.
March 20, 2019	Iowa DOT City of Missouri Valley	Discuss project status (alternatives, typical section, cost estimates, and schedule), MOU, Infrastructure for Rebuilding America (INFRA) Grant application, upcoming meetings, and USACE discussion items.
May 1, 2019	Iowa DOT City of Missouri Valley USACE	Discuss technical topics, including seepage berm analysis, typical section, tie-in to Willow Creek Levee, railroad coordination, overtopping of levee systems, current USACE model, and schedule coordination.
August 15, 2019	Iowa DOT City of Missouri Valley	Discuss project status, INFRA Grant application, project costs, and VE study.
September 25, 2019	Iowa DOT USACE	Discuss remaining items that need to be coordinated between the project and the Willow Creek Levee study.
November 13, 2019	Iowa DOT City of Missouri Valley Harrison County	Provide an update on the project and get consensus on the proposed preferred alternative and local connections to the bypass.
January 20, 2020	Iowa DOT USACE	Discuss levee location pros and cons.
March 2, 2020	Iowa DOT USACE City of Missouri Valley Harrison County	Further discuss roadway/levee alternative.

Meeting Date	Agencies in Attendance	Meeting Purpose
May 6, 2020	Iowa DOT City of Missouri Valley Harrison County Southwest Iowa Planning Council (SWIPCO)	Refine and get input on local access points.
May 18, 2020	Iowa DOT USACE SWIPCO City of Missouri Valley UPRR	Get input from UPRR on the proposed plan for the two railroad crossings.
June 1, 2020	Iowa DOT City of Missouri Valley Harrison County	Get input on local connection options.
June 23, 2020	Iowa DOT City of Missouri Valley USACE UPRR	Discuss UPRR comments on the two railroad crossings.
August 5, 2020	Iowa DOT City of Missouri Valley USACE	Evaluate how the Willow Creek Levee would tie into the bypass based on discussions with UPRR in June.
October 19, 2020	Iowa DOT USACE SWIPCO City of Missouri Valley Harrison County	Discuss Canal Street, UPRR crossings, the transfer of jurisdiction of existing US 30, and funding of the project.
December 18, 2020	Iowa DOT USACE City of Missouri Valley Harrison County SWIPCO	Provide an update on both the Missouri Valley Bypass and Willow Creek projects and discuss the request from the City/County regarding adding a half interchange at Kirlin.

5.1.2 Early Agency Coordination and Scoping

Early agency coordination began on June 20, 2018, with letters sent to federal agencies, state agencies, and local and regional units of government. In addition, USACE accepted an invitation to be a cooperating agency in the preparation of this EA because of the inclusion of at least one dual-function highway alternative that includes a levee. Early coordination letters were sent to the following:

- Federal agencies
 - Federal Aviation Administration
 - Federal Emergency Management Agency
 - Federal Railroad Administration
 - Federal Transit Administration, Region VII
 - National Park Service
 - US Army Corps of Engineers
 - US Department of Agriculture
 - US Department of Housing and Urban Development
 - US Department of the Interior
 - US Environmental Protection Agency

- US Fish and Wildlife Service
- US Fish and Wildlife Service, DeSoto National Wildlife Refuge Visitor Center
- State agencies
 - Iowa Department of Agriculture
 - Iowa Department of Natural Resources
 - Iowa Department of Public Health
 - Iowa State Historic Preservation Office
- Local and regional units of government
 - City of Logan, Iowa
 - City of Missouri Valley, Iowa
 - City of Modale, Iowa
 - Harrison County Assessor
 - Harrison County Board of Supervisors
 - Harrison County Clerk
 - Harrison County Recorder
 - Harrison County Sheriff
 - Harrison County Treasurer
 - Logan Chamber of Commerce
 - Missouri Valley Chamber of Commerce

In addition to the agencies listed above, early coordination letters were sent to the following schools, libraries, museums, and other interested groups:

- Logan-Magnolia Community School District
- Missouri Valley Community School District
- Missouri Valley Elementary School
- Missouri Valley Middle School
- Missouri Valley High School
- Missouri Valley Public Library
- Modale Public Library
- Union Pacific Railroad
- Watson Steam Train & Depot Museum
- West Harrison Community School District
- Wisecup Farm Museum

A total of 12 agency comment letters were received. The comments from the agencies and the responses provided are summarized in Table 5-2, and the comment letters are included in Appendix C.

Additional coordination was conducted through the NEPA/Section 404 Merge Process as described in Section 5.1.3.

Table 5-2: Agency Scoping Comments and Responses

Agency or Interested Group	Comment Summary	Response Summary
City of Missouri Valley Council Member	In both the northern and southern study areas, potential impacts on air quality, land quality, water quality, wildlife protection, noise pollution, and social impact were noted.	Comments noted.
FAA	<p>FAA does not generally provide comments from an environmental perspective. The project may require formal notice under 14 CFR Part 77, Objects Affecting Navigable Airspace. To determine if it is necessary to file with FAA, use the online Notice Criteria Tool.</p> <p>FAA recommended that the Notice Criteria Tool be checked at 1-mile intervals and increases in elevation. If filing is needed, FAA recommended a 120-day notification time frame.</p>	The Missouri Valley Airport is approximately 0.60 mile south of US 30. The airport is neither a public use airport nor a privately owned airport open for public use. Filing with FAA for the project is not required.
Harrison County Board of Supervisors	<p>The northern study area on Harrison County Road F-50 is not in the best interest for four reasons: (1) heavy trucks won't use the route; (2) F-50 would divert traffic from through-traffic-dependent businesses in Missouri Valley; (3) the northern study area would have extra costs (cut/fill, longer segment); (4) concept 3 is preferred.</p> <p>The project should be constructed as a Super-2 like was done in Carroll and Crawford Counties.</p>	<p>The northern study area has been removed from consideration because the out-of-distance travel was substantial and because the location would not meet purpose and need.</p> <p>Preference for a Super-2 construction has been noted. The EA evaluates a two-lane roadway bypass, with grading for future expansion to a four-lane roadway, with the potential for integration with a levee system.</p>
Harrison County Engineer	Comments were identical to those from the Harrison County Board of Supervisors.	See response to Harrison County Board of Supervisors above.
Iowa DNR, Conservation and Recreation Division	<p>Active bald eagle nests are present in the vicinity of the project. Coordination with USFWS – Rock Island District is recommended. Additional studies may be needed for listed or rare species.</p> <p>This letter is a record of review and does not include comment from the Environmental Services Division. Additional permits may be needed.</p>	Comments noted. A habitat survey was completed in 2018. Additional habitat and species surveys would be completed when the project progresses to final design.
Iowa DNR, Environmental Services Division	Iowa DNR attended the concurrence points 1 and 2 meeting and will attend future meetings. It had no comments at this time and thanked Iowa DOT for understanding the importance of the Loess Hills in project development.	No response required.

Agency or Interested Group	Comment Summary	Response Summary
Iowa DNR, Section 6(f) Funds Coordinator	No projects listed under the Land and Water Conservation Fund, Resource Enhancement and Protection Fund, or Wildlife Habitat Stamp Fund program within the area of the proposed study appear to be affected.	No response required.
Iowa DNR, Sovereign Lands and Environmental Review	<p>The project has been given a tracking number and project contact for future correspondence.</p> <p>The project is under review. When the review has been completed, a letter or email concerning the Sovereign Lands determination would be issued.</p>	Tracking number and project contact noted.
UPRR	UPRR answered the questions on a railroad insert provided by Iowa DOT; see Appendix C for UPRR’s responses.	No response required.
USACE	USACE received the cooperating agency request, and there is interest in the combined levee/roadway alternative. The Omaha District is evaluating solutions to address flood risks in a feasibility study in Missouri Valley. USACE stated that a combined levee/roadway alternative would present a unique opportunity to find a win-win for the parties involved. The Rock Island District would maintain permitting authority under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act. USACE looks forward to further collaboration efforts.	Comments noted. Iowa DOT and USACE have collaborated throughout the development of this EA, and USACE is a cooperating agency.
US Department of Agriculture, NRCS	<p>Farmland Protection Policy Act and NRCS conservation easements are under NRCS jurisdiction or control. Because limits of construction are unknown, NRCS cannot clear the project. When limits of construction are known, the State Soil Scientist and Easements Program Coordinator should be contacted for further assistance.</p> <p>An NRCS Form AD-1006 was provided for use on the project.</p>	NRCS Form AD-1006 was completed and submitted as part of the impact analysis for this EA. No NRCS conservation easements are present in the Study Area.
US Department of the Interior	Another contact at the Office of Environmental Policy and Compliance in Denver asked to be added to the distribution list.	Contact added to distribution list.

5.1.3 NEPA/404 Merge Coordination

As part of Iowa DOT’s NEPA/404 Merge Process, resource agencies that are signatories of the process agreement were asked to participate in addressing concurrence point 1 (purpose and need), concurrence point 2 (alternatives to be analyzed), concurrence point 3 (alternatives to be

carried forward), and concurrence point 4 (preferred alternative). A teleconference was held on June 18, 2018, for concurrence points 1 and 2. Agencies in attendance were Iowa DNR, USEPA, USACE, and USFWS, and all agencies concurred with concurrence points 1 and 2. Subsequently, USEPA withdrew its initial concurrence with alternatives to be analyzed and asked to review an alternative that would use Canal Street. After review of the additional alternative using Canal Street by Iowa DNR, USEPA, USACE, and USFWS, agencies were asked for and provided concurrence on the alternatives to be analyzed on July 11, 2018. On May 15, 2019, a second teleconference meeting was held with the agencies regarding concurrence point 3 (alternatives to be carried forward). Agencies in attendance were Iowa DNR, USEPA, USACE, and USFWS. All resource agencies concurred with Iowa DOT's alternatives review approach and decision to carry forward specific alternatives for detailed review. Concurrence point 4 (preferred alternative) will be reviewed following the public hearing and prior to completion of the EA decision document.

5.2 Public Involvement

Public involvement activities for this EA began with the project scoping phase in early 2018 and are ongoing, as discussed in the following sections.

5.2.1 Public Meetings

A Public Information Meeting (PIM) was held on March 13, 2018, to obtain public input on the purpose and need, and the northern and southern study areas, described in Section 2.2, Initial Range of Alternatives. Prior to the PIM, a public notice was published in the *Missouri Valley Times* and a meeting notification was placed on the Iowa DOT website to inform people about the project and PIM. The PIM was held from 4:00 to 6:00 p.m. at the Rand Community Center, 100 South 4th Street, in Missouri Valley, and was attended by 154 people.

Informational materials about the northern and southern bypass options, including a series of information boards and a PowerPoint presentation, were presented to attendees. PIM attendees had the opportunity to learn about the project process, and to provide input and ask questions directly to Iowa DOT representatives.

The public was supportive of a bypass along US 30, and many attendees indicated that the southern study area was preferable over the northern study area. Oral comments consisted of the following:

- Wanting semi-truck traffic out of Missouri Valley because of the resulting congestion, noise, and vibration
- Noting the status of current right-of-way ownership and easements within each study area
- Expressing concerns with the northern study area not being used by truck traffic because of hilly terrain
- Wanting the Old Lincoln Highway signage and welcome center to be preserved
- Noting potential impacts on the electrical substation south of Missouri Valley

An online PIM was launched on August 29, 2019, to present the public with the new southern bypass alignments and to introduce possible combined levee options. Email notifications and letters were sent to officials, tribes, utilities, and property owners to inform them of the online PIM. A notice was also placed in the *Missouri Valley Times* and on the Iowa DOT website

(Iowa DOT 2019b). A total of 159 persons registered to view the online PIM. The online PIM contained all of the information that was available to attendees of the 2018 PIM and the revisions to the preliminary alternatives since the 2018 PIM. The online PIM will remain accessible on the Iowa DOT website throughout the duration of the project. Comments received from the online PIM generally included the following:

- Provided locations of existing utilities within the revised alternative boundaries
- Noted preference for Alternative 2 or Alternative 6
- Noted support for a combined road/levee option
- Expressed concern about potential impacts on residences
- Expressed concerned about continued congestion within Missouri Valley

5.2.2 Correspondence

Throughout the course of the project, correspondence was received from the public through a variety of means, including the PIMs, telephone calls, letters, and email messages. All public correspondence was logged and considered in the NEPA process.

5.2.3 Future Public Involvement

A public hearing on this EA is anticipated in early 2022.

5.3 Tribal Coordination

Under the guidance of Section 106 of the National Historic Preservation Act of 1966 (16 USC 470f), states are required to coordinate with Indian tribes if a project could affect lands with cultural or religious significance. Consultation with the tribes was initiated in March 2018. An informational packet describing the proposed project was sent to 18 tribal entities. Four responses were received. The Prairie Island Indian Community indicated that they did not need to review the project further. The Upper Sioux Community indicated interest in the project and requested additional consultation throughout project development. A second letter regarding the findings of the Phase 1 archeological survey was sent to the same 18 tribal entities in January 2020. Three responses were received in late 2020 and early 2021. The Prairie Island Indian Community stated they are satisfied with the planned site treatment. The Santee Sioux Nation responded that they do not need to consult on the project. The Winnebago Tribe stated they do not need to be considered an interested party for the project.

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Appendix A
Memorandum of Understanding

**IOWA DEPARTMENT OF TRANSPORTATION
UNITED STATES ARMY CORPS OF ENGINEERS
CITY OF MISSOURI VALLEY IOWA
HARRISON COUNTY IOWA
Memorandum of Understanding**

County	<u>Harrison</u>
City	<u>Missouri Valley</u>
Iowa DOT	
Agreement No.	<u>2018-16-123</u>
Staff Action No.	<u>19-0375</u>

This Memorandum of Understanding (MOU) is made between the Iowa Department of Transportation, (hereafter the "DOT"), the Federal Highway Administration (hereafter the "FHWA") the city of Missouri Valley, Iowa (hereafter the "CITY"), Harrison County, Iowa (hereafter the "County"), and United States Army Corps of Engineers (hereafter the "USACE").

This MOU identifies the roles, work objectives and responsibilities of each party as they relate to the evaluation of plans for improving and relocating a portion of U.S. Highway 30 in Harrison County in and around Missouri Valley, Iowa and potential flood risk management plans along Willow Creek and the Boyer River in the same vicinity.

All parties acknowledge that during the alternatives development process for the US Highway 30 relocation project, consideration should be given to one alternative that could function as a dual flood risk management system and highway relocation. Other reasonable alternatives will also be considered.

WHEREAS, the DOT proposes to improve and/or relocate a portion of U.S. Highway 30 (Highway) in Harrison County in and around Missouri Valley, Iowa; and

WHEREAS, the relocation of the Highway is a joint effort between the FHWA and DOT and the DOT is conducting the preliminary study of the improvement and relocation alternatives under NEPA and other applicable federal statutes and regulations; and,

WHEREAS, Section 205 of the Flood Control Act of 1948, as amended (33 U.S.C. 701s) (hereinafter "Section 205"), authorizes the Secretary to undertake planning, design, and construction of small structural flood risk management projects not specifically authorized by Congress; and

WHEREAS, the City is willing to sponsor a plan to construct a flood risk reduction project along Willow Creek and the Boyer River vicinity; and

WHEREAS the USACE and the CITY are currently partnering in conducting a Feasibility Study for a Section 205 Project to protect the CITY; and,

WHEREAS, the Parties wish to study the possibility of a Section 205 Project in conjunction with a Highway Project.

