

Appendix A

Resource Report List



Resource Reports Prepared for the Project

	Report provided in an appendix to the EA	Report in the Project File
Purpose and Need Document	☒	☐
Alternative Analysis Document	☒	☐
Community Impact Assessment	☐	☒
Section 106 PQS Memo	☒	☐
Section 4(f) Documentation	☒	☐
Section 6(f) Coordination and/or Documentation (not applicable)	☐	☐
Air Quality Memo (not applicable)	☐	☐
Noise Study (not applicable)	☐	☐
Hazardous Materials Review	☐	☒
Floodplain PQS Memo	☐	☒
Wetland Delineation Report	☐	☒
Approved Jurisdictional Determination (not applicable)	☐	☐
Wild and Scenic Rivers Coordination (not applicable)	☐	☐
Draft Biological Assessment	☒	☐

Appendix B

Purpose and Need

Accessibility Support

This document may contain elements that are not fully accessible to screen readers. For a detailed explanation of the content or to request an alternative format, please contact Marissa Kuehn, NDOT Public Involvement Manager at marissa.kuehn@nebraska.gov or 402-479-4514

Purpose and Need Memorandum

Decatur Bridge
Burt County, Nebraska
Monona County, Iowa
Project No.: STP-51-7(109)
Control No.: 32395

June 6, 2024
Revised December 2025



Table of Contents

Acronyms and Terms	ii
Project Description	3
Development of the Initial Purpose and Need.....	3
Initial Purpose and Need Statements	4
1.1 Needs	4
1.1.1 Maintain Connectivity	4
1.1.2 Improve Infrastructure Condition	8
1.1.3 Improve Resiliency Against Flooding.....	11
1.2 Purpose.....	12

Acronyms and Terms

Acronym or Term	Definition
ADT	average daily traffic
CAG	Community Advisory Group
Iowa DOT	Iowa Department of Transportation
L RTP	Long-Range Transportation Plan
NDOT	Nebraska Department of Transportation
NRHP	National Register of Historic Places
NSTM	non-redundant steel tension members
SIMPCO	Siouxland Interstate Metropolitan Planning Council
S RTPA	Siouxland Regional Transportation Planning Association
USACE	US Army Corps of Engineers
USGS	US Geological Survey

Project Description

The Nebraska Department of Transportation (NDOT) in partnership with the Iowa Department of Transportation (Iowa DOT), and the Federal Highway Administration (FHWA) developed the following initial purpose and need statements to support the study of the Decatur Bridge Project (Control No. 32395). Phase 1 of the *Decatur Bridge Location and Environmental Study* is to assess the feasibility of improving the existing crossing of Nebraska Highway 51 (N-51)/Iowa Highway 175 (IA-175) over the Missouri River commonly referred to as the Decatur Bridge (S051 03644) in Burt County Nebraska, and Monona County, Iowa. The Decatur Bridge (construction started in 1951, opened to traffic in 1956) has been previously determined to be eligible for listing in the National Register of Historic Places (NRHP). Alternatives to be studied may include removal and replacement of the existing crossing or rehabilitation of the existing bridge. This project will be prepared as a Federal-aid eligible project.

Development of the Purpose and Need

NDOT in partnership with Iowa DOT held an initial meeting with the Community Advisory Group (CAG) assembled for the project on January 18, 2024, to provide an overview of the project and study process and to obtain input on the needs and purpose of the project. The initial needs and purpose statements were developed in consideration of the CAG input in addition to the study team's review of the project site, assessment of the condition of the existing bridge, and input received from regulatory agencies (e.g., US Army Corps of Engineers [USACE], US Coast Guard, Nebraska Game and Parks Commission, and Iowa Department of Natural Resources) during pre-scoping/early coordination meetings.

Following review of the purpose and need by FHWA, feedback on the initial purpose and need was obtained during the second meeting with the CAG held April 25, 2024. Feedback on the draft purpose and need was obtained from the public during two public meetings on August 28 and 29, 2024, before completing the *Decatur Bridge Location and Environmental Study* in January 2025. Refinement of the purpose and need and collection of additional data occurred after initiating the NEPA decision-making process in August 2025.

