

**Interstate 74 Quad Cities Corridor Study
Scott County, Iowa and Rock Island County, Illinois**

Project Number: IM-74-1(122)0-13-82

**FINAL ENVIRONMENTAL IMPACT STATEMENT
AND SECTION 4(f) STATEMENT**

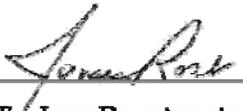
**Prepared in Accordance with:
The National Environmental Policy Act, as amended
42 USC 4332(2)(c)
and
Section 4(f) of the U.S. Department of Transportation Act, as amended
49 USC 303**

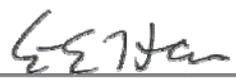
**by the
U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION,
IOWA DEPARTMENT OF TRANSPORTATION and
ILLINOIS DEPARTMENT OF TRANSPORTATION**

**Cooperating Agency
U.S. DEPARTMENT OF HOMELAND SECURITY, UNITED STATES COAST GUARD**

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 grant request to fund the preferred alternative.


**For Federal Highway
Administration**


**For Iowa Department of
Transportation**


**For Illinois Department of
Transportation**

1-8-2009

Date of Approval

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The Iowa and Illinois Departments of Transportation, in conjunction with the Federal Highway Administration (FHWA), have initiated planning and preliminary design studies for the improvement of Interstate 74 in Scott County, Iowa and Rock Island County, Illinois. The project begins at the I-74 interchange with Avenue of the Cities (23rd Avenue) in Moline, Illinois, and continues north across the Mississippi River to one mile north of the I-74 interchange with 53rd Street in Davenport, Iowa. The proposed work consists of upgrading the 4-lane interstate by providing mainline capacity improvements, interchange modifications, and realigning I-74 across the Mississippi River. This Condensed Final Environmental Impact Statement identifies a preferred location for the bridge alignment, preferred alternative interchange configurations, and preferred lane configurations to increase the mainline capacity. Potential impacts by the preferred alternative have been evaluated and include those to wetlands, water resources, historic buildings, homes and businesses, and public facilities and services.

Comments on this final EIS are due by March 16, 2009, and should be sent to James P. Rost, Iowa DOT.

Foreword

This Final Environmental Impact Statement (FEIS) is presented in the form of a condensed FEIS, as described in the Federal Highway Administration's (FHWA) *Technical Advisory T6640.8A* (October 30, 1987). The FHWA guidance notes that:

This approach avoids the repetition of material from the draft EIS by incorporating, by reference, the Draft EIS. The Final EIS is, thus, a much shorter document than under the traditional approach; however it should afford the reader a complete overview of the project and its impacts on the human environment.

In addition to summarizing the information in the Draft Environmental Impact Statement (DEIS) released in 2003, this condensed FEIS presents information that has changed since the circulation of the DEIS and identifies the Preferred Alternative of the project sponsors, the Iowa Department of Transportation, the Illinois Department of Transportation, and the Federal Highway Administration.

Other differences from the DEIS include a summary and disposition of the comments received from the public and agencies during the circulation of the DEIS and a more detailed discussion of mitigation for impacts to resources. The organization of the major sections of the FEIS mirror those of the DEIS, but some changes to the outline have been made to present the current information more efficiently.

Although the FHWA Technical Advisory does not require that a copy of the DEIS be circulated with the condensed FEIS, the DEIS is included on a CD in a sleeve inside the back cover of this document.

Summary

Summary

Summary of Proposed Action

The Iowa and Illinois Departments of Transportation (DOT) and the Federal Highway Administration (FHWA) are proposing improvements to the Interstate 74 (I-74) corridor in the Quad Cities from Avenue of the Cities (23rd Avenue) in Moline, Illinois, to 1 mile north of 53rd Street in Davenport, Iowa. The U.S. Coast Guard is a cooperating agency.

The study corridor traverses the cities of Moline, Bettendorf, and Davenport and includes a crossing of the Mississippi River ([Figure S-1, I-74 Iowa-Illinois Corridor Study Location Map](#), at the end of this section). Though I-74 is predominantly an east-west interstate, it is on a north-south alignment through the study corridor. As such, in this document direction of travel along I-74 is described as northbound or southbound to distinguish it from east-west traffic movement along cross roads. The I-74 study corridor is characterized by a mix of residential, commercial, and industrial development. Residential land use is present throughout the project corridor, but there are concentrations south of the commercial area in Moline and north of the commercial area in Bettendorf. Industrial land uses are mainly located along the river in Moline and Bettendorf. Parkland and open space can be found along the river in Moline and Bettendorf, and along Duck Creek in Bettendorf and Davenport.

I-74 is the primary north-south roadway through the study area. As such, it carries a large amount of commuter and commercial traffic. The proposed improvements to I-74 include:

- Providing additional capacity on I-74
- Improving the Mississippi River crossing
- Improving the six existing service interchanges
- Enhancing the connecting arterial roadway system
- Improving opportunities for transit, bike and pedestrian, and intermodal connections

Summary of Purpose of and Need for Proposed Action

The purpose of the proposed improvements is to improve capacity, travel reliability, and safety along I-74 between Avenue of the Cities (23rd Avenue) in Moline and 1 mile north of the I-74 interchange with 53rd Street in Davenport, and provide consistency with local land use planning goals.

The need for the proposed improvements to the I-74 corridor is based on a combination of factors related to providing better transportation service and sustaining economic development. In particular, the proposed action is intended to meet the following needs:

- Traffic demand and service
- Improved roadway geometry
- Improved safety considerations
- Dependability of travel
- Improved transportation connections
- Improved infrastructure condition
- Support of economic development

Current travel performance reflects a combination of high traffic volumes along I-74, older geometry, and the aging condition of the existing facility. Motorists on I-74 near the river crossing periodically experience stop-and-go conditions and backups at interchange ramps. Dependability of travel through the corridor is impaired, resulting in unreliable connections to other modes of transportation in the Quad Cities. As traffic volumes increase over time, these conditions will only worsen.

The Quad Cities have strong ties to manufacturing and agriculture, a good location in the Midwest market, and good access to other modes of travel for moving freight and goods, including rail, air, and barge. Bettendorf and Moline have also invested heavily in developing and redeveloping their downtown areas, through which I-74 travels. Improving the performance of I-74 through the project corridor is not only congruent with local land use plans, but is important to maintaining and enhancing the economic vitality of the riverfront areas.

Together, these needs form the basis for proposed improvements to the I-74 corridor. See Section 1, *Purpose of and Need for Action*, of this Final Environmental Impact Statement (FEIS) for more detailed information on the project's purpose and need. The alternatives developed to address these needs are discussed in Section 2, *Alternatives*, of this FEIS and are summarized below.

Summary of Alternatives

The process used to develop the range of alternatives considered and identify the Preferred Alternative is discussed in Section 2, *Alternatives*, of this FEIS. A broad array of alternatives was developed to meet the transportation needs and objectives for the I-74 corridor. The alternatives development process consisted of determining the engineering requirements; developing and evaluating the concept and build alternatives; and identifying a preferred alternative. Public involvement was integral to the process.

The concept alternatives developed and evaluated for their ability to meet the project's purpose and need included roadway alternatives such as providing additional travel lanes, reconfiguring existing service interchanges, and improving arterial roadways. Those that had the ability to satisfy the purpose and need and minimized environmental impacts along the I-74 corridor were developed into build alternatives. A variety of nonroadway improvements—such as transit, transportation system management, and bicycle and pedestrian improvements—were also considered. While these alternatives would not satisfy the purpose and need as stand-alone alternatives, they were retained and evaluated for their potential to be combined with other build alternatives.

The No-Action Alternative, defined as no new major construction along the I-74 corridor, was carried forward for comparison with the build alternatives, although it does not meet the project's purpose and need. See Section 2.3.5, *No-Action Alternative*, for details.

The build alternatives presented in the Draft Environmental Impact Statement (DEIS) meet the project purpose and need and accommodate the required safety, geometric, and capacity improvements while minimizing potential adverse environmental and community impacts. Build alternatives were developed on the basis of current design standards and the most current, available traffic forecast data for the original project design year of 2025. The project

design year has been extended to 2035 since the publication of the DEIS. See Section 2.2.1.1, *Design Year and LOS*, in the FEIS for details.

Build alternatives have been related to three sections of the corridor: 1) the South Section – Avenue of the Cities (23rd Avenue) to 12th Avenue in Moline; 2) the Central Section – 12th Avenue in Moline to Lincoln Road in Bettendorf; and 3) the North Section – Lincoln Road to 1 mile north of 53rd Street in Davenport. (See [Figure S-2](#) at the end of this section.) A single build alternative was considered in the South Section. In the Central Section, two options were considered for the mainline alignment, interchanges in downtown Moline and Bettendorf, U.S. 67 connector, and local roadway underpass in Bettendorf. In the North Section, one alternative was considered for the mainline and two alternatives were considered at the U.S. 6 and 53rd Street interchanges. For more details see Section 2.4, *Build Alternatives Retained for Detailed Evaluation in the DEIS*.

The Iowa and Illinois DOTs, in consultation with FHWA, identified a preferred alternative from the build alternatives presented in the DEIS. See Section 2.5, *Identification of the Preferred Alternative*. The elements of the Preferred Alternative are shown in Table S-1 and described in the following paragraph.

TABLE S-1
Elements of the Preferred Alternative

Section	Preferred Alternative
South Section	The one build alternative considered in the South Section was identified as preferred
Central Section	Alignment Alternative F with interchange variations M1 and B1 The Holmes Street/Mississippi Boulevard Underpass The U.S. 67 Diagonal Connector
North Section	The one build alternative considered in the North Section was identified as preferred Interchange variation 2 at both U.S. 6 and 53rd Street

In the South Section, the single build alternative was identified as the Preferred Alternative. Improvements are intended to add capacity, improve the infrastructure, and comply with current design standards.

In the Central Section, Alternative F was identified as the Preferred Alternative for the mainline alignment; M1 was identified as the preferred downtown Moline interchange alternative; B1 was identified as the preferred downtown Bettendorf interchange alternative; the diagonal configuration of the U.S. 67 connector was identified as the Preferred alternative; and Holmes Street/Mississippi Boulevard was identified as the preferred local roadway underpass option. The Preferred Alternative in the Central Section will add capacity, meet current design standards, improve the facility's infrastructure, and improve the economic vitality of the area by improving traffic flow through the downtown areas.

In the North Section, the one build alternative was identified as the Preferred Alternative for the mainline, and Variation 2 was identified as the Preferred Alternative for both the U.S. 6 and 53rd Street interchanges. As with the South Section, the Preferred Alternative in the

North Section is intended to increase capacity, improve the infrastructure, and bring the facility up to current design standards.

Refinements have been made to the Preferred Alternative based on more detailed analysis and information obtained since the publication of the DEIS, particularly updated traffic forecasts for 2035 and the *2035 Quad City Area Long-Range Transportation Plan (2035 LRP)*. No substantive changes to the Preferred Alternative in the South Section are proposed. In the Central Section, updates have been made to the design of the mainline, local roadways, and bicycle and pedestrian trail across the Mississippi River. Updates to the mainline and 53rd Street interchange have been made to the Preferred Alternative in the North Section. Also, improvements to 53rd Street have been expanded through the 53rd Street/Elmore Avenue intersection. See Section 2.6, *Modifications to the Preferred Alternative Since Publication of the DEIS*, for more details.

At the conclusion of the review period for this FEIS, the project sponsors will identify the alternative selected for implementation. This selected alternative will be described in a Record of Decision (ROD), the document that records the federal decision on the proposed action.

Summary of Impacts

The impacts of the No-Action Alternative and the modified Preferred Alternative are discussed in Section 4, *Environmental Consequences*, of the FEIS. A comparison between the impacts by Preferred Alternative as it was presented in the DEIS and the modified Preferred Alternative can be found in Tables S-2a and S-2b, *Preferred Alternative Impact Summary Table*, at the end of this section. Table S-3 summarizes the total impacts of the refined Preferred Alternative. The tables detail the right-of-way requirements; number of relocations and displacements; and impacts on historic parcels, noise receivers, potentially contaminated sites, and natural resources such as wetlands, floodplains, and threatened and endangered species.

In general, the modifications to the Preferred Alternative did not result in considerable changes to the resource impacts. In the South Section, a minor amount of right-of-way is now required to accommodate the Preferred Alternative. The primary impact would be increases in traffic noise at 11 receivers.

Most of the project's impacts will occur in the Central Section where the highest amount of new right-of-way is required and a new crossing of the Mississippi River is proposed. The modified Preferred Alternative would result in minor impacts to resources such as land use, socioeconomic resources, cultural resources, air quality, noise receivers, energy usage, aesthetic quality, water quality, wetlands, public land, wildlife, floodplains, or state and federally listed threatened and endangered species.

A small amount of new right-of-way is also required in the North Section, resulting in three residential impacts and minor land use changes. As a result of reconstruction of the existing facility, minor wetland impacts would occur to a wetland associated with Duck Creek. Duck Creek and its floodplain are crossed by the project. Approximately 20 noise receivers will be impacted in the North Section.

Because the No-Action Alternative does include construction of all committed and planned improvements detailed in 5- and 6-year improvement programs for the Iowa and Illinois DOTs, respectively, and in the LRP, some right-of-way and minor resource impacts may occur with that alternative. In addition, the No-Action Alternative would result in less direct and indirect vehicular operational energy savings than the build alternatives because the No-Action Alternative would not result in an improvement capable of reducing traffic congestion and turning conflicts along the route and thus would not reduce vehicular stopping and slowing conditions.

Other Activities Required

The proposed action involves impacts to resources regulated by state and federal agencies with jurisdiction. Coordination with these agencies has occurred during the development of the project. As a result of this coordination, the following permits or actions have been identified as requirements:

- A permit from the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act
- A permit from the Coast Guard under Section 9 of the Rivers and Harbors Act
- Water quality certification from the Iowa Department of Natural Resources (DNR) and the Illinois Environmental Protection Agency (Illinois EPA) under Section 401 of the Clean Water Act
- A permit from the Illinois DNR, Office of Water Resources for Construction in Floodways of Rivers, Lakes, and Streams and a floodplain permit from the Iowa DNR
- A National Pollution Discharge Elimination System (NPDES) permit coordinated between the Iowa DNR and Iowa DOT in Iowa and Illinois EPA and Illinois DOT in Illinois
- A Memorandum of Agreement with the Illinois and Iowa State Historic Preservation Offices detailing mitigation requirements for impacts to cultural resources, including historic resources governed by Section 4(f) of the Transportation Act of 1966, as amended, is included with this FEIS
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, will be followed during the acquisition and relocation of displaced residents
- An Incidental Take Permit in accordance with the Endangered Species Act of 1973

Regulatory Compliance

The planning, agency coordination, public involvement, and impact evaluation for the project have been coordinated according to the National Environmental Policy Act, the Clean Water Act, the Clean Air Act, the Farmland Protection Policy Act, Executive Order 11990 on Wetlands Protection, Executive Order 11988 on Floodplain Protection, Executive Order 12898 on Environmental Justice, the Fish and Wildlife Coordination Act, the Endangered Species Act, the National Historic Preservation Act, the 1899 Rivers and Harbor Act, Section 4(f) of the

Transportation Act of 1966, and other state and federal laws, policies, and procedures for environmental impact analyses and preparation of environmental documents.

This document complies with U.S. Department of Transportation and FHWA policies to determine whether a proposed project will have disproportionate impact on minority or low-income populations. It meets the requirements of the Presidential Executive Order on Environmental Justice 12898, "Federal Actions to Address Environmental Justice in Minority and Low-Income Populations." Neither minority nor low-income populations would receive disproportionately high or adverse impacts due to the implementation of the Preferred Alternative.

TABLE S-2a
Preferred Alternative Impact Summary Table—174 Mainline/Interchange Variations

Resource Issue	Units	South Section (Avenue of the Cities [23rd Avenue] to 12th Avenue)		Central Section ^a (12th Avenue to Lincoln Road)				North Section (Lincoln Road to 1 mile north of 53rd Street)			
		Preferred Alternative as Presented in DEIS	Refined Preferred Alternative	Alignment F with Moline Interchange Variation 1		Alignment F Bridge		Alignment F with Bettendorf Interchange Variation 1			
				Preferred Alternative as Presented in DEIS	Refined Preferred Alternative	Preferred Alternative as Presented in DEIS	Refined Preferred Alternative	Preferred Alternative as Presented in DEIS	Refined Preferred Alternative		
Land Conversions											
Net Increase in Highway ROW ^b	Acres	0	0.2	11.0	9.4	--	--	10.3	11.3	0	2.9
Residential Converted to ROW	Acres	0	0.2	0.6	0.3	0	0	0.6	1.7	0	2.2
Commercial Converted to ROW	Acres	0	0	3.9	6.9	0	0	8.4	9.6	0	5.7
Real Estate											
Residential Structures Required	Number	0	0	5	6	--	--	4	5	0	1
Businesses Required	Number	0	0	3	5	--	--	11	14	0	0
Churches Required	Number	0	0	0	0	--	--	0 ^c	0	0	0
Environmental Issues											
Wetlands Impacted	Acres	0	0	0	0	0.17	0.18	0	0	0.92 ^d	1.03
Floodplain Crossings	Number (Type)	0	0	0	0	1 (transverse ^e)	1 (transverse ^e)	0	0	1 ^d (transverse ^e)	1 (transverse ^e)
Stream/River Crossings	Number	0	0	0	0	1	1	0	0	1	1
Endangered Species	Yes/No	No	No	No	No	f	f	No	No	No	No
Historic Properties	Number	0	0	3	4	1	1	1	1	0	0
Parks	Number	0	0	0	0	0	0	1	1	0	0
Archaeological Sites	Number	0	0	0	0	0	0	0	0	0	0
Design Year Noise	Number of receivers affected ^g	15 ^h	11	13	12	--	--	11	13	20 ^d	20
Contaminated Sites	Number	0	0	8	8	0	0	13	12	0	0

^aAdditional impacts associated with local roadway improvements in Bettendorf are shown in Table 4-2b.

^bAfter the existing facility is demolished, there will be areas that can be converted from highway ROW to private use. These areas are subtracted from the amount of new ROW required to construct the proposed improvements to result in a net increase in highway ROW.

^cThe DEIS erroneously attributed the impacted church to the Bettendorf Interchange Variation 1. It should have been attributed to the U.S. 67 diagonal transition design variation for the Interchange Variations B1 and B2.

^dWhile no additional ROW is required from the preferred alternative in the North Section as presented in the DEIS, the proposed work includes a transverse crossing of the floodplain of Duck Creek and its associated wetlands, of which 0.92 acre would be affected. Additionally, approximately 20 noise receivers would be affected.

^eTransverse Floodplain crossing is a crossing of a floodplain at an angle of 30 to 90 degrees.

^fSurveys for mussels will be completed at a time more proximate to the construction of the proposed improvements in order to obtain the most accurate information on the locations of the mussels.

^gReceivers are locations at which noise levels were monitored.

^hAlthough no additional ROW is required by the preferred alternative in the South Section as presented in the DEIS, approximately 15 noise receivers would be impacted. Table S-1a and 4-30a in the DEIS erroneously stated that 16 noise receivers would be impacted in the South Section.

TABLE S-2b
Preferred Alternative Impact Summary Table—Bettendorf Local Roadway Variations

Resource Issue	Units	Local Roads (within the Central Section)		
		U.S. 67 Diagonal Transition Design Variation with Interchange Variation B1	Holmes Street/Mississippi Boulevard Local Roadway Underpass Design Variations	Refined Preferred Alternative
Land Conversions				
Net Increase in Highway ROW	Acres	2.7	4.1	0
Residential Converted to ROW	Acres	0.2	0.2	0
Commercial Converted to ROW	Acres	4.0	3.6	0
Real Estate				
Residential Structures Required	Number	7 ^a	9 ^a	0
Businesses Required	Number	19	20	0
Churches Required	Number	1 ^b	1	0
Environmental Issues				
Wetlands Impacted	Acres	0	0	0
Floodplain Crossings	Number (type)	0	0	0
Stream/River Crossings	Number	0	0	0
Endangered Species	Yes/No	No	No	No
Historic Properties	Number	0	0	0
Parks	Number	0	0	0
Archaeological Sites	Number	0	0	0
Contaminated Sites	Number	10	8	0

^aTwo structures are multifamily; one has two units and the other has eight units.

^bThe DEIS erroneously attributed the impacted church to the Bettendorf Interchange Variation 1 in Tables S-1a and 4-30a, *Impact Summary Table—Mainline/Interchange Variations*. It should have been attributed to the U.S. 67 diagonal transition design variation for the Interchange Variations B1 and B2 in Tables S-1b and 4-30b, *Impact Summary Table—Bettendorf Local Roadway Variations*.

TABLE S-3
Impacts of the Refined Preferred Alternative

Resource Issue	Units	Impact
Land Conversions		
Net Increase in Highway ROW ^a	Acres	27.9
Residential Converted to ROW	Acres	4.6
Commercial Converted to ROW	Acres	25.8
Real Estate		
Residential Structures Required	Number	21 ^b
Businesses Required	Number	39
Churches Required	Number	1
Environmental Issues		
Wetlands Impacted	Acres	1.21
Floodplain Crossings	Number (type)	2 (transverse ^c)
Stream/River Crossings	Number	2
Endangered Species	Yes/No	^d
Historic Properties	Number	6
Parks	Number	1
Archaeological Sites	Number	0
Design Year Noise	Receivers affected ^e	56
Contaminated Sites	Number	28

^a After the existing facility is demolished, there will be areas that can be converted from highway ROW to private use. These areas are subtracted from the amount of new ROW required to construct the proposed improvements to result in a net increase in highway ROW.

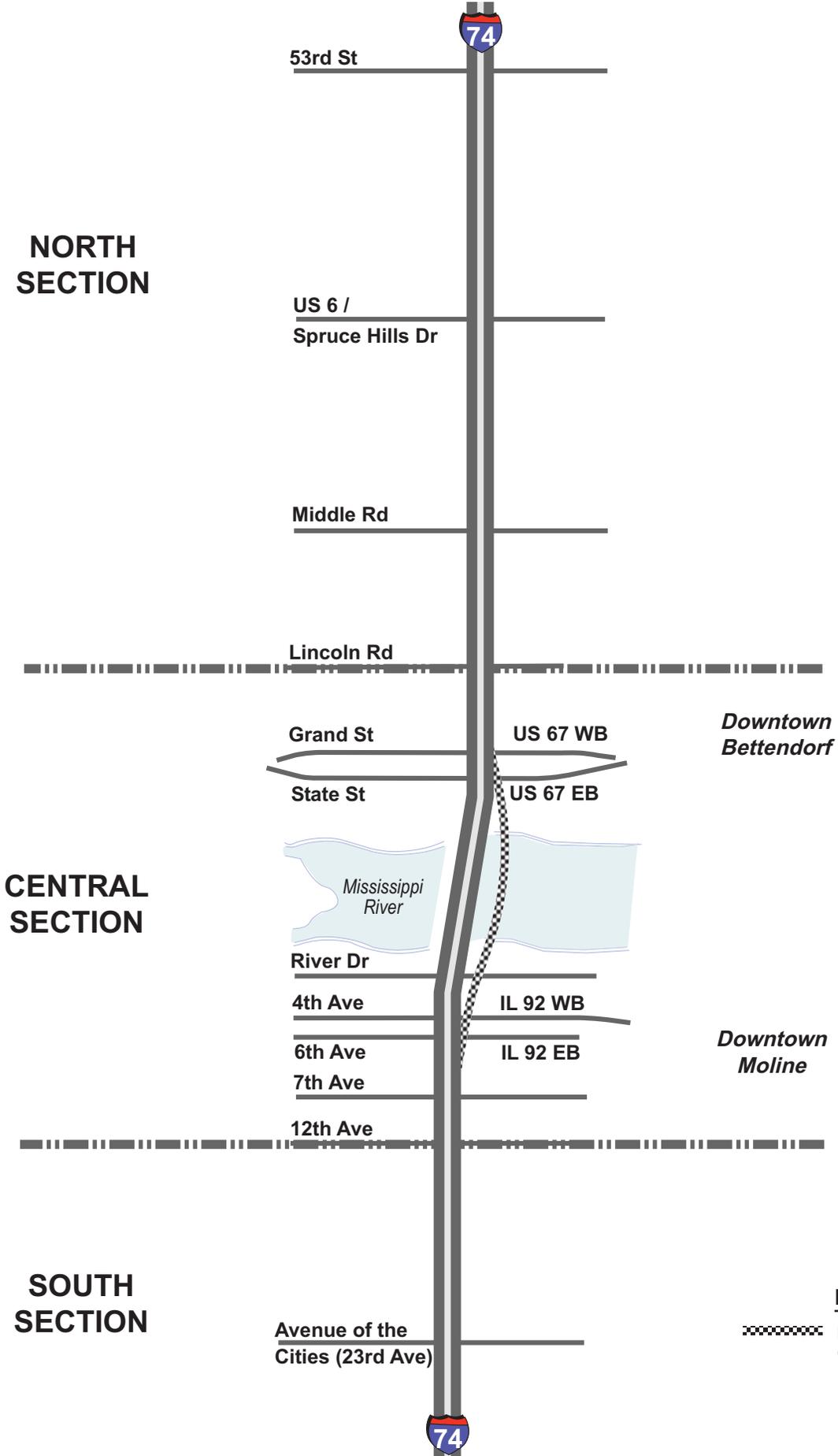
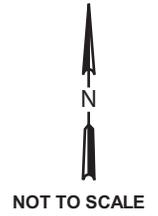
^b Two structures are multifamily; one has two units and the other has eight units.

^c Transverse Floodplain crossing is a crossing of a floodplain at an angle of 30 to 90 degrees.

^d Surveys for mussels will be completed at a time more proximate to the construction of the proposed improvements in order to obtain the most accurate information on the locations of the mussels.

^e Receivers are locations at which noise levels were monitored.

NORTH SECTION



CENTRAL SECTION

SOUTH SECTION

LEGEND

----- F Alignment Alternative (Preferred)

Figure S-2
Project Sections

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List of Acronyms Used in this Document

L

A

T

2025 LRP	2025 Quad City Area Long-Range Transportation Plan
2035 LRP	2035 Quad City Area Long-Range Transportation Plan
AASHTO	American Association of State Highway and Transportation Officials
ADA	Americans with Disabilities Act
ADT	average daily traffic
ASTM	American Standard of Testing Measures
BMP	best management practices
BSC	biological stream characterization
BTEX	benzene, toluene, ethylbenzene, xylene
CAA	Clean Air Act
C-D	collector-distributor
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO	carbon monoxide
Corps	U.S. Army Corps of Engineers
COSIM	Carbon Monoxide Screen for Intersection Modeling
CWA	Clean Water Act
dBA	A-weighted decibel unit
DEIS	Draft Environmental Impact Statement
DNR	Department of Natural Resources
EIS	Environmental Impact Statement
F	Fahrenheit
FAA	Federal Aviation Administration
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Maps
FQI	floristic quality index
GIS	geographic information system
HHS	Health and Human Services
HUD	U.S. Department of Housing and Urban Development
IDNR-OWR	Illinois Department of Natural Resources-Office of Water Resources
IEPA	Illinois Environmental Protection Agency
Illinois DNR	Illinois Department of Natural Resources
Illinois DOT	Illinois Department of Transportation

IHPA	Illinois Historic Preservation Agency
INAI	Illinois Natural Areas Inventory
INHS	Illinois Natural History Survey
Iowa DNR	Iowa Department of Natural Resources
Iowa DOT	Iowa Department of Transportation
ISGS	Illinois State Geological Survey
ITS	Intelligent Transportation System
IWPA	Interagency Wetland Policy Act
L	liter
LOS	level of service
LUST	leaking underground storage tank
MetroLINK	Rock Island County Metropolitan Mass Transit District
MG	municipal groups
MIS	Major Investment Study
MPO	Metropolitan Planning Organization
MSA	Metropolitan Statistical Area
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NEPA	National Environmental Policy Act
NFA	No Further Action
NFIP	National Flood Insurance Study Program
NO ₂	nitrogen dioxide
NPDES	National Pollutant Discharge Elimination System
NPL	National Priority List
NRCS	National Resource Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetland Inventory
O ₃	ozone
PCB	polychlorinated biphenyl
PESA	Preliminary Environmental Site Assessment
PFO ¹	Palustrine Forested Wetlands
Pb	lead
PM _{xx}	particulate matter (where xx indicates size of the particulate)
ppm	parts per million
PSI	Preliminary Site Investigation
RCRA	Resource Conservation and Recovery Act
RCRIS	Resource Conservation and Recovery Information System
ROD	Record of Decision
RTA	Regional Transportation Authority
RTP	Regional Transportation Plan
SHPO	State Historic Preservation Officer
SHWS	State Hazardous Waste Sites
SIP	State Implementation Plan

SO ₂	sulfur dioxide
SOV	single-occupancy vehicle
TDM	travel demand management
TIP	Transportation Improvement Program
TMDL	total maximum daily load
TNM	Traffic Noise Model
TSM	Transportation System Management
USDA	U.S. Department of Agriculture
USDOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
USNPS	U.S. National Park Service
UST	underground storage tank
VHD	vehicle hours of delay
VMT	vehicle miles of travel
VOC	volatile organic compound
VPD	vehicles per day
VPH	vehicles per hour

Section 1

Purpose of and Need for Action

Purpose of and Need for Action

1.1 Description of the Proposed Action

The Iowa and Illinois Departments of Transportation (Iowa DOT and Illinois DOT) and the Federal Highway Administration (FHWA) are proposing improvements to the Interstate 74 (I-74) corridor in the Quad Cities from Avenue of the Cities (23rd Avenue) in Moline, Illinois, north to 1 mile north of 53rd Street in Davenport, Iowa (see [Figure 1-1, I-74 Iowa-Illinois Corridor Study Location Map](#)). The proposed improvements would increase capacity throughout the project corridor and include a new Mississippi River crossing, improvements to six existing service interchanges, enhancements to the connecting arterial roadway system, and improved opportunities for transit, bicycle/pedestrian, and intermodal connections.

The project termini (Avenue of the Cities [23rd Avenue] in Illinois and 1 mile north of 53rd Street in Iowa) represent the general area of influence of the Mississippi River Crossing. I-74 is the only interstate facility that crosses the Mississippi River through the central Quad Cities area. As such, the I-74 corridor is the major transportation facility used to move people and goods through the area and across the Mississippi River. Commuters and other Quad City area residents rely on the I-74 bridges to reach destinations across the Mississippi River. The majority of the traffic on I-74 has a destination or an origin in the Quad Cities, emphasizing the importance of this facility for local and regional travel.

In March 2006, following publication of the Draft Environmental Impact Statement (DEIS), the Bi-State Regional Commission (the metropolitan planning organization (MPO) for the area) updated the *Quad City Area Long Range Transportation Plan (2035 LRP)* to forecast and plan for 2035 transportation conditions in the Quad Cities. The focus of the plan is to characterize future transportation needs and to identify improvements to the transportation network that would support such needs. Consideration was given not only to the local road and highway network, but also to public transit, rail, and bicycle/pedestrian facilities. The public was an important component in the development of the plan. Feedback from area residents was sought at public hearings, local interest group meetings, and through surveys. The updated plan includes an improved I-74 link as an important component in the future Quad Cities transportation system. The document highlighted that capacity along I-74 across the Mississippi River crossing would notably increase if the proposed improvements were made. See Section 1.2, *History*, in the DEIS for more details on the project history.

1.2 Purpose of the Proposed Action

The purpose of the proposed improvements is to improve capacity, travel reliability, and safety along I-74 between Avenue of the Cities (23rd Avenue) in Moline and 1 mile north of 53rd Street in Davenport, and to provide consistency with local land use planning goals. The remainder of this section discusses the corresponding needs in detail.

1.3 Need for the Proposed Action

The need for the proposed improvements to the I-74 corridor is based on a combination of factors related to providing better transportation service and sustaining economic development. In particular, the proposed action is intended to meet the following needs:

- Traffic demand and service
- Improved roadway geometry
- Improved safety considerations
- Dependability of travel
- Improved transportation connections
- Improved infrastructure condition
- Support of economic development

These needs are briefly described in the following pages. See Section 1.4, *Need for the Proposed Action*, in the DEIS for additional detail. The purpose of and need for the project have served to identify a preferred alternative for improving transportation service and economic viability along the project corridor.

1.3.1 Traffic Demand and Service

Existing and projected traffic on the I-74 bridges was examined to determine traffic demand. The 2035 LRP shows an increase in traffic from 77,800 vehicles per day (vpd) in 2002 to 99,900 vpd in 2035. This increase indicates a continued demand for travel across the Mississippi River along the I-74 corridor.

Level of service (LOS) was analyzed to determine how well the existing facility handles current traffic demand. LOS ranges from A (best) to F (worst). LOS A conditions include mobility unimpeded by other vehicles and good maneuverability within the traffic stream. Conversely, LOS F includes stop-and-go conditions, significant delays, and reduced travel speeds. The Iowa DOT, Illinois DOT, and FHWA frequently use LOS C as an urban roadway design standard, to the extent feasible within the constraints of economic costs, community compatibility, and environmental sensitivities.

Existing LOS is low at key locations in the downtown area where high traffic levels combine with current geometric conditions to create stop-and-go conditions and traffic backups at interchange ramps. Specifically, the Iowa-bound segment of I-74 across the river operates at LOS E during the peak hour. Other northbound segments of I-74, such as the segment between U.S. 67 and Kimberly Road and between Kimberly Road and Middle Road, operate at LOS D during the peak hour. Interchanges at River Drive, U.S. 67, Kimberly Road and Middle Road have ramps that operate at LOS D during the peak hour. Northbound weaving segments between Avenue of the Cities (23rd Avenue) and 7th Avenue, Kimberly Road and Middle Road, and Middle Road and U.S. 6 operate at LOS D, E, or F in the peak hour.

The Illinois-bound segment of I-74 across the river also operates at LOS E during the peak hour. The southbound mainline from Avenue of the Cities (23rd Avenue) to John Deere Road and segments of the mainline between River Drive and Avenue of the Cities (23rd Avenue) operate at LOS D. The U.S. 67 and River Drive interchanges have northbound ramps that operate at LOS D. Finally, the northbound weaving segments from U.S. 67 to Middle Road and Middle Road to Kimberly Road operate at LOS E in the peak hour. See [Figures 1-2a](#) and [1-2b](#), *I-74 Year 2000 Existing Traffic*.

The low LOS ratings for segments of I-74 in the project area, particularly the river crossings themselves, are indicative of capacity problems. As the number of vehicles per day increases on I-74 from today's conditions, the LOS will continue to decline, increasing driver frustration and decreasing the ability of the corridor to safely and efficiently move people and goods.

1.3.2 Roadway Geometry

Since the roadway was constructed, geometric standards developed by the American Association of State Highway and Transportation Officials (AASHTO) have been updated to reflect improved knowledge of how roadway geometry may influence safety and travel performance. The existing roadway geometry and infrastructure condition were examined using current AASHTO guidelines and Iowa and Illinois DOT policies. The following five primary geometric components were identified as contributing to the overall need for improvement within the project corridor and will be addressed by the proposed improvements. See [Figure 1-3, I-74 Design Issues](#).

- **Narrow lane and shoulder widths on the existing river-crossing structures and approaches.** The northbound (Illinois to Iowa) river crossing has two 11.5-foot travel lanes and no shoulders. The southbound (Iowa to Illinois) bridge has two 12-foot travel lanes and no shoulders. The absence of shoulders causes drivers to hug the centerline because they fear coming close to the railing/steel truss. No space is available for errant vehicles to recover, disabled vehicles to be removed from the flow of traffic, or maintenance and inspection vehicles to access the bridge without blocking traffic.
- **Reverse curves on the Illinois approach.** Reverse curves consist of a curve in one direction (horizontal curve) immediately followed by a curve in the opposite direction. The Illinois approach to the river crossing consists of a series of four horizontal curves, which in combination with vertical grades and closely spaced interchange ramps reduce safe travel speed and driver sight distance.
- **Maximum vertical grades on both the Illinois and Iowa approaches.** The vertical grade is 4 percent on the Illinois approach to the river and 3 percent on the Iowa approach, both the maximum allowable grades. Such steep vertical grades cause slow truck travel speeds, which in turn reduce the overall travel speed.
- **Close interchange spacing.** Design requirements recommend a distance of 0.75 mile between interchanges. In Moline, the 7th Avenue and River Drive interchanges are 0.38 mile apart; in Bettendorf, the U.S. 67 and Kimberly Road interchanges are 0.44 mile apart. Close interchange spacing reduces the distance available for safe merging and exiting maneuvers.
- **Short taper rates on ramps.** The short taper rates on the U.S. 67 and Middle Road ramps minimize the available distance for vehicles to accelerate to highway speeds before having to merge with mainline traffic or decelerate from highway speeds before reaching the ramp terminals. This is particularly difficult for trucks, which require greater distances for acceleration and deceleration.

1.3.3 Safety

The combination of traffic characteristics and outdated roadway geometry contributes to higher-than-average crash rates in segments of the I-74 corridor. These characteristics include the current narrow roadway and shoulder widths, and steep grades and tight curvatures on ramps and mainline geometry. When combined with other factors, such as high traffic volumes and congestion, higher-than-average accident rates result.

The number and rate of reportable accidents and fatalities are typically used to quantify highway safety. The expected crash rate for an urban freeway generally ranges between 1.2 and 1.4 crashes per million vehicle miles

traveled. The DEIS presented an analysis for a 3-year period from 1997 to 1999 (see Section 1.4.3, *Safety*, in the DEIS). An updated accident analysis was performed for the 3-year period between 2003 and 2005 to reflect the current conditions along the study corridor. The accident rates in the downtown areas and along the bridge remain higher than the national average range. The crash rates by location and direction of travel are shown in Table 1-1, *Crash Rates per Million Vehicle Miles by Direction of Travel* (see also Figure 1-4, *Crash Rates by Location*, located at the end of Section 1).

TABLE 1-1
Crash Rates per Million Vehicle Miles by Direction of Travel

Segment	Crash Rate		
	North-bound	South-bound	National Average
Downtown Moline	1.6	0.9	1.2–1.4
River crossing	1.2	1.7	1.2–1.4
Downtown Bettendorf	0.9	1.6	1.2–1.4

A total of 328 crashes occurred within the study area during the analysis years (2003–2005). Crash rates are subject to variance, and though there was a reduction in total number of crashes since the previous analysis period (1997–1999), there were no notable changes in the trends in crash severity, crash types, and crash distributions. There were 101 crashes with reported injuries, and 227 crashes with property damage only. There were no fatalities during the analysis years (see Figure 1-5, *Crash Severity by Location*, located at the end of Section 1). Of the 101 crashes with reported injuries, 7 resulted in major injuries, 30 resulted in minor injuries, and 64 resulted in possible injuries (see Figure 1-6, *Injury Severity by Location*). As with the previous analysis period, more than 50 percent of crashes occurred during normal dry-surface conditions. About 13 percent of crashes happened during wet-road conditions and 9 percent during ice and snow conditions. The predominant crash types are the same as the previous analysis period with slightly different percentages: rear-end (58.5 percent), fixed-object (18.0 percent), and sideswipe (7.9 percent) (see Figure 1-7, *Collision Type by Location*, located at the end of Section 1).

These types of accidents experienced within the project corridor typify those expected where roadways are narrow, where there is little area available for the recovery of errant vehicles, and where there is not adequate storage capacity along ramps to remove exiting vehicles from the mainline. Providing for increased capacity through the use of both auxiliary and basic lanes should help reduce multi-vehicle (typically rear-end and sideswipe) crashes, particularly during critical time periods. Elimination of the reverse curvature for the new river crossing alignment should result in some reduction in crashes. Providing full shoulders and improved ramp designs with longer tapers should result in

some reduction in crashes. Finally, upgrading of ramp geometry to meet or exceed AASHTO design criteria has been shown to reduce ramp-related crashes.

1.3.4 Consistent Travel Times within the Corridor (Dependability of Travel)

Dependable travel is evidenced by a facility that is open to traffic and provides a consistent travel time with smoothly flowing traffic. The I-74 corridor is the major vehicular travel corridor through the Quad Cities area, with an essential mission to move both goods and people across the Mississippi River; further, there are no nearby alternative routes when I-74 is congested or undergoing maintenance. Thus, the I-74 bridges carry most of the commuters between Illinois and Iowa. The dependability of travel is aggravated by traffic incidents, or even routine maintenance activities, which cause lane closures and additional traffic delays.

The need for dependable travel is based on providing easier commutes, dependable travel times for goods and services, and improved connections to other transportation modes. Increasing capacity along the mainline, improving the geometry on both the bridges and the roadway (including ramps), and enhancing connections to the local roadway systems would all increase the dependability of travel on the facility.

Maintaining access to the existing facility while the new facility is being built would increase the dependability of travel during construction. See 1.3.7, *Economic Development*, for more information.

1.3.5 Transportation Connections

The I-74 corridor is an important local, regional and national transportation connector. I-74 not only provides access to the national interstate network generally; but because it runs through two Quad City downtown areas, it also provides access for interstate traffic to the center of the Quad Cities region, while the other area interstates do not. I-74, alone and in connection with other interstates, provides access east to Chicago, west to Des Moines, and to the southeast through Illinois and Indiana. Local residential, economic and business centers are also accessed by I-74. Further, two major marked routes—U.S. 67 in Iowa and IL 92 in Illinois—do not have efficient access to I-74. U.S. 67 is a one-way pair along State and Grant streets in Bettendorf, with partial interchange access to I-74. IL 92 is also a one-way pair along 4th and 6th avenues, with no direct access to I-74.

I-74 is also one of five Mississippi River crossings providing cohesion in the Quad Cities region by bridging the two sides of the river. As a result of its location and characteristics, the I-74 Bridge carries the largest volume of local traffic. Traffic analyses indicate that roughly 90 percent of traffic on the I-74 Bridge originates from or terminates in the local metropolitan area.

Many other modes of human and freight travel can be accessed by I-74, including air, rail, river/barge, transit, and bicycle/pedestrian.¹ Two airports, three railroad companies, and more than 30 river/barge terminals operate in the Quad Cities and have access to I-74. Connections to public transit and bicycle/pedestrian facilities are also provided by I-74. The

¹ For more information on the transportation facilities in the Quad Cities region, refer to the 2035 *Quad City Area Long Range Transportation Plan* (March 22, 2006).

2035 LRP emphasizes the importance of efficient connections to the many modes of transportation on improving cohesion in a region that would otherwise be compartmentalized by the Mississippi River and the multiple communities of the Quad Cities.

I-74 is the fundamental artery by which travel is funneled through the Quad City area. It is strategic by its location and connectivity to employment centers and other transportation modes.

1.3.6 Infrastructure Condition

Age and use have diminished the condition of the I-74 pavement and bridges within the study area. The bridges are more than 30 years old, with the exception of the Iowa-bound bridge over the Mississippi River that was constructed over 70 years ago. While the Iowa and Illinois DOTs have routinely repaired parts of the pavement and bridges, some locations may require major rehabilitation/reconstruction as they approach the end of their useful life.

The FHWA gives bridges a rating between 0 and 100 to indicate a bridge's sufficiency to remain in service with a sufficiency rating of 100 signifying an entirely sufficient bridge. Replacement is generally considered for structures with a sufficiency rating less than 50. The sufficiency ratings of the bridges along the I-74 corridor range between 42 and 98, but the Iowa-bound Mississippi River bridge is rated 42 and the Illinois-bound bridge is rated 61.

1.3.7 Economic Development

Economic vibrancy has become an important focus on both the regional and local level in the Quad Cities. Improving the transportation infrastructure would support efforts by the Bi-State Regional Planning Commission, Moline, and Bettendorf to stimulate economic development. The Bi-State Regional Planning Commission identifies increasing the capacity on the I-74 Mississippi River crossing as critical to enhancing the economic viability of the Quad Cities region.

Bettendorf and Moline are economic and employment centers. A high percentage of travel on I-74 is destined to these centers. Options for travel are few except for I-74. Maintaining safe, reliable travel to these centers has become a priority for local planning organizations. Further, enhancing these centers is a goal of the communities themselves. Both Bettendorf and Moline have designed downtown riverfront redevelopment plans to increase the economic vibrancy of the communities. In its downtown redevelopment plans, Bettendorf has emphasized an interest in improving traffic circulation and bicycle/pedestrian accommodations. Moline has planned many downtown improvement projects, such as the recently constructed mixed-use development which resulted in nearly \$100 million in private investment and more than 300 new jobs. Improved travel to the downtown areas will help realize these goals.

The Moline and Bettendorf downtown economies rely on the continuous movement of people and goods in and out of the area. As such, maintaining two lanes of traffic in each direction along I-74, even during construction, is one of the conditions that must be met for an alternative to be considered reasonable. It should be noted that temporary lane closures may be allowed during non-peak hours.

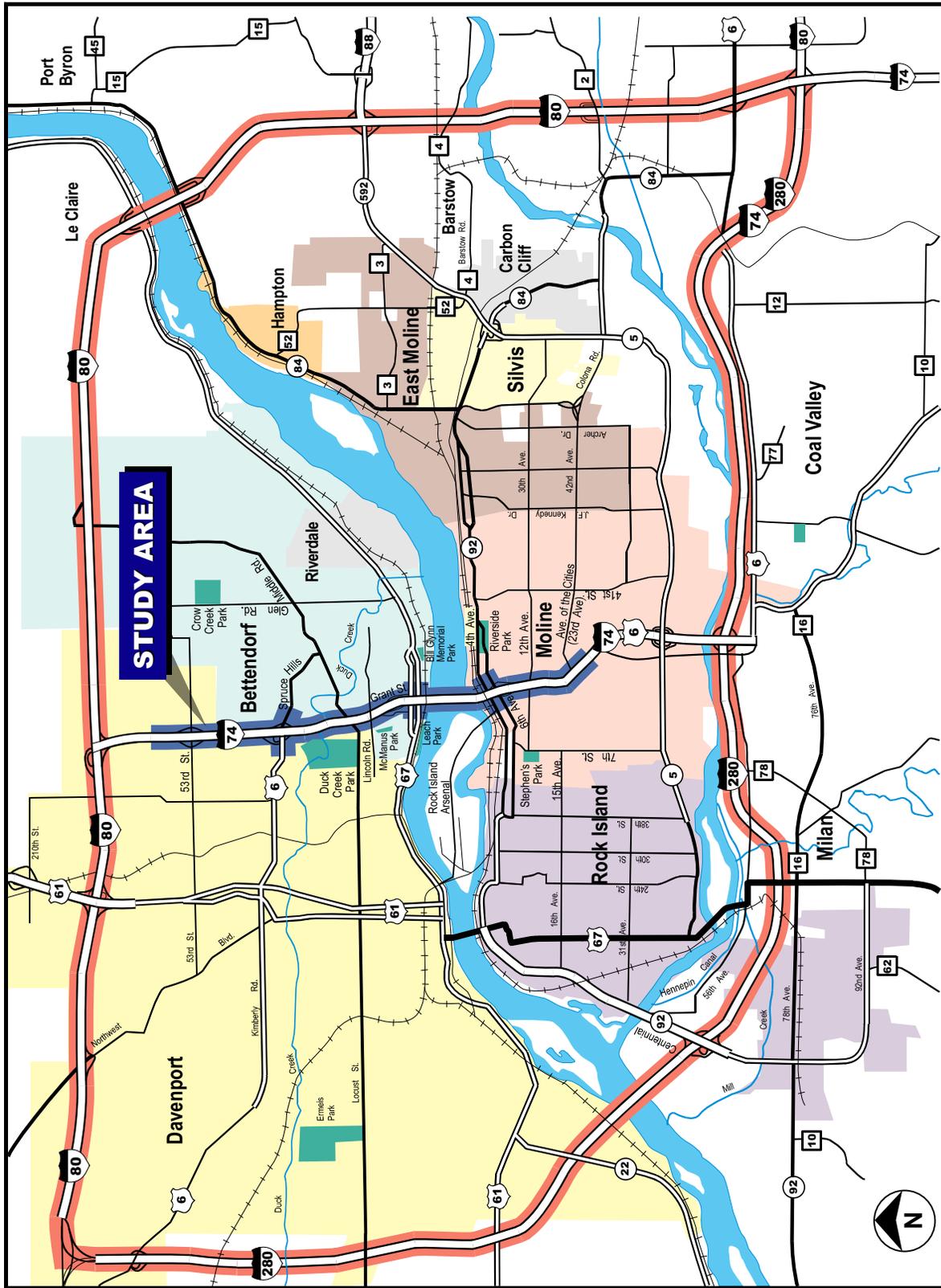


Figure 1-1
I-74 Iowa - Illinois Corridor Study
Location Map

Figure 1-1 I-74 Iowa-Illinois Corridor Study
Location Map

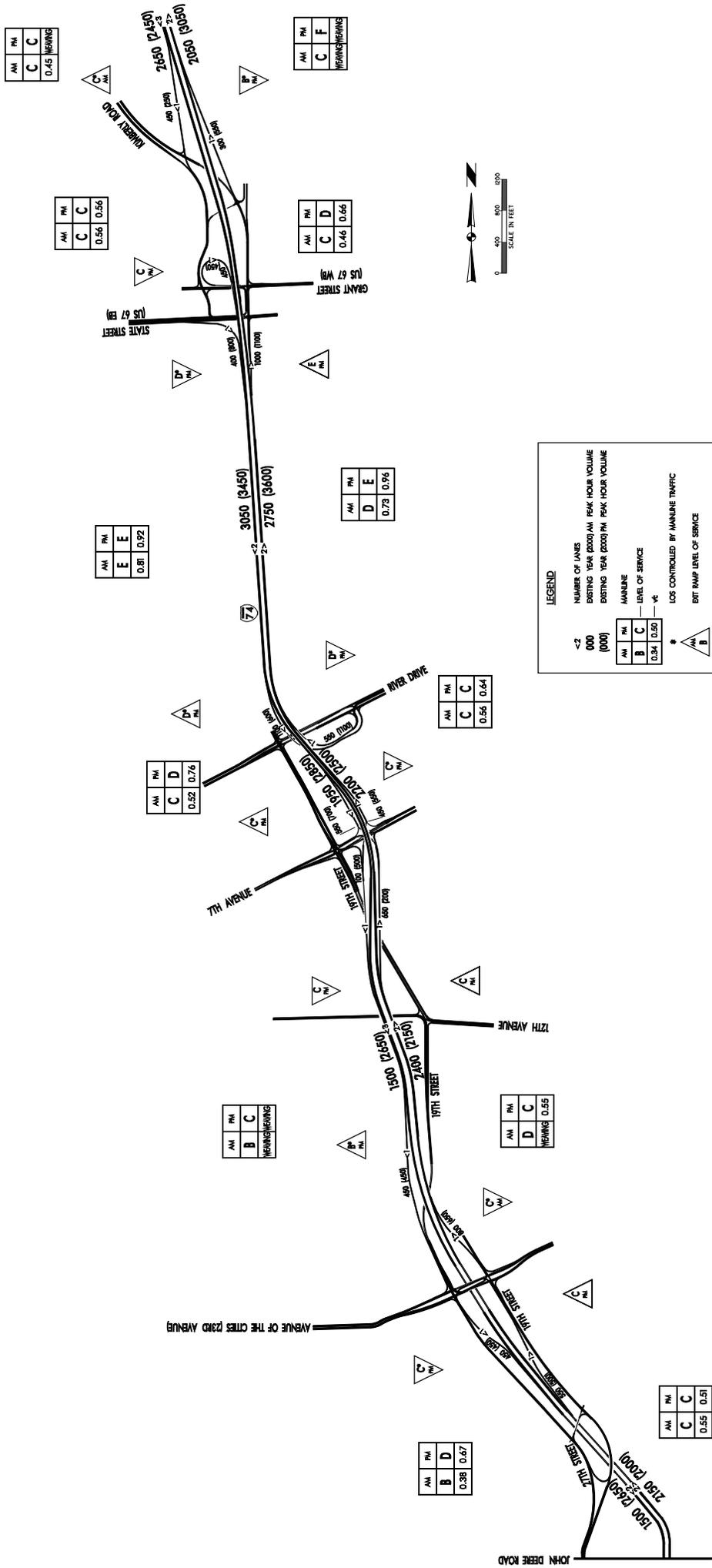


Figure 1-2A
I-74
Year 2000 Existing Traffic

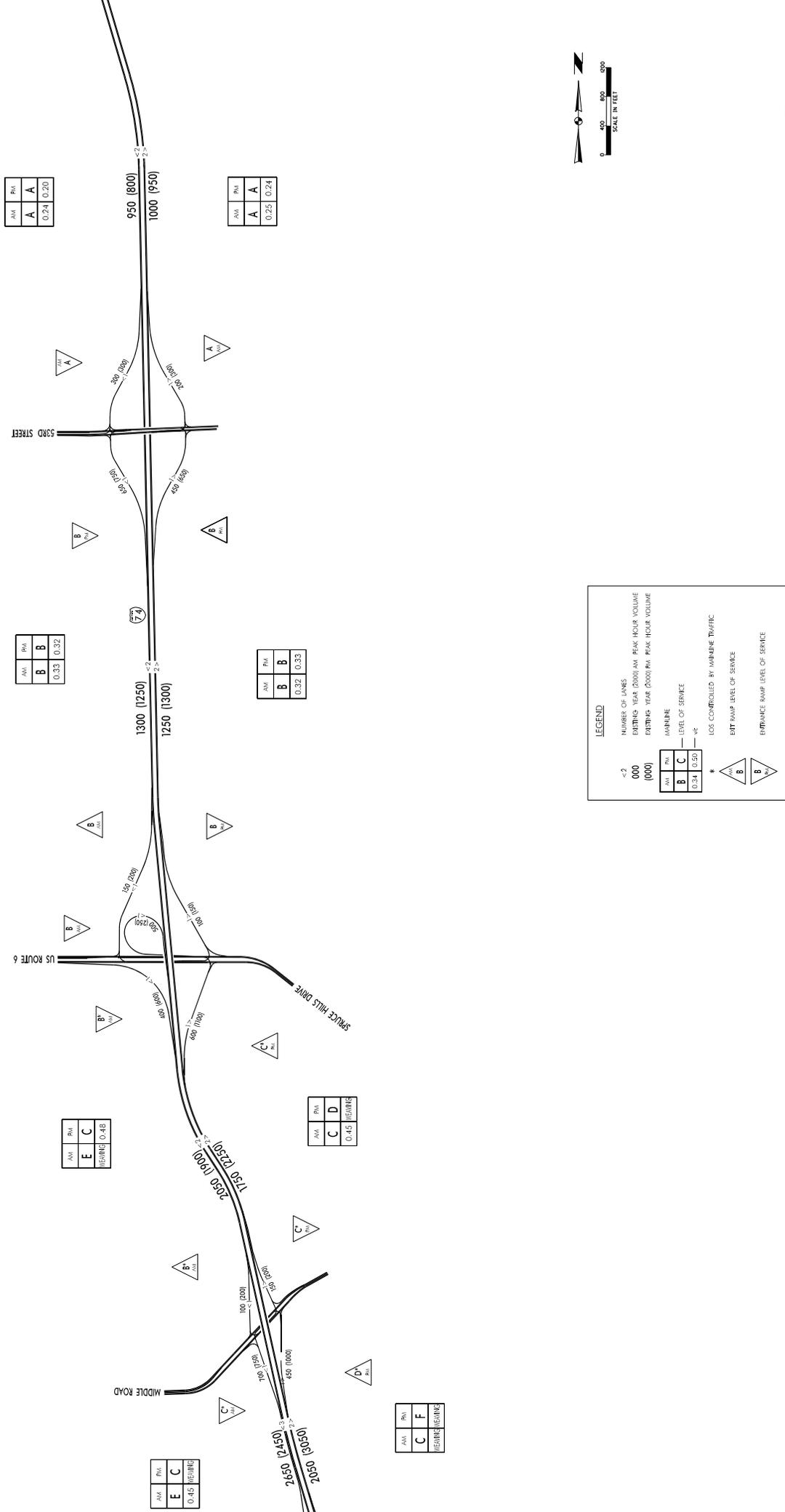


Figure 1-2B
i-74
Year 2000 Existing Traffic

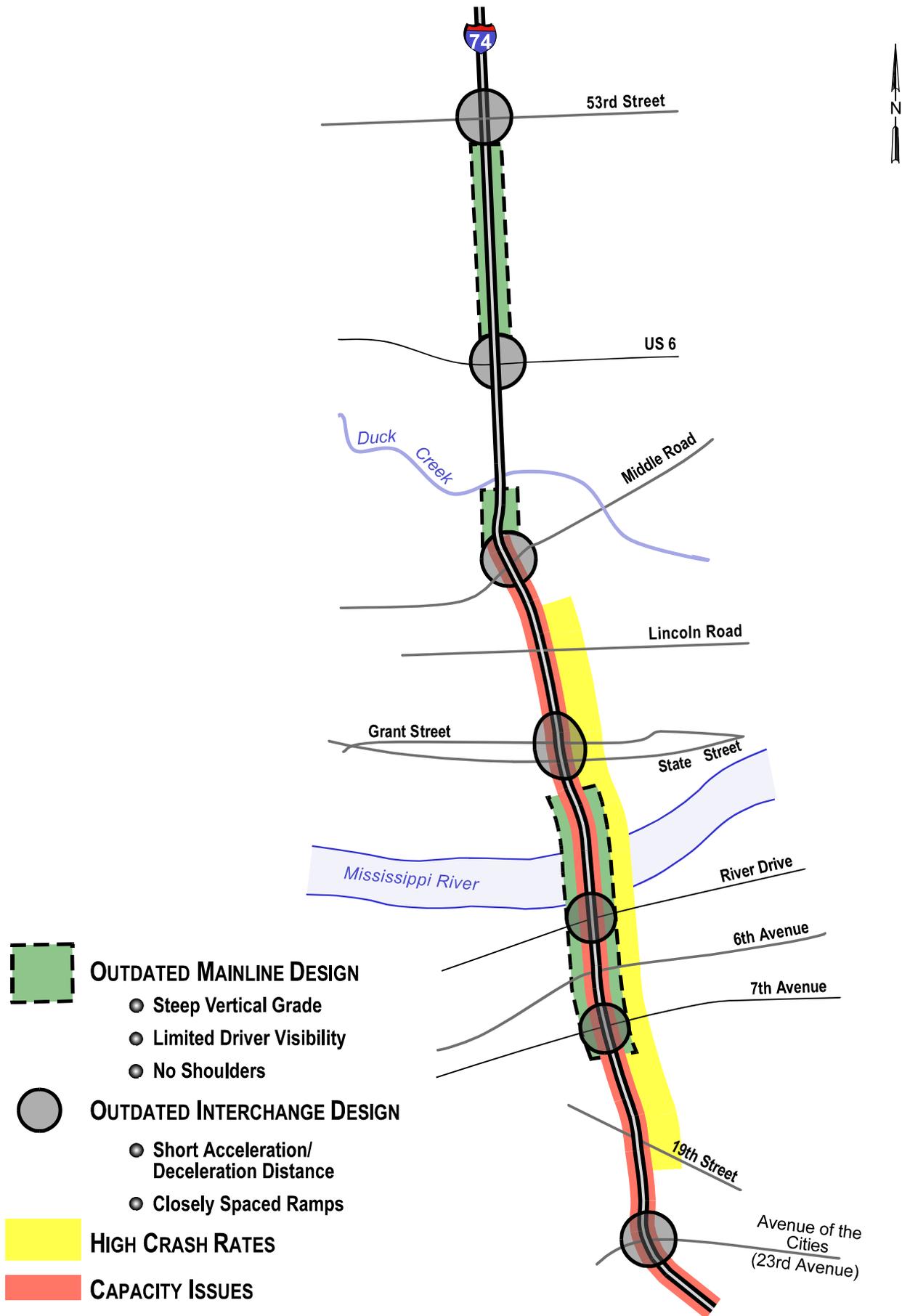


Figure 1-3
I-74 Design Issues

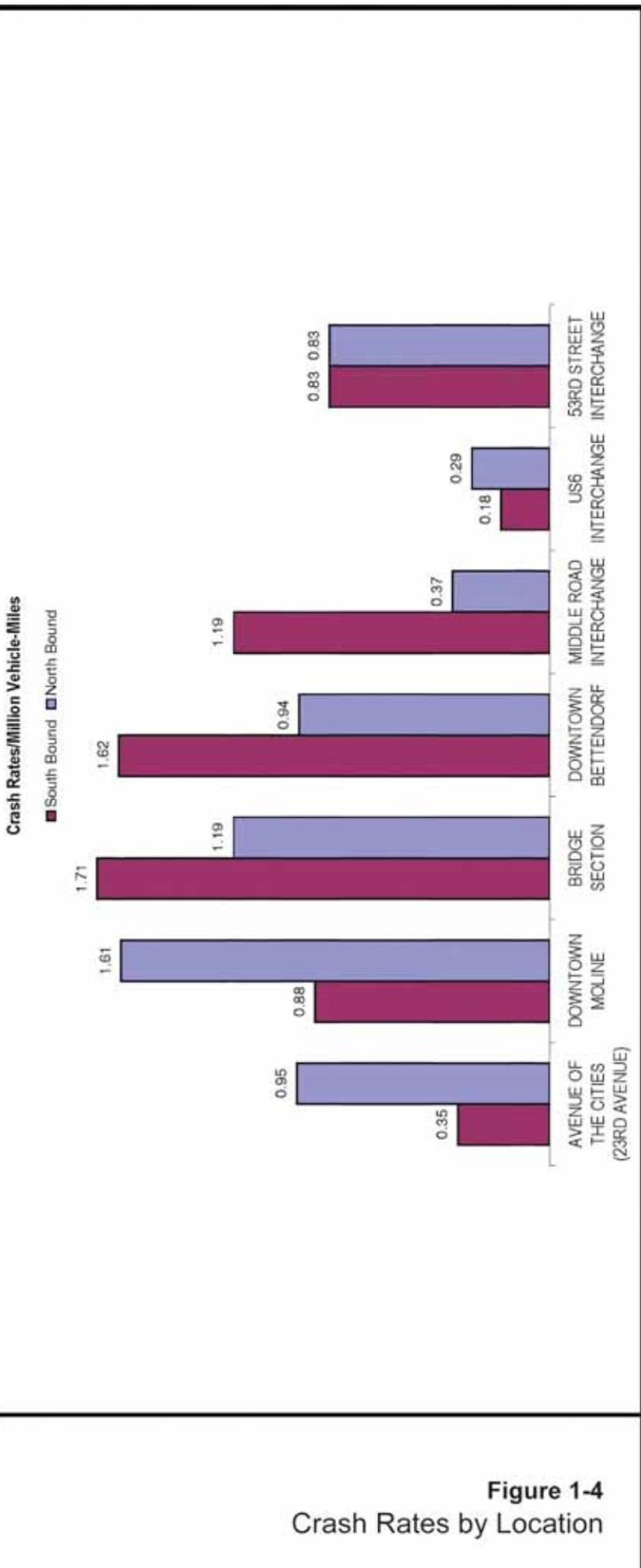
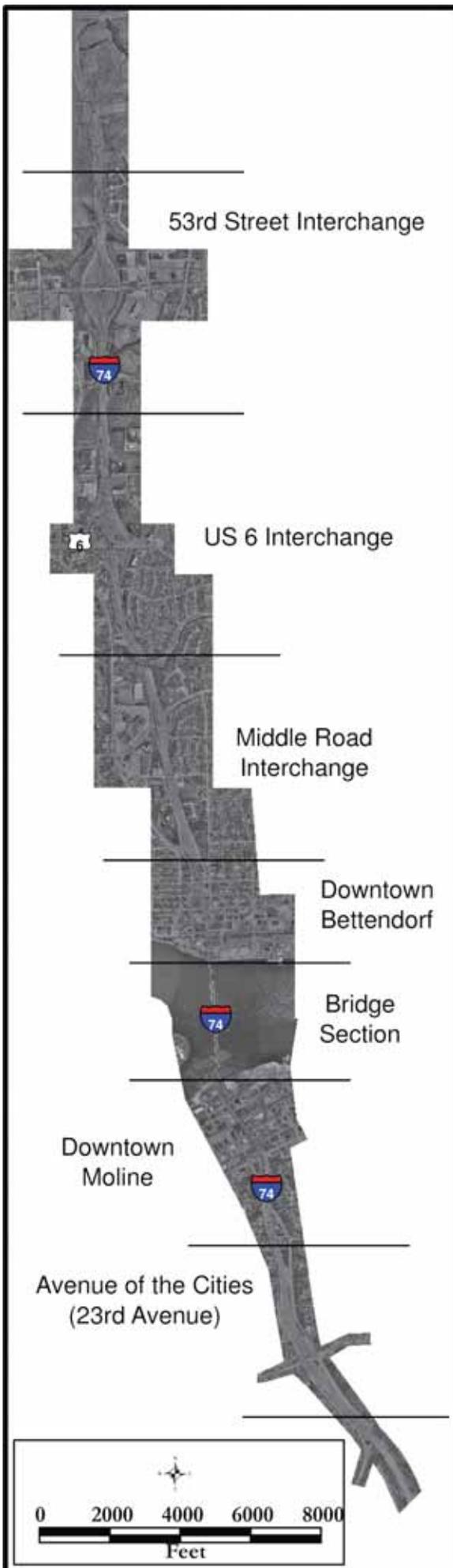


Figure 1-4
Crash Rates by Location

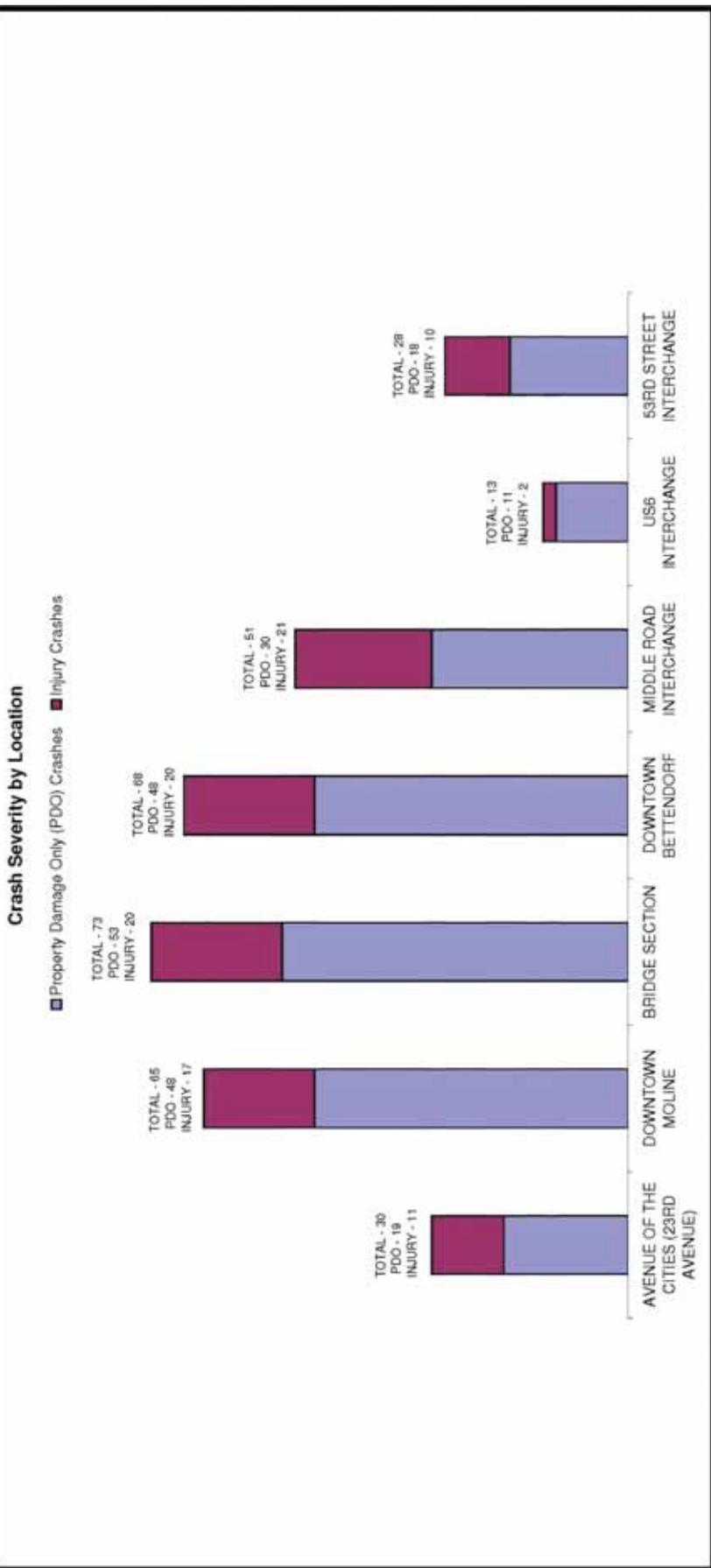
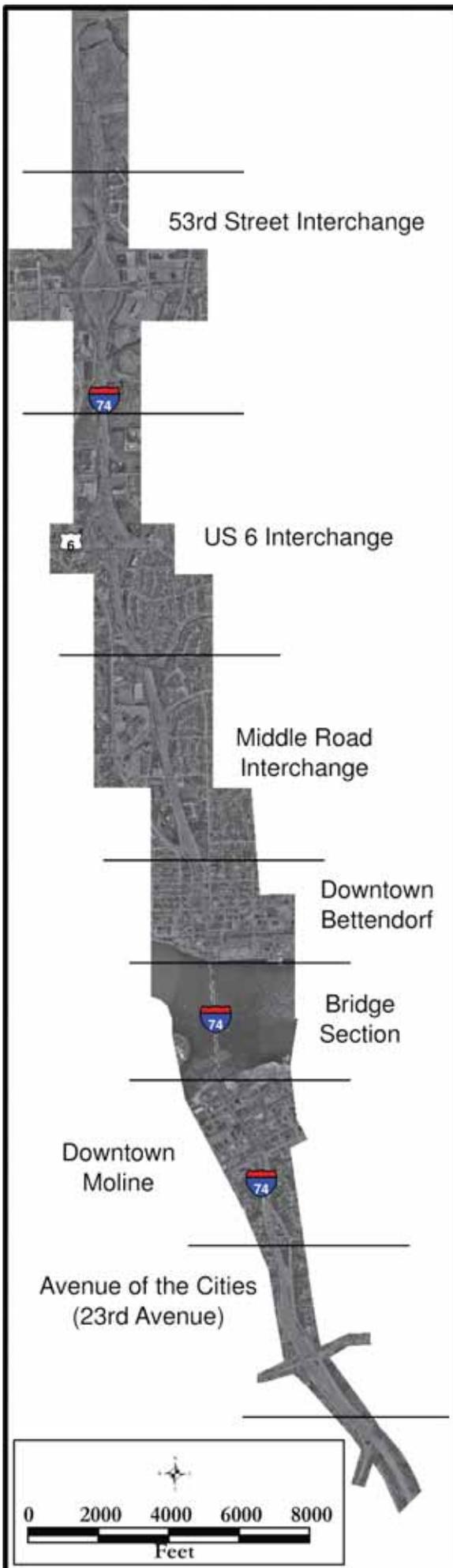