NOW, THEREFORE, the Parties agree as follows:

I. PURPOSES AND OBJECTIVES

The purpose of this MOU is to describe the roles of each participant as DOT prepares an Environmental Assessment (EA) for the U.S. 30 improvement and relocation project, and USACE conducts a flood risk management Feasibility Study for the Section 205 Project in Missouri Valley, Iowa. This MOU provides an outline of expectations by parties concerning the planning of highway improvements and flood risk management alternatives, including the potential for a dual-function alternative to provide both flood risk management and highway improvements. Collaborating in the development of the alternatives will allow

benefits, impacts, and life-cycle costs (including design, construction, and long-term operation and maintenance) to be better evaluated and considered by the parties.

The overarching goal of execution of this MOU is to facilitate efficient and timely implementation of highway and flood risk management improvements in the vicinity of Missouri Valley (provided they are economically justified, technically sound, and publicly acceptable) though:

- i. Improved service to the public through multi-agency partnership;
- ii. Effective utilization of discipline-specific expertise within the parties;
- iii. And multi-agency cooperation in sharing data and analysis reducing waste and risk of conflict across agency jurisdictions.

It is anticipated that if a combined levee and dual-function alternative is identified as economically feasible at the conclusion of the Section 205 study and is also selected as the preferred alternative within the EA, this alternative would be further developed and refined and a future agreement will be developed by the parties to identify specific obligations and commitments that are consistent with the context and intent of this MOU.

II. DEFINITIONS

A. Dual-Function Alternative – a combined highway and levee which incorporates an engineered levee to meet USACE and FEMA standards within the embankment of the highway.

B. Life Cycle Costs – all costs associated with a levee to include planning, design, permitting, construction, contract administration, inspections, operation, maintenance, repair, rehabilitation, and replacement, as necessary.

C. Flood Risk Management Project – a project to manage/reduce flood risks to life, property, and/or infrastructure. In general, FRM projects can be structural (manage the flood event by storing, channelizing, diverting, or blocking floodwaters) or nonstructural (manage the flood event by moving or modifying property at risk to reduce the effects of the flood event when it occurs).

D. Combined Project – a combined USACE and DOT project which achieves both flood risk reduction/resiliency for the City and Purpose and Need for the Highway Project.

E. Lead Federal Agency – (per CEQ) the agency (or agencies) with primary responsibility in preparing the environmental assessment (EA) following provisions of the National Environmental Policy Act (NEPA). In this case, FHWA will function as lead federal agency.

F. Priority 1 Access Control: Permanent access to the highway is allowed only at interchange locations. No permanent at-grade access is allowed.

G. Priority 2 Access Control: Access to the highway is allowed only at interchanges and selected at-grade locations. The minimum allowable spacing between access locations is one-half mile. Limiting primary highway access to existing public road intersections at intervals of one mile is preferable.

H. Feasibility Study – a report process the USACE follows in order to evaluate and recommend a plan for implementation based on project criteria and policy.

III. ROLES AND RESPONSIBILITIES

A. CITY agrees to:

1. Assume jurisdiction of existing U.S. 30 east of the east corporation limits of Missouri Valley westerly to I-29 interchange located west of Missouri Valley and coinciding with the limits of a relocated U.S. 30. A future Transfer of Jurisdiction Agreement will be negotiated between the DOT, CITY, and COUNTY to complete this transfer. This transfer of jurisdiction would take place after relocated U.S 30 is open to traffic. The exact dates and limits of the transfers of jurisdiction will be included in the future transfer agreement.

2. Be responsible for the planning, design, and relocation (at CITY expense) of all CITY-owned utilities and facilities needed for construction of the U.S. 30 improvement and relocation project.
3. Provide, without cost to the DOT, any right-of-way for the project which involves dedicated streets or alleys, and any other CITY-owned lands which are required for the project subject to the condition that the DOT shall reimburse the CITY for the value of improvements situated on such CITY-owned lands. The CITY has appraised itself of the value of these lands, and as a portion of their participation in the project, voluntarily agrees to make such lands available without further compensation.
4. Operate and maintain the Section 205 flood risk management project (if justified) and the flood risk management features of a dual-function alternative (if selected) to ensure the flood risk management system functions as intended during time of need. Routine inspection, operation and maintenance activities will follow those elements found in Title 33, Part 208 "Flood Control Regulations, Local Flood Protection Works; Maintenance and Operation of Structures and Facilities" including but are not limited to:
 - a. Conduct annual inspections of the flood risk management system in accordance with the Operation and Maintenance Manual and provide inspection reports to USACE;
 - b. Repair all areas of the flood risk management system that have settled, eroded, or in any way require earthwork to restore the levee cross section to the original constructed condition.
 - c. Maintain a woody vegetation free zone of the levee extending a minimum of 15-feet beyond the toes of the levee/berms, or to the project right-of-way, if less than 15-feet. These areas will be maintained with a grass or sod cover and mowed at least once annually.
 - d. Removal of any and all drift, debris, or trash deposits near the flood risk management project.
 - e. Maintain access routes to the flood risk management project to allow access during high water events.
 - f. Installation, inspection, maintenance, and operation of all gate closure structures along the flood risk management system.
 - g. Carefully monitor all project tie-offs and coordinate with the entities that own and/or control them to prevent any future modifications that would adversely impact the function of the flood risk management project.
 - h. Assist in the prevention of any encroachment onto the flood risk management project within the project's permanent right-of-way.
 - i. Inspect and maintain any required under-seepage control facilities.
 - j. Coordinate with the appropriate agencies and jurisdictions during a high-water event including any closures that may be required to be operated.

B. DOT agrees to:

1. Be the lead agency (on behalf of FHWA) for planning, preliminary engineering and design, final engineering and design, environmental documentation, clearance, estimates, and public involvement.
2. Continue Planning, Preliminary Engineering and Environmental Documentation of a potential U.S. 30 improvement project following DOT and FHWA policy and procedures and NEPA guidelines. Preliminary minimum criteria for the U.S. 30 improvement and relocation project include:
 - a. Real estate right of way area sufficient to provide a corridor to accommodate (at a minimum) two-lane divided highway with flexibility for future expansion.
 - b. Grading for either two or four lanes of relocated U.S. 30 incorporating an engineered levee cross-section within the embankment and placing the base of the drainage course and base courses for the pavement at or above the elevation of the top of the levee.
 - c. Paving of at least two lanes of the relocated U.S. 30.
 - d. Priority 1 or Priority 2 access control (or combination thereof) along the extent of relocated U.S. 30.
 - e. No trails and/or enhancements will be included as part of the highway design.

- f. Portions of the right-of-way acquired for improvement to the Primary Road System shall be acquired by the DOT in the name of the State of Iowa.
 - g. In connection with this project any real estate and rights to real estate necessary for right of way at the connection of any city street or alley and a primary highway relocation or reconstruction project, any access road or frontage road right of way if any, and any permanent utility easements which are or which will be under the jurisdiction of the CITY may be acquired by the DOT, for and in the name of the CITY. Where acquired by contract the LPA will receive title from the contract seller and the CITY will accept title thereto. Where acquired by condemnation, a single joint condemnation proceeding will be instituted by the DOT to acquire real estate or rights in real estate needed by the CITY for the CITY and to acquire real estate or rights in real estate needed by the DOT for the DOT.
3. Include a Dual-Function Alternative as one of the alternatives evaluated in the EA
 4. Work closely with USACE on the development of the Dual-Function Alternative
 5. If the Dual-Function Alternative is selected as the preferred plan, provide permanent easement or right-of-entry to the City for inspection and operation and maintenance of the levee components including drainage structures, closure structures, and appurtenant features.
 6. Invite the USACE to become a cooperating agency for preparation of the EA, as provided in 40 CFR 1501.6

A. USACE agrees to:

1. Continue the Feasibility Study for the Section 205 Project following its normal planning processes outlined below:
 - a. Feasibility studies follow guidance developed in response to the requirements of the "Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies" from 1983 (commonly referred to as the "Principles and Guidelines", or "P&G"). The Principles and Guidelines define the Federal objective of USACE project planning, which is to contribute to national economic development consistent with protecting the Nation's environment, pursuant to national environmental statutes, applicable executive orders, and other Federal planning requirements. The Principles and Guidelines establish a 6-step planning process which is followed during the conduct of a feasibility study. These steps are:
 - Identifying Problems and Opportunities – relevant to the specific project setting incorporating both the Federal objective as well as state, tribe, and community concerns;
 - Inventorying and Forecasting Conditions – analyze conditions specific to the identified problems and opportunities establishing a baseline of what exists and would occur should no action be recommended;
 - Formulating Alternative Plans – a full array of potential plans to address the problems and realize the identified opportunities;
 - Evaluating Alternative Plans – analyze socio-economic, environmental, and other effects (both beneficial and adverse) of the alternative plans – typically iterative with a qualitative assessment of a larger pool of plans to screen down to a smaller set for detailed, quantitative analysis;
 - Comparing Alternative Plans – comparison of the plans and their effects related to the problems and opportunities; and
 - Selecting a Recommended Plan – identify a recommended plan(s) for implementation.
 - b. The 6-step planning process, although linear or step-wise in nature, typically is iterative with repeating some or all of the steps as the study progresses and new data and analysis inform potential changes or refinements to the various steps.
2. Add a Combined Project alternative consisting of a USACE levee linking to a Dual-Function Alternative for the U.S. 30 highway bypass, as one of the alternatives included in the Section 205 Project Feasibility Study effort;

3. Work closely with DOT as it develops a Dual-Function Alternative.
4. Develop a preliminary design for the levee component of the Dual-Function Alternative as part of its analysis of the Combined Project Alternative to assure that it will meet all FEMA and USACE levee certification requirements.
5. Be responsible for all preliminary design, final design, and permitting involving the flood risk management features including interior drainage, and flood control appurtenances of a dual-function alternative on an alignment that is suitable to all parties to this agreement.
6. Become a cooperating agency under NEPA as provided in 40 CFR 1501.6,

IV. FUNDING

State, Local, and Federal Agency participation in this MOU and costs for subsequent development and/or construction is subject to availability of funds. This summary of funding is meant to illustrate overall intention by all parties.

- a. If a combined levee and dual-function alternative is identified as economically feasible at the conclusion of the Section 205 study and is selected as the preferred alternative during the EA, the DOT, USACE, and City agree to collectively pursue funding of the selected improvement strategy.
- b. If available, FHWA and DOT funding of a dual function alternative will be limited to the cost that would be required for an equivalent non-dual-function Highway project at the same location.
- c. The CITY shall be responsible for any costs for relocation of CITY-owned utilities prior to or after construction.
- d. Funding and subsequent implementation of any project is contingent on the Iowa Transportation Commission adding it to the DOT's five-year program and availability of USACE program funding.
- e. Subsequent implementation of any project US 30 relocation is contingent on American Association of State Highway and Transportation Officials (AASHTO) approval of the proposed rerouting of U.S. 30.
- f. Funding for replacement of a dual-function alternative in the future (should it be damaged by a flooding event) would be shared between the CITY/USACE and DOT with the CITY/USACE responsible for replacement of the levee structure (under Public Law 84-99, as applicable) and the DOT responsible for the roadway and associated reconstruction.
- g. Existing U.S. 30 will be eligible for primary road funding prior to the transfer of jurisdiction to the CITY, contingent upon the approval of the Iowa DOT Commission.

V. PROJECT INFORMATION

If a combined levee and dual-function alternative is identified as economically feasible at the conclusion of the Section 205 study, is selected as the preferred alternative during the EA, and is subsequently approved and funded for construction. The parties agree as follows:

- a. The DOT shall be the lead agency for the construction, contract administration, and inspection of the relocated U.S. 30 construction. Any inspection of a dual-function alternative related to the flood risk management system or drainage aspects will be provided by the USACE.
- b. The CITY shall be responsible for the planning, design, and relocation of any CITY-owned utilities or facilities impacted by a dual-function alternative.

- c. The USACE will be responsible for planning, design, construction, and costs associated with environmental mitigation (Section 404, Section 106, Section 7, etc.) required by a dual-function alternative.
- d. The DOT will be responsible for planning, design, construction, and costs associated with environmental mitigation (Section 404, Section 106, Section 7, etc.) required for the portions of the U.S. 30 relocation that are not part of the dual-function alternative.
- e. The DOT shall be responsible for acquisition of all right of way. The CITY shall be responsible for providing, without cost to the DOT, any right-of-way for the project which involves dedicated streets or alleys, and any other CITY-owned lands which are required for the project subject to the condition that the DOT shall reimburse the CITY for the value of improvements situated on such other CITY-owned lands. The CITY has appraised itself of the value of these lands, and as a portion of their participation in the project, voluntarily agrees to make such lands available without further compensation.
- f. Portions of right-of-way acquired for improvements to the Primary Road System shall be acquired in the name of the State of Iowa.
- g. In connection with this project any real estate and rights to real estate necessary for right of way at the connection of any city street or alley and a primary highway relocation or reconstruction project, any access road or frontage road right of way if any, and any permanent utility easements which are or which will be under the jurisdiction of the CITY may be acquired by the DOT, for and in the name of the CITY. Where acquired by contract the LPA will receive title from the contract seller and the CITY will accept title thereto. Where acquired by condemnation, a single joint condemnation proceeding will be instituted by the DOT to acquire real estate or rights in real estate needed by the CITY for the CITY and to acquire real estate or rights in real estate needed by the DOT for the DOT.
- h. The DOT agrees to maintain the highway infrastructure in good repair. Routine Highway maintenance shall include, but is not limited to:
 - i. Snow and ice control.
 - ii. ACC and/or PCC crack/joint/filling, patching, leveling of joints, sealing, grinding, or overlays.
 - iii. Application and blading of granular surfaces, shoulder repair, mowing to the toe of ditch, application of herbicide.
 - iv. Maintenance of paint markings and highway related signs.
 - v. Maintenance of utilities associated with the roadway.
 - vi. Maintenance of highway drainage structures
- i. The USACE agrees that routine highway maintenance activities (Section V.f. but subject to revision upon final design and construction) will be included in the Operation and Maintenance Manual for the Combined Project alternative consisting of a USACE levee linking to a Dual-Function Alternative, and therefore exempt from further USACE review and permitting requirements (e.g. Section 408 approval).

The USACE agrees that routine highway maintenance activities (Section V.f. but subject to revision upon final design and construction) will likely meet the criteria for a "categorical permission" as set forth in the January 2017 Finding of No Significant Impact "Categorical Permissions Section 408 Alterations to Existing U.S. Army Corps of Engineers Civil Works Projects 33 U.S.C. Section 408, Iowa" and therefore will not require additional environmental effect determinations under NEPA.

- j. The City/USACE agrees to expeditiously provide any permit or approvals required by the City/USACE for work within the flood risk management project critical area along a relocated dual-function alternative if and when necessary.
- k. The DOT agrees to expeditiously provide any permit or approvals required by the USACE or the CITY for work within the primary highway right-of-way along a relocated dual-function alternative if and when necessary.

VI. TERMINATION

This MOU may be terminated for any reason and at any time by any party by providing written notice; unless otherwise specified in the notice, termination is effective ninety (90) days after the date of the termination notice. Upon termination, all parties are responsible for their own costs and expenses incurred in connection with their respective obligations under this MOU.

VII. EFFECTIVE DATE AND SIGNATURE

- a. Execution of this MOU formally evidences that the parties have reviewed and accept this MOU.
- b. If a dual-function alternative is the recommended plan at the conclusion of the Section 205 feasibility study and is the preferred alternative at the conclusion of the EA, it is anticipated that a future agreement will be executed containing more specific costs, funding arrangements, design details, and maintenance requirements while remaining consistent with the intent of this MOU.
- c. This MOU is approved and is effective upon the date of the last signature below.

IN WITNESS WHEREOF, each of the parties hereto has executed MOU No. 2018-16-123 as of the date shown opposite its signature below.

CITY OF MISSOURI VALLEY:

By: Shawn Kelly Date 11/30/19, 2019
 Title: Mayor
 I, Jodie Flaherty, certify that I am the Clerk of the City, and that Shawn Kelly, who signed said Agreement for and on behalf of the City was duly authorized to execute the same on the day of January 8, 2019.
 Signed: Jodie Flaherty
 City Clerk of Missouri Valley, Iowa.