Purpose and Need Statements

1.1 Needs

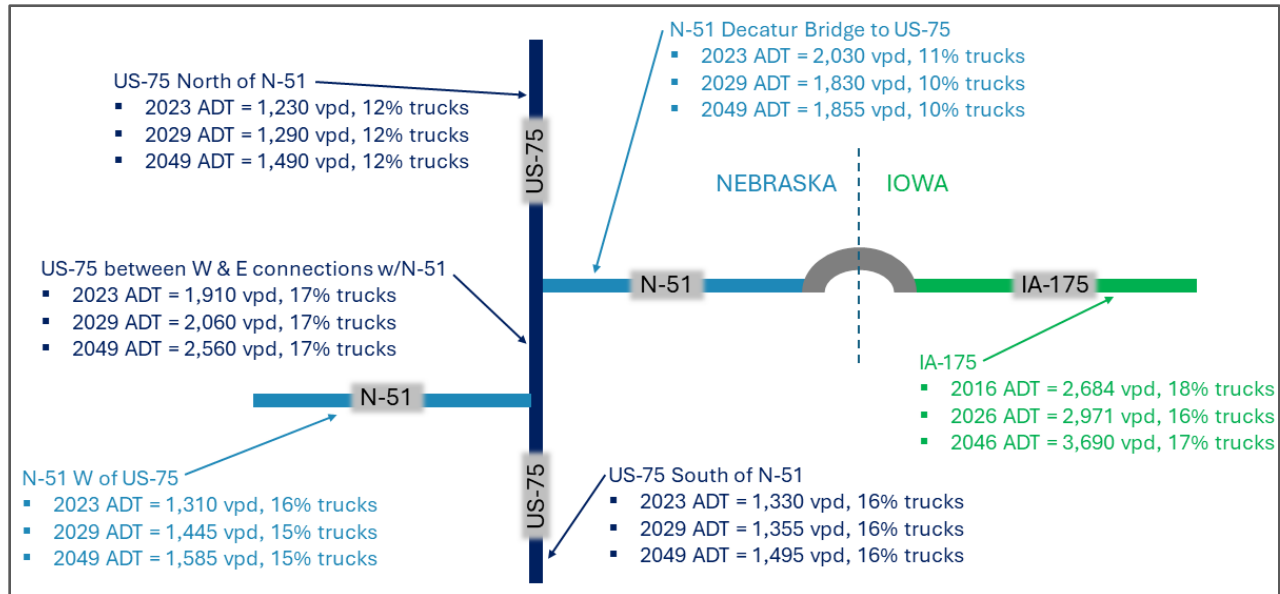
1.1.1 Maintain Connectivity¹

- The existing crossing connects Decatur and Onawa area residents with services (employment, education, health care, emergency, recreation) on both sides of the river.
 - Review of 2023 (existing year), 2026, and 2046 average daily traffic (ADT) volumes at the I-29/IA-175 interchange (provided by the Iowa DOT) indicates that more than 70 percent of the traffic using the Decatur Bridge crossing is generally traveling east-west between Decatur and Onawa and destinations beyond. The traffic distribution through the I-29/IA-175 interchange consists of:
 - From east (Iowa) to west (Nebraska):
 - 14 percent from southbound I-29 to the bridge
 - 15 percent from northbound I-29 to the bridge
 - 71 percent from Onawa to Decatur (IA-175 to the bridge)
 - From west (Nebraska) to east (Iowa):
 - 15 percent from the bridge to southbound I-29
 - 12 percent from the bridge to northbound I-29
 - 73 percent from Decatur to Onawa (bridge to IA-175)

¹ *Accessibility* refers to the ease of reaching desired destinations, services, or activities. It considers how easily people can reach essential services, such as healthcare, education, employment, and recreational opportunities, as well as the inclusivity of transportation options for people with disabilities or limited mobility.

Connectivity refers to the ability to reach everyday destinations that are critical to improving health. For example, people need access to grocery stores that provide healthy food, healthcare services for preventive care, and jobs and educational opportunities that contribute to economic well-being. The transportation system plays an important role in ensuring that travelers can reach everyday destinations safely, reliably, and conveniently.

Figure 1 – Existing and Forecasted Average Daily Traffic Volumes Through the Study Area²



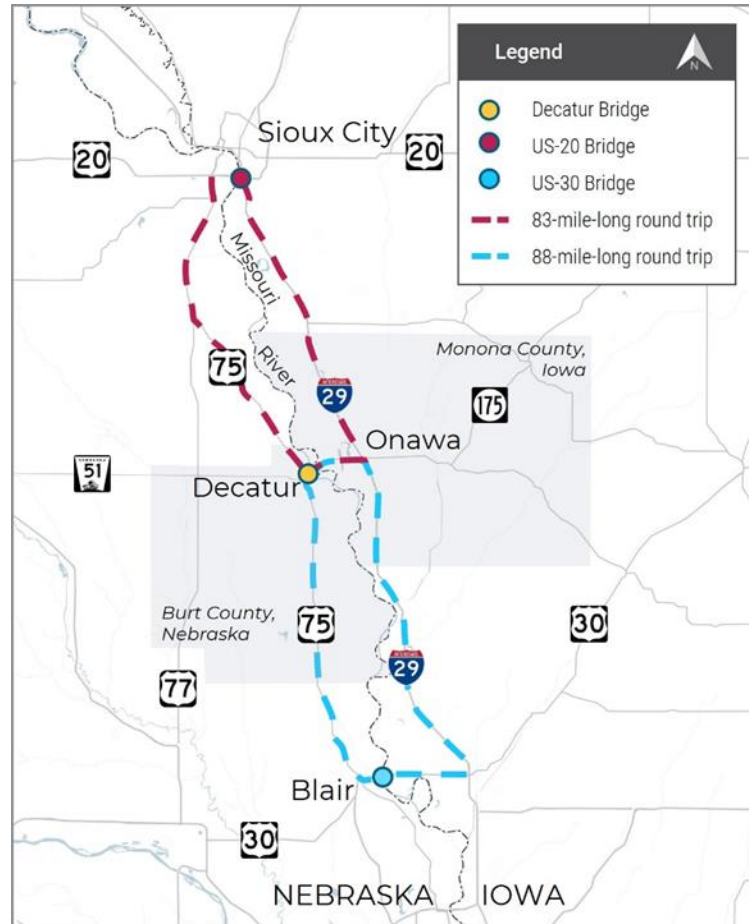
- Onawa (8.3 miles east) provides the closest hospital (Burgess Health Center, Level IV trauma unit), skilled nursing and rehabilitation care (Arboreta Health Care), and family medicine clinics that serve Decatur residents.
- As a rural, agricultural area, access to medical services, especially trauma care is critical. Only 3 Nebraska hospitals provide Level II Advanced Trauma care (Lincoln, Kearney, and Scottsbluff); all are more than 100 miles from Decatur. Sioux City, IA (43 miles) has the closest Level II trauma care facility with Onawa, IA (8.3 miles) providing the closest Level IV trauma care.
- A fire at the Decatur Museum on May 4, 2024, was responded to by the Decatur Volunteer Fire and Rescue Department, along with the Onawa IA (8.3 miles), Tekamah NE (16.4 miles), Bancroft NE (17.9 miles), and Craig NE (19.8 miles) fire departments.