Figure 1-5
Crash Severity by Location

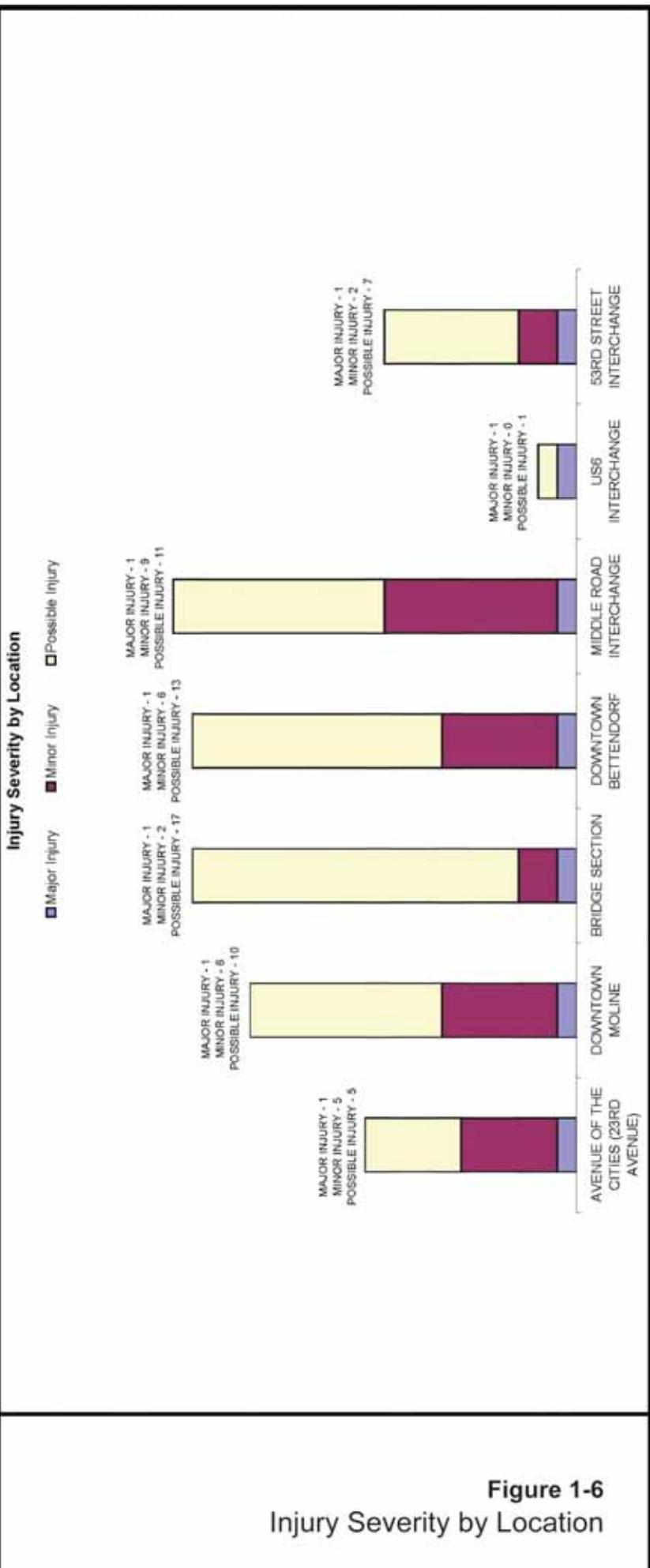
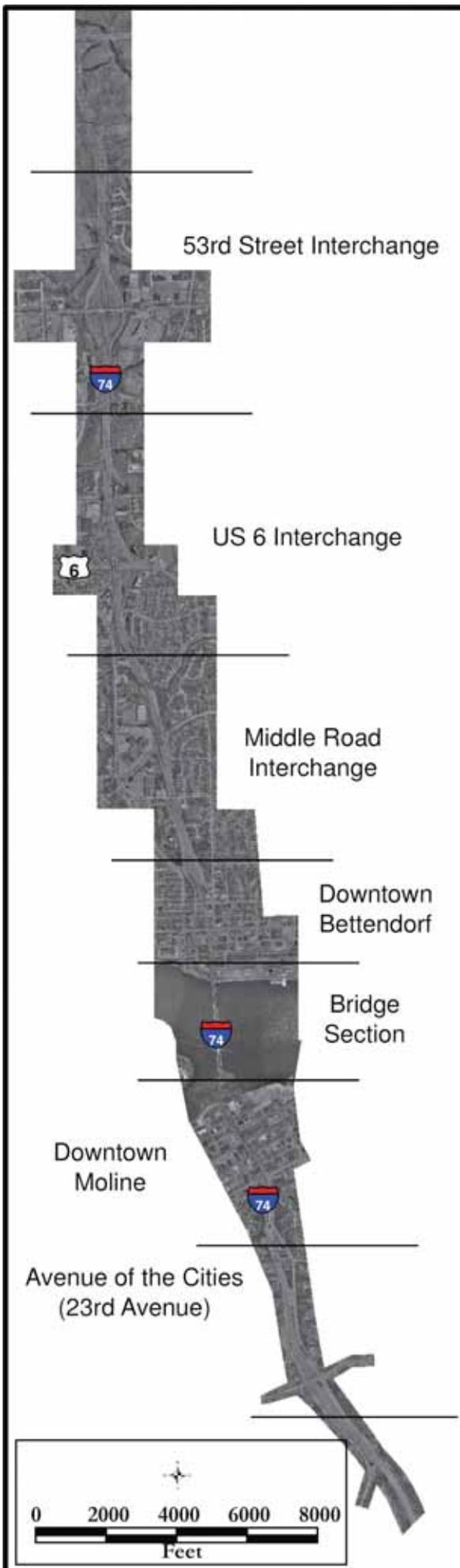


Figure 1-6
Injury Severity by Location

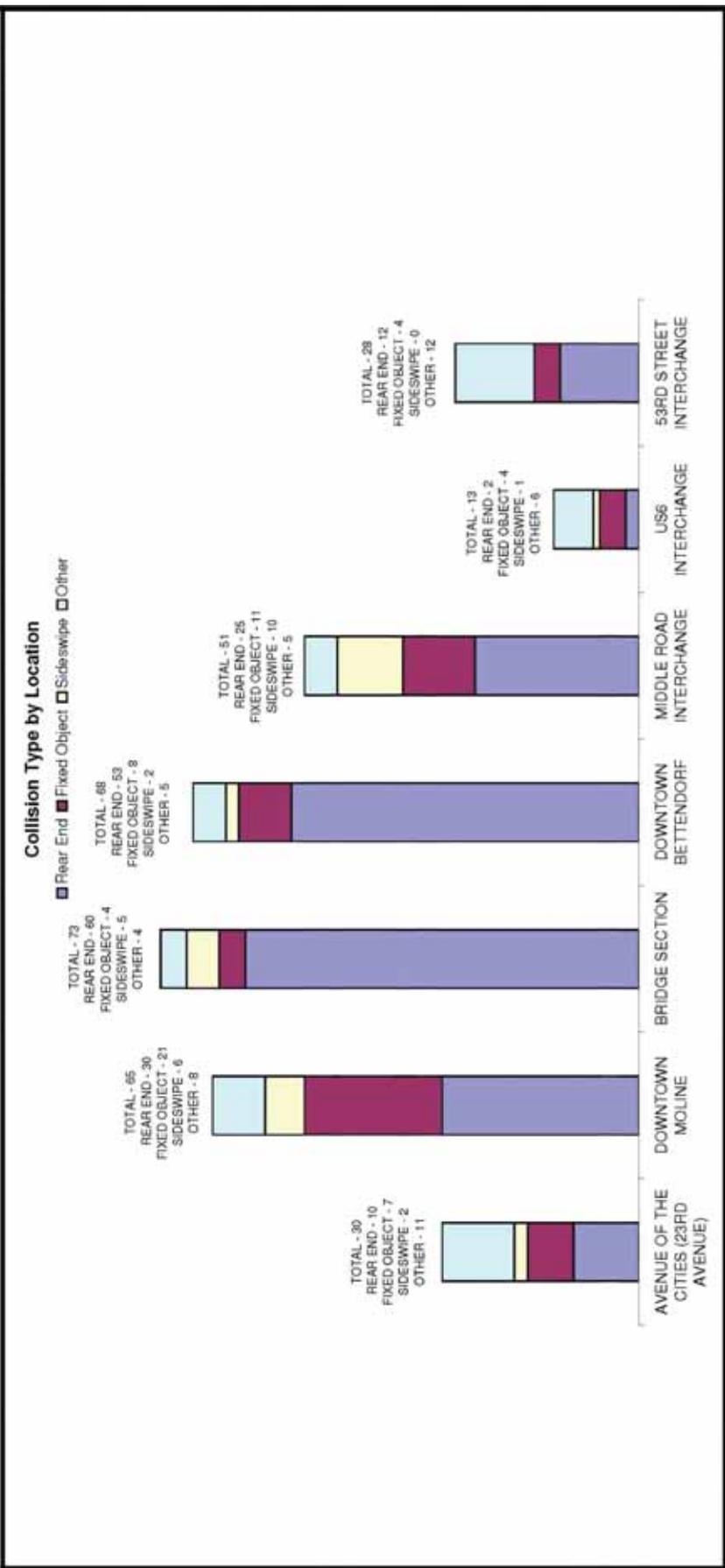
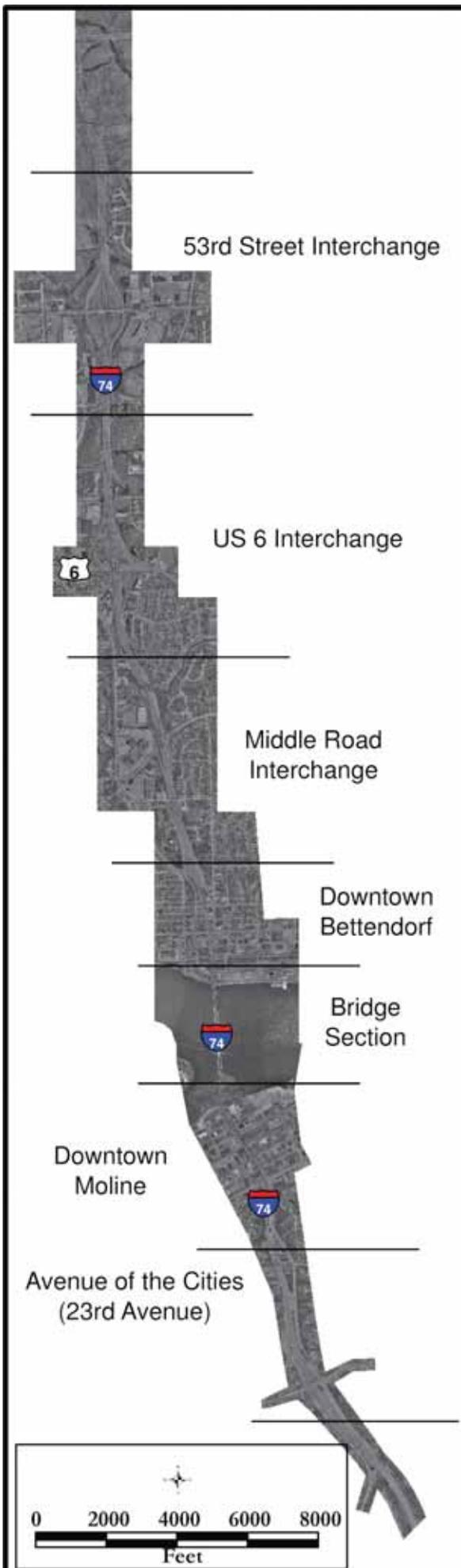


Figure 1-7
Collision Type by Location

Section 2
Alternatives

Alternatives

2.1 Preferred Alternative Summary

Following circulation of the DEIS, the project sponsors – the Iowa and Illinois DOTs, in consultation with the FHWA – identified a preferred alternative in the South, Central, and North sections of the project area:

- **South Section** – One build alternative was investigated in the South Section and discussed in the DEIS. It was identified as the Preferred Alternative.
- **Central Section**
 - **Mainline and Interchanges** – Alignment Alternative F and interchange variations M1 and B1 were identified as the Preferred Alternatives in the Central Section.
 - **U.S. 67 and Local Roadway/Underpass** – The U.S. 67 Diagonal Connector and the Holmes Street/Mississippi Boulevard Underpass were identified as the Preferred Alternatives in downtown Bettendorf.
- **North Section (Mainline and Interchanges)** – One build alternative was investigated for the I-74 mainline in the North Section. It was identified as the Preferred Alternative. The one build alternative investigated for the Middle Road interchange was identified as the Preferred Alternative. Variation 2 was identified as the Preferred Alternative at both U.S. 6 and 53rd Street.

The Preferred Alternative meets the project’s purpose and need. See Table 2-1, *Ability of the Preferred Alternative to Meet Purpose and Need*. The Preferred Alternative has been refined based on information learned since the publication of the DEIS. The justification for the identification of these project elements as preferred and the subsequent refinements are discussed later in this chapter.

At the conclusion of the review period for this FEIS, the project sponsors will identify the alternative selected for implementation. This selected alternative will be described in a Record of Decision (ROD), the document that records the federal decision on the proposed action. As the proposed improvement is a large infrastructure project with many associated design details, its design will continue to be advanced after publication of the ROD. This may result in changes in minor aspects of the design of the selected alternative but will not alter its basic features.

TABLE 2-1
Ability of the Preferred Alternative to Meet Purpose and Need

	Traffic Demand and Service	Improved Roadway Geometry	Improved Safety Considerations	Dependability of Travel	Improved Transportation Connections	Improved Infrastructure Condition	Support of Economic Development
South Section	√	√	√	√	√	√	N/A
Central Section	√	√	√	√	√	√	√
Mainline	√	√	√	√	√	√	√
Moline Interchanges	√	√	√	√	√	√	√
Bettendorf Interchanges	√	√	√	√	√	√	√
U.S. 67 Variations	√	√	√	N/A	√	√	√
Local Roadway Underpass Variations	√	√	√	N/A	√	√	√
Trail	N/A	N/A	N/A	N/A	√	N/A	N/A
North Section	√	√	√	√	√	√	√

√ indicates that the element of the Preferred Alternative meets the project purpose and need.

N/A indicates that the need item is not applicable to the element of the preferred alternative.

2.2 Alternatives Development Process

A broad array of alternatives was considered to address the transportation needs and objectives defined for the I-74 corridor study. Alternatives were developed to address the identified design, traffic, and safety needs of the corridor; to meet established planning and design criteria and standards; to avoid or minimize impacts to environmental resources; and to sustain economic development opportunities along the corridor. Improvement strategies considered highway capacity improvements, transportation system management strategies, as well as improvements for other modes of transportation including those to public transit services and bicycle/pedestrian facilities.

Given the differing nature of improvement requirements through the corridor, the study area was divided into three separate analysis sections; the South Section (from Avenue of the Cities [23rd Avenue] to 12th Avenue), the Central Section (from 12th Avenue in Illinois to Lincoln Road in Iowa), and the North Section (from Lincoln Road to 1 mile north of 53rd Street). See Section 2.1, *Alternatives Development Process*, in the DEIS for more details on the alternatives development process.

The alternatives development process involved four steps, as described below. The first three steps were accomplished prior to the circulation of the DEIS. The fourth step, identifying the Preferred Alternative, occurred after comments on the DEIS were received and considered.

1. **Establish Engineering Requirements** – Engineering requirements were established for addressing safety and capacity concerns, meeting the project purpose and need, and satisfying federal and state policies. They provided the basis for establishing the proposed corridor sizing and general design features of the alternatives.
2. **Develop and Evaluate Concept Alternatives** – Roadway and multimodal alternatives were then developed and evaluated at a conceptual level. Multiple new river crossing locations (see [Figure 2-1a](#), *Mississippi River Crossing Location Options, Preliminary River Crossings*), potential interchange improvements, and enhancements to other modes of transportation were investigated for their ability to address project purpose and need and to meet engineering requirements. Public input and guidance from regulatory/resource agencies were also considered when conceptual alternatives were advanced for further consideration or eliminated from further review.
3. **Develop and Evaluate Build Alternatives** – Build alternatives were developed after satisfactory concept alternatives had been identified. These include mainline alignment alternatives (see [Figure 2-1b](#), *Mississippi River Crossing Location Options, Refined River Crossings*) and alternatives for various interchange and local roadway improvement locations. Multimodal improvements were incorporated into the design of build alternatives.
4. **Identify Preferred Alternative** – Finally, a preferred alternative was identified after the build alternatives were analyzed for their ability to address the purpose and need, satisfy engineering requirements, minimize environmental and socioeconomic impacts, and address public and agency comments on the DEIS and Public Hearing.

2.2.1 Engineering Requirements

Basic planning and design requirements were established at the outset of the project. Sound planning requires that major infrastructure improvements provide a functionally and operationally acceptable facility for a reasonable design period. Highway improvements typically are designed for a 20-year design life from time of construction. However, a longer design life is prudent in the case of a major river crossing improvement because future expansion opportunities often are constrained by the physical characteristics of the bridge, inability to effectively handle traffic during construction, and economics. The planning and design criteria used to guide the development and comparative evaluation of the alternatives are described below.

2.2.1.1 Design Year and LOS

During the development of the DEIS, 2025 served as the design year for the roadway and bridges. However, because the Mississippi River structure represents a large investment and would be expected to have a lifespan beyond the traditional 20-year planning horizon, the design year was revised to 2035 after circulation of the DEIS, and the MPO developed updated traffic forecasts for the new design year. The target performance level for the projected design year traffic load was identified as LOS C. Reconstructed interstate corridors in congested urban environments should operate at LOS C to the extent feasible when considering economic cost, community compatibility, and environmental constraints. See Section 1.4.1 of the DEIS, *Traffic Demand and Service*, for a more detailed description of LOS.

2.2.1.2 Maintenance of Traffic during Construction

Two lanes of traffic in each direction across the Mississippi River must remain open during construction, except on limited occasions when a lane closure may be necessary during non-peak hours. This requirement was established given the regional significance of the I-74 corridor and limited alternative river crossing locations.

2.2.1.3 Proposed Corridor Sizing

Since the publication of the DEIS, the corridor sizing has been updated to accommodate 2035 traffic forecasts. The proposed cross section along I-74 remains at three 12-foot lanes in each direction between Avenue of the Cities (23rd Avenue) in Illinois and U.S. 6/Spruce Hills Drive in Iowa, with auxiliary lanes between select interchanges. However, in order to accommodate acceptable traffic performance through 2035, the previously proposed two-lane cross section between U.S. 6 and 53rd Street has been expanded to three lanes, and auxiliary lanes were added between several interchanges. These changes are discussed in more detail in Section 2.6, *Modifications to the Preferred Alternative Since Publication of the DEIS*. See [Figure 2-2, Preferred Alternative Corridor Sizing](#), and [Figure 2-3, Typical Proposed Cross Section](#).

2.2.1.4 Design Criteria

Project-specific design criteria were established on the basis of federal and state design standards and policies. Design criteria were developed for design speed, horizontal and vertical geometry, and roadway cross sections (mainline, ramp, and local roadway).

2.3 Range of Alternatives Considered

This section discusses the broad range of alternatives considered before the alternatives development process. Various roadway and multimodal improvements were developed and tested at a conceptual level to allow identification of a complete set of reasonable and representative build alternatives for more detailed consideration. The options included:

- Reuse of the Mississippi River bridges
- Multiple location and lane configuration options for a new river crossing
- Interchange location and design options
- Multimodal improvements

The process was structured to encourage input from the FHWA, the Iowa and Illinois DOTs, regulatory and resource agencies, the I-74 Project Advisory Committee, area officials, and the public. Improvement options that could not meet engineering requirements or could not avoid or minimize impacts were not considered further.

2.3.1 Mississippi River Bridge Reuse Options for Roadway Uses

Opportunities to retain and reuse the Mississippi River bridges for vehicular traffic were considered. The existing bridges are functionally obsolete and contribute to the safety, capacity, operational, and travel reliability concerns in the corridor. They consist of twin parallel structures with suspension type spans over the navigational channel, with a total structure length of 3,370 feet. The bridge reuse options were found to be unreasonable and were not retained for further consideration, as described below.

- **Widening the Existing Bridges** – After an evaluation, it was determined that the bridges cannot practically be widened to provide the required capacity because of the design characteristics of the suspension spans. The spans would need to be dismantled and rebuilt, requiring that the bridges be out of service for an extended period of time. Therefore, widening of the bridges is neither feasible nor practical.
- **Local Roadway Bridge Option** – Providing a new wider crossing for I-74 traffic and retaining the Iowa-bound bridge as a new local roadway connector was also considered. To do this, local approach structures and new local roadway connections would be required. The Iowa-bound bridge was selected as the preferred bridge for reuse because of its historic significance. However, the advanced age of the Iowa-bound bridge raised concern that the life-cycle costs for reuse may exceed those for reuse of the Illinois-bound bridge. This option was not retained for further consideration because it would not address project purpose and need, due to negligible demand for local trips between downtown Bettendorf and downtown Moline; fewer than 2 percent of daily trips across the I-74 bridges are made between the two business districts.
- **Southbound I-74 Bridge Option** – The existing bridge pair could be used for one direction of travel (southbound I-74), and then a new bridge would be constructed nearby for northbound traffic. Analyses revealed that the southbound I-74 bridge option would not meet purpose and need because it would not provide adequate capacity in the design year, would retain undesirable roadway design features, and would not fully address safety concerns along I-74.

- **Constructing a Third Center Bridge** – This option would retain local I-74 traffic on the existing twin bridges, and would include construction of a new four-lane bridge between the twin bridges for longer distance through traffic (I-74 express lanes). The construction of a third center bridge was not recommended for further evaluation because physical and structural constraints prevent it from being constructed according to interstate design standards. Further, it would not meet the project purpose and need as it would retain the undesirable mainline and ramp design features, would not adequately improve traffic operations along I-74, and would require closure of the I-74 bridges during construction.

2.3.2 Mississippi River Crossing Options

Various options for the location of the Mississippi River crossing were developed and analyzed, as discussed below. See Section 2.2.3, *Mississippi River Crossing Options*, in the DEIS for extensive discussion on the river crossing options considered as part of this study.

2.3.2.1 River Crossing Location Options

Multiple river crossing location options were considered for carrying the mainline across the Mississippi River. Options were developed to improve the horizontal and vertical alignments of the approach roadway, to accommodate I-74 traffic during construction, and to facilitate widening of the roadway. The locations ranged from 12th Street (Bettendorf)/18th Street (Moline) on the west side of I-74 to the Isle of Capri to the east (see [Figure 2-1a](#), *Mississippi River Crossing Location Options*). Ten river crossing alignment options (Alignments A through J), representing both easterly and westerly alignment shifts, initially were developed.

Alignments A, D, and H did not satisfy the established engineering requirements or had disproportionate environmental and community impacts, so they did not undergo further consideration.

Alignments C, E, and F were revised to incorporate the best characteristics of the other remaining alternatives (Alignments B, G, I, and J). Alignments C, E, and F were carried forward as representative of the range of remaining reasonable location alternatives and their related impacts. Alignment C was chosen as representative of the options for shifting the mainline west of the river crossing. Alignments E and F were carried forward as representative of the potential mainline shifts to the east. The social and environmental impacts, transportation issues, and constructability of the three alignments were analyzed to determine if it was reasonable to consider them further. See [Figure 2-1b](#), *Mississippi River Crossing Location Options, Refined River Crossings*.

Alignment C was dismissed because I-74 could not remain open to traffic during construction, a requirement set forth in the Purpose and Need for Action, and because it would have greater environmental and socioeconomic impacts, including those to 4(f) and Section 106 properties. Alignments E and F were carried forward as build alternatives because they had moderate to minor impacts and fair to good performance. As noted in Section 2.1, Alignment F was identified as the preferred river crossing location.

2.3.2.2 River Crossing Lane Arrangement Options

Several different lane arrangements were considered, including an eight-lane mainline crossing, six-lane mainline crossing, four-lane mainline crossing with a four-lane collector-distributor (C-D) roadway, and a double-deck crossing (see Table 2-2, *Mississippi River Bridge Lane Arrangement Options Evaluation*). The optimal lane arrangement would provide a functionally acceptable interstate river crossing for a reasonable period of time beyond the original 2025 design year. At the time the DEIS was circulated, the eight-lane mainline crossing was incorporated into the design for use in analyzing the potential environmental consequences of the build alternatives. Using the new traffic forecasts created after circulation of the DEIS, the eight-lane mainline crossing was selected as the preferred cross section as it would provide acceptable capacity through 2035.

2.3.3 Interchange Options

Various interchange location and type options were considered. As discussed in Section 1, existing I-74 interchanges contribute to capacity, operational and safety problems within the corridor, and the existing interchange design features do not comply with current design standards. Multiple interchange location and type options were considered to accomplish the following need components: comply with current interstate design standards, improve overall traffic operations, improve safety performance, improve accessibility and traffic circulation, and complement local transportation and land use plans.

An iterative process was used to evaluate interchange location and type options. Options that appeared to be technically feasible were developed to a greater degree of detail and evaluated through a qualitative analysis of engineering factors and potential environmental impacts, with input from area officials and the I-74 Project Advisory Committee. Factors considered included compatibility with current and projected travel patterns, design characteristics, and potential environmental and community impacts. Options carried forward are described in Section 2.4, *Build Alternatives Retained for Detailed Analysis in the DEIS*.

2.3.4 Non-roadway Alternatives

Non-roadway alternatives, including transportation system management techniques, transit enhancements, options for diverting I-74 traffic onto other roadways, and bicycle and pedestrian accommodations, were considered for their ability to address various design concerns in the project corridor. When considered as standalone alternatives, it was determined that they would not effectively address purpose and need. In all cases, the alternatives are used by a very small percentage of the traveling public. Examination of these options showed that although they play a role in reducing single occupancy vehicles and optimizing the efficiency of the overall transportation system, the capacity, operational, safety, and design problems along I-74 cannot be solved by such improvements alone. They could, however, improve transportation system connections and overall operations and encourage alternatives to single-occupancy vehicles when considered in addition to roadway improvements. Therefore, non-roadway improvements were included in the proposed design where appropriate. See Section 2.2.5, *Non-roadway Alternatives*, in the DEIS for more details.

2.3.5 No-Action Alternative

The No-Action Alternative is defined as no new major construction along the I-74 corridor. The No-Action Alternative would not effectively address the project's purpose and need, but it was retained as a baseline for comparison with the build alternatives.

Improvements implemented under the No-Action Alternative would be limited to short-term restoration work (maintenance) needed to ensure continued bridge and roadway pavement integrity. The design of the existing roadway, including location, geometric features, and current capacity constraints, would remain unchanged. Some minor operational improvements could be expected, such as deployment of a traffic management system for the bridges and minor improvements at high volume ramp intersections. Other planned or committed highway improvements (baseline improvements) would still be undertaken.

2.4 Build Alternatives Retained for Detailed Evaluation in the DEIS

The build alternatives retained for detailed study represent the range of reasonable and representative alternatives that meet project purpose and need. Alternatives were developed on the basis of the planning and design standards discussed in Section 2.2.1, *Engineering Requirements*. [Figure 2-4, Key Map of Build Alternatives as Represented in the DEIS](#), depicts key features of the proposed alternatives at the time of publication of the DEIS as related to three sections of the corridor: the South Section, the Central Section (including the Mississippi River crossing), and the North Section. Where appropriate, multimodal improvements were incorporated into the proposed alternatives.

The proposed alternatives with associated design variations in the South, Central, and North Sections as presented in the DEIS are briefly described below and shown in [Figure 2-5, Build Alternatives: Alignment and Interchange Variations](#), and [Figure 2-6, Build Alternatives: Downtown Bettendorf Local Roadway Variations](#). See Section 2.3.2, *Build Alternatives*, in the DEIS for detailed descriptions.

2.4.1 South Section

Only one build alternative was considered for the South Section (Avenue of the Cities [23rd Avenue] to 12th Avenue). Improvements to the existing facility would include reconstruction and widening, improving the facility's infrastructure, and redesigning the facility's features to comply with current design standards.

2.4.2 Central Section

The proposed alternatives in the Central Section (12th Avenue to Lincoln Road) consist of reconstructing and widening I-74, improving interchanges and local road connections, and constructing a new I-74 Mississippi River crossing.

2.4.2.1 Alignment Alternatives

Two mainline alignment alternatives, Alignment E and Alignment F, were considered for reconstructing I-74 through the downtown areas and across the Mississippi River. Both

alternatives shift the mainline alignment to the east, locating them roughly 230 feet and 780 feet east of the existing roadway, respectively.

2.4.2.2 Interchange Variations

Two variations were proposed for improving the 7th Avenue and River Drive interchanges in downtown Moline (Variations M1 and M2) and the U.S. 67 interchange in downtown Bettendorf (Variations B1 and B2). Variations were designed to accommodate current and projected traffic demand, improve safety, and comply with current design standards. The interchange variations could be used with either alignment alternative.

2.4.2.3 U.S. 67 Transition Design Variations

The proposed interchanges in downtown Bettendorf improve U.S. 67, a one-way couple, to a two-way street near I-74. Two design variations were developed for connecting the segments of U.S. 67 that would become a two-way street with the existing one-way couple on the east and west sides of the interchange. Both variations – the diagonal connector variation and 90-degree connector variation – are compatible with both mainline alignment alternatives and both interchange types.

2.4.2.4 Local Roadway Underpass Design Variations

Two local roadway underpass design variations were considered to retain accessibility to downtown Bettendorf. An improved Holmes Street/Mississippi Boulevard underpass and an improved Kimberly Road underpass option were presented as potential build alternatives.

2.4.2.5 Bicycle/Pedestrian Variations for Mississippi River Crossing

In response to public interest and local transportation plans, three options for an exclusive bicycle and pedestrian trail across the Mississippi River were presented as elements of build alternatives in the DEIS. The three options include no bicycle/pedestrian accommodations on I-74 bridges, a new bicycle/pedestrian trail on the existing Iowa-bound bridge, and a new bicycle/pedestrian trail on a new I-74 bridge.

2.4.3 North Section

Only one build alternative was developed for the mainline of I-74 in the North Section (Lincoln Road to 1 mile north of 53rd Street). Proposed improvements along the mainline include reconstructing and widening I-74, improving the geometry to comply with current design standards, and improving the facility's infrastructure. Two interchange variations for each location were considered at U.S. 6/Spruce Hills Drive and 53rd Street to provide better traffic flow at these interchanges.

2.5 Identification of the Preferred Alternative

The Preferred Alternative was identified in January 2005 on the basis of a comparison of the engineering, environmental, financial performance of the Build Alternatives, agency comments, and public input.

The Preferred Alternative involves the widening and reconstruction of I-74 in all sections of the project area. The existing cross-section will be widened to three lanes in each direction

from the Avenue of the Cities (23rd Avenue) in Moline through the 53rd Street interchange in Davenport. Additionally, auxiliary lanes will be constructed in the South Section and Central Section. Interchange improvements along with improvements to select connecting local roads will be made at Avenue of the Cities (23rd Avenue), 7th Avenue, River Drive, Grant Street, Middle Road, U.S. 6, and 53rd Street. The Preferred Alternative is shown and described on [Figure 2-7, Preferred Alternative](#), and in greater detail in Appendix A, *Preferred Alternative*.

2.5.1 South Section (Avenue of the Cities [23rd Avenue] to 12th Avenue)

The one build alternative considered in the South Section has been identified as the Preferred Alternative in this area of the project. The Preferred Alternative is shown in Appendix A, *Preferred Alternative*. It reconstructs I-74 and adds capacity through the South Section, specifically with the addition of a third 12-foot through lane in each direction and a 12-foot auxiliary lane between Avenue of the Cities (23rd Avenue) and 7th Avenue (northbound I-74). A 30-foot paved median with barrier would be provided to separate opposing traffic. The I-74 bridges over the 19th Street collector and 12th Avenue, and the Avenue of the Cities (23rd Avenue) bridge over I-74 would be reconstructed or repaired and widened to accommodate the proposed roadway improvements and provide adequate vertical clearance. Minor design improvements are proposed at entrance and exit ramp terminals and at the ramp intersections along Avenue of the Cities (23rd Avenue).

The proposed improvements add capacity, which in turn leads to an improvement in travel dependability and safety performance, addresses infrastructure condition issues, and ensures design standards are met.

2.5.2 Central Section (12th Avenue to Lincoln Road)

Two new alignment locations were considered in the Central Section, along with variations for the interchanges and local road configurations. The Preferred Alternative in the Central Section has the following features.

2.5.2.1 Mainline

Alignment F is the preferred mainline location alternative. This alignment shifts the mainline roughly 780 feet east from the existing centerline between 7th Avenue and Kimberly Road. Alignment F improves the horizontal and vertical alignment to meet roadway design criteria and to facilitate construction staging. Alignment F is preferred to Alignment E because it provides additional safety performance along mainline I-74 by eliminating the reverse curvature along the Illinois approach.

The Preferred Alternative includes constructing I-74 on new alignment (Alignment F) in the Central Section, including construction of a new I-74 Mississippi River crossing. The new Mississippi River crossing would include accommodations for a new bicycle/pedestrian crossing.

I-74 bridges over 19th Street, 7th/6th Avenue, 5th Avenue, 4th Avenue/CRI&P RR, River Drive, the Mississippi River, relocated State Street, U.S. 67/Grant Street, Holmes Street/Mississippi Boulevard, and Lincoln Road would be reconstructed and widened. The reconstructed bridges would meet design criteria, accommodate the proposed roadway widening, and provide acceptable vertical and lateral clearances. Similarly, 19th Street,

6th Avenue, Holmes Street, and Lincoln Road near I-74 would be reconstructed to provide adequate vertical clearance and to accommodate design improvements.

The preferred mainline improvements are shown in Appendix A, *Preferred Alternative Exhibit*. The proposed mainline improvements address multiple purpose and need components. Adding through and auxiliary lanes through the Central Section adds capacity to the facility and ensures compliance with current design standards. Providing adequate capacity to address traffic demand leads to an improved level of service and dependability of travel. Geometric features of the existing system will be rectified by improving the reverse curvature along the mainline. Replacing the aging bridges will address the need to improve the infrastructure along the corridor.

As discussed in Section 4 of this document, Alignment F also has fewer impacts to cultural resources, wetlands, and residential and business displacements than does Alignment E. Further, the representatives of the cities of Moline and Bettendorf preferred Alignment F, as it is more compatible with their downtown redevelopment initiatives; and the resource agencies expressed preference for Alignment F due to the lesser wetland impacts.

2.5.2.2 Interchanges

Moline. In Moline, the **M1** interchange configuration is preferred. M1 provides an improved interchange for existing traffic movements via a split diamond interchange system with ramp connections at 7th Avenue/19th Street, 6th Avenue (IL 92 eastbound) and River Drive. The proposed improvements would provide one upgraded ramp pair for traffic to and from the south (east) and two upgraded ramp pairs for traffic to and from the north (west). The reconfigured interchange improves safety and operation in downtown Moline and provides connections to another important transportation corridor, IL 92. Further, it provides enhanced access to downtown redevelopment and economic centers.

Both interchange build alternatives in Moline would improve mainline and ramp traffic operations to an acceptable LOS and meet design criteria for interchange elements such as ramp alignment and acceleration/deceleration distance. M1 is preferred because it requires less new right-of-way, has fewer impacts to cultural resources, residential and business displacements, and contaminated sites, provides comparably better traffic operations on the local roadway system, and generally maintains existing traffic patterns. M1 is shown in Appendix A, *Preferred Alternative Exhibit* (Sheet 3).

Bettendorf. In Bettendorf, the **B1** interchange configuration is the Preferred Alternative. With B1, the ramps at State Street and Kimberly Road would be removed and an improved diamond interchange at Grant Street (U.S. 67 westbound) would be provided. Grant Street near I-74 would be converted to a two-way street with three lanes in each direction. The proposed downtown Bettendorf interchanges were designed to meet current safety and operational standards and provide optimal connections to regionally important roadways and economic centers near downtown Bettendorf. Such enhanced access supports economic enhancement plans currently being implemented by the city.

Both interchange alternatives would operate at an acceptable LOS at the ramp intersections, but B1 would minimize disruption of traffic operations by retaining the connection between 13th Street and U.S. 67 and allowing improvements to the Holmes Street/Mississippi

Boulevard underpass. Therefore, B1 is the preferred interchange alternative for downtown Bettendorf. B1 is shown in Appendix A, *Preferred Alternative Exhibit* (Sheet 5).

2.5.2.3 U.S. 67 Transition Design Variations

The **U.S. 67 Diagonal Connector** is the Preferred Alternative in downtown Bettendorf. State Street traffic would be rerouted towards the improved I-74 interchange in a diagonal orientation between 10th and 12th streets west of I-74, and between 15th and 17th streets east of I-74. Seven new traffic signals would be provided at improved intersections along the U.S. 67 corridor.

By creating a diagonal connection on new alignment across existing city blocks rather than incorporating right-angle turns at existing intersections, the U.S. 67 Diagonal Connector results in greater impacts to residences and businesses. Although the 90-Degree Connector variation would provide acceptable traffic operations along U.S. 67, travel speeds would be reduced by the interrupted travel pattern and existing north-south travel patterns would be disrupted. The Diagonal Connector variation is preferred because it provides fewer interruptions in traffic operations and meets driver expectations along U.S. 67, and it generally maintains existing north-south travel patterns. The U.S. 67 Diagonal Connector variation is shown in Appendix A, *Preferred Alternative Exhibit* (Sheet 5).

2.5.2.4 Local Roadway/Underpass Design Variations

The **Holmes Street/Mississippi Boulevard Underpass** is the Preferred Alternative to retain existing access along the roadway between the east and west sides of I-74. The Kimberly Road underpass will be eliminated as part of this alternative. To accommodate the underpass, Holmes Street/Mississippi Boulevard must be lowered between 13th and 14th streets to provide adequate vertical clearance under the proposed I-74 ramps at Grant Street. An east-west underpass at Holmes Street/Mississippi Boulevard will maintain accessibility of the downtown area for area residents.

Although the Kimberly Road Underpass variation maintains a connection between the east and west sides of I-74, it requires minor out-of-distance travel for motorists traveling locally and slightly increases the traffic volumes on U.S. 67. The Holmes Street/Mississippi Boulevard Underpass variation will provide more direct access across I-74 and provide better traffic operations along U.S. 67 than the Kimberly Road Underpass variation. The Holmes Street/Mississippi Boulevard variation received more support from the public at public meetings and is preferred by the City of Bettendorf staff. Therefore, the Holmes Street/Mississippi Boulevard underpass variation is the Preferred Alternative. It is shown in Sheet 5 of Appendix A, *Preferred Alternative Exhibit*.

2.5.2.5 Bicycle/Pedestrian Variations for Mississippi River Crossing

A new bicycle/pedestrian trail will be provided along the new I-74 bridge (see Sheets 3 through 5 of Appendix A, *Preferred Alternative Exhibit*). The trail will enhance transportation connections to other segments of the important trail network in the Quad Cities, including a link to the major riverfront trails on each side of the river. This accommodation received extensive support from the public and is supported by local officials.

The trail will be physically separated from I-74 traffic and connections to the existing trail system will be provided on each side of the river. Both the river crossing and the ramps will be designed to comply with ADA requirements.

2.5.3 North Section (Lincoln Road to One Mile North of 53rd Street)

2.5.3.1 Mainline

The one build alternative considered for the mainline within the North Section has been identified as the Preferred Alternative. This alternative involves reconstructing and widening the mainline to accommodate three 12-foot through lanes in each direction through 53rd Street. Twelve-foot auxiliary lanes will be constructed between Grant Street (in the Central Section) and U.S. 6 in both the southbound and northbound directions. The I-74 bridges over Middle Road, Duck Creek, and U.S. 6/Spruce Hills Drive will be reconstructed to provide adequate vertical and lateral clearance and to accommodate design improvements. The 53rd Street bridge will be re-used and widened to accommodate the expansion from a four-lane to a six-lane cross section along 53rd Street.

As with the South and Central Sections, the proposed reconstruction and capacity improvements will address infrastructure condition issues, accommodate design year traffic, and improve LOS. Current design criteria will be met by reconstructing the vertical alignment along the mainline.

2.5.3.2 Interchanges

Middle Road. The one build alternative considered for the Middle Road interchange has been identified as the Preferred Alternative. It includes minor design improvements at entrance and exit ramp terminals and at ramp intersections along Middle Road. The Duck Creek Plaza entrance would be relocated to the west to improve intersection spacing along Middle Road.

U.S. 6 / Spruce Hills Drive. Variation 2 is the Preferred Alternative at U.S. 6. The U.S. 6 interchange configuration will be retained, but the northbound exit and entrance ramps and the associated U.S. 6 ramp terminal intersection will be shifted to the west of its present location. This will provide a greater distance between intersections along U.S. 6 and meet current design standards. The entrance and exit ramp terminals along I-74 also will be improved.

Both intersections will operate at an acceptable LOS, but Variation 2 is preferred because it will improve traffic flow along U.S. 6 by providing a greater distance between the ramp terminal intersection and the intersection with Utica Ridge. Variation 1 does not address the undesirable intersection spacing between the I-74 ramps, resulting in poorer traffic flow. The preferred U.S. 6 interchange design is shown in Appendix A, *Preferred Alternative Exhibit* (Sheet 7).

53rd Street. Variation 2 is the Preferred Alternative at 53rd Street. An improved partial cloverleaf type A interchange would be provided, with entrance loop ramps in the northwest and southeast quadrants. This design offers improved operation and safety features.

Both variations provide an acceptable LOS, but Variation 2 is preferred because it avoids the use of undesirable exit loop ramps, provides free-flow traffic operations for the eastbound to northbound movement and westbound to southbound movement (one of the heaviest interchange movements in the interchange), minimizes potential weaving issues along 53rd

Street, and provides a more conventional interchange form. The preferred 53rd Street interchange design is shown in Appendix A, *Preferred Alternative Exhibit* (Sheet 8).

2.5.4 Project Cost and Implementation Strategy

2.5.4.1 Project Cost

The estimated total base cost range of the I-74 Preferred Alternative is approximately \$875 million to \$1.35 billion, including construction, right-of-way acquisition, and engineering costs. Project base costs are estimated in year of expenditure dollars and reflect uncertainties associated with the current preliminary stage of design development.

Project base costs will be updated and refined during future preparation of final design plans. Updated project costs will account for refined design detail, including the effects of inflation.

A cost and schedule validation and risk assessment was conducted for the project. The object was to validate the planning level project cost and schedule estimates; to quantify uncertainty in the cost and schedule; and to prioritize critical risks and opportunities.

2.5.4.2 Implementation Strategy

It is Iowa and Illinois DOTs' preference to construct the Preferred Alternative in its entirety. The nature and complexity of the I-74 corridor improvements are such that project implementation (construction) will be conducted over a period of time. The actual schedule and sequence for project implementation will be based on funding availability, including future federal funding appropriations, and consideration of statewide and local transportation priorities. The corridorwide improvements could be divided into separate, stand-alone projects with independent utility, allowing Iowa DOT and Illinois DOT to implement the Preferred Alternative in some linear sequence based on corridorwide improvement priorities and funding availability.

A tentative list of seven potential stand-alone projects has been identified to provide input to the DOT multiyear program development process. The potential stand-alone projects are depicted and described in [Figure 2-8, I-74 Project Locations](#). The numbering of the projects is for identification purposes only and is not intended to imply priority or order of construction. If revenue were not a constraint, the duration of overall project construction of the entire corridor may be 8 to 9 years (Full Build). As noted, the actual sequence and schedule of construction will be driven by funding availability and statewide transportation priorities.

2.6 Modifications to the Preferred Alternative Since Publication of the DEIS

Following identification of the Preferred Alternative, preliminary design development was initiated so as to allow a more accurate identification of potential environmental consequences for this complex urban interstate corridor. Various minor design modifications were identified through this effort. Design modifications identified following the DEIS which have been incorporated into the Preferred Alternative are described below.

2.6.1 South Section

No substantive changes to the design features of the Preferred Alternative have been identified in the South Section.

The estimated construction footprint has been updated to accommodate construction of proposed roadway, structure, drainage, and roadside improvements on the basis of preliminary design plans. The construction footprint will be used as a guide to determine potential right-of-way acquisition needs. While no potential property displacements have been identified in the South Section, a minor amount of right-of-way is required.

2.6.2 Central Section

Several design changes have been incorporated into the Preferred Alternative in the Central Section, as follows:

- The DEIS assumed that an auxiliary lane would be necessary between River Drive and the southbound 7th Avenue entrance ramp to provide trucks with a dedicated “climbing lane” along the southbound upgrade. After further analysis, it was determined that LOS was high enough to preclude the need for the additional lane, and therefore the auxiliary lane was eliminated accordingly.
- The proposed connector roadway between 7th Avenue and 6th Avenue in Moline was widened from one to two northbound through lanes to provide acceptable intersection LOS with updated 2035 design year traffic.
- The proposed vertical profile of 6th Avenue in Moline was raised under I-74 to address a drainage issue in the current sag curve.
- Proposed improvements to local roadways in Moline have been refined based on input from City staff to enhance operations and traffic circulation. Also, local roadway improvement plans have been updated to accommodate pedestrian use where appropriate.
- The proposed Mississippi River Bridge cross section has been revised to accommodate a proposed multi-use trail crossing along the west side of I-74, which local officials identified as the preferred location for the trail accommodation following identification of the Preferred Alternative. A trail connection has been developed adjacent to the southbound River Drive exit ramp in Moline, and along the southbound U.S. 67 entrance ramp in Bettendorf. A trail connector structure has also been proposed to provide a direct connection to the riverfront trail system in Bettendorf.
- A proposed auxiliary lane has been added to I-74 southbound between Middle Road and U.S. 67. With this addition, the southbound U.S. 67 exit ramp was widened from a one-lane to a two-lane cross section. These changes were proposed to provide acceptable LOS for the updated 2035 design year traffic.
- Eastbound U.S. 67 near the proposed I-74 interchange ramps has been widened from the previously proposed 2-through lanes to 3-through lanes. This change was proposed to provide acceptable intersection LOS and traffic operations for updated 2035 design year traffic.

- Proposed improvements to local roadways in Bettendorf have been refined based on input from City staff to enhance operations and traffic circulation. Also, local roadway improvement plans have been updated to accommodate pedestrian use where appropriate.
- The proposed horizontal alignment of Kimberly Road near Grant Street has been refined to optimize design features.

The estimated construction footprint has been updated to accommodate construction of proposed roadway, structure, drainage, and roadside improvements on the basis of preliminary design plans. The construction footprint will be used as a guide to determine potential right-of-way acquisition needs (see Section 4.3.1.1, *Right-of-Way Requirements*). Estimated property displacements have been updated on the basis of the refined construction footprint (see Section 4.3.2.2, *Residential Relocation Impacts*, and Section 4.3.2.3, *Business Relocation Impacts*). New right-of-way and temporary construction easements will be required to accommodate the proposed improvements in the Central Section.

2.6.3 North Section

Several design changes have been incorporated into the Preferred Alternative in the North Section, as follows:

- Traffic forecasts for 2035 indicate that extending the third lane through the 53rd Street interchange, rather than providing it only through U.S. 6 as proposed in the DEIS, would better accommodate projected traffic.
- A proposed auxiliary lane has been added in the northbound direction between Middle Road and U.S. 6, and in the southbound direction between U.S. 6 and Grant Street. These auxiliary lanes are required to accommodate updated 2035 design year traffic.
- The northbound 53rd Street exit ramp was widened from a one-lane to a two-lane cross section. This change was proposed to provide acceptable LOS for the updated 2035 design year traffic.
- 53rd Street through the I-74 interchange was widened from two through-lanes to three through-lanes in each direction in order to accommodate updated 2035 design year traffic. Additionally, improvements are now proposed at the 53rd Street at Elmore Avenue intersection. These improvements are required to ensure acceptable traffic operations at the I-74 interchange in the design year.
- At the 53rd Street interchange, the southbound entrance ramp and northbound entrance ramp have been converted from a free-flow configuration to right-angle intersections in order to optimize traffic operations and safety performance for pedestrians along 53rd Street.
- The northern project limits were extended to 1 mile north of 53rd Street (as compared to 53rd Street as presented in the DEIS) to address geometric considerations of extending three mainline lanes north through the 53rd Street interchange.

The estimated construction footprint in the North Section has been updated to accommodate construction of proposed roadway, structure, drainage, and roadside improvements on the basis of preliminary design plans. The construction footprint will be

used as a guide to determine potential right-of-way acquisition needs (see Section 4.3.1.1, *Right-of-Way Requirements*). Estimated property displacements have been updated on the basis of the refined construction footprint (see Section 4.3.2.2, *Residential Relocation Impacts*, and Section 4.3.2.3, *Business Relocation Impacts*). New right-of-way and temporary construction easements will be required to accommodate the proposed improvements in the North Section.

Alignment I would result in substantial commercial, residential, and institutional impacts in Moline and Bettendorf, including impacts to the Scottish Rite Cathedral, Moline Chamber of Commerce, and Our Lady of Lourdes Church and School. Also, this option would require lane closures along I-74 during construction.

Alignment C would result in relatively moderate commercial impacts in Moline, and relatively moderate commercial and residential impacts in Bettendorf, including potential impacts to Leach Park and McManus Park.

Alignment A would result in impacts to the Moline Water Treatment Plant, impacts to McManus and Leach Parks, substantial commercial and residential impacts in Bettendorf, and potential impacts to Arsenal Island.

Alignment B would result in substantial commercial and residential impacts in Bettendorf, impacts to McManus and Leach Parks, and potential impacts to the Moline Water Treatment Plant.



Alignment E would result in commercial impacts in Moline and Bettendorf.

Alignment F would result in commercial and residential impacts in Moline, and relatively minor commercial impacts in Bettendorf. This option would affect planned redevelopment areas in Moline and Bettendorf.

Alignment G would result in substantial commercial, residential, and institutional impacts in Bettendorf, including impacts to Our Lady of Lourdes Church and School. This option would affect planned redevelopment areas in Moline and Bettendorf, and would provide only marginal improvements to the Illinois approach geometry.

Alignment D would require closure of the Mississippi River crossing during construction, and would provide only marginal improvements to the Illinois approach geometry.

Alignment J would result in substantial commercial and residential impacts in Moline. This option would require lane closures along I-74 during construction.

Alignment H would result in substantial commercial, residential, and institutional impacts in Moline and Bettendorf, including impacts to Our Lady of Lourdes Church and School, and the Isle of Capri Casino. This option would substantially affect planned redevelopment areas in Moline and Bettendorf.

Alignments C, E, and F were revised and retained for detailed study as representative of the range of reasonable location alternatives.

Figure 2-1a
Mississippi River Crossing Location Options
Preliminary River Crossings

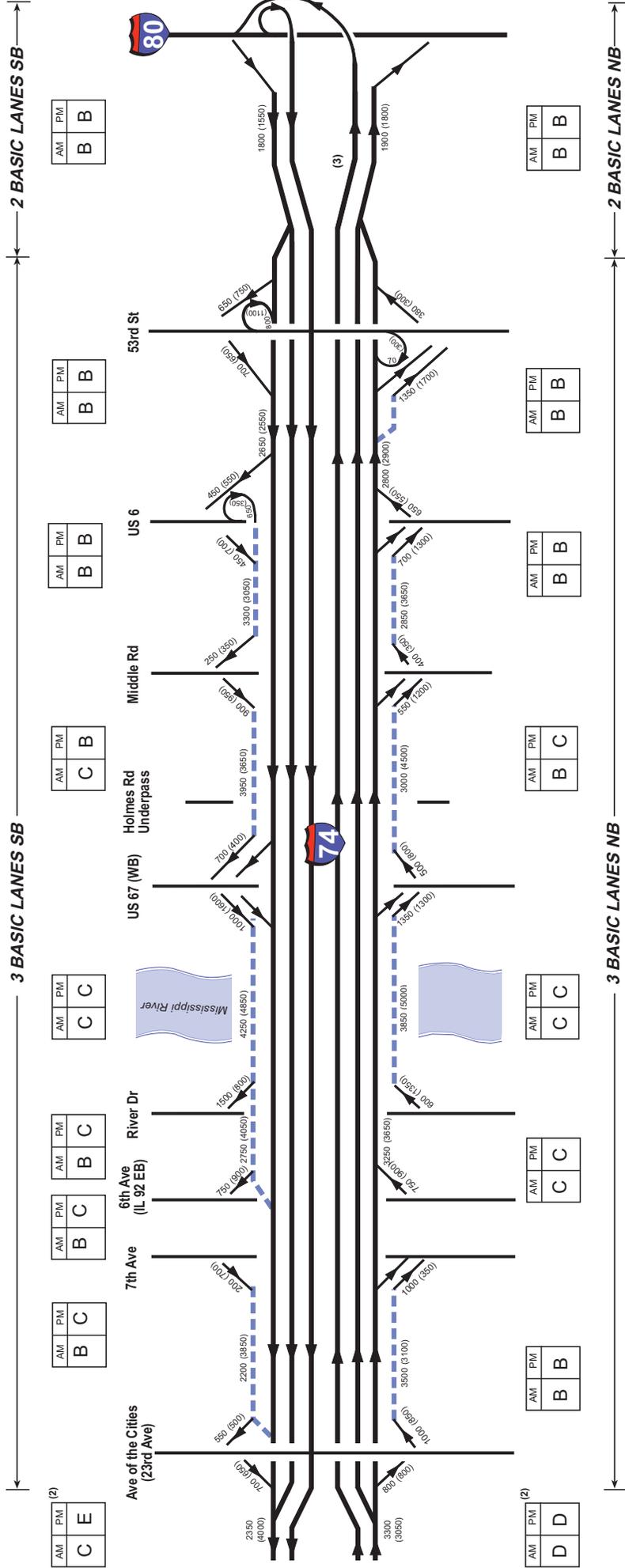


Alignment	Social/Environmental Impacts	Transportation Issues	Constructability	Reasonable for Further Consideration? ⁽¹⁾
C	<ul style="list-style-type: none"> Impacts to recreational and historic properties Bridge closure during construction activities would potentially harm economic stability of downtowns 	<ul style="list-style-type: none"> Minor improvement to Illinois approach geometry 	<ul style="list-style-type: none"> Difficult Staging Cannot maintain traffic on mainline Would require bridge closure throughout new bridge construction Longer construction time and high construction cost 	NO
E	<ul style="list-style-type: none"> Impacts to Bill Glynn Memorial Park Minor commercial impacts in Moline and Bettendorf 	<ul style="list-style-type: none"> Minor improvement to Illinois approach geometry Curvilinear river crossing alignment 	<ul style="list-style-type: none"> Low to medium construction costs Elevation difference less severe due to further offset from existing bridges 	YES
F	<ul style="list-style-type: none"> Commercial and minor residential impacts in Moline Substantial impacts to planned development Minor commercial impacts in Bettendorf Potential impacts to Bill Glynn Memorial Park 	<ul style="list-style-type: none"> Eliminates S-curve on Illinois approach 	<ul style="list-style-type: none"> Low construction costs Substantial offset from existing bridge 	YES

Key: ○ Substantial Impacts/ Poor Performance ◐ Moderate Impacts/ Fair Performance ● Minor/ No Impacts/ Good Performance

⁽¹⁾ Reasonable alignments (Alignments E and F) were carried forward for further consideration with the proposed alternatives. Alignment C was not carried forward because it does not meet the purpose and need.

Figure 2-1b
Mississippi River Crossing Location Options
Refined River Crossings



LEGEND

- 000 (000) AM (PM) Forecast Peak Hour Traffic Volumes (1)
- Proposed Mainline Basic Lane
- Proposed Mainline Auxiliary Lane
- Freeway Level of Service (2)

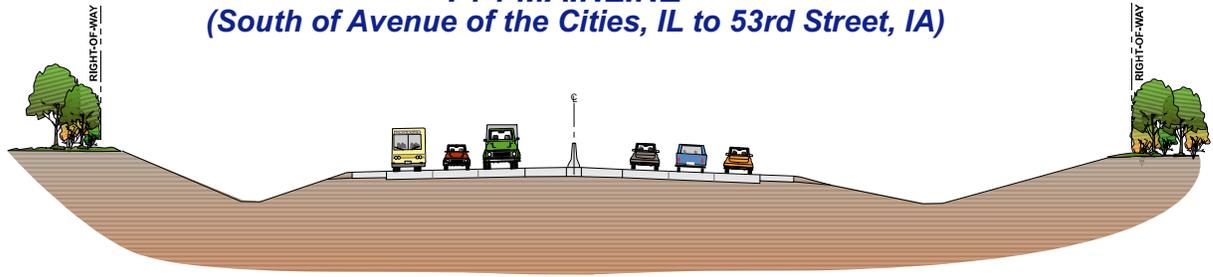
1 Forecast traffic was developed on the basis of the Year 2035 Quad Cities Long Range Plan and the Bi-State Regional Commission (BSRC) Model. Projected traffic volumes reflect the removal of tolls from the Centennial Bridge, but do not reflect the potential future construction of a new local river crossing (Bettendorf-East Moline Bridge).

2 Freeway Level of Service indicated for the segment of I-74 south of Ave of the Cities (23rd Ave) is beyond the study limits.

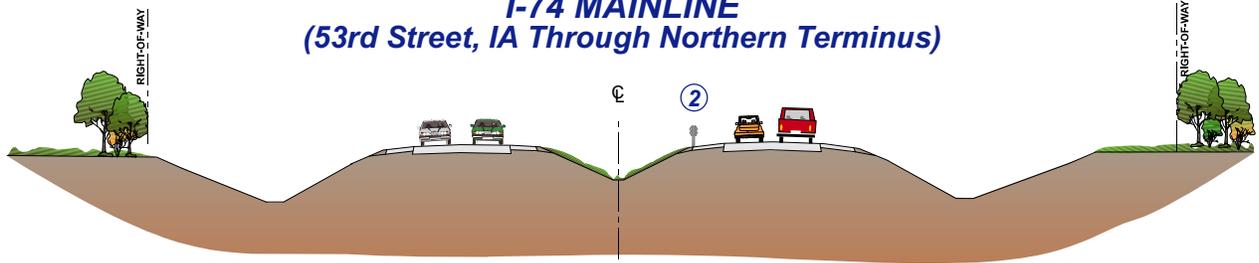
3 Physical median separation will be provided through the northern project limits north of 53rd Street in compliance with Iowa DOT design policies and practices.

Figure 2-2
Preferred Alternative
Corridor Sizing

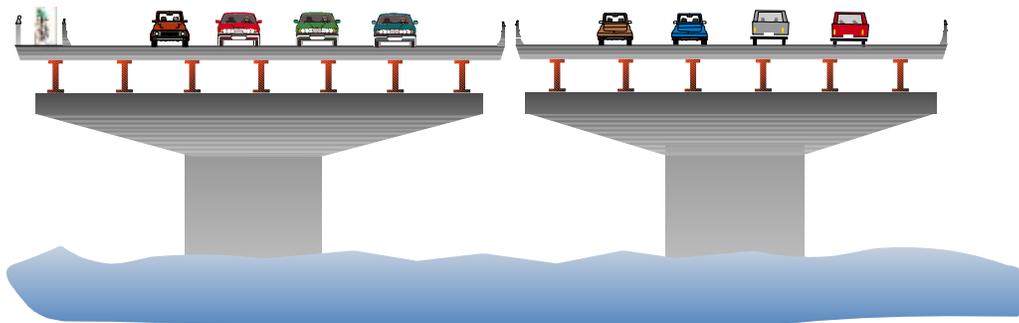
I-74 MAINLINE^①
 (South of Avenue of the Cities, IL to 53rd Street, IA)



I-74 MAINLINE
 (53rd Street, IA Through Northern Terminus)



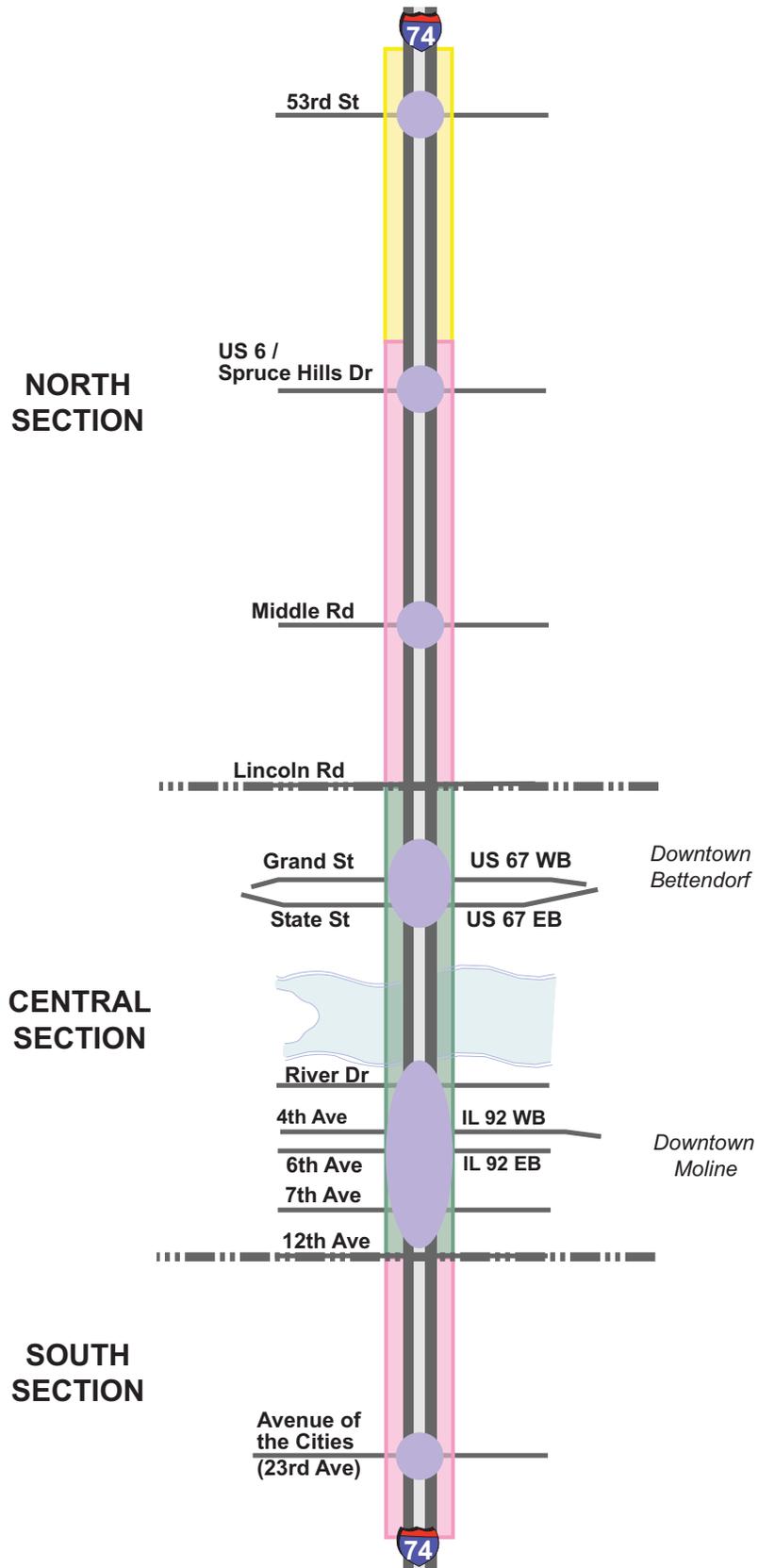
**I-74 BRIDGE
 OVER MISSISSIPPI RIVER
 (Preferred)**



LOOKING NORTH ON BRIDGE

- 1 A SIX-LANE ACCESS CONTROLLED FACILITY, WITH ADDITIONAL AUXILIARY LANES NEAR MAJOR INTERCHANGES. PROPOSED CROSS SECTION BASED ON CURRENT DESIGN STANDARDS AND 2035 RTP TRAFFIC FORECAST DATA.
- 2 THE PROPOSED MEDIAN TYPE (PAVED VERSUS GRASS) AND TREATMENT (BARRIER WALL VERSUS GUARDRAIL) TO BE DETERMINED WITH SUBSEQUENT STUDIES.

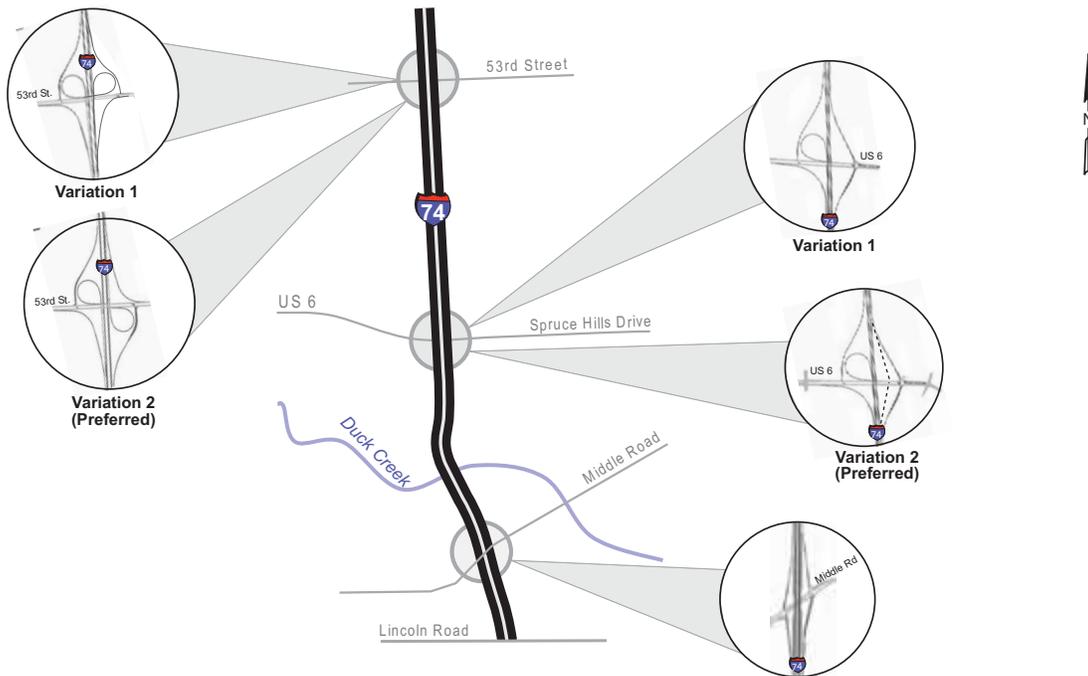
Figure 2-3
 Typical Proposed
 Cross Section



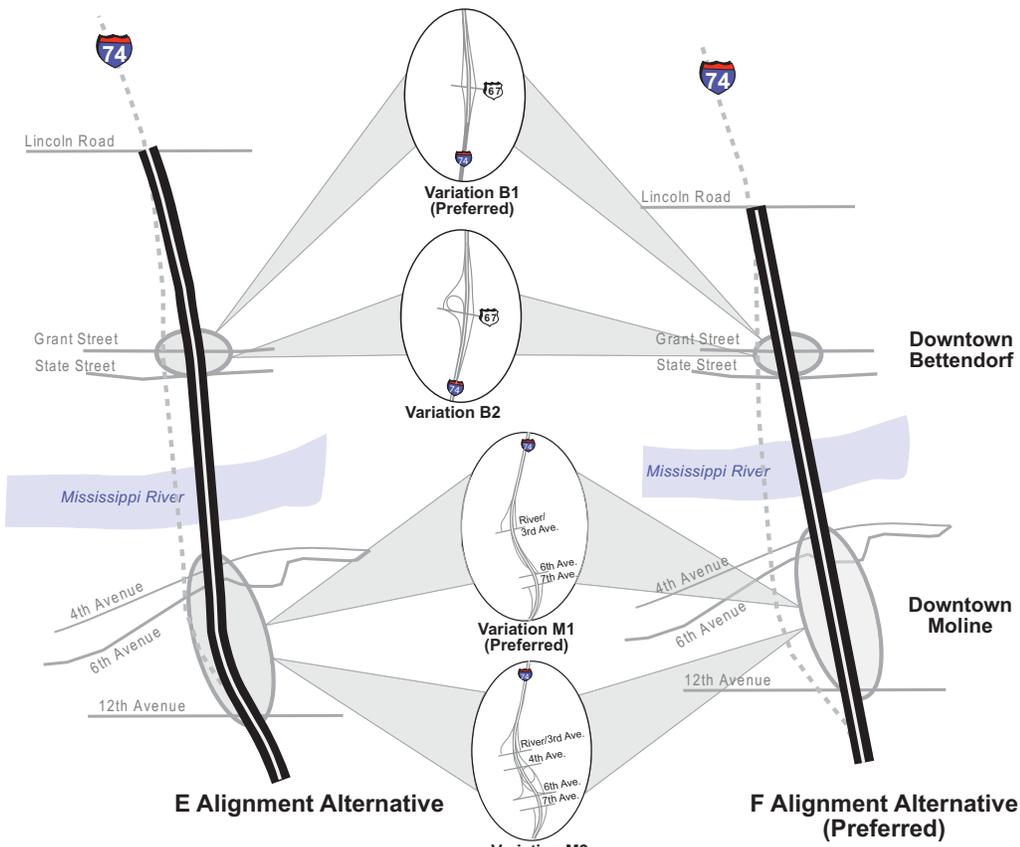
LEGEND

- Widening/Reconstruction
- Mainline Realignment/Widening/Reconstruction
- Reconstruction
- Interchange Improvements

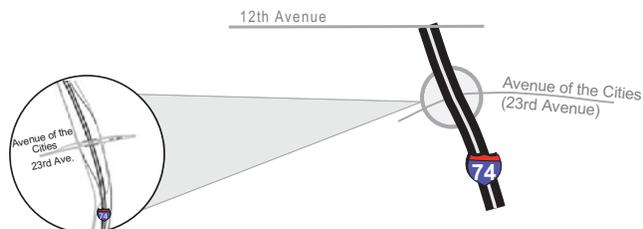
Figure 2-4
Key Map of Build Alternatives
as Presented in the DEIS



North Section



Central Section



South Section

Figure 2-5
Build Alternatives
Alignment and Interchange Variations

Figure 2-5 Build Alternatives
Alignment and Interchange Variations

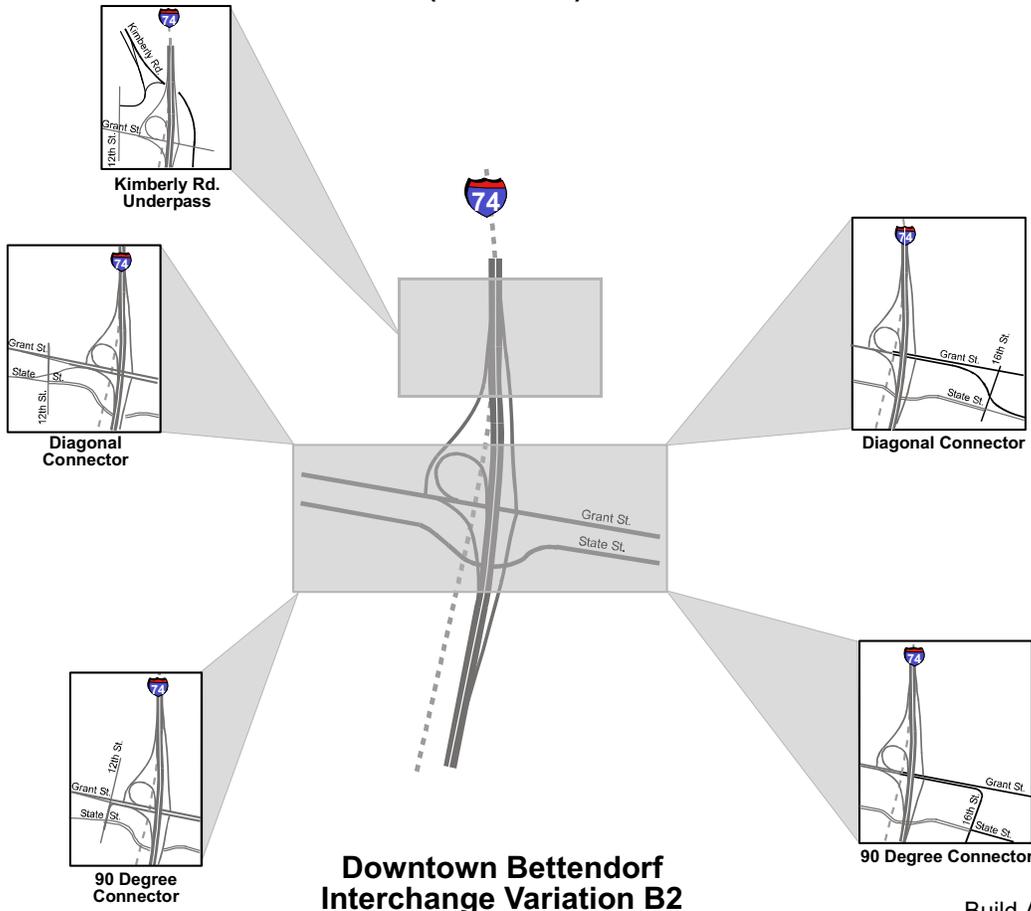
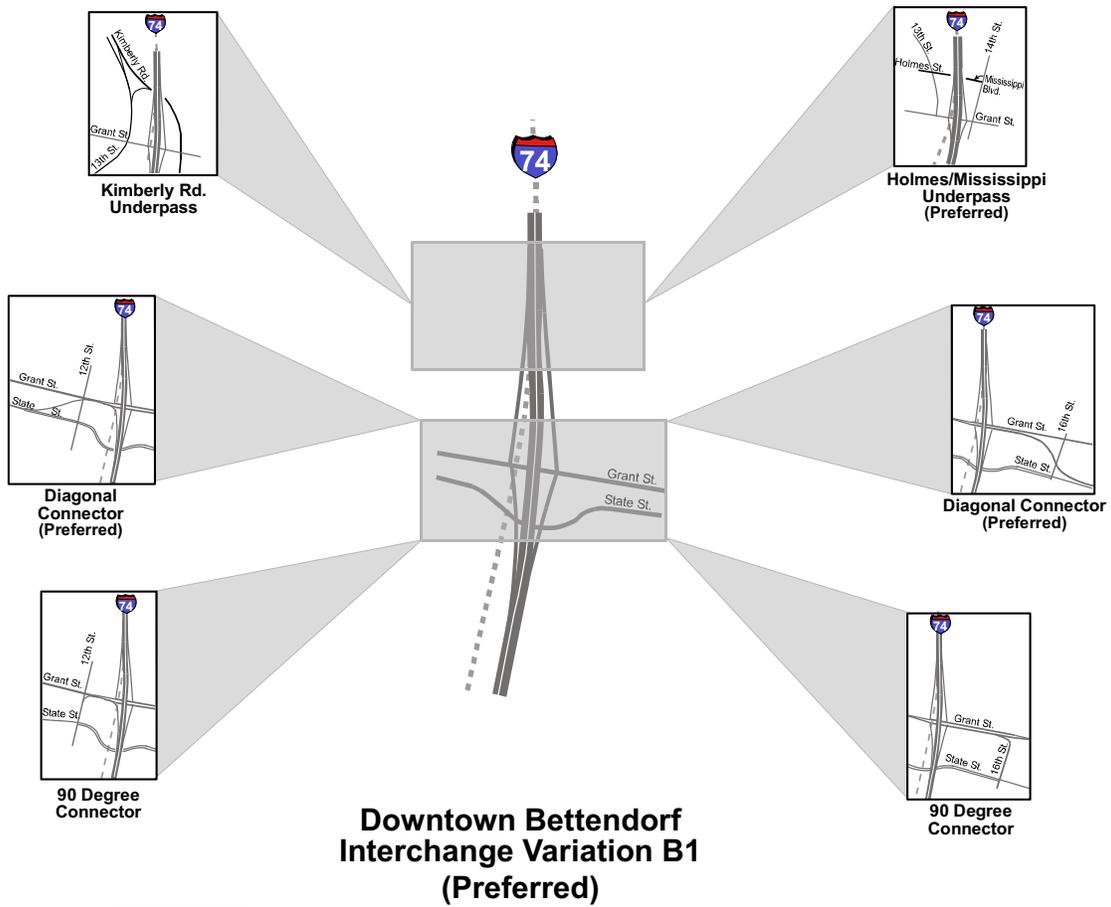


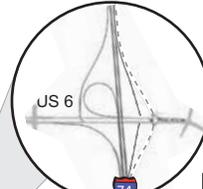
Figure 2-6 Build Alternatives
Downtown Bettendorf Local Roadway Variations

Figure 2-6
Build Alternatives
Downtown Bettendorf
Local Roadway Variations

NORTH SECTION



Variation 2



Variation 2

Mainline

- Reconstruct and improve I-74 providing 6 basic lanes with additional auxiliary lanes at select locations.
- Shift alignment of I-74 to the east near the Mississippi River.