BOARD OF SUPERVISORS OF HARRISON COUNTY:

By: _____ Date _____, 20____.
 Chairperson

ATTEST:

By: _____
 County Auditor

- j. The City/USACE agrees to expeditiously provide any permit or approvals required by the City/USACE for work within the flood risk management project critical area along a relocated dual-function alternative if and when necessary.
- k. The DOT agrees to expeditiously provide any permit or approvals required by the USACE or the CITY for work within the primary highway right-of-way along a relocated dual-function alternative if and when necessary.

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- a. Execution of this MOU formally evidences that the parties have reviewed and accept this MOU.
- b. If a dual-function alternative is the recommended plan at the conclusion of the Section 205 feasibility study and is the preferred alternative at the conclusion of the EA ,, it is anticipated that a future agreement will be executed containing more specific costs, funding arrangements, design details, and maintenance requirements while remaining consistent with the intent of this MOU.
- c. This MOU is approved and is effective upon the date of the last signature below.

IN WITNESS WHEREOF, each of the parties hereto has executed MOU No. 2018-16-123 as of the date shown opposite its signature below.

CITY OF MISSOURI VALLEY:

By: _____ Date _____, 20__.
 Title: Mayor
 I, _____, certify that I am the Clerk of the City, and that _____, who signed said Agreement for and on behalf of the City was duly authorized to execute the same on the day of _____, 20__.
 Signed: _____
 City Clerk of Missouri Valley, Iowa.

BOARD OF SUPERVISORS OF HARRISON COUNTY:

By: Walter Peterson Date 12-31- _____, 2018.
 Chairperson

ATTEST:
 By: Austin Burbanck
 County Auditor

FEDERAL HIGHWAY ADMINISTRATION:

By: Karen A Bobo Date Jan 8, 2019.

Name: Karen Bobo
Title: Division Administrator
FHWA- Iowa Division

UNITED STATES ARMY CORPS OF ENGINEERS:

By: _____ Date _____, 20__.

Name:
Title:

IOWA DEPARTMENT OF TRANSPORTATION:

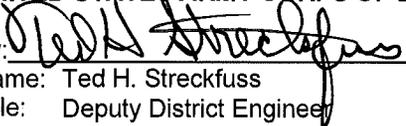
By: _____ Date _____, 20__.

Tammy Nicholson
Director – Office of Location and Environment

FEDERAL HIGHWAY ADMINISTRATION:

By: _____ Date _____, 20__.
Name: Karen Bobo
Title: Division Administrator
FHWA- Iowa Division

UNITED STATES ARMY CORPS OF ENGINEERS:

By:  Date **FEB 15 2019**, 20__.
Name: Ted H. Streckfuss
Title: Deputy District Engineer
Corps of Engineers, Omaha District

IOWA DEPARTMENT OF TRANSPORTATION:

By: _____ Date _____, 20__.
Tammy Nicholson
Director – Office of Location and Environment

FEDERAL HIGHWAY ADMINISTRATION:

By: _____ Date _____, 20____.
Name: Karen Bobo
Title: Division Administrator
FHWA- Iowa Division

UNITED STATES ARMY CORPS OF ENGINEERS:

By: _____ Date _____, 20____.
Name:
Title:

IOWA DEPARTMENT OF TRANSPORTATION:

By: Tammy Nicholson Date 2/18, 2019.
Name: Tammy Nicholson
Title: Director – Office of Location and Environment

Appendix B
Resources Considered and Dismissed

Resources Considered and Dismissed

Joint Development

No proposed facilities, such as trails or parks, are planned with the project.

Bicycle and Pedestrian Facilities

No pedestrian or bicycle paths were identified within or adjacent to the Study Area (City of Missouri Valley 2019).

Wild and Scenic Rivers

There are no rivers designated as wild and scenic or rivers listed in the Nationwide Rivers Inventory within the Study Area (National Wild and Scenic Rivers System n.d.; National Park Service 2019).

Air Quality

The Study Area is in attainment for ozone, particulate matter, sulfur dioxide, lead, carbon monoxide, and nitrogen dioxide (US Environmental Protection Agency [USEPA] 2019). The project complies with Iowa's current State Implementation Plan for attaining the National Ambient Air Quality Standards (which contain no transportation control measures) and with the conformity requirement for the Clean Air Act Amendments of 1990. Short-term air quality impacts associated with dust and equipment emissions during construction would be controlled by standard contract and equipment specifications.

Mobile Source Air Toxics

In accordance with the Federal Highway Administration's (FHWA) October 18, 2016, Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents, this project has been determined to generate minimal air quality impacts for Clean Air Act criteria pollutants and has not been linked with any special mobile source air toxics (MSAT) concerns. As such, this project will not result in changes in traffic volumes, vehicle mix, basic project location, or any other factor that would cause an increase in MSAT impacts of the project from that of the No-Build Alternative.

Moreover, USEPA regulations for vehicle engines and fuels will cause overall MSAT emissions to decline significantly over the next several decades. Based on regulations now in effect, an analysis of national trends with USEPA's MOBILE6.2 model forecasts a combined reduction of 72 percent in the total annual emission rate for the priority MSAT from 1999 to 2050 while vehicle-miles of travel are projected to increase by 145 percent. This will both reduce the background level of MSAT as well as the possibility of even minor MSAT emissions from this project.

Woodlands

Woodlands are defined as areas consisting of 3 acres or greater of forested land having at least 200 trees (3-inch diameter at breast height or greater) per acre or an area of 0.5 acre or greater, but less than 3 acres, of at least 200 trees (3-inch diameter at breast height or greater) per acre that is connected to a larger tract of forested land or a total of more than 3 acres (not including treed fencerows and trees along property lines). Approximately 0.06 acre of woodlands is located within the Build Alternative impact area. In accordance with Iowa DOT Policy 11A030,

woodland impacts do not occur if the area of impact is less than 2 acres. Avoidance of the woodlands would be determined during final design.

Parklands and Recreational Areas

Parks are defined as lands that have been officially designated as such by a federal, state, or local agency. Natural areas are lands designated by Congress or federal or state agencies as wildlife refuges, waterfowl production areas, wildlife management areas, nature preserves, or recreation areas. Parks and natural areas may contain recreational resources (such as trails, ball fields, and swimming pools). However, recreational resources can exist independently of designated parks or natural areas.

There are three park and recreation areas located within or adjacent to the Study Area: the Missouri Valley City Park / Harrison County Fairgrounds, the Missouri Valley soccer fields, and the Missouri Valley Community Schools. The Missouri Valley City Park / Harrison County Fairgrounds includes the Henry Nissen Athletic Complex, the Missouri Valley Aquatics Center, and the Watson Steam Train and Depot. The property is bounded by Willow Creek and US 30 on the east, Union Pacific Railroad on the south, Willow Road on the west, and West Huron Street on the north. The property is approximately 30 acres. The Missouri Valley City Park / Harrison County Fairgrounds amenities include a track and football field, rodeo area, exhibit halls, playground, campground, and aquatics center. The Missouri Valley soccer fields are located north and west of the Missouri Valley City Park. The area is bounded by Beacon Avenue on the east, West Huron Street on the south, Willow Road on the west, and West Clair Street on the north. The area consists of four mowed fields and a maintenance building. The Missouri Valley Community Schools are located between North 9th Street and US 30. Amenities include a playground, tennis courts, three baseball diamonds, and two open green spaces. There are no state recreation areas, wildlife management areas, or designated water trails within the Study Area (Iowa DNR 2019a, 2019b).

The Build Alternative would not impact any of the identified park or recreational areas.

Section 4(f) Resources

Section 4(f) of the US Department of Transportation Act of 1966 (23 United States Code 138, 49 United States Code 303, and 23 Code of Federal Regulations 774) provides protection for publicly owned parks, recreation areas, historic sites (regardless of ownership), and wildlife and waterfowl refuges from conversion to a transportation use.

As described under Parklands and Recreational Areas, the Study Area contains three parks and recreation areas that are also Section 4(f) resources: the Missouri Valley City Park, the Missouri Valley soccer fields, and the Missouri Valley Community Schools. No trails, state recreation areas, or wildlife management areas were identified within the Study Area. Additionally, an archeological survey was completed within the Study Area in 2018. The survey did not identify archeology resources that were eligible for listing in the National Register of Historic Places. An architectural survey was completed in May 2018–August 2019. Iowa DOT prepared an effect determination indicating “No Historic Properties Affected” on October 30, 2020. The effect determination requested that the Iowa State Historic Preservation Office (Iowa SHPO) concur with the finding, and Iowa SHPO responded with concurrence on December 3, 2020 (Iowa SHPO 2020).

References

- City of Missouri Valley. 2019. "Parks & Recreation." Welcome to the City of Missouri Valley, Iowa. Accessed April 4, 2019. <http://www.cityofmissourivalley.com/>.
- FHWA. 2016. Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents. October 18. https://www.fhwa.dot.gov/environment/air_quality/air_toxics/policy_and_guidance/msat/2016msat.pdf.
- Iowa DNR. 2019a. Iowa DNR Recreation Atlas. Accessed April 4, 2019. <https://programs.iowadnr.gov/maps/Recreationatlas/Recreation.html>.
- Iowa DNR. 2019b. "Interactive Paddling Map." Where to Paddle. Accessed April 22, 2019. <https://www.iowadnr.gov/Things-to-Do/Canoeing-Kayaking/Where-to-Paddle>.
- Iowa SHPO. 2020. Email to Jacob Woodcock, Iowa DOT, from Sara André, Iowa State Historic Preservation Office. December 3.
- National Park Service. 2019. Nationwide Rivers Inventory. Accessed April 22, 2019. <https://www.nps.gov/maps/full.html?mapId=8adbe798-0d7e-40fb-bd48-225513d64977>.
- National Wild and Scenic Rivers System. n.d. "Iowa." National Wild and Scenic Rivers System. Accessed April 22, 2019. <https://www.rivers.gov/iowa.php>.
- USEPA. 2019. Nonattainment Areas for Criteria Pollutants (Green Book). October 31. Accessed November 25, 2019. <https://www.epa.gov/green-book>.
- Ozone:** Nonattainment Areas for the 2015 Ozone Standards. <https://epa.maps.arcgis.com/apps/MapSeries/index.html?appid=d37c4a84a023422e8a24272dd8875f56>.
- Particulate matter:** Nonattainment Areas for the 2012 Annual Fine Particle Standards. <https://epa.maps.arcgis.com/apps/MapSeries/index.html?appid=5879c27026f94488a69bcff4cef067de>.
- Sulfur dioxide:** Nonattainment Areas for the 2010 Sulfur Dioxide Standards. <https://epa.maps.arcgis.com/apps/MapSeries/index.html?appid=f8036399a8df4f1995fd8abcdf88af20>.
- Lead:** Nonattainment Areas for the 2008 Lead (Pb) Standards. <https://epa.maps.arcgis.com/apps/MapSeries/index.html?appid=c2adc0e808f94dd59ee5fa5662263e3f&webmap=e1722be07b8e42d5811594f37851ff34>.
- Carbon monoxide:** Carbon Monoxide (1971) Maintenance Areas (Redesignated from Nonattainment by State/County/Area. <https://www3.epa.gov/airquality/greenbook/cmcty.html>.
- Nitrogen dioxide:** Nitrogen Dioxide (1971) Designated Area/State Information. <https://www3.epa.gov/airquality/greenbook/nbtc.html>.

Appendix C
Agency and Tribal Coordination

<scott.tener@faa.gov>; Scott_Blackburn@nps.gov; seth.moore@dnr.iowa.gov; shelly.grimmius@ia.usda.gov; smstruble1@q.com; steve.king@iowa.gov; Fender, Steven (FRA) <steven.fender@dot.gov>; tanaduke@aol.com; tlcohrs4@gmail.com; Harrison County [County Treasurer] <treasurer@harrisoncountyaia.org>; tridder@lomaschools.org; vicki.krohn@iowacourts.gov

Subject: Missouri Valley Environmental Assessment

For the purpose of complying with the National Environmental Policy Act (NEPA), the Federal Highway Administration, in cooperation with the Iowa Department of Transportation, is initiating the preparation of an environmental assessment (EA) for the Missouri Valley Bypass Study.

As a part of early coordination, we are soliciting comments from your agency regarding the proposed project as it relates to your agency's area of expertise. The comments and material you supply will be used to determine if the proposed improvements may have impacts that warrant further consideration and are consistent with future long-term development plans within the study corridor. Your comments will be incorporated into the environmental planning process and Environmental Assessment document as appropriate.

The enclosed information should help you understand the nature of the project and help you determine the location of the proposed roadway improvement. To remain on schedule a response would be appreciated within 30 days of receipt of this letter. If you have any questions about the project please contact Danny Zeiman at 515-239-1381 or by email at Danny.Zeiman@iowadot.us.

Sincerely,



DeeAnn L. Newell

Iowa Department of Transportation | Office of Location and Environment
800 Lincoln Way | Ames, Iowa 50010
Phone: 515-239-1364 | Email: DeeAnn.Newell@iowadot.us

Harrison County Board of Supervisors

John Straight, Chairman
Larry King, Vice Chair
Walter Utman, Member

July 19, 2018

Ms DeeAnn Newell
NEPA Document Management
Office of Location & Environment
800 Lincoln Way
Ames, IA 50010

Ref: Environmental Assessment for Missouri Valley ByPass - Hwy 30.
Project: NHSX-030-1(175)--3H-43

Dear Ms Newell:

In our opinion and several of our constituents, the Logan to Modale relocation of Hwy 30 along F-50 is a not in the best interest of the users of the road system through Harrison County. Our reasons are listed below:

1) Much of the traffic, ESPECIALLY HEAVY TRUCKS, WILL NOT FOLLOW THIS ALIGNMENT as follows:

All of the many trucking firms and operators that we have queried have expressed their disdain for the idea of driving west 10 miles out of their way to their destinations in Omaha or Blair. And they will not use the interstate for the leg south from Modale back to present Hwy 30. The heavy truck operators that currently use Hwy 30 in this area move a significant number of loads to and from the corn ethanol plant, rock quarry, asphalt and concrete plants, and grain elevators in Blair and Fort Calhoun.

The new chicken processing plant in Fremont will soon add to the heavy traffic loads from this area. In our experience, these operators and many lighter vehicles will take the shortest path to their destination and often prefer to take county roads. Many of the trucks hauling thru this area to Blair are triple-axle 96,000 lb trucks that are over-weight for Interstate travel. All of the overweight trucks and most other traffic would take Harrison County Hwy K-45 from Modale south to Hwy 30 on their way to Blair or west. K-45 is already routinely overloaded and overstressed with over-80,000 lb loads avoiding I-29 on their way to Blair and Omaha from Hornick, Charter Oak, Ute, Mapleton, Sloan, Whiting, Onawa, Blencoe, Soldier, and Moorhead. This spring when we embargoed K-45 to loads over 16 tons, we raised a hornet's nest of complaints from operators and grain elevators from these towns who refuse to carry 80,000 lbs or less - even for 90 days.

These over-weight trucks also move many road-damaging loads to and from Omaha for packing plants, grain elevators, and for heavy equipment sales and repair. These heavy loads will continue to use the old Hwy 30 alignment thru Missouri Valley to avoid Interstate travel and to avoid the extra miles. The local trucking operators hauling 80,000 and less that have expressed their opinion to us on this subject have all stated their intention to use the old alignment from Logan to Missouri Valley.