² Existing and forecasted traffic volumes were provided by each DOT. Once a planning horizon year has been established as the NEPA phase begins, updated forecasted volumes will be provided for the chosen design year.

- Past long-term crossing closures negatively affected jobs and the regional economy.

- Crossing closures (short-term and long-term) require more than 80 miles of adverse, out-of-direction travel, adding excessive travel time to and from Decatur.

Figure 2 – Nearest Existing Missouri River Crossings to Decatur



- Round trip to/from Decatur through Sioux City, Iowa (I-129, next river crossing to the north) is 83.1 miles.
- Round trip to/from Decatur through Blair, Nebraska (US-30, next river crossing to the south) is 88.4 miles.

- CAG members shared that they or family members could not afford the time nor expenses of the adverse, out-of-direction travel caused by previous long-term closures of the crossing for repairs, forcing several to move from Decatur or change jobs.
- A 2019 Economic and Demographic Trends Study for Burt County conducted by the Nebraska Public Power District (NPPD)³ indicated approximately 4.5 percent of Burt County workers traveled to Iowa for jobs.
- Data provided by the Siouxland Interstate Metropolitan Planning Council (SIMPCO) in 2022⁴ indicated the largest area of employment growth across the 6-county region (including Monona County, IA) was in agriculture, forestry, fishing and hunting, and mining. Livestock processing and food processing and manufacturing were the top trade clusters in the region with Sioux City as the focal point of the regional trade cluster. In the SIMPCO region, traded clusters refer to the groups of industries that serve markets beyond the region in which they are located. These are vital to strong regional economies because these industries and jobs generally

³ *Economic and Demographic Trends, Burt County and Surrounding Area*. Nebraska Public Power District; April 2019. [NOTE: data reflects pre-pandemic conditions]

⁴ Siouxland Interstate Metropolitan Planning Council website, accessed May 2024. <https://simpco.org/>

account for higher wages and greater levels of innovation. The top six traded clusters in descending order are: Livestock Processing; Food Processing and Manufacturing; Business Services, Distribution and Electronic Commerce; Transportation and Logistics; Education and Knowledge Creation. Three of these are considered a “Strong Traded Cluster”, which is a cluster that has high employment specialization in a region. These are Livestock Processing (ranked #5 in U.S.), Food Processing and Manufacturing (#41), and Transportation and Logistics (#95).⁵ These trade clusters are supported by areas of high agricultural production, manufacturing centers, and adequate transportation infrastructure.

- According to the Nebraska Counties Explorer, the Burt County economy is also driven by agriculture with 83 percent of the land used for livestock and crop production. The county is home to 107 cattle producers and two primary grain markets.
- According to the Robert Wood Foundation, 76 percent of Monona County’s land is devoted to farming (employing less than one-third of the workforce); but manufacturing, transportation, and retail are the primary sources of employment.⁶
- I-29 (Iowa) and US-75 (Nebraska) support the transportation of livestock and manufactured goods to regional and national markets; with N-51 and IA-175 via the Decatur Bridge providing a local connection to these transportation corridors and local producers and markets on both sides of the river.
- SIMPCO/Siouxland Regional Transportation Planning Association (SRTPA) Long-Range Transportation Plan (LRTP)⁷ identified long-distance truck transportation as posing additional demands on the region’s roadways. I-29 (approximately 6.5 miles east of Decatur on the Iowa side of the river) is a major corridor not only for regional traffic but also for NAFTA traffic from Mexico and the Southeast to central and western Canada. Traffic volumes along I-29 are anticipated to grow, particularly with the rise of Alberta as a significant energy and manufacturing center. The largest freight categories carried along I-29 into and out of the SIMPCO region include cereal grains, prepared foodstuffs/fats/oils, gravel and crushed stone, and agricultural products.

⁵ SIMPCO Comprehensive Economic Development Strategy 2022-2026.
https://simpco.org/hubfs/Economic%20Development%20Division/CEDS-2022-2026_FINAL_9_27_22.pdf?hsLang=en

⁶ <https://www.rwjf.org/en/about-rwjf/how-we-work/learning-and-evaluation/sentinel-communities/monona-county-iowa.html>.

⁷ SIMPCO Siouxland Regional Transportation Planning Association (SRTPA) Long-Range Transportation Plan, Chapter 6 Intermodal Transportation; Accessed May 2024.