53rd Street Interchange

- Reconstruct and improve the interchange with loop ramps in the northwest and southeast quadrants and associated improvements along 53rd Street.

U.S. 6 (Spruce Hills Drive) Interchange

- Improve the interchange ramps, including shifting the existing northbound exit and entrance ramps and the ramp intersection west of its present location.

Middle Road

- Improve interchange design features.

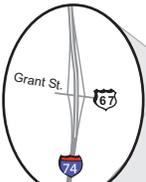
Downtown Bettendorf Interchange (B1)

- Reconstruct and improve the interchange with a full access interchange at Grant Street (U.S. 67).
- Eliminate existing ramps at State Street and at Kimberly Road.
- Convert Grant Street in the vicinity of I-74 to a two-way street with 3 lanes in each direction.

Holmes Street Underpass

- Maintain the existing Holmes Street/ Mississippi Boulevard underpass, but close the existing Kimberly Road underpass.

CENTRAL SECTION



Variation B1



Holmes/Mississippi Underpass

Downtown Bettendorf

Mississippi River Crossing

- Construct a new I-74 Mississippi River Bridge along a new alignment to the east of the existing bridges.
- Remove the existing bridges.
- Pursue opportunities for a pedestrian/ bike trail crossing along the new I-74 Mississippi River Bridge.



Diagonal Connector



U.S. 67 Diagonal Connector

- Provide new connector roadways to route State Street traffic towards the I-74 interchange ramps at Grant Street.



Variation M1

Downtown Moline (Interchange M1)

- Provide an improved full access interchange with ramp connections at 7th Avenue/19th Street and at 6th Avenue (IL 92 east bound), and a partial interchange with ramps to and from the north at River Drive.

SOUTH SECTION



Avenue of the Cities

- Improve interchange design features.

Figure 2-7 Preferred Alternative

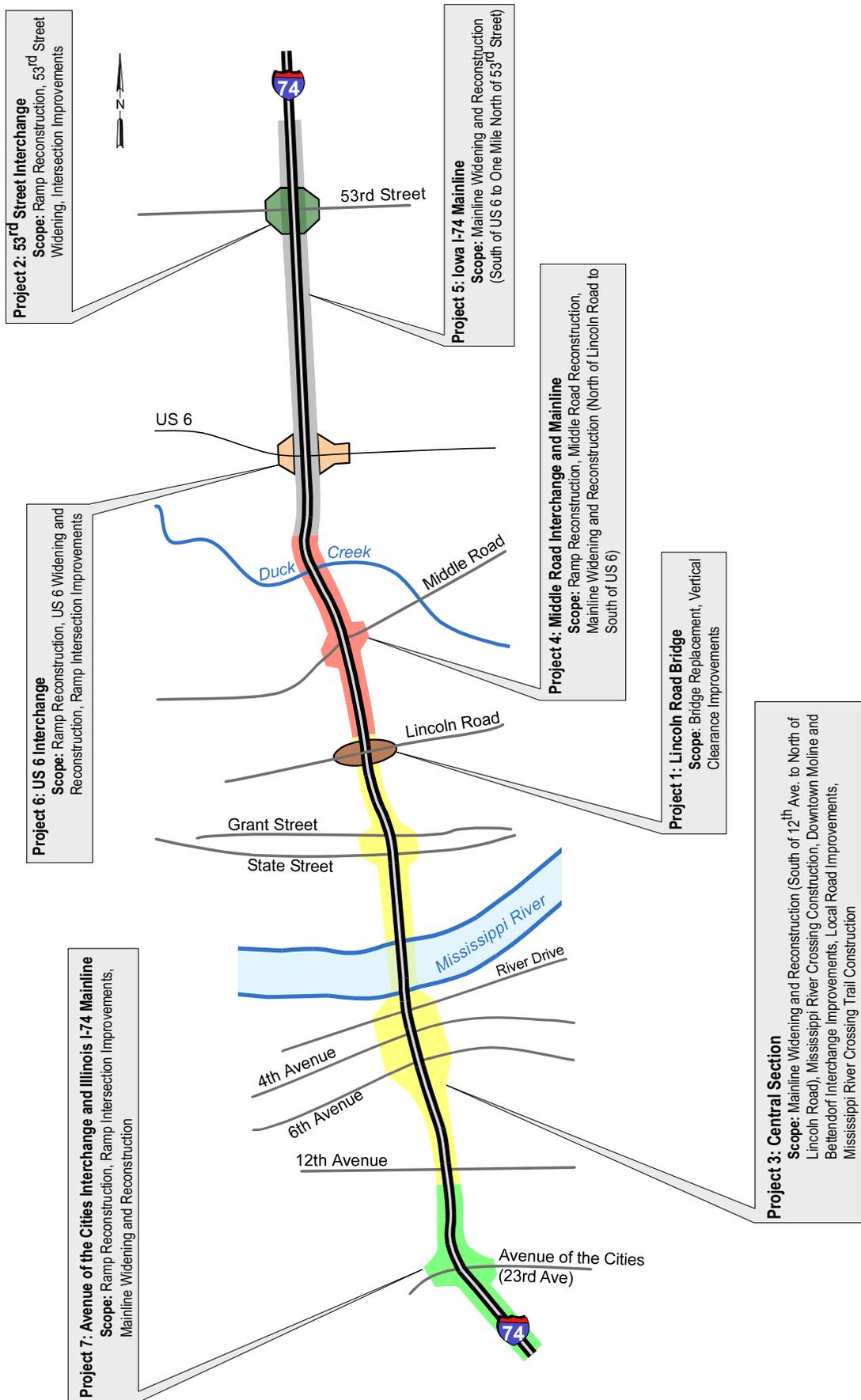


Figure 2-8
 I-74 Project Locations

Figure 2-8 I-74 Project Locations

Section 3
Affected Environment

Affected Environment

This section updates the description of the environmental, economic, and social setting of the project corridor as described in the DEIS. Where conditions have not changed, additional detail about an environmental resource may be found in the corresponding section of the DEIS. Many of the resources described in this section are depicted in Appendix B, *Aerial Photo Exhibit*.

3.1 Land Use and Related Characteristics

3.1.1 Geographical Setting

The project is located along I-74 in the Quad Cities between Avenue of the Cities (23rd Avenue) in Moline, Illinois, and 1 mile north of 53rd Street in Davenport, Iowa. The Mississippi River, the most prominent natural feature within the corridor, passes through the Central Section of the project between downtown Moline and downtown Bettendorf, Iowa.

3.1.2 Geology and Soils

Section 3.1.2 of the DEIS details the geology and soils present in the project corridor. Sedimentary rock dominates the geology in the project corridor. The soil associations found on the Iowa side of the corridor include Tama, a soil type that occurs on gently to moderate rolling to moderately steep topography and is largely used for row crops; Colo-Lawson-Nodaway, a soil type that occurs on nearly level terrain and is poorly drained indicating frequent flooding; and Downs-Fayette, which occurs on gently sloping to very steep topography. On the Illinois side of the project corridor, two soil associations can be found: Raddle-Joslin soils, which can be found on nearly level to moderately sloping topography and are largely used for cultivated crops such as corn and soybeans; and Fayette-Sylvan-Hickory soils that are found on gently sloping to very steep topography.

3.1.3 General Land Use

The project corridor is characterized by commercial, residential, industrial, agricultural, and park and open space land uses (see [Figure 3-1](#), *Existing Land Use*). Most commercial land uses are located in the northern part of the corridor and in the downtown areas of Moline and Bettendorf. Residences make up most of the land use south of downtown Moline and north of downtown Bettendorf. Industrial properties are located mainly along the Moline and Bettendorf riverfronts. Park/open space properties and multi-use trails are located along the Moline and Bettendorf riverfronts and along Duck Creek in Bettendorf and Davenport.

Since the DEIS was published, land use has changed in Bettendorf and Davenport. The undeveloped property adjacent to I-74 on the east side of the highway on the south side of Bettendorf's border with Davenport has been built out, although the property's land use designation as an office/research campus has not changed since the DEIS. Farther north in the northwest quadrant of the I-74/53rd Street interchange the open space has been

converted to commercial/retail property. Across I-74 on the south side of 67th Street residences are beginning to fill in the open space north of the existing residential properties.

3.1.4 Transportation

I-74 plays an important role in the local, regional, and national transportation network. Aside from I-74, three other interstate highways, 5 U.S. highways, 10 state highways, 3 railroads, 1 commercial airport, 30 barge terminals, and 1 general-aviation airport serve the Quad Cities region. In addition, a U.S. Customs Port of Entry and a Foreign Trade Zone serve as economic entryways for the area. The roadway network also provides vehicular and nonmotorized access to trails, transit, rail, river, air, and intermodal freight facilities.

3.1.4.1 Street System and Highways

The I-74 corridor remains a vital transportation facility in the Quad Cities region. This network provides the region with excellent interstate connections:

- I-80, providing connections east to Chicago and west to Des Moines
- I-280, forming a beltway around the south and west sides of the Quad Cities
- I-88, providing a second connection east to Chicago
- I-74, providing connections to the southeast through central Illinois and Indiana

I-74 also provides access to the local highway system. The system is characterized by one-way streets in the riverfront area and underdesigned connections to the interstate system. U.S. 67 is operated as a one-way pair along State Street and Grant Street in Bettendorf, with partial interchanges to I-74. Bettendorf's long-range plans suggest a desire to consolidate U.S. 67 into a two-way facility with Grant Street functioning as the major U.S. 67 through traffic route, and State Street functioning as a local U.S. 67 business route. On the Illinois side, IL 92 also forms a one-way pair along 4th and 6th Avenues. IL 92 does not currently interchange with I-74.

3.1.4.2 Public Transport

As one of the primary north-south routes through the center of the Quad Cities, I-74 is used by, and provides links to, public transportation. According to the *2035 Quad City Area Long Range Transportation Plan (2035 LRP)*, the annual average growth rate for transit ridership in the Quad Cities is 2.2 percent. Ridership is projected to increase to 6,628,818 trips in 2035. Existing and future transit facilities in the Quad Cities are shown on [Figure 3-2, Quad City Area Transit Facilities](#). Services operating in the Quad Cities include the following:

- Bettendorf Transit bus service is a 5 fixed-route system. Bettendorf Transit operates a route over the I-74 bridge to Centre Station in downtown Moline.
- Davenport CitiBus is a 12 fixed-route bus system.
- MetroLINK provides an 11 fixed-route bus service. In addition to bus service, MetroLINK's Channel Cat Water Taxi provides service to five area docks between Memorial Day and Labor Day.
- Bettendorf and Davenport contract with River Bend Transit to provide paratransit services in Iowa. MetroLINK provides paratransit service in Illinois. Commercial bus lines, including Burlington Trailways and Greyhound, also serve the Quad Cities.

3.1.4.3 Air Service

I-74 provides direct access to two airports located in the Quad Cities area: the Quad City International Airport and the Davenport Municipal Airport. Since the publication of the DEIS, ATA has stopped operating at the Quad City International Airport, but the airport now serves eight national or international destinations, or hubs. In 2005, 860,000 passengers used the Quad City International Airport, an increase of more than 14 percent since 1999. The major airfreight carriers are now BAX Global, DHL/Danzas Air & Ocean, DHL Express, and UPS Supply Chain Solutions.

The Davenport Municipal Airport continues to serve corporate aircraft and as a reliever for the Quad Cities International Airport. See Section 3.1.4, *Transportation*, in the DEIS for more information on air services provided in the Quad Cities.

3.1.4.4 Rail Service

The Quad Cities area is not served by passenger rail, but it is served by three rail freight carriers (Iowa, Chicago, and Eastern Railroad; Burlington Northern Santa Fe; and Iowa Interstate). No changes in their routes or stations have occurred since the publication of the DEIS.

3.1.4.5 Bicycle Facilities

The two significant bicycle trails in the project corridor, the Great River Trail/Mississippi River Trail-Illinois (identified as the “Great River Trail” in the DEIS) in Illinois and the Mississippi River Trail-Bettendorf (called “Bettendorf Riverfront Trail” in the DEIS) in Iowa, continue to provide area residents with access to recreational, commercial and industrial facilities in the region and beyond the Quad Cities area. Gaps in the Great River Trail/Mississippi River Trail-Illinois have been completed since the publication of the DEIS such that it now connects to two other major regional and national trails, the Grand Illinois Trail, and the American Discovery Trail. The Bettendorf part of the Mississippi River Trail is now connected to the Davenport segment. When completed, the Mississippi River Trail will connect the Quad Cities region to Lake Itasca in Minnesota and to the Gulf of Mexico. A connection between the Illinois and Iowa riverfront trails across the Mississippi River is included in the 2035 LRP. [Figure 3-3](#), *Quad City Area Bicycle/Pedestrian and Rail Facilities*, depicts the existing and planned trail network.

3.1.5 Navigation

There are roughly 30 barge terminals in the Quad Cities region. The use of the Mississippi River for navigation is an important element of the local and national economy. The project area lies within Pool 15 of the Mississippi River, which is formed by Lock & Dam #15, about 4 miles downstream of the I-74 bridge, and Lock & Dam #14, about 7 miles upstream.

Lock & Dam #15 is the most proximate and well-documented location in terms of total number of vessels and cargo tonnage passing through the Quad Cities on the Mississippi River. In 2006, 21,942,068 tons of cargo, 2,343 commercial vessels, and 2,342 recreational vessels passed through Lock & Dam #15 (U.S. Army Corps of Engineers January 31, 2007).

3.1.6 Utilities

The project corridor is served by energy, telephone, cable, water, and wastewater utilities. MidAmerican Energy Company provides electrical and natural gas services within the project corridor. Major telephone service providers include Ameritech, QWEST, McLeod, Central Scott Telephone Company, and SBC for local service, and AT&T, MCI WorldCom, McLeod, and Sprint for long-distance service. Cable services also provide fiber optic communications to the area. Wastewater services are provided by the local municipalities. Moline residents receive water from the municipality, but Davenport and Bettendorf receive their water from Iowa-American Water Company. The Moline Water Treatment Plant is located just to the west of the I-74 bridges along the riverfront. The plant treats the Moline water supply and distributes water to the distribution system. There are power lines but no substations along the corridor.

3.1.7 Public Facilities and Services

Five churches are located within the corridor: the Apostolic Assembly, Kingdom Hall of Jehovah's Witnesses, Bettendorf Presbyterian Church, and Our Lady of Lourdes in Bettendorf, and the First Congregational Church in Moline. Our Lady of Lourdes, in downtown Bettendorf, also has a private/parochial school. The Thomas Edison Learning Center, a private school, is located in downtown Bettendorf within the project corridor. There are no public schools in the project corridor. These properties are shown in Appendix B, *Aerial Photo Exhibit*.

3.2 Farmland Resources

3.2.1 Agriculture in the Project Corridor

As mentioned in Section 3.2.1 of the DEIS, *Agriculture in the Project Corridor*, agricultural land use is found only at the north end of the predominantly urban project corridor. Also mentioned was Davenport's plan to develop this land in the future. In the time since the DEIS was published, Davenport's planned commercial development of this land has occurred in the northwest quadrant of the I-74/53rd Street interchange. On the south side of 67th Street across I-74, residences are being built on the property formerly characterized as farmland. Whereas at the time of the DEIS 6,500 linear feet of agricultural uses bordered the I-74 corridor, only 2,900 linear feet border the I-74 corridor now.

Although the project corridor is predominately developed, farming is an important economic resource in Scott County. See Section 3.2.1 of the DEIS, *Agriculture in the Project Corridor*, for further details about the agricultural characteristics of the study area.

3.2.2 Prime and Important Farmland

The proposed project does not require any right-of-way from farmland and, therefore, coordination with the Illinois or Iowa Departments of Agriculture is not required.

3.3 Socioeconomic Characteristics

3.3.1 Population and Ethnicity

U.S. Census Bureau statistics were used to analyze the population and ethnicity in the project corridor. Population and ethnicity are described briefly below; for a more detailed description, see Section 3.3.1, *Population and Ethnicity*, in the DEIS.

Population was analyzed at the metropolitan statistical area (MSA), county and municipal levels. In all cases, population had risen since 1990. Between 1990 and 2000, population increased 2.3 percent in the Quad Cities MSA, 5.1 percent in Scott County, Iowa, and 0.4 percent in Rock Island, Illinois. In the same period of time, population increased 11.1 percent in Bettendorf, 3.2 percent in Davenport, and 1.6 percent in Moline.

Similarly, the racial composition of the MSA, counties, and municipalities was analyzed. For the FEIS, the racial composition of the Census blocks (the smallest unit available for analyzing ethnicity) in the project corridor was also analyzed. The racial composition of the project corridor is predominantly white, accounting for nearly 88 percent of the population. In 2000, African Americans and people of Hispanic origin accounted for nearly 10 percent of the population in the project corridor. Other racial group categories (American Indian and Alaskan Native, Asian, Native Hawaiian, Other Pacific Islander, or Other) accounted for about 2 percent.

3.3.2 Employment and Income

The major features of employment and income in the project corridor are described below. Section 3.3.2, *Employment and Income*, in the DEIS, contains additional information.

3.3.2.1 Employment

Between 1970 and 2000, employment grew by 40 percent in the Quad Cities MSA, 44 percent in the state of Illinois, and 50 percent in the state of Iowa. Most of the growth occurred in the years 1970 to 1980 and 1990 to 2000.

Although total employment remained steady through the 1980s (the number of jobs in the MSA increased by 2,600 jobs over the 10-year period between 1980 and 1990), a fundamental shift in employment occurred – from a manufacturing economy to a service economy. The Quad Cities' history as the "Farm Equipment Capital of the Midwest" changed in the 1980s, when many of the major manufacturers – Caterpillar, Farmall, International Harvester, Case, and Deere – reduced their workforce or left the area entirely. In 1980, manufacturing accounted for nearly 26 percent of the jobs, as compared to just 14.1 percent of the jobs in the MSA in 2000. Conversely, the services sector increased from 19 percent of the job market in 1990 to nearly 31 percent (the greatest share of the market) in 2000. The wholesale and retail trade sector also experienced a significant increase in number of jobs between 1980 and 2000, increasing by 9,789 jobs. However, the sector's market share increased by only 1 percent.

The top ten 2005 employers in the Quad Cities MSA, in decreasing order of employees, are Rock Island Arsenal, Deere & Company, Genesis Health System, Trinity Regional Health System, Tyson Fresh Meats, Alcoa, Inc., Kraft Foods/Oscar Meyer, MidAmerican Energy Company, APAC Customer Services, Inc., and Exelon. The top eight of those employers were

also the top eight at the time the DEIS was published, though in some cases, changes in the number of employees has affected their ranking. APAC Customer Services and Exelon now rank in the top ten. Illini Hospital, the ninth largest employer in 2000, became part of Genesis Health System, the third largest employer in 2005, and as such, the number of employees at Illini Hospital is reflected in Genesis Health System's employee count. CNH Global's combine plant was the Quad City area's 10th largest employer in 2000, but the plant closed in 2004.

3.3.2.2 Income

Median household income was analyzed at the MSA, state, county and municipal levels (see Section 3.3.2, *Employment and Income*, in the DEIS for analysis at these levels). In all cases, census data for 2000 showed an increase in median household income since the 1990 census. In Iowa, median household income for the state (\$39,469) was less than Scott County (\$42,701) and the Quad Cities (\$40,621). The median household income in Illinois was \$46,590, which was greater than Rock Island County (\$38,608) and the Quad Cities (\$40,621). For the FEIS, median household income was also analyzed for the Census block groups (the smallest unit available for economic analysis) along the project corridor. In 1999, median household income for the entire project corridor ranged from \$22,176 to \$81,339. Median household income ranged between \$31,531 and \$81,339 along the Iowa part of the project corridor and between \$22,176 and \$55,735 along the Illinois part of the project corridor. When compared to 1989 median household income for block groups along the project corridor (some of which, it should be noted, may cover a slightly different area but combined cover the project corridor), all but three block groups experienced an increase in median household income. Median household income decreased \$979 and \$2,164 in block groups in Iowa and \$5,300 in a block group in Illinois.

3.3.3 Residential

Single-family residential land uses tend to occur at the north and south ends of the project. Closer to the river, land use transitions to business uses, with some single and multi-family residential areas interspersed among commercial uses (see [Figure 3-1, Existing Land Use](#)). Near 53rd Street and further north, new, previously planned, residential development is under way on the east side of I-74.

3.4 Air Quality

The National Ambient Air Quality Standards (NAAQS), established by USEPA set maximum allowable concentration limits for six criteria air pollutants. Areas in which air pollution levels persistently exceed the NAAQS may be designated as "non-attainment." States in which a non-attainment area is located must develop and implement a State Implementation Plan (SIP) containing policies and regulations that will bring about attainment of the NAAQS.

All areas of Illinois currently are in attainment of the standards for four of the six criteria pollutants: carbon monoxide, nitrogen dioxide, sulfur dioxide, and lead.

For the 8-hour ozone standard, Cook, DuPage, Kane, Lake, McHenry, and Will counties, as well as Aux Sable and Goose Lake Townships in Grundy County and Oswego Township in Kendall County, have been designated moderate non-attainment areas. Jersey, Madison,

Monroe, and St. Clair counties in the St. Louis area also have been designated as moderate non-attainment areas for the 8-hour ozone standard.

Cook, DuPage, Kane, Lake, McHenry, and Will counties, as well as Aux Sable and Goose Lake Townships in Grundy County and Oswego Township in Kendall County, have been designated as non-attainment areas for PM_{2.5}. In addition, Madison, Monroe, and St. Clair counties and Baldwin Township in Randolph County have also been designated non-attainment areas for PM_{2.5}.

The Lake Calumet area and Lyons Township in Cook County have been designated as maintenance areas for the particulate matter (PM₁₀) standard. In addition, Oglesby and several adjacent townships in LaSalle County, and Granite City and Nameoki townships in Madison County have been designated as maintenance areas for the PM₁₀ standard. The project is located in Scott County, Iowa and Rock Island County, Illinois, which are being proposed as non-attainment areas for 24-Hour PM 2.5 by USEPA.

3.5 Ambient Noise Levels

Vehicular traffic on I-74 and local roadways is the predominant source of noise in the project corridor. Noise levels were monitored at 21 receiver locations throughout the project corridor. Receiver descriptions are given in Table 3-1, *Description of Noise Monitoring Locations Within the I-74 Project Corridor*, and receiver locations are shown in Appendix B, *Aerial Photo Exhibit*. Receiver locations include residences, churches, and one park. Existing traffic noise levels range from 58 to 76 decibels (A-weighted scale) (dBA). They currently approach or exceed the Iowa and Illinois DOT noise abatement criterion of 67 dBA at a majority of first row receiver locations (for example, in a residential neighborhood, those houses that front the roadway) along the I-74 corridor. First row category B receiver locations (picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals) experience peak hour noise levels from mid-60s dBA to mid-70s dBA. Noise receivers 500 feet from the corridor and farther experience peak noise levels in the low 60s dBA.

3.6 Surface Water and Aquatic Resources

As noted, the Mississippi River is the dominant natural feature within the project corridor. Most of the land in the project area drains into the river, either directly or by tributaries such as Duck Creek. Duck Creek and its three tributaries are located in the northern part of the project corridor in Scott County, Iowa. The proposed improvements include crossings of the Mississippi River, Duck Creek, and Duck Creek's tributaries. The Mississippi River and Duck Creek are perennial water bodies and both drain an area greater than 1 square mile. Duck Creek's tributaries flow intermittently and each drain an area less than 1 square mile.

These water bodies are shown in Appendix B, *Aerial Photo Exhibit*. This section briefly describes and updates information presented in Section 3.6, *Surface Water and Aquatic Resources*, in the DEIS.

TABLE 3-1
Description of Noise Monitoring Locations Within the I-74 Project Corridor

Monitoring Location	Site Description and Location	Distance to I-74 (ft) ^a	Time of Day	Measured Noise Levels L _{eq} (dBA)
R1	3617 E. 59th St.—backyard of property in the grass area	180	AM peak	<u>68</u>
R2	Grass field—approximately 30 yards south of Tanglewood Lane, near chain link fence facing I-74	120	AM peak	<u>72</u>
R3	715 Hillside—south of apartment parking lot in grass area	80	AM	<u>69</u>
R4	Intersection of Cypress and Hawthorn—grass area south of intersection	120	AM	<u>70</u>
R5	Hampton Inn—parking lot on east side of hotel	90	AM	<u>69</u>
R6	Daycare/residence—edge of east parking lot and field	430	AM	58
R7	Bettendorf Presbyterian Church—grass median in front of church	300	AM	<u>67</u>
R8	1125 Fairlane Dr.—grass area northwest of residence	110	PM	<u>69</u>
R9	Apartment complex—grass area near chain-link fence	100	PM	<u>67</u>
R10	1205 Highland Park Dr.—driveway apron east side of residence	120	PM	<u>68</u>
R11	Lincoln Manor Apartment Complex—1018 Lincoln east parking lot	150	PM	<u>69</u>
R12	1006 18th St. A—on concrete sidewalk near fire hydrant	70	PM peak	<u>71</u>
R13	Corner of 18th St. A and 14th Ave.—end of sidewalk	60	PM peak	<u>76</u>
R14	1613 18th St. C—grass area near chain link fence	80	PM peak	<u>75</u>
R15	2302 16th Ave.—grass area northwest of residence	340	AM peak	<u>67</u>
R16	2301 14th Ave.—west edge of driveway	310	AM peak	62
R17	923 22nd St.—grass area north of residence	220	AM	<u>68</u>
R18	McManus Park—southwest corner, just south of covered picnic area in grass	420	AM peak	65
R19	Our Lady of Lourdes Catholic Church—parking lot near handicap parking spaces	400	AM peak	<u>69</u>
R20	Scottish Rite Cathedral—parking lot just east of church	490	AM peak	62
R21	513 21st St.—grass area near alley	230	AM peak	60

^aDistance from microphone to edge of nearest lane
Monitoring locations with measured noise levels in **bold, underlined** text approach or exceed the FHWA NAC.

3.6.1 Physical, Chemical and Biological Description of Surface Water Bodies

3.6.1.1 Physical Description of Surface Water Bodies

Mississippi River. The Mississippi River is classified as a First Order Stream. The project corridor crosses the part of the Mississippi River known as Pool 15, which is formed by Lock & Dam #15 located downstream of the project corridor, and Lock & Dam #14 located upstream. The Mississippi River is 3,160 feet (0.6 mile) wide at the location of the project corridor. Arsenal Island is located to the west of I-74, and the I-74 bridge bisects a small island near the Illinois side of the river. The main navigation channel is along the Iowa side of the river.

The part of the Mississippi River on the south side of Arsenal Island and the small island near the Illinois side of the river is known as Sylvan Slough, a documented mussel bed. Though its exact boundaries have not been delineated (Whitney et al. personal communication July 10, 2003), it is located entirely within the Mississippi River – Moline Natural Area.

Duck Creek. Duck Creek flows through the urban landscape and has been partly channelized. It is a warmwater, perennially flowing water body. According to the Strahler Stream Order, Duck Creek is a third order stream.

Duck Creek Tributaries. Duck Creek's tributaries have been channelized in some stretches and flow through an urban landscape. They flow intermittently and their hydrologic characteristics are subject to stormwater runoff.

3.6.1.2 Chemical Description of Surface Water Bodies

Water quality standards for Iowa and Illinois vary between the two states. The DEIS lists the water quality standards for chemical constituents frequently associated with road construction, operation, and maintenance (Dupuis 2002). These have not been changed since the publication of the DEIS.

Water quality data were retrieved from the STORET database maintained by USEPA. In the DEIS, water quality measurements were analyzed at the Lock and Dam #15 sampling location about 3 miles downstream from I-74. Measurements revealed levels of road-related chemical constituents well below the established chronic and acute standard threshold levels in Illinois and Iowa.

No recent records were found at the Lock and Dam #15 sampling location (about 3 miles downstream of I-74) discussed in the DEIS, but water quality sampling was conducted between 2003 and 2005 at a location immediately downriver of I-74. Table 3-2, *Water Quality Data for the Mississippi River*, lists the results for sampled constituents compared to the standards set by Illinois and Iowa. Levels of ammonia found at the site are well below the state standards. Total dissolved solids were found to be below Illinois's standards but above Iowa's standards. In comparison to the levels found at Lock and Dam #15, dissolved phosphorus, total chloride, and total dissolved solids were higher next to I-74.

TABLE 3-2

Water Quality Data for the Mississippi River
(on the West Side of I-74 as Compared to Acute and Chronic State Standards in Illinois and Iowa)

Parameter	Actual Water Quality Data	Illinois Standards		Iowa Standards	
		Acute Criteria	Chronic Criteria	Acute Criteria	Chronic Criteria
Nitrogen, ammonia (NH ₃), total	< 0.05	7.9	2.3	9.8	2.0
Total Kjeldahl nitrogen	0.5		No established standard		
Nitrogen, nitrite (NO ₂) and nitrate (NO ₃)	1.5		No established standard		
Phosphorus (as P), dissolved	0.1		No established standard		
Phosphorus (as P), total	0.08		No established standard		
Chloride, total	331	500 (general use)		No established standard	
Total dissolved solids (solids, fixed, total)	870	1,000 (general use)		750	750

Note: All measurements are in mg/L.

3.6.1.3 Biological Description of Surface Water Bodies

Mississippi River. Faunal species present in perennial water bodies can indicate stream conditions. The most recent fish surveys in the area were conducted by IDNR personnel as part of the multi-agency Long Term Resource Monitoring Program for the Mississippi River (Bowler and Kirby 2007). The surveys completed nearest to the project corridor were at Pool 13 (between 37 and 71 river miles upstream of the I-74 bridge) between 1989 and 2006. More than 85 species of fish were found at that location. In order of decreasing abundance, the most common fish species found at Pool 13 include the emerald shiner (*Notropis antherinoides*), bluegill (*Lepomis macrochirus*), mimic shiner (*Notropis volucellus*), river shiner (*Notropis scabriceps*), and gizzard shad (*Dorosoma cepedianum*). The emerald shiner and bluegill were two of the top five fish species found at the sampling location in Pool 15 described in the DEIS. The other three fish species most abundant in Pool 15 – river carpsucker (*Carpoides carpio*), carp (*Cyprinus carpio*), and channel catfish (*Ictalurus punctatus*) – were among the 20 most abundant fish species found in Pool 13.

No recent data are available for fish spawning locations in the Mississippi River near the Quad Cities. Data were collected in Navigation Pool 15 by the Great River Environmental Action Team, an intergovernmental group devised to manage the Upper Mississippi River basin, in 1984 (and then reviewed in 1994 for currency) to identify fish spawning locations. Fish spawning locations were identified upriver and downriver of I-74 but not within the immediate project corridor.

The presence of native mussel populations can be a water quality indicator. For a detailed description of the mussel species present in the Mississippi River, see Section 3.10.1, *Threatened and Endangered Species*, and Section 4.12, *Threatened and Endangered Species*, and Appendix D, *Detailed Action Report*, in the DEIS.

Three mussel beds near the I-74 project corridor were identified during field surveys conducted in 1994–95 (Whitney et al. 1997), the Case-IH, Illiniwek, and Sylvan Slough mussel beds. The areal extent of the three mussel beds, however, has not been delineated

(Whitney et al. 2003). The Case-IH mussel bed is located about 2.7 miles upstream of the I-74 bridge and the Illiniwek mussel bed is about 6.6 miles upstream. Mussel species on the state and federal lists inhabit all three mussel beds. See Section 3.6.1, *Physical, Chemical, and Biological Description of Surface Water Bodies*, in the DEIS for a more extensive description of the mussel beds.

The third mussel bed, Sylvan Slough, is partly located under the I-74 bridge. As mentioned above, mussel species on the state and federal lists inhabit this mussel bed. Section 3.6.1, *Physical, Chemical, and Biological Description of Surface Water Bodies*, in the DEIS includes a more extensive description of the mussel bed. Note that both states now consider the sheepsnose mussel (*Plethobasus cyphus*), which was found at Sylvan Slough, a state endangered species.

Duck Creek. Duck Creek, located on the Iowa side of the project corridor, provides habitat for a warmwater fishery. Additional fish surveys were conducted in 2002 to add to the 1999 and 2000 data included in the DEIS. Two additional species were found in the 2002 surveys, to total 26 species now found in Duck Creek. The species present in Duck Creek are a subset of those found in the Mississippi River. Abundance data for Duck Creek are unavailable.

Duck Creek's tributaries flow intermittently and, therefore, do not support mussels. Some fish may enter the tributaries during high water events.

3.6.1.4 Water Quality Standards for Surface Water Bodies

The Illinois Pollution Control Board and the Iowa DNR develop water quality standards to comply with the Clean Water Act in Illinois and Iowa, respectively. Water bodies are categorized with designated uses and then evaluated for their ability to support such uses. Water quality, per the Clean Water Act, is characterized in part by how well a given water body supports its designated use.

In its 2008 305(b) Water Quality Report, the Illinois EPA identified the following slightly different designated uses that could be applied to water bodies in the state:

- Aquatic Life
- Fish Consumption
- Public and Food Processing Water Supplies
- Primary Contact
- Secondary Contact
- Aesthetic Quality

Iowa DNR identified four designated uses in its 2004 305(b) Water Quality Report:

- Primary Contact (Recreation)
- Aquatic Life Support
- Drinking Water Supply
- Fish Consumption

Water bodies in Illinois and Iowa can either fully support or not support their designated uses. According to Illinois's Water Quality Report, the Mississippi River fully supports its Aquatic Life, Primary Contact, and Secondary Contact uses, but does not support its Fish Consumption and Public and Food Processing Water Supplies uses. Aesthetic Quality was not assessed. Polychlorinated biphenyls, manganese, and mercury from atmospheric

deposition (toxics) and unknown sources were identified as the causes for its non-support of its Fish Consumption and Public and Food Processing Water Supplies uses.

Iowa's Water Quality Report indicates that the Mississippi River fully supports its Aquatic Life Support and Fish Consumption uses but does not support its Drinking Water Supply use. The Mississippi River was not evaluated for how well it supported its Primary Contact Recreation use because of lack of information. Arsenic levels prevent the Mississippi River from directly supporting its Drinking Water Supply use. Communities that obtain their drinking water from the Mississippi River treat the water for arsenic and other contaminants before supplying it to its residents.

Insufficient information was available to assess Duck Creek in 2004. Therefore, the information contained in the DEIS is still the most recent, in that it supports its designated use as identified before publication of the DEIS; that is, Aquatic Life and Secondary Contact Recreation. Iowa DNR's classification of Duck Creek as a Limited Resource Warmwater Stream has not changed since the DEIS.

3.6.1.5 Illinois Designated Natural Area

The Mississippi River–Moline Natural Area is located within the project corridor. Habitat suitable for threatened and endangered species can be found within there. Several listed mussel species have been known to occur within the natural area, and the bald eagle has used it as wintering habitat. For more information, see Section 3.10.1, *Threatened and Endangered Species*, and Appendix D, *Detailed Action Report* in the DEIS. Appendix C, *Correspondence*, in the DEIS and FEIS, contains agency correspondence relevant to the natural area.

3.6.2 Groundwater and Groundwater Quality

3.6.2.1 Groundwater

Groundwater recharge potential is graded on a scale from Zone 1 to Zone 7; Zone 1 locations signify the highest potential for groundwater recharge (Keefer and Berg 1990). The portion of the project corridor in Illinois is located in Zones 1 and 5 for groundwater recharge potential. Iowa does not have similar information on groundwater recharge available. No areas have been designated as principal or sole-source aquifers in Illinois or Iowa by USEPA under Section 1424(c) of the Safe Drinking Water Act.

3.6.2.2 Drinking Water

Generally, municipalities proximate to surface waters obtain their drinking water from them. Conversely, those without a surface water body nearby use groundwater as their source of drinking water. Bettendorf, Davenport, Moline (including East Moline), and Rock Island receive their drinking water from the Mississippi River.

Rock Island's water supply is drawn at Lock & Dam 15, about 3 miles downstream of the I-74 bridge, and the Rock Island Arsenal water supply intake is located 1.8 miles downstream of the I-74 bridge. The Moline water intake is located about 250 feet upstream of the existing I-74 bridges. The water supply intake for Davenport and Bettendorf is located 1.9 miles downstream of the I-74 bridge.

3.7 Wetlands

Wetlands in the project corridor were identified during a field survey. After reviewing maps showing National Wetland Inventory (NWI) wetlands and NRCS hydric/hydric inclusion soils for the corridor, wetlands were delineated according to the routine onsite method described in the *Corps of Engineers Wetlands Delineation Manual* (U.S. Army Corps of Engineers 1987). See Section 3.7 in the DEIS, *Wetlands*, for more information on how wetlands were identified.

Wetland data sheets were completed for ten sites within the I-74 study corridor, nine of which were determined to meet wetland vegetation, soils, and hydrology requirements. The delineated wetland areas were classified using the Cowardin Classification System (1979), the Corps' standard method for describing wetland types, and consist of palustrine emergent (PEM), forested (broad-leaved deciduous) (PFO1), scrub/shrub (broad-leaved deciduous) (PSS1), and unconsolidated bottom (PUB) types. The floristic quality index (FQI), which indicates the level of disturbance and natural quality of a wetland, was determined for each of the project area wetlands. An FQI below 10 suggests a site of low natural quality, whereas a score of below 5 may denote a highly disturbed site. An FQI above 20 suggests that a site has evidence of native character and may be an environmental asset. The project area wetlands' FQI range between 1.7 and 10.5 and represent a relatively high level of disturbance and low natural quality. Table 3-3, *Wetland Areas Within the I-74 Study Corridor*, summarizes results for the delineation at each wetland area. Wetland locations are shown in [Figure 3-4, Wetlands](#), and in Appendix B, *Aerial Photo Exhibit*.

3.8 Floodplains

Floodplains are flood-prone areas identified as part of the National Flood Insurance Study Program. The project corridor crosses the Mississippi River and its floodplain in the downtown areas of Moline and Bettendorf. A levee exists on the Mississippi River bank in Iowa east of the bridge, but the floodplain spills onto the land encompassing Leach Park and 350 feet farther northwest of the bridge. Part of the downtown area of the City of Moline lies within the Mississippi River 100-year floodplain, according to Flood Insurance Rate Maps. Moline does not have a flood control structure located in the downtown area.

Several other areas within the project corridor are indicated on Flood Insurance Rate Maps as 100-year floodplain; that is, areas that have a 1 percent probability of flooding in any given year. Mapped 100-year floodplain is also present in low-lying areas along Duck Creek and its unnamed tributaries. Duck Creek and its associated floodplain traverse the project corridor just south of Kimberly Road. In Illinois, there are no mapped 100-year floodplains within the project limits. [Figure 3-5, Flood Insurance Rate Map](#), depicts 100-year floodplains within the project area.

3.9 Upland Plant Communities

Upland plant communities within the project area are sparse and consist of nonnative grassland along roadsides. Such sparse cover is of limited value for foraging wildlife.

TABLE 3-3
Wetland Areas Within the I-74 Study Corridor

Wetland ID	Cowardin Classification ^a	Wetland Area (ac) ^b	Description	Predominant Vegetation	Floristic Quality Index
WT-1	PFO1/PEM	4.5	Wetland 1 is located along Tributary 1 of Duck Creek and primarily lies west of I-74, though it is connected by a culvert to a small area on the east side of I-74. It is severely disturbed as a result of channelization and excessive stormwater flow.	Box elder (<i>Acer negundo</i>), elderberry (<i>Sambucus canadensis</i>), reed canary grass (<i>Phalaris arundinacea</i>), stinging nettle (<i>Urtica dioica</i>), giant ragweed (<i>Ambrosia trifida</i>), ground ivy (<i>Glechoma hederacea</i>)	3.6
WT-2	PEM	0.2	Wetland 2 is located 0.5 mile south of the I-80/I-74 interchange, on the east and west sides of I-74. It is a small, circular wet depression on the west side of I-74. The portion east of I-74 is a linear swale.	Pennsylvania smartweed (<i>Polygonum pennsylvanicum</i>), cocklebur (<i>Xanthium strumarium</i>), lakebank sedge (<i>Carex lacustris</i>), reed canary grass (<i>Phalaris arundinacea</i>)	3.6
WT-3	PFO1/PSS1	0.4	Wetland 3 is located along Tributary 3 of Duck Creek 0.75 mile south of the 53rd Street/I-74 interchange on the east and west sides of I-74. Flowing water in the stream bottom was about 3 inches deep and the stream channel was incised about 2 feet from the adjacent linear wetland zone.	Box elder (<i>Acer negundo</i>), silver maple (<i>Acer saccharinum</i>), bedstraw (<i>Galium aparine</i>), reed canary grass (<i>Phalaris arundinacea</i>), white avens (<i>Geum canadense</i>), sandbar willow (<i>Salix exigua</i>)	1.9
WT-4,5,6	PFO1	4 = 1.3 5 = 6.5 6 = 1.9	Wetland 4 is a small area of the northeast corner of Arsenal Island. Wetlands 5 and 6 are linear islands in the Mississippi River that run under the I-74 bridge. Parts of the islands are inundated with relatively high floodwaters of the Mississippi River. The wetlands were not accessible during the field review, but were observed through binoculars.	Silver maple (<i>Acer saccharinum</i>), cottonwood (<i>Populus deltoides</i>), reed canary grass (<i>Phalaris arundinacea</i>)	1.7
WT-7	PFO1/PEM	0.9	Wetland 7 is adjacent to Duck Creek, which crosses beneath I-74 between the U.S. 6 interchange and the Middle Road interchange. Duck Creek has become incised about 6 feet below its natural floodplain. Standing water was present in a low-lying area on the south side of Duck Creek west of I-74.	Hackberry (<i>Celtis occidentalis</i>), stinging nettle (<i>Urtica dioica</i>), bedstraw (<i>Galium aparine</i>), white avens (<i>Geum canadense</i>), sandbar willow (<i>Salix exigua</i>), narrowleaf cattail (<i>Typha angustifolia</i>)	10.2
WT-8	PUB/PFO1	0.9	This wetland is located on the south side of the Mississippi River east of I-74 and north of the 12th Avenue underpass. It appears to be an excavated pond impounded in part by a residential street running along its southern edge. The pond is surrounded by young to submature wet-mesic forest.	Duckweed (<i>Lemna minor</i>), American elm (<i>Ulmus americana</i>), cottonwood (<i>Populus deltoides</i>), box elder (<i>Acer negundo</i>), Missouri gooseberry (<i>Ribes missouriense</i>), Tartarian honeysuckle (<i>Lonicera tatarica</i>)	10.5

TABLE 3-3
Wetland Areas Within the I-74 Study Corridor

Wetland ID	Cowardin Classification ^a	Wetland Area (ac) ^b	Description	Predominant Vegetation	Floristic Quality Index
WT-9	PFO1	0.7	Wetland 9 is located on the north side of the Mississippi River, east of I-74 between the Lincoln Road overpass and the I-74/Middle Road interchange. It appears to be fed hydrologically by two storm sewer outlets that converge at this location.	Box elder (<i>Acer negundo</i>), Tartarian honeysuckle (<i>Lonicera tatarica</i>), violet (<i>Viola sororia</i>), reed canary grass (<i>Phalaris arundinacea</i>)	2

^aClassification describes dominant wetland type within hydrologically connected wetlands
^b Estimated Wetland Area includes only the portion of wetland located within the study corridor limits

PFO1—Palustrine Forested Wetlands—Broad-leaved, deciduous forested wetlands, typically known as swamps. Within the project corridor, these communities consist primarily of areas of floodplain forest along or in association with small creeks and drainages. Species such as elm and silver maple are common. Other species present include cottonwood, sycamore, black willow, and green ash.

PSS1—Palustrine Scrub/Shrub Wetlands—Wetlands dominated by small trees and shrubs are identified as PSS1 communities. Species of willow and dogwood dominate the PSS1 wetlands in the project corridor. Many of these wetland types are found in conjunction with forested wetlands (PFO1). In these cases, periodic flooding and overland flow provide the primary source of hydrology. Small areas of PSS1 are also found along the margins of some ponds and lakes.

PEM—Palustrine Emergent Wetlands—PEM wetlands consist of marshes, wet meadows, wet prairies, and sloughs that are dominated by perennial herbaceous vegetation. Within the project corridor, PEM wetlands consist mainly of depressions, vegetated waterways, and stream banks. PEM wetlands support a relatively wide variety of wetland plants. Species such as reed canary grass and cattail occupy many depressional areas, while species of bulrush and sedge are found in other locations.

PUB—Palustrine Unconsolidated Bottoms —These sites consist primarily of constructed farm and stock ponds. These ponds are often small, less than 1.2 acres in size, and often support wetland vegetation, including willow and various emergent species such as bulrush and cattail.

3.10 Wildlife Resources

The Mississippi River is an important flyway for migrating waterfowl and other birds. Stretches of the Mississippi River near the corridor provide abundant loafing and foraging habitat for diving ducks. Loafing and foraging habitat for dabbling ducks is less prevalent, though some use the shallow water habitat associated with islands and spits within the Mississippi River. Mammal and avian species that have adapted to urban conditions can be found in the project corridor and include raccoon, striped skunk, gray squirrel, fox squirrel, eastern cottontail, Virginia opossum, and several mouse species. Common songbird and other avian species in urban land within the project corridor include English sparrow, starling, brown-headed cowbird, grackle, Eastern kingbird, black crow, American kestrel, and mourning dove. White-tailed deer may be found at the northern terminus of the corridor, where agricultural habitat remains.

All of the unionid mussels collected from the Mississippi River by INHS during a recent (2005) spot survey bore zebra mussel (*Dreissena polymorpha*) byssal plaques. This indicates that there is an infestation of the project area by zebra mussels. Zebra mussels are native to Europe and Asia and were brought to the United States in the ballast water of ships. Since their introduction to water bodies such as the Mississippi River, zebra mussels have overtaken the habitat of native mussel species thereby severely diminishing their populations.

3.10.1 Threatened and Endangered Species

The threatened and endangered species assessment was accomplished by consultation with state and federal resource agencies, review of published and file information, and field surveys. Threatened and endangered species information was received from Iowa DNR during early coordination activities. *The Checklist of Endangered and Threatened Animals and Plants of Illinois* (Illinois Endangered Species Protection Board 2005), and *Endangered and Threatened Species of Illinois: Status and Distribution, Vol. 1 – Plants and Vol. 2 – Animals* (Herkert 1992) were consulted to confirm current listed species' status and basic biology.

3.10.1.1 Federal Protected Species

The USFWS identified the federally threatened bald eagle (*Haliaeetus leucocephalus*), the federally endangered Higgins' eye mussel (*Lampsilis higginsii*), and the federal candidate (Category 2) spectacle case mussel (*Cumberlandia monodonta*) as being recorded near the project corridor. A review of the USFWS list of federal threatened and endangered species and other recognized species of concern last updated in August 2007 revealed no change in the federal status of the federally endangered Higgins' eye mussel and spectacle case mussels identified by USFWS before the field survey. As of August 8, 2007, the bald eagle is no longer included on the list of threatened and endangered species, but it remains protected under the Bald and Golden Eagle Protection Act (Eagle Act) and the Migratory Bird Treaty Act. The Eagle Act prohibits the "taking" of bald eagles, including their parts, eggs and nests, unless a permit is acquired from the Secretary of the Interior. Killing, shooting, and wounding bald eagles are included in the definition of a "take."

3.10.1.2 State Protected Species

The Iowa and Illinois DNRs were contacted to determine if any occurrences of state threatened or endangered species were recorded in or near the project corridor. While early coordination with the Iowa DNR uncovered no state threatened and endangered species within the corridor, subsequent investigations revealed state threatened and endangered mussel species within the Mississippi River. The Illinois DNR identified the bald eagle and four listed mussel species as being recorded in or near the project corridor (Appendix C, *Correspondence*).

The Illinois DNR identified a bald eagle (*Haliaeetus leucocephalus*) record at a location (1997 “018”) within the river channel 0.25 mile east (upstream) of the I-74 bridge (see Appendix C, *Correspondence* in the DEIS). The Mississippi River–Moline Natural Area is used as wintering habitat for the bald eagle. Use of the natural area by the bald eagle was first reported in 1986 and the last observations were reported in 1999. During the winter of 1999, 63 to 108 bald eagles were observed to be using habitat within the natural area. The Elton-Fox Eagle night roost site is located within Rock Island County, Illinois, but not within the I-74 project area. Note that *The Checklist of Endangered and Threatened Animals and Plants of Illinois* (Illinois Endangered Species Protection Board 2005) indicates that the bald eagle has been reclassified from a state endangered species to a state threatened species in Illinois.

The mussel species are described in Table 3-4, *Occurrences of Listed and Candidate Mussel Species*. *The Checklist of Endangered and Threatened Animals and Plants of Illinois* (Illinois Endangered Species Protection Board, 2005) was reviewed to identify changes to the listings of the mussel species recorded in or near the project corridor. The sheepnose mussel, a state endangered species, was incorrectly identified as a state threatened species in the DEIS.

The following three mussel beds lie within Navigation Pool 15:

- **Sylvan Slough**, at river mile 485.8, lies below the I-74 bridge. Its limits are slightly upstream and slightly downstream of the I-74 bridge. It has been designated a mussel refuge since 1988, and mussel harvesting is not permitted there. Of the three important mussel beds in Navigation Pool 15, Sylvan Slough has a low abundance and diversity of mussels (Whitney et al. 1996). It has, however, been designated as an Essential Habitat Area for the Higgins eye by the Higgins Eye Recovery Plan. The term “Essential Habitat Area” is intended to identify those areas that the USFWS and its partners have found to be of utmost importance to the conservation of the species (Recovery Plan, Draft 2004). The Essential Habitat Area extends between river miles 485.5 to 486. The area has also been listed as a biologically significant Illinois stream by the Illinois Natural History Survey (1992) and as such, is given consideration in Illinois EPA antidegradation review for water quality certification. A recent (2005) spot survey for mussels within the Sylvan Slough Essential Habitat Area identified 15 species of mussels within the area. The federally listed Higgins eye mussel and state listed sheepnose, butterfly, and black sandshell mussel species were identified.
- **The Case-IH mussel bed**, at river mile 488.5, is 2.7 miles upstream of the I-74 bridge. It was harvested for mussels heavily in the 1970s and occasionally over the past 10 years. The bed represents the second most abundant and diverse mussel bed of the three important beds in Navigation Pool 15 (Whitney et al. 1996).

TABLE 3-4
Occurrences of Listed and Candidate Mussel Species

Species	Status	Mussel Bed Name/ River Mile ^a /Source	Habitat Requirements	Mussel Density
Higgins' eye (<i>Lampsilis higginsi</i>)	Federal and state (Iowa and Illinois) endangered	Illiniwek Bed / 492.4 / Whitney et al. (1996)	"Large rivers with gravel and sand" ^c	< 0.03/ft ²
		Case-IH / 488.5 / Whitney et al. (1996) and Illinois DNR ^b		< 0.03/ft ²
		Sylvan Slough / 485.8 / Whitney et al. (1996)		< 0.03/ft ²
		482.82/Illinois DNR		Unspecified
Spectacle case (<i>Cumberlandia monodonta</i>)	Federal candidate and state (Iowa and Illinois) endangered	Illiniwek Bed/492.4 / Whitney et al. (1996)	"Large rivers with swiftly flowing, among boulders in patches of sand, cobble or gravel in areas where current is reduced" ^c	< 0.03/ft ²
		486.42/Illinois DNR		Unspecified
Butterfly (<i>Ellipsaria lineolata</i>)	State (Iowa and Illinois) threatened	Case-IH/488.5 / Whitney et al. (1996)	"Large rivers in sand or gravel" ^c	> 1.86/ft ²
		Sylvan Slough / 485.8 / Whitney et al. (1996)		0.09–0.93/ft ²
		Illiniwek Bed / 492.4 / Whitney et al. (1996)		> 1.86/ft ²
		486.42/Illinois DNR		Unspecified
Sheepnose (<i>Plethobasus cyphus</i>)	State (Iowa and Illinois) endangered	487.7 (Iowa DNR)		Unspecified
		Sylvan Slough / 485.8 / Whitney et al. (1996)	"Medium to large rivers in gravel or mixed sand and gravel" ^c	< 0.03/ft ²
Black sandshell (<i>Ligumia recta</i>)	State threatened (Illinois)	486.42 / Illinois DNR		Unspecified
		Sylvan Slough / 485.8 / INHS (2005)	"Medium to large rivers, in riffles or raceways, in gravel or firm sand." ^c	Unspecified

^a The I-74 bridge is located at River Mile 485.8

^b Approximate river mile for Illinois DNR reported occurrences

^c Per *Freshwater Mussels of the Midwest* (Cummings and Mayer 1992)

- **The Illiniwek mussel bed**, at river mile 492.4, lies 6.6 miles upstream of the I-74 bridge and was commercially harvested during the late 1960s and early 1970s. Of the three important mussel beds in Navigation Pool 15, It has the greatest abundance and diversity of mussels (Whitney et al. 1996).

In addition to the above-mentioned mussel beds, Iowa DNR documented three new observations of the butterfly mussel 1.9 miles upstream of the I-74 bridge in 2007. These beds, however, are outside of the project area and no impacts are expected to result from the proposed improvements.

3.11 Parks, Recreational Areas, and Other Public Use Lands

Four parks and three trails are located within the project corridor. Their properties are described below and shown in Appendix B, *Aerial Photo Exhibit*. For more information, see Section 3.11, *Parks, Recreational Areas, and Other Public Use Lands*, in the DEIS.

- **Stevens Square Park** has been identified within the project corridor since the DEIS was published. Stevens Square Park is located in the northwest quadrant of 7th Avenue and 19th Street in downtown Moline. It was donated to the Moline Parks Department, which currently owns the property. The property contains park benches and picnic tables, but it is not highlighted by the city as a prime recreational facility. It is largely used as an outdoor space for the adjacent Moline Activity and Senior Center.
- The **Bill Glynn Memorial Park and Iowa-Illinois Memorial Bridge Monument** is located on the east side of I-74 in Bettendorf near the Mississippi River. Though it is known as a “park,” it is actually a 1.95-acre excess parcel of right-of-way owned by the Iowa DOT and is not regarded a recreational property by the Bettendorf Parks Department. The Iowa-Illinois Memorial Bridge Monument honoring the World War I veterans is located on the property.
- **Leach Park** is a 4.3-acre publicly owned park located along the riverfront on the Iowa side of the river. The Mississippi River Trail-Bettendorf runs through the park.
- **McManus Park** is a 4.4-acre publicly owned neighborhood park located in Bettendorf and is used regularly by area residents.
- **Duck Creek Parkway** is a 15-mile long bicycle/pedestrian trail that follows Duck Creek through Davenport to Devil’s Glen Park in Bettendorf (see [Figure 3-3](#), *Quad City Area Bicycle/Pedestrian and Rail Facilities*).
- **The Great River Trail/Mississippi River Trail-Illinois** is located near the Mississippi River on the Illinois side of the project corridor. The trail connects to the Grand Illinois Trail and the American Discovery Trail in Illinois.
- **The Mississippi River Trail-Bettendorf** is located along the Mississippi River on the Iowa side of the project corridor. It is used primarily for recreation, but its potential to serve as a commuter facility has increased since it has been connected to the Davenport segment of the Mississippi River Trail. Connections up-river through Riverdale to LeClaire and Princeton are in the planning stages.

3.12 Cultural Resources

3.12.1 Archaeological Resources

The project corridor was analyzed for sites listed on or eligible for listing on the National Register of Historic Places (NRHP). Research into potentially significant archaeological sites by means of records searches, pedestrian surface examination and geomorphological investigations revealed no NRHP eligible or listed archaeological sites. One site along the riverfront was found to have prehistoric artifacts, but further investigation revealed no evidence of intact features or significant cultural deposits. An Iowa DOT Tribal Notification

form was completed and reported that no Native American sites eligible for the NRHP were found (see Appendix C, *Correspondence*).

3.12.2 Standing Structures

After the NRHP was reviewed to determine if any structures listed on it were in the area of potential effect, the structures within the project corridor were reviewed to see if they were eligible for listing on the register. Many of the older buildings had been redeveloped and modernized, but of 195 structures, only two were found to be listed on the NRHP and nine were found to be eligible for listing. One structure listed on the NRHP and five structures eligible for listing are located in Moline. The other structure listed on the NRHP and the other four structures eligible for listing are located in Bettendorf. For descriptions of these properties see Table 3-5, *Architectural Site Summaries in the I-74 Project Corridor*. They are also shown in Appendix B, *Aerial Photo Exhibit*.

3.13 Regulated Materials

3.13.1 Hazardous Waste

USEPA listing of potential, suspected, and known hazardous waste or hazardous substance sites in Illinois (that is, the Comprehensive Environmental Response Compensation and Liability Information System [CERCLIS]) has been reviewed to ascertain whether the proposed project will involve any listed site. According to USEPA CERCLIS list updated on April 9, 2007, the U.S. Army Rock Island Arsenal and the John Deere Plow and Planter Works, located about 1 mile to the west of the project corridor, are active CERCLIS sites, and the Kone, Inc., building is an archived CERCLIS site.

3.13.2 Nonhazardous Waste

A Preliminary Environmental Site Assessment (PESA) was completed on the Illinois side of the project corridor in August of 2002. A review of the Illinois EPA leaking underground storage tank (LUST) database on June 6, 2007, confirmed that no new sites were added to the list since the issuance of the PESA. Fourteen special waste sites located along the project corridor were identified during the PESA ([Figure 3-6, Potentially Contaminated Sites](#), at the end of Section 3). Excavation stipulations were subsequently identified for the 14 sites where there were special waste concerns. If excavation or additional right-of-way is required at any of these sites, further soil testing is recommended to determine the extent and nature of contamination. Detail regarding the nature of the sites and stipulations for construction can be found in [Table 3-6, Hazardous and Nonhazardous Special Waste Sites of Concern in Illinois](#).

[Table 3-7, Hazardous and Nonhazardous Special Waste Sites of Concern in Iowa](#), contains information regarding special waste sites of concern found during the Limited Phase 1 Environmental Investigation on the Iowa side of the project corridor. These sites are classified as “high risk,” which indicates that they have a known or suspected presence of contamination above minimum cleanup levels or require further subsurface investigation to be ruled low or medium risk.

See [Figure 3-6, Potentially Contaminated Sites](#), at the end of Section 3, for the location of these sites within the project corridor.

TABLE 3-5
Architectural Site Summaries in the I-74 Project Corridor

Site # or Name	Description	NRHP Recommendation
Iowa		
Regina Coeli Monastery	Now known as the Abbey Hotel and operated for commercial purposes, this property was listed in the NRHP in 1994.	Listed
Bettendorf Grocery/ Bettendorf Improvement Company Building	The property has two commercial units on the ground floor and apartments on the second. The building is a Classical Revival-inspired commercial brick front design and is notable for its architectural significance and its historical association with the locally-important Bettendorf Improvement Company.	Eligible
W. F. Bruhn & Son General Merchandise Store	This property is front-gabled frame commercial building representing a rare survival from the early commercial development of Bettendorf.	Eligible
Iowana Farms Milk Company	Art Moderne-style building housed a major dairy operation in the mid to late 20th century in Bettendorf.	Eligible
The Iowa-Illinois Memorial Bridge and Memorial Bridge Monument (bridge is located in both Iowa and Illinois, statue in Iowa).	Carries Iowa-bound I-74 traffic across the Mississippi River. It was completed in 1935 and is determined eligible for the NRHP. The monument was erected as a dedication to veterans. It contributes to the historic eligibility of the Iowa-Illinois Memorial Bridge, but is not individually eligible.	Eligible
Illinois		
Davenport, Rock Island and Northwestern Railroad Depot	This building currently houses the Quad Cities Convention and Visitors Center. It is designated a local historic landmark.	Eligible
Eagle Signal Building	This building is one of the few early 20th century industrial buildings that remains standing in this part of Moline. It has retained its historical architectural integrity to warrant its eligibility for listing on the NRHP.	Eligible
Moline Post Office on 3rd Ave.	This post office was built in 1910. It is also designated as a local historic landmark.	Eligible
LeClaire Hotel	Designated as a local historic landmark as well as listed in the NRHP in 1994.	Listed
C. Ivar Josephson House	A well-preserved example of the Queen Anne architectural style.	Eligible
Moline Public Library	This building is also designated as a local historic landmark.	Eligible
Moline Post Office on 17th St.	This post office was built in 1935.	Eligible
B.P.O.E. (Elks) Building	The building houses the Community Christian Fellowship.	Eligible
Scottish Rite Cathedral	The Cathedral is designated as a local historic landmark.	Eligible
Knights of Pythias Lodge Hall	This building is an interesting example of an early 20th century lodge building reflecting design influence from the Prairie and Craftsman styles of architecture.	Eligible
Thomas/Lewis/Wilson House	This building could possibly be the oldest standing house in Moline and considering its age, it is very well preserved.	Eligible

TABLE 3-6
Hazardous and Nonhazardous Special Waste Sites of Concern in Illinois

Facility Name	Facility Location	Finding
Vacant lot	100 Block of 19th St.	PESA stated that this site was found to be contaminated and any excavation or grading below 3 feet within 50 feet of soil boring 1314-2a will require the management of special waste.
Kone, Inc.	1 Kone Ct.	PESA stated that this site was found to be contaminated by VOCs relating to the operations of Kone, Inc., and any excavation or grading at Kone, Inc. will require the management of special waste.
Former Frank Foundries Corp.	2020 River Dr.	PESA stated that this site was found to be contaminated by VOCs from LUSTs, USTs, and machine and tool shops, oil houses, metals from the former foundry sites and machine shops, and PCBs in the former transformer and drum-storage areas. Any excavation or grading at the former Frank Foundries Corp. will require the management of special waste.
Vacant lot	2000 block of 4th Ave.	PESA stated that this site was found to be contaminated by metals and VOCs associated with the foundry operation and any excavation or grading below 2 feet within 50 feet of soil boring 1314-13b will require the management of special waste.
Deere & Co. parking lot	2000 4th Ave.	PESA stated that this site was found to be contaminated by VOCs and metals from the machine shops and metals from the blacksmith and grinding facilities and any excavation or grading at Deere & Co. parking lot will require the management of special waste.
Riverside Products	400 21st St.	PESA stated that this site was found to be contaminated by VOCs and metals from the machine shop and any excavation or grading below 6 feet within 50 feet of soil boring 1314-15 will require the management of special waste.
Iowa Interstate Railroad	2401 4th Ave.	PESA stated that this site was found to be contaminated and any excavation or grading at Iowa Interstate Railroad will require the management of special waste.
Aman Gas and Food Mart	1830 5th Ave.	PESA stated that this site was found to be contaminated and any excavation or grading below 2 feet within 50 feet of soil boring 1314-17b will require the management of special waste.
Mike's Automotive and Towing	428 19th St.	PESA stated that this site was found to be contaminated and any excavation or grading below 6 feet within 50 feet of soil boring 1314-18a will require the management of special waste.
Vacant lot	1934 5th Ave.	PESA stated that this site was found to be contaminated and any excavation or grading below 6 feet within 50 feet of soil boring 1314-23b will require the management of special waste.
Brannen's Auto Works	2100 5th Ave.	PESA stated that this site was found to be contaminated and any excavation or grading below 6 feet at Brannen's Auto Works will require the management of special waste.
Office Building	602-608 19th St.	PESA stated that this site was found to be contaminated and any excavation or grading below 2 feet within 50 feet of soil boring 1314-31a or any excavation or grading below 50 feet of soil boring 1314-31c will require the management of special waste.
Scottish Rite Cathedral	1800 7th Ave.	PESA stated that this site was found to be contaminated by VOCs from USTs or repair facilities associated with the former auto dealer and any excavation or grading below 4 feet within 50 feet of soil boring 1314-34a will require the management of special waste.
Vacant lot	702 19th St.	PESA stated that this site was found to be contaminated and any excavation or grading below 2 feet at boring 1314-35a will require the management of special waste.

VOC = volatile organic compound; LUST = leaking underground storage tank; UST = underground storage tank; PCB = polychlorinated biphenyl

TABLE 3-7
Hazardous and Nonhazardous Special Waste Sites of Concern in Iowa

Facility Name	Facility Location	Finding
H&H Car Care Center	612 Kimberly Rd.	LUST/UST. Former filling station with BTEX plume starting under south center, extending towards southwest corner of property. Currently automotive detailing business. Possibly source of odors emanating from storm inlet on Mississippi Boulevard.
Dale Snapp Co.	536 14th St.	LUST/UST. Former filling station with BTEX plume starting under center, extending towards south edge of the property. Currently automotive sales/rental business. Possibly source of odors emanating from storm inlet on Mississippi Boulevard.
Handy Stop	1430 Grant St.	LUST/UST. Current filling station with possible BTEX plume onsite. "No Action Required" status due to lack of receiver pathways.
Crescent Economy Inc.	1303 Grant St.	RCRIS. Current dry cleaning business. Potentially affected by contaminant plume from former Showboat Car Wash site.
(Former) Showboat Car Wash	1215 Grant St.	LUST/UST. Former car wash/filling station with BTEX plume starting under center, extending towards the east/northeast. Likely reaching offsite.
(Former) Hoyt & Son Automotive	1210 Grant St.	LUST/UST. Apparent former filling station with BTEX plume centered onsite. Currently automotive service center.
Johnny's Amoco (BP)/QC Mart	1402 State St.	RCRIS/LUST/UST. Current filling station with BTEX plume under most of the site, possibly extending offsite to the north and likely extending offsite to the east. Potentially affected by contamination migrating from the Twin Bridges 66 site.
Twin Bridges 66	333 14th St.	LUST/UST. Current filling station with BTEX plume under most of the site, possibly extending offsite to the north and east, and likely extending offsite to the south. Potentially affected by contamination migrating from the Johnny's Amoco site. Free product may also be present as part of the plume.
(Former) Lindquist Ford Site	1910 State St. (East of Corridor)	RCRIS/LUST/UST. Former automotive dealership location, with possible BTEX plume onsite. "No Action Required" status due to lack of receptor pathways. Site is significantly to the east of the project corridor.
Plaza Building	1823 State St. (East of Corridor)	LUST/UST. Former commercial building with BTEX plume under southeast portion of the site. Site is significantly to the east of the project corridor.
City Hall	1609 State St.	LUST/UST. Current City Hall with BTEX plume under the majority of the site, possibly extending offsite to the north, and likely extending offsite to the south and east. Possibly affected by contamination extending from Kelley's Gas site.
Kelley's Gas	1543 State St.	UST/LUST. Current filling station with BTEX plume under most of the site, likely extending offsite to the east and west. Free product may also be present as part of the plume.
Twin Bridges Truck City	131 12th St.	RCRIS/LUST/UST. Site is used for office and storage for QC Pools and Spa. Residual petroleum soil and/or groundwater contamination may be present at the site at levels below cleanup standards. "No Further Action" status granted by the Iowa DNR on January 10, 1996.
Adel Parking Lot	1159 State St.	Former location of filling station dating to 1950-1960 period. Site does not have documented contamination, but without any data on subsurface conditions, the potential exists.
Adel Parking Lot	1207 State St.	Former location of filling station dating to 1950-1960 period. Site does not have documented contamination, but without any data on subsurface conditions, the potential exists.