If the F-50 route to Modale is chosen by IDOT, we would insist on a change of jurisdiction for the Modale to Hwy 30 section of K-45 from the County to the State of Iowa in exchange for the County accepting the jurisdiction of the existing Logan to Missouri Valley section of Hwy 30. That's the route that thru traffic traveling west to Nebraska will take, and Harrison County should not be saddled with the results of that error in judgment.

2) The north alignment along F-50 WOULD DIVERT TRAFFIC FROM THE CITY OF MISSOURI VALLEY AREA THAT THEY DEPEND ON FOR BUSINESS. The overweight trucks and others that refuse the out-of-distance travel on the Modale route would still present significant safety and living-environment issues in the downtown area of Missouri Valley. We believe that the F-50/Modale choice would have a very negative impact on the City of Missouri Valley and on the City of Modale and that an adjacent bypass would have a positive impact on Missouri Valley's business and residential environment.

3) We believe that building the F-50/MODALE ALIGNMENT cannot be justified due to these EXTRA COSTS:

- a) that segment is much longer (approximately 11 miles) from Logan to Modale,
- b) expanding and rebuilding the segment of K-45 to Hwy 30 at DeSoto Bend (approximately 4.7 additional miles),
- c) the heavy cuts and fills and the large footprint on the environment that will be required in the Hog Creek area 1 mile west of Logan

4) OF THE THREE CHOICES OF BYPASS ALIGNMENT AT THE CITY OF MISSOURI VALLEY, WE PREFER CONCEPT #3, the most northerly alignment only with a modification of the north end to terminate at the horizontal curve south of 296th Street(F-58) approximately 1 mile south of the proposed north terminus. Besides the advantage of being shorter and therefore causing less environmental impact, the more direct and shorter 'Modified Concept #3' would improve the dangerous horizontal curve whose PI is approximately 750' south of the F-58 / Hwy30 existing intersection. 'Modified Concept #3' would also transfer jurisdiction of the deteriorated section of existing Hwy 30 in front of the IDOT's Missouri Valley shed from the Primary System to the County system, and would make an at grade intersection with County F-58 possible, and a tie in at that location should make an acceptable intersection design possible with old Hwy 30 and the new alignment.

This 'Modified Concept #3' route along Canal Street appears to have the least negative effect on the surrounding land, and we believe that business development would be more successful along both sides of the alignment closest to the city because of its close proximity to city residents. The

route along Canal Street would also eliminate the need for the County to replace the existing Willow Creek bridge on Canal Street. Elimination of that bridge would save the County about \$350,000.

This project should be designed and constructed as a Super-2 highway to be consistent with existing construction of Hwy 30 in Carroll and Crawford Counties between Denison and Carroll. That includes environmental, right of way acquisition, grading and paving. "Grade for four - pave for two" is a dreadful wasteful of taxpayers money in this situation. Hopefully common sense pragmatism will win out.

Thank you for the opportunity to comment on this important project.

Respectfully submitted by Harrison County Board of Supervisors,

John Straight, Chairman
Larry King, Vice Chairman
Walter Utman, Member

Newell, Deeann

From: Steven Struble <sstruble@harrisoncountya.org>
Sent: Thursday, July 19, 2018 7:13 AM
To: Newell, Deeann
Cc: sbonham@harrisoncountya.org; Danny.Zeiman@iowadot.us
Subject: RE: Hwy 30 Bypass Missouri Valley -EA Comments- Harrison County Engineer

Comments To Office of Location and Environment and Iowa Transportation Commissioners

From Steven Struble
Harrison County Engineer
301 N. 6th Avenue
Logan, IA 51546

Ref: Environmental Assessment for Missouri Valley ByPass - Hwy 30.
Project: NHSX-030-1(175)--3H-43

Comments To Office of Location and Environment and Iowa Transportation Commissioners

The Logan to Modale relocation of Hwy 30 along F-50 is a non-starter- a bad idea by my judgement (with 30 years of County Engineering experience) and unanimously among our contacts and associates here in Harrison County for several reasons:

1) Much of the traffic, ESPECIALLY HEAVY TRUCKS, WILL NOT FOLLOW THIS ALIGNMENT as follows:

All of the many trucking firms and operators that we have queried have expressed their disdain for the idea of driving west 10 miles out of their way to their destinations in Omaha or Blair. And they will not use the interstate for the leg south from Modale back to present Hwy 30. The heavy truck operators that currently use Hwy 30 in this area move a significant number of loads to and from the corn ethanol plant, rock quarry, asphalt and concrete plants, and grain elevators in Blair and Fort Calhoun. The new chicken processing plant in Fremont will soon add to the heavy traffic loads from this area. In my experience, these operators and many lighter vehicles will take the shortest path to their destination and often prefer to take county roads. Many of the trucks hauling thru this area to Blair are triple-axle 96,000 lb trucks that are over-weight for Interstate travel. All of the overweight trucks and most other traffic would take Harrison County Hwy K-45 from Modale south to Hwy 30 on their way to Blair or west. K-45 is already routinely overloaded and overstressed with over-80,000 lb loads avoiding I-29 on their way to Blair and Omaha from Hornick, Charter Oak, Ute, Mapleton, Sloan, Whiting, Onawa, Blencoe, Soldier, and Moorhead. This spring when we embargoed K-45 to loads over 16 tons, we raised a hornets nest of complaints from operators and grain elevators from these towns who refuse to carry 80,000 lbs or less - even for 90 days.

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If the F-50 route to Modale is chosen by IDOT, I would recommend that my Board of Supervisors insist on a change of jurisdiction for the Modale to Hwy 30 section of K-45 from the County to the State of Iowa in exchange for the County accepting the jurisdiction of the existing Logan to Missouri Valley section of Hwy 30. That's the route that thru traffic traveling west to Nebraska will take, and Harrison County should not be saddled with the results of that error in judgement.

2) The north alignment along F-50 WOULD DIVERT TRAFFIC FROM THE CITY OF MISSOURI VALLEY AREA THAT THEY DEPEND ON FOR BUSINESS. The overweight trucks and others that refuse the out-of-distance travel on the Modale route would still present significant safety and living-environment issues in the downtown area of Missouri Valley. I believe that the F-50/Modale choice would have a very negative impact on the City of Missouri Valley and on the City of Modale and that an adjacent bypass would have a positive impact on Missouri Valley's business and residential environment.

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- c) the heavy cuts and fills and the large footprint on the environment that will be required in the Hog Creek area

1 mile west of Logan

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would improve the dangerous horizontal curve whose PI is approximately 750' south of the F-58 / Hwy30 existing intersection. 'Modified Concept #3'

would also transfer jurisdiction of the deteriorated section of existing Hwy 30 in front of the IDOT's Missouri Valley shed from the Primary System to the County system, and would make an at grade intersection with County F-58 possible, and a tie in at that location should make an acceptable intersection design possible with old Hwy 30 and the new alignment.

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Elimination of that bridge would save the County about \$350,000.

This project should be designed and constructed as a Super-2 highway to be consistent with existing construction of Hwy 30 in Carroll and Crawford Counties between Denison and Carroll. That includes environmental, right of way acquisition, grading and paving. "Grade for four - pave for two" is a dreadful wasteful of taxpayers money in this situation. Hopefully common sense pragmatism will win out.

Thank you for the opportunity to comment on this important project.

Sincerely,

Steven Struble, P.E.
Harrison County Engineer

Newell, Deeann

From: Seth Moore <seth.moore@dnr.iowa.gov>
Sent: Thursday, July 5, 2018 10:29 AM
To: Newell, Deeann
Cc: Kristen Lundh
Subject: Environmental Review for Natural Resources 15757

Missouri Valley Bypass Study

Project Location

Harrison County

Thank you for inviting Department comment on the impact of this project. The Department has records of active eagle nests in the vicinity of this project. Bald eagles (*Haliaeetus leucocephalus*) were removed from the federal list of threatened and endangered species in 2007, and are no longer protected under the Endangered Species Act. However, bald eagles remain protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. Please contact the U.S. Fish and Wildlife Service - Rock Island Field Office, 1511 47th Avenue, Moline, IL 61265 regarding the proposed project.

Department records and data are not the result of thorough field surveys. If listed species or rare communities are found during the planning or construction phases, additional studies and/or mitigation may be required.

This letter is a record of review for protected species, rare natural communities, state lands and waters in the project area, including review by personnel representing state parks, preserves, recreation areas, fisheries and wildlife but does not include any comment from the Environmental Services Division of this Department. This letter does not constitute a permit. Other permits may be required from the Department or other state or federal agencies before work begins on this project.

Please reference the following DNR Environmental Review/Sovereign Land Program tracking number assigned to this project in all future correspondence related to this project: 15757.

If you have questions about this letter or require further information, please contact me at (515) 725-8464.

Sincerely,



Seth Moore | Environmental Specialist
Iowa Department of Natural Resources
P 515-725-8464 | F 515-725-8201 | 502 E. 9th St., Des Moines, IA
50319
www.iowadnr.gov

Newell, Deeann

From: Schwake, Christine <christine.schwake@dnr.iowa.gov>
Sent: Monday, July 16, 2018 9:48 AM
To: Newell, Deeann
Subject: Re: Missouri Valley Environmental Assessment

Dear Ms. Newell,

Thank you for the opportunity to comment on the Missouri Valley Bypass Study in preparation of the Environmental Assessment (EA). I recently attended the Concurrence Points (CP) 1 & 2 meeting and will continue to attend the CP meetings in the future. We have no concerns or comments to make at this time. Thank you for understanding the importance of the Loess Hills as you continue working on this project.

If you have any questions, please call me at (515) 725-8399.

Sincerely,

Christine Schwake
Environmental Specialist

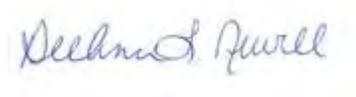
On Wed, Jun 20, 2018 at 8:58 AM, Newell, Deeann <DeeAnn.Newell@iowadot.us> wrote:

For the purpose of complying with the National Environmental Policy Act (NEPA), the Federal Highway Administration, in cooperation with the Iowa Department of Transportation, is initiating the preparation of an environmental assessment (EA) for the Missouri Valley Bypass Study.

As a part of early coordination, we are soliciting comments from your agency regarding the proposed project as it relates to your agency's area of expertise. The comments and material you supply will be used to determine if the proposed improvements may have impacts that warrant further consideration and are consistent with future long-term development plans within the study corridor. Your comments will be incorporated into the environmental planning process and Environmental Assessment document as appropriate.

The enclosed information should help you understand the nature of the project and help you determine the location of the proposed roadway improvement. To remain on schedule a response would be appreciated within 30 days of receipt of this letter. If you have any questions about the project please contact Danny Zeiman at 515-239-1381 or by email at Danny.Zeiman@iowadot.us.

Sincerely,



DeeAnn L. Newell

Iowa Department of Transportation | Office of Location and Environment
800 Lincoln Way | Ames, Iowa 50010
Phone: 515-239-1364 | Email: DeeAnn.Newell@iowadot.us



Christine Schwake | Environmental Specialist
Iowa Department of Natural Resources
P 515-725-8399 | F 515-725-8201 | 502 E. 9th St., Des Moines, IA 50319
www.iowadnr.gov

Newell, Deeann

From: Kathleen Moench <kathleen.moench@dnr.iowa.gov>
Sent: Wednesday, June 20, 2018 10:05 AM
To: Newell, Deeann
Subject: Re: Missouri Valley Environmental Assessment
Attachments: image004.jpg

DeeAnn,

After review of the Land & Water Conservation Fund (LWCF), Resource Enhancement and Protection Fund (REAP) and Wildlife Habitat Stamp Fund (WHSF) program projects in the area of the proposed study, no projects appear to be affected. Thank you for the early coordination process. Kathleen



Kathleen Moench | Executive Officer
Iowa Department of Natural Resources
P 515-725-8213 | F 515-725-0384 | 502 E. 9th St., Des Moines, IA 50319
www.iowadnr.gov

On Wed, Jun 20, 2018 at 8:58 AM Newell, Deeann <DeeAnn.Newell@iowadot.us> wrote:

For the purpose of complying with the National Environmental Policy Act (NEPA), the Federal Highway Administration, in cooperation with the Iowa Department of Transportation, is initiating the preparation of an environmental assessment (EA) for the Missouri Valley Bypass Study.

As a part of early coordination, we are soliciting comments from your agency regarding the proposed project as it relates to your agency's area of expertise. The comments and material you supply will be used to determine if the proposed improvements may have impacts that warrant further consideration and are consistent with future long-term development plans within the study corridor. Your comments will be incorporated into the environmental planning process and Environmental Assessment document as appropriate.

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Sincerely,



DeeAnn L. Newell

Iowa Department of Transportation | Office of Location and Environment
800 Lincoln Way | Ames, Iowa 50010
Phone: 515-239-1364 | Email: DeeAnn.Newell@iowadot.us

Newell, Deeann

From: colleen.conroy@dnr.iowa.gov on behalf of DNR Sov Land and Env Review <sler@dnr.iowa.gov>
Sent: Friday, June 22, 2018 1:30 PM
To: Newell, Deeann
Subject: (SL 15757) Re: Missouri Valley Environmental Assessment

Sovereign Lands: 15757

Your application was logged under the tracking number listed above. Please use the assigned tracking number on all future correspondence for this project.

Contact: Seth Moore, 515-725-8464, Seth.Moore@dnr.iowa.gov

Environmental Reviews can be submitted electronically to: SLER@dnr.iowa.gov.

This correspondence does not constitute approval. When review has been completed a letter or email concerning the Sovereign Lands determination will be issued.

Thank you,



Iowa Department of Natural Resources
502 E 9th St, Des Moines, IA 50319
www.iowadnr.gov

On Wed, Jun 20, 2018 at 10:54 AM Colleen Conroy <colleen.conroy@dnr.iowa.gov> wrote:



Colleen Conroy | Administrative Assistant
Iowa Department of Natural Resources
P 515-725-8268 | F 515-725-8202
502 E 9th St, Des Moines, IA 50319
www.iowadnr.gov

----- Forwarded message -----

From: Seth Moore <seth.moore@dnr.iowa.gov>
Date: Wed, Jun 20, 2018 at 9:03 AM
Subject: Fwd: Missouri Valley Environmental Assessment
To: Colleen Conroy <colleen.conroy@dnr.iowa.gov>

Please log, thank you.



Seth Moore | Environmental Specialist
Iowa Department of Natural Resources
P 515-725-8464 | F 515-725-8201 | 502 E. 9th St., Des Moines, IA
50319
www.iowadnr.gov

----- Forwarded message -----

From: **Newell, Deeann** <DeeAnn.Newell@iowadot.us>
Date: Wed, Jun 20, 2018 at 8:58 AM
Subject: Missouri Valley Environmental Assessment
To: summerlin.joe@epa.gov <summerlin.joe@epa.gov>
Cc: Mike.LaPietra@dot.gov <Mike.LaPietra@dot.gov>, Zeimen, Danny <Danny.Zeimen@iowadot.us>, Schram, Scott <Scott.Schram@iowadot.us>, Suhr, Scott <Scott.Suhr@iowadot.us>, Hofer, Brad <Brad.Hofer@iowadot.us>, Nicholson, Tamara <Tamara.Nicholson@iowadot.us>, Woodcock, Jacob <JACOB.WOODCOCK@iowadot.us>

For the purpose of complying with the National Environmental Policy Act (NEPA), the Federal Highway Administration, in cooperation with the Iowa Department of Transportation, is initiating the preparation of an environmental assessment (EA) for the Missouri Valley Bypass Study.

As a part of early coordination, we are soliciting comments from your agency regarding the proposed project as it relates to your agency's area of expertise. The comments and material you supply will be used to determine if the proposed improvements may have impacts that warrant further consideration and are consistent with future long-term development plans within the study corridor. Your comments will be incorporated into the environmental planning process and Environmental Assessment document as appropriate.