1.12 Improve Infrastructure Condition

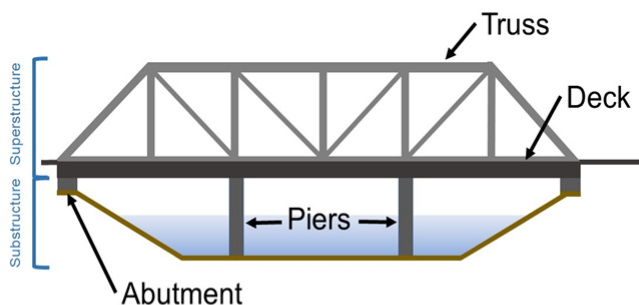
- Existing bridge condition (*the state of the bridge in terms of structural deterioration, need for frequent and costly repairs, and issues that affect the remaining useful life of the structure*)
 - 75 years old with age-related structural deterioration throughout the superstructure including corrosion, section loss, and cracking.⁸
 - In 2022, 5 years after a major repair in 2017, the biennial inspection identified structural issues of “high or moderate urgency” noting steel cracks and section loss repairs needed in approximately 7 locations. Other structural issues were also identified in approximately 69 locations, and non-structural issues in approximately 18 locations.⁹
 - Although the overall condition ratings in 2022 were acceptable (Deck = 7, Good Condition, Superstructure = 6, Satisfactory Condition, and Substructure = 7, Good Condition), the high and moderate urgency issues need to be addressed in the near term. The necessary repairs are not typical and require specialized design and equipment to implement them. The repairs cannot be performed as part of routine maintenance work but may require the crossing to be closed for an unspecified period.

Figure 3 – Bridge Component and Condition Definitions

What are bridge ratings?

Bridge condition ratings describe the existing, in-place bridge as compared to the record drawing bridge condition. Ratings range in number from 9 (excellent condition) to 0 (failed condition).

The **Deck** is the bridge component directly supporting wheel loads. The **Superstructure** includes the structural parts of the bridge that provide horizontal span (e.g., arch, truss, girders, etc.). The **Substructure** includes structural parts of the bridge that support the horizontal span (e.g., piers, bents, abutments, etc.).



What is bridge condition?

Bridge condition is determined by the lowest of the ratings for Deck, Superstructure, and Substructure. If the lowest rating is greater than or equal to 7, the bridge is classified as Good; if it is less than or equal to 4, the classification is Poor. Bridges rated 5 or 6 are classified as Fair.

⁸ Last bridge inspection conducted in 2022. Next inspection due in September 2024.

⁹ *Fracture Critical and Routine Inspections Report for S051 03644, District 3, Burt County, Eastern Limits of Decatur on Nebraska Highway 51/Iowa Highway 175 over the Missouri River and Various Access Roads*. Olsson for the Nebraska Department of Transportation; February 17, 2023.

- Nine structural repair projects have occurred since the bridge was opened to traffic in 1956. Three of these projects (deck replacement in 2000, scour stabilization in 2011, and major repairs in 2017) went beyond regular/ongoing maintenance.
 - In 2000-2001, the original concrete deck was replaced with an open steel grate deck because of the age and deterioration of the concrete. Installing open steel grate decking helped maintain the functional load rating of the bridge, as the weight of the steel decking is approximately 20 percent of the original concrete deck weight. Although the deck replacement addressed load ratings on the bridge, the open grate deck panels allow precipitation, chemicals, and road salts carried by crossing vehicles to drip directly onto the structural steel members below, accelerating corrosion. Since 2021, NDOT and the Iowa DOT have been replacing deck panels annually at a cost of \$175,000 per year (2024 dollars).
 - The 2011 scour repair closed the river crossing for 5 months.
 - In 2017, structural steel repairs were performed on the River Unit and Iowa Approach Unit trusses. The floor beams of the River Unit were post-tensioned (strengthened) to increase their load capacity. Concrete repairs and strengthening were performed on several substructure units. Street and navigation lighting were overhauled, and the approaches and railings were updated. The entire superstructure and steel portions of the substructure were blasted and repainted. The 2022 inspection indicated that the overall condition ratings were acceptable, although “high and moderate urgency” issues still needed to be addressed in the near term. These repairs are not typical and require special design and specialized equipment to implement. Such repairs cannot be performed as part of routine maintenance work but may require the crossing to be closed for an undetermined period.

The “high or moderate urgency” deficiencies require repairs to Nonredundant Steel Tension Member (NSTM), formerly classified as fracture-critical members such as the lower chords and floorbeams. Repairs to these members may include the replacement or reinforcement of cracked or corroded members. Repairs may include removal and replacement of steel bolts in NSTM connections, and costly temporary shoring of members may be necessary during the repair work. Without ongoing critical repairs, existing cracks noted in the NSTM can propagate and continue to affect the structural integrity of the bridge.

- The most recent inspection conducted in July 2024 identified “high” and “medium” urgency repairs in addition to new or further deterioration in structural members repaired in 2022. Extensive cracking in the deck panel welds continues and is the primary reason for the “fair” deck condition rating. NDOT is developing a scope of repairs to be initiated in 2025-2026 to address the identified “high” and “medium” urgency repairs.
- Existing bridge functional deficiencies - (*the design of the bridge in comparison to current standards*)
 - Lacks shoulders, has narrow travel lanes (less than current design standards).
 - The clear roadway width is 22 feet, 6 inches with no shoulders and 2 approximately 10-foot-wide travel lanes. Current design standards would require

a minimum 6-foot-wide shoulder on each side and 12-foot-wide travel lanes, for a total minimum clear roadway width of 36 feet.