TABLE 3-7
Hazardous and Nonhazardous Special Waste Sites of Concern in Iowa

Facility Name	Facility Location	Finding
Village Inn	1208-1210 State St.	Former location of filling station dating to 1950–1960 period. Site does not have documented contamination, but without any data on subsurface conditions, the potential exists.
Nextel Phone	1504 State St.	Former location of filling station dating to the 1960s. One monitoring well was found in the southwest corner of the site, but no information was found as to its purpose or properties. Site does not have documented contamination, but without any data on subsurface conditions, the potential exists.
Great American Window Company	710 14th St.	Former location of filling station dating to 1950–1960 period. Manager indicated that USTs at the site had been removed many years ago. Site does not have documented contamination, but without any data on subsurface conditions, the potential exists.
Rapid Lube and Oil	1740 State St.	RCRIS/LUST/UST. Current site of oil change and auto service business and location of former filling station. Site is impacted by BTEX-free product and contamination from former leaking USTs. BTEX plume lies under most of the site, possibly extending offsite to the south and west.
Car Quest	312 17th St.	Current location of auto parts store. One monitoring well was found on the site, possibly serving as upgradient well for City Hall subsurface investigation. This monitoring well had documented BTEX contamination in samples taken in 1989 and 1990. The source of the contamination has not been determined.
US Petro Mart	845 State St.	Current filling station with BTEX plume under most of the site, likely extending offsite to the south and west. Site is significantly to the west of the proposed corridor.
Dart Mart	411 14th St.	Current filling station. Site may be impacted by BTEX plume from Twin Bridges 66 filling station.
US West	1437 Grant St.	Currently used for telephone operations. Potentially impacted by BTEX plume from Twin Bridges 66 filling station.
Hans Body Shop	1720 State St.	RCRIS. Former location of filling station dating to 1950–1960 period. Site may be impacted by BTEX contamination from Rapid Lube site.
Bettendorf Auto	1705 to 1719 State St.	Current auto sales operation. Potentially impacted by contamination from City Hall BTEX plume.
Twin Bridges Motor Inn/Paddle Wheel Lounge	221 15th St.	Current site of restaurant and motel. Likely impacted by BTEX contamination from Kelley's gas site.
(Former) Ross' Drive Through	512 14th St.	Current site of abandoned restaurant. Potentially impacted by BTEX contamination from Dale Snapp site.
Knox Corporation	1416 State St.	Potentially impacted by BTEX contamination from Johnny's Amoco and Twin Bridges 66 sites.

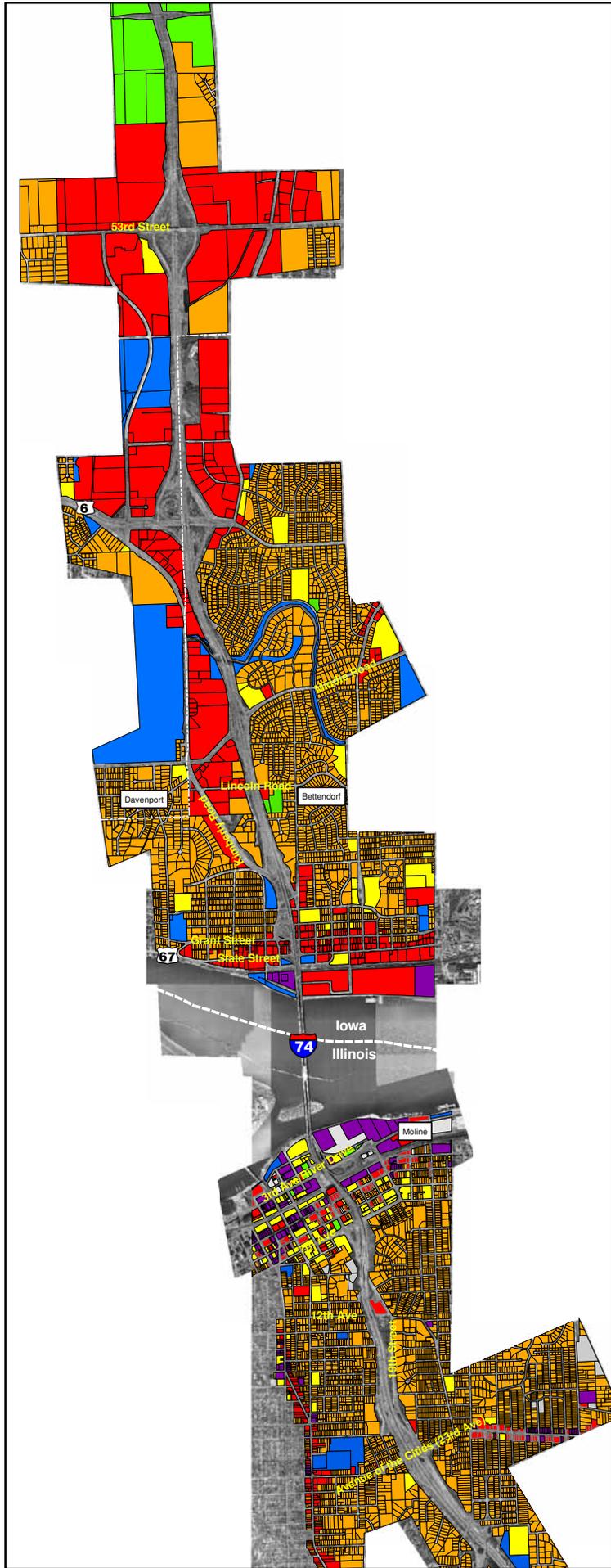
Source: Raymond Professional Group, Inc. Limited Phase I Environmental Investigation Report, I-74 Iowa-Illinois Corridor Study (Project No. 813-8275). 2003.

BTEX = benzene, toluene, ethylbenzene, xylene; Iowa DNR = Iowa Department of Natural Resources

3.14 Visual Resources/Aesthetics

The I-74 project corridor has three distinct viewsheds.

- In the south section, from Avenue of the Cities (23rd Avenue) in Moline to the top of the bluff in Illinois, residential communities dominate the landscape with some scattered commercial properties on the east side of the road. There, I-74 is located along a ridge line such that the residential development on the west side of I-74 rises above the interstate facility, whereas the landscape on the east side is lower than the facility.
- The Mississippi River runs through the central section of the corridor, creating a river valley where Moline and Bettendorf are located. Between the bluff in Illinois and Kimberly Road in Bettendorf, the bridge carrying I-74 over the Mississippi River rises above the riverside cities and dominates the viewsheds along the river, the interstate, and the urban corridor.
- In the north section, from Kimberly Road through the project's northern terminus, the landscape consists of residential communities, office complexes, and large commercial properties. At the far north end of the project corridor, the agricultural landscape is transitioning to residential uses.



Legend

- Commercial
- Institutional
- Industrial
- Open Space/Agriculture
- Recreation
- Residential
- Vacant

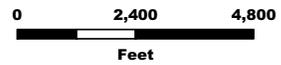


Figure 3-1 Existing Land Use

Figure 3-1
Existing Land Use

Source: Bi-State Regional Commission and City of Moline, 2003.

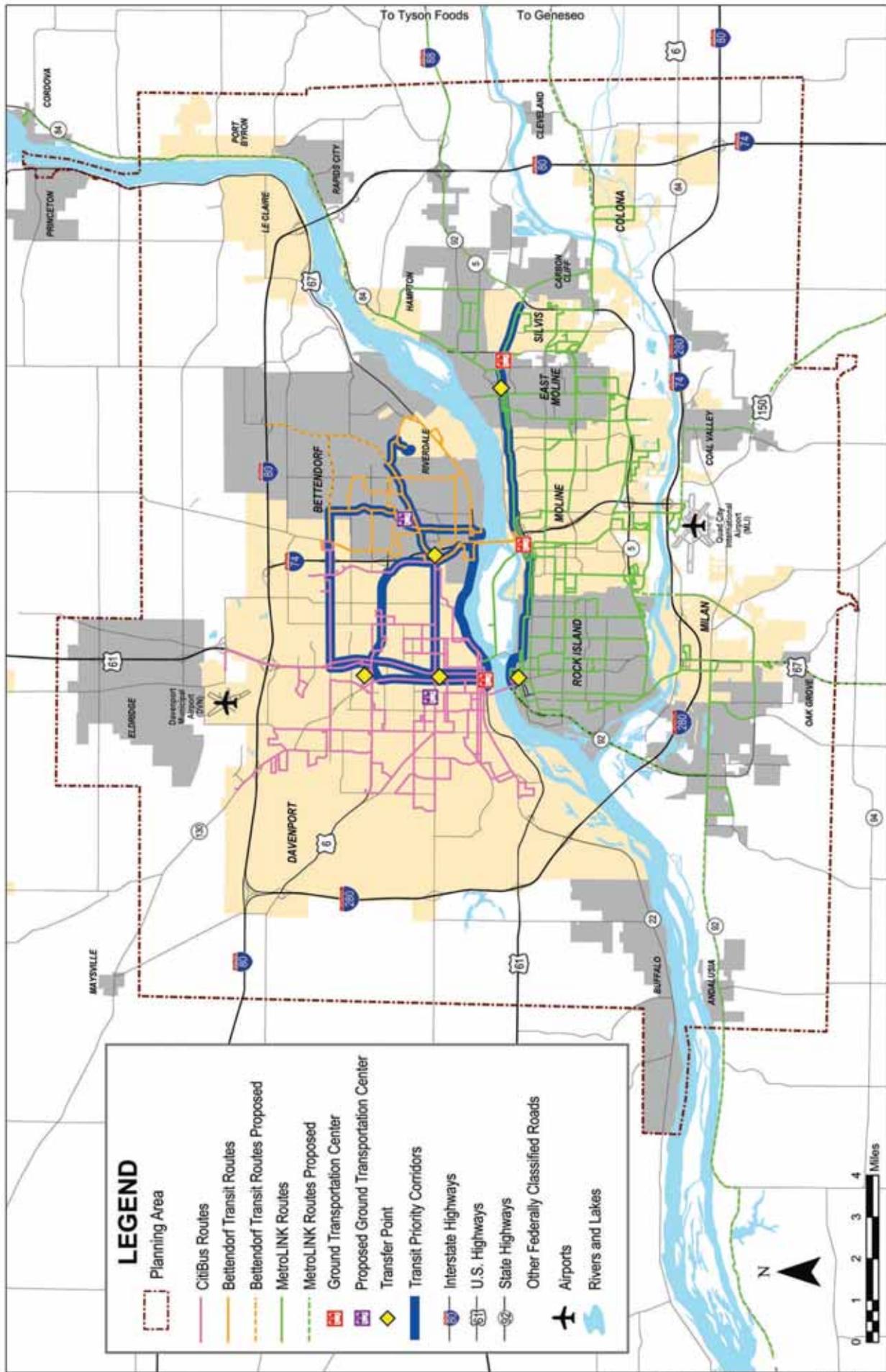


Figure 3-2
Quad City Area
Transit Facilities*

Figure 3-2 Quad City Area Transit Facilities*

* Source: 2035 Quad City Long Range Transportation Plan
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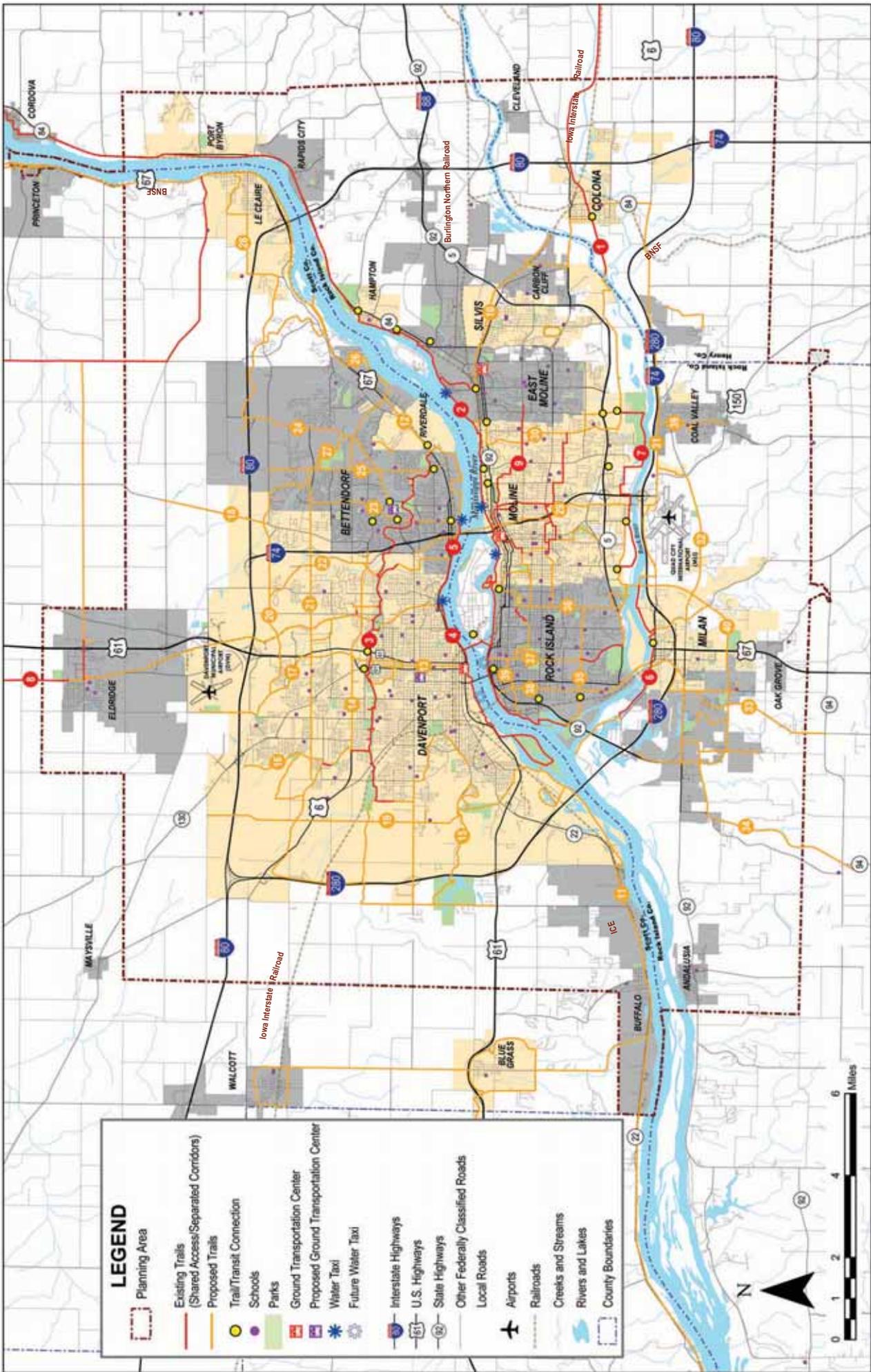


Figure 3-3
Quad City Area
Bike/Pedestrian and Rail Facilities*

* Source: 2035 Quad City Long Range Transportation Plan
T 156835.AA.EN.09 Fig 3-3 01-30-0719

Figure 3-3 Quad City Area Bike/Pedestrian and Rail Facilities*

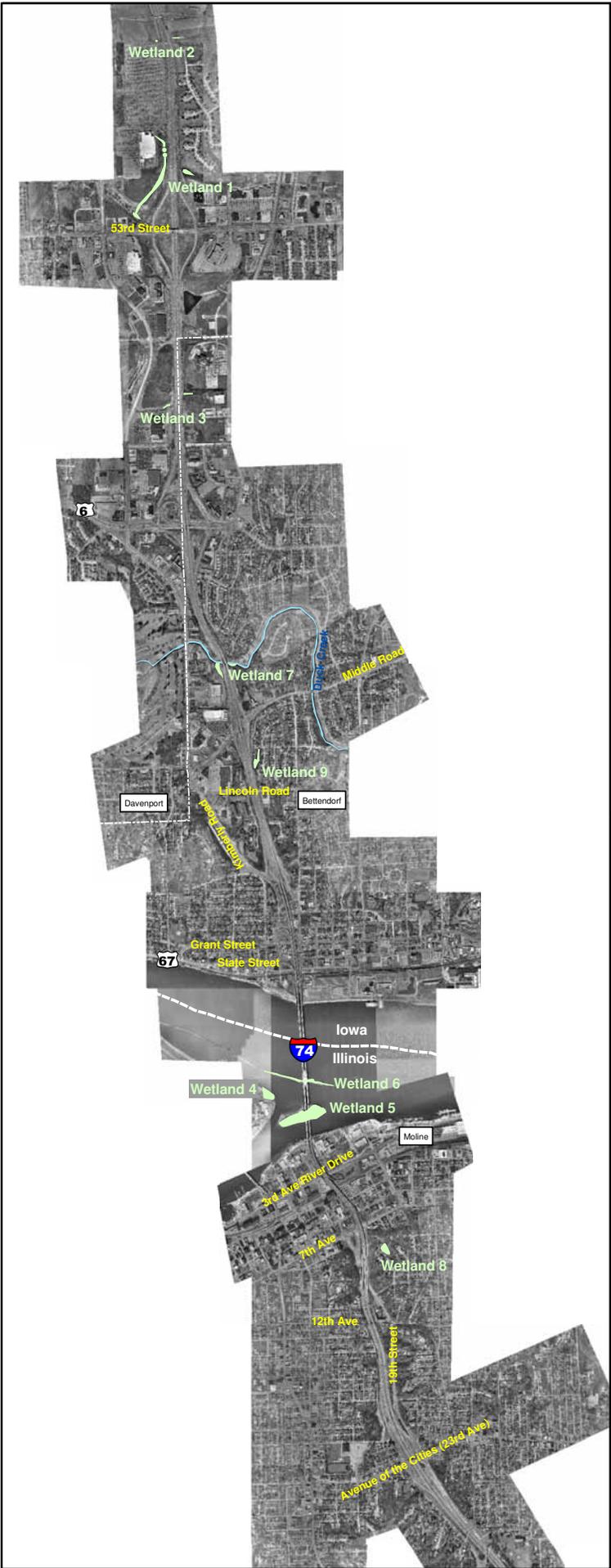


Figure 3-4 Wetlands

Legend

- Field Survey Wetlands
- Duck Creek and Tributaries
- Municipal Boundary
- State Boundary

N

0 2,400 4,800

Feet

Figure 3-4
Wetlands

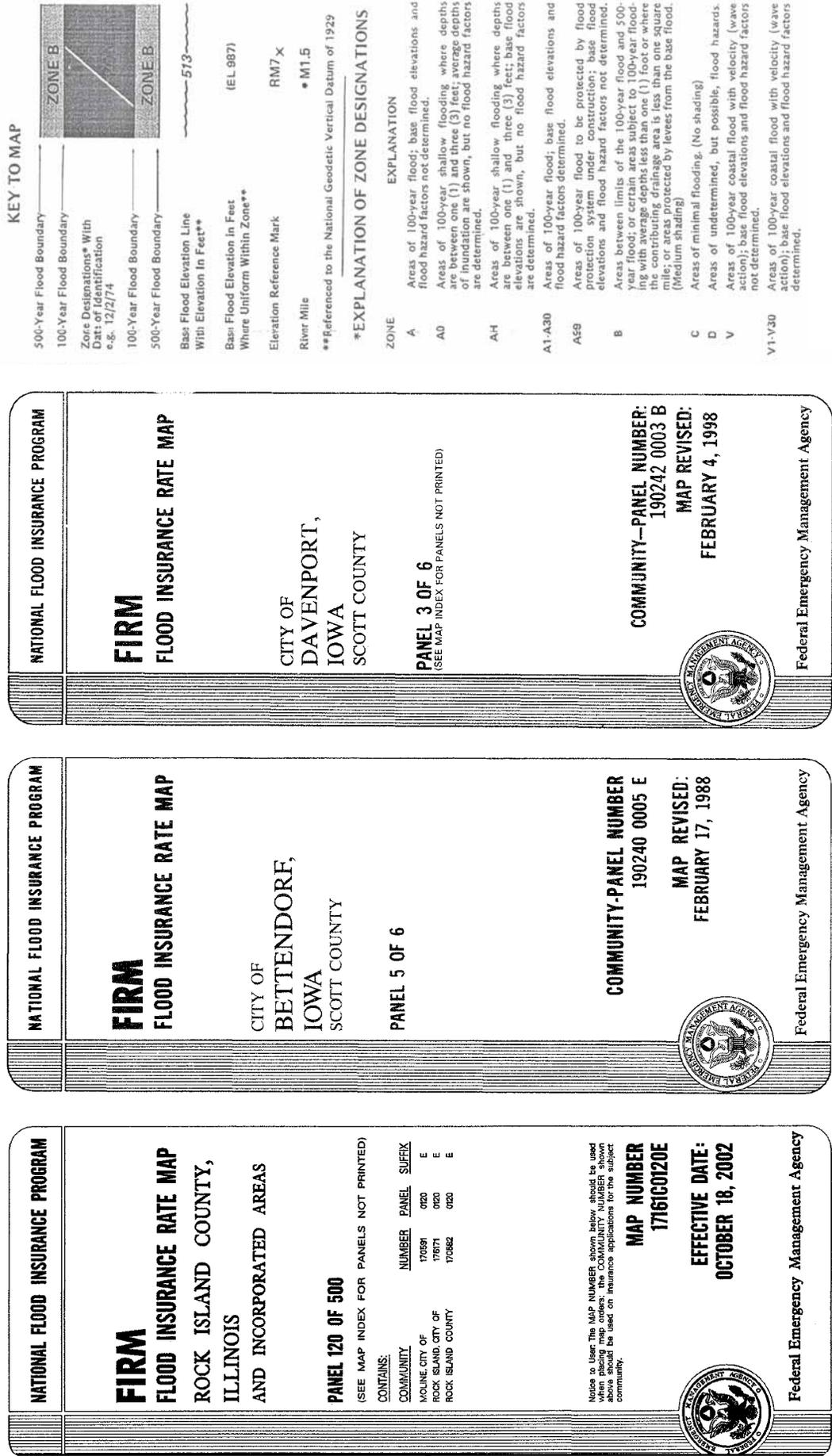


Figure 3-5
Flood Insurance Key Map
Moline, Illinois
Bettendorf, Iowa
Davenport, Iowa

Figure 3-5 Flood Insurance Key Map

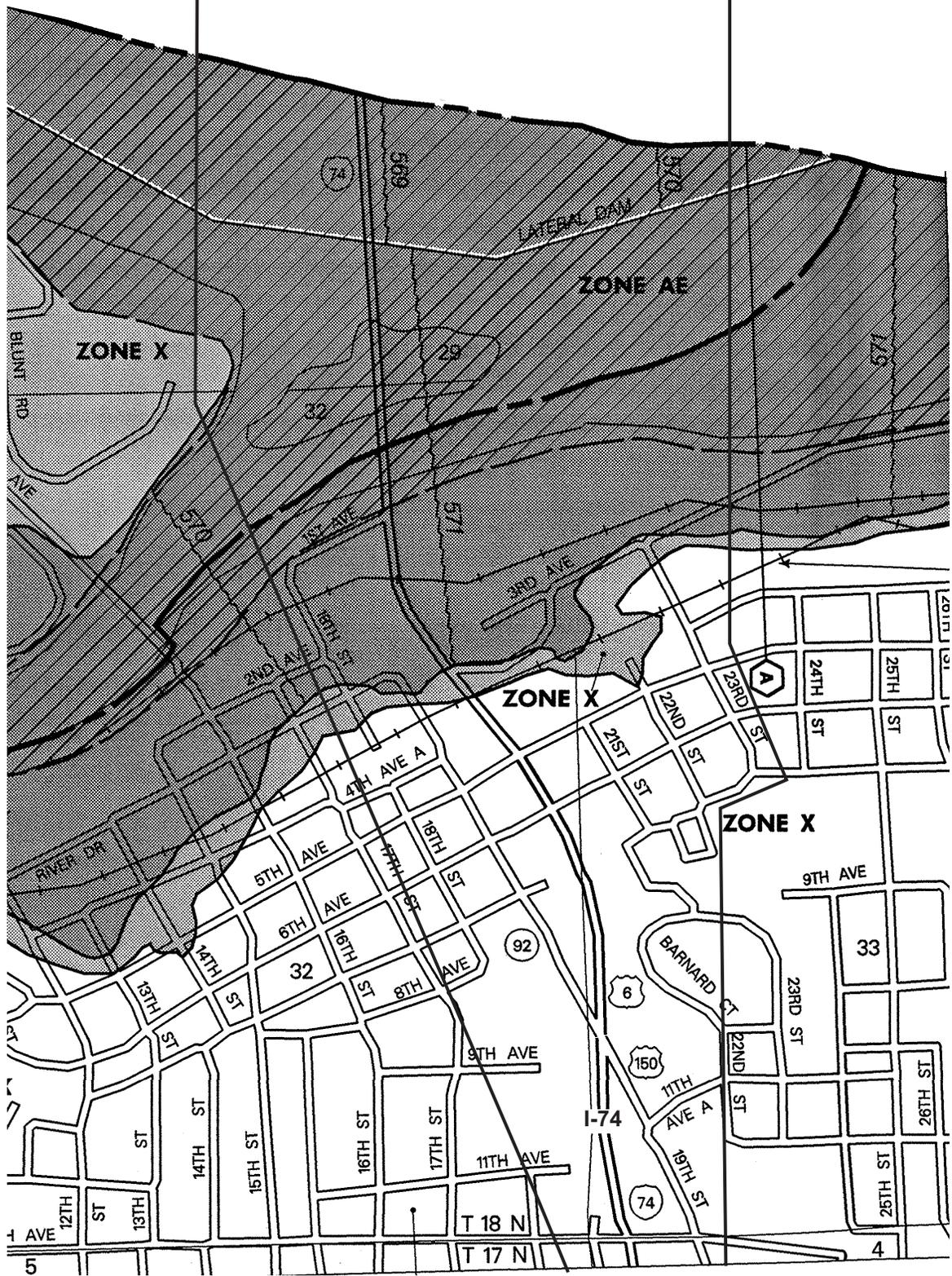


Figure 3-5a
Flood Insurance Rate Map
 Moline, Illinois

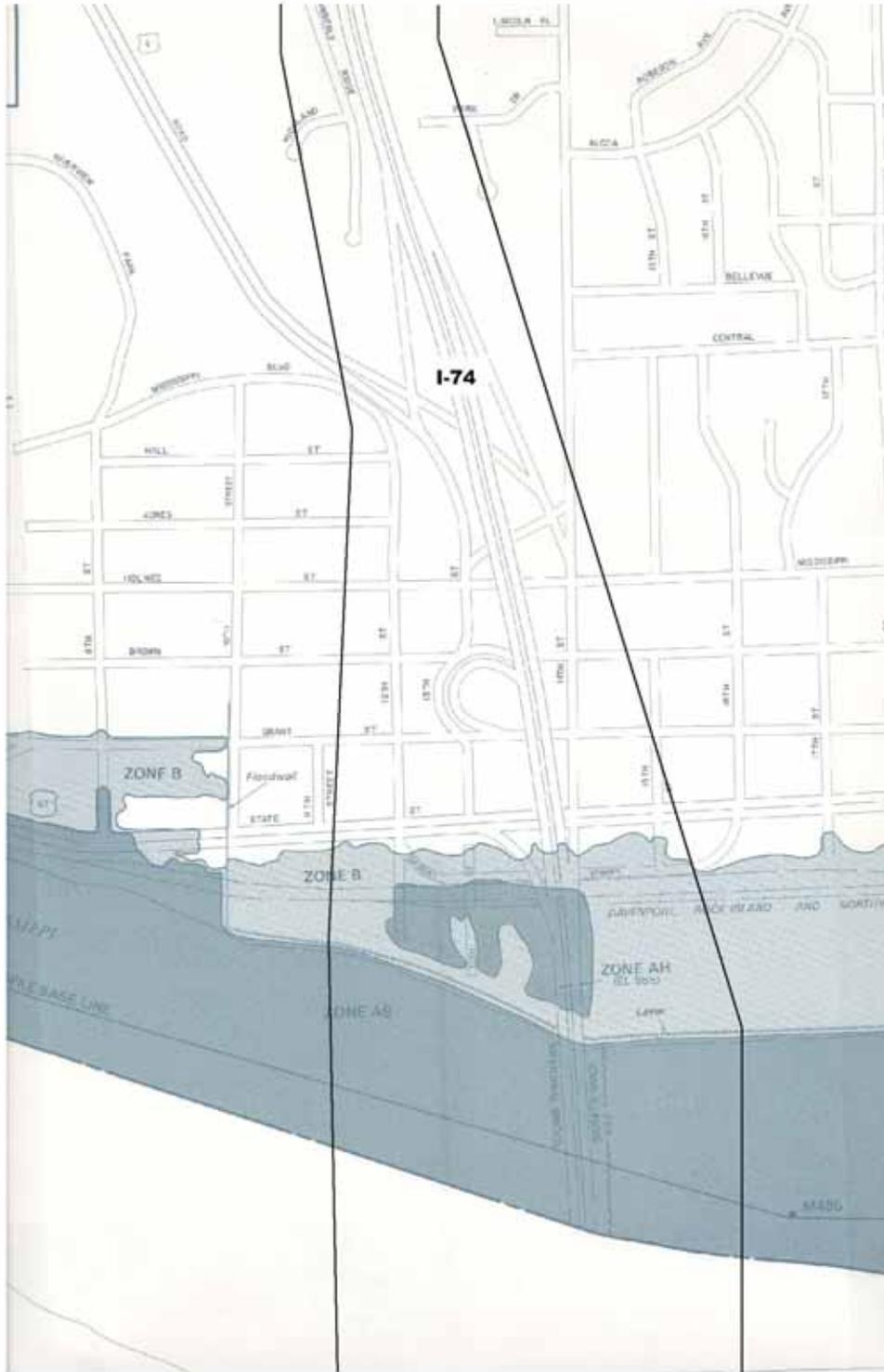


Figure 3-5b
 Flood Insurance Rate Map
 Bettendorf, Iowa (South)

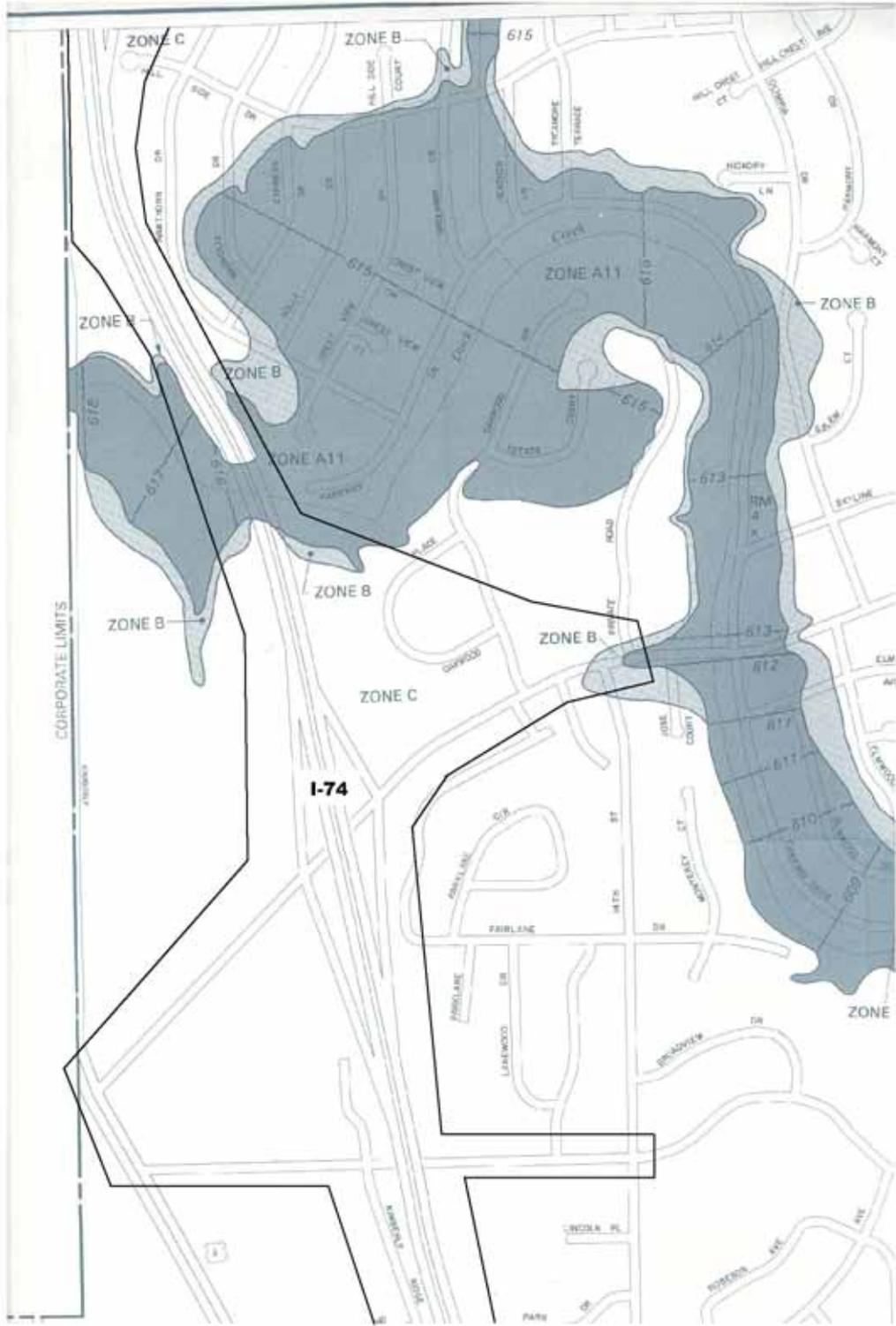


Figure 3-5c
Flood Insurance Rate Map
 Bettendorf, Iowa (North)

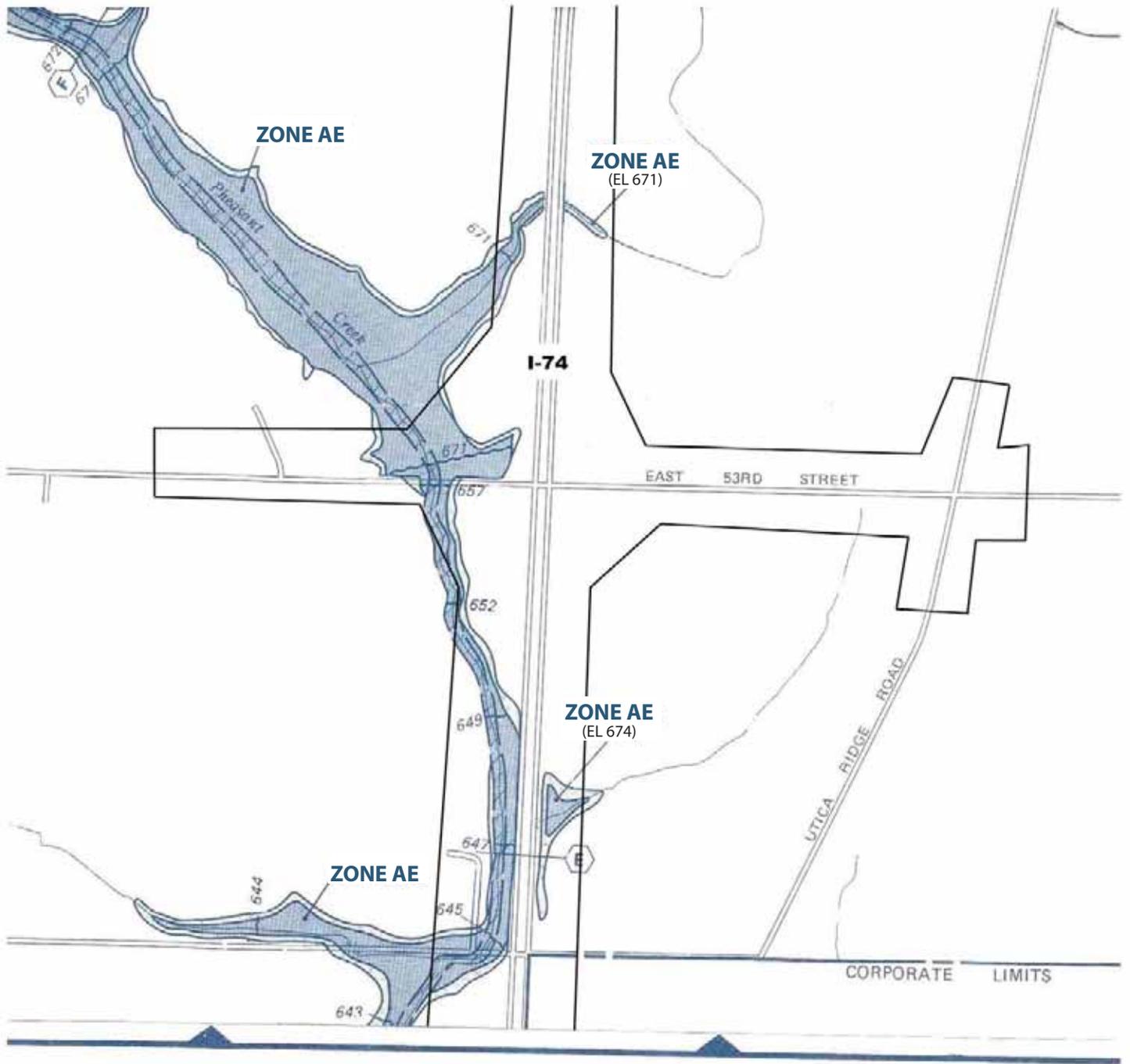


Figure 3-5d
Flood Insurance Rate Map
Davenport, Iowa

Section 4
Environmental Consequences

Environmental Consequences

Section 4 describes the beneficial and adverse social, economic, and environmental effects of the proposed action and the measures to mitigate adverse impacts. The impacts of the No-Action Alternative and the Build Alternatives are discussed in Section 4 of the DEIS and summarized in Tables 4-1a and 4-1b, *DEIS Impact Summary Table*.

Following circulation of the DEIS, a Preferred Alternative was identified from the Build Alternatives. This Preferred Alternative is described in Section 2, *Alternatives*. Since the Preferred Alternative was identified, refinements have been made to the design of the Preferred Alternative. These refinements have resulted in some changes in the environmental consequences. These changes in the impacts of the Preferred Alternative are discussed in the remainder of this chapter and summarized in Tables 4-2a and 4-2b, *Preferred Alternative Impact Summary Table*. Impacts by the DEIS Build Alternative components comprising the Preferred Alternative are also summarized in Tables 4-2a and 4-2b under “Preferred Alternative as Presented in the DEIS” and described below using similar nomenclature. Table 4-3 summarizes the total impacts of the refined Preferred Alternative.

4.1 Identification of the Preferred Alternative

4.1.1 South Section and North Section

At the time the DEIS was published, the design did not require additional right-of-way in the North or South sections. Only one build alternative for the South Section was presented in the DEIS and has subsequently been identified as the Preferred Alternative. In the North Section, only one improvement option for the mainline was proposed and included improvements along the existing alignment. The only variations in the North Section presented were at the I-74 interchanges with U.S. 6/Spruce Hills Drive and 53rd Street. As no additional right-of-way would be required by the variations at both of the interchanges, the preferred alternatives for these interchanges were identified solely on the basis of engineering performance.

4.1.2 Central Section

The potential impacts in the Central Section varied, depending on the mainline and interchange alternative considered. In addition to the engineering considerations for the identification of the Preferred Alternative noted in Section 2, the following environmental consequences were considered.

4.1.2.1 Mainline

Alignment F was chosen as the Preferred Alternative in part for the following reasons:

- It would minimize impacts to wetlands by 1.93 acres and avoid Wetland 5 entirely.
- It would locate the I-74 bridge farther from Sylvan Slough where the federally endangered Higgins’ eye pearly mussel (*Lampsilis higginsii*) is located. This location would also minimize the potential to contribute sediment loading to Sylvan Slough

during bridge construction because sediment would have more time to disperse before being deposited on the river substrate. USEPA, in the agency's comments on the DEIS, requested that Alignment F be selected for this reason.

4.1.2.2 Interchanges

Moline Interchange Variation 1 (M1) was chosen over M2, in part, because, depending on which mainline alignment it is combined with, it would:

- Require 2.1 to 2.5 acres fewer of new highway right-of-way
- Impact two to five fewer residences
- Impact two to four fewer businesses
- Impact one to two fewer historic properties

The decision to select **Bettendorf Interchange Variation 1 (B1)** as the Preferred Alternative rather than B2 was based on its engineering performance. B1, in some cases and depending on which mainline alignment it is combined with, has equal or higher impacts than B2. Specifically it would:

- Require 0.2 to 0.4 acre more of new highway right-of-way
- Impact the same number or one more business
- Impact two more noise receivers
- Impact one to two more contaminated sites

4.1.2.3 Bettendorf Local Roadway Variations

The **U.S. 67 Diagonal Connector** was identified as the Preferred Alternative rather than the U.S. 67 90-Degree Connector because of its engineering performance. The Diagonal Connector presents greater impacts to environmental and socioeconomic resources than the 90-degree connector. Specifically, the U.S. 67 Diagonal Connector, depending on which Bettendorf Interchange Variation it would be combined with would:

- Require 1.05 to 2.02 acres more of highway right-of-way
- Require the same or 0.09 acre more of residential land use
- Require 2.41 to 3.41 acres more of commercial land use
- Impact one to seven more residences
- Impact nine to eighteen more businesses
- Impact one to five more contaminated sites

The **Holmes Street/Mississippi Boulevard Underpass** option was identified as the Preferred Alternative rather than the Kimberly Road underpass option because of its engineering performance and because it was preferred by local agencies and the public. The Kimberly Road underpass would not result in any environmental or socioeconomic impacts because this underpass could be improved within the existing right-of-way. The Holmes Street/Mississippi Boulevard underpass option would require additional right-of-way in order to ensure adequate vertical clearance underneath the improved I-74 mainline. The additional right-of-way needs associated with this underpass option would:

- Require 0.07 acre of highway right-of-way
- Require 0.42 acre of residential land use
- Impact one residence

TABLE 4-1a
DEIS Impact Summary Table – I-74 Mainline/Interchange Variations

Resource Issue	Units	Central Section (12th Avenue to Lincoln Road)												North Section (Lincoln Road to one mile north of 53rd Street)	
		E Alignment						F Alignment							
		Moline		Bettendorf		Moline		Bettendorf ^a		Moline		Bettendorf ^a			
Interchange Variation M1	Interchange Variation M2	Interchange Variation B1	Interchange Variation B2	Interchange Variation M1	Interchange Variation M2	Interchange Variation B1	Interchange Variation B2	Interchange Variation M1	Interchange Variation M2	Interchange Variation B1	Interchange Variation B2	Interchange Variation B1	Interchange Variation B2	Bridge	
Land Conversions															
Net Increase in Highway ROW	Acres	10.6	13.1	10.1	9.9	11.0	13.1	--	--	10.3	9.9	9.9	0	0	
Upland Converted to ROW	Acres	0	0	0	0	0	0	0	0	0	0	0	0	0	
Farmland Converted to ROW	Acres	0	0	0	0	0	0	0	0	0	0	0	0	0	
Real Estate															
Residential Structures Required	Number	2	7	4	4	5	7	--	--	4	4	4	0	0	
Businesses Required	Number	4	7	12	12	3	6	--	--	11	11	11	0	0	
Churches Required	Number	0	0	1	1	0	0	--	--	1	1	1	0	0	
Environmental Issues															
Wetlands Affected	Acres	0	0	0	0	2.1	0	0	0	0	0	0	0	0.92 ^b	
Floodplain Crossings	Number (type)	0	0	1 (transverse ^c)	0	0	0	0	0	1 (transverse ^c)	0	0	0	1 ^b (transverse ^c)	
Stream/River Crossings	Number	0	0	0	0	1	0	0	0	0	0	0	0	1	
Endangered Species	Yes/No	No	No	No	No	No	No	No	No	No	No	No	No	No	
Historic Properties	Number	4	5	1	1	3	4	1	1	1	1	1	1	0	
Parks	Number	0	0	1	1	0	0	0	0	0	0	0	0	0	
Archaeological Sites	Number	0	0	0	0	0	0	0	0	0	0	0	0	0	
Design Year Noise	Number of Receivers Impacted ^e	13	13	11	9	13	13	--	--	11	9	11	9	20 ^b	
Contaminated Sites	Number	8	10	12	11	8	10	0	0	13	12	13	12	0	

^aAdditional Impacts associated with local roadway improvements in Bettendorf are shown in Table 4-1b.

^bWhile no additional ROW is required in the North Section, the proposed work includes a transverse crossing of the floodplain of Duck Creek and its associated wetlands, of which 0.92 acre would be impacted. Additionally, approximately 20 noise receivers would be impacted.

^cTransverse Floodplain crossing is a crossing of a floodplain at an angle of 30 to 90 degrees.

^dSurveys for muskells will be completed during the preparation of the FEIS.

^eReceivers are locations at which noise levels were monitored.

^fWhile no additional ROW is required in the South Section, approximately 15 noise receivers would be impacted. Table S-1a and 4-30a in the DEIS erroneously stated that 16 noise receivers would be impacted in the South Section.

TABLE 4-1b
DEIS Impact Summary Table – Bettendorf Local Roadway Variations

Resource Issue	Units	Local Roads (within the Central Section)						
		U.S. 67 Transition Design Variations			Local Roadway Underpass Design Variations			
		90 Degree	Diagonal		Holmes Street/ Mississippi Boulevard ^b		Kimberly Road ^c	
	Interchange Variation B1	Interchange Variation B2 ^a	Interchange Variation B1	Interchange Variation B2 ^a				
Land Conversions								
Net Increase in Highway ROW	Acres	1.24	0.72	2.74	2.29	0.07	0	0
Residential Converted to ROW	Acres	0.13	0.09	0.18	0.13	0.42	0	0
Commercial Converted to ROW	Acres	1.01	0.57	3.98 ^d	3.42	0	0	0
Real Estate								
Residential Structures Required	Number	4	0	7 ^e	5 ^e	1	0	0
Businesses Required	Number	7	1	19	16	0	0	0
Churches Required	Number	0	0	0	0	0	0	0
Environmental Issues								
Wetlands Impacted	Acres	0	0	0	0	0	0	0
Floodplain Crossings	Number (type)	0	0	0	0	0	0	0
Stream/River Crossings	Number	0	0	0	0	0	0	0
Endangered Species	Yes/No	No	No	No	No	No	No	No
Historic Properties	Number	0	0	0	0	0	0	0
Parks	Number	0	0	0	0	1	0	0
Archaeological Sites	Number	0	0	0	0	0	0	0
Contaminated Sites	Number	7	9	10	12	0	0	0

^aImpacts shown reflect 2 lanes in each direction along Grant Street. Providing 3 lanes in each direction would have impacts similar to Interchange Variation B1.

^bThe Holmes Street/Mississippi Boulevard Variation is compatible only with Interchange Variation B1. The impacts for this variation are identical for Alignment Alternatives E and F.

^cThe Kimberly Road Underpass Variation is compatible with both Interchange Variations B1 and B2. The impacts for this underpass variation are identical for Alignment Alternatives E and F and Interchange Variations B1 and B2.

^dThe DEIS incorrectly stated that 3.98 acres of Commercial lands would be converted to highway ROW.

^eTwo structures are multi-family; one has two units and the other has eight units.

TABLE 4-2a
Preferred Alternative Impact Summary Table—174 Mainline/Interchange Variations

Resource Issue	Units	South Section (Avenue of the Cities [23rd Avenue to 12th Avenue])		Central Section ^a (12th Avenue to Lincoln Road)				North Section (Lincoln Road to one mile north of 53rd Street)			
		Preferred Alternative as Presented in DEIS	Refined Preferred Alternative	Alignment F with Moline Interchange Variation 1		Alignment F Bridge		Alignment F with Bettendorf Interchange Variation 1			
				Preferred Alternative as Presented in DEIS	Refined Preferred Alternative	Preferred Alternative as Presented in DEIS	Refined Preferred Alternative	Preferred Alternative as Presented in DEIS	Refined Preferred Alternative		
Land Conversions											
Net Increase in Highway ROW ^b	Acres	0	0.2	11.0	9.4	--	--	10.3	11.3	0	2.9
Residential Converted to ROW	Acres	0	0.2	0.6	0.3	0	0	0.6	1.7	0	2.2
Commercial Converted to ROW	Acres	0	0	3.9	6.9	0	0	8.4	9.6	0	5.7
Real Estate											
Residential Structures Required	Number	0	0	5	6	--	--	4	5	0	1
Businesses Required	Number	0	0	3	5	--	--	11	14	0	0
Churches Required	Number	0	0	0	0	--	--	0 ^c	0	0	0
Environmental Issues											
Wetlands Affected	Acres	0	0	0	0	0.17	0.18	0	0	0.92 ^d	1.03
Floodplain Crossings	Number (type)	0	0	0	0	1 (transverse ^e)	1 (transverse ^e)	0	0	1 ^d (transverse ^e)	1 (transverse ^e)
Stream/River Crossings	Number	0	0	0	0	1	1	0	0	1	1
Endangered Species	Yes/No	No	No	No	No	f	f	No	No	No	No
Historic Properties	Number	0	0	3	4	1	1	1	1	0	0
Parks	Number	0	0	0	0	0	0	1	1	0	0
Archaeological Sites	Number	0	0	0	0	0	0	0	0	0	0
Design Year Noise	Number of receivers affected ^g	15 ^h	11	13	12	--	--	11	13	20 ^d	20
Contaminated Sites	Number	0	0	8	8	0	0	13	12	0	0

^aAdditional impacts associated with local roadway improvements in Bettendorf are shown in Table 4-2b.

^bAfter the existing facility is demolished, there will be areas that can be converted from highway ROW to private use. These areas are subtracted from the amount of new ROW required to construct the proposed improvements to result in a net increase in highway ROW.

^cThe DEIS erroneously attributed the impacted church to the Bettendorf Interchange Variation 1. It should have been attributed to the U.S. 67 diagonal transition design variation for the Interchange Variations B1 and B2.

^dWhile no additional ROW is required from the preferred alternative in the North Section as presented in the DEIS, the proposed work includes a transverse crossing of the floodplain of Duck Creek and its associated wetlands, of which 0.92 acres would be impacted. Additionally, approximately 20 noise receivers would be impacted.

^eThe DEIS erroneously attributed the impacted church to the Bettendorf Interchange Variation 1. It should have been attributed to the U.S. 67 diagonal transition design variation for the Interchange Variations B1 and B2.

^fWhile no additional ROW is required from the preferred alternative in the North Section as presented in the DEIS, the proposed work includes a transverse crossing of the floodplain of Duck Creek and its associated wetlands, of which 0.92 acres would be impacted. Additionally, approximately 20 noise receivers would be impacted.

^gSurveys for muskells will be completed at a time more proximate to the construction of the proposed improvements in order to obtain the most accurate information on the locations of the muskells.

^hReceivers are locations at which noise levels were monitored.

ⁱWhile no additional ROW is required by the preferred alternative in the South Section as presented in the DEIS, approximately 15 noise receivers would be impacted. Table S-1a and 4-30a in the DEIS erroneously stated that 16 noise receivers would be impacted in the South Section.

TABLE 4-2b
Preferred Alternative Impact Summary Table—Bettendorf Local Roadway Variations

Resource Issue	Units	Local Roads (within the Central Section)			
		U.S. 67 Diagonal Transition Design Variation with Interchange Variation B1	Refined Preferred Alternative	Holmes Street/Mississippi Boulevard Local Roadway Underpass Design Variations	Refined Preferred Alternative
Land Conversions					
Net Increase in Highway ROW	Acres	2.7	4.1	0.1	0
Residential Converted to ROW	Acres	0.2	0.2	0.4	0
Commercial Converted to ROW	Acres	4.0	3.6	0	0
Real Estate					
Residential Structures Required	Number	7 ^a	9 ^a	1	0
Businesses Required	Number	19	20	0	0
Churches Required	Number	1 ^b	1	0	0
Environmental Issues					
Wetlands Impacted	Acres	0	0	0	0
Floodplain Crossings	Number (type)	0	0	0	0
Stream/River Crossings	Number	0	0	0	0
Endangered Species	Yes/No	No	No	No	No
Historic Properties	Number	0	0	0	0
Parks	Number	0	0	1	0
Archaeological Sites	Number	0	0	0	0
Contaminated Sites	Number	10	8	0	0

^aTwo structures are multi-family; one has two units and the other has eight units.

^bThe DEIS erroneously attributed the impacted church to the Bettendorf Interchange Variation 1 in Tables S-1a and 4-30a, Impact Summary Table – Mainline/Interchange Variations. It should have been attributed to the U.S. 67 diagonal transition design variation for the Interchange Variations B1 and B2 in Tables S-1b and 4-30b: *Impact Summary Table—Bettendorf Local Roadway Variations*.

4.1.2.4 Bicycle / Pedestrian Accommodations

Bicycle/pedestrian accommodations across the Mississippi River were included in the Preferred Alternative because of public support and compatibility with the 2035 LRP. Specifically, bicycle/pedestrian accommodations would be provided on the new Mississippi River bridge. Reusing the existing Iowa-bound bridge as a bicycle/pedestrian trail was dismissed because no local agencies would commit to assuming jurisdiction over the bridge.

4.2 No-Action Alternative

The No-Action Alternative is included as a basis of comparison with the Preferred Alternative. The No-Action Alternative is defined as no new major construction along the I-74 corridor, though short-term improvements and committed and planned improvements (as detailed in Iowa DOT and Illinois DOT multiyear improvement programs, and in the LRP) would still be undertaken. The No-Action Alternative would not address the project’s purpose and need and would result in the following consequences:

- With the No-Action Alternative, capacity and operational deficiencies would expand and worsen creating a situation where traffic demand and service would not be met. Without improvements to capacity and operational issues, the congestion on I-74 would result in a break-down in traffic flow during peak periods and increasingly unreliable travel times for people, goods, and services.

TABLE 4-3
Impacts of the Refined Preferred Alternative

Resource Issue	Units	Impact
Land Conversions		
Net Increase in Highway ROW ^a	Acres	27.9
Residential Converted to ROW	Acres	4.6
Commercial Converted to ROW	Acres	25.8
Real Estate		
Residential Structures Required	Number	21 ^b
Businesses Required	Number	39
Churches Required	Number	1
Environmental Issues		
Wetlands Impacted	Acres	1.21
Floodplain Crossings	Number (type)	2 (transverse ^c)
Stream/River Crossings	Number	2
Endangered Species	Yes/No	^d
Historic Properties	Number	6
Parks	Number	1
Archaeological Sites	Number	0
Design Year Noise	Receivers affected ^e	56
Contaminated Sites	Number	28

^a After the existing facility is demolished, there will be areas that can be converted from highway ROW to private use. These areas are subtracted from the amount of new ROW required to construct the proposed improvements to result in a net increase in highway ROW.

^b Two structures are multifamily; one has two units and the other has eight units.

^c Transverse Floodplain crossing is a crossing of a floodplain at an angle of 30 to 90 degrees.

^d Surveys for mussels will be completed at a time more proximate to the construction of the proposed improvements in order to obtain the most accurate information on the locations of the mussels.

^e Receivers are locations at which noise levels were monitored.

- With the No-Action Alternative, roadway geometry would remain unchanged. The roadway design would not be updated to reflect current AASHTO safety and service guidelines. Existing geometry contributes to decreased safety and lower travel reliability. As discussed in Section 1, *Purpose of and Need for Action*, the facility experiences a high crash rate, particularly in the downtown areas where the approaches to the bridges have undesirable horizontal and vertical curves. The facility also limits the dependability of travel during both normal travel periods as well as when emergency or maintenance activities occur on the bridges. The No-Action Alternative would not improve safety, travel reliability, or any other need that relies on an updated roadway geometry.
- With the No-Action Alternative, connections between the various multi-modal transportation services in the Quad Cities would not be improved. I-74 provides access to multiple interstate, airport, waterway, transit, and bicycle/pedestrian facilities. Improved access to these facilities will become increasingly important to ensure efficient transport of goods and services as the Quad Cities' economy grows.
- With the No-Action Alternative, the condition of the physical infrastructure would worsen, resulting in increased maintenance activities and costs. Increases in maintenance activities also have the related impact of additional impedance to the flow of traffic when maintenance is necessary on the bridges.
- The No-Action Alternative would not contribute to the economic development of the Quad Cities, a priority reported in Bi-State Regional Commission's *Comprehensive Economic Development Strategy*. This report indicated that while the Quad Cities is an attractive location for its proximity to a large population in a 300-mile radius, infrastructure improvements such as increasing the transportation capacity to accommodate new or an expanded business market and increasing bridge capacity are needed to maintain and strengthen the Quad Cities' economic conditions. Neither of these suggested improvements would be made if the facility remained as is.
- With the No-Action Alternative, capacity is not increased and air quality would be affected by the escalation of pollutant emissions from vehicles idling as a result of traffic congestion.

4.3 Impacts of the Modified Preferred Alternative

As discussed at the beginning of this section, refinements have been made to the design of the Preferred Alternative since its identification. A change occurs in the South and North Sections where a minor amount of right-of-way is now required to accommodate the proposed improvements. The remainder of this section focuses on changes in the environmental consequences resulting from such design refinements. Tables 4-2a and 4-2b, *Preferred Alternative Impact Summary Table*, compares the changes to the elements of the Preferred Alternative before and after the circulation of the DEIS.

The impacts presented in the following text are the new total impacts, not the differences in impacts from the DEIS. The impacts presented below are intended to represent the worst-case scenario. However, due to the preliminary nature of the design, the impacts are approximate. This section only discusses resources where a change occurred as a result of the design refinements. If no change occurred, then no discussion is included.

4.3.1 Land Use Planning and Related Impacts

4.3.1.1 Right-of-Way Requirements and Land Use Changes

South Section. No right-of-way impacts were identified in the DEIS. Due to refinements, the Preferred Alternative now requires 0.2 acre of additional right-of-way and 0.1 acre of temporary easement in the South Section. Construction of the Preferred Alternative would result in the conversion of 0.2 acre of residential land use to transportation use.

Central Section—Mainline/Interchange Improvements. The preferred mainline/interchange alternative in Moline (Alignment F with M1), as it was presented in the DEIS, required 11.0 acres of right-of-way (right-of-way needs were not broken down into permanent and temporary requirements). The 11.0 acres included 0.6 acre of residential land use, 3.9 acres of commercial land use, 6.2 acres of industrial land uses, and 0.3 acre of local roadway right-of-way. The refined Alignment F with M1 requires 16.2 acres of additional right-of-way and 0.2 acre of temporary easement. Construction of the Preferred Alternative require 0.3 acre of residential land use, 6.9 acres of commercial land use, 8.6 acres of industrial land uses, and 0.4 acre of local roadway right-of-way. After demolition of the existing facility in Moline occurs, 6.8 acres may be made available for conversion from transportation to other uses.

In Bettendorf (Alignment F with B1), as it was presented in the DEIS, required 10.3 acres of right-of-way (right-of-way needs were not broken into permanent and temporary requirements). This included 0.6 acre of residential land use, 8.4 acres of commercial land use, and 1.3 acre of local roadway right-of-way. The refined Alignment F with B1 requires 11.3 acres of additional right-of-way and 1.2 acres of temporary easement. Construction would result in the conversion of 1.7 acres of residential land use and 9.6 acres of commercial land use to transportation uses.

Central Section—Local Roadway Improvements. The U.S. 67 Diagonal Connector, as it was presented in the DEIS, resulted in a net increase of 2.7 acres of right-of-way (right-of-way needs were not broken into permanent and temporary requirements). This includes 0.2 acre of residential and 4.0 acres of commercial property. The refined U.S. 67 Diagonal Connector requires 4.1 acres of additional right-of-way permanently and 0.7 acre temporarily. Construction of the Preferred Alternative would require 0.2 acre of residential lands, 3.6 acres of commercial lands, and 0.3 acre of local roadway right-of-way. The Holmes Street Underpass alternative requires no additional right-of-way permanently but 0.1 acre temporarily.

North Section. No right-of-way impacts were identified in the DEIS. The refined Preferred Alternative requires 7.9 acres of additional right-of-way and 2.6 acres of temporary easement in the North Section. Construction of the Preferred Alternative would result in the conversion of 2.2 acres of residential and 5.7 acres of commercial land uses to transportation uses. After demolition of the existing facility occurs, 5.0 acres may be made available for conversion from transportation to other uses.

4.3.1.2 Transportation Impacts

Build Alternatives—Roadway. As mentioned in Section 4.1.3 of the DEIS, *Transportation Impacts*, the improved downtown interchange configurations result in property access impacts. The Preferred Alternative, as shown in Table 4-7 of the DEIS, *Property Access Impacts*, affected access

to 13 properties. Property access impacts resulting from the refined Preferred Alternative can be found in Table 4-4, *Refined Preferred Alternative Property Access Impacts*.

Build Alternatives—Bicycle/Pedestrian. At the time the DEIS was published, two options existed for providing bicycle/pedestrian accommodations across the Mississippi River: reusing the Mississippi River crossings for bicycle/pedestrian traffic, and incorporating a bicycle/pedestrian trail on a new river crossing. The refined Preferred Alternative includes bicycle/pedestrian accommodations on a new Mississippi River crossing. This would provide a new connection between two significant trails along the river; the Great River Trail/Mississippi River Trail – Illinois and the Mississippi River Trail – Bettendorf on the Iowa side. The provision of such a new connection would be consistent with the goals of the 2035 LRP, which recommends that bicycle/pedestrian crossings be accommodated with future Mississippi River bridge improvements. See Section 2, *Alternatives*, for additional information on the incorporation of bike/pedestrian accommodations into the proposed improvements.

4.3.1.3 Navigation Impacts

Coordination occurred between the Iowa and Illinois DOTs and the Coast Guard to determine how navigation can be least impacted with the construction of the new bridges (see Appendix C, *Correspondence*). A navigation simulation was conducted to identify acceptable pier placement and horizontal clearance for the proposed bridge as well as preferred bridge pier orientation. The results of the exercise were that if a horizontal clearance of 675 feet is provided, the bridge orientation should present a flat channelward face and if the current horizontal clearance is provided (710 feet), the pier orientation is not a concern. It was agreed that a horizontal clearance of 710 feet would be provided with the new bridge. This would maximize the bridge's performance and eliminate the need for accessory structures since the clearance would match the existing clearance.

4.3.1.4 Aviation Impacts

Coordination with the Federal Aviation Administration (FAA) occurred to ensure that the proposed structure would not cause any obstruction to air navigation. The FAA, in its July 5, 2007, "Determination of No Hazard to Air Navigation" (see Appendix C, *Correspondence*), concluded that the proposed structure would not exceed obstruction standards or present a hazard to air travel if the structure was marked or lighted according to FAA standards.

4.3.1.5 Public Facilities and Services

Central Section—Mainline/Interchange Improvements. The Preferred Alternative in Moline (Alignment F with M1), as it was presented in the DEIS, required right-of-way from the First Congregational Church and the Scottish Rite Cathedral. The Scottish Rite Cathedral, although noted as such in the DEIS, should not be represented as a public facility as it is owned by a private organization, is not open for public use and is not a church despite its "cathedral" name. The refined preferred mainline/interchange alternative in Moline (Alignment F with M1) does not affect the First Congregational Church. Alignment F with B1, as presented in the DEIS, required right-of-way from Our Lady of Lourdes Catholic School. The refined preferred mainline/interchange alternative in Bettendorf (Alignment F with B1) requires right-of-way from the Our Lady of Lourdes Catholic School and Kingdom Hall of Jehovah's Witnesses properties.

TABLE 4-4
Refined Preferred Alternative Property Access Impacts

Alternative	"Name"	Property	Access Impacts
Mainline/Interchange Alternatives			
Alignment F with M1	Green Valley Cabinet Company	190 22nd Street	Access from 21st Street is eliminated
	Single-family Residence	520 21st Street	Access to 6th Avenue is eliminated
	Single-family Residence	530 21st Street	Access to 6th Avenue is eliminated
	Wilson House Stationers	604 21st Street	Access to 6th Avenue is eliminated
Alignment F with B1	Avenue Rental	1326 State Street	Improved access by new driveway to State Street
	Crescent Cleaners	1303 Grant Street	Access will be restricted as a result of driveway closure on Grant Street
Downtown Bettendorf Local Rd			
B1 with Diagonal Connector	Village Inn	1210 State Street	Improved access as a result of conversion of State Street to two-way traffic
	Dollar General	1224 State Street	Improved access as a result of conversion of State Street to two-way traffic
	Quest Communications	1437 Grant Street	Access restricted due to conversion of 15th Street at Grant Street to right in-right out
	Tyco Simplex Grinnell	326 11th Street	Access relocated to proposed U.S. 67 Eastbound and changed to right in-right out

Central Section—Local Roadway Improvements. The U.S. 67 diagonal connector displaced the Apostolic Assembly of Bettendorf in the DEIS. The refined U.S. 67 diagonal connector continues to displace the Apostolic Assembly of Bettendorf and requires right-of-way from the Bettendorf City Hall property. The refined preferred local underpass alternative (Holmes Street) no longer affects McManus Park, as it did in the DEIS.

North Section. The Preferred Alternative, as presented in the DEIS, did not affect any public facilities and services in the North Section. The refined Preferred Alternative in the North Section requires right-of-way from the Bettendorf Presbyterian Church and Mississippi Medical Plaza properties.

4.3.1.6 Consistency of the Proposed Action with Land Use Plans

The Preferred Alternative, as presented in the DEIS, was consistent with land use plans that assessed improving the I-74 corridor through the Quad Cities. Documents considered while developing the Preferred Alternative can be found in Table 4-9 of the DEIS, *Summary of*

Documents Reviewed for I-74 Improvements. The Bi-State Regional Commission adopted the 2035 Quad Cities Area Long-Range Transportation Plan on March 22, 2006. This updated plan describes the Preferred Alternative as an important component in the future Quad Cities transportation system. The document highlights the importance of the improvements along I-74 across the Mississippi River in increasing capacity on the Quad Cities area transportation system. Implementing the refined Preferred Alternative would be consistent with this plan.

4.3.1.7 Indirect and Cumulative Impacts

Construction of any of the alternatives has the potential to create excess parcels once construction has been completed and traffic has been relocated to the new facility. These excess parcels may provide additional area for redevelopment, including the relocation of public facilities such as the Apostolic Assembly of Bettendorf. Excess parcels are identified on Appendix A, *Preferred Alternative Exhibit*.

4.3.2 Socioeconomic Impacts

4.3.2.1 Environmental Justice

The 2000 Census data along with site visits were used to determine if the project has the potential to exert disproportionately high adverse impacts upon minority or low-income populations. A review of census data reveals that 87.4 percent of the population is white, whereas 10.4 percent is African American or of Hispanic origin and 2.2 percent is from other racial group categories (American Indian and Alaskan Native, Asian, Native Hawaiian, Other Pacific Islander, or Other). The Department of Health and Human Services (HHS) poverty guideline is available to compare with the 2000 census median family income data. A review of the HHS 2007 poverty guideline for an average family of four is \$20,650. In 1999, median household income for Census blocks along the project corridor ranged from \$22,176 to \$81,339. The Preferred Alternative does not have the potential to exert high or disproportionate adverse impacts upon minority or low-income populations.

4.3.2.2 Residential Relocation Impacts

Central Section—Mainline/Interchange Improvements. Alignment F with M1, as presented in the DEIS, affected four single-family residential structures and one multi-family residential structure with four units resulting in the displacement of twenty residents. The refined Alignment F with M1 impacts five single-family residences and one multi-family building that has four units. Twenty-two residents will be displaced as a result. Alignment F with B1, as it was presented in the DEIS, impacted four single-family residents and no multi-family buildings resulting in the displacement of ten residents. The refined Alignment F with B1 impacts five single-family residences and no multi-family buildings. Twelve residents are displaced as a result.

Central Section—Local Roadway Improvements. The preferred U.S. 67 local roadway improvement alternative (Diagonal Connector), as presented in the DEIS, impacted five single-family residential structures and two multi-family structures (two and eight units each) resulting in the displacement of 37 residents. The refined U.S. 67 Diagonal Connector impacts seven single-family residences and two multi-family buildings (two and eight units each). Forty-two residents are displaced as a result.

North Section. The Preferred Alternative in the North Section, as presented in the DEIS, did not displace any residents. The refined Preferred Alternative impacts one single-family residence.

4.3.2.3 Business Relocation Impacts

Central Section—Mainline/Interchange Improvements. The preferred mainline/interchange alternative in Moline (Alignment F with M1), as presented in the DEIS, affected three businesses and their estimated 65 employees. The refined Alignment F with M1 impacts five businesses and their estimated 100 employees total. The preferred mainline/interchange alternative in Bettendorf (Alignment F with B1), as presented in the DEIS, affected 11 businesses and their estimated 68 employees. The refined Alignment F with B1 affects 14 businesses and their estimated 118 employees total.

Central Section—Local Roadway Improvements. The Diagonal Connector, as presented in the DEIS, affected 19 businesses and their estimated 120 employees. The refined Diagonal Connector impacts 11 commercial buildings, three of which are multi-tenant for a total of 20 businesses and their estimated 130 employees.

4.3.2.4 Property Taxes

A short-term tax revenue loss in the region would result from the conversion of taxable land into a nontaxable transportation use under the Preferred Alternative (Table 4-5). To evaluate the tax losses, information was obtained from the County Tax Assessors’ and Treasurers’ offices for Scott and Rock Island Counties. Tax values for properties to be acquired for right-of-way were gathered as were total annual property taxes for each county. After reviewing tax information from 2001 to analyze the Preferred Alternative’s impact to the tax base for the DEIS, it was determined that the Preferred Alternative would remove \$330,000 or 0.22 percent from the Rock Island County tax base and \$148,200 or 0.08 percent from the Scott County tax base.

TABLE 4-5
Estimated Tax Loss Summary

	Total Tax Loss	Total County Taxes Collected	Percent of County Taxes (%)
South Section	\$800	\$177,000,000	0.0004%
Central Section Alignment F/M1	\$102,700	\$177,000,000	0.06%
TOTAL—Rock Island County	\$103,500	\$177,000,000	0.06%
Central Section Alignment F/B2	\$161,800	\$208,000,000	0.08%
U.S. 67 diagonal connector	\$102,700	\$208,000,000	0.05%
Kimberly Road/Holmes Street improvements	\$0	\$208,000,000	0.0%
North Section	\$38,000	\$208,000,000	0.02%
TOTAL—Scott County	\$302,500	\$208,000,000	0.15%

For the FEIS, county tax information from 2005 was collected. Rock Island County collected annual property taxes of \$177 million. Scott County’s taxes collected totaled \$208 million. The Preferred Alternative will result in \$103,500 in tax loss for Rock Island County or 0.06 percent of total county taxes. Scott County will experience a \$302,500 tax loss (0.15 percent of total county taxes) as a result of the refined Preferred Alternative.

South Section. The refined Preferred Alternative in the South Section requires additional right-of-way from approximately 10 parcels, and results in an estimated \$800 in tax losses. This represents 0.0004 percent of total property taxes collected by Rock Island County.

Central Section—Mainline/Interchange Improvements. The refined preferred mainline/interchange alternative in Moline (Alignment F with M1) requires right-of-way from approximately 40 parcels, and results in an estimated \$102,700 in tax losses, or 0.06 percent, of Rock Island County’s total annual property tax. The refined preferred mainline/interchange alternative in Bettendorf (Alignment F with B1) requires property from approximately 40 parcels, resulting in an estimated \$161,800 in tax losses or 0.08 percent of Scott County’s total annual property tax.

Central Section—Local Roadway Improvements. The refined preferred U.S. 67 local roadway improvement alternative (diagonal connector) requires property from approximately 50 parcels, and results in an estimated \$102,700 in tax losses or 0.05 percent of Scott County’s total annual property tax.

North Section. The refined Preferred Alternative in the North Section impacts approximately 40 parcels, and results in an estimated \$38,000 in tax losses or 0.02 percent of Scott County’s total annual property tax.

4.3.2.5 Indirect and Cumulative Impacts

While a direct loss in property tax revenue would be a result of the proposed improvements, in the long run, the modifications of the corridor would result in improved mobility throughout the region, and enhanced links to other interstates as well as various alternative modes of travel. As discussed earlier in this document, transportation is one key factor that attracts businesses to a location. This improvement coupled with other efforts planned in the area could result in redevelopment in the area. Such development would ultimately result in an increase in property taxes, more than off-setting the losses associated with the initial construction. As discussed in Section 4.3.1, *Land Use Planning and Related Impacts*, some property currently in transportation land uses may become available for conversion to other uses, including potential commercial use.