The enclosed information should help you understand the nature of the project and help you determine the location of the proposed roadway improvement. To remain on schedule a response would be appreciated within 30 days of receipt of this letter. If you have any questions about the project please contact Danny Zeiman at 515-239-1381 or by email at Danny.Zeiman@iowadot.us.

Sincerely,

DeeAnn L. Newell

Iowa Department of Transportation | Office of Location and Environment
800 Lincoln Way | Ames, Iowa 50010
Phone: 515-239-1364 | Email: DeeAnn.Newell@iowadot.us

Newell, Deeann

From: Kyle D. Nodgaard <kdnodgaa@up.com>
Sent: Thursday, July 5, 2018 2:24 PM
To: Newell, Deeann
Subject: Re: Missouri Valley Environmental Assessment
Attachments: Mo Valley bypass questions.docx

Deeann,

Please see the attached.

Kyle Nodgaard, P.E.
Industry and Public Projects
Union Pacific Railroad
Omaha, NE
kdnodgaa@up.com
402-544-2029 (Office)
402-271-5656 (Fax)

From: "Newell, Deeann" <DeeAnn.Newell@iowadot.us>
To: "kdnodgaa@up.com" <kdnodgaa@up.com>
Cc: "Hobbs, Maria" <Maria.Hobbs@iowadot.us>, "Engle, Edward" <Edward.Engle@iowadot.us>
Date: 06/21/2018 09:48 AM
Subject: Missouri Valley Environmental Assessment

This email originated from outside of the company. Please use discretion if opening attachments or clicking on links.

For the purpose of complying with the National Environmental Policy Act (NEPA), the Federal Highway Administration, in cooperation with the Iowa Department of Transportation, is initiating the preparation of an environmental assessment (EA) for the Missouri Valley Bypass Study.

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The enclosed information should help you understand the nature of the project and help you determine the location of the proposed roadway improvement. To remain on schedule a response would be appreciated within 30 days of receipt of this letter. If you have any questions about the project please contact Danny Zeimen at

515-239-1381 or by email at Danny.Zeimen@iowadot.us.

Sincerely,



DeeAnn L. Newell

Iowa Department of Transportation | Office of Location and Environment
800 Lincoln Way | Ames, Iowa 50010
Phone: 515-239-1364 | Email: DeeAnn.Newell@iowadot.us

[attachment "20180119_Letter.pdf" deleted by Kyle D. Nodgaard/UPC] [attachment "20180119_Railroad.doc" deleted by Kyle D. Nodgaard/UPC] [attachment "Missouri_Valley_Railroad.PDF" deleted by Kyle D. Nodgaard/UPC]

**

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**

EARLY RAILROAD COORDINATION

In addition to the information described in the cover letter, we are also requesting information specific to railroads. The information you provide by answering the questions below will help us to effectively consider railroad resources within the project study area, address issues related to those resources, and coordinate with the appropriate railroad contacts.

1. Does the map accurately depict all tracks and other railroad resources within the project study area? **From what I can tell, yes.**
2. Are there plans to add or abandon tracks within the project study area? When?
 - a. **No**
3. Are there industries/clients within the study area that are served by your tracks?
 - a. **Yes**
4. Are there other parties with interest in the tracks (e.g., leased tracks, operating agreements with other railroads or industry, etc.) within the project study area?
 - a. **Without doing copious amounts of research, probably yes.**
5. Please identify spur tracks and existing and proposed industry leads, if applicable.
 - a. **Spur tracks can be seen from the most recent aerial images. No proposed leads are in the works to my knowledge.**
6. What is the daily rail traffic on the tracks within the project study area? Is rail traffic on any of the tracks within the project study area projected to increase or decrease in the next 3 years?
 - a. **The rail traffic varies and changes based on location and business. See the FRA website for train counts at specific crossings.**
7. Is there anything else about your business in the project study area that you would like us to consider in our early planning process?
 - a. **The proposed location of the bypass would be helpful for UP to give more precise information.**
8. Please provide the name(s) and contact information for operations on the tracks within the project study area.
 - a. **Kyle Nodgaard for now, kdnodgaa@up.com, 402-544-2029**

ECT LAUX/CENWO-PMA-C/glp/2690
BET for JOHNSON/CENWO-PMA-A
BET THOMPSON/CENWO/PM-A
GROW/CENWO-OC



REPLY TO
ATTENTION

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
1616 CAPITOL AVENUE
OMAHA, NEBRASKA 68102-4901

July 31, 2018

Planning, Programs, and Project Management Division

Iowa Department of Transportation
Attn: Ms. Tamara Nicholson, Director
Office of Location and Environment
800 Lincoln Way
Ames, Iowa 50010

Dear Ms. Nicholson:

We have received your invitation (dated June 27, 2018) to participate as a Cooperating Agency on the Environmental Assessment (EA) for the Missouri Valley Highway 30 Bypass in Harrison County, IA. We understand that the proposed EA will investigate alternatives for routing a U.S. Highway 30 bypass around the community of Missouri Valley, and that at least one of the alternatives will be a dual-function highway project which will also serve as a flood risk management levee. This dual-function highway alternative is of keen interest to the Omaha District as we have been investigating flood risk issues in the Missouri Valley area periodically over the past two decades. We look forward to working with you as a cooperating agency for investigating the prospects of a dual-function highway alternative.

As you are aware, the Omaha District is currently working in partnership with the City of Missouri Valley on a feasibility study to investigate potential solutions to address flood risks along the Willow Creek and Boyer River. Our legal authority for conducting this study comes under Section 205 of the Flood Control Act of 1948, as amended, and we signed a feasibility study cost sharing agreement in September 2014 to initiate the study. As part of conducting that study we have been communicating and meeting with the IDOT regarding potential overlap, interaction, and synergy between proposed levees and a potential U.S. Highway 30 bypass. In recent months, we have been sharing data, analyses, and modeling with the IDOT to increase collaboration and efficiencies on the two projects. We recently attended a Technical Meeting with the IDOT on July 23rd to talk about the various alternatives and the challenges faced by the relocation of U.S. 30 and integrating the two projects. Conceptually we believe that an appropriately integrated flood risk management and highway bypass plan presents a unique opportunity to find a win-win for the City and the State of Iowa.

While the Omaha District is the lead for the above mentioned 205 study, the Rock Island District is the lead regarding permitting authority under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act. The Rock Island District Regulatory Branch will continue to participate with the IDOT by following the normal 404/NEPA Merger process for portions of the project that may require a Department of Army permit.

We look forward to collaborating with you on planning efforts toward meeting multiple objectives of the USACE, IDOT, and the community of Missouri Valley. If you have any questions, please contact Mr. Eric Laux, Environmental and Cultural Resources Section Chief at (402) 995-2682, or by e-mail at eric.a.laux@usace.army.mil. For any questions regarding the 404 permitting, the point of contact is Albert Frohlich, Regulatory Project Manager. He may be reached at (309) 794-5859, or by email at Albert.J.Frohlich@usace.army.mil.

Sincerely,

A handwritten signature in black ink, appearing to read "Eric Laux". The signature is fluid and cursive, with the first name "Eric" and last name "Laux" clearly distinguishable.

Eric A. Laux
Chief, Environmental & Cultural Resources

cc:
Albert Frohlich, Project Manager
Regulatory, Rock Island District

Newell, Deeann

From: Rogers, Richard - NRCS, Des Moines, IA <Richard.Rogers@ia.usda.gov>
Sent: Thursday, June 21, 2018 9:59 AM
To: Newell, Deeann
Cc: Jensen, Sindra - NRCS, Des Moines, IA; Bednarek, Richard - NRCS, Des Moines, IA; McCall, Kevin - NRCS, Des Moines, IA; Kinyon-Anderson, Tara - NRCS, Des Moines, IA
Subject: Missouri Valley Bypass Study, NRCS comments
Attachments: FPPA_Initial Screening Tool_Fillable_FINAL_030217.tiff

Dear Deeann,

Thank you for contacting the Iowa NRCS regarding the EA for the Missouri Valley Bypass Study. Of the many resource considerations important to our agency, two specific areas are either under our jurisdiction or control, namely Farmland Protection Policy Act (FPPA) and NRCS conservation easements. Because your letter identifies only specific locations on small scale maps (i.e., no project boundaries or limits of construction, or project details sufficient to render evaluate effects), it is premature for our office to provide you with information that would satisfactorily “clear” the proposed action.

However, as specific project areas are confirmed and detail provided, you are encouraged to contact Mr. Richard Bednarek, State Soil Scientist, and Ms. Sindra Jensen, Easements Program Coordinator for further assistance on FPPA and NRCS easements, respectively. Both Rick and Sindra are copied above.

As a guide, I am also attaching an FPPA flowchart we use for the purpose of determining if the NRCS would need to process a Form AD-1006 submitted by the responsible Federal agency, HUD, or its authorized agent.

Please contact me if you need further clarification.

Sincerely,

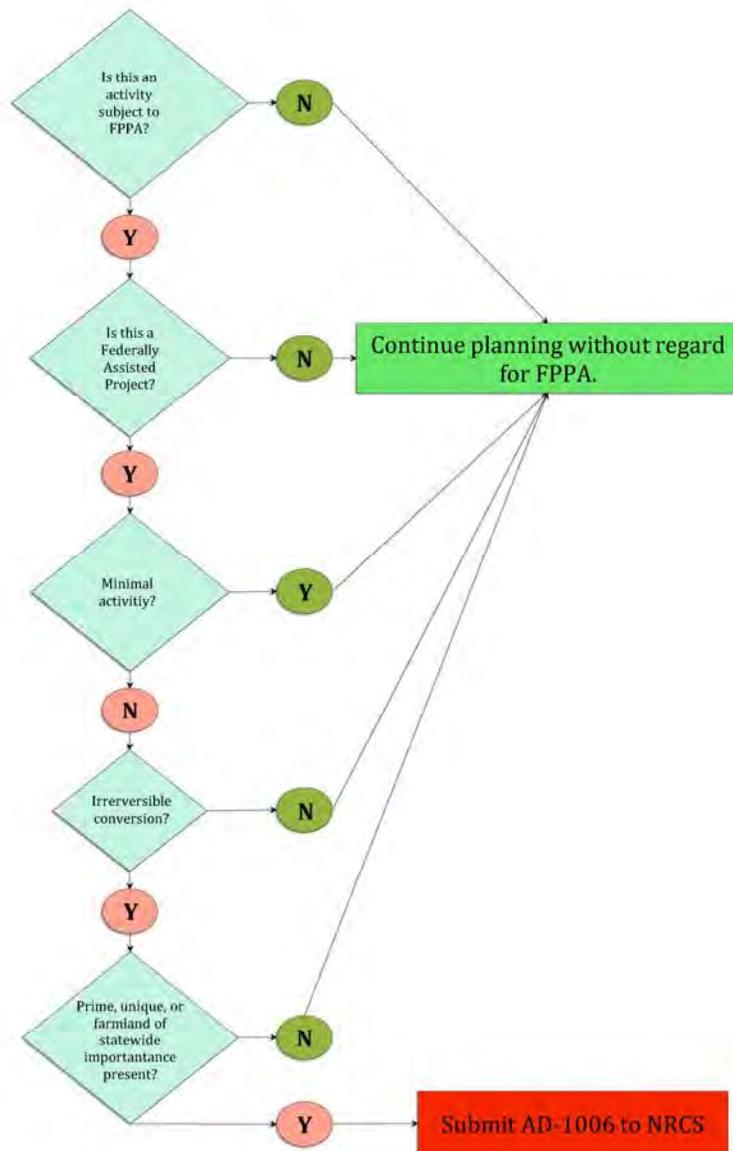
Richard A. Rogers

Richard A. Rogers
State Cultural Resource Specialist
210 Walnut Street, 693 Federal Building
Des Moines, Iowa 50309-2180
Natural Resources Conservation Service
Desk (515) 323-2253

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Farmland Protection Policy Act

Initial Screening Tool



CHECK ALL THAT APPLY
<p style="text-align: center;"><u>Federally Assisted Project</u></p> <p><input type="checkbox"/> Acquiring or disposing of land;</p> <p><input type="checkbox"/> Providing financing or loans;</p> <p><input type="checkbox"/> Managing property; or</p> <p><input type="checkbox"/> Providing technical assistance.</p>
<p style="text-align: center;"><u>Activities not subject to FPPA</u></p> <p><input type="checkbox"/> Federal permitting and licensing (on private or non-federal lands only).</p> <p><input type="checkbox"/> Projects planned and completed without the assistance of a Federal agency.</p> <p><input type="checkbox"/> Projects on land already in urban development or used for water storage,</p> <p><input type="checkbox"/> Construction within an existing right-of-way purchased on or before August 4, 1984,</p> <p><input type="checkbox"/> Construction for national defense purposes,</p> <p><input type="checkbox"/> Construction of on-farm structures needed for farm operations,</p> <p><input type="checkbox"/> Surface mining, where restoration to agricultural use is planned.</p>
<p style="text-align: center;"><u>Activities that may be subject to FPPA</u></p> <p><input type="checkbox"/> State highway construction projects, (through the Federal Highway Administration);</p> <p><input type="checkbox"/> Airport expansions;</p> <p><input type="checkbox"/> Electric cooperative construction projects;</p> <p><input type="checkbox"/> Railroad construction projects;</p> <p><input type="checkbox"/> Telephone company construction projects;</p> <p><input type="checkbox"/> Reservoir and hydroelectric projects;</p> <p><input type="checkbox"/> Federal agency projects that convert farmland;</p>
<p style="text-align: center;"><u>Minimal Activity</u></p> <p><input type="checkbox"/> Replacing existing structures within the same footprint.</p> <p><input type="checkbox"/> Installation of utility poles, underground utilities, and temporary access roads where restoration of pre-construction conditions is planned.</p>
<p style="text-align: center;"><u>Irreversible Conversion of Farmland to Non-Agricultural use</u></p> <p><input type="checkbox"/> An action or structure which precludes agricultural activity on areas considered prime or unique farmland, or farmland of statewide importance.</p> <p><input type="checkbox"/> The action or structure would permanently exclude such agricultural activity for the reasonably foreseeable future.</p> <p><input type="checkbox"/> Placing a structure or material on the surface, fencing and conservation easements that effectively exclude agricultural use for the reasonably foreseeable future.</p>

RESET FORM

Newell, Deeann

From: Ryan Sloan <ryan_sloan@ios.doi.gov>
Sent: Friday, June 22, 2018 3:48 PM
To: Newell, Deeann
Subject: Re: [EXTERNAL] Missouri Valley Environmental Assessment

Thank you DeeAnn!

Ryan Sloan
Office of Environmental Policy and Compliance
Denver Regional Environmental Protection Specialist
U.S. Department of the Interior
303-445-2502 (desk)
720-725-0075 (cell)
Ryan.Sloan@ios.doi.gov

On Thu, Jun 21, 2018 at 5:43 AM Newell, Deeann <DeeAnn.Newell@iowadot.us> wrote:

Ryan, I will add you to our distribution list.

Thanks

DeeAnn

From: Ryan Sloan [mailto:ryan_sloan@ios.doi.gov]
Sent: Wednesday, June 20, 2018 5:54 PM
To: Newell, Deeann <DeeAnn.Newell@iowadot.us>
Subject: Re: [EXTERNAL] Missouri Valley Environmental Assessment

Hi DeeAnn,

I work with Courtney Hoover at the Department of the Interior's Office of Environmental Policy and Compliance in Denver. Could you please add me to your distribution list?