- o Designed in 1949 for vehicular loads below modern requirements.
 - The existing load posting for the bridge is 25 tons for a single-unit truck, 36 tons for a standard semi-truck, and 40 tons for a combined truck. Legal loads range from 25 tons to 38.75 tons for single-unit trucks, 37 tons for a standard semi-truck, and 43 tons for a combined truck.¹⁰ Vehicles that could be restricted based on the existing load posting include semi-trucks and some agricultural vehicles.
- o The narrow deck and load posting limit the use of the bridge by larger/heavier vehicles. Due to the narrowness of the roadway, partial closure of the bridge is frequently required to conduct repairs and maintenance.
 - The bridge is closed every two years for a routine bridge inspection.
 - In 2022, the inspection closure duration was approximately one week, and included both one-lane closures for under-bridge snooper inspection and full closure for the inspection of the overhead truss members. The bridge was closed for several weeks in 2017 for major structural repairs. Other major repair closures occurred in 2014, 2001, 2000, 1990, 1988, 1982, and 1970. Additionally, steel grid deck panels are repaired or replaced annually.¹¹
 - Crashes and other incidents on the bridge have blocked one or both lanes of traffic, obstructing traffic from moving around the incident and hampering access by emergency responders.
 - From 2016 through 2020, N-51 through Decatur (ending at the bridge) experienced a crash rate of 2.489 crashes per million vehicle miles compared to the statewide average crash rate of 1.725 crashes per million vehicle miles for a 2-lane urban highway section.

Figure 4: Load posting



¹⁰ The bridge was designed for H15 live loading, which is much less than the current HL-93 design standard. The load posting of 25 tons for special hauling vehicles is similar to the Nebraska Type 3 Legal Truck but less than larger legal single-unit trucks such as SU5 – SU7. In addition, the single-axle legal load is 20,000 pounds but the load posting restrictions may limit single-axle weight depending on the vehicle configuration, including larger trucks and farm equipment

¹¹ A table indicating the specific repairs made between 1970 and 2017 is attached to this document to only support its review. The table is not intended to be included in the final purpose and need.

- Review of crash data provided by both NDOT and Iowa DOT:

Crash Parameter	N-51 2016-2020	IA-175 2019-2023
Total crashes	5 (3 at/on bridge)*	9 (2 at/on bridge)
Fatal crashes	0	0
Minor Injury crashes	3 (all at/on bridge)	1
Property damage-only crashes	2	8
Note: Crash data from both states do not overlap. NDOT values on N-51 extend from US-75 east to the state line (center of the bridge). Iowa DOT values on IA-175 extend from the state line east to Cherry Street. * The 3 crashes at/on the Decatur Bridge identified by NDOT occurred between May 2019 and August 2020 inclusive of the Iowa 5-year time period. A consistent 5-year crash history (2019-2023) will be provided in study report. Confidential Information: Federal Law, 23, U.S.C. §407, prohibits the production of this document or its contents in discovery or its use in evidence in a State or Federal Court. The State of Nebraska has not waived any privilege it may assert as provided by that law through the dissemination of this document and has not authorized further distribution of this document or its contents to anyone other than the original recipient.		

1.1.3 Improve Resiliency Against Flooding

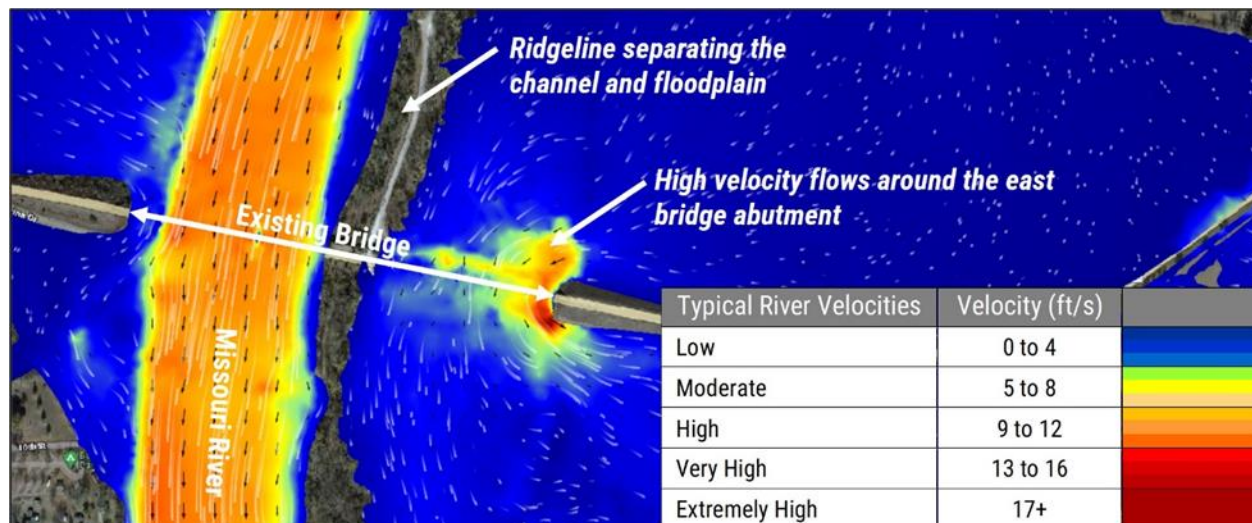
- Forecasted flood frequency and intensity – recent trends on the lower Missouri River show an increase in the frequency and magnitude of major flood events at the project location. A 2023 USACE study¹² predicts 50-year, 100-year, and 500-year floods to be 30 percent to 60 percent larger than previous estimates made in 2003, due to changing conditions within the upper Missouri River basin.
 - Per the updated flood frequencies in the 2023 USACE study, the 2011 flood was midway between a 50-year and a 100-year flood.
- Infrastructure stability – the crossing was closed for 5 months in 2011 due to foundation scour caused by the major flood event. The crossing remains susceptible to scour issues from future flood events of similar or greater magnitude.
 - Bathymetric sounding studies conducted by Iowa DOT and the USGS during the 2011 flood indicated up to 40 feet of scour had occurred at the east abutment and easternmost pier (Pier 8), exposing the foundation piles and threatening the stability of the structure.^{13,14}