4.3.3 Air Quality

4.3.3.1 Conformity

No part of this project is within a designated nonattainment area or maintenance area for any of the air pollutants for which USEPA has established standards. Accordingly, a conformity determination under 40 CFR Part 93 (“Criteria and Procedures for Determining Conformity to State or Federal Implementation Plans of Transportation Plans, Programs, and Projects Funded or Approved under Title 23 USC or the Federal Transit Act”) is not required.

It should be noted, however, that in December 2006, USEPA lowered its 24-hour ambient air quality health standard for fine particulate matter with a diameter of 2.5 microns or smaller, known as PM 2.5, from 65 to 35 micrometers per cubic meter of air. Possible contributors of PM 2.5 include industrial combustion as well as vehicle exhaust.

The Iowa DNR monitors air quality within Scott County. Data from 2007 indicates that one monitor in Davenport averaged PM 2.5 readings of 37 micrometers per cubic meter of air

during ambient conditions. With the new, lower threshold for PM 2.5, there now exist areas within Scott County that do not meet the ambient air quality health standard for PM 2.5. USEPA subsequently directed the Iowa DNR to provide recommendations for the boundaries of the area in nonattainment of air quality standards.

To date, the Iowa DNR has held public meetings in Scott County to seek public input on the nonattainment area boundaries. Coordination is also underway with the Bi-State Regional Planning Commission and Illinois EPA. The next steps in this process involve publishing a notice in the Federal Register with the proposed nonattainment area boundaries. After the Federal Register publication, and assuming there are no substantial objections, USEPA may direct the Iowa DNR to develop a State Implementation Plan (SIP). The SIP provides the plan for reestablishing air quality attainment within the area currently in nonattainment. Generally, an air quality model is developed and used to evaluate the potential impact of major infrastructure improvements, such as projects that add capacity to the existing highway system. A SIP that would define the plan for reaching attainment in Scott County is not expected until the year 2011.

In April 2007, USEPA issued a guidance memorandum clarifying how transportation conformity will be implemented under the revised standard. Per the memo, transportation conformity for the new 24-hour PM 2.5 standard does not apply until one year after the effective date of the nonattainment designations that consider that standard.¹ Final designation of the Scott County area is not expected until after Federal Register publication in early 2009.

The Iowa and Illinois DOTs will continue to work with the Iowa DNR, Illinois EPA and USEPA as more information becomes available to ensure that the proposed project meets the requirements of the SIP once it is adopted.

4.3.3.2 Microscale Analysis

The DEIS assessed the project's localized, or site specific, air quality impacts at the 23rd Avenue interchange because that location experienced the highest ADT in the project corridor. However, more recent guidance from the Illinois DOT on performing a microscale analysis shifts away from using ADT as a criterion for selecting an intersection to analyze and places more emphasis on identifying an intersection closest to sensitive receptors. As such, the intersection of 7th Avenue and 19th Street in Moline was selected for the updated microscale analysis because it is located closest to sensitive receptors. The air quality effects of the proposed project were analyzed using the Illinois Carbon Monoxide Screen for Intersection Modeling (COSIM). The "worst case" analysis provided by the COSIM model indicated that the proposed undertaking does not have the potential for contributing to a violation of the National Ambient Air Quality Standard (NAAQS) for carbon monoxide. Carbon monoxide concentrations for the worst-case receptor were as follows:

¹ Memorandum: Transportation Conformity and the Revised 24-hour PM 2.5 Standard. Merrylin Zaw-Mon, Director, Transportation Conformity and Regional Programs Division, Office of Transportation and Air Quality, US Environmental Protection Agency. April 16, 2007.

Preferred Alternative

- Existing (2007): 4.1 ppm
- Build – Time of Completion (TOC) (2022): 4.0 ppm
- TOC + 10 years (2032): 4.3 ppm
- Design Year (2035): 4.3 ppm

No-Action Alternative

The No-Action Alternative was also evaluated, with the following results:

- Existing (2007): 4.1 ppm
- Build – TOC (2022): 4.0 ppm
- TOC + 10 years (2032): 4.3 ppm
- Design Year (2035): 4.4 ppm

The results from this roadway improvement indicate that the concentrations are below the 8-hour NAAQS of 9.0 ppm, which is necessary to protect public health and welfare.

4.3.3.3 Mobile Source Air Toxics

In addition to the criteria air pollutants for which there are NAAQS, USEPA regulates air toxics. Most air toxics originate from human sources, including on-road mobile sources, non-road mobile sources (such as airplanes), area sources (such as dry cleaners), and stationary sources (such as factories or refineries).

Mobile Source Air Toxics (MSATs) are a subset of the 188 air toxics defined by the Clean Air Act. The MSATs are compounds emitted from highway vehicles and non-road equipment. Some toxic compounds are present in fuel and are emitted to the air when fuel evaporates or passes uncombusted through the engine. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion products. Metal air toxics also result from engine wear or from impurities in oil or gasoline.

USEPA is the lead federal agency for administering the Clean Air Act and has certain responsibilities regarding the health effects of MSATs. USEPA issued a Final Rule on Controlling Emissions of Hazardous Air Pollutants from Mobile Sources (*66 Federal Register* [March 29, 2001]: 17229). The rule was issued under the authority in Section 202 of the Clean Air Act. In its rule, USEPA examined the impacts of existing and newly promulgated mobile source control programs, including its reformulated gasoline program, its national low emission vehicle (NLEV) standards, its Tier 2 motor vehicle emissions standards and gasoline sulfur control requirements, and its proposed heavy duty engine and vehicle standards on-highway diesel fuel sulfur control requirements. FHWA projects that even with a 64 percent increase in VMT between 2000 and 2020, these programs will reduce on-highway emissions of benzene, formaldehyde, 1,3-butadiene, and acetaldehyde by 57 to 65 percent, and will reduce on-highway diesel particulate matter emissions by 87 percent.

As a result, USEPA concluded that no further motor vehicle emissions standards or fuel standards are necessary to further control MSATs. The agency is preparing another rule under authority of Section 202(l) of the Clean Air Act that will address these issues and could make adjustments to the full 21 and the primary six MSATs.

This Final EIS includes a basic analysis of the likely MSAT emission impacts of the project. However, the technical tools that are available do not enable us to predict the project-specific health impacts of emission changes associated with the alternatives carried forward in the Final EIS. Thus, the following discussion is included in accordance with CEQ regulations (40 CFR 1502.22(b)) regarding incomplete or unavailable information:

Evaluating the environmental and health impacts of MSATs on a proposed highway project would involve several key elements, including emissions modeling, dispersion modeling to estimate ambient concentrations resulting from the estimated emissions, exposure modeling to estimate human exposure to the estimated concentrations, and final determination of health impacts based on the estimated exposure. Each of these steps is encumbered by technical shortcomings or uncertain science that prevents a more thorough determination of the MSAT health impacts of the project.

1. Emissions. USEPA's tools for estimating MSAT emissions from motor vehicles are not sensitive to key variables determining emissions of MSATs in the context of highway projects. MOBILE 6.2 is used to predict emissions at a regional level but has limited applicability at the project level. MOBILE 6.2 is a trip-based model: emission factors are projected based on a typical trip of 7.5 miles and on average speeds for the typical trip. This means that MOBILE 6.2 cannot predict emission factors for a specific vehicle operating condition at a specific location at a specific time. Because of this limitation, MOBILE 6.2 can only approximate the operating speeds and levels of congestion likely to be present on the largest-scale projects and cannot adequately capture emissions effects of smaller projects. For particulate matter, the model results are not sensitive to average trip speed, although the other MSAT emission rates do change with changes in trip speed. Also, the emissions rates used in MOBILE 6.2 for both particulate matter and MSATs are based on a limited number of tests of mostly older-technology vehicles. Lastly, in its discussions of particulate matter under the conformity rule, USEPA has identified problems with MOBILE 6.2 as an obstacle to quantitative analysis.

These deficiencies compromise the capability of MOBILE 6.2 to estimate MSAT emissions. MOBILE 6.2 is an adequate tool for projecting emissions trends, and performing relative analyses among alternatives for very large projects, but it is not sensitive enough to capture the effects of travel changes tied to smaller projects or to predict emissions near specific roadside locations.

2. Dispersion. The tools for predicting how MSATs disperse are also limited. USEPA's current regulatory models, CALINE3 and CAL3QHC, were developed and validated more than a decade ago for the purpose of predicting episodic concentrations of carbon monoxide to determine compliance with the NAAQS. The performance of dispersion models is more accurate for predicting maximum concentrations that can occur at some time at some location within a geographic area. This limitation makes it difficult to predict accurate exposure patterns at specific times at specific highway project locations across an urban area to assess potential health risk. The National Cooperative Highway Research Program is conducting research on best practices in applying models and other technical methods in the analysis of MSATs. The work will focus on identifying appropriate methods of documenting and communicating MSAT impacts in the NEPA process and to the general public. Along with these general limitations of dispersion models, FHWA is also faced with

a lack of monitoring data in most areas for use in establishing project-specific MSAT background concentrations.

3. Exposure Levels and Health Effects. Finally, even if emission levels and concentrations of MSATs could be predicted accurately, shortcomings in current techniques for exposure assessment and risk analysis preclude us from reaching meaningful conclusions about project-specific health impacts. Exposure assessments are difficult because it is difficult to accurately calculate annual concentrations of MSATs near roadways, and to determine the period that people are actually exposed to those concentrations at a specific location. These difficulties are magnified for 70-year cancer assessments, particularly because insupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over a 70-year period. Considerable uncertainty is associated with the existing estimates of toxicity of the various MSATs because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population. Because of these shortcomings, any calculated difference in health impacts among alternatives is likely to be much smaller than the uncertainties associated with calculating the impacts. Consequently, the results of such assessments would not be useful to decisionmakers, who would need to weigh such information against other project impacts that are better suited for quantitative analysis.

Research into the health impacts of MSATs is ongoing. For different emission types, there are a variety of studies that show either that some are statistically associated with adverse health outcomes through epidemiological studies (frequently based on emissions levels found in occupational settings) or that animals demonstrate adverse health outcomes when exposed to large doses.

Exposure to toxics has been a focus of several USEPA efforts. Most notably, the agency conducted the National Air Toxics Assessment (NATA) in 1996 to evaluate modeled estimates of human exposure applicable to the county level. While not intended for use as a measure of or benchmark for local exposure, the modeled estimates in the NATA database best illustrate the levels of various toxics when aggregated to a national or State level.

USEPA is in the process of assessing the risks of various kinds of exposures to these pollutants. Its Integrated Risk Information System (IRIS) is a database of human health effects that may result from exposure to various substances found in the environment. The IRIS database is located at <http://www.epa.gov/iris>. The following toxicity information for the six prioritized MSATs was taken from the IRIS database Weight of Evidence Characterization summaries. This information is taken verbatim from USEPA's IRIS database and represents the agency's most current evaluations of the potential hazards and toxicology of these chemicals or mixtures.

- Benzene is characterized as a known human carcinogen.
- The potential carcinogenicity of acrolein cannot be determined because existing data are inadequate for an assessment of human carcinogenic potential for the oral and inhalation routes of exposure.
- Formaldehyde is a probable human carcinogen, as indicated by limited evidence in humans and sufficient evidence in animals. 1,3-butadiene is characterized as carcinogenic to humans by inhalation.

- Acetaldehyde is a probable human carcinogen based on increased incidence of nasal tumors in male and female rats and laryngeal tumors in male and female hamsters after inhalation exposure.
- Diesel exhaust is likely to be carcinogenic to humans by inhalation from environmental exposures. Diesel exhaust, as reviewed in this document, is the combination of diesel particulate matter and diesel exhaust organic gases.
- Diesel exhaust also represents chronic respiratory effects, possibly the primary noncancer hazard from MSATs. Prolonged exposures may impair pulmonary function and could produce symptoms, such as cough, phlegm, and chronic bronchitis. Exposure relationships have not been developed from these studies.

Other studies have addressed MSAT health impacts in proximity to roadways. The Health Effects Institute, a nonprofit organization funded by USEPA, FHWA, and industry, has undertaken a major series of studies to research near-roadway MSAT hotspots, the health implications of the entire mix of mobile source pollutants, and other topics. The final summary of the series is not expected for several years.

Some recent studies have reported that proximity to roadways is related to adverse health outcomes – particularly respiratory problems.² Much of this research is not specific to MSATs, but rather surveys the full spectrum of both criteria and other pollutants. The FHWA cannot evaluate the validity of these studies, but more importantly, it does not provide information that would be useful to alleviate the uncertainties listed above and enable us to perform a more comprehensive evaluation of health impacts specific to this project.

Because of the uncertainties outlined above, the effects of air toxic emissions on human health cannot be assessed quantitatively at the project level. Available tools allow us to reasonably predict relative emissions changes between alternatives for larger projects, but the amount of MSAT emissions from each project alternative and MSAT concentrations or exposures created by each project alternatives cannot be predicted with enough accuracy to be useful in estimating health impacts. (As noted, the current emissions model cannot serve as a meaningful emissions analysis tool for smaller projects.) Therefore, the relevance of the unavailable or incomplete information is that it is not possible to determine whether any of the alternatives carried forward would have “significant adverse impacts on the human environment.”

As noted, technical shortcomings of emissions and dispersion models and uncertain science with respect to health effects prevent meaningful or reliable estimates of MSAT emissions and effects of this project. However, even though reliable methods do not exist to estimate accurately the health impacts of MSATs at the project level, it is possible to qualitatively assess the levels of future MSAT emissions under the project. Although a qualitative analysis cannot identify and measure health impacts from MSATs, it can give a basis for identifying and comparing the potential differences among MSAT emissions between the No-Build Alternative and the Preferred Alternative. The qualitative assessment presented below is derived in part from a study conducted by the FHWA entitled *A Methodology for*

² South Coast Air Quality Management District, Multiple Air Toxic Exposure Study-II (2000); Highway Health Hazards, The Sierra Club (2004) summarizing 24 studies on the relationship between health and air quality; NEPA's Uncertainty in the Federal Legal Scheme Controlling Air Pollution from Motor Vehicles, Environmental Law Institute, 35 ELR 10273 (2005) with health studies cited therein.

Evaluating Mobile Source Air Toxic Emissions Among Transportation Project Alternatives, found at www.fhwa.dot.gov/environment/airtoxic/msatcompare/msatemissions.htm.

For the Preferred Alternative, the amount of MSATs emitted would be proportional to vehicle miles traveled, or VMT. The VMT for the Preferred Alternative is slightly higher than for the No-Build Alternative, because the additional capacity increases the efficiency of the roadway. This increase in VMT would lead to higher MSAT emissions for the Preferred Alternative along the highway corridor, along with a corresponding decrease in MSAT emissions along the parallel routes. The emissions increase is offset somewhat by lower MSAT emission rates due to increased speeds; according to USEPA's MOBILE 6.2 emissions model, emissions of all of the priority MSATs except for diesel particulate matter decrease as speed increases. The extent to which these speed-related emission decreases will offset VMT-related emission increases cannot be reliably projected due to the inherent deficiencies of technical models.

With the implementation of the Preferred Alternative, emissions in the design year will likely be lower than present levels as a result of USEPA's national control programs that are projected to reduce MSAT emissions by 57 to 87 percent between 2000 and 2020. Local conditions may differ from these national projects in terms of fleet mix and turnover, projected VMT growth rates, and local control measures. However, the magnitude of the USEPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the project area are likely to be lower in the future in nearly all cases.

The additional travel lanes contemplated as part of the Preferred Alternative will have the effect of moving some traffic closer to nearby homes, schools and businesses; therefore, there may be localized areas where ambient concentrations of MSATs could be higher with the Preferred Alternative than the No-Build Alternative. The localized increases in MSAT concentrations would likely be most pronounced along the expanded roadway sections in areas where the Preferred Alternative follows the existing alignment. However, as discussed above, the magnitude and the duration of these potential increases compared to the No-Build alternative cannot be accurately quantified because of the inherent deficiencies of current models.

In summary, when a highway is widened and, as a result, becomes closer to receptors, the localized levels of MSAT emissions for the Preferred Alternative could be higher relative to the No-Build Alternative, but this could be offset by increased speeds and reductions in congestion (which are associated with lower MSAT emissions.) Also, MSATs will be lower in other locations when the roadway shifts away from them. However, USEPA's vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause regionwide MSAT levels to be significantly lower than those of today.

In this document, FHWA has provided a qualitative analysis of MSAT emissions relative to the various alternatives carried forward and has acknowledged that the Preferred Alternative may result in increased exposure to MSAT emissions in certain locations, although the concentrations and durations of exposure are uncertain. Because of this uncertainty, the health effects from these emissions cannot be estimated.

4.3.4 Noise Impacts

The project noise impacts were reassessed to evaluate worst case hourly traffic noise levels for the updated design year 2035 and noise abatement options were analyzed at locations where updated impacts occur. See [Figure 4-1, Studied Noise Barriers and Receiver Locations](#) for receiver locations.

4.3.4.1 Traffic Generated Noise Levels

Traffic noise levels were evaluated using the FHWA Traffic Noise Model version 2.5 computer program. The analysis includes the refined Preferred Alternative along with forecast peak hour traffic for 2035, whereas the initial analysis included the build alternatives as configured in the DEIS and forecasted traffic for 2025.

Existing and future peak hour traffic noise levels for the noise receivers can be found in Table 4-6, *Updated I-74 Predicted Existing and Future Noise Levels – Peak-Hour Traffic Volume*. Predicted noise levels that approach or exceed the noise abatement criteria (NAC) levels (67 dBA) for the No-Action or Preferred Alternatives are noted in **bold, underlined** text.

TABLE 4-6a

South Section: Updated I-74 Predicted Existing and Future Noise Levels—Peak-Hour Traffic Volume

Receiver	Existing (dBA)	Future No-Build 2035 (dBA)	Future Build 2035 (dBA)	Build Increase above Existing (dBA)
Avenue of the Cities (23rd Avenue) Interchange				
R13	74	<u>75</u>	<u>75</u>	+1
R14	74	<u>75</u>	<u>74</u>	0
R15	67	<u>68</u>	<u>69</u>	+2
R16	64	<u>67</u>	<u>67</u>	+3
SF33	67	<u>68</u>	65	-2
MF3	63	64	<u>67</u>	+4
SF34	59	60	62	+3
SF35	61	61	62	+1
SF36	70	<u>71</u>	<u>67</u>	-3
SF37	67	<u>68</u>	65	-2
SF38	63	64	63	0
SF39	65	<u>66</u>	64	-1
SF40	59	60	61	+2
SF41	61	62	<u>67</u>	+6
CH3	64	65	61	-3
SF42	67	<u>68</u>	64	-3
SF43	64	<u>66</u>	62	-2
SF44	67	<u>70</u>	<u>67</u>	0
SF 78	60	63	64	+4

bold, underlined = Predicted noise levels that approach or exceed the NAC levels (67 dBA) for the No-Action or Preferred Alternatives

TABLE 4-6b

Central Section: I-74 Predicted Existing and Future Noise Levels—Peak-Hour Traffic Volume

Receiver	Existing (dBA)	Future No-Build 2035 (dBA)	Future Build 2035 (dBA)	Build Increase above Existing (dBA)
River Drive Interchange				
R12	73	<u>76</u>	<u>75</u>	+2
R17	70	<u>70</u>	<u>70</u>	0
R20	62	63	63	+1
R21	63	65	<u>69</u>	+6
MF2	66	<u>68</u>	<u>67</u>	+1
SF23	61	62	60	-1
SF24	62	63	63	+1
H8	66	<u>68</u>	65	-1
SF25	69	<u>69</u>	<u>69</u>	0
SF26	69	<u>70</u>	<u>69</u>	0
H9	67	<u>68</u>	65	-2
SF27	73	<u>73</u>	<u>72</u>	-1
SF28	65	65	64	-1
SF29	69	<u>69</u>	<u>67</u>	-2
SF30	67	<u>68</u>	65	-2
SF31	67	<u>67</u>	65	-2
SF32	67	<u>69</u>	65	-2
SF50	65	<u>68</u>	65	0
SF51	70	<u>73</u>	<u>70</u>	0
SF52	68	<u>72</u>	<u>68</u>	0
SF 73	68	<u>68</u>	<u>68</u>	0
SF 74	67	<u>68</u>	<u>66</u>	-1
SF 75	60	61	62	+2
SF 76	62	64	62	0
SF 77	60	61	62	+2
U.S. 67/ State Street Interchange				
R10	70	<u>73</u>	<u>74</u>	+4
R18	60	62	64	+4
R19	61	62	<u>66</u>	+5
SF12	62	63	65	+3
SF13	72	<u>73</u>	<u>73</u>	+1
SF14	63	64	<u>66</u>	+3
SF15	70	<u>72</u>	<u>72</u>	+2
SF16	68	<u>69</u>	<u>69</u>	+1
SF17	62	63	64	+2
SF18	61	62	64	+3
SF19	60	61	63	+3
SF20	64	<u>66</u>	<u>68</u>	+4
SF21	60	62	64	+4
H7	63	64	<u>71</u>	+8

TABLE 4-6b

Central Section: I-74 Predicted Existing and Future Noise Levels—Peak-Hour Traffic Volume

Receiver	Existing (dBA)	Future No-Build 2035 (dBA)	Future Build 2035 (dBA)	Build Increase above Existing (dBA)
CH2	60	61	<u>69</u>	+9
SF22	60	62	<u>69</u>	+9
SF45	65	<u>67</u>	<u>70</u>	+5
SF46	63	64	<u>66</u>	+3
SF47	61	63	64	+3
SF48	59	60	65	+6
SF49	61	62	65	+4
P1	63	64	64	+1
SF 68	63	65	63	0
SF 69	67	<u>69</u>	64	-3
SF 70	58	60	61	+3
SF 71	61	62	63	+2
SF 72	67	<u>68</u>	<u>67</u>	0

bold, underlined = Predicted noise levels that approach or exceed the NAC levels (67 dBA) for the No-Action or Preferred Alternatives

TABLE 4-6c

North Section: I-74 Predicted Existing and Future Noise Levels—Peak-Hour Traffic Volume

Receiver	Existing (dBA)	Future No-Build 2035 (dBA)	Future Build 2035 (dBA)	Build Increase above Existing (dBA)
Middle Road Interchange				
R6	59	61	61	+2
R7	66	<u>68</u>	<u>68</u>	+2
R8	69	<u>69</u>	<u>68</u>	-1
R9	74	<u>75</u>	<u>75</u>	+1
R11	72	<u>73</u>	<u>73</u>	+1
SF9	63	64	63	0
SF10	68	<u>69</u>	<u>67</u>	-1
SF11	62	63	64	+2
H6	69	<u>69</u>	<u>70</u>	+1
CH1	68	<u>70</u>	<u>71</u>	+3
SF 59	63	64	64	+1
SF 60	65	<u>66</u>	<u>66</u>	+1
U.S. 6/Spruce Hills Drive Interchange				
R2	69	<u>73</u>	<u>73</u>	+4
R3	69	<u>70</u>	<u>70</u>	+1
R4	70	<u>71</u>	<u>72</u>	+2
R5	71	<u>72</u>	<u>71</u>	0
SF5	68	<u>70</u>	<u>71</u>	+3
C4	60	60	58	-2
C5	61	63	64	+3

TABLE 4-6c

North Section: I-74 Predicted Existing and Future Noise Levels—Peak-Hour Traffic Volume

Receiver	Existing (dBA)	Future No-Build 2035 (dBA)	Future Build 2035 (dBA)	Build Increase above Existing (dBA)
H1	68	<u>68</u>	<u>71</u>	+3
H2	65	<u>66</u>	<u>69</u>	+4
H3	64	<u>66</u>	<u>67</u>	+3
H4	60	61	61	+1
H5	63	63	62	-1
MF1	65	65	65	0
SF6	66	<u>67</u>	<u>68</u>	+2
SF7	63	64	<u>66</u>	+3
SF8	66	<u>67</u>	63	-3
SF66	49	50	51	+2
SF67	52	53	55	+3
53rd Street Interchange				
R1	63	63	<u>66</u>	+3
SF1	64	65	<u>69</u>	+5
SF2	56	58	61	+5
SF3	53	55	57	+4
SF4	57	58	61	+4
CH4	59	62	61	+2
SF61	60	61	63	+3
SF62	55	57	60	+5
SF63	47	49	50	+3
SF64	49	51	53	+4
SF65	45	47	49	+4
C2	56	59	57	+1
C3	60	60	64	+4

bold, underlined = Predicted noise levels that approach or exceed the NAC levels (67 dBA) for the No-Action or Preferred Alternative

South Section. The noise impact analysis for the DEIS resulted in one receiver that would have experienced noise levels that would approach NAC, 15 that would have exceeded the NAC and two that would not have been impacted in the South Section. The updated noise impact analysis concluded that out of 19 noise receivers, none would experience noise levels that would approach NAC, 8 would exceed the NAC, and 11 would not be affected by the refined Preferred Alternative.

Central Section. The noise impact analysis completed for the DEIS resulted in two noise receivers that would approach NAC, 11 that would exceed NAC, and two receivers that would not be affected by the Preferred Alternative in Moline (Alignment F with M1). Two noise receivers would approach NAC, nine receivers would exceed NAC, and six receivers would not experience impacts by the Preferred Alternative for the U.S. 67/State Street interchange. The updated noise impact analysis for the refined Preferred Alternative

indicated that in out of 25 noise receivers in downtown Moline, one would experience noise levels that would approach NAC, 11 would exceed the NAC, and 13 would not be affected by the refined Preferred Alternative. Out of 27 noise receivers in downtown Bettendorf at the U.S. 67/State Street interchange, three would experience noise levels that would approach NAC, 10 would exceed the NAC, and 14 would not be affected by the refined Preferred Alternative.

North Section. The noise impact analysis for the North Section in the DEIS resulted in one receiver that would experience noise levels approaching the NAC, 19 that would experience noise levels exceeding the NAC, and eight that would experience no impact. The analysis completed for the refined Preferred Alternative in the North Section resulted in the following: out of 43 noise receivers, three would experience noise levels that would approach NAC, 17 would exceed the NAC and 23 would not be affected by the refined Preferred Alternative.

4.3.4.2 Noise Barrier Analysis

In the DEIS, nine noise barriers were evaluated for their ability to mitigate noise impacts at receivers along the corridor. It was determined that two barriers in Iowa and one barrier in Illinois met the physical feasibility and economical reasonability criteria for implementing barriers. See Section 4.4.4 in the DEIS, *Noise Barrier Analysis*, for details.

Based on the findings of the updated noise analysis, noise levels at some noise-sensitive locations approach or exceed the applicable state and federal noise criteria. Therefore, an updated noise barrier analysis was completed to evaluate mitigation for such noise impacts. The analyzed noise barriers and the results of the analysis are described in Table 4-7, *Noise Barrier Calculations* and shown on [Figure 4-1](#), *Studied Noise Barriers and Receiver Locations*.

Where feasible and desired by the public, noise mitigation measures will be put in place. Specifically, four noise barriers (as opposed to the three recommended in the DEIS) meet the criteria and are proposed for placement to minimize expected noise increase: two in Iowa and two in Illinois. Final construction of any noise abatement will depend on public input and final design considerations.

4.3.5 Water Quality Impacts

The affected water bodies identified in the DEIS would also be affected by the refined Preferred Alternative: the Mississippi River, Duck Creek, and its three unnamed tributaries. The three Mississippi River crossing bridge types that were under consideration in the DEIS required different numbers of piers resulting in slightly different impacts to water resources. The recommended bridge type for the Preferred Alternative is a true arch bridge. This bridge type requires a higher number of piers than the other concept bridge types presented in the DEIS, but fewer than the existing structure. Fewer piers would be required with the new bridge (preliminary design indicates a total of 14 piers) in comparison to the total of 20 piers the existing bridges have in the river. The in-stream pier footprint of the proposed I-74 bridge would cause approximately 68,000 ft² of disturbance in the Mississippi River. This would result in temporary water quality impacts and increased turbidity during construction.

TABLE 4-7
Noise Barrier Calculations

Barrier Segment	State	Barrier Location	Number of Benefitted Residences	Barrier Height (ft)	Barrier Length (ft)	Barrier Area (ft ²)	Total Barrier Cost	Cost per Benefitting Residence	Reasonable to Build?
Barrier 1	Iowa	NE of the 53rd Street interchange adjacent to a residential area	23	6–16	2,568	20,508	\$615,240	\$26,749	No
Barrier 2	Iowa	SE of the U.S. 6/Spruce Hills Drive interchange adjacent to a residential community	21	14	1,806	25,282	\$758,460	\$36,117	No
Barrier 3 ^a	Iowa	SW of the Middle Road interchange adjacent to two apartment buildings	8	6	609	3,653	\$109,590	\$13,699	Yes
Barrier 4	Iowa	SE of the Middle Road interchange	6	8–16	722	10,357	\$310,710	\$51,785	No
Barrier 5 ^b	Iowa	East of I-74 and north of Lincoln Road adjacent to an apartment complex	12	12–14	500	6,803	\$204,090	\$17,007	Yes
Barrier 6	Iowa	West of I-74 and south of Lincoln Road	8	8–10	706	6,660	\$199,800	\$24,975	No
Barrier 7	Iowa	East of I-74 and south of Lincoln Road	15	16	966	15,460	\$463,800	\$30,920	No
Barrier 8	Illinois	West of I-74 and south of River Drive	23	6–14	1,335	17,283	\$518,490	\$22,543	Yes
Barrier 9	Illinois	East side of I-74 and south of River Drive	3	20	1,703	34,067	\$1,022,010	\$340,670	No
Barrier 10	Illinois	NW of the Avenue of the Cities (23rd Avenue) interchange	8	10	617	6,166	\$184,980	\$23,122	Yes
Barrier 11	Illinois	NE of the Avenue of the Cities (23rd Avenue) interchange	13	6–14	1,802	23,815	\$714,450	\$54,957	No

^aAssumes 4 main floor units benefitted in each building.

^bAssumes 12 main floor units benefitted in the complex.

4.3.5.1 Construction Impacts to Surface Water

Section 4.5.1 of the DEIS, *Construction Impacts to Surface Water*, discusses impacts to surface water resources as a result of construction of the proposed improvements. The identification of Alignment F as the Preferred Alternative will minimize the amount of sediment loading to the Sylvan Slough, a known location of the federally endangered Higgins' eye pearly mussel (*Lampsilis higginsii*), during bridge construction because it is farther upstream from the other mainline alternative and therefore the sediment has more time to disperse before being deposited on the river substrate. As mentioned in the DEIS, all of the proposed bridge types would result in similar levels of construction impacts. The true arch was selected as the recommended bridge type because although it requires more piers than the cable-stayed bridge type, it provides better construction, operation, and safety performance.

Potential bridge demolition techniques were evaluated as part of this study (see 4.3.16.3, *Navigation* for a description). In the agency's comments on the DEIS, USEPA requested that if the existing bridges are removed, demolition be conducted in a manner that releases the least amount of heavy metals into the environment. When determining the appropriate demolition technique for the I-74 bridges, consideration will be given to those alternatives that would minimize the release of heavy metals and other potentially harmful substances into the environment. For example, rather than using explosives to demolish bridge piers, one alternative is to drill holes in the pier and fill them with a nontoxic slurry that expands upon hardening, breaking apart the concrete in the piers. With this method, the bridge piers would be reduced to rubble in a matter of hours or days.

4.3.5.2 Operational and Maintenance Impacts to Surface Waters

Stormwater runoff is expected to enter receiving waters along the corridor. As noted in Section 4.5.2 of the DEIS, *Operational and Maintenance Impacts to Surface Waters*, runoff can contain solids, heavy metals, oil and grease, bacteria, herbicides, and nutrients.

An analysis was undertaken to determine how much runoff could be captured and stored to reduce the amount of contamination entering the INAI site and the Sylvan Slough. Non-structural methods to reduce the amount of contamination contained in the runoff were also investigated. Extensive coordination with Illinois DNR, USEPA, and USFWS was undertaken (see Appendix C, *Correspondence*) and resulted in the following findings:

- Only part of the runoff could be captured and directed away from the Mississippi River.
- The new bridge will be located further upstream from the Sylvan Slough mussel bed providing more distance than currently exists for dilution of the stormwater pollutants before the water reaches the mussel bed.
- The Moline Water Treatment Facility has an outlet directly into Sylvan Slough.
- The cost to construct and difficulty to maintain a system to capture stormwater from the bridge and to pipe it offsite outweigh the benefit to water quality that would result.
- After considering multiple structural options for handling stormwater effluent, it was determined that nonstructural measures such as sweeping after snow events, standard sweeping practices, and use of environmentally-friendly deicing materials as they become less expensive over time, are more cost-effective measures.

4.3.6 Wetland Impacts

Impacts to wetlands are described below. See Table 3-3, *Wetland Areas Within the I-74 Study Corridor*, for more information on the wetlands and Exhibit 3-4, *Wetlands*, for their location.

4.3.6.1 Central Section—Mainline/Interchange Improvements

Alignment F, as presented in the DEIS, affected 0.17 acre of Wetland 6. The refined Alignment F affects 0.18 acre of Wetland 6. The Floristic Quality Index of Wetland 6 is 1.7, which indicates not only low natural quality, but a highly disturbed site.

4.3.6.2 North Section

The Preferred Alternative in the North Section, as it was presented in the DEIS, affected 0.92 acre of Wetland 7. The refined Preferred Alternative in the North Section affects 0.21 acre of Wetland 9, 0.41 acre of Wetland 7, and 0.41 acre of Wetland 1. Similar to Wetland 6 in the Central Section, Wetlands 1 and 9 have FQIs (3.6 and 2, respectively) indicating not only low natural quality, but a highly disturbed site. Wetland 7 has an FQI of 10.2, which indicates that the wetland has a relatively low natural quality.

4.3.6.3 Wetland Mitigation

Where there is no practicable alternative to filling wetlands, state and federal regulations require compensatory mitigation. As such, Iowa and Illinois have identified suitable locations that will comply with the requirements for mitigating wetland impacts.

Illinois. Illinois DOT is proposing to purchase credits at the Andalusia Slough Wetland bank to mitigate for wetland impacts on the Illinois side of the corridor (see the Wetland Impact Evaluation Form in Appendix D). The Andalusia Slough Wetland Bank is offsite but within the Mississippi River Basin. As a result of the wetland being affected by a new alignment, the mitigation procedures are being processed as a Standard Action. Because the wetland (site 6) occurs within an Illinois designated natural area, a mitigation ratio of 5.5:1.0 applies.

Iowa. Iowa DOT is investigating wetland mitigation sites for wetlands impacted on the Iowa side of the project corridor. Therefore, the search for mitigation sites was focused on appropriate locations in Iowa and according to Iowa DOT policy.

Based on Iowa DOT Water Resources Mitigation Ratio Matrix (revision August 26, 2005) (Iowa DOT, 2005), applicable wetland mitigation ratios for these impacts are summarized in Table 4-8, *Summary of Expected Mitigation Ratios Pertinent to the I-74 Roadway Improvement*.

Given the preferred choice of onsite mitigation, 1.5 acres of restored wetland would compensate for the 1.03 acres of wetland impact associated with the I-74 improvements.

All wetland impacts occur within the Copperas-Duck watershed (Hydrologic Unit Code [HUC] 07080101). Therefore, the search for suitable onsite wetland mitigation is confined to HUC 07080101 and adjacent HUC-8s within the same Major Land Resource Area (MLRA); i.e., HUCs 07080103, 07080206, and 07080209. All wetland impacts are within the Illinois and Iowa Deep Loess and Drift MLRA, as are all proposed candidate mitigation sites. Other search parameters include the following:

TABLE 4-8

Summary of Expected Mitigation Ratios Pertinent to the I-74 Roadway Improvement

Wetland Type (Impact)	Location of Mitigation	Mitigation Ratio
Emergent wetland (Wetlands 1 & 7)	Onsite ^a	1.5:1
Emergent wetland (Wetlands 1 & 7)	Offsite ^b	2.0:1
Forested wetland (Wetlands 1, 7, & 9)	Onsite	1.5:1 (plus preservation of upland buffer ^c)
Forested wetland (Wetlands 1, 7, & 9)	Offsite	3.0:1 (plus preservation of upland buffer)

^aOnsite signifies mitigation within the same HUC-8 as the proposed wetland fill or any adjacent HUC-8 that is within the same Major Land Resource Area (MLRA).

^bOffsite signifies mitigation outside of the HUC-8 of the proposed wetland fill and outside of adjacent HUC-8 watersheds within the same MLRA

^cUpland buffer area, by convention, is assumed to be approximately 30 percent of the area of the proposed wetland mitigation.

- Abundance of hydric soils
- Availability of a source of restorative hydrology
- Adjacency to public lands
- Compatibility with long-term acquisition goals of the Iowa DNR and local County Conservation Boards
- Ability to emulate, post restoration, the functions and values of the impacted wetlands while meeting in-kind restoration acreage goals

The search for suitable wetland mitigation consisted of three components: Geographic Information System (GIS) screening, interviews with resource agencies (Iowa DNR, Natural Resources Conservation Service [NRCS], and County Conservation Boards), and a minor field component. Three potential wetland mitigation sites that were identified are described in Table 4-9, *Summary of Features of Potential Wetland Mitigation Sites Associated with the I-74 Improvements*.

A brownfield cleanup site in Davenport, Iowa, may provide a fourth potential wetland mitigation site. See letters from the City of Davenport and Iowa DOT in Appendix C, *Correspondence*, for further information.

The three sites described above would provide suitable wetland mitigation for wetland impacts in Iowa resulting from the proposed improvements to I-74. All sites have hydric soils mapped within them, and have sources of restorative wetland hydrology. Two of three sites are adjacent to public lands.

One of the three sites described above (Site 2) is for sale. It is unknown if landowners of any of the sites would be willing to subdivide to allow a relatively small wetland mitigation, i.e. approximately 2 acres. All potential mitigation sites would likely provide considerably more wetland mitigation than what would be required to compensate for the I-74 wetland impacts. Thus, depending on landowner willingness to negotiate, wetland mitigation would likely be feasible on each of the three sites. However, no decision has been made on where the mitigation will take place.

TABLE 4-9
Summary of Features of Potential Wetland Mitigation Sites Associated with the I-74 Improvements (Sites 1,2, and 3)

Site Feature	Potential Mitigation Site		
	Site 1	Site 2	Site 3
Location	West of Gambrill, Iowa	Northwest of Gambrill, Iowa	Southeast of McCausland, Iowa
Considered “onsite” mitigation; i.e. within appropriate HUC-8’s?	Yes	Yes	Yes
Adjacent to Public Lands?	Yes, adjacent to Allens Grove Park (Scott County Conservation Board)	No	Yes, adjacent to southeast edge of the McCausland Wildlife Management Area
Parcel Acreage	263	135	Unknown
For sale as of January 2007?	Unknown	Yes	Unknown
Percent of parcel acreage as hydric or potentially with hydric inclusions?	70	80	Nearly 100
Percent of parcel acreage likely occupied by wetland currently?	~10	~80 on 80-acre parcel, ~15 on 55-acre parcel	~10
Adjacent to surface waters or drainageways?	Yes, Mud Creek and several unnamed drainage ditches (tributaries of the Wapsi River)	Yes, 2 unnamed tributaries of the Wapsi River	Yes, several drainage ditches and unnamed tributaries of the Wapsi River
Other benefits of potential mitigation site	East of Highway Y52, frontage on the Wapsi River, perhaps consistent with state or county acquisition goals Apparent ease of re-establishing wetland hydrology on parts of this site West of Highway Y52, adjacent to Allens Grove Park	Frontage on the Wapsi River, perhaps consistent with state or county acquisition goals Apparent ease of re-establishing wetland hydrology on portions of this site	Adjacent to state Wildlife management Area, consistent with state or county acquisition goals Apparent ease of re-establishing wetland hydrology on portions of this site
Other detriments of potential mitigation site	None	None	None

4.3.7 Floodplain Impacts

The proposed improvements to I-74 would cross the 100-year floodplain associated with the Mississippi River and Duck Creek and run parallel to the 100-year floodplain of a tributary of Duck Creek. Proposed floodplain encroachments would be designed to be consistent with state and local floodplain goals and objectives. Proposed structure openings would be sized using HEC-RAS or other appropriate computer models to ensure that backwater increases are within state and local standards. Access points would be limited near floodplain crossings to ensure that the project does not promote development within the floodplain.

Following construction, the roadways sideslopes would be reseeded with fast-growing grasses to prevent sedimentation in the floodplain, Mississippi River, Duck Creek and its tributaries. In addition, construction debris will be kept out of the floodplain and river. Impacts to natural and beneficial floodplain values, beyond those associated with construction would be minimized by strict access control along the construction alignments.

4.3.7.1 South Section

There are no floodplain impacts in the south section.

4.3.7.2 Central Section—Mainline/Interchange Improvements

The proposed bridge type of the Preferred Alternative has been hydraulically modeled to determine potential floodplain impacts resulting from the construction of a new bridge over the Mississippi River.

A two-dimensional (2-D) model (FESWMS program) was used to analyze potential effects of the proposed bridge type on water levels during a 100-year flood event. Both the temporary construction condition (existing bridges and proposed bridges in place at the same time) and the ultimate build condition (proposed bridges in place and existing bridges removed) were modeled in order to determine whether either condition would increase water levels. In order to meet Federal and State requirements, the activities in the river must not increase water levels by more than 0.01 foot over existing conditions for the ultimate condition. This requirement to increase current 100-year flood water levels by no more than 0.01 foot is known as zero rise.

Based on the analysis completed, the zero rise condition can be met for the ultimate build condition for the 100-year flood. During the temporary construction condition, the analysis indicated a 0.05-foot rise for the 100-year flood. FHWA coordinated with FEMA regarding the calculated rise for the temporary construction condition and FEMA agreed that the 0.05-foot rise was acceptable for the temporary condition.

The information regarding the 2-D analysis was provided to the Iowa and Illinois DNRs for their review. Both DNRs concurred with the 2-D modeling technique and the results of the analysis. A meeting was also held with the Corps to review the analysis and results.

4.3.7.3 North Section

The DEIS noted that a transverse crossing of the floodplain currently exists at Duck Creek and that the replacement structures will maintain the existing opening size. The recommended improvements include the reconstruction and widening of the bridge to accommodate the expansion of the mainline from 2 lanes in each direction to 3 lanes plus an auxiliary lane in each direction. No piers are currently located within the waterway itself and the locations of the new piers would be farther from the waterway than they are currently. Although some fill will be placed within the floodplain, the improvements are not expected to negatively impact existing floodplain heights.

A tributary to Duck Creek runs roughly parallel to the west side of I-74 through the 53rd Street interchange. Some encroachment is expected in the floodplain for this Duck Creek tributary. This impact may result in minimal increases in flood heights and flood limits, but would not result in significant adverse impacts on the natural and beneficial floodplain

values; it would not result in any significant change in flood risks or damage; and would not result in the potential for interruption of emergency service or emergency evacuation routes; therefore, it has been determined that this encroachment is not significant.

4.3.8 Designated Natural Areas

4.3.8.1 Indirect and Cumulative Impacts

As discussed in Section 4.10.1 of the DEIS, *Mississippi River – Moline Natural Area*, the Mississippi River – Moline Natural Area, home to listed mussel species, is crossed by existing and proposed Mississippi River bridges on the Illinois side. USEPA and Illinois DNR, in their comments on the DEIS, expressed concern regarding the potential impacts a new river crossing would have on the Natural Area and the listed mussel species inhabiting it. An analysis was undertaken to determine to what extent stormwater effluent into the Mississippi River should be limited in order to minimize impact to surface waters, especially the Natural Area. Extensive coordination with Illinois DNR, USEPA, and USFWS (Appendix C, *Correspondence*) resulted in the following findings:

- The new bridge will be located farther upstream, providing more distance than currently exists for dilution of the stormwater pollutants.
- The Moline Water Treatment Facility has an outlet directly into Sylvan Slough.
- The cost to construct and difficulty to maintain a system to capture the stormwater from the bridge and pipe it offsite outweigh the benefit to water quality that would result.
- After considering multiple structural options for handling stormwater effluent, it was determined that nonstructural measures, such as sweeping after snow events, standard sweeping practices, and use of environmentally-friendly deicing materials as they become less expensive over time, are more cost-effective measures.

4.3.9 Threatened and Endangered Species

No state- or federal-listed plant species would be affected by the project.

One federally endangered mussel species – the Higgins’ eye pearly mussel (*Lampsilis higginsii*) – and four state-listed mussel species – the spectacle case (*Cumberlandia monodonta*), the sheepnose (*Plethobasus cyphus*), the butterfly mussel (*Ellipsaria lineolata*), and black sandshell (*Ligumia recta*) – are known to inhabit mussel beds near the I-74 bridge.

The bald eagle (*Haliaeetus leucocephalus*), which has been removed from the federal endangered and threatened species list, is now protected under the Eagle Act (see Section 3.10.1.1, *Federal Protected Species* for more information on the Act). Bald eagles perch on trees in the Mississippi River within the I-74 project corridor. While a few trees would likely be removed on islands under the existing bridge in the course of bridge replacement, there is abundant similar habitat on unaffected parts of the islands and along the banks of the Mississippi River. Therefore, any impacts to bald eagle wintering habitat would be negligible. In its response to the Detailed Action Report, the Illinois DNR recommended that bald eagle nest locations be reviewed and refined before beginning road and bridge construction.

4.3.9.1 Mitigation for Threatened and Endangered Species

In the agency's comment on the DEIS, USEPA requested that more detailed information on mussel impacts and mitigation strategies (e.g., number of individual mussel species impacted, specific mussel relocation plans) be included in the FEIS. However, USFWS together with the Iowa and Illinois DNRs, have agreed that surveying required to gather this information before publication of the FEIS is unnecessary but would occur closer to the time the proposed Mississippi River bridges are constructed. Therefore, the additional information USEPA requested has not been developed for inclusion in the FEIS. USFWS expressed concern about potential water quality impacts the proposed project would have on the mussels. Coordination with the agency was undertaken to identify the best methods to limit such impacts. USFWS identified the following measures for minimizing water quality impacts that may adversely affect the mussel population: sweeping after snow events, standard sweeping practices, and use of environmentally-friendly deicing materials as they become less expensive over time (Appendix C, *Correspondence*). Coordination with USFWS will occur during the mussel surveying to ensure that the requirements of Section 7 of the Endangered Species Act are met.

Impact avoidance, minimization, and mitigation strategies for the mussel species were identified in the Detailed Action Report prepared during the development of the DEIS (see Appendix D of the DEIS, *Detailed Action Report*). The Illinois DNR, in its response of March 21, 2003, to the Detailed Action Report, (see Appendix C of the DEIS, *Correspondence*), recommended that the Illinois DOT seek an Incidental Take Authorization (ITA) before proceeding with the I-74 improvements. As such, a Conservation Plan has been prepared to address a number of aspects: the impact of the proposed taking; measures to minimize and mitigate the impact; funding that will be available to undertake environmental mitigation; alternative actions that would avoid potential takes; data and information that show the proposed taking will not reduce the likelihood of the survival of the species; and an agreement between the Illinois DNR and Illinois DOT to carry out the elements of the plan.

Mussels would need to be removed from within about 10 feet of each existing and proposed pier and relocated according to an approved mussel relocation plan. Mussel relocation has been used as a successful mitigation strategy on several similar bridge replacement projects and would serve as the mitigation strategy for potential impacts to listed mussel species in this project area. Mussels will be relocated to an area with suitable stable substrates, similar unionid assemblages, and low to no zebra mussel infestations. They will be temporarily held in containers that provide moist and uncrowded conditions. During construction, the Illinois DOT state erosion and sediment control measures will be implemented to support recolonization of the area by the mussel species. Further, measures will be taken to limit infestation by zebra mussels, where feasible. Piers can be made intolerable to zebra mussels. A nonstick coating may be applied to the piers to prevent zebra mussel attachment.

Per Illinois DNR's request, continuous monitoring was included in the plan. The construction site will be assessed during the year after the new piers are constructed and the existing ones are removed to determine if the mussels have recolonized the area. At that time it will be determined if further monitoring is required. The relocation sites will be assessed as close as feasible to 3 months after the relocation and the following year to determine the survival of the relocated mussel species. As requested by USEPA, relocating

the mussel species outside the vicinity of where a future Campbells Island bridge could be placed will be considered.

The Conservation Plan is open to public review and comment. Consultation with the Illinois DNR will be closed when the Incidental Take Permit is received.

4.3.10 Section 4(f) Regulation

Pursuant to Section 4(f), a separate Final Section 4(f) Statement was prepared for this project and is circulated with this Final EIS.

4.3.11 Public Use Lands

4.3.11.1 Central Section—Mainline/Interchange Improvements

The Preferred Alternative, as presented in the DEIS, required the conversion of the Bill Glynn Memorial Park to transportation uses. The refined Preferred Alternative continues to do so. It should be noted that, as discussed in Section 3.11, *Parks, Recreational Areas, and Other Public Use Lands*, while the park is available for public use, it is not considered a 4(f) property because it is an excess parcel owned by Iowa DOT.

Future noise levels from the Preferred Alternative, as it was presented in the DEIS, were expected to exceed NAC at Our Lady of Lourdes. Future noise levels from the refined Preferred Alternative (Alignment F with B1) according to updated noise analysis (the updated noise analysis is described in Section 4.3.4, *Noise Impacts*) are expected to approach NAC. While noise levels are expected to rise by 1 to 4 dBA at other public use lands the refined Preferred Alternative is not expected to cause substantial noise impacts, which Iowa DOT defines as an increase of 10 dBA or more and the Illinois DOT defines as an increase of more than 14 dBA.

4.3.11.2 Central Section—Local Roadway Improvements

While the preferred local roadway improvement alternative (Holmes Street), as it was presented in the DEIS, required 0.06 acre of temporary easement from McManus Park, the refined Holmes Street local roadway improvement alternative does not impact the park.

4.3.12 Considerations Relating to Bicyclists and Pedestrians

Provisions for bicycle/pedestrian accommodations across the new Mississippi River bridge are included in the Preferred Alternative as a result of support from the public and the local governments. Such accommodations would be compatible with the 2035 LRP.

During construction, it may be necessary to re-route the existing trail along adjacent roadways. Closing the trail is not expected and the detour is expected to last less than a year.

4.3.13 Cultural Resources

4.3.13.1 Central Section—Mainline/Interchange Improvements

At the time the DEIS was published, it was unknown whether demolition of the Iowa-Illinois Memorial Bridge and Monument would result from the proposed improvements. The structure was offered to local agencies with the stipulation that they maintain the

structure; however, none volunteered to assume jurisdiction of it. Therefore, the proposed action includes the removal of the Iowa-Illinois Memorial Bridge and Monument.

The Preferred Alternative, as presented in the DEIS, affected the property on which the Scottish Rite Cathedral stands and also displaced the Knights of Pythias Lodge Hall; Davenport, Rock Island, and Northwestern Railroad Depot; and the Iowana Farms Milk Company. The refined preferred mainline/interchange alternative (Alignment F with M1 and B1) affects the properties on which the Scottish Rite Cathedral and C.I. Josephson House stand and also displaces the Knights of Pythias Lodge Hall; Davenport, Rock Island and Northwestern Railroad Depot; and the Iowana Farms Milk Company.

4.3.13.2 Measures to Minimize Impact

Measures to minimize impacts to cultural resources by the refined Preferred Alternative can be found in Table 4-10, *Summary of Minimization Measures for Specific Properties*.

4.3.13.3 Mitigation of Impacts to Cultural Resources

Mitigation for unavoidable impacts has been developed in consultation with the Iowa and Illinois SHPOs and documented in the MOAs between each state's DOT and SHPO (see Appendix 4(f)-6, *Memoranda of Agreement*). The Iowa-Illinois Memorial Bridge Monument will be moved to an appropriate public location, preferably to a location close to the original site, such as Leach Park, so that it can continue to commemorate the bridge. For impacted historic buildings, the proposed mitigation involves documenting and photographing the structures for historic archives. FHWA notified the Advisory Council on Historic Preservation (ACHP) of the Finding of Adverse Effect on the four historic properties. ACHP responded with a determination that the agency's participation in the process for resolving adverse effects was unnecessary and that filing the MOAs and any related documentation with the ACHP would satisfy the requirements of Section 106 of the National Historic Preservation Act (see Appendix C, *Correspondence*).

As can be seen from Table 4-10, *Summary of Minimization Measures for Specific Properties*, potential impacts to three cultural resources can be minimized. Impacts to the Scottish Rite Cathedral can be minimized through the use of retaining walls and by reducing the underpass structure depth. Impacts to the C.I. Josephson property have been minimized by selecting interchange option M1, which requires only temporary use of the front of the property during construction. Finally, the Iowa-Illinois Bridge Monument can be relocated to another nearby location, potentially identified as Leach Park.

4.3.14 Special Waste

4.3.14.1 Hazardous Waste

No CERCLIS site(s) will be involved or impacted by the proposed alternatives.

4.3.14.2 Nonhazardous Waste

On the Illinois side of the project corridor, a PESA for special waste was conducted by the Illinois State Geological Survey. It has been determined that a supplemental PESA is not required for the project. The PESA concluded that the alignment could involve sites potentially impacted with regulated substances. Further, it has been determined that not all of

TABLE 4-10
Summary of Minimization Measures for Specific Properties

Property	Minimization Measures	Carried Forward?
Scottish Rite Cathedral	Construct a retaining wall to avoid permanent use of Scottish Rite Cathedral property.	Yes
C.I. Josephson Property	Select Interchange Variation M1, which requires only temporary use of the front of the property during construction.	Yes
Knights of Pythias Lodge Hall	All alternatives would impact the building directly. Minimization of impact to the building was not possible.	Not applicable
Davenport, Rock Island, and Northwestern Railroad Depot	Increase or decrease the ramp divergence angle.	No
	Relocate the structure to a nearby property.	No
Iowa-Illinois Memorial Bridge and Monument	Reuse of the bridges for I-74 traffic with construction of a new structure adjacent to the existing bridges.	No
	Construction of a new bridge on new alignment for I-74 traffic with re-use of the existing bridges for local traffic.	No
	Construct a new bridge on new alignment for I-74 traffic, and reuse the existing bridges for transit.	No
	Construct a new bridge on new alignment, and reuse one of the existing bridges for bicycle/pedestrian traffic.	No
	Widen the bridges to accommodate additional lanes.	No
	Relocate the monument to another position near the bridge.	Yes
Iowana Farms Milk Company	Increase or decrease the ramp divergence angle.	No
	Adjust the ramp configuration.	No

the sites would be avoided. The sites which may not be avoided include Kone, Inc., Former Frank Foundries Corp., Deere & Co. Parking Lot, Vacant Lot (2000 Block-4th Avenue), Riverside Products, Vacant Lot (1934 5th Avenue), Office Building (602-608 19th Street), Scottish Rite Cathedral parking lot, Iowa Interstate Railroad, and Vacant Lot (702 19th Street). The Iowa Interstate Railroad is the only additional property that may not be avoided since the proposed alignment was refined.

[Figure 3-6, Potentially Contaminated Sites](#), at the end of Section 3, *Affected Environment*, illustrates these properties' locations. Some of the sites involve petroleum contamination from leaking underground storage tanks. Of the 10 sites, excavation is expected to exceed depth restrictions at eight. The nature and extent of the involvement are known and the areas of contamination, involving 4,757.5 cubic yards, will be managed and disposed of in accordance with applicable federal and state laws and regulations and in a manner that will protect human health and the environment. The quantities to be disposed of are not expected to have a significant impact on landfill capacity.

A Limited Phase I Environmental Investigation was completed to identify potentially contaminated properties on the Iowa side of the project corridor. These are depicted on [Figure 3-6, Potentially Contaminated Sites](#), at the end of Section 3, *Affected Environment*. Sites that may

be affected by the proposed alignment (as it was presented in the DEIS and after refinements) include Great American Window, H&H Car Care Center, Dale Snapp Co., Crescent Economy, Inc., former Showboat Car Wash, former Hoyt & Son Auto, Johnny's Amoco (BP)/QC Mart (BP), Twin Bridges 66, former Ross' Drive Through, Dart Mart, Knox Corporation, Adel parking lot/ramps at 1159 State Street and 1207 State Street, Village Inn, Car Quest, City Hall, Handy Stop, and US West. For these sites, further subsurface investigations are recommended in order to define the precise location and nature of potential contamination.

Former Frank Foundries Corp. in Moline, Illinois was enrolled in the Illinois EPA Site Remediation Program; a No Further Remediation letter was issued in 1992. The property subsequently experienced a leaking underground storage tank event in 1996 and after over-excavation of the site, a second No Further Remediation letter was issued in 1998 indicating the land was authorized for residential or industrial/commercial uses. Remediation is underway on the Twin Bridges 66 property in Bettendorf. Over-excavation, soil venting, and *in situ* groundwater treatment are methods used in the site remediation program. Clean up was completed at the Handy Stop in Bettendorf in March 2001; a certificate indicating no further action was required was issued in November 2001. No USEPA Brownfields Pilot Sites are within the project corridor. See Section 4.16.2, *Nonhazardous Waste*, in the DEIS for the history of the impacted properties.

Central Section—Mainline/Interchange Improvements. Impacts to sites with regulated materials by the preferred mainline/interchange interchange improvements are summarized in Table 4-11, *Sites with Regulated Materials Impacted by the Preferred Mainline/Interchange Improvement*.

Central Section—Local Roadway Improvements. Five sites with regulated materials will be affected by the preferred local roadway improvements: Car Quest, City Hall, Handy Stop, US West, and the Adel Parking Lot at 1159 State Street.

4.3.15 Visual Impacts / Aesthetics

4.3.15.1 Proposed New River Crossing Structure

Following a rigorous evaluation process that included construction, engineering, safety, aesthetic and public interest analyses, the basket handle true arch twin bridge type is recommended for the new river crossing. This process occurred in three phases.

The first phase consisted of identifying the location of the proposed river crossing and the number of travel lanes required on the bridges. This phase was completed in 2005 when the preferred alignment was identified and it was determined that four lanes in each direction would be provided across the Mississippi River.

In the second phase, the project team identified the bridge types that would accommodate the preferred location for I-74, lane arrangement and navigational requirements. As mentioned in Section 4.17.1, *Concepts for a New River Crossing Structure*, in the DEIS, three concepts were considered potential bridge types, a cable-stayed bridge, an arch bridge and a suspension bridge. The suspension bridge type was not carried forward in the process because the alternative bridge types are more economical to construct and maintain than suspension bridges. The three bridge types that would accommodate the preferred location for I-74 were the tied arch, the true arch and the cable-stayed. In May 2006, a public meeting

TABLE 4-11
Sites with Regulated Materials Impacted by the Preferred Mainline/Interchange Improvement

Moline	Bettendorf
Kone, Inc. (Industrial/ transformer site)	Great American Window (former UST site with no accompanying documentation)
Former Frank Foundries Corp. (LUST/former UST/former industrial/former transformer site)	H&H Car Care Center (LUST/UST)
Vacant lot (2000 block–4th Avenue) (former industrial site)	Dale Snapp Co. (LUST/UST)
Deere & Co. parking lot (former industrial site)	Former Ross' Drive Through (potential BTEX contamination from Dale Snapp Co.)
Riverside Products (industrial site)	Dart Mart (potential BTEX contamination from Twin Bridges 66)
Office building (602–608 19th Street) (possible UST site)	Former Hoyt & Son Auto (LUST/UST)
Scottish Rite Cathedral parking lot (possible UST/former commercial site)	Twin Bridges 66 (LUST/UST)
Vacant lot (702 19th Street) (possible UST site)	Crescent Economy, Inc. (RCRIS)
Vacant lot (1934 5th Avenue)	Former Showboat Car Wash (LUST/UST)
Iowa Interstate Railroad	Knox Corporation (potential BTEX contamination from Johnny's Amoco and Twin Bridges 66 sites)
	Village Inn (former filling station with no documentation on contamination, but potential contamination exists)
	Johnny's Amoco (BP)/QC Mart (BP) (RCRIS/LUST/UST)
	Adel parking lot/ramp (1207 State Street) (former filling station with no documentation on contamination, but potential contamination exists)

was held where visualizations of the true arch bridge type, two variations on the tied arch bridge type, and the cable-stayed bridge type were presented. Questionnaires were provided to attendees so that they could rate the bridge types and various other components to the river crossing. The Iowa and Illinois DOTs considered public responses to the questionnaires and other public comment forms during the evaluation period of this phase. They also considered the following aspects:

- Engineering performance: design features, constructability, environmental/ social impacts, alignment/geometric compatibility, and security/protection
- Financial Performance: initial construction cost and life cycle costs
- Aesthetics: structural logic (the bridge should look stable and appear to support its load with ease), visual relationship to communities (be a source of pride), the appearance of the bridge from the water, land, and driver's perspective

While all four finalist bridge types satisfy basic engineering requirements with comparable overall performance and have comparable financial performance, the project team and the public identified the true arch and cable-stayed bridge types as more aesthetically pleasing than the tied arch bridge type. Finally, the Iowa and Illinois DOTs identified the basket

handle true arch twin bridge as the recommended bridge type because it has twin decks, as opposed to a single deck on a cable-stayed bridge. Twin decks allow for efficient deck replacement options, are more structurally redundant, provide a higher level of security, and provide flexibility for traffic and construction staging. The third phase of the process, preliminary bridge design, is underway.

It should be noted that the recommended bridge type is subject to funding availability and therefore may change based on cost considerations. If such a change is recommended by the project sponsors in the future, the proposed changes will be coordinated with the public and additional NEPA documentation, if appropriate, would be completed.

4.3.15.2 Aesthetics

The Iowa and Illinois DOTs in coordination with the I-74 Advisory Committee formed a Corridor Aesthetics Advisory Team (CAAT) to develop an aesthetic theme and aesthetic design guidelines for the I-74 corridor through the preliminary design phase. The public has been involved in the development of the aesthetic concepts, and the DOTs will continue to engage the communities through the final design phase. The implementation of the aesthetic concepts the team suggests rely on future funding availability.

4.3.16 Construction and Operational Impacts

4.3.16.1 Transportation

A sequence for implementing the proposed improvements was devised to minimize the amount of disruptions (lane and ramp closures and detours) that motorists would endure during construction. In Moline, at least one exit ramp and one entrance ramp in each direction will be open during construction. The only exception is while the northbound 7th Avenue exit ramp is under construction, motorists will be detoured to the Avenue of the Cities (23rd Avenue) exit and along 19th Street to reach downtown Moline. Any necessary ramp closures at other interchanges along the corridor will occur briefly and during non-peak hours. Along the mainline, two lanes in each direction will remain open during construction. If additional lane closures are necessary, they will occur briefly and during nonpeak hours.

It is assumed that, though all trails will remain open during construction, users will be diverted to adjacent facilities during that brief period of time. It is also assumed that pedestrians, too, will be rerouted when construction impedes access to sidewalks.

4.3.16.2 Air Quality

Demolition and construction work can result in short-term increases in fugitive dust and equipment-related particulate emissions in and around the project area. (Equipment-related particulate emissions usually are minor when equipment is well maintained.) The potential air quality impacts will be short-term, occurring only while demolition and construction work is in progress and local conditions are appropriate.

The potential for fugitive dust emissions typically is associated with building demolition, ground clearing, site preparation, grading, stockpiling of materials, onsite movement of equipment, and transportation of materials. The potential is greatest during dry periods, high wind conditions, and periods of intense construction work.

Illinois DOT's Standard Specifications for Road and Bridge Construction include provisions for dust control. Under those provisions, dust and airborne dirt generated by construction will be managed through dust control procedures or a specific dust control plan, when warranted. The contractor and Illinois DOT will meet to review the nature and extent of dust-generating activities and will cooperatively develop specific types of control techniques appropriate to the specific situation. Techniques that may warrant consideration include measures such as minimizing track-out of soils onto nearby publicly traveled roads, reducing speed on unpaved roads, covering haul vehicles, and applying chemical dust suppressants or water to exposed surfaces, particularly those on which construction vehicles travel. With the application of appropriate measures to limit dust emissions during construction, this project will not cause any notable, short-term particulate matter air quality impacts.

4.3.16.3 Solid Waste and Hazardous Waste

Any demolition or construction waste must be recycled or delivered to a permitted waste disposal/treatment facility. The Illinois EPA has classified this type of material as Clean Construction Demolish Debris (CCDD) and allows it to go to properties as long as they meet Illinois DOT specifications.

4.3.16.4 Navigation

Construction of the bridge substructure and superstructure has implications for river navigation interests. During construction, building equipment and materials will need to be placed in the river channel, thereby reducing the horizontal clearance available for navigation. The duration of the reduction in horizontal clearance is dependent upon the specific foundation type selected and the specific methods of construction employed, but could be expected to be in the range of 1 to 2 years. Work tugs and material barges will be operating near the construction site. Depending on the type of construction, temporary closure of the river channel may be required so that the work tug, material barge and crane barge can operate in the channel. The superstructure could be constructed in relatively smaller pieces, which would require shorter periods of channel closure for the floating in of the pieces and their erection, or larger pieces, which would require the river channel to be shut down for longer periods of time. Construction of the main span substructures could be require short-term closure of the river channel. Construction of the approach span substructures would require the short-term transit of equipment barges across the channel.

Several potential bridge demolition techniques have been considered as part of this study. The techniques investigated are described below. Depending on which technique used, river navigation will be obstructed for a period of time during demolition. A final determination about demolition methodology will be made during final design, and in consultation with the U.S. Coast Guard. Coordination will also occur with the Illinois DNR and the Corps during the permitting process to assess potential environmental impacts resulting from the bridge demolition.

- **Bridge Deck** – Two options exist for removing the bridge deck. One consists of cutting the bridge deck into large sections and removing it by barge or by trucks using the still intact portions of the bridge. The other consists of breaking the deck into smaller pieces and dropping the debris into debris nets.

- **Structural Steel** – The structural steel of the bridge may either be dismantled piecemeal or in large spans and removed using barges. Dismantling in large spans would require the use of explosive devices to break apart the larger pieces of the steel.
- **Main Suspension Cable and Towers** – To remove the main suspension cable and towers of the navigation unit is to cause it to collapse into the side spans by partially removing the anchor bolts and cutting the suspension cables at mid-span using explosive devices. This procedure only causes short-term interruption to river navigation. Debris in the side spans can be removed in a controlled manner.
- **Foundations** – The concrete foundations of the river spans will be removed at a depth prescribed by the U.S. Coast Guard.

4.3.17 Relationship of Local Short-Term Uses versus Long-Term Productivity

All highway projects require the investment or commitment of some part of resources found in the existing environment. *Short-term* refers to the immediate consequences of the project; *long-term* relates to its direct or secondary effects on future generations.

Short-term consequences of the proposed build alternatives include:

- Relocation of residences and impacts on businesses.
- Removal of private properties from tax rolls, thereby reducing the property tax base.
- Conversion of floodplain and wetland to transportation use.
- Inconvenience to residents, business owners/suppliers, and employees during construction.

Some long-term benefits that may be realized from the recommended alternative include:

- An efficient transportation corridor through the heart of the Quad Cities that would provide better access for both daily commuting trips as well as special events trips.
- Improved motorist safety and convenience and reduced energy usage.
- Potential for new tax base in the project area by providing high-type transportation infrastructure to accommodate the movement of goods and services and orderly residential and commercial development.
- Enhanced employment growth for the region, including increased wages and salaries.
- Regional economic development, including growth in the industrial sector.
- Reduced current and forecasted traffic congestion on the road network in the I-74 corridor area.
- The identification and preservation of protected species habitat.

The I-74 Quad Cities corridor study is based on comprehensive transportation planning that considers the need for present and future traffic movement within the context of present and future land use development and the environment. Therefore, the local short-term impacts and use of resources by the proposed action is consistent with the maintenance and enhancement of long-term productivity.

4.3.18 Irreversible and Irretrievable Commitments of Resources

Constructing either of the proposed build alternatives would involve committing a range of natural, physical, human, and fiscal resources. Land acquired for constructing the proposed project is considered an irreversible commitment during the time period the land is used for highway purposes. Right-of-way requirements would convert land from residential, commercial, and natural environmental resource uses. Wildlife casualties may be expected, but due to the minimal amount of natural wildlife habitat in the project area, are not enough to appreciably reduce the likelihood of survival of any species. Adjacent land uses would be expected to experience some increase in noise levels; however, noise barriers would be constructed where justified to mitigate the effects of the increase in noise levels.

Considerable amounts of fossil fuel, labor, and highway construction materials, such as steel, cement, aggregate, and asphalt, would be required. In addition, considerable labor and natural resources would be used in fabricating and preparing construction materials. Those resources generally are irretrievable, but their use would not have a substantial adverse effect on continued availability.

Construction of either of the proposed alternatives would involve irretrievable federal, state, and local funding. Land converted from private to public uses would displace local tax revenues.

Committing resources is based on the concept that residents in the project area, region, and state would benefit by the improved capacity and safety that would result from the proposed project. The benefits such as improved access to businesses and community services, increased safety, and reduced travel times, and increased economic development are expected to outweigh the commitment of resources in the long term.

4.3.19 Permits and Related Approvals

In addition to the water resource permits discussed in Section 4.7 of the DEIS, *Water Resource Permits*, the following permits and related approvals will be acquired for the build alternatives:

- **Section 106.** Archaeological and historical surveys were conducted as part of the project in compliance with Section 106 of the National Historic Preservation Act of 1966, as amended. Requirements for Section 106 of the National Historic Preservation Act will be fulfilled to the satisfaction of both the Iowa and Illinois SHPO; coordination with both states' SHPOs would continue throughout the design process.
- **Utilities.** Coordination with utility providers would also be required during design and construction to coordinate the relocation and replacement of utilities crossing the right-of-way as well as those using the existing I-74 right-of-way by permit or agreement.

4.3.20 Additional Commitments

In addition to permits and other actions required before and during construction, the following commitments resulting from coordination with resource agencies are expected to be carried out in future phases of the project.

- Identification of a detour route for bicyclists and pedestrians using trails that will need to be temporarily closed during construction of the proposed improvements.
- Identification and purchase of appropriate sites for mitigating wetland impacts.
- Completion of a mussel survey at the location of the existing and proposed bridges over the Mississippi River is required closer to the construction date to more accurately determine the mussel populations' location and abundance. Additionally, the activities identified in the Conservation Plan (see Appendix E) must be followed to limit the disruption to the mussels and their habitat and to maximize their ability to thrive once the proposed improvements have been implemented. A review of the Bald Eagle nest sites is also required prior to construction to accurately identify their locations.
- Mitigation activities detailed in the MOAs with the Illinois and Iowa SHPOs for impacts to cultural resources (see Appendix 4(f)-6 of the Final Section 4(f) Statement).

4.3.21 Only Practicable Alternative Finding for Impacts to Wetlands

Executive Order 11990 on the Protection of Wetlands dated May 24, 1977, requires federal agencies to avoid, to the extent practicable, long- and short-term adverse impacts associated with destroying or modifying wetlands. More specifically, the Order directs federal agencies to avoid new construction in wetlands unless there is no practicable alternative measures to minimize harm to the wetlands. The following information sets forth the basis for a finding that there is no practicable alternative to construction in the wetlands located along the project corridor and that the proposed improvements will include all practicable measures to minimize harm to the wetland resources.

The project description, the description of wetlands, and wetlands affected are covered in the appropriate sections of this Final EIS. The Preferred Alternative would affect four individual wetlands totaling 1.21 acres. Because the Preferred Alternative is oriented roughly parallel to the existing I-74 corridor, where there are wetlands adjacent to the highway and, in places, on both sides of the highway, it is not possible to avoid wetland impacts completely. Wetland impacts were minimized by selecting the Build Alternative across the Mississippi River that avoids an entire wetland. The No-Build Alternative was eliminated from consideration because it would fail to meet the project's purpose and need objectives (see Section 2, *Alternatives*).