Kind regards,

Ryan

Ryan Sloan
Office of Environmental Policy and Compliance
Denver Regional Environmental Protection Specialist
U.S. Department of the Interior
303-445-2502 (desk)
720-725-0075 (cell)
Ryan.Sloan@ios.doi.gov

On Wed, Jun 20, 2018 at 4:12 PM Hoover, Courtney

----- Forwarded message -----

From: **Newell, Deeann** <DeeAnn.Newell@iowadot.us>

Date: Wed, Jun 20, 2018 at 8:04 AM

Subject: [EXTERNAL] Missouri Valley Environmental Assessment

To: "assessor@harrisoncountytia.org" <assessor@harrisoncountytia.org>, "awlogan@iowtelecom.net" <awlogan@iowtelecom.net>, "beth.freeman@fema.dhs.gov" <beth.freeman@fema.dhs.gov>, "bhoesing@movalleycsd.org" <bhoesing@movalleycsd.org>, "bill.northey@dnr.ia.gov" <bill.northey@dnr.ia.gov>, "bnichols@movalleycsd.org" <bnichols@movalleycsd.org>, "Bradley, Bryan" <bryan.bradley@iowadot.us>, "Carrie.E.Dobbins@hud.gov" <Carrie.E.Dobbins@hud.gov>, "christine.schwake@dnr.iowa.gov" <christine.schwake@dnr.iowa.gov>, "cityofmodale@yahoo.com" <cityofmodale@yahoo.com>, "cjwcup@live.com" <cjwcup@live.com>, "ckm1962@hotmail.com" <ckm1962@hotmail.com>, "Courtney_Hoover@ios.doi.gov" <Courtney_Hoover@ios.doi.gov>, "Dave.Tierney@dnr.iowa.gov" <Dave.Tierney@dnr.iowa.gov>, "DeSoto@fws.gov" <DeSoto@fws.gov>, "director@iowaeda.com" <director@iowaeda.com>, "director@missourivalleychamber.com" <director@missourivalleychamber.com>, "frapa@dot.gov" <frapa@dot.gov>, "Heidi_Woeber@fws.gov" <Heidi_Woeber@fws.gov>, "IA_Webmanager@hud.gov" <IA_Webmanager@hud.gov>, "jasongsporrer@gmail.com" <jasongsporrer@gmail.com>, "jflaherpy@ci.missouri-valley.ia.us" <jflaherpy@ci.missouri-valley.ia.us>, "johntiffany@yahoo.com" <johntiffany@yahoo.com>, "jtrepa@westharrison.school" <jtrepa@westharrison.school>, "kathleen.moench@dnr.iowa.gov" <kathleen.moench@dnr.iowa.gov>, "kayla.a.eckert@usace.army.mil" <kayla.a.eckert@usace.army.mil>, "kimmy308@outlook.com" <kimmy308@outlook.com>, "kkruckman@movalleycsd.org" <kkruckman@movalleycsd.org>, "kurt.simon@ia.usda.gov" <kurt.simon@ia.usda.gov>, "lthomp@harrisoncountytia.org" <lthomp@harrisoncountytia.org>, "maafstrucking@gmail.com" <maafstrucking@gmail.com>, "mark.bechtel@dot.gov" <mark.bechtel@dot.gov>, "martha.s.chieply@usace.army.mil" <martha.s.chieply@usace.army.mil>, "mayor@ci.missouri-valley.ia.us" <mayor@ci.missouri-valley.ia.us>, "mcollins@harrisoncountytia.org" <mcollins@harrisoncountytia.org>, "mike.naig@dnr.ia.gov" <mike.naig@dnr.ia.gov>, "minesAndMinerals@iowaAgriculture.gov" <minesAndMinerals@iowaagriculture.gov>, "movalleypubliclibrary@gmail.com" <movalleypubliclibrary@gmail.com>, "pattysmoon@msn.com" <pattysmoon@msn.com>, "Polly.Carver-Kimm" <Polly.Carver-Kimm@idph.iowa.gov>, "psears@harrisoncountytia.org" <psears@harrisoncountytia.org>, "rholtz@movalleycsd.org" <rholtz@movalleycsd.org>, "rmpabouts@yahoo.com" <rmpabouts@yahoo.com>, "scott.tener@faa.gov" <scott.tener@faa.gov>

"Scott_Blackburn@nps.gov" <Scott_Blackburn@nps.gov>, "seth.moore@dnr.iowa.gov" <seth.moore@dnr.iowa.gov>, "shelly.grimmius@ia.usda.gov" <shelly.grimmius@ia.usda.gov>, "smstruble1@q.com" <smstruble1@q.com>, "steve.king@iowa.gov" <steve.king@iowa.gov>, "steven.fender@dot.gov" <steven.fender@dot.gov>, "tanaduke@aol.com" <tanaduke@aol.com>, "tlcohrs4@gmail.com" <tlcohrs4@gmail.com>, "Harrison County [County Treasurer]" <treasurer@harrisoncountyaia.org>, "tridder@lomaschools.org" <tridder@lomaschools.org>, "vicki.krohn@iowacourts.gov" <vicki.krohn@iowacourts.gov>

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Sincerely,

DeeAnn L. Newell

Iowa Department of Transportation | Office of Location and Environment
800 Lincoln Way | Ames, Iowa 50010
Phone: 515-239-1364 | Email: DeeAnn.Newell@iowadot.us

--

Courtney Hoover

Regional Environmental Officer, Denver

Office of Environmental Policy and Compliance

Department of the Interior

303-445-2503 (Desk) 303-478-3373 (Cell)

Denver Federal Center, Building 67 Room 118

Denver, CO 80225



Form 536002 04/15

Tribal Notification Form
To: Prairie Island Indian Community

Date 03/09/2018 IA DOT contact Jacob Woodcock
IADOT project # NHSX-030-1(175)--3H-43 Phone # 515-239-1035
Location Missouri Valley Bypass US Hwy 30; Harrison County E-mail jacob.woodcock@iowadot.us
Description Preliminary Engineering

Type of Project (see map)

- VERY SMALL - Disturb less than 12-inch depth (plow zone)
SMALL - Grading on existing road, shouldering, ditching, etc.
SMALL - Bridge or culvert replacement
LARGE - Improve existing road from 2 lanes to 4 lanes
LARGE - New alignment
OTHER -

Type of Coordination/Consultation Points

- 1 - Early project notification (project map and description)
2 - Notification of survey findings (Phase I)
2a - Notification of site evaluation (Phase II)
3 - Consultation regarding site treatment
4 - Data Recovery Report
5 - Other

Type of Findings

- No American Indian archaeology site(s) found
--Section 106 Consultation Process ends*
American Indian archaeology sites found but not eligible for National Register listing -- Section 106 Consultation Process ends*
Avoided American Indian archaeology sites eligible for National Register listing (see map and list of sites) --Section 106 Consultation Process may or may not end
Potentially significant American Indian archaeology sites found (see map and list of sites)
American Indian archaeology sites eligible for National Register listing cannot be avoided (see map)
Burial site found

* In the event of a late discovery, consultation will be reopened

of non-significant prehistoric archaeology sites
of potentially significant prehistoric archaeology sites
of National Register-eligible prehistoric archaeology sites

Affected National Register Properties

- Investigating avoidance or minimizing harm options Protected
Avoided National Register Evaluation

Please Respond

Who should we contact for site/project-related discussions?

Name Street Address City, Zip Code
Phone E-mail

Do you know of any sensitive areas within or near the project the FHWA/DOT should avoid (please describe)?

- Thank you for the information; however, we do not need to consult on this particular project.
We have no objections at this time, but request continued notification on this project.
Please send a copy of the archaeology report.
Thank you for the information. We are satisfied with the planned site treatment.
We have concerns and wish to consult.
We wish to participate in the Memorandum of Agreement for this project.

Comments

Name Naah White Tribe or Nation Prairie Island Indian Community Date 4-2-18

(Comments continued on back)

From: [Samantha Odegard](#)
To: [Woodcock, Jacob](#)
Subject: Upper Sioux Community requesting to be consulted Missouri Valley Bypass
Date: Monday, April 16, 2018 12:41:33 PM

Good Afternoon Jacob,

Following up on your Consultation Initiation that we received March 13th, the Upper Sioux Community THPO wish to continue the consultation process and plan to be active in this project.

Samantha Odegard

Tribal Historic Preservation Officer

Upper Sioux Community

PO Box 147 Granite Falls, MN 56241

samanthao@uppersiouxcommunity-nsn.gov

Office Phone: 320-564-6334



Form 536002 04/15

Tribal Notification Form
To: Prairie Island Indian Community

Date 01/23/2020 IA DOT contact Jacob Woodcock
IADOT project # NHSX-030-1(175)--3H-43 Phone # 515-239-1035
Location Missouri Valley Bypass E-mail jacob.woodcock@iowadot.us
Description Preliminary Engineering

Type of Project (see map)

- VERY SMALL - Disturb less than 12-inch depth (plow zone)
SMALL - Grading on existing road, shouldering, ditching, etc.
SMALL - Bridge or culvert replacement
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OTHER - Preliminary Engineering

Type of Coordination/Consultation Points

- 1 - Early project notification (project map and description)
2 - Notification of survey findings (Phase I)
2a - Notification of site evaluation (Phase II)
3 - Consultation regarding site treatment
4 - Data Recovery Report
5 - Other

Type of Findings

- No American Indian archaeology site(s) found
--Section 106 Consultation Process ends*
American Indian archaeology sites found but not eligible for National Register listing -- Section 106 Consultation Process ends*
Avoided American Indian archaeology sites eligible for National Register listing (see map and list of sites) --Section 106 Consultation Process may or may not end
Potentially significant American Indian archaeology sites found (see map and list of sites)
American Indian archaeology sites eligible for National Register listing cannot be avoided (see map)
Burial site found

* In the event of a late discovery, consultation will be reopened

0 # of non-significant prehistoric archaeology sites
0 # of potentially significant prehistoric archaeology sites
0 # of National Register-eligible prehistoric archaeology sites

Affected National Register Properties

- Investigating avoidance or minimizing harm options Protected
Avoided National Register Evaluation

*****Please Respond*****

Who should we contact for site/project-related discussions?

Noah White 5636 Sturgeon Lk Rd Welch Mn 55089
Name Street Address City, Zip Code

Phone E-mail

Do you know of any sensitive areas within or near the project the FHWA/DOT should avoid (please describe)?

- Thank you for the information; however, we do not need to consult on this particular project.
We have no objections at this time, but request continued notification on this project.
Please send a copy of the archaeology report.
Thank you for the information. We are satisfied with the planned site treatment.
We have concerns and wish to consult.
We wish to participate in the Memorandum of Agreement for this project.

Comments

Comments section with lines for text entry.

Name Tribe or Nation Date

Prairie Island Indian Community

(Comments continued on back)

Additional Comments _____

Fold first

(TAPE--Do NOT Staple.)

(TAPE--Do NOT Staple.)

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CULTURAL RESOURCES SECTION
IOWA DEPARTMENT OF TRANSPORTATION
800 LINCOLN WAY
AMES IA 50010-9902



Fold last



Form 536002 04/15

Tribal Notification Form
To: Santee Sioux Nation

Date 12/08/2020 IA DOT contact Jacob Woodcock
IADOT project # NHSX-030-1(175)--3H-43 Phone # 515-239-1035
Location Missouri Valley Bypass E-mail jacob.woodcock@iowadot.us
Description Preliminary Engineering

Type of Project (see map)
VERY SMALL - Disturb less than 12-inch depth (plow zone)
SMALL - Grading on existing road, shouldering, ditching, etc.
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OTHER - Preliminary Engineering
Type of Coordination/Consultation Points
1 - Early project notification (project map and description)
2 - Notification of survey findings (Phase I)
2a - Notification of site evaluation (Phase II)
3 - Consultation regarding site treatment
4 - Data Recovery Report
5 - Other
Type of Findings
X No American Indian archaeology site(s) found
--Section 106 Consultation Process ends*
American Indian archaeology sites found but not eligible for National Register listing -- Section 106 Consultation Process ends*
Avoided American Indian archaeology sites eligible for National Register listing (see map and list of sites) --Section 106 Consultation Process may or may not end
Potentially significant American Indian archaeology sites found (see map and list of sites)
American Indian archaeology sites eligible for National Register listing cannot be avoided (see map)
Burial site found
of non-significant prehistoric archaeology sites
of potentially significant prehistoric archaeology sites
of National Register-eligible prehistoric archaeology sites

Affected National Register Properties
Investigating avoidance or minimizing harm options Protected
Avoided National Register Evaluation

Who should we contact for site/project-re
Name Mishy Frazier
Phone 402-857-3451
Do you know of any sensitive areas within
Santee Sioux Nation THPO
52946 Highway 12 Niobrara, NE 68760-7057
City, Zip Code City, Zip Code
E-mail E-mail
cribe)? ssn.thpo@gmail.com
Thank you for the information; however, we do not need to consult on this particular project.
We have no objections at this time, but request continued notification on this project.
Please send a copy of the archaeology report.
Thank you for the information. We are satisfied with the planned site treatment.
We have concerns and wish to consult.
We wish to participate in the Memorandum of Agreement for this project.
Comments
Name Mishy Frazier Tribe or Nation Santee Sioux Nation of NE Date 1/11/2021

(Comments continued on back)

Additional Comments

Fold first

(TAPE--Do NOT Staple.)

OMAHA NE 680

13 JAN 2021 PM 4 L

(TAPE--Do NOT Staple.)

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OFFICE OF LOCATION AND ENVIRONMENT
CULTURAL RESOURCES SECTION
IOWA DEPARTMENT OF TRANSPORTATION
800 LINCOLN WAY
AMES IA 50010-9902



Fold last

Randall, Emily [DOT]

From: Woodcock, Jacob
Sent: Thursday, January 7, 2021 3:20 PM
To: Randall, Emily [DOT]
Subject: FW: US Highway 30 Missouri Valley Bypass, Harrison County, IA; Preferred Alternative

Emily,

Would you please add this to the file and note in PSS when you get a chance.

Thanks,

Jacob

From: Jordann Blackfish <jordann.blackfish@winnebagoTribe.com>
Sent: Thursday, January 7, 2021 3:12 PM
To: Woodcock, Jacob <JACOB.WOODCOCK@iowadot.us>
Cc: Sunshine Bear <sunshine.bear@winnebagoTribe.com>
Subject: Re: US Highway 30 Missouri Valley Bypass, Harrison County, IA; Preferred Alternative

Good Afternoon,

I am the assistant to our THPO, Sunshine Thomas-Bear. I am replying to this email on her behalf. If you have any questions, please feel free to contact me or Sunshine who is CC'd in this email.

Thank you for your section 106 correspondence. This project will not affect any known sites affiliated with the Winnebago Tribe of Nebraska. We do not have any questions or concerns regarding your proposed undertaking at this time. You do not need to consider us as an interested party throughout the duration of your undertaking.

Thank you,

Jordann Blackfish

Repatriation/Museum Assistant

Angel DeCora Museum

Phone: 402-257-5587

Thunder Clan Building, 610 E College Dr, Winnebago, NE

Email: Jordann.Blackfish@WinnebagoTribe.com

Office of Location & Environment

800 Lincoln Way, Ames, IA 50010

Phone: 515-239-1035 | Email: jacob.woodcock@iowadot.us

March 9, 2018

Ref No: NHSX-030-1(175)--3H-43

Harrison County

Primary Systems

Consultation Initiation

R & C: _____

Mr. Daniel Higginbottom
Ms. Sara Andre
State Historical Society of Iowa
600 East Locust
Des Moines, IA 50319-0290

Dear Daniel and Sara:

RE: Preliminary Engineering for Missouri Valley Bypass US Hwy 30; Harrison County, Iowa; **Consultation Initiation**

For purposes of the National Historic Preservation Act, the Iowa Department of Transportation (Iowa DOT) in corporation with the Federal Highway Administration (FHWA) is initiating this consultation to request any concerns you may have and assist us in identifying historic properties that may be affected by the proposed project.