¹² *Missouri River Flow Frequency Study, Yankton, South Dakota to Hermann Missouri*; US Army Corps of Engineers Northwest Division, Omaha District, Kansas City District, and Missouri River Basin Water Management. June 2023.

¹³ *IA-175 Embankment Imaging – Monona County, IA*. Collins Engineers for the Iowa Department of Transportation; August 2, 2011.

¹⁴ *Repeated Multibeam Echosounder Hydrographic Surveys of 15 Selected Bridge Crossings Along the Missouri River from Niobrara to Rulo, Nebraska, During the Flood of 2011*. Scientific Investigations Report 2014-5062; US Geological Society; 2014.

Figure 5 – 2011 Peak Flood Velocities



- Iowa DOT repaired the scour hole and placed protective riprap and dikes in the area allowing the bridge to reopen to traffic.
- Though an open scour hole is not present at this time (2024) near the east abutment and Pier 8, the channel and floodplain conditions that led to the scour remain.
- The floodplain on the east side of the channel is separated from the channel by a low ridgeline and is almost entirely blocked by the approach roadway embankment. During flood events, water in the east floodplain is conveyed only through a narrow area around the east abutment, which accelerates the flow and increases scouring action.
- A hydraulic analysis performed in conjunction with the Decatur Bridge Concept Study indicates that for events similar to, or larger than the 2011 flood, the potential is high for another scour hole to develop.
- System reliability – approach roadway (Iowa side) is susceptible to overtopping by updated 100-year and 500-year flood volumes.

1.2 Purpose

The purpose of the Project is to provide a resilient river crossing connecting Decatur, Nebraska/N-51 and Onawa, Iowa/IA-175 that maintains access to regional commerce, employment, education, health care, and recreation facilities; maintains accessibility to and by emergency services; and provides infrastructure to support current and future travel demand.

Appendix C

Alternatives

Accessibility Support

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**DECATUR BRIDGE
ALTERNATIVES ANALYSIS TO SUPPORT
COORDINATION UNDER
SECTION 106 OF THE
NATIONAL HISTORIC PRESERVATION ACT**

Burt County, Nebraska and Monona County, Iowa
STP-51-7(109), Control No.: 32395

US Department of Transportation
Federal Highway Administration

Nebraska Department of Transportation
Iowa Department of Transportation

August 2025
Revised December 2025

Table of Contents

Table of Contents	1
1.0 Introduction and Background	1-1
1.1 Introduction	1-1
1.2 Background of the Historic Resource – Decatur Bridge	1-2
1.2.1 Description of the Historic Resource	1-2
1.3 Function and Structural Condition of the Decatur Bridge	1-6
1.3.1 Repair History	1-6
1.3.2 Structural Deficiencies.....	1-7
1.3.3 Non-Structural Deficiencies	1-7
1.3.4 Functional Deficiencies.....	1-10
1.3.5 Service Life	1-10
2.0 Purpose and Need for the Proposed Action.....	2-1
2.1 Maintain Connectivity.....	2-1
2.2 Improve Infrastructure Condition	2-1
2.3 Improve Resiliency Against Flooding.....	2-1
3.0 Alternatives Considered.....	3-1
3.1 No-Build Alternative.....	3-1
3.2 Rehabilitation Alternative	3-1
3.3 Use of Another River Crossing.....	3-5
3.4 Build Alignments to Provide an Improved River Crossing	3-6
3.4.1 Blue Alternative – Build New Bridge North of the Existing Crossing.....	3-7
3.4.2 Orange Alternative – Build a New Bridge South of the Existing Crossing.....	3-8
3.5 Summary Comparison of the Alternatives Considered.....	3-11
4.0 Summary and Conclusions	4-1
5.0 References.....	5-1

List of Tables

Table 3-1:	Identified Structural Deficiencies in 2024 and Potential Repairs.....	3-2
Table 3-2:	Functional Deficiencies and Current Design Standards	3-3
Table 3-3:	Summary of the Screening of the Universe of Alternatives Against the Purpose and Need.....	3-13
Table 3-4:	Summary of the Screening of the Universe of Alternatives Against the Performance Areas.....	3-14
Table 3-5:	High-Level Impact Comparison of the New Location Build Alignments (Fall 2024).....	3-15
Table 3-6:	Impact Comparison for the No-Build and Build Alternatives.....	3-16