The Preferred Alternative satisfies the transportation objectives set out in the purpose and need section of the Final EIS. Measures to minimize harm to wetlands are discussed in Section 4.3.6.3, *Wetland Mitigation*.

Based upon the above factors and considerations, it is determined that there is no practicable alternative to the proposed construction in wetlands of the project area, and that the Preferred Alternative includes all practicable measures to minimize harm to the wetlands that may result from such use.

4.3.22 Only Practicable Alternative Finding for Impacts to Floodplains

Presidential Order 11988 and 23 CFR 650 require that federal agencies avoid, to the extent practicable, impacts to natural floodplain values and incompatible floodplain development. The following information sets forth the basis for a finding of no practicable alternative to

floodplain encroachment associated with the proposed improvements to I-74, and to demonstrate that the proposed improvements will include all practicable measures to minimize harm to floodplains which may result from such use.

Improvements to I-74 require crossings of the Mississippi River and Duck Creek floodplains and a parallel encroachment on the floodplain of a Duck Creek tributary. Given the nature of the improvements, these crossings are unavoidable if the project's purpose and need is to be satisfied. Section 2 of the Draft and Final EIS discuss alternatives developed and evaluated to meet the project's purpose and need. A number of alternatives to the Preferred Alternative were considered, but dismissed from further consideration because they would not meet the project's purpose and need. The Preferred Alternative was identified as the most practicable alternative based on ability to meet the engineering criteria, agency coordination, consideration of environmental and socioeconomic impacts, and public input.

Design of the new Mississippi River crossing is underway and will continue in the design phase of the project. The proposed bridge type of the preferred alternative has been hydraulically modeled to determine potential floodplain impacts resulting from the construction of a new bridge over the Mississippi River.

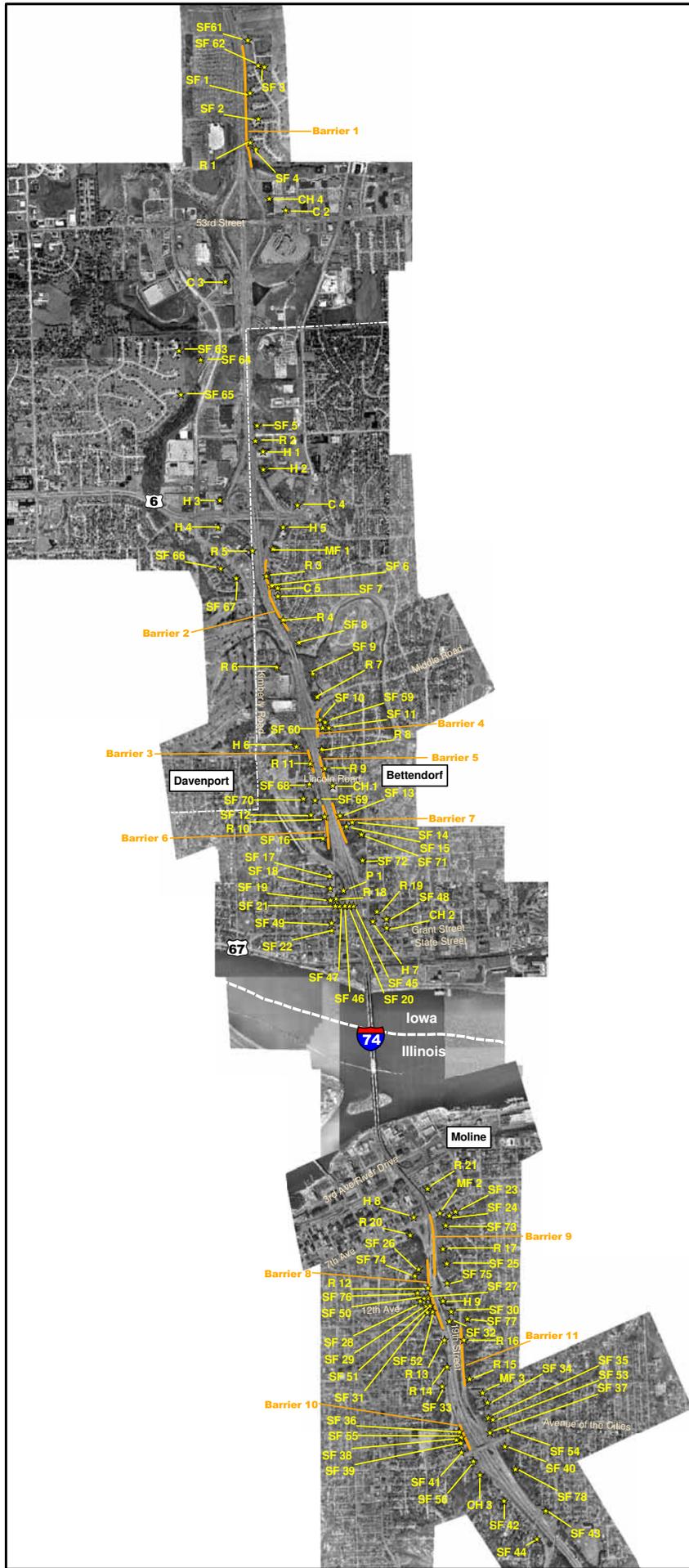
A 2-D model (FESWMS program) was used to analyze potential effects of the proposed bridge type on water levels during a 100-year flood event. The analysis and results are presented in a technical memorandum entitled "Interstate 74 Hydraulic Analysis" (October 2008). Both the temporary construction condition (existing bridges and proposed bridges in place at the same time) and the ultimate build condition (proposed bridges in place and existing bridges removed) were modeled in order to determine whether either condition would increase water levels. In order to meet Federal and State requirements, the activities in the river must not increase water levels by more than 0.01 foot over existing conditions for the ultimate condition. This requirement to increase current 100-year flood water levels by no more than 0.01 foot is known as zero rise.

Based on the analysis completed, the zero-rise condition can be met for the ultimate build condition for the 100-year flood. During the temporary construction condition, the analysis indicated a 0.05-foot rise for the 100-year flood. FHWA coordinated with FEMA regarding the calculated rise for the temporary construction condition and FEMA agreed that the 0.05-foot rise was acceptable for the temporary condition.

The information regarding the 2-D analysis was provided to the Iowa and Illinois DNRs for their review. Both DNRs concurred with the 2-D modeling technique and the results of the analysis. A meeting was also held with the Corps to review the analysis and results.

The proposed improvements across the Duck Creek floodplain and alongside the Duck Creek tributary floodplain have been designed to result in the least amount of impact. The reconstructed bridge over Duck Creek is expected to avoid increasing flood heights over existing conditions. Impact to the Duck Creek tributary floodplain is reduced because proposed improvements to I-74 in this vicinity can be accomplished by enhancing the existing facility.

Based on the above considerations, it is determined that there is no practicable alternative to the proposed construction in floodplains and that the proposed action includes all practicable measures to minimize harm to floodplains which may result from such use.



Legend

- Municipal Boundary
- State Boundary
- Studied Noise Barriers
- Noise Receiver Locations
- R = Receiver locations monitored during onsite measurements
- SF = Single-Family Residence
- MF = Multi-Family Residence
- CH = Church
- H = Hotel, Motel or Inn
- P = Park
- C = Commercial

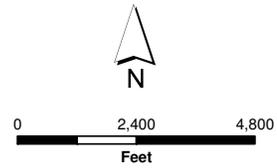


Figure 4-1 Studied Noise Barriers and Receiver Locations

Figure 4-1
Studied Noise Barriers and Receiver Locations



Finalist Bridge Type



Iowa Department of Transportation

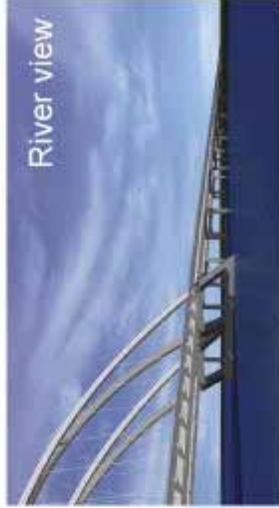


Illinois Department of Transportation

Basket Handle True Arch Twin Bridge



Aerial view



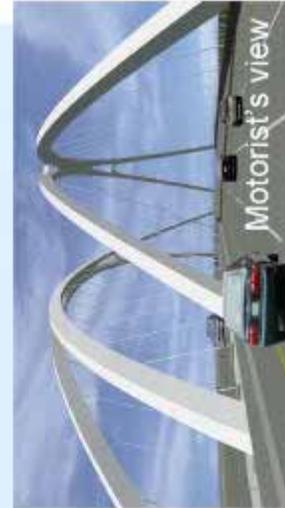
River view



Bettendorf shoreline view



Approach view



Motorist's view

Figure 4-2 Proposed New River Crossing Structure

Figure 4-2
Proposed New River
Crossing Structure

Section 5
Comments and Coordination

Comments and Coordination

Involving the public in the development of the design continues to be an important component of the study process. Project team members, including members from Iowa and Illinois DOT and their consultant team, have met representatives of resource agencies, governmental officials, interest groups, and area citizens to acquire their input, answer questions, and determine how best the project can meet their needs. This section describes coordination efforts that have occurred throughout the study period.

5.1 Effects of Early Coordination

Involving area residents, interest groups, agencies, and elected officials in the study early in the process has provided continuous opportunities for members of the public to provide input and share their concerns. Project team members have used this input to design improvements that address transportation issues facing Quad Cities residents. Early coordination efforts helped define the project purpose and need, develop suitable alternatives to address issues experienced by area residents, and ultimately, identify the Preferred Alternative.

5.2 Federal, State, and Local Agency Coordination

Two groups, the Resource Agency Group and the Advisory Committee, were established early in the study process to provide a venue for discussing the project and obtaining input from agency representatives and other stakeholders.

5.2.1 Resource Agency Group

The Resource Agency Group, which consists of state and federal resource and regulatory agencies, met during scheduled NEPA/404 merger meetings to discuss how resources relate to the current project and what regulatory requirements need to be addressed throughout the process. A significant role of the Resource Agency Group was to provide concurrence at established points in the NEPA/404 merged process as identified in the Statewide Implementation Agreement.

Before the publication of the DEIS, the Resource Agency Group received an Early Coordination packet, which provided members with background information on the project, and met twice. Since the publication of the DEIS, Resource Agency Group meetings have been held to update members on the project's progress and address project-related concerns as well as reach concurrence on the remaining points to complete the NEPA/404 merged process. The meetings are summarized in Table 5-1, *I-74 Resource Agency Group Meetings*.

TABLE 5-1
I-74 Resource Agency Group Meetings

Meeting #	Meeting Date	Topic
1	June 2001	The first meeting was to introduce the project purpose and need and establish a procedure for following the NEPA/404 requirements.
2	December 2001	At the second meeting, concurrence was reached on the project purpose and need, range of alternatives to be considered, and alternatives to be carried forward. See Section 5.2.1, <i>Resource Agency Group</i> , in the DEIS for a list of participating agencies and more information on meeting discussions.
3	March 2005	The purpose of the third meeting was to update resource agencies on the study's progress. Resource agency representatives received an overview of the major components of the project as well as milestones that had occurred since the last meeting, including the publication of the DEIS and completion of 2035 traffic forecasts. A summary of Concurrence Points 1, 2, and 3 (purpose and need, range of alternatives to be considered, and alternatives to be carried forward, respectively) reached at the December 2001 meeting was provided. Impacts to natural resources by alternatives presented in the DEIS were reviewed as well as agency comments on the DEIS. The procedures and findings of the navigation channel simulation were also presented. Finally, the method for identifying the Preferred Alternative was presented and next steps were identified, including the development of this Final EIS, the ROD, and the completion of any outstanding regulatory requirements.
4	August 2007	At the fourth meeting, concurrence on the Preferred Alternative, Concurrence Point 4, was reached and granted. Resource agency representatives were provided with an update on major events that had occurred since the last meeting, including the selection of the recommended bridge type, advancements on engineering design, and additional work near the 53rd Street intersection. Major public involvement events, such as the third public information meeting and local agency coordination meetings, were reviewed. Attendees were provided with an update on environmental studies activities that are underway, such as the cultural resource MOAs, examination of bridge foundation construction and bridge demolition methodologies, techniques for limiting impacts to water quality in the Mississippi River, and threatened and endangered species coordination. A brief summary of Concurrence Points 1, 2, and 3 (purpose and need, range of alternatives to be considered, and alternatives carried forward, respectively) was given. The Preferred Alternative was described, including major design features, reasons for identifying it as preferred and its environmental and socio-economic impacts. Finally, the project schedule and next steps, including circulation of the FEIS, future public involvement activities, and the ROD, were discussed.

5.2.2 Coordination with the Federal Aviation Administration

Coordination with the FAA occurred to ensure that the proposed improvements would not pose a hazard to air navigation. After reviewing the dimensions of the structure, the FAA issued a "Determination of No Hazard to Air Navigation" provided that the structure is marked/lighted according to FAA standards.

5.2.3 Advisory Committee

The Advisory Committee consisted of representatives from local government, the Metropolitan Planning Organization and transportation agencies. This committee was assembled to guide development of the I-74 corridor, to serve as a two-way communication link between the project team and the communities, and to provide a mechanism for key stakeholders to provide input on project actions and decisions.

Nine meetings were held prior to the publication of the DEIS. Topics discussed at the meetings included project status and schedule, alternatives development, public involvement activities, and environmental studies. Section 5.2.2, *Advisory Committee*, of the DEIS contains a list of the Agency Committee members and more information regarding specific meeting discussions. Table 5-2, *I-74 Project Advisory Committee Meetings*, contains topics discussed at the meetings held since the DEIS was published in late 2003.

TABLE 5-2
I-74 Project Advisory Committee Meetings

Meeting #	Meeting Date	Topic
10	February 2004	Project status, summary of DEIS/Public Hearing agency and public comments, build alternative, bicycle/pedestrian accommodations, project implementation issues, next steps
11	July 2004	Project status, 2035 traffic forecasts and analysis update, bicycle/pedestrian accommodations update, local input on the identification of Preferred Alternative, Mississippi River bridge design issues update, Public Involvement Plan (Part Two studies)
12	June 2005	Part Two study overview, I-74 Mississippi River bridge type study, bridge architectural design, corridor aesthetic design, Mississippi River bicycle/pedestrian trail crossing, Public Involvement Plan (Part Two studies), next steps
13	August 2005	Project status, Mississippi River bicycle/pedestrian trail crossing, public involvement activities, corridor aesthetic design, I-74 Mississippi River bridge type study, draft initial financial plan, next steps
14	March 2006	Project status overview, ACTT workshop, I-74 Mississippi River bridge type study, public involvement activities, corridor aesthetic design, next steps
15	August 2006	Public Meeting #3 summary, recommended bridge type, project schedule update, design issues, preview of initial Corridor Aesthetics Analysis Team (CAAT) meeting, next steps
16	January 2007	Project status update, design issues, CAAT meeting numbers 1 and 2, project funding, next steps
17	June 2007	Project status update, funding status update, pending design and environmental issues, corridor aesthetic design, risk based cost analysis workshop, public involvement, next steps
18	September 2007	Project status update, Project funding and implementation discussion, design and environmental issues, corridor aesthetic design, public involvement, next steps

5.2.4 MetroLINK Meeting

The project team met with MetroLINK officials on June 6, 2002, to discuss possible transit accommodations for inclusion in the proposed improvements. MetroLINK officials concluded that ridership would not necessitate the incorporation of bus turnouts and park-and-ride lots into the proposed design, but that it would be helpful if the design included ramp bypass lanes for buses and the potential for future transit accommodations. See Section 5.2.3, *MetroLINK Meeting*, and Appendix C, *Correspondence*, in the DEIS for more information on this meeting.

5.2.5 Bicycle/Pedestrian Accommodations Technical Committee

Following the decision to include bicycle/pedestrian accommodations in the proposed river crossing improvements, a Bicycle/Pedestrian Accommodations Technical Committee was established. The goal of the committee was to ensure the most suitable design of the proposed trail and to identify funding and maintenance responsibilities. Members of the committee include personnel from the Iowa and Illinois DOTs; the cities of Moline, Davenport, and Bettendorf; and the Bi-State Regional Commission. Two meetings with the committee have been held. Summaries of those meetings are included in Table 5-3, *I-74 Bicycle/Pedestrian Accommodations Technical Committee Meetings*.

TABLE 5-3
I-74 Bicycle/Pedestrian Accommodations Technical Committee Meetings

Meeting #	Meeting Date	Topics
1	September 2004	The status of the trail, design alternatives, funding options, and future trail issues to be considered were discussed. It was emphasized that the incorporation of bicycle/pedestrian accommodations stems largely from strong public support. Options for trail locations and connections to existing facilities were presented. Design considerations were discussed, including user safety, the provision of river overlooks, trail capacity, access for maintenance personnel, and facility operations. Preliminary costs for the preliminary design options were presented. Attendees shared ideas for potential funding sources; Iowa and Illinois DOT agreed to further discussions related to funding opportunities and responsibilities in advance of the next committee meeting.
2	July 2005	Attendees were updated on the status of the trail design and presented with options for the location and width of the trail. Alternatives for addressing maintenance and operations concerns were discussed, as were potential funding responsibilities for the construction, maintenance, and operation of the trail. The procedures for developing the bridge design and aesthetic treatments were reviewed. Finally, committee members identified important features for consideration during trail design, such as viewing platforms, lighting, trail elevation, and barrier systems.

5.2.6 Local Agency Meetings

Members of the project team met with local agencies to discuss project issues unique to their community. Meetings were held with representatives of the cities of Bettendorf, Davenport, and Moline, and Scott County. Topics discussed during these meetings include interchange variations, the I-74 preferred alternative, the I-74 study process, preliminary roadway plans, engineering issues, and overall project development.

5.3 The Public and Interested Groups

Opportunities for general public involvement included an interactive Web site, public meetings, speakers' bureaus/small group meetings, and newsletters. Up-to-date study information was periodically distributed through newsletters and on the study Web site.

5.3.1 Public Information Meetings

Three rounds of public information meetings have been held since the project's inception. The first two meetings were held prior to the publication of the DEIS and consisted of one

meeting each in Bettendorf, Iowa and Moline, Illinois, held on consecutive days. The third meeting was held in Moline. All meetings were conducted in an open-house format, with representatives from the Iowa and Illinois DOTs, their consultants, and other members of the Advisory Committee available to answer questions, provide more information on the information presented at the meetings, and acquire input from attendees. Meeting summaries, which include comments made at the meetings, can be requested from either the Iowa or the Illinois DOT.

5.3.1.1 Public Information Meeting #1

The first public information meeting occurred in July 2001 to introduce area residents and interested parties to the project. Information was presented on the existing conditions along the project corridor, the purpose and need for improvements, concept alternatives, the public involvement plan, environmental documentation requirements, and project schedule. Public input on the concept alternatives presented at the meeting was used in identifying alternatives to carry forward for further design.

5.3.1.2 Public Information Meeting #2

The second public information meeting was held in July 2002 to present the existing conditions along the project corridor, the project purpose and need, the public involvement program, and overall study process, schedule, and status. Public input was solicited on continued use options for the existing Mississippi River bridge(s) and possible bridge types.

See Section 5.3.1, *Public Information Meetings*, in the DEIS for more information on the first two public information meetings.

5.3.1.3 Public Information Meeting #3

The third public information meeting was held on May 23, 2006, at the Mark Conference Center in Moline, Illinois, and was attended by more than 200 people. The meeting was intended to gauge the public's preference among the four finalist Mississippi River bridge types and present the I-74 Preferred Alternative, proposed bicycle/pedestrian accommodations, and possible aesthetic treatments. Iowa and Illinois DOT personnel, their consultants, and other members of the I-74 Project Advisory Committee were available to answer questions and gather input from attendees.

The majority of people attending the meeting agreed that the proposed improvements were needed and were interested to see the four finalist bridge types. Many of the verbal comments received during the meeting revolved around the property impacts, the bicycle/pedestrian path across the Mississippi River, and the four finalist bridge types.

Written comments were accepted through June 6, 2006. A total of 42 general project comment forms were received and are included in the project summary document. Many of the comments identified a preference for one of the bridge types and emphasized the importance of aesthetics and cost in selecting a preferred type. Another common comment was support for bicycle/pedestrian accommodations on the new bridge. Following is a summary of the comments heard at the meeting and the responses.

Issue:	Strong support for bicycle/pedestrian accommodations on the new river crossings (7 comments).
Response:	Each finalist bridge type was developed to accommodate a new bicycle/pedestrian trail crossing of the Mississippi River. The trail crossing is an important enhancement to the regional and national trail network in the Quad Cities. The new I-74 bridge design will include four traffic lanes (three through lanes and an auxiliary lane), full width shoulders in each direction, and a bicycle/pedestrian trail physically separated from the roadway on the west side of the new bridge.

Issue:	Indications of support for particular bridge types (11 comments).
Response:	A comprehensive screening process for potential bridge types was performed to identify acceptable replacement bridge types for the Mississippi River crossing. Bridge types were evaluated on the basis of three general performance factors: engineering performance, financial performance (initial construction and life-cycle cost), and overall aesthetics. The design team carefully evaluated all bridge types to identify the ones that best met the performance factors. Public preference for a certain bridge type will be an important part of the evaluation of the four finalist bridge types.

Issue:	Concern about individual property impacts (2 comments).
Response:	Information was provided to those requesting details on how the project impacts their property.

Issue:	Input on bridge type selection provided on the I-74 Mississippi River Bridge Comment Form.
Response:	A separate I-74 Mississippi River Bridge Comment Form was available at the meeting for the public to comment specifically on the bridge types. The comment form contained pictures and aesthetic features of the four finalist bridge types: Basket Handle True Arch Twin Bridges, Modified Basket Handle Tied Arch Twin Bridges with Vertical Pier and Vertical Hangers, Basket Handle Tied Arch Twin Bridges with Vertical Pier and Vertical Hangers, and Cable-Stayed Single Bridge with Semi-Fan Stay Arrangement. Responders were asked to rank the various aesthetic features of the bridge types and identify a preference for one of the four bridge types. A total of 88 Bridge Comment Forms were received. Most responders (68 percent) identified the shoreline or river view as the most important vantage point (view of the bridge(s)) as opposed to the driver's view or both views equally. Seventy-one percent of responders said that the aesthetics/visual features of the bridge are "very important" as opposed to "moderately important" or "not important." When asked to identify a preference for one of the four finalist bridge types, the Cable-Stayed Single Bridge with Semi-Fan Stay Arrangement was chosen most often (46.5 percent); the Basket Handle True Arch Twin Bridges was preferred by 42 percent of the responders.

Four individuals expressed support for the project in general and for the consideration of aesthetics in the bridge design. Five individuals expressed concern regarding cost of replacing the bridges, four individuals indicated support for dismissed alternatives and six comments were in support of additional improvements. Two individuals raised concerns regarding the noise impacts resulting from the proposed improvements.

5.3.2 Public Hearing

Following publication of the DEIS and 4(f) Statement, a set of public hearings were held to present the findings included in the DEIS and to solicit public input. The hearings occurred on December 1, 2003, at the Bettendorf Public Library in Bettendorf, Iowa, and on December 2, 2003, at the Mark Conference Center in Moline, Illinois. Personnel from the Iowa and Illinois DOTs and their project consultants were at both meetings to answer questions and receive public input.

The same information was presented at both meetings and included alternatives considered throughout the process, those still under consideration, and potential beneficial and adverse impacts they may have on environmental and socioeconomic resources. Copies of the DEIS

and 4(f) Statement were on hand for attendees to review and comment on. The public involvement program, overall project process and schedule, and visualizations of the potential bridge types were also presented at the hearings. Comments were accepted through January 9, 2004, for inclusion in the project summary. A total of 111 written comments and 24 oral comments documented by the court reporter were submitted. Comments that the project team members heard at the public hearings were also documented. Following is a summary of the issues and concerns expressed during the public comment period.

Issue:	General support for improvements along the I-74 corridor (65 comments).
Response:	The Iowa and Illinois DOTs, in consultation with the FHWA, have identified a preferred alternative for the I-74 Quad Cities Corridor Study. The Preferred Alternative was identified based on engineering factors, potential environmental impacts, and input from involved agencies, area officials, and the public. The next steps in the study are completion of the ROD, which will identify the selected alternative, and further design studies of the selected alternative.

Issue:	Bicyclist and pedestrian needs should be addressed with planned improvements (43 comments).
Response:	A bicycle/pedestrian path across the Mississippi River is being considered with the project. The path will be located along one of the new Mississippi River bridges, but a determination as to whether it will be located on the northbound or southbound bridge has not yet been made.

Issue:	Comments regarding preferences for regional river crossing priorities and suggestions for other alternatives (59 comments).
Response:	The I-74 project was initiated following a broader regional study of Mississippi River crossing needs in the region. The Quad Cities Mississippi River Crossing Major Investment Study (MIS) (December 1998) conducted by the Iowa and Illinois Departments of Transportation evaluated various strategies to improve travel access across the Mississippi River. The study recommends a three-pronged regional strategy for improving access across the Mississippi River: (1) removal of tolls from the Centennial Bridge with other low cost transportation system management techniques, (2) widening of the I-74 crossing, and (3) construction of a new bridge connecting Bettendorf and East Moline. The study concluded that all three strategies are required over the long term to accommodate regional transportation needs. Specifically, each river crossing addresses distinct transportation needs. Planning for the I-74 project is proceeding on the premise that the other river crossing improvements will be implemented independently and in addition to this project. Recommendations from the MIS were endorsed by Quad Cities area officials and served as the basis for development of the region's long-range transportation plan.

Issue:	Suggestions for retaining the existing Mississippi River bridges (20 comments).
Response:	The I-74 Mississippi River bridges are narrow and lack shoulders. The design of the structures is such that they cannot reasonably be widened. Options for retaining and reusing the bridges for local traffic or as a separate bicycle/pedestrian path were considered, but were also determined to not be reasonable. Section 2 of this document and Section 2 of the DEIS (on the CD at the back of this document) contain further information about this determination.

Issue:	Concern that construction of a new I-74 bridge will negatively affect travel times and access (9 comments).
Response:	A construction staging plan is being developed for the Preferred Alternative. This plan will identify requirements and sequences of construction for I-74 mainline, ramp, and arterial roadway improvements. Although some lane and ramp closures during construction are inevitable, plans will be developed to minimize construction-related impacts to communities and properties. Construction staging plans will be developed to maintain two lanes of traffic in each direction at all times for the entire I-74 corridor. Maintenance of traffic during construction was one of the conditions that had to be met for an alternative to be considered reasonable. With regard to traffic maintenance along local roads, the project team will make every effort to ensure that access is available to all properties during construction, although temporary restrictions to access may be necessary for limited periods of time. The project team will work with local officials and business owners to develop plans that minimize traffic disruption and inconveniences for area businesses and residents.

Concerns relating to environmental impacts (15 comments), project schedule and process (14 comments), and impacts to specific properties (11 comments) were also included in the responses received from area residents.

5.3.3 Small Group Meetings

Meetings were held with a number of local groups interested in particular components of the project. A list of these groups, along with summaries of meetings held before the end of 2003, can be found in Section 5.3.2, *Small Group Meetings*, of the DEIS.

A meeting with River Action, Inc. was held on July 20, 2005. The group expressed support for the bicycle/pedestrian trail along the Mississippi River bridge and the preliminary decisions regarding trail location and width. Also discussed were the design features, the project schedule, and funding issues regarding the Preferred Alternative.

5.3.4 Property Owner Meetings

Three sets of property owner meetings have occurred during the course of the project. The first set was held in 2003 and is discussed in Section 5.3.3, *Property Owner Meetings*, of the DEIS.

The I-74 project team met with 30 individual property/business owners in a second set of one-on-one meetings on July 19, 20, and 26, 2005. The meetings were held at the Bettendorf Chamber of Commerce and Iowa DOT Davenport offices. The purpose of the meetings was to provide an opportunity for potentially affected property and business owners in downtown Bettendorf and Moline to talk to project staff regarding overall project issues, potential impacts to individual properties, and Iowa DOT and Illinois DOT property acquisition procedures. Materials present at the meetings include an exhibit showing the draft I-74 Preferred Alternative, Iowa DOT property acquisition brochures, and the I-74 Newsletter Issue #4. Common concerns and issues raised at the meetings were right-of-way acquisition schedule, relocation assistance and process, changes in property access and parking resulting from the proposed improvements, and the ability to reuse or reacquire property remaining after completion of project.

A third set of one-on-one meetings with property owners occurred between November 14-16, 2007. Thirty-six individual property/business owners attended the meetings, which were held at the Bettendorf City Hall and Bettendorf Chamber of Commerce. The purpose of the meetings was to provide potentially impacted property owners and business owners

in downtown Bettendorf and Moline an opportunity to talk to project staff regarding overall project issues, potential impacts to individual properties, and Iowa DOT and Illinois DOT property acquisition procedures. Invitations to participate in the individual property owner meetings were mailed to property owners affected by the current construction limit boundaries.

A variety of project information was available at the meetings, including exhibits showing the I-74 Preferred Alternative, I-74 parcel maps, and Iowa DOT Property Acquisition Brochures. Topics most commonly discussed were the construction schedule, property appraisal and acquisition/relocation process, changes in property access and parking as a result of the proposed improvements, and the ability to reuse or reacquire property remaining after completion of project.

5.3.5 Project Videos

Four videos have been produced during the study period. The first three videos were produced prior to the publication of the DEIS and are described in Section 5.3.4, *Project Videos*, of the DEIS. A fourth video was developed in conjunction with the Public Hearing and was shown both at the hearings and on public access television. The video introduced the project and its regional context, described the major DEIS components, including a lengthy description of the alternatives carried forward for further review, and provided information on upcoming events and how to get involved.

5.3.6 Newsletters/Brochures

Five newsletters and one brochure have been developed throughout the course of the study. The newsletters were mailed to area residents, interest groups, governmental officials, and agency personnel and posted on the project Web site. The newsletters provided updates on the study's progress and announced project milestones that had been reached, as well as providing an opportunity for the public to send comments via return mail.

The first two newsletter issues and the brochure were developed prior to the DEIS being published and are described in Section 5.3.5, *Newsletters/Brochures*, in the DEIS. Table 5-5, *Newsletters*, summarizes information provided in the three newsletters produced since the publication of the DEIS. No additional brochures have been developed.

TABLE 5-4
Newsletters

	Date	Topics
Issue #3	Fall 2003	Message from the Project Advisory Committee; DEIS; Summary of Alternatives; What's Next?; Comment Form
Issue #4	Winter 2005	Message from the Project Advisory Committee; Preferred Alternative; Mississippi River Design Process; Public Involvement Opportunities; Comment Form
Issue #5	Spring 2006	Message from the Project Advisory Committee; Bridge Types Considered for the Mississippi River Crossing; Bridge Type Evaluation; The I-74 Preferred Alternative; What's Next?; Comment Form

5.3.7 Web Site

A project Web site, www.i74corridorstudy.org, was developed to provide an additional venue for disseminating project-related information and soliciting public input. The Web site has been consistently updated as milestones are reached or public involvement activities are scheduled. The Web site provides visitors with the opportunity to add their contact information to the mailing list or submit a comment. See Section 5.3.6, *Web Site*, in the DEIS for information presented on the Web site prior to the publication of the DEIS.

Since the DEIS was published, the following information has been posted on the project Web site:

- Identification of the I-74 Preferred Alternative
- Selection of the recommended bridge type
- Newsletter Issues 3, 4, and 5
- Public Hearing and Public Information Meeting #3 announcements and presentation materials

Comments are continually received through the Web site and include support for the proposed improvements, concern about congestion along the corridor, questions about the proposed bridge location, and support for the bicycle/pedestrian accommodations.

5.3.8 Mailing List

The contact information for area residents; federal, state, and local governmental officials; interest group representatives; and agency personnel was compiled in a project mailing list. More than 1,000 names were on the list at the time the DEIS was published. Since then, the mailing list has been revised and currently includes approximately 200 more names. The list has been used to send project updates and meeting invitations.

5.4 Draft EIS Comments

The Notice of Availability for the DEIS was published in the Federal Register on November 14, 2003. The comment period closed on January 9, 2004. Comments on the DEIS were received from agency representatives and members of the public. Comments received from the public are summarized in Section 5.3.2, *Public Hearing*, in this FEIS. Agency Comments and DOT responses are described below.

5.4.1 Agency Comments

Table 5-5, *Agency Comments on the DEIS*, summarizes comments received by agencies and actions taken by DOT to address them.

TABLE 5-5
Agency Comments on the DEIS

Agency	Comment	Response
U.S. Coast Guard	Requires impact to tribal land be discussed in the FEIS.	An Iowa DOT Tribal Notification form was completed and reported that no Native American Indian sites eligible for the NRHP were found. See Section 3.12.1, <i>Archaeological Resources</i> .
USDA, Natural Resources Conservation Service	Requires construction impacts to navigation and environment to be discussed in the FEIS.	Section 4.3.16.4, <i>Navigation Impacts</i> , was added to the document to discuss the navigation situation during construction.
U.S. Environmental Protection Agency	Construction activity should cause minimal impact to air, water, and wildlife resources.	Alternatives were developed to limit the amount of adverse impact that improvements would have on the environment.
U.S. Environmental Protection Agency	Recognizes that the existing bridge could be reused for bicyclists/pedestrians or for mass transit options.	Comment was considered when deciding whether reuse of the existing bridge would be included in the proposed improvements.
U.S. Environmental Protection Agency	Requests inclusion of information on fish spawning areas.	Information was added to Section 3.6.1, <i>Physical, Chemical, and Biological Description of Surface Water Bodies</i> , regarding fish spawning areas in the water bodies within the project corridor.
U.S. Environmental Protection Agency	Requests more information on wetlands in the project area be included in the FEIS—for example, Floristic Quality Index (FQI).	FQI was added in Table 3-3, <i>Wetland Areas Within the I-74 Study Corridor</i> , and a sentence about the FQI rating in each of the paragraphs specific to each wetland was included in FEIS in Section 4.3.6, <i>Wetland Impacts</i> .
U.S. Environmental Protection Agency	If removal of bridge is decided upon, request that demolition release least amount of heavy metals into the environment.	Potential demolition methodologies discussion was added to Section 4.3.5.1, <i>Construction Impacts to Surface Water</i> .
U.S. Environmental Protection Agency	Requests inclusion of information on any potential impact to fish spawning areas, and avoidance, minimization, and mitigation measures possible.	No fish spawning locations were identified within the project corridor. Therefore, no discussion on impacts to spawning areas was added.
U.S. Environmental Protection Agency	To minimize stormwater runoff into the river, suggests implementing BMPs with the assistance of Illinois EPA and Iowa DNR and considering stormwater collection on the bridge deck.	A discussion was added to Section 4.3.5.2, <i>Operational and Maintenance Impacts to Surface Waters</i> , regarding whether stormwater collection on the bridge deck was included in the design.
U.S. Environmental Protection Agency	The severity of impact to the quality of wetlands should be discussed.	Information on impacts to the quality of the wetlands was added to Section 4.3.6, <i>Wetland Impacts</i> .
U.S. Environmental Protection Agency	Recognizes that reuse of the existing bridge would avoid impacts to the mussel species.	Comment was considered when deciding whether reuse of the existing bridge would be included in the proposed improvements.
U.S. Environmental Protection Agency	Requests new structure to be a cable-stayed bridge because it would require the installation of the fewest number of piers in the river.	An explanation was included in Section 4.3.15.1, <i>Proposed New River Crossing Structure</i> , as to why the cable-stayed bridge was not recommended as the proposed bridge type.

TABLE 5-5
Agency Comments on the DEIS

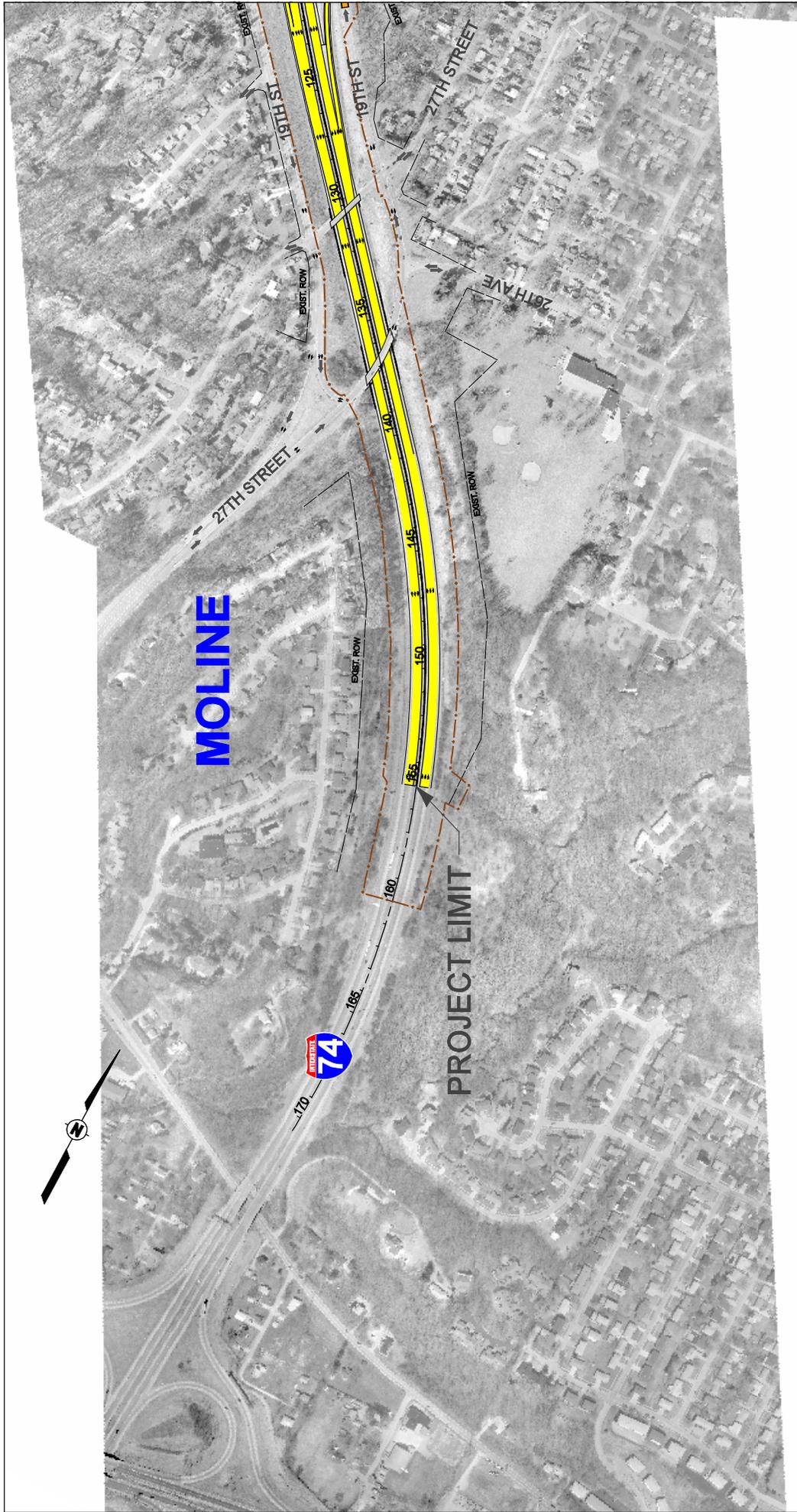
Agency	Comment	Response
	<p>USEPA would not require removal of lead-based paint from the bridge prior to demolition. However, wastes generated from removal of lead-based paint in preparation for torch demolition or rivet removal may fall under RCRA regulations. The project should be reviewed for RCRA applicability.</p>	<p>Section 4.3.16.3, <i>Solid Waste and Hazardous Waste</i>, will include the determination on whether RCRA applies to the demolition of the existing bridges.</p>
	<p>Suggests choosing Alignment F because it is farther away from the mussel bed than Alignment E and therefore would minimize impacts to the mussels.</p>	<p>Comment was considered when identifying the Preferred Alternative.</p>
	<p>Requests that relocation of mussel species occurs outside the vicinity of where a Campbells Island bridge could be placed.</p>	<p>Comment is included as a potential mitigation strategy in Section 4.3.9.1, <i>Mitigation for Threatened and Endangered Species</i>.</p>
	<p>FEIS should include the mussel mitigation strategy.</p>	<p>Section 4.3.9.1, <i>Mitigation for Threatened and Endangered Species</i>, notes that the jurisdictional agencies considered this request and concluded that additional mussel surveys required to identify a mitigation strategy will not be completed until the time of construction is near, which is expected to occur during subsequent stages of the project.</p>
	<p>Requests more information on mussel impacts such as specific numbers of mussels directly and indirectly affected and a more thorough description of the area affected.</p>	<p>The number of mussels is not known at this time. The jurisdictional agencies considered this request and concluded that additional mussel surveys required to determine this information will not be completed until the time of construction is near.</p>
<p>Illinois Environmental Protection Agency</p>	<p>A Construction Site NPDES permit is required from the Division of Water Pollution Control.</p> <p>A Section 401 Water Quality Certification will be required for any Section 404 dredge and fill permit required by the Army Corps of Engineers.</p>	<p>Section 4.3.5, <i>Water Quality Impacts</i>, will be updated to reflect that coordination has occurred with IEPA.</p> <p>The agency was contacted for specific requirements.</p>
	<p>Any demolition or construction waste must be recycled or delivered to a permitted waste disposal/treatment facility.</p>	<p>This sentence was included in Section 4.3.16.3, <i>Solid Waste and Hazardous Waste</i>.</p>
<p>Illinois Department of Natural Resources</p>	<p>Supports including bicycle/pedestrian accommodations in improvements.</p> <p>In following with the Interagency Wetland Policy Act, wetland impact determinations and wetland compensation plans must be implemented within 3 years before requiring reevaluation.</p> <p>Supports efforts to continue minimizing impacts to wetlands and</p>	<p>Support was considered during alternatives development.</p> <p>A wetland mitigation plan was developed and described in Section 4.3.6.3, <i>Wetland Mitigation</i>.</p> <p>Illinois DOT will continue to coordinate with IDNR per normal process.</p>

TABLE 5-5
Agency Comments on the DEIS

Agency	Comment	Response
	implementing IDOT's Wetland Action Plan. Requests opportunity to review/comment to comply with Illinois Interagency Policy Act.	Measures to address stormwater runoff have been considered. See Section 4.3.5, <i>Water Quality Impacts</i> , for further information.
	Indicates a concern about the impact that runoff from the bridge could have on the Sylvan Slough and requested mitigation measures be evaluated.	
	Indicate who is applying and therefore responsible for implementing the Incidental Take Application. Consultation will be closed when application is received.	The following text was included in Section 4.3.9.1, <i>Mitigation for Threatened and Endangered Species</i> : "An Incidental Take Permit will be applied for and implemented by the project sponsors (Iowa and Illinois DOTs). Consultation with the Illinois DNR will be closed when the permit is received."
	Requests continued monitoring of the Natural Area for bald eagle use.	If continual monitoring of the Natural Area for bald eagle use can be provided it will be noted in Section 4.3.9, <i>Threatened and Endangered Species</i> .
	Reviews for compliance with the Endangered Species Act must occur within 3 years.	Coordination with IDNR and project development have been ongoing since the publication of the DEIS.
Cities of Bettendorf, Rock Island, Moline, and East Moline; and Counties of Scott and Rock Island	Highlighted that the bridge has never met highway standards; of most concern are the lack of shoulders and substandard weaving lengths on the ramps.	The following sentence was included in Section 1.3.2, <i>Roadway Geometry</i> , "Since the roadway was constructed, geometric standards developed by the American Association of State Highway and Transportation Officials (AASHTO) have been updated to reflect improved knowledge of how roadway geometry may influence safety and travel performance."
	Expressed concern that crashes are higher than similar river crossings in the Quad Cities by three times.	Comment was considered during the development of design measures to address safety issues.

Section 4(f) Statement

Appendix A
Preferred Alternative Exhibit



LEGEND

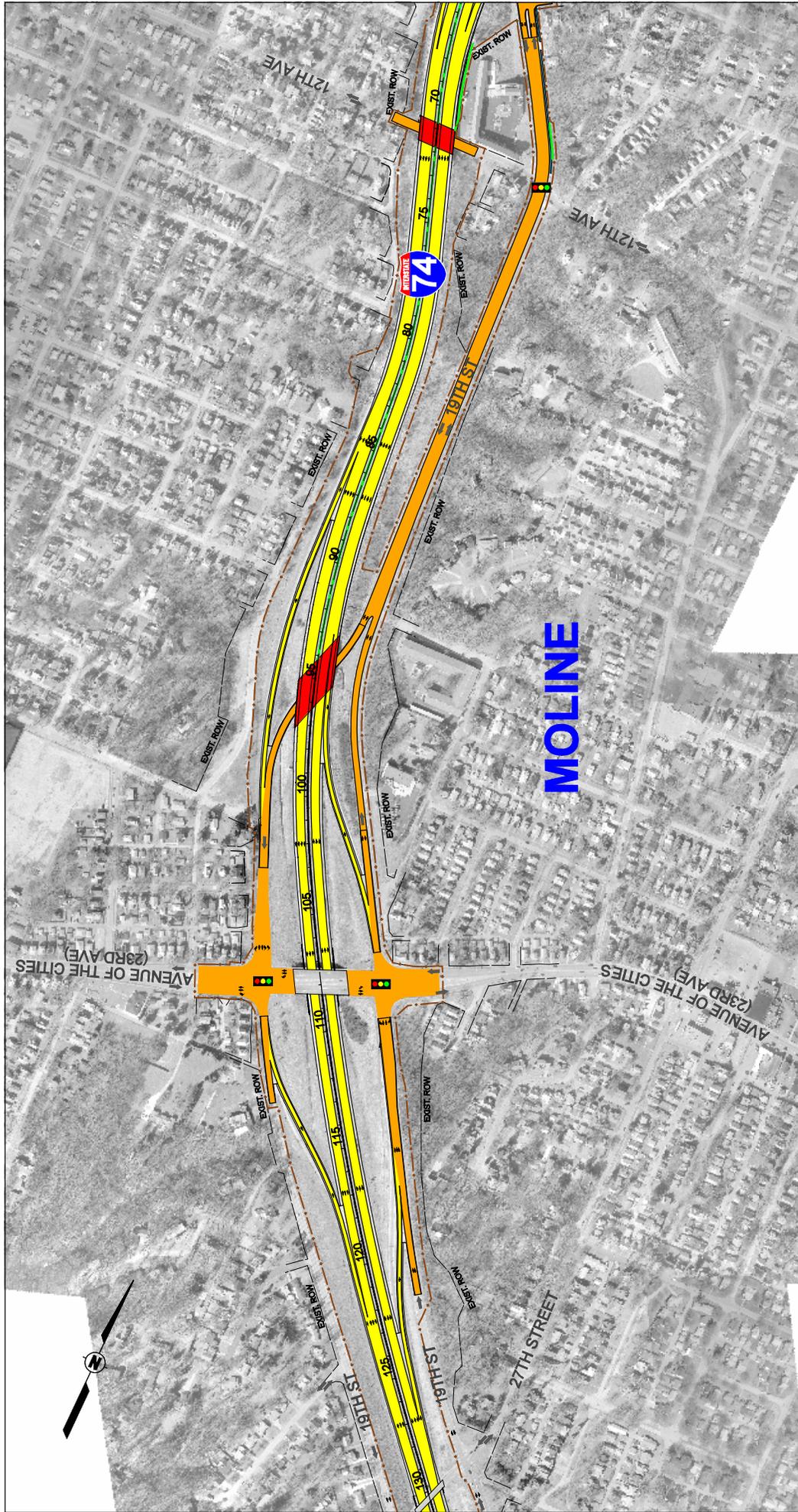
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- PROPOSED LOCAL ROADS
- PROPOSED STRUCTURES
- EXISTING ROW
- PROPOSED BIKE / PEDESTRIAN TRAIL
- LIMITS OF CONSTRUCTION

- DEIS POTENTIAL DISPLACEMENTS
- NEW POTENTIAL DISPLACEMENTS
- TRAFFIC SIGNAL
- PROPOSED ROADWAY REMOVALS / CLOSURES
- PROPOSED RETAINING WALLS
- AREA OF REMOVAL



IOWA & ILLINOIS DEPARTMENTS OF TRANSPORTATION
I-74 IOWA - ILLINOIS CORRIDOR STUDY
MOLINE - IL, BETTENDORF & DAVENPORT - IA
I-74 PREFERRED ALTERNATIVE - DRAFT

PRELIMINARY PLANS:
 NOT FINAL, SUBJECT TO CHANGE

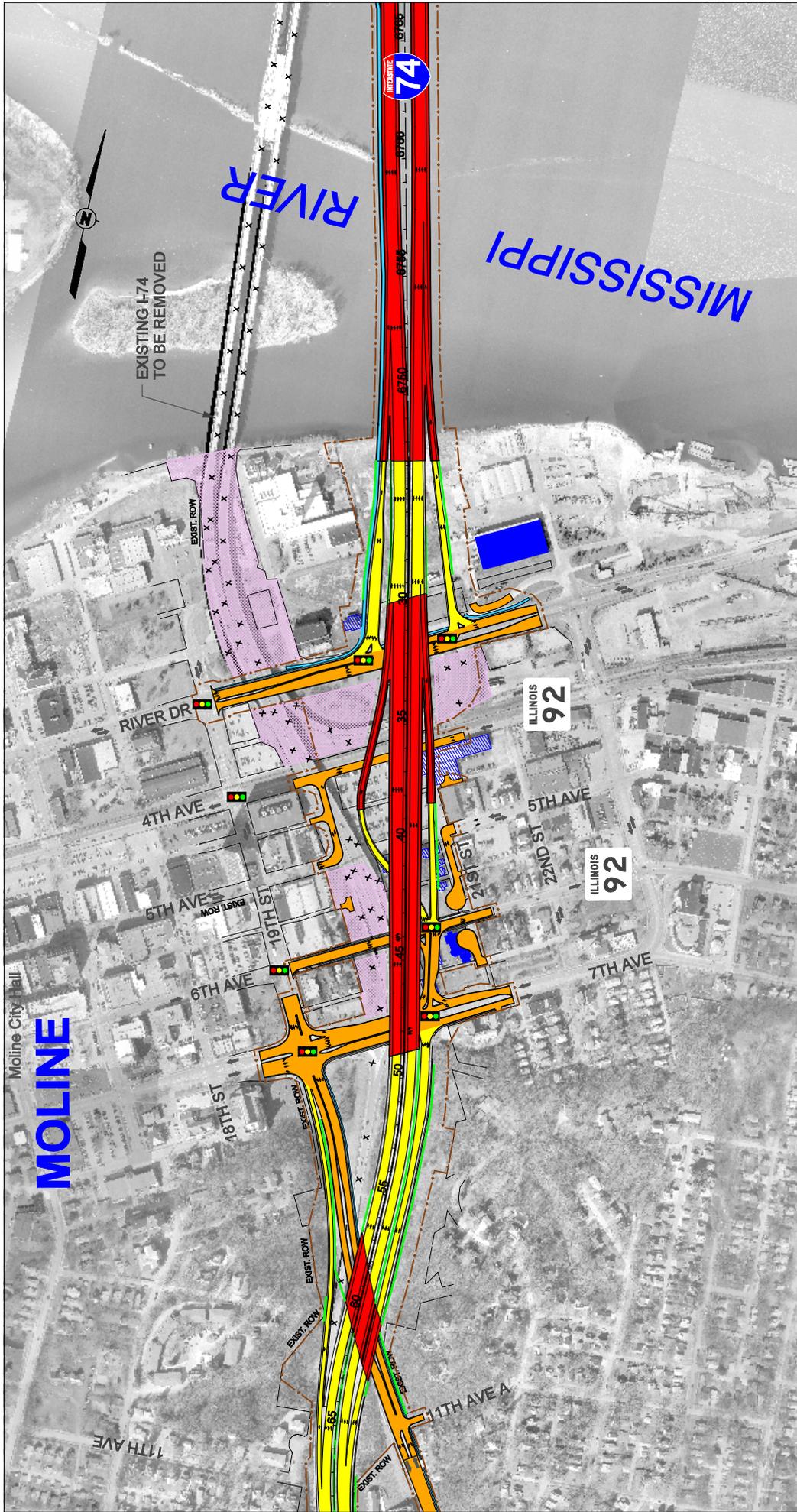


IOWA & ILLINOIS DEPARTMENTS OF TRANSPORTATION
I-74 IOWA - ILLINOIS CORRIDOR STUDY
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I-74 PREFERRED ALTERNATIVE - DRAFT

- LEGEND**
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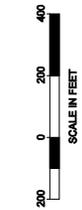
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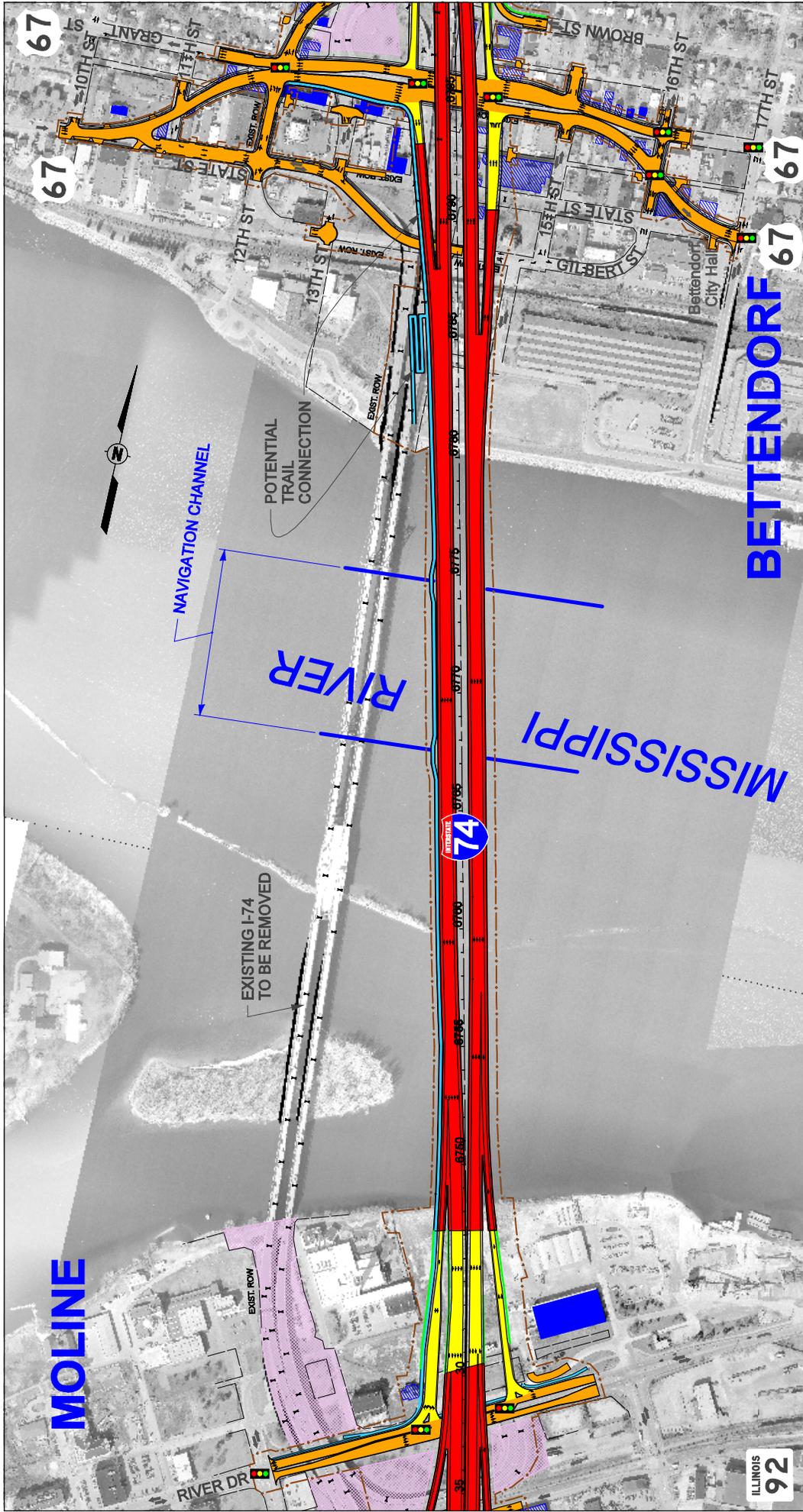
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PRELIMINARY PLANS:
NOT FINAL, SUBJECT TO CHANGE

IOWA & ILLINOIS DEPARTMENTS OF TRANSPORTATION
I-74 IOWA - ILLINOIS CORRIDOR STUDY
MOLINE - IL, BETTENDORF & DAVENPORT - IA
I-74 PREFERRED ALTERNATIVE - DRAFT



MOLINE

BETTENDORF



LEGEND

- PROPOSED MAINLINE AND RAMPS
- PROPOSED LOCAL ROADS
- PROPOSED STRUCTURES
- EXISTING ROW
- PROPOSED BIKE / PEDESTRIAN TRAIL
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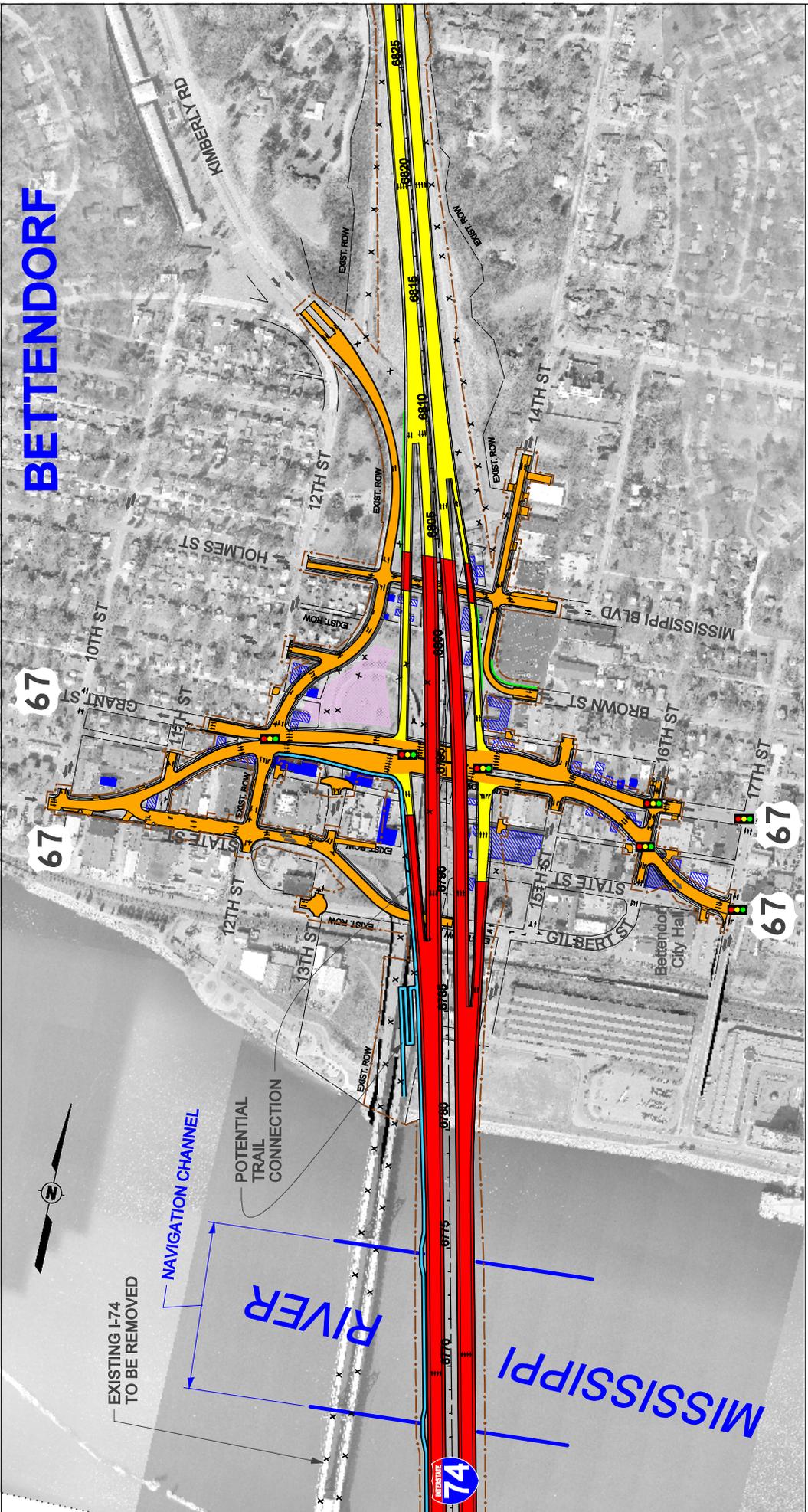
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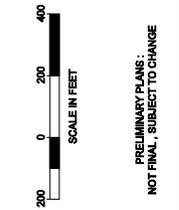
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BETTENDORF

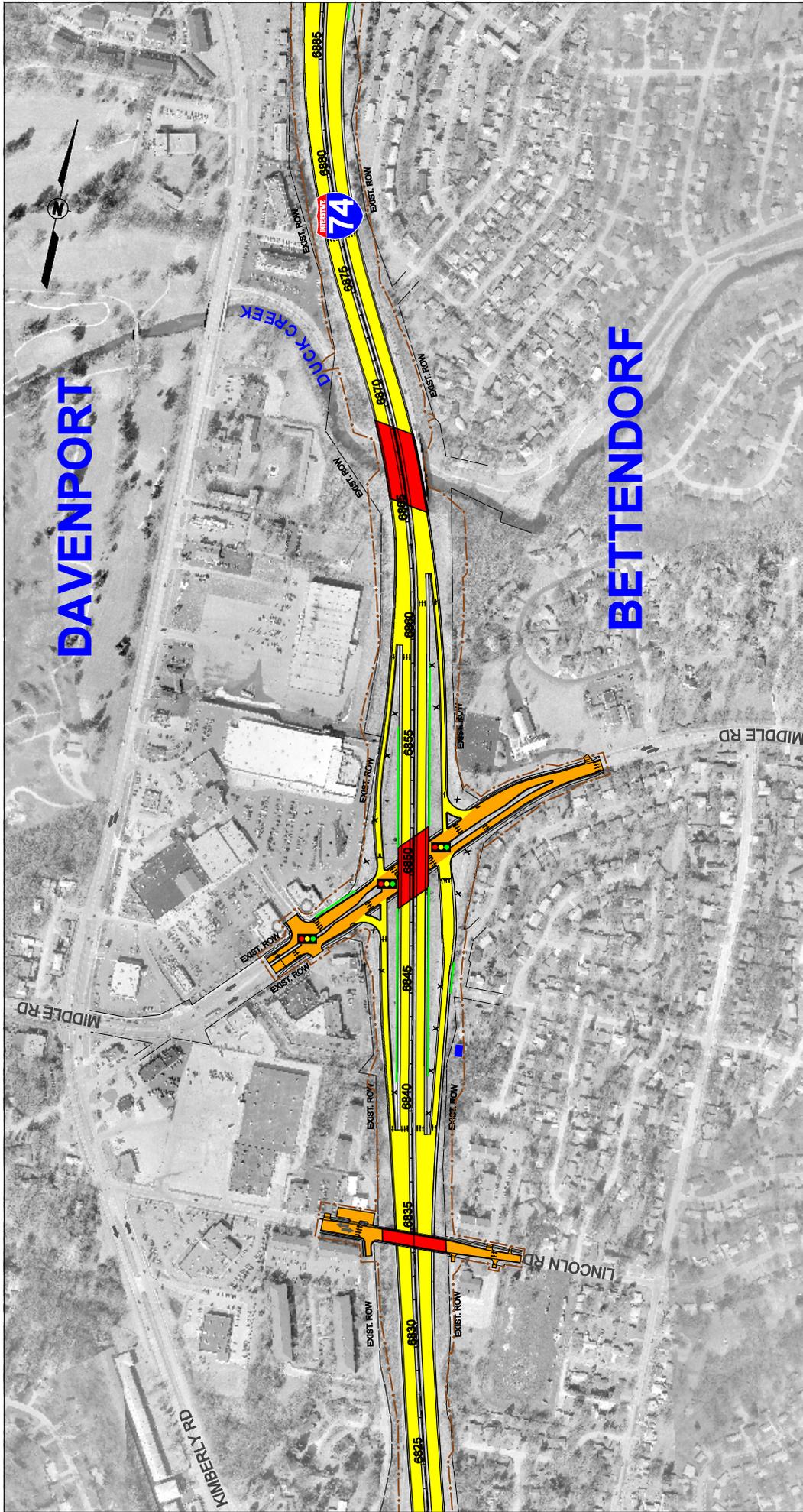


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- LEGEND**
- █ PROPOSED MAINLINE AND RAMPS
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 - █ TRAFFIC SIGNAL
 - █ PROPOSED ROADWAY REMOVALS / CLOSURES
 - █ PROPOSED RETAINING WALLS
 - █ AREA OF REMOVAL

PRELIMINARY PLANS:
NOT FINAL, SUBJECT TO CHANGE

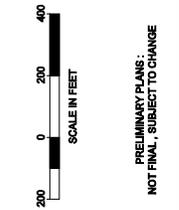


DAVENPORT

BETTENDORF

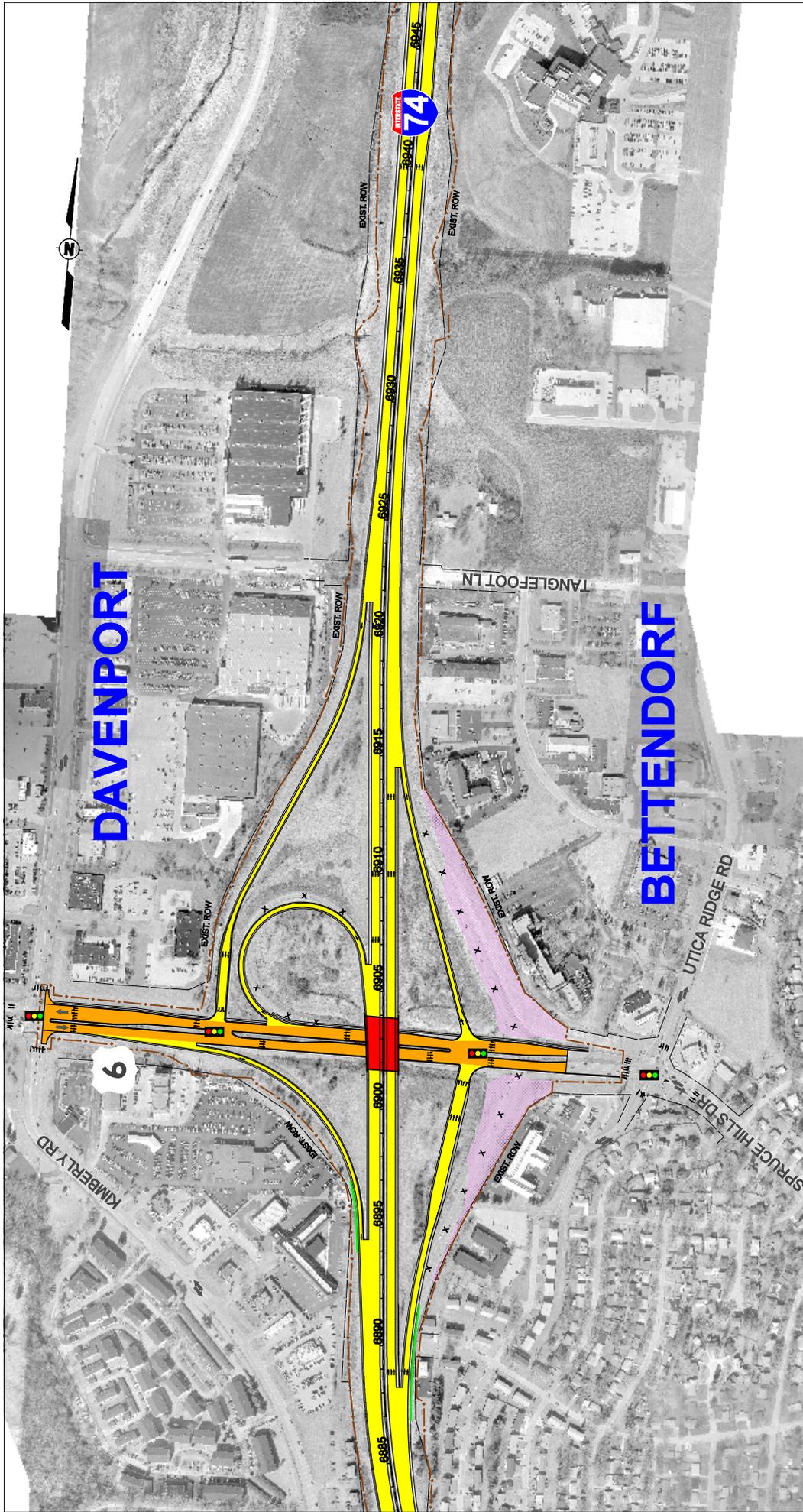


IOWA & ILLINOIS DEPARTMENTS OF TRANSPORTATION
 I-74 IOWA - ILLINOIS CORRIDOR STUDY
 MOLINE - IL, BETTENDORF & DAVENPORT - IA
 I-74 PREFERRED ALTERNATIVE - DRAFT



- LEGEND**
- PROPOSED MAINLINE AND RAMP
 - PROPOSED LOCAL ROADS
 - PROPOSED STRUCTURES
 - EXISTING ROW
 - PROPOSED BIKE / PEDESTRIAN TRAIL
 - LIMITS OF CONSTRUCTION
 - DEIS POTENTIAL DISPLACEMENTS
 - NEW POTENTIAL DISPLACEMENTS
 - TRAFFIC SIGNAL
 - PROPOSED ROADWAY REMOVALS / CLOSURES
 - PROPOSED RETAINING WALLS
 - AREA OF REMOVAL