The Iowa DOT in corporation with the FHWA is proposing to construct the Missouri Valley Bypass which would bypass Missouri Valley, Iowa, and reduce truck and passenger vehicles through town. This project is early in the development stage so a full range of alternatives is not known at this time, but there are two study areas under consideration (**Figure 1**). The northern study area extends along Harrison County Road F-50 from Interstate 29 to US Hwy 30. The southern study area includes an area south of Missouri Valley and extends along US Hwy 30 from I-29 to 280th Street. The proposed project will utilize existing right-of-way (ROW) and additional ROW will likely be required to accommodate the project activities.

The study area has been identified to include proposed work areas where the ground disturbance may occur and considers potential indirect effects. The Area of Potential Effect will be defined after comments are received from your agency and other consulting parties.

A site records search revealed a number of previously recorded archaeological and built environment resources in the current study area (**Table 1**). Several of the buildings noted below no longer appear to be extant. Bear Creek Archeology, Inc. will begin conducting a Phase I archaeological investigation and intensive architectural investigation of the study area in the spring 2018. A finalized report of the investigation will be submitted to your office and appropriate consulting parties in a future correspondence.

Table 1

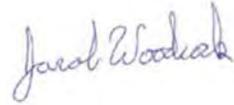
Site Number	Site Type	National Register Status/Recommendation	Study Area
13HR52	Historic Euro-American Occupation	Potentially Eligible	Northern
13HR53	Historic Euro-American Townsite	Potentially Eligible	Northern
13HR58	Historic Euro-American Fill	No Further Work	Southern
13HR59	Historic Euro-American Habitation	No Further Work	Southern
13HR60	Historic Euro-American Habitation	No Further Work	Southern
13HR61	Historic Euro-American Habitation	No Further Work	Southern
13HR62	Historic Euro-American Scatter	No Further Work	Southern
13HR122	Historic Euro-American Farm	N/A	Northern
13HR129	Historic Euro-American Scatter	Not Eligible	Northern
43-00119	Sidewalk	Potentially Eligible	Southern
43-00120	Sidewalk	Potentially Eligible	Southern
43-00123	Single Family Home/111 North 3 rd Street	Potentially Eligible	Southern
43-00145	Commercial Building (Missouri Valley Opera House)	Potentially Eligible	Southern
43-00161	Commercial Building/110 South 8 th Street	Potentially Eligible	Southern
43-00162	Single Family Home/115 South 8 th Street	Potentially Eligible	Southern
43-00165	Commercial Building/403 East Erie Street	Potentially Eligible	Southern
43-00166	Commercial Building/401 East Erie Street	Potentially Eligible	Southern
43-00167	Commercial Building	Potentially Eligible	Southern
43-00168	Commercial Building/502 East Erie Street	Potentially Eligible	Southern
43-00169	Commercial Building (Masonic Temple)/306-308 East Erie Street	Potentially Eligible	Southern
43-00170	Commercial Building (Iowa Power Building)/310 East Erie Street	Potentially Eligible	Southern
43-00171	Commercial Building/407 East Erie Street	Potentially Eligible	Southern
43-00172	Commercial Building/423 East Erie Street	Potentially Eligible	Southern
43-00173	Commercial Building/422 East Erie Street	Potentially Eligible	Southern
43-00174	Commercial Building/515 East Erie Street	Potentially Eligible	Southern
43-00176	Single Family Home/806 East Erie Street	Potentially Eligible	Southern
43-00177	Single Family Home/820 East Erie Street	Potentially Eligible	Southern
43-00178	Single Family Home/826 East Erie Street	Potentially Eligible	Southern
43-00180	Single Family Home	Potentially Eligible	Southern
43-00184	Single Family Home	Potentially Eligible	Southern
43-00200	Commercial Building	Potentially Eligible	Southern
43-00429/43-00153	Single Family Home/102 South 7 th Street	Eligible	Southern
43-00437	Object/Watson Steam Train	Eligible	Southern
43-00441	Commercial Building (Rialto Theatre)/405 East Erie Street	Potentially Eligible	Southern

Consultation initiation letters are being sent to Tribes/Nations with Harrison County interest, the Office of the State Archaeologist, the Harrison County Historic Preservation Commission, the Harrison County Historical Village and Welcome Center, the Lincoln Highway Museum and the Wisecup Farm Museum.

We request your input on our proposed project so that we can incorporate your concerns into project development. For that purpose, we request that you respond within thirty days of your receipt of this correspondence. Should your office issue a Review and Compliance number for this project, please let us know.

If you have any questions, please contact me at 515-239-1035 or jacob.woodcock@iowadot.us.

Sincerely,

A handwritten signature in blue ink that reads "Jacob Woodcock". The signature is written in a cursive style.

Jacob Woodcock
Office of Location and Environment

JWW

Enclosures:

Study Area Map

cc: Scott Schram – District 4 Engineer
Danny Zeiman – Project Manager
DeeAnn Newell – NEPA/OLE – DOT

Location & Environment Bureau

800 Lincoln Way, Ames, IA 50010

Phone: 515-239-1035 | Email: jacob.woodcock@iowadot.us

January 23, 2020

Ref. NHSX-030-1(175)--3H-43

Primary System

Harrison County

BCA 2386

R&C: 20180343056

Mr. Daniel Higginbottom
State Historic Preservation Office
600 East Locust
Des Moines, IA 50319

RE: Phase I Archaeological Survey, US Highway 30 Missouri Valley Bypass Location Study Area, Harrison County, Iowa; No Determination of Effect

Dear Daniel:

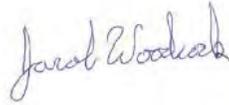
Enclosed for your review and comment is the *Phase I Archaeological Survey, US Highway 30 Missouri Valley Bypass Location Study Area, Harrison County, Iowa*. The Iowa DOT in corporation with the FHWA is proposing to construct the Missouri Valley Bypass which would bypass Missouri Valley, Iowa, and reduce truck and passenger vehicles through town. This project is in the development stage so the preferred alternative is not known at this time.

The Phase I archaeological investigation by Bear Creek Archaeology (BCA) began in June of 2018 to determine if significant archaeological resources occur in the project area. In total, the survey area covers 3,762 acres (1522 ha).

The BCA investigation consisted of archival research which identified previous archaeological investigations of the study area, geomorphological investigation, pedestrian survey, and subsurface testing. The investigation identified no new sites and did not reexamine five previously reported archaeological sites due to prior recommendations. The BCA investigation included an geomorphological study during which nearly all of the project area was interpreted to have low archaeological potential. Focused subsurface testing in moderate and high potential areas were negative. Based on the outcome of the current investigation and prior archaeological surveys, the project area is recommended for no additional archaeological investigation. Our office agrees with the recommendations in the attached *Phase I Archaeological Survey, US Highway 30 Missouri Valley Bypass Location Study Area, Harrison County, Iowa*.

A project determination of effect will be established when the Area of Potential Effect has been determined and consultation regarding all historic properties has occurred. An intensive architectural report is being developed and will be consulted on in the near future. If you concur with the results of this archaeological investigation, please sign the concurrence line below, add your comments and return this letter. If you have any questions, please contact me at 515-239-1035 or jacob.woodcock@iowadot.us.

Sincerely,



Jacob Woodcock
Location and Environment Bureau

JWW

Enclosure

cc: Wes Mayberry – District 4 Engineer
Danny Zeiman – Project Manager
Derek Lee – Bear Creek Archaeology
DeeAnn Newell – NEPA/OLE - DOT

Concur: _____ Date: _____
SHPO Archaeologist

Comments:

Location & Environment Bureau

800 Lincoln Way, Ames, IA 50010

Phone: 515-239-1035 | Email: jacob.woodcock@iowadot.us

March 13, 2020

Ref. NHSX-030-1(175)--3H-43

Primary System

Harrison County

BCA 2387

R&C: 20180343056

Ms. Sara Andre
State Historic Preservation Office
600 East Locust
Des Moines, IA 50319

**RE: Phase I Architectural Survey, US Highway 30 Missouri Valley Bypass Location Study Area
Harrison County, Iowa; *No Determination of Effect***

Dear Sara:

Enclosed for your review and comment is the *Phase I Architectural Survey, US Highway 30 Missouri Valley Bypass Location Study Area Harrison County, Iowa*. The Iowa DOT in corporation with the FHWA is proposing to construct the Missouri Valley Bypass which would bypass Missouri Valley, Iowa, and reduce truck and passenger vehicles through town. This project is in the development stage, so the preferred alternative is not known at this time.

The intensive architectural history investigation by Bear Creek Archaeology (BCA) was carried out between May 2018 to August 2019 to determine if significant historic architectural resources occur in the project area. In total, the survey area covers 3.762 acres (1,522.4 ha). A total of 125 resources were identified at the time of the fieldwork as less than 45 years of age and the remaining 354 historic resources were evaluated for their potential National Register of Historic Places (NRHP) eligibility. Three previously inventoried properties, all extant, were previously recommended as eligible for the NRHP: 102 S. 7th Street (43-00153/43-00180/43-00429), Shawmutt/city park (miniature steam train; 43-00437), and 405 E. Erie Street (theatre; 43-00441). A visual inspection was made of the house and theatre and they were found to be in good condition. Access to the miniature train was not available during the field survey as it was stored in a building in a city park. Two previously inventoried properties with undetermined NRHP eligibility were reexamined and recommended eligible: 122 N. 7th Street (43-00155) and 806 E. Erie Street (43-00176). Four properties inventoried during the current survey are recommended eligible for the NRHP: 216 W. Erie Street (43-00847), 223 E. Erie Street (43-00920), 123 N. 6th Street (43-00970), and 122 N. 8th Street (43-01028). In total, nine resources are recommended eligible for the NRHP in the current study area. The remainder of the historic age properties in the survey area as defined on report figures are recommended as not eligible for the NRHP. Our office agrees with the recommendations in the attached *Phase I Architectural Survey, US Highway 30 Missouri Valley Bypass Location Study Area Harrison County, Iowa*.

A project determination of effect will be established when the Area of Potential Effect has been determined and consultation regarding all historic properties has occurred. With consideration to the full range of alternatives, initial indication suggests that none of the properties identified above as eligible or recommended eligible for the NRHP will be directly impacted by this project. If you concur with the results of this investigation, please sign the concurrence line below, add your comments and return this letter. If you have any questions, please contact me at 515-239-1035 or jacob.woodcock@iowadot.us.

Sincerely,



Jacob Woodcock
Location and Environment Bureau

JWW

Enclosure

cc: Wes Mayberry – District 4 Engineer
Danny Zeiman – Project Manager
Derek Lee – Bear Creek Archaeology
DeeAnn Newell – NEPA/OLE - DOT

Concur: _____ Date: _____
SHPO Historian

Comments:

Location and Environment Bureau
800 Lincoln Way, Ames, IA 50010
Phone: 515-239-1035 | Email: jacob.woodcock@iowadot.us

October 30, 2020

Ref. NHSX-030-1(175)--3H-43
Primary System
Harrison County
R&C: 180343056

Mr. Daniel Higginbottom
Ms. Sara Andre
State Historic Preservation Office
600 East Locust
Des Moines, IA 50319

RE: US Highway 30 Missouri Valley Bypass, Harrison County, Iowa; Preferred Alternative; *No Historic Properties Affected*

Dear Daniel and Sara:

Enclosed for your review and comment are figures highlighting the preferred alternative which constitutes the Area of Potential Effect (APE) for this undertaking. Our offices previously consulted on this project starting back in March of 2018. Your office most recently responded and concurred with the Bear Creek Archaeology (BCA) report findings (BCA 2386) on July 30th, 2020.

Project Description

This project proposes to construct the Missouri Valley Bypass which would bypass Missouri Valley, Iowa, and reduce truck and passenger vehicles through town. The preferred alternative consists of creating a paved two-lane roadway with grading for a future paved four-lane section on new alignment and the integration of the roadway with a levee system. The proposed bypass is located south of Missouri Valley and extends northeast of town. It begins by tying into the existing I-29/US 30 interchange (Exit 75) and curves a little south to run parallel with Canal Street and heads east for approximately 1.6 miles and then turns north for another 0.75 miles until it nears the existing US 30. It then turns northeast for approximately 0.75 miles and ties into US 30 approximately 2,000 feet east of Melrose Avenue.

Area of Potential Effect

The Area of Potential Effect (APE) for this project was designed to include those areas that could potentially experience direct effects from the proposed project (**Figures 1-3**). There are no National Register of Historic Places (NRHP) eligible properties inside of the APE. The only NRHP eligible property in the vicinity is 43-00437 which is over 300 feet from the APE. No indirect effects are anticipated from the proposed activities. The APE for this project falls inside of the larger encompassing study area noted in previous correspondence.

Identification Efforts

Previously our office submitted a Phase I archaeological survey and intensive architectural survey of the earlier study area. Both reports were completed by BCA are titled *Phase I Architectural Survey, US Highway 30 Missouri Valley Bypass Location Study Area Harrison County, Iowa* and *Phase I Archaeological Survey, US Highway 30 Missouri Valley Bypass Location Study Area, Harrison County, Iowa* respectively.

Intensive Architectural Investigation

An intensive architectural history investigation by BCA was carried out between May 2018 to August 2019 to determine if significant historic architectural resources occur in the project area. A total of 125 resources were identified at the time of the fieldwork as less than 45 years of age and the remaining 354 historic resources were evaluated for their potential NRHP eligibility. In total, nine resources were recommended eligible for the NRHP (43-00155, 43-00176, 43-00437, 43-00441, 43-00847, 43-00920, 43-00970, 43-01028 and 43-00153/43-00180/43-00429). The remainder of the historic age properties in the survey area were recommended as not eligible for the NRHP. Our office agreed with the BCA Report 2387 recommendations as noted in our March 13th, 2020 submittal. Given your office has not responded to the Iowa DOT's March 13th, 2020 report finding submission and subsequent follow up requests; the 30-day window for comment has past and we are continuing the Section 106 process with the NRHP eligibility determinations from that submission. No NRHP eligible or listed properties are located inside of the APE for this project.

Phase I Archaeological Investigation

A Phase I archaeological investigation by BCA began in June of 2018 to determine if significant archaeological resources occur in the project area. In total, that survey area covered 3,762 acres (1522 ha). The BCA investigation consisted of archival research which identified previous archaeological investigations of the study area, geomorphological investigation, pedestrian survey, and subsurface testing. The investigation identified no new sites and did not reexamine five previously reported archaeological sites due to prior recommendations. The BCA investigation included a geomorphological study during which nearly all of the project area was interpreted to have low archaeological potential. Focused subsurface testing in moderate and high potential areas were negative. Based on the outcome of this investigation and prior archaeological surveys, BCA recommended no additional archaeological investigation for the study area. Our office agreed with this recommendation as noted in our June 24th, 2020 submission. Your office concurred with the BCA 2386 report findings and recommendations on July 30th, 2020. No NRHP eligible or listed properties are located inside of the APE for this project.

Consultation Efforts

The Iowa DOT is sending *No Historic Properties Affected* findings letters to Tribes/Nations with Harrison County interest, the Office of the State Archaeologist, the Harrison County Historic Preservation Commission, the Harrison County Historical Village and Welcome Center, the Lincoln Highway Museum and the Wisecup Farm Museum. Starting in March of 2018, we have consulted multiple times on this undertaking with those noted above.

Finding of Effect

Based on the review of the project and BCA reports, our office has given this undertaking a determination of *No Historic Properties Affected*. If you concur, please sign the concurrence line below, add your comments, and return this letter. If you have any questions, please contact me at 515-239-1035 or jacob.woodcock@iowadot.us.