List of Figures

Figure 1-1:	Study Area Resources.....	1-2
Figure 1-2:	USACE Realignment of the Missouri River under the Decatur Bridge, 1955 (looking north).....	1-3
Figure 1-3:	Decatur Bridge (S051 03644).....	1-4
Figure 1-4:	Components of the Decatur Bridge.....	1-5
Figure 1-5:	Decatur Bridge Looking East Along the Bridge Centerline.....	1-5
Figure 1-6:	Bridge Component and Condition Definitions	1-6
Figure 1-7:	“High” and “Medium” Urgency Structural Deficiencies of the Decatur Bridge Identified During the 2024 Inspection	1-8
Figure 1-8:	Examples of Structural Deficiencies Identified During 2024 Inspection	1-9
Figure 3-1:	Nearest Existing Missouri River Crossings to Decatur.....	3-5
Figure 3-2:	Alignments to Provide an Improved River Crossing	3-6
Figure 3-3:	Blue Alternative – Build a New Bridge North of and Parallel to the Existing Decatur Bridge	3-9
Figure 3-4:	Orange Alternative – Build a New Bridge South of and Parallel to the Existing Decatur Bridge	3-10

Appendices

Appendix A	Nebraska Historic Bridge Inventory and Historic Bridge Management Plan
Appendix B	Consideration of Adaptive Reuse of the Decatur Bridge
Appendix C	Agency Coordination and Public Involvement

1.0 Introduction and Background

The purpose of this alternatives analysis is to support the project decision-making process. The anticipated use of Federal funds for construction of the project requires review in accordance with the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. §4321 et seq). NEPA also requires compliance with other special-purpose laws as they apply to a proposed action. Because the Decatur Bridge (S051 03644) has been determined eligible for listing on the National Register of Historic Places (NRHP), and the alternatives under consideration would result in a likely adverse effect on this historic resource, the decision-making process followed for this project must also comply with the requirements of Section 106 of the National Historic Preservation Act (NHPA) (16 U.S.C. 470). This document assesses the alternatives considered for the project in compliance with Section 106 requirements. The impacts of the proposed action are also being evaluated in accordance with Section 4(f) of the Department of Transportation (DOT) Act (49 U.S.C. §303/23 U.S.C. §138). As identified during the *Decatur Bridge Location and Environmental Study* completed in 2024¹ and as described in Section 3.0 of this document, the No-Build and Rehabilitation Alternatives do not meet the purpose and need, and the Build Alternatives considered would remove the existing bridge, resulting in a “use” under Section 4(f).

1.1 Introduction

The Nebraska Department of Transportation (NDOT), in partnership with the Iowa Department of Transportation (Iowa DOT) and the Federal Highway Administration (FHWA), is proposing the improvement of the Nebraska Highway 51 (N-51) and Iowa Highway 175 (IA-175) crossing of the Missouri River connecting Burt County, Nebraska and Monona County, Iowa (**Figure 1-1**). The National Register of Historic Places (NRHP)-eligible Decatur Bridge carries N-51 and IA-175 over the Missouri River, providing an important transportation linkage for local and regional travelers.

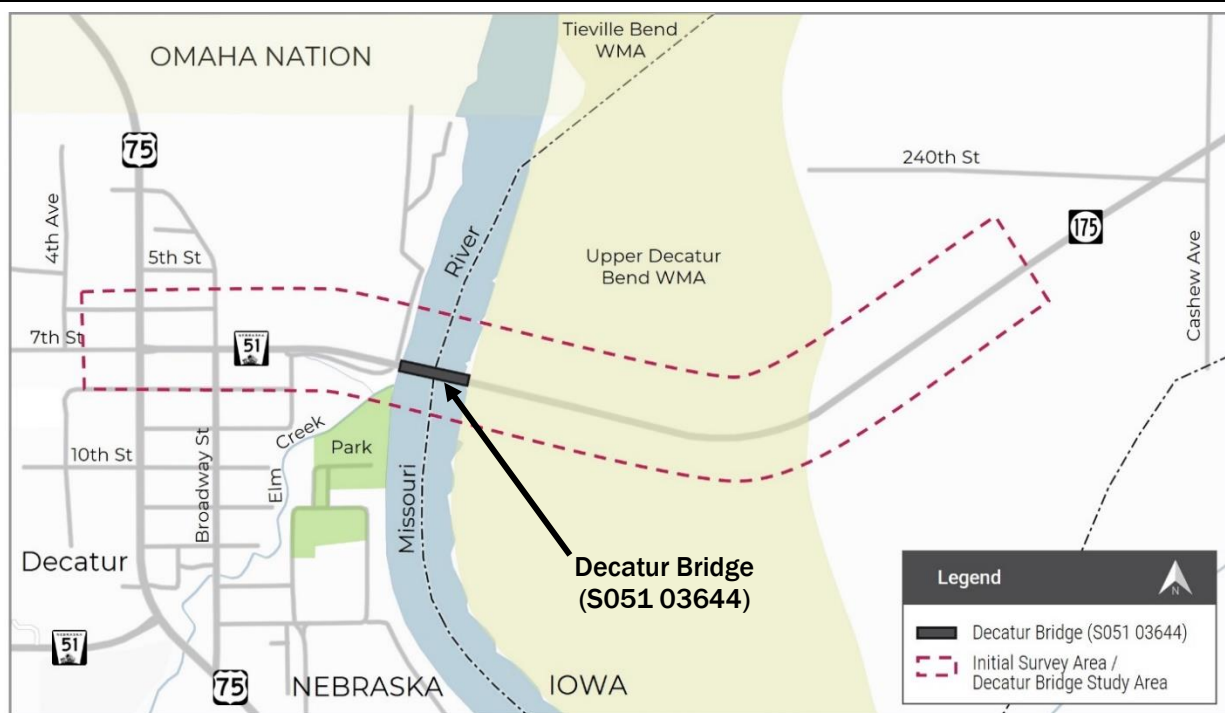
Built in 1951 and opened to traffic in 1956, the **Decatur Bridge (S051 03644)** is 1,956 feet long consisting of a three-span Nebraska Approach Unit, a two-span rigid-connected Warren-type through-truss River Unit, and two Iowa Approach Units each composed of three spans (**Figure 1-4**). The Decatur Bridge was determined NRHP eligible by the Nebraska SHPO in 2013 and by the Iowa SHPO in 2011 under Criterion A: History-Transportation, as a large highway bridge that established the first highway crossing of a major waterway and as a major state bridge-building initiative; and under Criterion C: Engineering, as a steel continuous through truss bridge with an exceptional span length.