PRELIMINARY PLANS:
 NOT FINAL, SUBJECT TO CHANGE

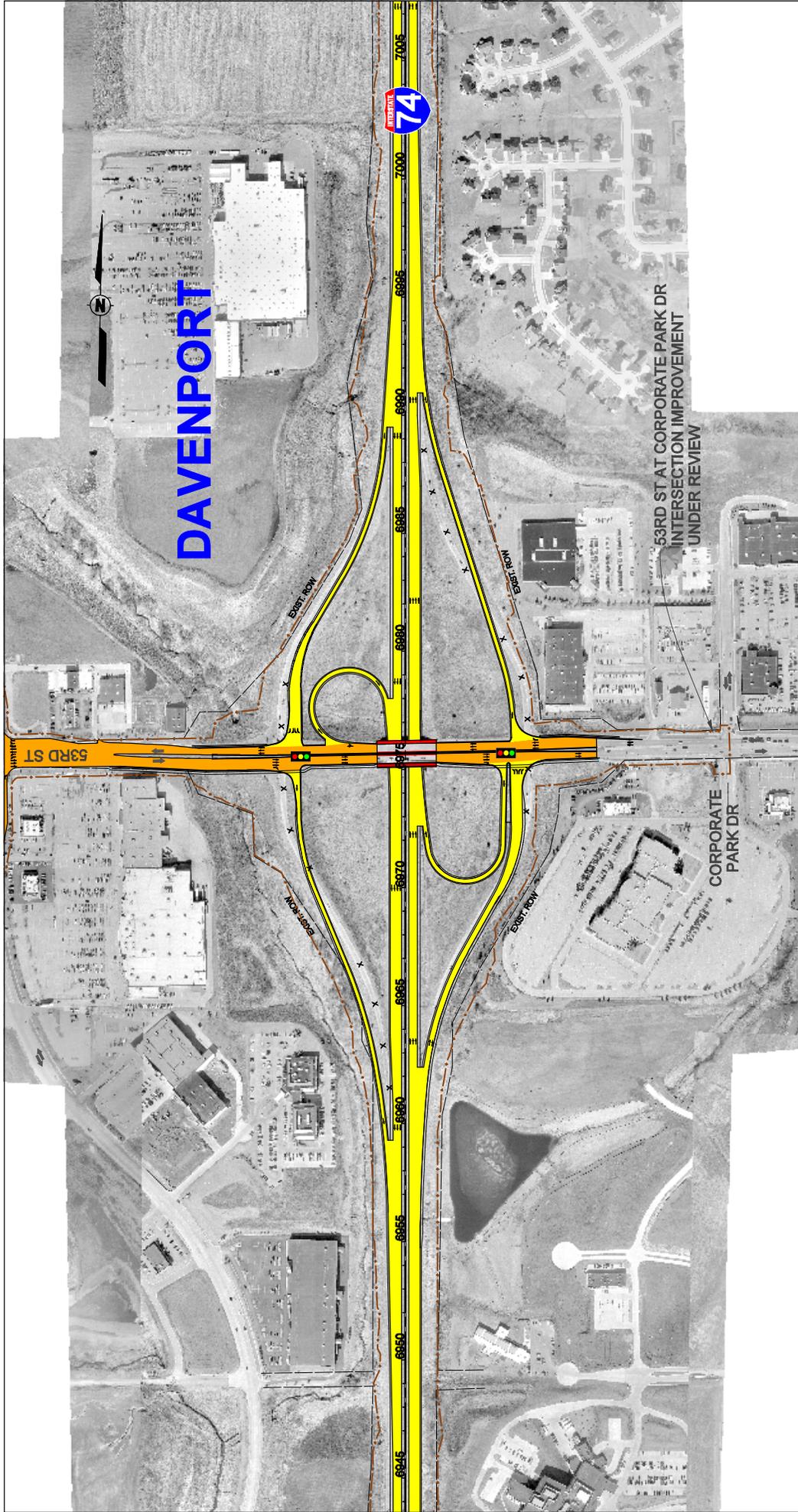


- LEGEND**
- PROPOSED MAINLINE AND RAMPS
 - PROPOSED LOCAL ROADS
 - PROPOSED STRUCTURES
 - EXISTING ROW
 - PROPOSED BIKE / PEDESTRIAN TRAIL
 - LIMITS OF CONSTRUCTION
 - DEIS POTENTIAL DISPLACEMENTS
 - NEW POTENTIAL DISPLACEMENTS
 - TRAFFIC SIGNAL
 - PROPOSED ROADWAY REMOVALS / CLOSURES
 - PROPOSED RETAINING WALLS
 - AREA OF REMOVAL



PRELIMINARY PLANS:
NOT FINAL, SUBJECT TO CHANGE

IOWA & ILLINOIS DEPARTMENTS OF TRANSPORTATION
I-74 IOWA - ILLINOIS CORRIDOR STUDY
MOLINE - IL, BETTENDORF & DAVENPORT - IA
I-74 PREFERRED ALTERNATIVE - DRAFT

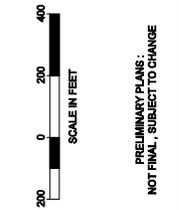


DAVENPORT

53RD ST AT CORPORATE PARK DR
INTERSECTION IMPROVEMENT
UNDER REVIEW

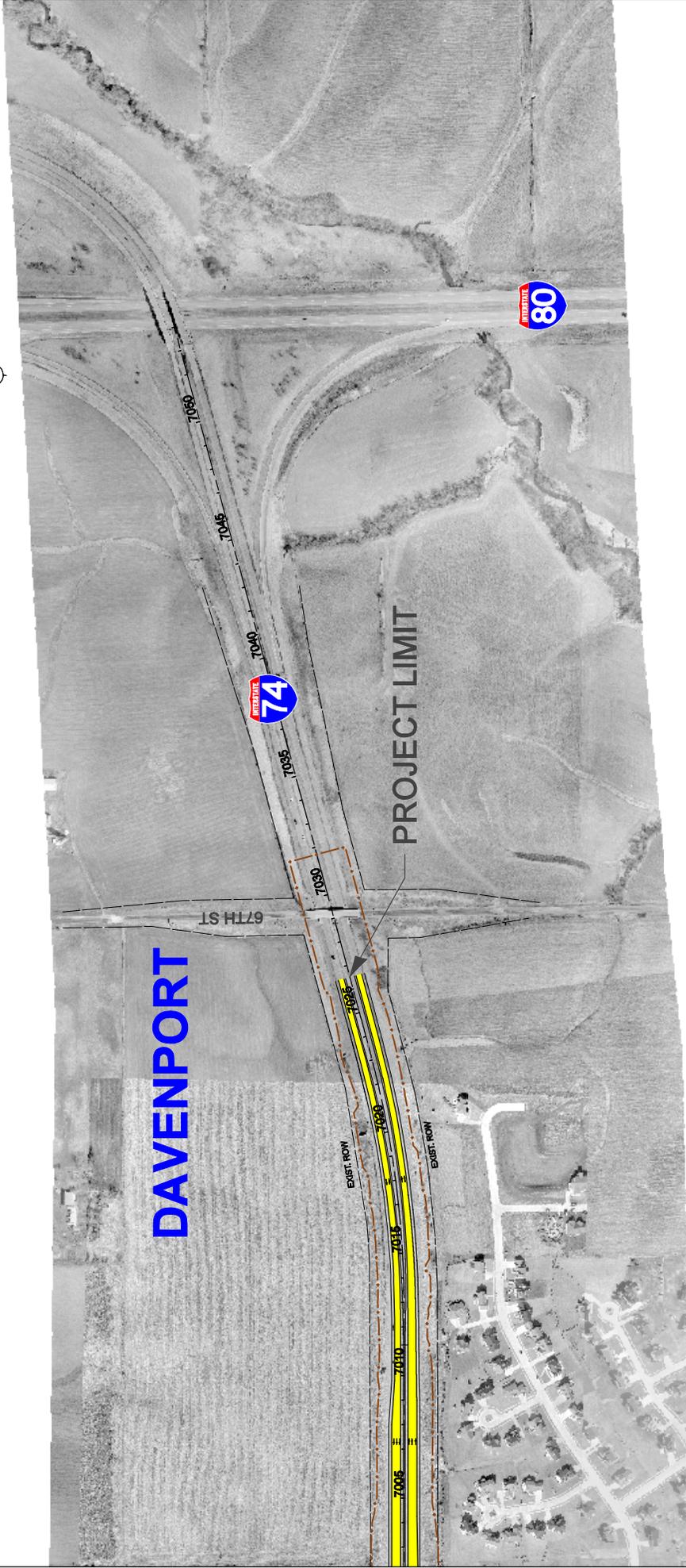


IOWA & ILLINOIS DEPARTMENTS OF TRANSPORTATION
I-74 IOWA - ILLINOIS CORRIDOR STUDY
MOLINE - IL, BETTENDORF & DAVENPORT - IA
I-74 PREFERRED ALTERNATIVE - DRAFT



- LEGEND**
- PROPOSED MAINLINE AND RAMPS
 - PROPOSED LOCAL ROADS
 - PROPOSED STRUCTURES
 - EXISTING ROW
 - PROPOSED BIKE / PEDESTRIAN TRAIL
 - LIMITS OF CONSTRUCTION
 - DEB POTENTIAL DISPLACEMENTS
 - NEW POTENTIAL DISPLACEMENTS
 - TRAFFIC SIGNAL
 - PROPOSED ROADWAY REMOVALS / CLOSURES
 - PROPOSED RETAINING WALLS
 - AREA OF REMOVAL

PRELIMINARY PLANS:
NOT FINAL, SUBJECT TO CHANGE



LEGEND

- PROPOSED MAINLINE AND RAMPS
- PROPOSED LOCAL ROADS
- PROPOSED STRUCTURES
- EXISTING ROW
- PROPOSED BIKE / PEDESTRIAN TRAIL
- LIMITS OF CONSTRUCTION

- DEIS POTENTIAL DISPLACEMENTS
- NEW POTENTIAL DISPLACEMENTS
- TRAFFIC SIGNAL
- PROPOSED ROADWAY REMOVALS / CLOSURES
- PROPOSED RETAINING WALLS
- AREA OF REMOVAL



PRELIMINARY PLANS:
NOT FINAL, SUBJECT TO CHANGE

IOWA & ILLINOIS DEPARTMENTS OF TRANSPORTATION
I-74 IOWA - ILLINOIS CORRIDOR STUDY
MOLINE - IL, BETTENDORF & DAVENPORT - IA
I-74 PREFERRED ALTERNATIVE - DRAFT

Appendix B
Aerial Photo Exhibit

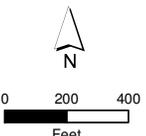


Aerial Photo Exhibit (South Section) - Page 1 of 10

Legend

Proposed Mainline and Ramps	Community Facilities	Municipal Boundary	Noise Receivers
Proposed Local Roads	Properties with Structures Listed on/Eligible for NRHP	State Boundary	R = Receiver locations monitored during onsite measurements
Proposed Bike/Pedestrian Trail	Properties with Structures Ineligible for NRHP	Wetlands	SF = Single-Family Residence
Proposed Retaining Walls	Historic Structures	Parks	MF = Multi-Family Residence
Footprint	National Register Historic Eligibility	Displacements	CH = Church
Bike/Pedestrian Trails	L = Listed E = Eligible	Duck Creek & Tributaries	H = Hotel, Motel or Inn
Sylvan Slough	I = Ineligible C = Contributing	Potentially Contaminated Sites	P = Park
			C = Commercial

Preferred Alternative





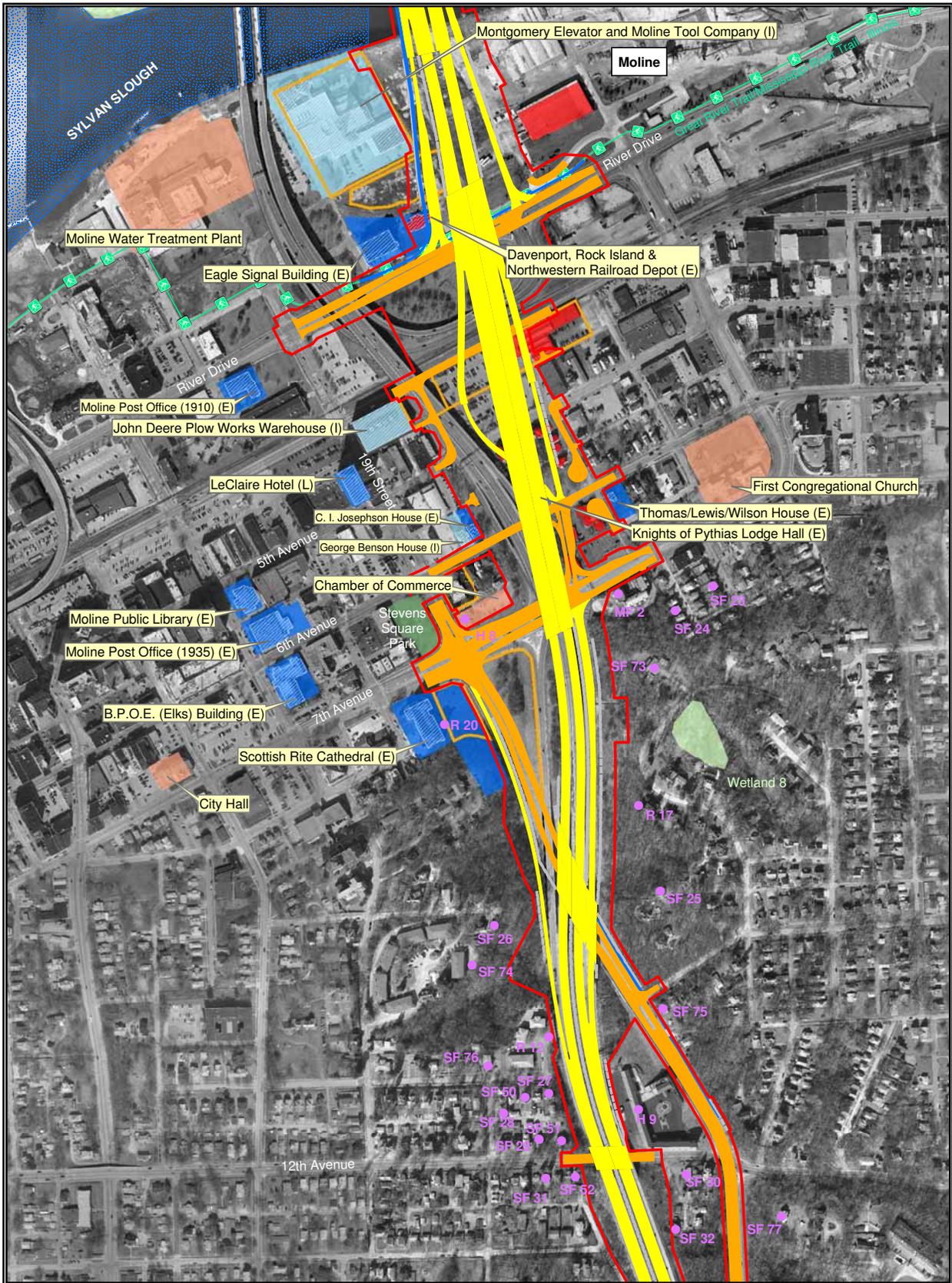
Aerial Photo Exhibit (South Section) - Page 2 of 10

Legend	
Proposed Mainline and Ramps	Community Facilities
Proposed Local Roads	Properties with Structures Listed on/Eligible for NRHP
Proposed Bike/Pedestrian Trail	Properties with Structures Ineligible for NRHP
Proposed Retaining Walls	Historic Structures
Footprint	National Register Historic Eligibility
Bike/Pedestrian Trails	L = Listed E = Eligible
Sylvan Slough	I = Ineligible C = Contributing
Municipal Boundary	State Boundary
Wetlands	Parks
Displacements	Duck Creek & Tributaries
Potentially Contaminated Sites	Noise Receivers
	R = Receiver locations monitored during onsite measurements
	SF = Single-Family Residence
	MF = Multi-Family Residence
	CH = Church
	H = Hotel, Motel or Inn
	P = Park
	C = Commercial

Preferred Alternative

0 200 400
Feet

Page 2 of 10

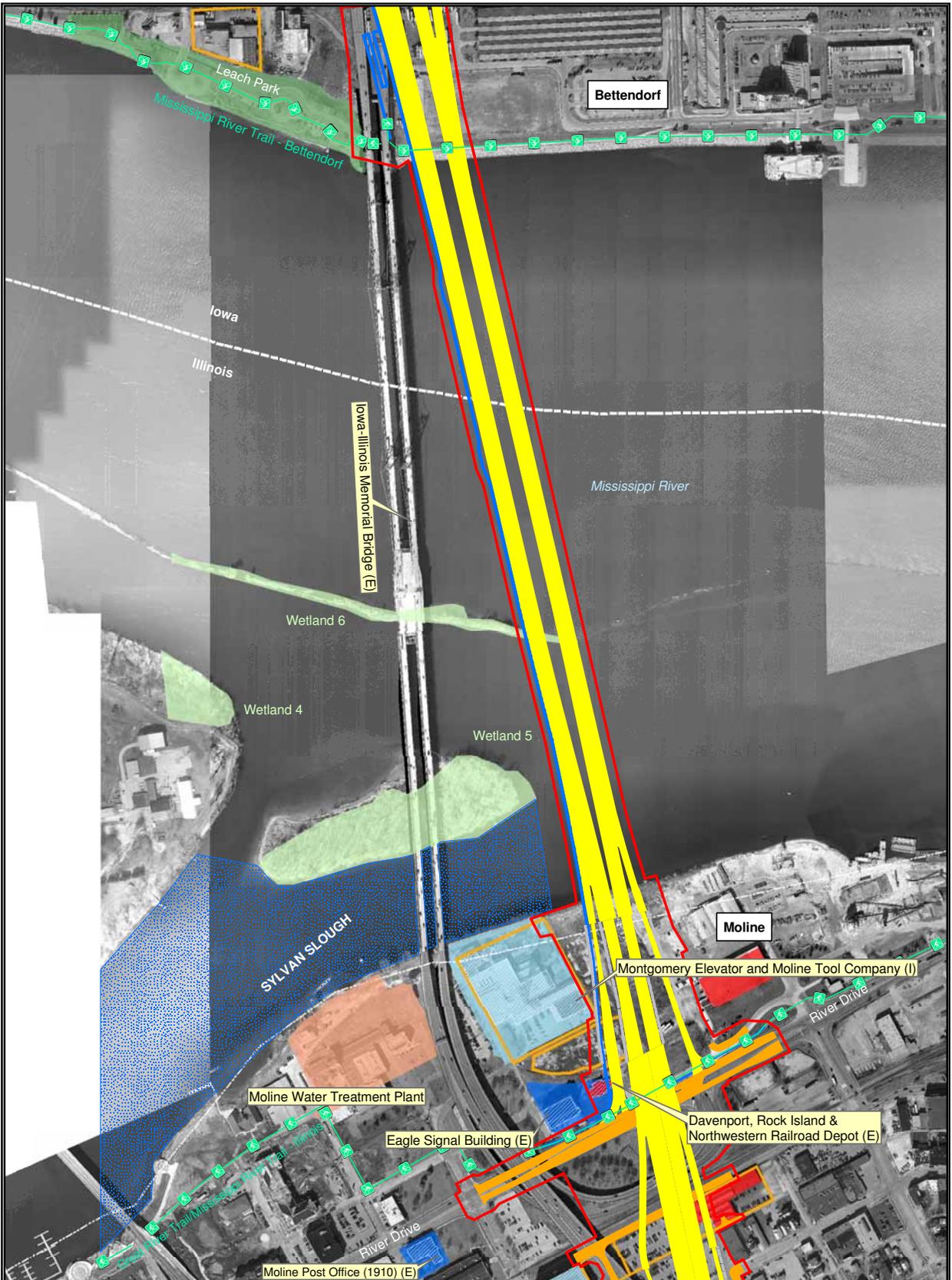


Aerial Photo Exhibit (Central Section)
Downtown Moline - Page 3 of 10

Legend	
	Proposed Mainline and Ramps
	Proposed Local Roads
	Proposed Bike/Pedestrian Trail
	Proposed Retaining Walls
	Footprint
	Bike/Pedestrian Trails
	Sylvan Slough
	Community Facilities
	Properties with Structures Listed on/Eligible for NRHP
	Properties with Structures Ineligible for NRHP
	Historic Structures
	National Register Historic Eligibility
	L = Listed E = Eligible
	I = Ineligible C = Contributing
	Municipal Boundary
	State Boundary
	Wetlands
	Parks
	Displacements
	Duck Creek & Tributaries
	Potentially Contaminated Sites
	Noise Receivers
	R = Receiver locations monitored during onsite measurements
	SF = Single-Family Residence
	MF = Multi-Family Residence
	CH = Church
	H = Hotel, Motel or Inn
	P = Park
	C = Commercial

Preferred Alternative

0 200 400
Feet



Aerial Photo Exhibit (Central Section)
Mississippi River Bridge - Page 4 of 10

Legend	
	Proposed Mainline and Ramps
	Proposed Local Roads
	Proposed Bike/Pedestrian Trail
	Proposed Retaining Walls
	Footprint
	Bike/Pedestrian Trails
	Sylvan Slough
	Community Facilities
	Properties with Structures Listed on/Eligible for NRHP
	Properties with Structures Ineligible for NRHP
	Historic Structures
	National Register Historic Eligibility
	L = Listed E = Eligible
	I = Ineligible C = Contributing
	Municipal Boundary
	State Boundary
	Wetlands
	Parks
	Displacements
	Duck Creek & Tributaries
	Potentially Contaminated Sites
	Noise Receivers
	R = Receiver locations monitored during onsite measurements
	SF = Single-Family Residence
	MF = Multi-Family Residence
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	P = Park
	C = Commercial

Preferred Alternative

0 200 400
Feet

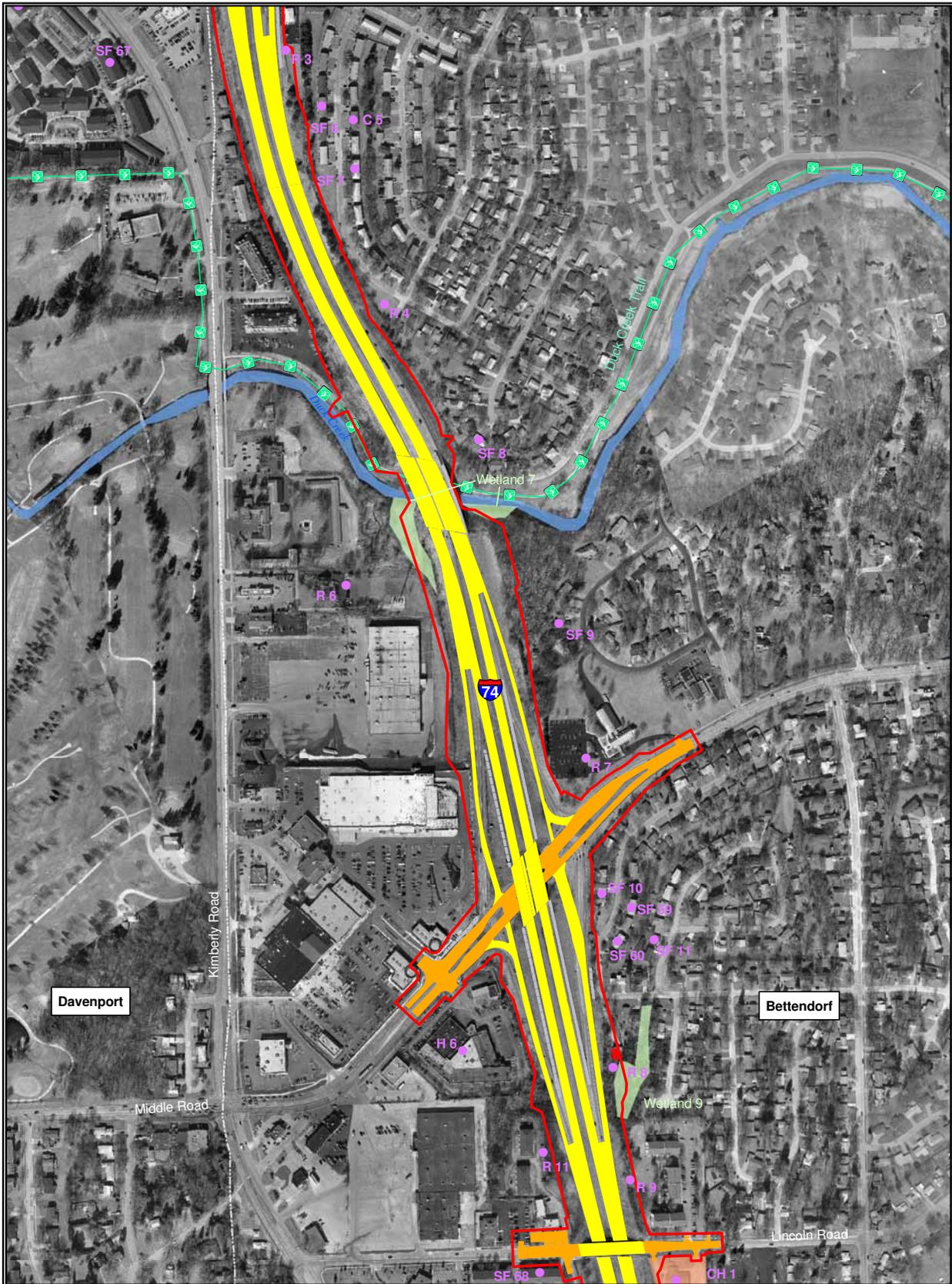


Legend	
	Proposed Mainline and Ramps
	Proposed Local Roads
	Proposed Bike/Pedestrian Trail
	Proposed Retaining Walls
	Footprint
	Bike/Pedestrian Trails
	Sylvan Slough
	Community Facilities
	Properties with Structures Listed on/Eligible for NRHP
	Properties with Structures Ineligible for NRHP
	Historic Structures
	National Register Historic Eligibility
	L = Listed
	E = Eligible
	I = Ineligible
	C = Contributing
	Municipal Boundary
	State Boundary
	Wetlands
	Parks
	Displacements
	Duck Creek & Tributaries
	Potentially Contaminated Sites
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Preferred Alternative

Page 5 of 10

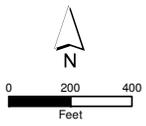
Aerial Photo Exhibit (Central Section)
Downtown Bettendorf - Page 5 of 10



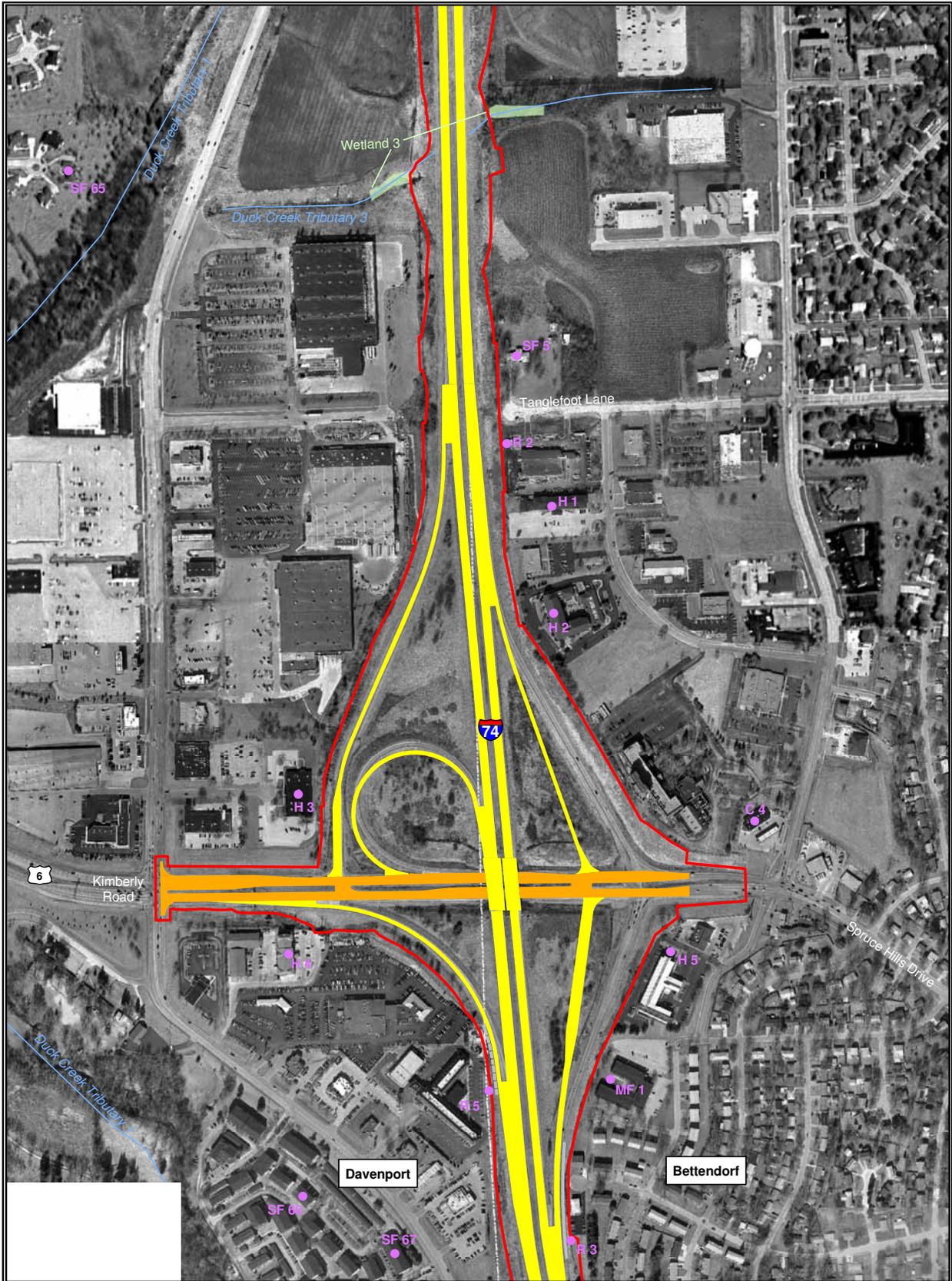
Legend

- | | | | |
|--------------------------------|--|--------------------------------|---|
| Proposed Mainline and Ramps | Community Facilities | Municipal Boundary | Noise Receivers |
| Proposed Local Roads | Properties with Structures Listed on/Eligible for NRHP | State Boundary | R = Receiver locations monitored during onsite measurements |
| Proposed Bike/Pedestrian Trail | Properties with Structures Ineligible for NRHP | Wetlands | SF = Single-Family Residence |
| Proposed Retaining Walls | Historic Structures | Parks | MF = Multi-Family Residence |
| Footprint | National Register Historic Eligibility | Displacements | CH = Church |
| Bike/Pedestrian Trails | L = Listed E = Eligible | Duck Creek & Tributaries | H = Hotel, Motel or Inn |
| Sylvan Slough | I = Ineligible C = Contributing | Potentially Contaminated Sites | P = Park |
| | | | C = Commercial |

Preferred Alternative



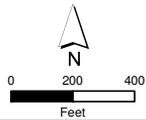
Aerial Photo Exhibit (North Section)
Middle Road Interchange - Page 6 of 10

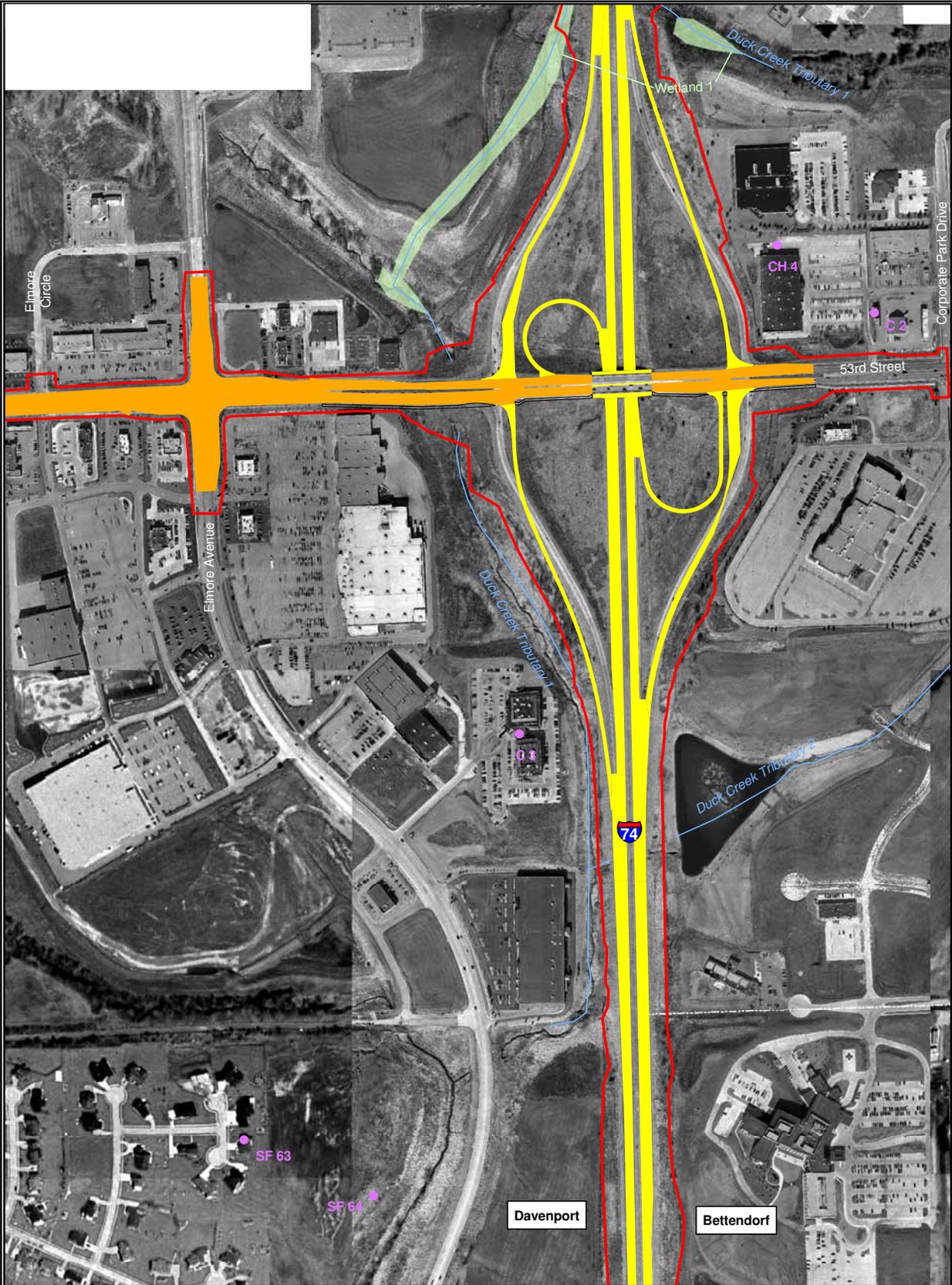


Legend

- | | | | |
|--------------------------------|--|--------------------------------|---|
| Proposed Mainline and Ramps | Community Facilities | Municipal Boundary | Noise Receivers |
| Proposed Local Roads | Properties with Structures Listed on/Eligible for NRHP | State Boundary | R = Receiver locations monitored during onsite measurements |
| Proposed Bike/Pedestrian Trail | Properties with Structures Ineligible for NRHP | Wetlands | SF = Single-Family Residence |
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| Sylvan Slough | I = Ineligible C = Contributing | Potentially Contaminated Sites | P = Park |
| | | | C = Commercial |

Preferred Alternative

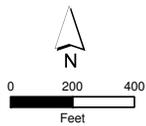


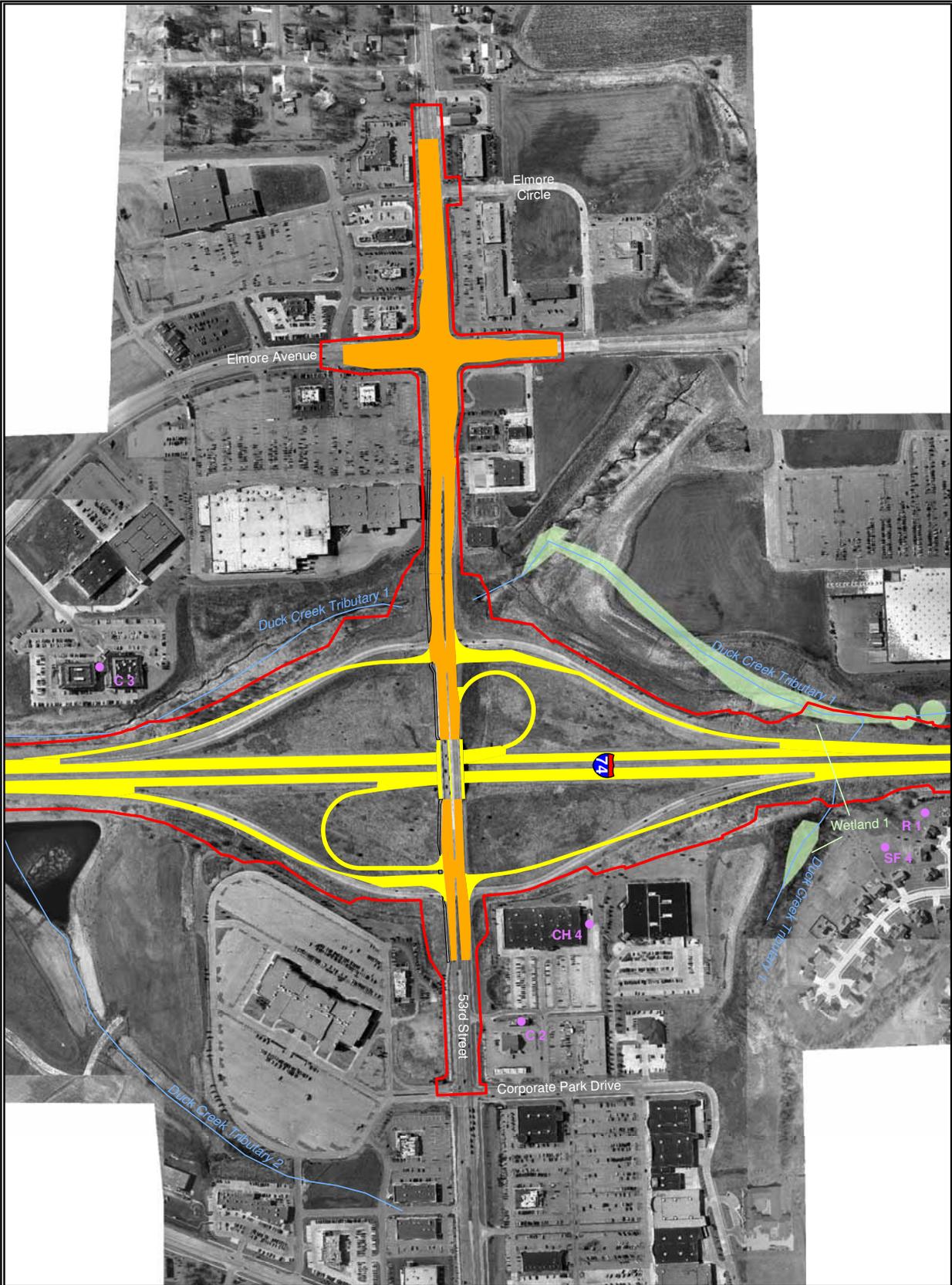


Legend

- | | | | |
|--------------------------------|--|--------------------------------|---|
| Proposed Mainline and Ramps | Community Facilities | Municipal Boundary | Noise Receivers |
| Proposed Local Roads | Properties with Structures Listed on/Eligible for NRHP | State Boundary | R = Receiver locations monitored during onsite measurements |
| Proposed Bike/Pedestrian Trail | Properties with Structures Ineligible for NRHP | Wetlands | SF = Single-Family Residence |
| Proposed Retaining Walls | Historic Structures | Parks | MF = Multi-Family Residence |
| Footprint | National Register Historic Eligibility | Displacements | CH = Church |
| Bike/Pedestrian Trails | L = Listed E = Eligible | Duck Creek & Tributaries | H = Hotel, Motel or Inn |
| Sylvan Slough | I = Ineligible C = Contributing | Potentially Contaminated Sites | P = Park |
| | | | C = Commercial |

Preferred Alternative

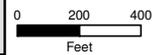
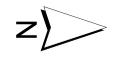


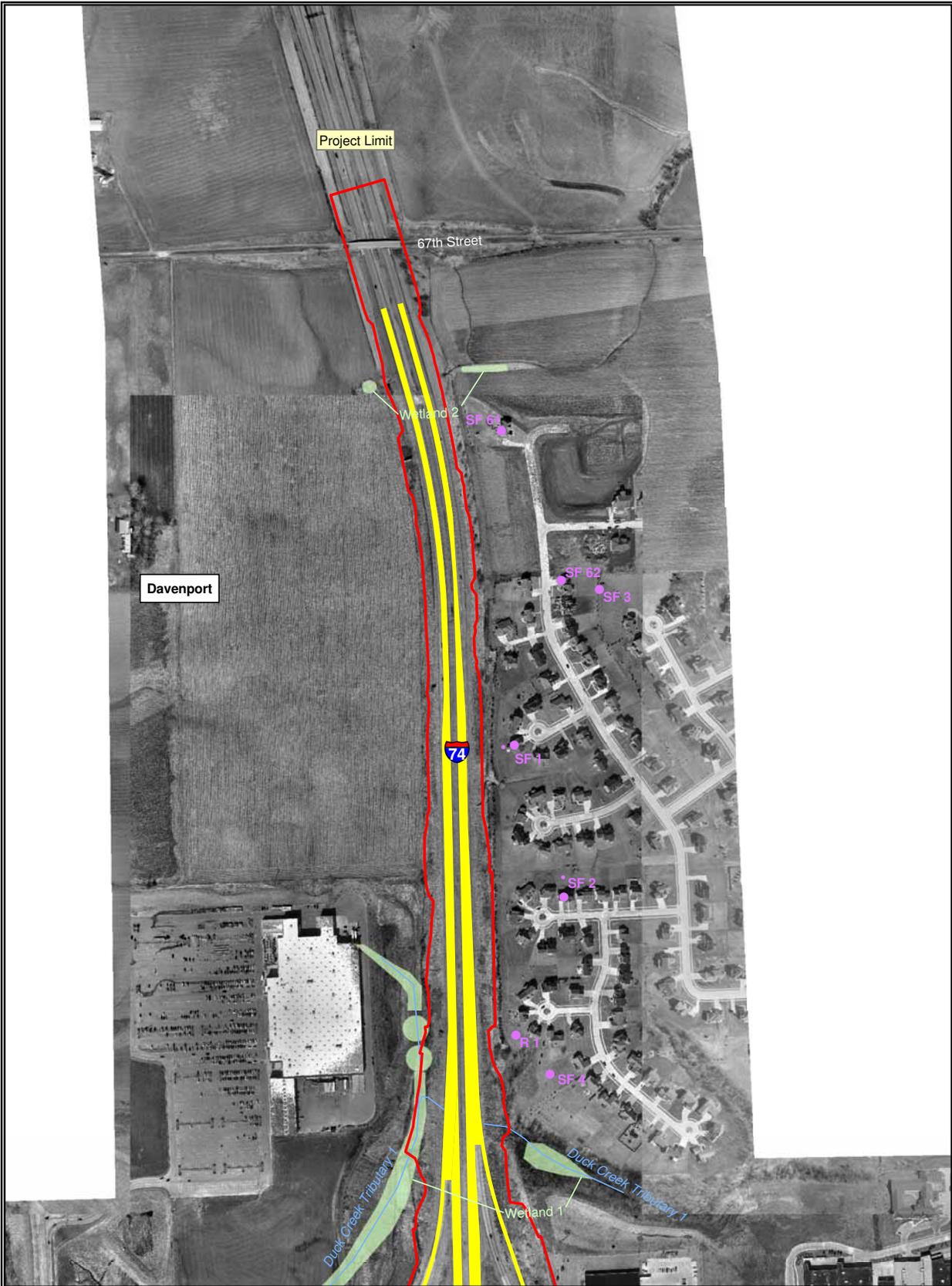


Legend

- | | | | |
|--------------------------------|--|--------------------------------|---|
| Proposed Mainline and Ramps | Community Facilities | Municipal Boundary | Noise Receivers |
| Proposed Local Roads | Properties with Structures Listed on/Eligible for NRHP | State Boundary | R = Receiver locations monitored during onsite measurements |
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| | | | C = Commercial |

Preferred Alternative



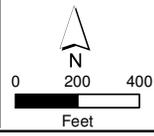


Aerial Photo Exhibit (North Section)
Northern Project Limit - Page 10 of 10

Legend

Proposed Mainline and Ramps	Community Facilities	Municipal Boundary	Noise Receivers
Proposed Local Roads	Properties with Structures Listed on/Eligible for NRHP	State Boundary	R = Receiver locations monitored during onsite measurements
Proposed Bike/Pedestrian Trail	Properties with Structures Ineligible for NRHP	Wetlands	SF = Single-Family Residence
Proposed Retaining Walls	Historic Structures	Parks	MF = Multi-Family Residence
Footprint	National Register Historic Eligibility	Displacements	CH = Church
Bike/Pedestrian Trails	L = Listed E = Eligible	Duck Creek & Tributaries	H = Hotel, Motel or Inn
Sylvan Slough	I = Ineligible C = Contributing	Potentially Contaminated Sites	P = Park
			C = Commercial

Preferred Alternative



Correspondence with Federal Agencies

U.S. Coast Guard December 1, 2003
U.S. Environmental Protection Agency December 29, 2003
U.S. Department of Agriculture, Natural Resources Conservation Service January 12, 2004
U.S. Coast Guard November 16, 2004
Response to U.S. Coast Guard May 7, 2007
Federal Aviation Administration July 5, 2007
U.S. Fish and Wildlife Service August 13, 2007
Federal Highway Administration March 7, 2006 (i.e., 2008)
Advisory Council on Historic Preservation May 13, 2008
Federal Emergency Management Agency August 1, 2008
Federal Emergency Management Agency October 8, 2008

Correspondence with State Agencies

Illinois Environmental Protection Agency November 24, 2003
Illinois Department of Natural Resources December 16, 2003
Iowa Department of Transportation December 7, 2005
Illinois Department of Natural Resources August 14, 2007

Correspondence with County/Municipal Agencies

Rock Island County November 17, 2003
City of East Moline November 18, 2003
City of Moline November 18, 2003
Scott County Board of Supervisors November 18, 2003
City of Davenport November 24, 2003
City of Rock Island November 26, 2003
City of Bettendorf December 2, 2003
City of Davenport November 10, 2004
Response to City of Davenport November 10, 2004

Correspondence with Other Organizations

Iowa Department of Transportation August 26, 2002
Iowa Department of Transportation August 26, 2002
River Industry Action Committee December 1, 2004

Appendix C
Correspondence

Correspondence with Federal Agencies

U.S. Department of
Homeland Security

United States
Coast Guard



Commander
Eighth Coast Guard District

1222 Spruce Street
St. Louis, MO 63103-2832
Staff Symbol: obr
Phone: (314) 539-3900, Ext 2382
Fax: (314) 539-3755
Email:

REC

DEC 1 0 2003

16591.1/485.51 UMR
1 December 2003

Ms. Tamara Nicholson, P.E.,
Project Manager
Office of Location and Environment
Iowa Department of Transportation
800 Lincoln Way
Ames, IA 50010

OFFICE OF LOCATION & ENVIRONMENT

Subj: PROPOSED IOWA-ILLINOIS MEMORIAL DUAL BRIDGE REPLACEMENT,
MILE 485.51, UPPER MISSISSIPPI RIVER

Dear Ms. Nicholson:

This is in reply to your letter of November 6, 2003, inviting our comments on the Draft Environmental Impact Statement (DEIS) for the subject project. The Coast Guard reviewed the document from the perspective of assessing the impacts of bridge construction on navigation and the environment. The following comments must be addressed in the final EIS document:

- a. Tribal Lands – The impact of the project on tribal lands sites must be addressed.
- b. When demolishing the bridge, the impacts to navigation and environment must be addressed.

Please provide the above requested additional information in order that this document will be acceptable to the Coast Guard. We will also need a final copy of the Final Environmental Impact Statement.

We appreciate the opportunity to comment on this project. Please contact Mr. David Orzechowski at the above telephone number if you have questions regarding our comments or requirements.

Sincerely,

A handwritten signature in black ink, appearing to read "R. Wiebusch".

ROGER K. WIEBUSCH
Bridge Administrator
By direction of the District Commander



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII
901 NORTH 5TH STREET
KANSAS CITY, KANSAS 66101

RECEIVED

JAN 02 2004

DEC 29 2003

OFFICE OF LOCATION & ENVIRONMENT

Mr. James P. Rost, Director
Office of Location and Environment
Iowa Department of Transportation
800 Lincoln Way
Ames, IA 50010

Dear Mr. Rost:

RE: Interstate 74 Quad Cities Corridor Study Draft Environmental Impact Statement in Scott County, Iowa and Rock Island County, Illinois. CEQ Number 030510

The U.S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) for the proposed improvement of Interstate 74. The project begins south of the I-74 interchange with 23rd Avenue in Moline, Illinois, and continues north across the Mississippi River through Bettendorf to the I-74 Interchange with 53rd Street in Davenport, Iowa. Our review is provided pursuant to the National Environmental Policy Act (NEPA) 42 U.S.C. 4231, Council of Environmental Quality (CEQ) regulations 40 C.F.R. Parts 1500-1508, and Section 309 of the Clean Air Act. This DEIS was assigned the CEQ number 030510.

The purpose of the proposed improvements for the project is to improve capacity, travel reliability, and safety along I-74, and to provide consistency with local land use and planning goals. Because the final disposition of the existing bridge is not determined, and a preferred alternative is not declared, EPA's review of the document has resulted in a rating of EC-2 (Environmental Concerns/Insufficient Information). Please refer to the enclosed "Summary of Rating Definitions" for further details on EPA's rating system. EPA believes that additional information is warranted on the specific issues detailed below.

Existing Bridge Disposition and Designated Natural Areas

Final disposition of the existing I-74 bridge should take into consideration the fact that the area in and around the bridge is designated as the "Moline Natural Area" according to the Illinois Natural Areas Inventory. Retaining the existing structure would eliminate demolition impacts to mussel species (the Higgins' eye, the Spectacle case, the Butterfly, and the Sheepnose), and allow for possible use of the structure as a pedestrian/bike crossing or potential use of mass transit solutions.

If removal of the existing bridge is ultimately selected, demolition techniques should be specified to minimize release of any lead, chromium or other heavy metal components of the bridge. In preparation for demolition, EPA would not require the removal of lead based paint from the entire structure. However, removal of lead-based paint to provide access for torch demolition or rivet removal may generate wastes that could be regulated under the Resource Conservation and Recovery Act (RCRA). The project proponents should assess the applicability of RCRA to any solid wastes generated from structure demolition.

The relocation plan for three mussel species within the Sylvan Slough mussel bed (directly under the existing I-74 bridge between the Moline, Illinois riverbank and the small island near the Moline, Illinois riverbank) should include relocation site alternatives which are beyond the area of impact from the construction of a new river bridge near Campbell Island. The FEIS should include the mussel mitigation strategy. EPA advocates a cumulative effects analysis for the relocation sites to ensure that past activities have not rendered the habitat unsuitable, or that future planned activities in the vicinity limit the temporal use of the relocation site as was the case in the Moline, Illinois to Arsenal Island bridge transportation project.

We recommend that the Final Environmental Impact Statement (FEIS) include additional information on the project's impacts to mussels and their habitat, including an estimate of the number of mussels directly and indirectly impacted and a more thorough description of the areas to be affected. Of the two alignments (Alternatives E and F) still under consideration, Alternative F is farther from the nearest mussel bed (Sylvan Slough) and may have lesser impacts to the mussels from sediment loadings. We suggest that Alternative F be considered for implementation for that reason.

Water Quality Impacts

The construction of a new river structure in the Mississippi River will disturb the river bed and contribute to the river's sediment loading, depending on the number of piers constructed in the river. The three bridge concepts that are being proposed are a cable-stayed bridge, an arch bridge, and a suspension bridge. We recommend that the project proponents explore the installation of a cable-stayed bridge, which would put the least number of piers in the Mississippi River. Because sedimentation could impact fish spawning activities in the area, we request that the FEIS include information on fish spawning in the area and a commitment to avoid, minimize, and/or mitigate impacts of construction to fish spawning activities in affected streams.

Due to the anticipated increase in average daily traffic (ADT), EPA requests that best management practices (BMP's) and other forms of mitigation to collect and attenuate road contaminant runoff (e.g. detention ponds), be explored to a greater extent with Illinois EPA and Iowa Department of Natural Resources. Mitigation options should include storm water collection for runoff from the bridge deck itself.

Business Relocations

The EPA evaluated the study corridor for facilities that have reported toxic releases, or are under regulatory permit. Most facilities found in our database search (EPA's EnviroMapper) are Small Quantity Generators regulated under RCRA. These facilities are not expected to be significant factors in re-location decisions. Two other facilities (Kone Incorporated, and Moline Tool Company) may have infrastructure and permit complexity that would need closer scrutiny for relocation decisions. EPA has included facility detail reports for these two businesses as enclosures. EPA also recommends that the Federal Highway Administration (FHWA) evaluate potential relocations for industrial pretreatment permit status and violation history with the municipal utilities directors. Relocation of businesses with a history of non-compliance may provide additional benefits to the individual communities.

Wetlands

The EPA is concerned with the amount of wetland information presented in the DEIS. The DEIS does not describe the specific functions and value of each wetland in the project area. The FEIS should provide this information, in order to understand the gravity of impacts to each wetland. Wetland values may include floristic quality index (FQI) numbers.

Thank you for the opportunity to provide our comments regarding this project. If you have any questions, please contact Mr. Nick Rocha, NEPA Reviewer at (913) 551-7805.

Sincerely,



Jody Hudson
Deputy Director
Environmental Services Division

Enclosure



U.S. Environmental Protection Agency Facility Registry System (FRS)

[Recent Additions](#) | [Contact Us](#) | [Print Version](#) EF Search:
[EPA Home](#) > [Envirofacts](#) > [FRS](#) > [Report](#)



Facility Detail Report



Facility Name:	KONE INCORPORATED
Location Address:	1 MONTGOMERY COURT
Supplemental Address:	
City Name:	MOLINE
State	IL
County Name:	ROCK ISLAND
ZIP/Postal Code:	61265
EPA Region:	05
Congressional District	17
Legislative District Number:	
HUC Code:	07080101
Federal Facility:	NO
Tribal Land :	
Latitude:	41.512397
Longitude:	-90.512674
Method:	ADDRESS MATCHING-HOUSE
Reference Point Description:	PLANT ENTRANCE (GENERAL)
Duns Number:	005262308
Registry ID:	110001378857

[Report Facility Discrepancy](#)

[Map this facility](#)

Environmental Interests

Information System	Information System ID	Environmental Interest Type	Data Source	Last Updated Date	Supplemental Environmental Interests:
AIRS/AFS	IL0858931	AIR MINOR	AIRS/AFS	03/24/2001	
NEI	17161161045AAZ	CRITERIA AIR POLLUTANTS INVENTORY	NEI	03/28/2003	

NEI	NTIIL1619624	HAZARDOUS AIR POLLUTANTS INVENTORY	NEI		
NET	171610030	CRITERIA AIR POLLUTANTS INVENTORY	AIR VOLUNTARY SUBMISSION	12/30/1996	
NTI	NTI56013	HAZARDOUS AIR POLLUTANTS INVENTORY	AIR VOLUNTARY SUBMISSION	12/30/1996	
PCS	ILR000053	NPDES NON-MAJOR	NPDES PERMIT		
RCRAINFO	ILD984812610	NOT IN A UNIVERSE	NOTIFICATION	12/20/1999	

Facility Mailing Addresses

Affiliation Type	Delivery Point	City Name	State	Postal Code	Information System
FACILITY MAILING ADDRESS	ONE KONE CT	MOLINE	IL	61265	RCRAINFO
FACILITY MAILING ADDRESS	ONE MONTGOMERY CT	MOLINE	IL	61265	AIRS/AFS
OWNER	1820 GRANT ST	BETTENDORF	IA	52722	RCRAINFO
OWNER	ONE MONTGOMERY COURT	MOLINE	IL	61265	PCS
REGULATORY CONTACT	ONE MONTGOMERY COURT	MOLINE	IL	61265	RCRAINFO

NAICS Codes

No NAICS Codes returned.

SIC Codes

Data	SIC	Description	Primary	Report Discrepancy
NEI	3534	ELEVATORS AND MOVING		Report
NEI	3534	ELEVATORS AND MOVING		Report
NTI	3534	ELEVATORS AND MOVING		Report
AIRS/AFS	3534	ELEVATORS AND MOVING		Report

Contacts

Affiliation Type	Full Name	Office Phone	Information System	Mailing Address	Report Discrepancy
COGNIZANT OFFICIAL	MONTGOMERY KONE, INC.	3097571468	PCS		Report

REGULATORY CONTACT	JON CROSSMAN	3097435212	RCRAINFO	View	Report
--------------------	--------------	------------	----------	----------------------	------------------------

Organizations

Affiliation Type	Name	DUNS Number	Information System	Mailing Address	Report Discrepancy
OWNER	MONTGOMERY KONE, INC.		PCS	View	Report
OWNER	KONE HOLDINGS INC		RCRAINFO	View	Report
OWNER/OPERATOR		005426424	AIRS/AFS		Report

Alternative Names

Alternative Name
MONTGOMERY KONE,

Query executed on: DEC-22-2003

[EPA Home](#) | [Privacy and Security Notice](#) | [Contact Us](#)

Last updated on Monday, December 22nd, 2003
http://oaspub.epa.gov/enviro/fii_query_dtl.disp_program_facility



U.S. Environmental Protection Agency Facility Registry System (FRS)

[Recent Additions](#) | [Contact Us](#) | [Print Version](#) EF Search: **GO**
[EPA Home](#) > [Envirofacts](#) > [FRS](#) > Report



Facility Detail Report



Facility Name:	MOLINE TOOL COMPANY
Location Address:	102 20TH ST
Supplemental Address:	
City Name:	MOLINE
State:	IL
County Name:	ROCK ISLAND
ZIP/Postal Code:	61265
EPA Region:	05
Congressional District:	17
Legislative District Number:	
HUC Code:	07080101
Federal Facility:	NO
Tribal Land :	
Latitude:	41.512222
Longitude:	-90.511111
Method:	
Reference Point Description:	
Duns Number:	034911784
Registry ID:	110001378848

[Report Facility Discrepancy](#)

[Map this facility](#)

Environmental Interests

Information System	Information System ID	Environmental Interest Type	Data Source	Last Updated Date	Supplemental Environmental Interests:
AIRS/AFS	IL0858930	AIR MINOR	AIRS/AFS	04/11/2002	
NEI	17161161045AAY	CRITERIA AIR POLLUTANTS INVENTORY	NEI	03/28/2003	

NEI	NTIIL1619623	HAZARDOUS AIR POLLUTANTS INVENTORY	NEI		
NET	171610029	CRITERIA AIR POLLUTANTS INVENTORY	AIR VOLUNTARY SUBMISSION	12/30/1996	
NTI	NTI52826	HAZARDOUS AIR POLLUTANTS INVENTORY	AIR VOLUNTARY SUBMISSION	12/30/1996	

Facility Mailing Addresses

Affiliation Type	Delivery Point	City	State	Postal Code	Information
FACILITY MAILING	102 20TH ST	MOLINE	IL	61265	AIRS/AFS

NAICS Codes

No NAICS Codes returned.

SIC Codes

Data	SIC	Description	Primary	Report Discrepancy
NEI	3541	MACHINE TOOLS, METAL CUTTING		Report
NEI	3541	MACHINE TOOLS, METAL CUTTING		Report
NTI	3541	MACHINE TOOLS, METAL CUTTING		Report
AIRS/AFS	3541	MACHINE TOOLS, METAL CUTTING		Report

Contacts

No Contacts returned.

Organizations

No Organizations returned.

Alternative Names

No Alternative Names returned.

Query executed on: DEC-22-2003

Adequacy of the Impact Statement

"Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

Draft Environmental Impact Statement Rating Definitions

Environmental Impact of the Action

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative. EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

United States Department of Agriculture



Natural Resources Conservation Service
210 Walnut Street
693 Federal Building
Des Moines, IA 50309-2180

January 12, 2004

Mr. James P. Rost
Director
Office of Location and Environment
Iowa Department of Transportation
800 Lincoln Way
Ames, Iowa 50010

Re: Project Number: IM-74-1(122) 0-13-82
I-74 Quad Cities Corridor Study
Draft Environmental Impact Statement/4(f) Statement

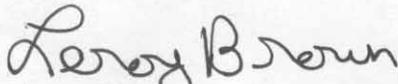
Dear Mr. Rost:

I have reviewed the I-74 Quad Cities Corridor Study, Draft Environmental Impact Statement/4(f) Statement. The majority of the proposed activity will occur on non-agricultural land, thus it is not in the specific Natural Resources Conservation Service (NRCS) responsibility. But I do want to state that any construction activity should take into full consideration the protection of the air, water and wildlife resources.

Mr. Paul Viner is the NRCS District Conservationist for Scott County, Iowa. Site specific information can be obtained from Mr. Viner by contacting him at (563) 391-1403 or by email at Paul.Viner@ia.usda.gov.

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

Sincerely,


Leroy Brown
State Conservationist

U.S. Department of
Homeland Security

United States
Coast Guard



Commander
Eighth Coast Guard District

RECEIVED

NOV 22 2004

OFFICE OF LOCATION & ENVIRONMENT

1222 Spruce Street
St. Louis, MO 63103-2832
Staff Symbol: obr
Phone: (314)539-3900, x2378
Fax: (314)539-3755
Email:

16591.1/485.51 UMR
November 16, 2004

Mr. James P. Rost
Director
Office of Location and Environment
Iowa Department of Transportation
800 Lincoln Way
Ames, IA 50010

Subj: PROPOSED IOWA-ILLINOIS (I-74) HIGHWAY BRIDGE REPLACEMENT,
MILE 485.51, UPPER MISSISSIPPI RIVER

Dear Mr. Rost:

A simulation of different span lengths for the proposed bridge project was conducted at the Center for Maritime Education (CME) in Paducah, KY. The purpose of the simulation was to identify acceptable pier placement and horizontal clearance for the subject replacement bridge.

Early discussions between our offices identified Iowa Department of Transportation's (IADOT) desire to provide less than the existing clearance of 710 feet in order to reduce project costs. The Coast Guard's position was that if a reduced clearance would provide for the reasonable needs of navigation, it would need to be demonstrated at the CME navigation simulator.

The simulation involved a variety of runs in both the upstream and downstream directions with different conditions and bridge clearances provided. Following each run the pilot was debriefed with information forms completed by observers and interviewers. The results are summarized in the enclosed documents.

Pier placements and horizontal clearances:

Simulations were conducted providing horizontal clearances of 710', 675', 600' and 550'. In all cases the left descending channel pier of the existing bridge was kept stationary and the right channel pier was relocated as necessary. These clearances were initially measured face to face of the piers until the final day when runs were made with a 675' horizontal clearance measured normal to the channel between pier tips due to their skewed orientation.

Based on a review of the comments of the operator, observer and interviewers, it is the Coast Guard's position that the minimum horizontal clearance required is 675 feet normal to the channel with the left descending pier at its present location.

Subj: PROPOSED IOWA-ILLINOIS (I-74) HIGHWAY BRIDGE
REPLACEMENT, MILE 485.51, UPPER MISSISSIPPI RIVER

16591.1/485.51 UMR
November 16, 2004

Pier orientation (aspect):

The piers were oriented normal to the roadbed, and not normal to the flow of the river until the last day when runs were made with the piers parallel to the river flow. It was the opinion of the operators that pier orientation normal to the bridge deck (angled to the river flow) caused substantial problems in running the bridge alternatives. There was strong opinion expressed that from a mariner's standpoint, that a flat pier face is preferred to an angled pier face and the problem of pier orientation was accentuated as the span clearances were reduced.

Based on a review of the comments, it is the Coast Guard's position that the preferred orientation of piers for a new bridge should present a flat channelward surface. This could be achieved by orienting the piers parallel to the flow of the river or constructing accessory structures such as a cell and short sheerfence to provide a flat surface parallel to the flow of the river.

Pier placement:

The critical pier is the left descending pier. It must be aligned with the left descending pier of the existing bridge. The location of the right descending pier is measured from the most channelward location of the left descending pier.

I appreciate the opportunity to comment on the proposal at an early stage in project development. Please contact me if additional information is needed.

Sincerely,



ROGER K. WIEBUSCH
Bridge Administrator
By direction of the District Commander

Copy: Ms. Sandra Rice, P.E., CM2HILL
Mr. Sam Dicky, RIAC
Mr. Ernie Petzold, P.E., Jacobs



Iowa Department of Transportation

800 Lincoln Way, Ames, IA 500010

Phone: 515/239-1206

Fax: 515/239-1978

May 7, 2007

Mr. Roger Wiebusch, Commander
United States Coast Guard
Eighth District Branch
1222 Spruce Street
St Louis, Missouri 63103

Re: Proposed Iowa-Illinois (I-74) Highway Bridge Replacement, Mile 485.81, Upper Mississippi River

Dear Mr. Wiebusch:

The Iowa Department of Transportation, in coordination with the Illinois Department of Transportation and other agencies, evaluated many different bridge types for the navigation span of the new I-74 Mississippi River Crossing at the Quad Cities of Iowa and Illinois (R.M. 485.81).

The Basket Handle True Arch Twin Bridges emerged as the preferred scheme at the end of the process and was selected as the bridge type to be advanced for further development. The advantages of the True Arch Twin Bridges are as follows:

- Construction of two narrow structures is preferred over one wide structure; the geometry control will be easier, there is more repetition leading to increased productivity, there should be a reduced potential for unexpected construction delays.
- One bridge can be completed and opened to traffic while the other is being built.
- The twin decks allow for efficient deck replacement options and provide flexibility in maintenance of traffic for major repairs since the possibility exists to move all traffic to one roadway.
- The twin bridges are structurally redundant, providing a measure of increased security.

The issue of channel pier orientation was discussed with the Coast Guard throughout the bridge type selection process. In summary, it was agreed that the channel piers should be oriented to present a flat channelward face if the minimum acceptable horizontal clearance of 675 feet is provided. It was also agreed that pier orientation is not a concern if the new bridge's horizontal clearance matches that of the existing bridge (710 feet).

During the selection and evaluation process, it was decided that the new bridge will be configured to provide a 710-ft horizontal clearance. This clearance permits the piers to be oriented such that performance of the bridge is maximized. In addition, no accessory structures are needed since the channel width matches the existing horizontal clearance. For a more complete discussion of this topic, please refer to the September 23, 2005 letter from the Iowa DOT.

The attached figure shows the orientation of the proposed new bridge both to the existing bridge and to the navigation channel. A minimum vertical clearance of 60 feet will be provided in the 710'-0" navigation channel.

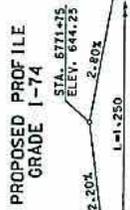
Sincerely,



Norman L McDonald
Iowa DOT Bridge Engineer
Office of Bridges and Structures

NLM:EP:baj
Attachment

Cc: John Clute, Consultant Coordination
Ahmad Abu-Hawash, Chief Structural Engineer
Bruce Brakke, Bridge Maint. & Inspection
Tammy Nicholson, Location & Environment
Jim Rost, Location & Environment
Mitch Dillavou, Engineering Bureau Director
Kevin Mahoney, Highway Division Director
Jim Schnoebelen, District 6 Engineer
Catherine Cutler, District 6 Planner
Derrick Lopez, Illinois DOT
Todd Ahrens, Illinois DOT
Ernst Petzold, Jacobs
Lidia Pilecky, CH2M
Janet Vine, Location & Environment

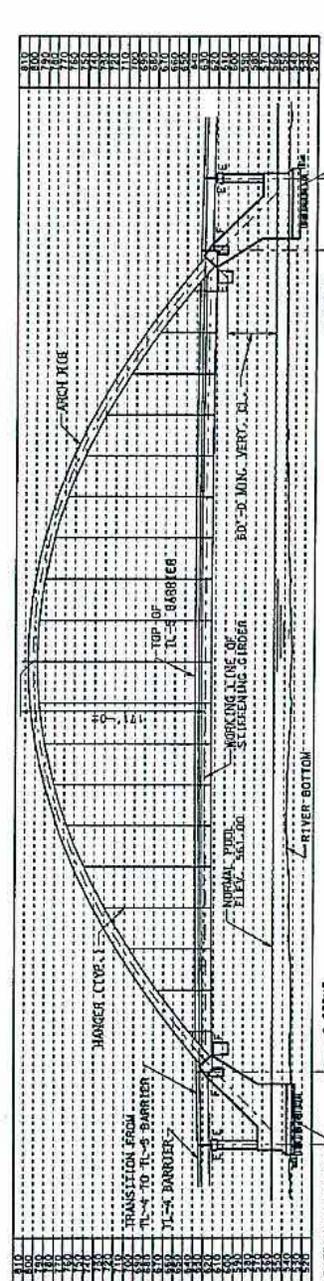


HYDRAULIC DATA (NGVD 1912)
 CESSATION OF NAVIGATION ELEV. 562.5
 2% FLOODLINE ELEV. 565.5
 50-YEAR FLOOD ELEV. 572.5
 HIGH WATER ELEV. 569.7 APRIL - MAY 1965
 NORMAL POOL ELEV. 561.0

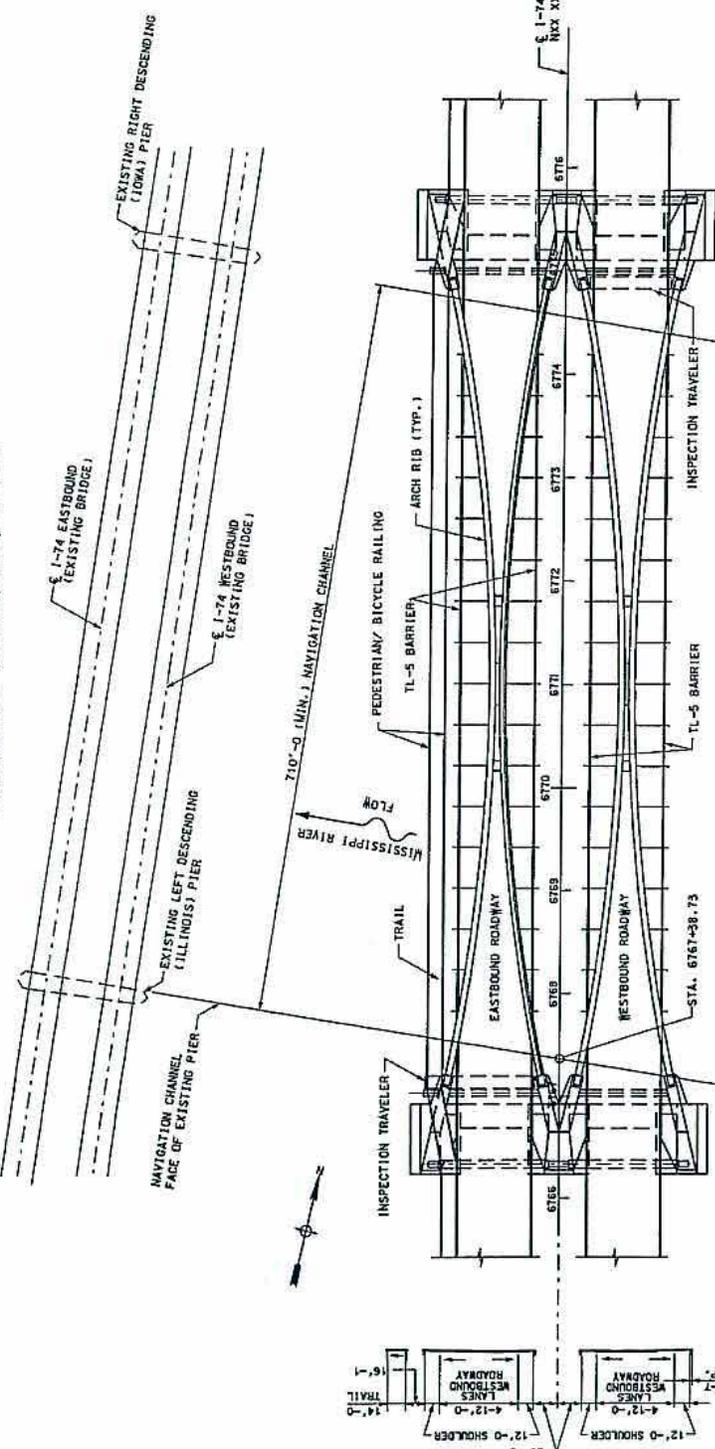
TRAFFIC ESTIMATE
 WB ADT = 49,600 (2035)
 EB ADT = 50,200 (2035)

LOCATION
 INTERSTATE I-74 OVER MISSISSIPPI RIVER
 1-78 N. R. 04 E. SECTION 33 &
 1-18 N. R. 01 W. SECTION XX &
 FHRA NO. XXXXX

MINIMUM VERTICAL CLEARANCE
 MINIMUM VERTICAL CLEARANCE FROM BRIDGE
 DECK TO NAVIGATION CHANNEL
 ABOVE NORMAL POOL = 60'-0"



LONGITUDINAL SECTION ALONG C 1-74



PLAN

DESIGN FOR SCEN
795'-0 x 72'-0 TWIN TRUE ARCH BRIDGES W/14'-0 TRAIL SITUATION PLAN
 795'-0 SPAN
 STA. 671+00.00
 JULY 2007
SCOTT & ROCK ISLAND COUNTIES
 DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. _____ OF _____ FILE NO. _____ DESIGN NO. _____ SHEET NUMBER



Federal Aviation Administration
 Air Traffic Airspace Branch, ASW-520
 2601 Meacham Blvd.
 Fort Worth, TX 76137-0520

Aeronautical Study No.
 2007-ACE-1657-OE

Issued Date: 07/05/2007

John Clute
 Iowa Department of Transportation
 800 Lincoln Way
 Ames, IA 50010

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Bridge
Location:	Bettendorf, IA
Latitude:	41-31-13.50 N NAD 83
Longitude:	90-30-43.46 W
Heights:	248 feet above ground level (AGL) 809 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

As a condition to this Determination, the structure is marked and/or lighted in accordance with FAA Advisory circular 70/7460-1 K Change 2, Obstruction Marking and Lighting, a med-dual system - Chapters 4,8(M-Dual),&12.