Sincerely,



Jacob Woodcock
Location and Environment Bureau

JWW

Enclosure

cc: Wes Mayberry – District 4 Engineer
Danny Zeiman – Project Manager
DeeAnn Newell – NEPA/OLE - DOT

Concur: _____ Date: _____
SHPO Archaeologist

Comments:

Concur: _____ Date: _____
SHPO Historian

Comments:

From: [Andre, Sara](#)
To: [Woodcock, Jacob](#)
Cc: [DCA SHPO106](#); [Higginbottom, Daniel \[DCA\]](#); [Newell, Deeann](#)
Subject: FHWA_Multi
Date: Thursday, December 3, 2020 1:39:49 PM

We have received your submittal for the above referenced federal undertaking. We provide the following response in accordance with Section 106 of the National Historic Preservation Act of 1966 and its implementing regulations 36 CFR 800.

Regarding this project, please see the following comments:

R&C# 200331029_FHWA_Osceola_STPN-069-2(26)--2J-20_US 69 Proposed Resurfacing

- Concur with the federal agency and/or their designated representative (No Adverse Effect)

R&C# 201168032_FHWA_Albia_NHSN-005-2(46)--2R-68_IA-05 Proposed Resurfacing

- Concur with the federal agency and/or their designated representative (No Adverse Effect)

R&C# 191120078_FHWA_Osceola_NHSN-034-5(28)--2R-20_US 34 Resurfacing with Milling

- Concur with the federal agency and/or their designated representative (No Adverse Effect)

R&C# 180343056_FHWA_Harrison County_NHSX-030-1(175)--3H-43_Proposed US Hwy 30 Missouri Valley Bypass_Additional Information

- Concur with the federal agency and/or their designated representative (No Historic Properties Affected)

Please note that due to the current status of our office, you will not receive a hard copy of this email. It is the submitter's responsibility to maintain the official file of record and to send hardcopies of historic property inventories (archaeological/architectural survey reports) to SHPO for entry into NADB and the Inventory as circumstances allow.

Kind regards,

Sara André
Architectural Historian
State Historic Preservation Office

sara.andre@iowa.gov | 515-242-6157 | iowaculture.gov

*****Be advised that the current health emergency may affect the ability of our office to respond to future correspondences within the expected timeframe. Staff are continuing to work toward meeting the statutory 30-day review and comment period where applicable and will be notifying agencies if any review is anticipated to take longer than 30 days.*****

*****Please note: Our building is currently closed to the public in an effort to slow the spread of the COVID-19. During this time, SHPO staff will be available most effectively through email correspondence and conference calls*****

Iowa Arts Council | Produce Iowa | State Historical Society of Iowa

Iowa Department of Cultural Affairs

Share your stories using #iowahistory

Kind regards,

Sara André

Architectural Historian

State Historic Preservation Office

sara.andre@iowa.gov | 515-242-6157 | iowaculture.gov

*****Be advised that the current health emergency may affect the ability of our office to respond to future correspondences within the expected timeframe. Staff are continuing to work toward meeting the statutory 30-day review and comment period where applicable and will be notifying agencies if any review is anticipated to take longer than 30 days.*****

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Iowa Arts Council | Produce Iowa | State Historical Society of Iowa

Iowa Department of Cultural Affairs

Share your stories using #iowahistory

Newell, Deeann

From: Roger Gunderson <tanaduke@aol.com>
Sent: Tuesday, July 17, 2018 10:46 PM
To: Newell, Deeann
Subject: mo. valley bypass

Sent two EA's to Dan Zeiman. North and South routes. Will repeat if needed.

EA: Iowa road F 50 to I 29

Approximate 24 miles distance

An paved agricultural farm to market/ housing development road through Loess hills starting at junction with hwy 30 near Logan Ia., eventually passing through Calhoun, Ia. , following hwy 183 South to connect with paved county road west, exiting onto ,I 29, following 29 south to junction with hwy 30 at Missouri Valley.

Air quality: entry to F50 at base level rising to a hilltop, descending through a gorge returning to higher altitude, descending back to base level. Housing exists in this area. Would a pocket like this in countryside cause carbon monoxide fumes to collect? Further down road the roadway levels are more consistent. But entire area is typically Vulnerable to morning fog. Overall increased heavy traffic might have an impact.

Land Quality: Overall three bridges need to be inspected, possibly replaced (one is wood deck over creek). The Willow & Allen creek, streams eventually lead to the Boyer, which as you know, makes it to the Missouri. Widening roadway , if planned, could be complicated in a some way, by some deep ditches along South side of road on F 50 and on county road to Interstate (known as the Modale Road – lost the number- map unclear) To prevent flooding fields in the area. So, construction techniques needed to avoid erosion and clogging relief areas and silt loss of field surfaces.

Water Quality: Don't see many farm animals in area, primarily crops. But as anywhere, increased activity means increased possibility of spills or accidents or chemical surface runoff making it's way into wells and ponds. The area does not receive water via public Sources but relies on wells. Risk probably would be no greater than similar locations in Iowa.

Wildlife: Of the 429 known bird species in Iowa, the closest I can come to resident avian Population is a guess that whatever species exist in Harrison county would be represented in this area. You no doubt have more accurate numbers on the endangered critters list, birds, rodents, burrowing crits, deer, etc. and populations in Southwest Iowa. Since the area has been farmed throughout Iowa's history, (my grandmother lived in Calhoun on the 1870 census) It would be likely many of these animals have been driven back into the hills. Some animals like muskrats, opossum, raccoons , muscles and snails, to name a few probably visit the two creek beds for food. The creeks might be occasionally visited by wading birds, but I have no proof of that.

Noise Pollution & Social Impact: In a lovely, seasonally representative area where very limited traffic has reduced the noise level for residents, increases in traffic will no doubt Be an annoyance, along with a greater potential for accidents and trash accumulations from passersby. Whereas now an occasional seed corn sack might be seen in a ditch, a new accumulation of a wide variety of containers, papers and generally discharged items will surely create negative responses from residents along the roadway. Not to mention the noises previously intermittent and now semi-(no pun)-continuous.

EA: South Route Missouri Valley bypass

US 30 to US 30/ I 29

Approximate 6 to 8 miles (depending on Eastern junction location placement)

A possible graveled road (non-specific designation) or a non-developed roadway connecting at highway 30 East of Missouri Valley, Ia. And proceeding Westward to intersect with Highway 30/ I 29 West of Missouri Valley, Iowa. Initially traversing a semi- commercial, industrial (RR Yard) area and later skirting a residential area North of the proposed route. The route is predominately non-residential and this may mitigate environmental damage to some extent.

Air Quality: Residents are already familiar with a variety of odors, being next to a RR yard. Increased vehicular traffic could aggravate existing odors. RR unit emissions combined with these new emissions could result in air quality violations, but that is currently unprovable. The residential area is at the near end (or middle) of the proposed route, which then progresses through a low level farm road within the flood plane, before reaching it's western junction with US 30.

Land Quality: There are several difficult issues on this route, most of it is within the flood plane, crossings for 2 to 3 rail lines are needed. And a crossing for the Willow Creek, west of town. One advantage is the reduced distance for the bypass and another is that a graveled roadbed above or nearly above flood levels exists for about ½ the distance of the route. Two salvage yards, a farmstead and a residential area exists on either side of this route. The Boyer river is primarily East of this route while the Willow Creek runs through it. One salvage yard is licensed but I'm not sure about the other.

Water Quality: The above issues regarding the land would create concern about water quality for wells but the residents are within city limits and receive city water. That's not to say that drainage ditches may already be diverted to the Boyer for flood control measures and fact finding needs to be done here. People Soft company and Mo. Valley Street Dept is a primary source for information regarding what's going where.

Wildlife Protection: Two factors relating to wildlife on this route. Closer proximity to the Boyer river and the existence of commercial activities (mainly RR) which have been along this route as far back as the town was established. RR, Lumber Yards, train depot, locomotive turn table, etc. All of these have contributed to either discourage wildlife activity or train critters how to successfully cope with that activity and succeed in that environment. I'm not well enough informed to determine which fact is prevalent. I would think that on the proposed route, the South edge (nearer the Boyer) would be to a degree populated by animals dependent or at least partly dependent on the river for food.

Noise Pollution: Given the location's nearness to RR, and highway 30 downtown Mo.Valley, the residents seem to have accepted high levels of noise (or given up trying to abate that noise).

Social Impact: Again, given the location of the route, most people would more than likely express a “so what” attitude. Many of those property owners in “O’Dell’s Addition” (popular name for the residential area in question) have been overlooked and neglected by city government for so long that it would surprise me if many opinions would be expressed at all. The most critical comments would likely be from local business owners who have characteristically seen a bypass as a detriment to their businesses. They fear that any route around town would be the “death toll” for downtown business’ in MV.



Roger Gunderson

Appendix D
Farmland Conversion Impact Rating for Corridor Type Projects Form
(NRCS-CPA-106)

**FARMLAND CONVERSION IMPACT RATING
FOR CORRIDOR TYPE PROJECTS**

PART I (To be completed by Federal Agency)	3. Date of Land Evaluation Request 4/14/21	4. Sheet 1 of <u>2</u>
---	---	------------------------

1. Name of Project US 30 Missouri River Bypass	5. Federal Agency Involved Federal Highway Administration
---	---

2. Type of Project Highway on new alignment	6. County and State Harrison County, Iowa
--	--

PART II (To be completed by NRCS)	1. Date Request Received by NRCS	2. Person Completing Form
--	----------------------------------	---------------------------

3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES <input type="checkbox"/> NO <input type="checkbox"/>	4. Acres Irrigated Average Farm Size
---	--

5. Major Crop(s)	6. Farmable Land in Government Jurisdiction Acres: _____ % _____	7. Amount of Farmland As Defined in FPPA Acres: _____ % _____
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8. Name Of Land Evaluation System Used	9. Name of Local Site Assessment System	10. Date Land Evaluation Returned by NRCS
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PART III (To be completed by Federal Agency)	Alternative Corridor For Segment			
	Corridor A	Corridor B	Corridor C	Corridor D
A. Total Acres To Be Converted Directly	256			
B. Total Acres To Be Converted Indirectly, Or To Receive Services	0			
C. Total Acres In Corridor	256	0	0	0

PART IV (To be completed by NRCS) Land Evaluation Information				
A. Total Acres Prime And Unique Farmland				
B. Total Acres Statewide And Local Important Farmland				
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted				
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value				

PART V (To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)

PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))	Maximum Points				
1. Area in Nonurban Use	15	12			
2. Perimeter in Nonurban Use	10	8			
3. Percent Of Corridor Being Farmed	20	16			
4. Protection Provided By State And Local Government	20	0			
5. Size of Present Farm Unit Compared To Average	10	1			
6. Creation Of Nonfarmable Farmland	25	0			
7. Availability Of Farm Support Services	5	5			
8. On-Farm Investments	20	10			
9. Effects Of Conversion On Farm Support Services	25	0			
10. Compatibility With Existing Agricultural Use	10	5			
TOTAL CORRIDOR ASSESSMENT POINTS	160	57	0	0	0

PART VII (To be completed by Federal Agency)	Maximum Points				
Relative Value Of Farmland (From Part V)	100				
Total Corridor Assessment (From Part VI above or a local site assessment)	160	57	0	0	0
TOTAL POINTS (Total of above 2 lines)	260	57	0	0	0

1. Corridor Selected: A	2. Total Acres of Farmlands to be Converted by Project: 256	3. Date Of Selection: 4/14/21	4. Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
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5. Reason For Selection:
The corridor was selected through the Iowa DOT concurrence point process in coordination with City of Missouri Valley, Harrison County, and US Army Corps of Engineers.

Signature of Person Completing this Part: Randall McCart, HDR	DATE 4/14/21
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NOTE: Complete a form for each segment with more than one Alternate Corridor

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.

(1) 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?

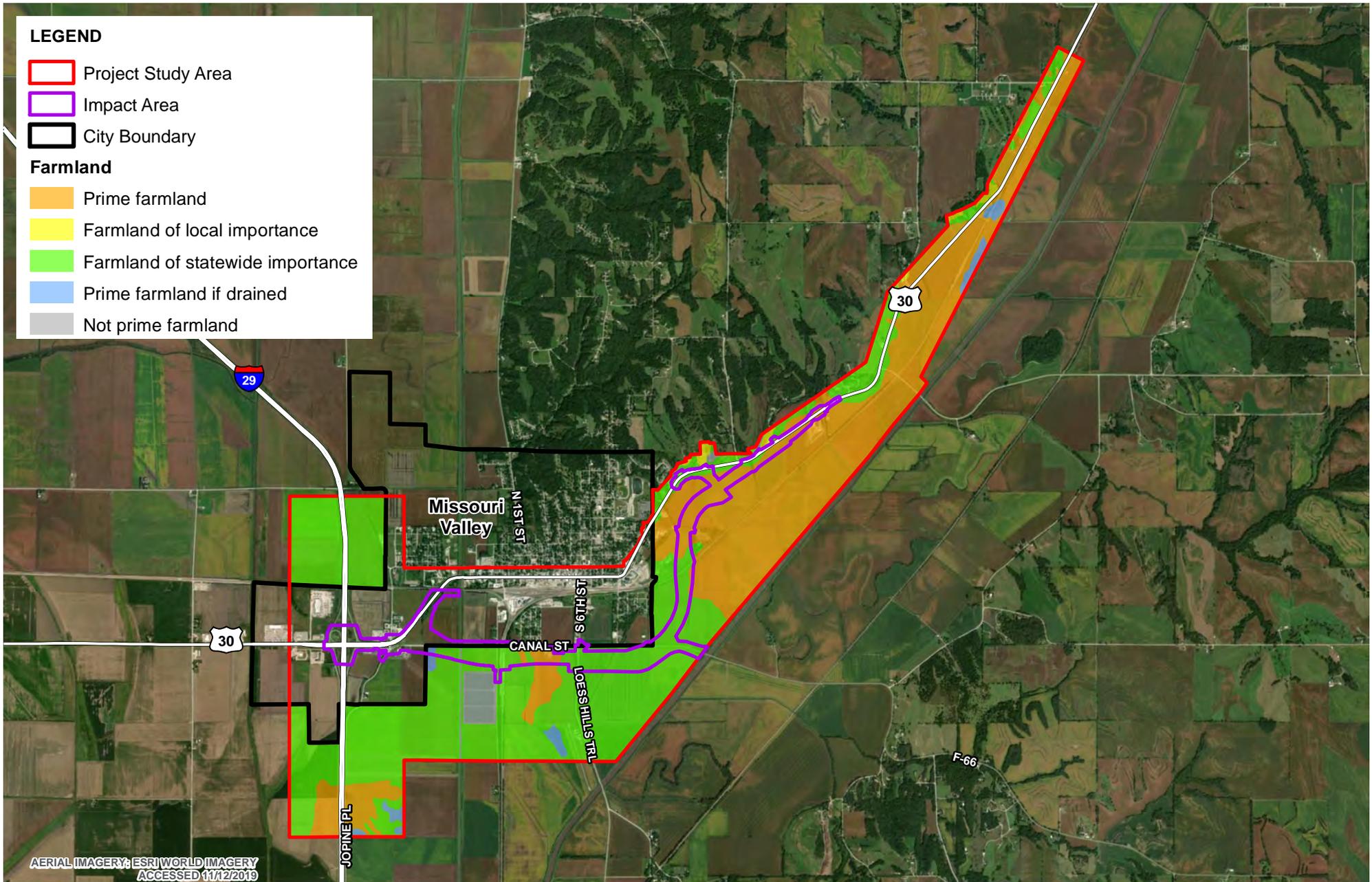
High amount of on-farm investment - 20 points
Moderate amount of on-farm investment - 19 to 1 point(s)
No on-farm investment - 0 points

(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



**FARMLAND IMPACT
HARRISON COUNTY, IOWA**

FIGURE 1

FARMLAND CONVERSION IMPACT RATING