It is required that the enclosed FAA Form 7460-2, Notice of Actual Construction or Alteration, be completed and returned to this office any time the project is abandoned or:

- At least 10 days prior to start of construction (7460-2, Part I)
- Within 5 days after the construction reaches its greatest height (7460-2, Part II)

This determination expires on 01/05/2009 unless:

- (a) extended, revised or terminated by the issuing office.
- (b) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE POSTMARKED OR DELIVERED TO THIS OFFICE AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

A copy of this determination will be forwarded to the Federal Communications Commission if the structure is subject to their licensing authority.

If we can be of further assistance, please contact our office at (847) 294-7520. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2007-ACE-1657-OE.

Signature Control No: 515078-100561316

(DNE)

Brenda Mumper
Specialist

7460-2 Attached

-----Original Message-----

From: Heidi_Woeber@fws.gov [mailto:Heidi_Woeber@fws.gov]

Sent: Monday, August 13, 2007 11:43 AM

To: Rodgers, Cassandra S

Cc: HAMER, STEVE

Subject: I-74 Bridge

Cassandra:

I was just talking to Steve Hamer about the I-74 Bridge as it relates to the run-off and mussel beds.

Over the past week since our meeting on August 2nd I have done some research and had discussions with our contaminants biologist, Mike Coffey.

He tends to agree with me that the runoff from the bridge will probably be less of an issue than originally thought. The new bridge will actually be further upstream from the known bed location. Our contaminants biologist agreed that the pollutants could be expected to be diluted at an even greater rate from off of the new bridge (due to its greater distance upstream). There is also an existing storm sewer effluent pipe that is nearer to the sylvan slough bed to be considered. This effluent pipe would most likely have a greater impact on water quality in the slough area and potentially on the mussel bed.

Steve and I agree that we could logically drop the need for any construction related drain system. There does not appear to be an environmental justification for it.

The Service continues to recommend, as a matter of course, other methods, such as sweeping after snow events, standard street cleaning practices, or using environmentally friendly deicers (as they become less expensive over time) to reduce pollutants entering a river system. It is my understanding that these may or may not be covered under the IADOT's best management practices for handling bridge weeping/runoff....

Any questions let me know, I would be happy to discuss further.....

Heidi Woeber
Fish and Wildlife Biologist
Ecological Services, Rock Island Field Office
1511 47th Avenue
Moline, Illinois 61265
309/757-5800 Ext. 209
309/757-5806 Fax
heidi_woeber@fws.gov



U.S. Department
of Transportation
**Federal Highway
Administration**

Iowa Division Office

105 6th Street
Ames, IA 50010

In Reply Refer To:
HDA-IA

March 7, 2006

Ms. Carol Legard
FHWA Liaison
Advisory Council on Historic Preservation
1100 Pennsylvania Avenue, NW, Suite 809
Washington, DC 20004

Dear Ms. Legard:

Notification of Finding of Adverse Effect for IM-74-1(122)9-13-82
Iowa-Illinois Memorial Bridge, Iowana Farms Milk Company, Scott County, Iowa
and
Rock Island & Northwestern Railroad Depot and Knights of Pyhias Lodge Hall, Illinois

This letter is to notify the Council of a Finding of Adverse Effect and to provide the summary documentation of that finding as specified in 36 CFR 800.6(a)(1) and 800.11(e). Please note that two of the properties are in Iowa and two are in Illinois. The Iowa DOT and FHWA Division Office will be working with the Iowa SHPO on the Iowa properties only. The Illinois DOT will coordinate the properties in Illinois.

Supporting Documentation is enclosed for your information. The enclosed documents include:

1. Iowa Department of Transportation letter dated February 25, 2008
2. Project Description
3. Project Location Map
4. Cultural Resources Correspondence

Please advise our office of your decision regarding participation in this project. If you have any questions, please contact me at (515) 233-7302

Sincerely,

Michael G. La Pietra
Environment and Realty Manager

Enclosures

cc:
Randy Faber (Iowa DOT)
MGLaPietra:ckl 3.7.08
G:\LONG\MLA\Iowa-Illinois Bridged-file.doc

MOVING THE
AMERICAN
ECONOMY





Preserving America's Heritage

May 13, 2008

Mr. Michael G. La Pietra
Environment and Realty Manager
U.S. Department of Transportation
FHWA Iowa Division
105 6th Street
Ames, IA 50010

Ref: *Proposed Reconstruction of I-74 from 53rd Street in Davenport, IA to 23rd Avenue in Moline, IL
Ref. No. IM-74-7(122)9-13-82
Scott County, Iowa and Rock Island County, Illinois*

Dear Mr. La Pietra:

The Advisory Council on Historic Preservation (ACHP) recently received your notification and supporting documentation regarding the adverse effects of the referenced undertaking on the Iowa-Illinois Memorial Bridge, Iowana Farms Milk Company, Scott County, Iowa and the Rock Island & Northwestern Railroad Depot and Knights of Pythias Lodge Hall, Illinois; properties listed or eligible for listing in the National Register of Historic Places. Based upon the information you provided, we have concluded that Appendix A, *Criteria for Council Involvement in Reviewing Individual Section 106 Cases*, of our regulations, "Protection of Historic Properties" (36 CFR Part 800), does not apply to this undertaking. Accordingly, we do not believe that our participation in the consultation to resolve adverse effects is needed. However, if we receive a request for participation from the State Historic Preservation Officer (SHPO), affected Indian tribe, or other party, we may reconsider this decision. Additionally, should circumstances change, and you determine that our participation is needed to conclude the consultation process, please notify us.

Pursuant to 36 CFR §800.6(b)(1)(iv), you will need to file the final Memorandum of Agreement (MOA), developed in consultation with the Iowa SHPO, the Illinois SHPO and any other consulting parties, and related documentation with the ACHP at the conclusion of the consultation process. The filing of the MOA and supporting documentation with the ACHP is required in order to complete the requirements of Section 106 of the National Historic Preservation Act.

ADVISORY COUNCIL ON HISTORIC PRESERVATION

1100 Pennsylvania Avenue NW, Suite 803 • Washington, DC 20004
Phone: 202-606-8503 • Fax: 202-606-8647 • achp@achp.gov • www.achp.gov

Thank you for providing us with your notification of adverse effect. If you have any questions or require our further assistance, please contact Carol Legard at 202-606-8522 or via e-mail at clegard@achp.gov.

Sincerely,

A handwritten signature in black ink that reads "LaShavio Johnson". The signature is written in a cursive, flowing style.

LaShavio Johnson
Historic Preservation Technician
Federal Permitting, Licensing and Assistance Section
Office of Federal Agency Programs

PROJECT MEETING REPORT

Federal Highway Administration
Iowa Division Office

PROJECT LOCATION		PROJECT NO.
I-74 Corridor Project in Quad Cities		IM-74-1(122)
TRANSPORTATION ENGINEER/DATE	DISTRICT	COUNTY
Andy Wilson – 8/1/08	6	Scott
OTHERS IN ATTENDANCE		
Rick Sacbibit, Roger Connel, Joe Krolak, Larry Arneson, Dan Ghere, Curtis Monk, Tom Jantscher		
TYPE, LOCATION AND DATE OF MEETING		
FHWA/FEMA I-74 Project Briefing – 7/29/08		

MAJOR ISSUE(S)

The purpose of this meeting was to provide a short I-74 Project briefing and begin a discussion between FHWA and FEMA regarding how to proceed with this project, considering any potential floodplain impacts associated with the new Mississippi River bridge. The meeting started with individual introductions, followed by a general overview of the project background and current status.

Major issues discussed during the call include:

- No additional structures (flood control or others) within the floodplain are included with this project.
- Preliminary 2-D model shows a rise of 0.05' upstream of the structures in the interim condition (existing and new bridges in place) and no change in WSE for the ultimate condition (new bridge fully operational and existing bridges removed).
- Interim condition will most likely exist for more than 5 years—this time will be necessary to build the new structure and tie-ins and demolish the existing structure. Traffic will be maintained on I-74 throughout the project, but will primarily operate on one bridge at a time (i.e., there will not be an extended period of time when new and existing bridges are simultaneously operational).
- The standard Conditional Letter of Map Revision (CLOMR)/Letter of Map Revision (LOMR) process should be followed for the project; however, the CLOMR should demonstrate coordination with the locals concerning the interim condition and the LOMR may not be necessary if no net change occurs in the WSE for the ultimate condition.
- Significant change (>0.5') in interim condition would require coordination with locals.
- Analysis should compare to:
 - Current effective Flood Insurance maps
 - 2004 USACE map modernization information
 - Future (ultimate) condition
- The Final EIS and Record of Decision for the project may be completed prior to the submittal of any CLOMR.
- FEMA would definitely be concerned if impact of interim condition was >0.5', but since the expected rise is <0.1', the impact (based on the preliminary analysis) would be acceptable.
- Any follow-up questions for FEMA should be directed to Rick Sacbibit with a copy to the Region VII office.

From: Sacbibit, Rick [mailto:rick.sacbibit@dhs.gov]
Sent: Wednesday, October 08, 2008 12:38 PM
To: Wilson, Andrew; Nusz, Rick; Leonard, Richard; Krolak, Joseph <FHWA>; Ghere, Dan; Monk, Curtis; Arneson, Larry; Pagan, Jorge <FHWA>
Cc: Grogg, Max [DOT Contact]; Hine, Mike <FHWA>; Claman, David [DOT]; Sacbibit, Patrick
Subject: RE: Final Minutes from FEMA/FHWA Meeting to discuss proposed I-74 Mississippi River Crossing in the Quad Cities

Andy,

Thanks for documenting the meeting and forwarding the meeting minutes. I concur with the minutes and approach that was outlined in your message.

Rick

Patrick "Rick" F. Sacbibit, P.E., CFM
Program Specialist
FEMA - Engineering Management Branch (MT-RA-EM)
Tel: 202.646.7659
rick.sacbibit@dhs.gov

From: Wilson, Andrew [mailto:Andrew.Wilson@fhwa.dot.gov]
Sent: Wednesday, October 08, 2008 12:54 PM
To: Sacbibit, Patrick; Nusz, Rick; Leonard, Richard; Krolak, Joseph <FHWA>; Ghere, Dan; Monk, Curtis; Arneson, Larry; Pagan, Jorge <FHWA>
Cc: Grogg, Max; Hine, Mike <FHWA>; Claman, David [DOT]
Subject: Final Minutes from FEMA/FHWA Meeting to discuss proposed I-74 Mississippi River Crossing in the Quad Cities

I have attached the final minutes from our meeting on 7/29/08 to discuss the Quad Cities I-74 Project.

The DOT's and FHWA do plan to complete the NEPA process for the project in the near future with a finding that this is the only practicable alternative for impacts to floodplains. The Final EIS explains that the proposed design has been modeled and is expected to cause a "zero-rise" in the floodplain for the ultimate condition but up to a 0.05' rise in the interim condition. The document also explains that the proposed action includes all practicable measures to minimize harm to the floodplains.

It is our understanding from FEMA/FHWA discussion that based on the results of

the modeling done to date no CLOMR/LOMR will be required for the ultimate condition of this project, because there is no change in the water surface elevation. For the interim condition (when existing and new bridges are in place) a CLOMR may be necessary due to uncertainty in the timeline for project completion. When this project nears the construction phase, the Iowa and Illinois DOT will commit to a schedule and budget for the project. At that time the DOT's will assess the need for a CLOMR for the interim condition based on the established project timeline (i.e., if the project timeline shows multiple years in the interim condition without significant construction progress towards the ultimate condition, a CLOMR will be submitted).

As we discussed, the DOT's have developed hydraulic models for the area and shared them with the Iowa and Illinois DNR's as well as the USACE. Regardless of the decision on whether a CLOMR is necessary, the Iowa DOT will forward the models and the minutes from the coordination meetings, per the direction of FEMA.

Please respond to this note with your concurrence in the minutes and the approach outlined above, or let me know if there are any changes that you would like me to make. Also let me know if you would like any additional information at this time (the hydraulic models, coordination meeting minutes, etc.).

Thanks,
Andy Wilson
FHWA-Iowa Division
(515) 233-7313

Correspondence with State Agencies



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276, 217-782-3397
JAMES R. THOMPSON CENTER, 100 WEST RANDOLPH, SUITE 11-300, CHICAGO, IL 60601, 312-814-6026

ROD R. BLAGOJEVICH, GOVERNOR

RENEE CIPRIANO, DIRECTOR

217/782-0547

November 24, 2003

RECEIVED

DEC 01 2003

Mr. James P. Rost, Director
Office of Location and Environment
Iowa Department of Transportation
800 Lincoln Way
Ames, Iowa 50010

OFFICE OF LOCATION & ENVIRONMENT

Re: I-74 Quad Cities Corridor Study
Draft Environmental Impact Statement / 4(f) Statement

Dear Mr. Rost:

This is in response to a November 6, 2003 letter from Tamara Nicholson, Project manager of the I-74 Iowa-Illinois Corridor Study, requesting comments on the DEIS referenced above.

The Agency has no objections to the project; however, a construction site activity NPDES permit will be required from the Division of Water Pollution Control. In addition, a 401 Water Quality Certification will be required from the Agency for any 404 dredge and fill permit required by the U.S. Army Corps of Engineers. Please contact Alan Keller at 217/782-0610 for specific permit requirements.

Also, the Agency reminds IDOT contractors that wastes generated by demolition or construction must be recycled or delivered to a permitted waste disposal/treatment facility. For information concerning wastes, please contact Michael Nechvatal of the Bureau of Land at 217/785-8604.

Sincerely,

Bernard P. Killian
Deputy Director



Illinois Department of Natural Resources

One Natural Resources Way • Springfield, Illinois 62702-1271
<http://dnr.state.il.us>

Rod R. Blagojevich, Governor

Joel Brunsvold, Director

December 16, 2003

Mr. James P. Rost, Director
Office of Location and Environment
Iowa Department of Transportation
800 Lincoln Way
Ames, IA 50010

RE: DEIS Review and
4(f) Statement
I-74 Quad Cities Corridor
Studies

Dear Mr. Rosts:

The Illinois Department of Natural Resources (IDNR) has reviewed the Draft Environmental Impact Statement (DEIS) for the I-74 Quad Cities Corridor Study. We offer the following comments for your consideration.

The main thought that should continue to be carried out as this project progresses through the planning and design phase is to implement the "avoidance and minimization" concept of impacts to natural resources on the landscape.

Biological Resources:

In the DEIS, reference is made to the recommendation by IDNR for application of an Incidental Take Authorization (ITA) as part of the consultation process for potential impacts to the four state listed mussel species that occur within the Mississippi-Moline Natural Area. The EIS needs to identify who will be the applicant for the ITA, thus responsible for its' implementation. Upon receipt of the approved ITA, consultation will be closed.

Continued monitoring of the Natural Area for bald eagle use especially during the winter is critical as this site is heavily used and provides habitat within the Natural Area.

Wetland Resources:

The Illinois Department of Natural Resources concurs with the efforts to continue minimizing the impacts to wetlands and the implementation of the Illinois DOT Wetlands Action Plan. When final wetland impacts are known and the mitigation plan developed, IDNR review and comment should be requested for compliance with the Illinois Interagency Policy Act. Reference is made to the DEIS, Table 4-23 on page 4-44, that Alignment F would result in less wetland impacts than Alignment E. Choosing Alignment F would be more favorable due to the sensitive resources found in the Mississippi River-Moline Natural Area and mitigation needs.

James P Rost
DEIS/I-74
Page 2

Bicycle/Pedestrian Accommodations:

The Illinois Department of Natural Resources concurs with the need to include this element of any build alternative that is implemented.

Mitigation Measures:

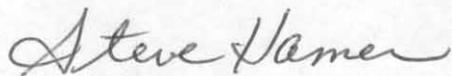
The mitigation measures for listed mussel species outlined in the DEIS, (Section 7.0) propose the development of a detailed mussel relocation plan along with the implementation of Best Management Practices . The IDNR concurs with this recommendation and would like the opportunity to review and provide input for its' success. This plan should include a monitoring period to determine the success of mussel relocation for future projects.

The presence of the Mississippi River-Moline Natural Area, which includes the Sylvan Slough, a designated mussel refuge, occurs both up and down stream of the project corridor and should receive special protection from the effects of the salt and automobile- related runoff. **The IDNR disagrees with the reference that the extra travel lane will basically reduce run-off from the bridge. More lanes, means more cars which would increase more salt and more car pollutants!!** The IDNR would recommend that the run-off be piped (collected) to an area that would reduce the effects to this mussel refuge/INAI site.

In keeping with the resource policies established by the Illinois Department of Natural Resources, the Interagency Wetland Policy Act allows a three year time period for wetland impact determinations and wetland compensation plans to be implemented before having to be re-evaluated. This same three year time period applies to the reviews for compliance with the state Endangered Species Protection Act and resource studies relative to the project.

If you have any questions on the above, please contact me at 217-785-5500.

Sincerely,



Steve Hamer
Transportation Review Program
Division of Natural Resource Review

cc: Tom Flattery, IDNR
Glen Kruse, IDNR
Pat Malone, IDNR

Richard Nelson,USFWS
Newton Ellens, USEPA
John Betker, USACOE

Carolyn Grosboll,INPC File
J.D. Stevenson, FHWA
Charles Perino, IDOT/CentralOffice

file

DEC 09, 2005



Iowa Department of Transportation

800 Lincoln Way, Ames, Iowa 50010

515-239-1215, FAX 515-239-1726

December 7, 2005

Ref. No IM-74-1(122)9--13-82
Scott County, Iowa
Rock Island County, Illinois

R&C# 9802 82 04⁸

Mr. Ralph Christian
Historic Preservation
State Historical Society of Iowa
600 East Locust
Des Moines, IA 50319

Dear Ralph:

RE: Finding of Adverse Effect for I-74 Improvements from 53rd St. in Davenport through Bettendorf, Iowa across the Mississippi River to 23rd Ave. in Moline, Illinois

A report with the results of a survey to identify historic properties that could be affected by this project was sent for your review in 2002 and we received your comments, October 16, 2002.

A variety of alternatives for construction of this project have been examined for feasibility, serviceability, and ability to provide for future traffic needs. Alternate "F" has been identified as the preferred alignment in part because more historic properties and other 4(f) resources are avoided than with other alternatives. However, this alignment will adversely affect the lowana Milk Farms Company in Bettendorf and the Iowa -Illinois Memorial Bridge (northbound span), properties eligible for listing on the National Register of Historic Places.

The lowana Milk Farms Company, property 82-05063, is located in close proximity to both the I-74 mainline and the US 67/State St. interchange. Major project improvements could not be designed for that location without affecting this property. The project will have an Adverse Effect on this historic property.

The Iowa-Illinois Memorial Bridge (north/Iowa bound span), property 82-00111, will be replaced by construction of this project. Several alternatives investigated options that would have retained the historic bridge. These included integrating the historic span and new bridges in a combined facility to carry interstate traffic across the river. Also considered was construction of a new I-74 bridge with transfer to local jurisdiction of the historic structure for local traffic use, pedestrian/bike use, or alternative transportation modes.

Mr. Ralph Christian
December 7, 2005

IM-74-1(122)9--13-82
Page 2

Infeasibility of design, Coast Guard restrictions regarding construction in and over the navigation channel of the river, and lack of jurisdictional interest in the historic span by local governments precluded use of any of these options for the historic bridge. Consequently, construction of the project will require its removal, an Adverse Effect to the historic property.

There will be No Adverse Effect by the project upon the W. F. Bruhn & Son General Merchandise Store, property 82-05069, which is eligible for the National Register. There will also be no Adverse Effect on the Regina Coeli Monastery, a property listed on the National Register in 1994.

If you agree with our findings and accept our request to consult for the purpose of drafting a memorandum of agreement which will stipulate a plan to mitigate the loss of the historic properties, please sign the concurrence line below. If you have any questions, please do not hesitate to contact me.

Sincerely,



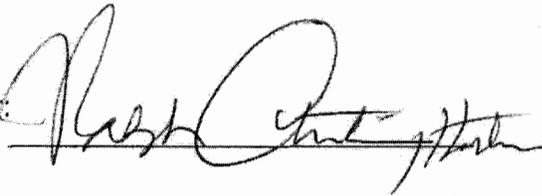
Randall B. Faber
Office of Location & Environment
randall.faber@dot.iowa.gov

RBF:

Encl.

cc: Mike LePietra, Federal Highway Administration
Richard Kautz, Iowa DOT, District 6

Concur:



1/10/06
Date

-----Original Message-----

From: HAMER, STEVE

Sent: Tuesday, August 14, 2007 11:04 AM

To: tamara.nicholson@dot.iowa.gov

Cc: Heidi_Woeber@fws.gov; Rodgers, Cassandra S

Subject: I-74 Bridge deck drainage--Moline, IL.

Tamara: Having discussed our (IL DNR) request with other IL DNR staff to capture the bridge deck run-off of the new I-74 bridge to improve the water quality of the Sylvan Slough Mussel Refuge, it is thought that it would be best not to pursue this request any longer.

Based on several factors such as:

- A) The ability to pipe the water out far enough to the main channel was unsuccessful.
- B) The cost was excessive and maintenance a problem in relation to any significant water quality improvement in the Sylvan Slough.
- C) The bridge is a little further upstream, thus allowing more of a dilution factor. Also allowing the water to be drained through several points instead of discharge at a single point would be better.

We would like to see a continued effort to perform a maintenance schedule of sweeping and vacuuming debris off the bridge, plus monitor the deicing agents used on the bridge so that excess amounts are not used and any new "agents" more environmentally friendly will be looked at in the future.

I appreciate all the effort that has been put into trying to accommodate our request and the in-dept meeting discussions. We tried!

If you have any questions, please call me at 217-785-4862.

Steve Hamer

Transportation Review Program

IDNR-Division of Ecosystems and Environment One Natural Resources Way
Springfield, IL 62702-1271

Phone: (217) 785-5500

Fax: (217) 524-4177

email: Steve.Hamer@Illinois.gov

Correspondence with County/Municipal Agencies

RECEIVED

NOV 20 2003

OFFICE OF LOCATION & ENVIRONMENT



Rock Island County

Rock Island County...Build the future and improve the quality of life for our community

County Board

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James E. Bohnsack

Vice Chairman
John Brandmeyer

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Phillip Banaszek

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Ted E. Davies

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Gary Freeman

Fee & Salaries
John Malvik

Finance & Economic
Development
Tom Rockwell

Legislative
Connie Mohr-Wright

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James Sallows
Fred W. Schultz
Wanda M. Sweat
Don "Whitey" Verstraete

Executive Assistant
Shelly L. Chapman

Payroll Supervisor
Carol A. Shradar

Asst. Payroll Supervisor
Roxanne M. Phillips

Payroll Specialist
Marlowe J. Smock

November 17, 2003

James P. Rost, Director
Office of Location and Environment
Iowa Department of Transportation
800 Lincoln Way
Ames, Iowa 50010

Dear Mr. Rost:

This letter is to inform the Department of Transportation that the County of Rock Island fully supports the I-74 Corridor project. The I-74 Corridor is extremely important to the commerce of the area. Interstate 74 is the major north/south corridor in the Quad City area and provides for the movement of people and goods to employment centers, entertainment venues, and commercial/industrial sites.

Adequate access and capacity crossing the Mississippi River is imperative for the Quad Cities to remain a vital community as we seek to exhibit a market population of nearly 400,000. In the Quad Cities, over 150,000 vehicles cross the Mississippi River on an average day with half of these crossings on I-74 alone. Over 50 percent of those employed work in a community outside of their residence. Over 20 percent of those employed work outside of their state of residence.

There is an urgent need to address congestion on the I-74 Bridge which is carrying over 77,000 vehicles per day and is significantly over capacity. The problem is compounded by the fact that the Bridge never met Interstate standards, has no shoulders, and the ramps nearest the Bridge have inadequate weaving lanes. Annual crashes along the I-74 Corridor are three times that of similar corridors in the nation.

Prompt and continued assistance to address I-74 Corridor improvements include final design, right-of-way acquisition, interchange and approach reconstruction, and construction. Authorization for funding in the next Federal Transportation Act has been requested by area leaders. We look forward to working with the Department of Transportation to implement this regionally significant transportation improvement.

Sincerely,

James E. Bohnsack
County Board Chairman

JEB/sc

OFFICE OF THE COUNTY BOARD

Rock Island County, Illinois
1504 Third Avenue, Rock Island, IL 61201
Phone: (309) 558-3605 • Fax: (309) 786-4473



CITY OF EAST MOLINE
OFFICE OF THE MAYOR

November 18, 2003

James P. Rost, Director
Office of Location and Environment
Iowa Department of Transportation
800 Lincoln Way
Ames, Iowa 50010

Re: Support For Quad City I-74 Corridor Project

Dear Mr. Rost:

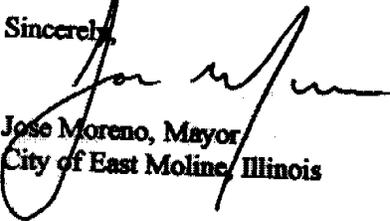
This letter is to inform the Department of Transportation that the City of East Moline, Illinois fully supports the I-74 Corridor project. The I-74 Corridor is extremely important to the commerce of the area, which includes both Iowa and Illinois. Interstate 74 is the major north/south corridor in the Quad City area and provides for the movement of people and goods to employment centers, entertainment venues, and commercial/industrial sites.

Adequate access and capacity crossing the Mississippi River is imperative for the Quad Cities to remain a vital community as we seek to exhibit a market population of nearly 400,000. In the Quad Cities, over 150,000 vehicles cross the Mississippi River on an average day with half of these crossings on I-74 alone. Over 50 percent of those employed work in a community outside of their residence. Over 20 percent of those employed work outside of their state of residence.

There is an urgent need to address congestion on the I-74 Bridge which is carrying over 77,000 vehicles per day and is significantly over capacity. The problem is compounded by the fact that the Bridge never met Interstate standards, has no shoulders, and the ramps nearest the Bridge have inadequate weaving lanes. Annual crashes along the I-74 Corridor are three times that of similar corridors in the nation.

Prompt and continued assistance to address I-74 Corridor improvements include final design, right-of-way acquisition, interchange and approach reconstruction, and construction. Authorization for funding in the next Federal Transportation Act has been requested by area leaders. We look forward to working with the Department of Transportation to implement this regionally significant transportation improvement.

Sincerely,



Jose Moreno, Mayor
City of East Moline, Illinois



*Mayor
Stanley F. Leach*

619 - 16 Street
Moline, Illinois 61265

Phone: (309) 797-0463
Fax: (309) 797-0479

November 18, 2003

Mr. James P. Rost, Director
Office of Location and Environment
Iowa Department of Transportation
800 Lincoln Way
Ames, Iowa 50010

Dear Mr. Rost:

The City of Moline is fully committed to the I-74 Corridor project.

The need for the project is undeniable. Interstate 74 serves as a major north-south corridor of national significance and provides linkage between several locally important commercial and industrial centers in both Illinois and Iowa and makes the Project vital to the continued economic well-being and commerce of the Quad Cities area.

Safety and design issues continue to be a concern in the corridor. The bridge itself is functionally obsolete and is not constructed to acceptable standards for Interstate driving conditions. Consequently, there is an urgent need for sufficient infrastructure and bridge crossing capacity, which will alleviate the congestion caused by the 77,000 vehicles crossing per day. Implementation of this improvement will also address issues, such as inadequate merging lanes and narrow shoulders that contribute to the abnormal amount of accidents occurring annually.

With these economic and safety concerns in mind, the City of Moline hereby extends its full support to this important project and requests the continued support of the Iowa Department of Transportation.

Sincerely,

A handwritten signature in black ink, appearing to read "S. Leach", written over a horizontal line.

Stan Leach
Mayor

BOARD OF SUPERVISORS

428 Western Avenue
Davenport, Iowa 52801-1004

Ph: (563) 326-8749 Fax: (563) 328-3285
www.scottcountyiowa.com



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Chairman
JIM HANCOCK
Vice Chairman
GREGORY P. ADAMSON
OTTO L. EWOLDT
LARRY MINARD

November 18, 2003

James P. Rost, Director
Office of Location and Environment
Iowa Department of Transportation
800 Lincoln Way
Ames, Iowa 50010

Dear Mr. Rost:

This letter is to inform the Department of Transportation that Scott County fully supports the I-74 Corridor project. The I-74 Corridor is extremely important to the commerce of the area. Interstate 74 is the major north/south corridor in the Quad City area and provides for the movement of people and goods to employment centers, entertainment venues, and commercial/industrial sites.

Adequate access and capacity crossing the Mississippi River is imperative for the Quad Cities to remain a vital community as we seek to exhibit a market population of nearly 400,000. In the Quad Cities, over 150,000 vehicles cross the Mississippi River on an average day with half of these crossings on I-74 alone. Over 50 percent of those employed work in a community outside of their residence. Over 20 percent of those employed work outside of their state of residence.

There is an urgent need to address congestion on the I-74 Bridge which is carrying over 77,000 vehicles per day and is significantly over capacity. The problem is compounded by the fact that the Bridge never met Interstate standards, has no shoulders, and the ramps nearest the Bridge have inadequate weaving lanes. Annual crashes along the I-74 Corridor are three times that of similar corridors in the nation.

Prompt and continued assistance to address I-74 Corridor improvements include final design, right-of-way acquisition, interchange and approach reconstruction, and construction. Authorization for funding in the next Federal Transportation Act has been requested by area leaders. We look forward to working with the Department of Transportation to implement this regionally significant transportation improvement.

Sincerely,

A handwritten signature in cursive script, appearing to read "Carol Schaefer", is written over a horizontal line. Below the signature, the name and title are printed.

Carol Schaefer, Chairman
Scott County Board of Supervisors



City of Davenport

Charles W. Brooke, Mayor
cwb@ci.davenport.ia.us

November 24, 2003

James P. Rost, Director
Office of Location and Environment
Iowa Department of Transportation
800 Lincoln Way
Ames, Iowa 50010

Dear Mr. Rost:

This letter is to inform the Department of Transportation that the City of Davenport fully supports the I-74 Corridor project. We are happy with the alternatives that the consultant is providing at the public hearings. Naturally, the 53rd Street and I-74 interchange is of great interest to the City of Davenport, as it will continue to enhance the economic development of the area.

Adequate access and capacity crossing the Mississippi River is imperative for the Quad Cities to remain a vital community as we seek to exhibit a market population of nearly 400,000. In the Quad Cities, over 150,000 vehicles cross the Mississippi River on an average day with half of these crossings on I-74 alone. Over 50 percent of those employed work in a community outside of their residence. Over 20 percent of those employed work outside of their state of residence.

There is an urgent need to address congestion on the I-74 Bridge which is carrying over 77,000 vehicles per day and is significantly over capacity. The problem is compounded by the fact that the Bridge never met Interstate standards, has no shoulders, and the ramps nearest the Bridge have inadequate weaving lanes. Annual crashes along the I-74 Corridor are three times that of similar corridors in the nation.

Prompt and continued assistance to address I-74 Corridor improvements include final design, right-of-way acquisition, interchange and approach reconstruction, and construction. Authorization for funding in the next Federal Transportation Act has been requested by area leaders. We look forward to working with the Department of Transportation to implement this regionally significant transportation improvement.

Sincerely,

Charles W. Brooke, Mayor

226 West Fourth Street • Davenport, Iowa 52801
Telephone: 563-326-7701 Fax: 563-328-6726 TDD: 563-326-6145
www.cityofdavenportiowa.com

"...where the Mississippi River Celebrates!"



**ROCK ISLAND
ILLINOIS**

Mayor Mark W. Schwiebert

November 26, 2003

James P. Rost, Director
Office of Location and Environment
Iowa Department of Transportation
800 Lincoln Way
Ames, Iowa 50010

Dear Mr. Rost:

This letter is to inform the Department of Transportation that the City of Rock Island supports the I-74 Corridor project. This corridor is extremely important to the commerce of the area. Interstate 74 is a major north/south corridor in the Quad City area and provides for the movement of people and goods to employment centers, entertainment venues, and commercial/industrial sites.

Adequate access and capacity crossing the Mississippi River is imperative for the Quad Cities to remain a vital community as we seek to exhibit a market population of nearly 400,000. In the Quad Cities, over 150,000 vehicles cross the Mississippi River on an average day with half of these crossings on I-74 alone. Over 50 percent of those employed work outside of their community of residence. Over 20 percent of those employed work outside of their state of residence.

There is a real need to address congestion on the I-74 Bridge which is carrying over 77,000 vehicles per day and is significantly over capacity. The problem is compounded by the fact that the Bridge never met Interstate standards, has no shoulders, and the ramps nearest the Bridge have inadequate weaving lanes. Annual crashes along the I-74 Corridor are three times that of similar corridors in the nation.

Prompt and continued assistance to address I-74 Corridor improvements include final design, right-of-way acquisition, interchange and approach reconstruction, and construction. Authorization for funding in the next Federal Transportation Act has been requested by area leaders. We look forward to working with the Department of Transportation to implement this regionally significant transportation improvement.

Sincerely,

Mark W. Schwiebert
Mayor

MWS:clg

1528 Third Avenue, Rock Island, Illinois 61201-8678
Phone.309.732.2012 Fax.309-732-2055
Email: schwiewm.ri.lincoln.org



QUAD CITIES USA



CITY OF BETTENDORF

1609 STATE STREET • BETTENDORF, IOWA 52722-4937 • (319) 344-4000

RECEIVED
DEC 08 2003
OFFICE OF LOCATION & ENVIRONMENT

December 2, 2003

James P. Rost, Director
Office of Location & Environment
Iowa Department of Transportation
800 Lincoln Way
Ames, Iowa 50010

Re: I-74 Corridor Project

Dear Mr. Rost:

This letter is to inform the Department of Transportation that the City of Bettendorf fully supports the I-74 Corridor Project. The I-74 Corridor is extremely important to the commerce of the area. Interstate 74 is the major north/south corridor in the Quad City Area and provides for the movement of people and goods to employment centers, entertainment venues, and commercial/industrial sites.

Adequate access and capacity crossing the Mississippi River is imperative for the Quad Cities to remain a vital community as we seek to exhibit a market population of nearly 400,000. In the Quad Cities, over 150,000 vehicles cross the Mississippi River on an average day with half of these crossings on I-74 alone. Over 50% of those employed work in a community outside of their residence. Over 20% of those employed work outside of their state of residence.

There is an urgent need to address congestion on the I-74 Bridge which is carrying over 77,000 vehicles per day and is significantly over capacity. The problem is compounded by the fact that the bridge never met Interstate Standards, has no shoulders, and the ramps nearest the bridge have inadequate weaving lanes. Annual crashes along the I-74 Corridor are three times that of similar corridors in the nation.



printed on recyclable paper

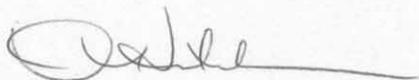


December 2, 2003
Letter to James Rost
Re: I-74 Corridor

Page -2-

Prompt and continued assistance to address I-74 Corridor improvements include final design, right-of-way acquisition, interchange and approach reconstruction, and construction. Authorization for funding in the next Federal Transportation Act has been requested by area leaders. We look forward to working with the Department of Transportation to implement this regionally significant transportation improvement.

Sincerely,

A handwritten signature in black ink, appearing to read "Ann Hutchinson", with a long horizontal line extending to the right.

Ann Hutchinson
Mayor



City of Davenport

226 West Fourth Street • Davenport, Iowa 52801
Telephone: 563-326-7711 TDD: 563-326-6145
www.cityofdavenportiowa.com

November 10, 2004

Mr. Jim Rost
Director, Office of Location and Environment
Iowa Department of Transportation
800 Lincolnway
Ames, Iowa 50010

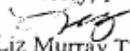
Dear Mr. Rost:

Per Marc Solberg's request, I am writing to request your assistance in the form of a letter of support for a proposed grant application. The City of Davenport is in the process of applying for EPA Brownfield Clean up funds for two adjoining properties located along West River Drive/U.S. 61. The properties are undeveloped and located on both sides of the river. We have completed Phase I and Phase II environmental assessments on both properties. Our application requests funding to address the contamination of the northern portion of the site, which has up to twenty feet of illegally dumped fill, much of it "fluff" from automobile salvage operations. Our project proposes to return the sites to their original natural setting, including the enhancement and revitalization of the wetlands on the site.

Mike Hayes, Project Manager of the Corps of Engineers, thought this project might be a good candidate for wetland replacement with future Iowa Department of Transportation projects. We would certainly be interested in meeting with you and your staff to discuss possible cooperation as our plans progress.

Thank you for your consideration. If you have any questions, feel free to contact me at (563)323-6167 or email emt@ci.davenport.ia.us.

Sincerely,


Liz Murray Tallman
Economic Development Program Manager

Working together to serve you





Iowa Department of Transportation

800 Lincoln Way, Ames, Iowa 50010

515-239-1798

FAX 515-239-1726

November 10, 2004

Ref. 510
Scott County
IM-74-1(122)5--13-82
PIN: 03-82-074-010

Elizabeth Murray Tallman
Economic Development Program Manager
City of Davenport
226 West Fourth Street
Davenport, Iowa 52801

Dear Ms. Tallman:

Thank you for your inquiry into our wetland mitigation program. We are currently in a planning study for an improvement to the I-74 corridor in the Quad Cities. The current study area begins near 53rd Street in Davenport and extends to 23rd Avenue in Moline, Illinois. A result of most any highway project is unavoidable impacts to wetlands, requiring compensatory wetland mitigation per Section 404 of the Clean Water Act. While we are not yet far enough along in the development process, it is reasonable to expect we will have a need for mitigation.

We are always interested in finding willing 3rd party partners for our mitigation and would have an interest in further investigating the potential that the Zenith and Meyers properties, or segments thereof, could be used for these purposes. Because the I-74 work is in its early planning stages we cannot make any commitment at this time; however, it appears your initiative has good potential.

If you have any questions or require additional information, please call me at 515-239-1798 or Marc Solberg at 515-233-7712.

Sincerely,

Jim Rost, Director
Office of Location and Environment

JPR:mjs:jj

cc: Richard Kautz, District 6 Engineer, Iowa DOT
Scott Marler, Water Resources Supervisor



Correspondence with Other Organizations



Iowa Department of Transportation TRIBAL NOTIFICATION

Date August 26, 2002

IA DOT contact Matt Donovan

IADOT project # IM-74-1 (122) 9-13-8

Phone # 515-239-1097

Location City of Bettendorf, Scott County, Iowa

E-mail math.donovan@dot.state.ia.us

Description New I-74 bridge over the Mississippi River

Type of Project (see map)

- | | |
|--|---|
| <input type="checkbox"/> VERY SMALL - Disturb less than 12 inch depth (plow zone) | <input type="checkbox"/> LARGE - Improve existing road from 2-lanes to 4-lanes |
| <input type="checkbox"/> SMALL - Grading on existing road, shouldering, ditching, etc. | <input type="checkbox"/> LARGE - New alignment |
| <input type="checkbox"/> SMALL - Bridge or culvert replacement | <input checked="" type="checkbox"/> OTHER <u>major Bridge Construction (I-74)</u> |

Type of Coordination/Consultation Points

- | | |
|--|---|
| <input type="checkbox"/> 1--Early project notification (project map and description) | <input type="checkbox"/> 3--Consultation regarding site treatment |
| <input checked="" type="checkbox"/> 2--Notification of survey findings (Phase I) | <input type="checkbox"/> 4--Final Data Recovery Report |
| <input type="checkbox"/> 2a--Notification of site evaluation (Phase II) | |

Type of Findings

- | | |
|--|---|
| <input type="checkbox"/> No American Indian sites found
--Section 106 Consultation Process ends * | <input type="checkbox"/> Potentially significant American Indian sites found
Phase II evaluation conducted (see map and list of sites) |
| <input checked="" type="checkbox"/> No significant American Indian sites eligible for National Register listing found--Section 106 Consultation Process ends * | <input type="checkbox"/> American Indian sites eligible for National Register listing cannot be avoided (see map) |
| <input type="checkbox"/> Avoided American Indian sites eligible for National Register listing (see map and list of sites)
--Section 106 Consultation Process may or may not end | <input type="checkbox"/> Burial site found |
| * in the event of a late discovery consultation will be reopened | _____ # of non-significant prehistoric sites |
| | _____ # of potentially significant prehistoric sites |
| | _____ # of National Register eligible prehistoric sites |

Affected National Register Properties

- | | |
|---|--|
| <input type="checkbox"/> Investigating avoidance or minimizing harm options | <input type="checkbox"/> Protected |
| <input type="checkbox"/> Avoided | <input type="checkbox"/> Data Recovery/MOA |

***** 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)? _____

- | | |
|--|--|
| <input type="checkbox"/> Thank you for the information; however, we do not need to consult on this particular project. | <input checked="" type="checkbox"/> Thank you for the information. We are satisfied with the planned site treatment. |
| <input type="checkbox"/> We do not have a comment at this time but request continued notification on this project. | <input type="checkbox"/> We have concerns and wish to consult. |
| <input type="checkbox"/> Please send a copy of the archaeology report. | <input type="checkbox"/> We wish to participate in the Memorandum of Agreement for this project. |

Comments _____

<u>Maureen Ly</u>	<u>Iowa Tribe of OK</u>	<u>9-9-02</u>
Name	Tribal Name	Date



Iowa Department of Transportation TRIBAL NOTIFICATION

Date August 26, 2002
IADOT project # IM-74-1 (122) 9-13-8
Location City of Bettendorf, Scott County, Iowa
Description New I-74 bridge over the Mississippi River

IA DOT contact Matt Donovan
Phone # 515-239-1097
E-mail mat.donovan@dot.state.ia.us

Type of Project (see map)

<input type="checkbox"/> VERY SMALL - Disturb less than 12 inch depth (plow zone)	<input type="checkbox"/> LARGE - Improve existing road from 2-lanes to 4-lanes
<input type="checkbox"/> SMALL - Grading on existing road, shouldering, ditching, etc.	<input type="checkbox"/> LARGE - New alignment
<input type="checkbox"/> SMALL - Bridge or culvert replacement	<input checked="" type="checkbox"/> OTHER <u>Major Bridge Construction (I-74)</u>

Type of Coordination/Consultation Points

<input type="checkbox"/> 1--Early project notification (project map and description)	<input type="checkbox"/> 3--Consultation regarding site treatment
<input checked="" type="checkbox"/> 2--Notification of survey findings (Phase I)	<input type="checkbox"/> 4--Final Data Recovery Report
<input type="checkbox"/> 2a--Notification of site evaluation (Phase II)	

Type of Findings

<input type="checkbox"/> No American Indian sites found --Section 106 Consultation Process ends *	<input type="checkbox"/> Potentially significant American Indian sites found Phase II evaluation conducted (see map and list of sites)
<input checked="" type="checkbox"/> No significant American Indian sites eligible for National Register listing found--Section 106 Consultation Process ends *	<input type="checkbox"/> American Indian sites eligible for National Register listing cannot be avoided (see map)
<input type="checkbox"/> Avoided American Indian sites eligible for National Register listing (see map and list of sites) --Section 106 Consultation Process may or may not end	<input type="checkbox"/> Burial site found

* in the event of a late discovery consultation will be reopened

_____ # of non-significant prehistoric sites
 _____ # of potentially significant prehistoric sites
 _____ # of National Register eligible prehistoric sites

Affected National Register Properties

<input type="checkbox"/> Investigating avoidance or minimizing harm options	<input type="checkbox"/> Protected
<input type="checkbox"/> Avoided	<input type="checkbox"/> Data Recovery/MOA

***** **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)? _____

<input type="checkbox"/> Thank you for the information; however, we do not need to consult on this particular project.	<input type="checkbox"/> Thank you for the information. We are satisfied with the planned site treatment.
<input type="checkbox"/> We do not have a comment at this time but request continued notification on this project.	<input type="checkbox"/> We have concerns and wish to consult.
<input type="checkbox"/> Please send a copy of the archaeology report.	<input type="checkbox"/> We wish to participate in the Memorandum of Agreement for this project.

Comments _____

Matt Muehlen _____ 9-12-2
 Name Tribal Name Date

River Industry Action Committee

Sammy Dickey
Chairman
1701 E. Market Street
Jeffersonville, IN 47130
Office: 812-288-1968
Fax: 812-288-0255

Buddy Compton
Co-Chairman
P. O. Box 2756
Paducah, KY 42002
Office: 270-441-1613
Fax: 270-441-1633

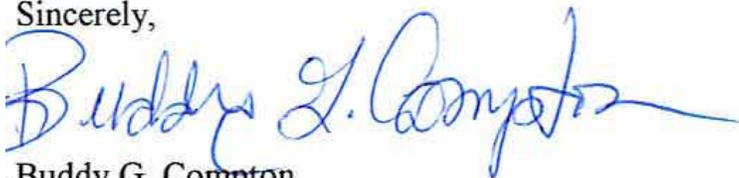
TO: SCI
FROM: Buddy Compton, Co-Chairman RIAC
SUBJECT: I-74 Bridge Project, Simulation
DATE: December 1, 2004

In September the Seaman's Church Institute contacted RIAC, (River Industry Action Committee), to participate in evaluating simulation exercises on the I-74 Mississippi River Bridge at Quad cities, Illinois and Iowa area, approximately mile 485.8 Upper Mississippi River.

RIAC supplied two active Upper Mississippi River pilots from two different companies to run through the area on the Simulator. Their objective was to determine a minimal bridge clearance for safe passage through the proposed I-74 Replacement Bridge over the Mississippi River just downstream from that same location mentioned above. RIAC also had the Chairman and Co-Chairman present to assist in the evaluation process, both experienced Upper Mississippi River pilots.

The process involved running through the site under a number of different river conditions, weather conditions, and with a number of different tow sizes with different horsepower towboats. After evaluating each exercise, RIAC recommends that the replacement bridge for this area have a minimum horizontal span (between the concrete support piers) of 700 feet. The vertical clearance should remain the same as the existing bridge, 66.1 feet above normal pool stage.

Sincerely,



Buddy G. Compton
Co-Chairman RIAC

CC: S. Dicky
R. Wiebush
File

Appendix D
Wetland Impact Evaluation Form

Wetlands

Submittal Date: 05/16/2001	Sequence No: 9724	Project No:
District: 2	Requesting Agency: DOH	
Contract #:	Job No.: P-92-032-01	
Counties: Rock Island Co., Illinois & Scott Co., Iowa		
Route: FAI 74	Marked: I-74	
Street:	Section: 81B	
Municipality(ies): Moline, IL, Bettendorf, IA, & Davenport, IA	Project Length: 11.265 km	7 miles
From To (At): 23rd Ave. in Moline to 53rd St. in Bettendorf		
Quadrangle: Milan, Coal Valley, and Davenport East	Township-Range-Section: T17N-R1W-Sect. 4, 5 & 9	
Anticipated Design Approval: 12/31/2003	Cleared for Design Approval:	
Cleared for Letting: 03/30/2007	Mitigation: Yes	Mitigation Completed:

Wetland Impacts Evaluation

Submittal Date:	03/26/2007	Submitted By:	
Does the project have wetland impacts?	Yes	Type:	Permanent
Briefly describe the measures considered to avoid and minimize adverse impacts to the wetlands:	The Preferred Alignment (F) was chosen which minimizes impacts by totally avoiding impacts to Wetland 5. The bridge will span most, if not all, of the impacted wetland.		
Summarize briefly why there are no practicable alternatives to the use of the wetland(s):	There are wetlands adjacent to the existing highway on both sides, in places. The preferred alignment is close to the existing roadway. Therefore, it is not possible to avoid wetland impacts completely.		
Wetland mitigation is being proposed:	wetland bank site	<input checked="" type="checkbox"/> Reviewed	

Memo Date:	03/30/2007	Memo By:	Felecia Hurley
Memo:	<p>This memorandum is in response to the Wetland impact Evaluation (WIE) form submitted to this office on March 26, 2007. Since this project is on new alignment it is being processed as a Standard Action and the highest mitigation ratios apply. One wetland site (Site 6) will have 0.18 acres of permanent wetland impact. This wetland is part of the Mississippi River-Moline Natural Area. According to the implementing procedures of the Illinois Wetland Policy Act a mitigation ratio of 5.5:1.0 is required, resulting in 0.99 acre of mitigation. Mitigation for the permanent impact has been proposed to occur at the Andalusia Slough Wetland Bank site. This office concurs with that form of mitigation.</p> <p>According to the approved IDOT Wetlands Action Plan coordination with the Illinois Department of Natural Resource (IDNR) is required with all Standard Actions. By copy of this memorandum, IDNR is being notified of this project. Their mitigation recommendations and our recommendations for further coordination will be forwarded to your office upon receipt of a response. This project is being coordinated with the United States Fish and Wildlife Service (USFWS) because it may require an Individual Permit.</p> <p>The wetland delineations have been provided to you as an attachment to the Biological Resource Review (BRR) dated May 21, 2002. They were included in the Draft Biological Resources Technical Report dated December 2001.</p> <p>If there are any questions please call Felecia Hurley at (217) 782-9129.</p> <p>Attachments</p> <p>Cc: Steve Hamer (IDNR) Richard Nelson (USFWS) FAH</p>		

Memo Date:	03/26/2007	Memo By:	C. Rodgers
Memo:	<p>The proposed project will construct a new structure for I-74 across the Mississippi River near the existing structure. The preferred alignment will only impact one wetland (site 6) in Illinois, and will span over the top of the site. The actual placement of the piers has not been determined at this time, but one pier may either be located in this wetland or adjacent to it. The alignment will avoid the other Illinois wetland sites. This wetland is located within the Mississippi River - Moline Natural Area.</p> <p>The District proposes to purchase bank credits at the Andalusia Slough Wetland Bank, which is off site, but in the same Mississippi River Basin.</p>		

Wetland Impacts and Mitigation Required

Site No.	Type	T&E	Nature Preserve	Natural Area	Essential Habitat	Size (acres)	Acres of Impact	Ratio	Acres of Compensation
5	Forested	No	No	Yes	No	6.45	.000		
Basin	07080101	Quadrangle	Davenport East		FQI	1.7			
Describe the work:		Vegetation Removal							
6	Forested	No	No	Yes	No	1.86	.180	5.5	.990
Basin	07080101	Quadrangle	Davenport East		FQI	1.7			
Describe the work:		Vegetation Removal							
Total							.180		.990

Appendix E
Incidental Take Authorization

IDOT Conservation Plan for the Higgins eye pearly mussel (*Lampsilis higginsii*), the spectacle case (*Cumberlandia monodonta*), the butterfly mussel (*Ellipsaria lineolata*), the black sandshell (*Ligumia recta*), and the sheepsnose mussel (*Plethobasus cyphus*) inhabiting the Mississippi River in the vicinity of the proposed I-74 bridge improvement in Moline, IL in Rock Island County

1. Description of the impact likely to result from the proposed taking

A. Legal description of the project area

The project construction area is from Avenue of the Cities (23rd Avenue) in Moline, Illinois, to one mile north of 53rd Street in Davenport, Iowa. There are two separate areas of impact on the Sylvan Slough: the location of the construction of the new interstate bridge and the location of the removal of the existing bridge.

The legal location of the bridge construction and demolition area (i.e. the subject mussel bed) is taken from the Davenport East, IA, US Geological Survey 7.5-minute topographic quadrangle map (1991, NAD 1983). The area of the project in which the mussels are located is near the south end of the existing I-74 Bridge in the Mississippi River.

Both the existing I-74 Bridge and the proposed new bridge are located at the 4th Principal Meridian, Township 18 North, Range 1 West, Southeast ¼ of Section 29 and Northeast ¼ of Section 32.

B. Biological Data

Sylvan Slough

The project crosses the Mississippi River-Moline Natural Area which covers 2,297 acres of the Mississippi River on the Illinois side of the river. The significant features of the natural area are its mussel beds which contain federal and state listed species of mussels and wintering habitat for the state listed bald eagle.

The Sylvan Slough is a part of this natural area and the Slough is located between the Rock Island Arsenal Island and the cities of Rock Island and Moline. Approximately 4,800 feet of the upstream portion of the Sylvan Slough has been designated as an Essential Habitat Area for the Higgins' eye pearly mussel (federally listed) by the Higgins' eye pearly mussel recovery plan. The existing interstate bridge occurs within the designated area. The proposed new bridge occurs adjacent to the upstream boundary of the designated area of the slough.

A recent (2005) spot survey for mussels within the Sylvan Slough Essential Habitat Area identified 15 species of mussels within this area. The dominant mussels in the area were the Pimpleback (*Quadrula pustulosa*) and the threehorn wartback (*Obliquaria reflexa*). In addition, one federally listed mussel species (Higgins' eye) and three state listed mussel species (sheepsnose, butterfly, and black sandshell) were also identified. All of the unionid mussels collected bore zebra mussel byssal plaques. These listed mussel species are briefly described in the following paragraphs.

Higgins eye pearly mussel (*Lampsilis higginsii*) Biological Data

The Federally Endangered Higgins Eye Pearly Mussel (*Lampsilis higginsii*) is known to occur immediately upstream and downstream from the existing I-74 Bridge over the Mississippi River (Whitney *et al* 1996, Illinois DNR 2001). The mussel bed inhabited by Higgins Eye Pearly Mussel in the vicinity of the I-74 Bridge is known locally as Sylvan Slough, used synonymously in this report as The Mississippi River - Moline INAI. Sylvan Slough, located at River Mile 485.8, lies, in part, underneath the I-74 bridge and slightly on the downstream side. Mussel surveys in Sylvan Slough were undertaken in the 1980's and in 1994 and 1995 (Whitney *et al* 1996). The density of Higgins Eye Pearly mussels found in Sylvan Slough during these survey efforts is estimated to be less than 0.33 live specimens / m² (Whitney *et al* 1996). Another location of the Higgins Eye Pearly mussel was recorded 2.7 miles upstream from the existing I-74 bridge (Whitney *et al* 1996).

Glochidia of the Higgins eye pearly mussel are known to be hosted in the gills of sauger (*Stizostedion canadense*). The Higgins eye pearly mussel prefers a gravel or sand substrate.

Spectacle case (*Cumberlandia monodonta*) Biological Data

The state-endangered and Federal Candidate Spectacle Case Mussel (*Cumberlandia monodonta*) is known to occur approximately 0.5 miles upstream from the existing I-74 Bridge at River Mile 486.3 (Illinois DNR 2001). For reference, the existing I-74 Bridge is located at River Mile 485.8. Density of the Spectacle Case Mussel at this location is unknown. An additional location of the Spectacle Case mussel is recorded several miles upstream from the existing I-74 Bridge (Whitney *et al* 1996).

The host fish species for the Spectacle Case is unconfirmed. The Spectacle case prefers a boulder strewn substrate with cobbles, gravel, and sand.

Butterfly mussel (*Ellipsaria lineolata*) Biological Data

The State-threatened Butterfly Mussel is known to occur at River Mile 485.8 (directly under the existing I-74 Bridge) (Whitney *et al* 1996), River Mile 486.3 (0.5 miles upstream from the existing I-74 Bridge) (Illinois DNR 2001), and at River Mile 488.5 (2.7 miles upstream from the existing I-74 Bridge) (Whitney *et al* 1996).

The freshwater drum (*Aplodinotus grunniens*) is a known host of glochidia of the Butterfly mussel. The Butterfly mussel prefers a substrate of gravel or sand.

Sheepnose mussel (*Plethobasus cyphus*) Biological Data

The state-endangered and Federal Candidate Sheepnose Mussel is known to occur at River Mile 485.8 (directly under the existing I-74 Bridge) (Whitney *et al* 1996), and at River Mile 486.3 (0.5 miles upstream from the existing I-74 Bridge) (Illinois DNR 2001).

A likely fish host for Sheepnose mussel glochidia is the sauger (*Stizostedion canadense*). The Sheepnose mussel prefers a substrate of a mosaic of sand and gravel.

Black Sandshell (*Ligumia recta*)

The state-threatened Black Sandshell Mussel is known to occur at River Mile 485.8 (under and slightly downstream of the existing I-74 Bridge). (Illinois Natural History Survey, 2005).

The American eel and bluegill are likely host species for the Black Sandshell. The Black Sandshell prefers a substrate of gravel or firm sand.

C. Habitat and description of activities that will result in take.

A large concentration of mussels on substrates of sand and gravel is known to occur within the Sylvan Slough area. During low river states the current is swift within the Slough.

Two proposed activities may involve a take of mussels. The first is the construction of a new I-74 bridge across the Mississippi River. The second is the removal of the existing I-74 bridge once the new bridge is open to traffic. In the vicinity of the I-74 Bridge, habitat for rare mussels is only present in and near Sylvan Slough.

The construction of a new I-74 bridge will require the construction of 4 new piers within Sylvan Slough. Each new pier will have a footprint (on average) of 1059 SF. The impact area of each new pier will be the pier footprint plus 10 feet outside of the footprint. Thus, the impact area of each new pier will be 2760 SF. With 4 piers, the total new pier impact area will be 11,040 SF.

The existing I-74 bridge has 20 total piers, 10 Illinois-bound and 10 Iowa-bound, including the Moline Anchorage. A total of 4 piers are on islands. In stream work will be required to remove those piers that are in the Mississippi River, 16 in total. Four in-stream piers are currently in place near Sylvan Slough that would need to be removed. The footprint of each pier is on average 1059 SF. The potential impact area is the approximately 10 foot wide perimeter around each pier, a perimeter area of about 1700 SF. Four in-stream piers each having an impact area (perimeter area) of 1700 SF means that 6800 SF of potential mussel habitat would be impacted.

D. Explanation of the anticipated adverse effects on the listed species.

If not relocated, mussels would likely be buried or otherwise crushed or killed by construction activities. The potential adverse impacts would result from the loss of bottom habitat by the new piers, the construction process for placement of new piers into the river, and the removal of the old piers and superstructure. The construction of the new piers may require the use of barges, a causeway, haul road, or temporary construction bridge. The removal of the existing bridge may be accomplished through dismantling the superstructure and lowering it onto barges or the use of explosives to remove the existing piers.

2. Measures the applicant will take to minimize and mitigate that impact

A. Plans to minimize the area affected by the proposed action, the number of individuals of an endangered or threatened species that will be taken, and the amount of habitat affected.

The project will be restricted to the rights-of-way. The rights-of-way are approximately 300 feet in width. A small number of Higgins' eye, spectacle case, butterfly, sheepnose, and black sandshell mussels could be taken. Approximately 11,040 square feet and 6,800

square feet of Slough habitat could be affected by construction activities associated with the new and existing bridges, respectively.

B. Plans for management of the area affected by the proposed action that will allow continued use of the area by the species.

During construction, adjacent land areas will contain erosion and sediment control features. The Department's erosion and sediment control policy will be followed and will be in compliance with the U.S. Army Corps of Engineers Section 404 permit, the water quality certification policies of Illinois EPA, and the requirements within the NPDES construction permit. It is expected, that after the instream work has been completed, the area will be available for re-colonization by all species of mussels.

C. Description of all measures to be implemented to minimize or mitigate the effects of the proposed action on the endangered or threatened species.

To minimize and mitigate the affects of the project on the Higgins' eye, spectacle case, butterfly, sheepnose, and black sandshell mussels it is planned to relocate all individuals of these species from the bridge pier areas (11,040 square feet and 6,800 square feet from the new and existing bridges, respectively). It is expected that the mussel relocations at the two bridge sites will be separated by several years.

The relocation area will be to an area with suitable stable substrates, similar unionid assemblages, and low to no zebra mussel infestations. The relocation area or areas will be determined before the mussels are moved through consultation with the IDNR and the U.S. Fish and Wildlife Service. These areas could include the Sylvan Slough, other localities within the Mississippi River, or areas within the Rock River. The temporary holding of mussels will be in containers that allow the animals to remain moist and uncrowded. All mussel relocation protocols will be followed. The relocation will occur between May 1 and November 1 of any given year and will be done as to avoid extreme temperatures.

Prior to construction all contractors and construction personnel will receive training regarding legal and ecological aspects of Higgins' eye pearly mussel and the four mussels listed by the State of Illinois.

D. Plans for monitoring the effects of the measures implemented.

Monitoring of the construction sites will occur at least once during the following year at each site. At the new bridge site, that will occur after the piers have been constructed. At the existing bridge site, that will be after the bridge has been removed. The purpose of the monitoring effort is to determine if the mussels, including the Higgins' eye and state listed species, have re-colonized the area. It is anticipated that the habitat at the construction site will have recovered and that the host fishes have re-colonized the area. Based on the results of these two monitoring surveys, the need for further monitoring will be assessed.

Monitoring of the mussel relocation site(s) will occur as close as feasible to 3 months after the relocation and the following year. The purpose of the monitoring effort is to determine the survival of the relocated Higgins' eye and state listed species.

The relocation plan prepared by the Illinois Natural History Survey is attached.

E. Projected cost of each measure that will minimize or mitigate the effects of proposed action on endangered or threatened species.

The total project cost is estimated to be \$775 million (2007 dollars). The estimated cost of constructing the new bridge (the preferred alternative) is \$298 million and the estimated cost of demolishing the existing I-74 bridge is \$7 million (construction and demolition costs are 2007 dollars). The estimated cost of mussel mitigation is \$166,000, assuming two years of mussel monitoring.

F. Adaptive management practices that will be used to deal with changed or unforeseen circumstances that affect the effectiveness of measures instituted to minimize or mitigate the effects of the proposed action on endangered or threatened species.

Mussel relocation is dependent on the flow and volume of water in the river at that time. If the flow is swift and/or the water levels are high the relocation(s) will not take place. Mussel relocation will occur only when water levels are low and current conditions are moderate or low.

Potential mussel relocation beds will be carefully screened to assure that habitat is suitable for transplanted mussels and that risks of external threats to the relocation beds (siltation, chemical spills) are minimized. The relocation will be done according to accepted standards to minimize mussel mortality.

G. Verification that funding to support mitigation activities will be available for the life of conservation plan.

Illinois Department of Transportation has a contractual obligation with the Illinois Natural History Survey (INHS). The INHS will be in charge of the mussel relocation and monitoring surveys.

3. Alternative actions that would not result in the take

The only alternative that would not result in the take of listed freshwater mussels is the “no action” alternative, which means that the bridge would not be replaced.

4. Data and information to assure that the proposed taking will not reduce the likelihood of the survival of the species.

The biogeographic range of the Higgins Eye Pearly Mussel includes the Mississippi River, upstream and downstream from the I-74 bridge, the St. Croix River (between Wisconsin and Minnesota), the Wisconsin River, and the Lower Rock River.

The biogeographic range of the Spectacle case Mussel includes the Upper and Lower Mississippi River, the Ohio River, the Cumberland River, the Lower Missouri River, and the Tennessee River.

The biogeographic range of the Butterfly Mussel includes Pools 10, 11, 12, 15, and 19 of the Mississippi River and lower reaches of tributaries flowing into these pools.

The biogeographic range of the Sheepnose Mussel is limited to scattered locales on the Mississippi River upstream and downstream from the I-74 Bridge.

The biogeographic range of the Black Sandshell Mussel includes the Mississippi River in Rock Island County, Illinois. It is widely distributed, but uncommon in much of the Midwest.

5. An implementing agreement, which shall include, but not be limited to:

A. Names of all participants in the execution of the conservation plan, including public bodies, corporations, organizations, and private individuals.

Thomas C. Brooks
Natural Resources Unit Chief
Illinois Department of Transportation, Springfield

Kevin S. Cummings
Malacologist
Illinois Natural History Survey, Champaign

Glen Kruse
Endangered Species Program Manager
Illinois Department of Natural Resources

Rich Lewis
Illinois Department of Natural Resources, Springfield

Chris Phillips, Ph.D.
Director of the Center for Biodiversity
Illinois Natural History Survey

George F. Ryan, P.E.
Deputy Director, Region 2 Engineer
Illinois Department of Transportation

Bob Schanzle
Malacologist
Illinois Department of Natural Resources, Springfield

Jeremy S. Tiemann
Malacologist
Illinois Natural History Survey, Champaign

Jim Schnoebelen, P.E.
District Engineer
Iowa Department of Transportation, District 6

Scott Marler, P.W.S.
Wetland Resources Program Manager
Iowa Department of Transportation

B. The obligations and responsibilities of each of the identified participants with schedules and deadlines for completion of activities in the Conservation Plan and a schedule for preparation of progress report to be provided to the Department.

The Illinois Department of Natural Resources is responsible for the review of this Conservation Plan and for subsequent issuance of the Incidental Take Authorization.

The Illinois Natural History Survey, in consultation with the Illinois Department of Transportation and the Illinois Department of Natural Resources, will relocate the Higgins eye, spectacle case, butterfly, sheepsnose, and black sandshell mussels from the construction sites to a site(s) outside the project area. A post construction survey will be done at the construction sites to determine the success of mussel re-colonization. Surveys will be conducted at the relocation site(s) to determine the success of the Higgins' eye, spectacle case, butterfly, sheepsnose, and black sandshell survival.

The Iowa Department of Transportation is responsible for the construction sites, the placement and function of the erosion and sediment control, all items in the Incidental Take Authorization and coordination with the Illinois Department of Transportation and the U.S. Fish and Wildlife Service.

The Illinois Department of Transportation is responsible for the mussel surveys and the mussel relocation efforts, all items in the Incidental Take Authorization, coordination with Iowa Department of Transportation, Illinois Natural History Survey, Illinois Department of Natural Resources, and the U.S. Fish and Wildlife Service.

The INHS will have duties of surveying for threatened or endangered mussels and moving the Higgins Eye Pearly Mussel, the Spectacle Case Mussel, the Butterfly Mussel, and the Sheepsnose Mussel away from the project location to suitable habitat. Post construction, the INHS will examine the impacted area for re-colonization by Higgins Eye Pearly Mussel, the Spectacle Case Mussel, the Butterfly Mussel, and the Sheepsnose Mussel.

IDOT is responsible for obtaining biological clearance from IDNR, coordination and implementing recommendations to the contractor related to and constructing the project and addressing commitments listed under the Incidental Take Authorization permit.

C. Assurances that each participant in the execution of the conservation plan has the legal authority to carry out their respective obligations and responsibilities under the conservation plan.

Through a cooperative agreement with the U.S. Fish and Wildlife Service, all Illinois Department of Natural Resources field staff (including the Illinois Natural History Survey staff) have authority under Section 6 of the Endangered Species Act to conduct

surveys for federally listed species. Both agencies have authority to conduct surveys for state listed species.

The Illinois Department of Transportation has the legal responsibility for the implementation and oversight of the mussel surveys and relocations under the Illinois Endangered Species Act. All federal and state laws, regulations, permits, and commitments will be adhered to.

D. Assurances of compliance with all other federal, state, and local regulations pertinent to the proposed action and to execution of the conservation plans.

The projects will require individual Section 404 permits from the U.S. Army Corps of Engineers (Rock Island District) and water quality certification from Illinois EPA.

E. Copies of any federal authorizations for taking already issued to the applicant.

None.

F. For projects that will result in the taking of endangered or threatened species of plants, copies of expressed written permission of the landowner.

Not applicable since the Higgins Eye Pearly Mussel, the Spectacle Case Mussel, the Butterfly Mussel, and the Sheepnose Mussel are considered animals under the Illinois Endangered Species Act (ILCS 10/2).

Appendix F
List of Preparers

APPENDIX F

List of Preparers

Name	Area of Expertise
Iowa Department of Transportation	
Jim Rost	Director, Office of Location and Environment
Donna Matulac, P.E.	Project Engineer
Janet Vine	Environmental Compliance
Stephen Larson	Environmental Compliance
Randy Faber	Cultural Resources Specialist
Ron Ridnour	Environmental Specialist
Marc Solberg	Wetland Ecologist
Brad Azeltine	Environmental Specialist
Illinois Department of Transportation	
Charles Perino	Natural Resources and General Content Review
Barbara H. Stevens	Socioeconomic Impact Analysis and General Content Review
John A. Walthall	Archaeological Coordination, Analysis and Review
Walt Zyznieuski	Air Quality Coordination, Analysis and Review
Mark Nardini	General Content, Special Waste, Cultural, Air and Noise Coordination, Analysis and/or Review
Cassandra Rodgers	Wetlands Analysis, Biological Studies and Review
Derrick Lopez, P.E.	Phase I Engineering
Federal Highway Administration—Iowa Division Office	
Mike LaPietra	NEPA Compliance
Andy Wilson, P.E.	Transportation Engineer
Federal Highway Administration—Illinois Division Office	
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Appendix G
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APPENDIX G

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P.O. Box 3368
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(309) 793-6300

**For a copy, contact:
City of Bettendorf
City Hall
1609 State Street
Bettendorf, Iowa
www.bettendorf.org
(563) 344-4000

Appendix H
Distribution List

Final EIS Distribution List

Federal Agencies

U.S. Army Corps of Engineers, Rock Island District
U.S. Environmental Protection Agency, Region V – Office of Environmental Review
U.S. Environmental Protection Agency, Region VII – Environmental Services Division
U.S. Department of the Interior, Office of Environmental Policy and Compliance
U.S. Department of the Interior, Fish and Wildlife Service
U.S. Department of Homeland Security, United States Coast Guard
U.S. Department of the Army, Rock Island Arsenal
U.S. Department of Housing and Urban Development, Des Moines Field Office
U.S. Department of Housing and Urban Development, Region V
U.S. Department of Agriculture, Natural Resources Conservation Service
Advisory Council on Historic Preservation
Federal Emergency Management Agency, Region VII
Federal Emergency Management Agency, Region V

State Agencies

Iowa

State Historical Society of Iowa
Iowa Department of Economic Development
Iowa Department of Natural Resources

Illinois

Illinois Department of Natural Resources
Illinois Department of Natural Resources, Office of Mines and Minerals
Illinois Department of Natural Resources, Office of Water Resources
Illinois State Geological Survey
Illinois Natural Historic Survey
Illinois Water Survey
Illinois Environmental Protection Agency
Illinois Historic Preservation Agency
Illinois State Clearinghouse
Illinois State Library

Local Units of Government

City of Bettendorf, Iowa
City of Bettendorf Planning Department
City of Davenport, Iowa
City of Davenport Planning Department

City of Moline, Illinois
City of Moline Planning Department
City of Rock Island, Illinois
Scott County Administrator
Scott County Board of Supervisors
Scott County, County Engineer
Scott County, Planning and Development
Rock Island County Board
Rock Island, County Engineer
Rock Island County, Economic Development
Bi-State Regional Commission

Interested Groups and Individuals

National Trust for Historic Preservation
Rock Island County Historical Society
River Action, Inc.
Downtown Businesses of Bettendorf
Davenport One
Renew Moline
Bettendorf Chamber of Commerce
Illinois Quad Cities Chamber of Commerce
Scott County Conservation Board
Curt Roseman
Quad Cities Development Group

Public Libraries

Bettendorf Public Library
Moline Public Library, Downtown Branch
Davenport Public Library

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