The Decatur Bridge has undergone nine major repairs since it opened to traffic. An inspection conducted in 2024 identified additional “high and medium urgency” deficiencies to be addressed through a tenth major repair project in late 2025. The bridge has a clear roadway width of 22 feet, 6 inches composed of two 11-foot-6-inch-wide travel lanes and no shoulders, compared to current bridge design criteria that would require a minimum 6-foot-wide shoulder on each side of the bridge and 12-foot-wide travel lanes for a minimum clear roadway width of 36 feet. In the 1950s, the bridge with a concrete deck was designed for vehicular loads below those of today’s fleet. In 2000, the concrete deck was replaced with the existing open steel grate deck. The reduced load posting and narrow deck limit use of the bridge by larger/heavier vehicles, including grain and livestock trucks and agricultural equipment. The narrowness

¹ *Decatur Bridge Location and Environmental Study Feasibility Report*; January 2025. Accessible at [cn32395-decatur-bridge-location-and-environmental-study-feasibility-report-2025-01-13-final-1.pdf](https://www.ndot.gov/cn32395-decatur-bridge-location-and-environmental-study-feasibility-report-2025-01-13-final-1.pdf)

of the roadway also leads to frequent partial closures of the bridge (one lane of travel) when minor repairs and maintenance are conducted.

Figure 1-1: Study Area Resources



1.2 Background of the Historic Resource – Decatur Bridge

Section 106 of the NHPA requires federal agencies to consider the effects of a permitted, sponsored, or funded undertaking on historic (NRHP-listed or eligible) resources. The *Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation and the Nebraska State Historic Preservation Officer for the Highway Bridge Replacement and Rehabilitation Program* (PA) executed in 1991 established the review parameter priorities regarding the evaluation of historic bridges in Nebraska. The PA led to the development of the *Nebraska Historic Bridge Inventory and Historic Bridge Management Plan*, and although expired, the PA and inventory and management plan established protocols for consideration of historic bridges in Nebraska and priorities for their treatment. The bridge inventory is updated periodically, in accordance with the PA, and was most recently updated in 2007 (Mead and Hunt 2007). Additional information regarding the *Nebraska Historic Bridge Inventory and Historic Bridge Management Plan* is provided in **Appendix A**.

1.2.1 Description of the Historic Resource

In 1927, Nebraska approved legislation to build a bridge across the Missouri River, using Decatur's natural rock bottom as a suitable river crossing. In 1928, the US Congress approved funds to assist with constructing the bridge; however, with the onset of the Great Depression in 1929, plans for the bridge never came to fruition, and Decatur residents had to continue to rely on ferry services to cross the Missouri River.

After World War II, the Burt County Nebraska Bridge Commission was formed with the intent of spanning the Missouri River between Decatur and Onawa. In 1946, President Harry Truman signed legislation

approving construction of the bridge; however, a steel strike later that year, followed by a change in the river's course in 1947, caused further delays. The United States Army Corps of Engineers (USACE) approved the site for the Decatur crossing in 1950 with the groundbreaking on the Decatur side of the river on April 21, 1950. At the time the bridge was being built, the Missouri River changed its course, leaving the proposed bridge site nearly a quarter of a mile west of the river channel, earning the project the nickname of the bridge "that went nowhere, because it lost its river" (see **Figure 1-2**).

Figure 1-2: USACE Realignment of the Missouri River under the Decatur Bridge, 1955 (looking north)



Construction of the bridge proceeded on dry land as a cost-cutting measure, with the intent to re-channel the river once construction was completed. Dredging for the river channel under the new bridge began in January 1955, with the bridge opening to traffic as a toll bridge in December 1955. The Decatur Bridge (**Figure 1-3**) was formally dedicated in May 1956 during Decatur's centennial celebration.

Figure 1-3: Decatur Bridge (S051 03644)



The Decatur Bridge is 1,956 feet long, consisting of a three-span Nebraska approach unit, a two-span Warren through truss River Unit, and two Iowa approach units, each three spans long (**Figure 1-4**). The bridge has a clear roadway width of 22 feet, 6 inches, consisting of two 11-foot 3-inch-wide lanes and no shoulders. The deck is comprised of open steel grate panels, with a steel C-channel curb. The bridge railing is a built-up steel rail with W-shaped posts spaced 7 feet 6 inches apart, with the rail extending approximately 2 feet 11 inches above the riding surface (**Figure 1-5**).

Figure 1-4: Components of the Decatur Bridge

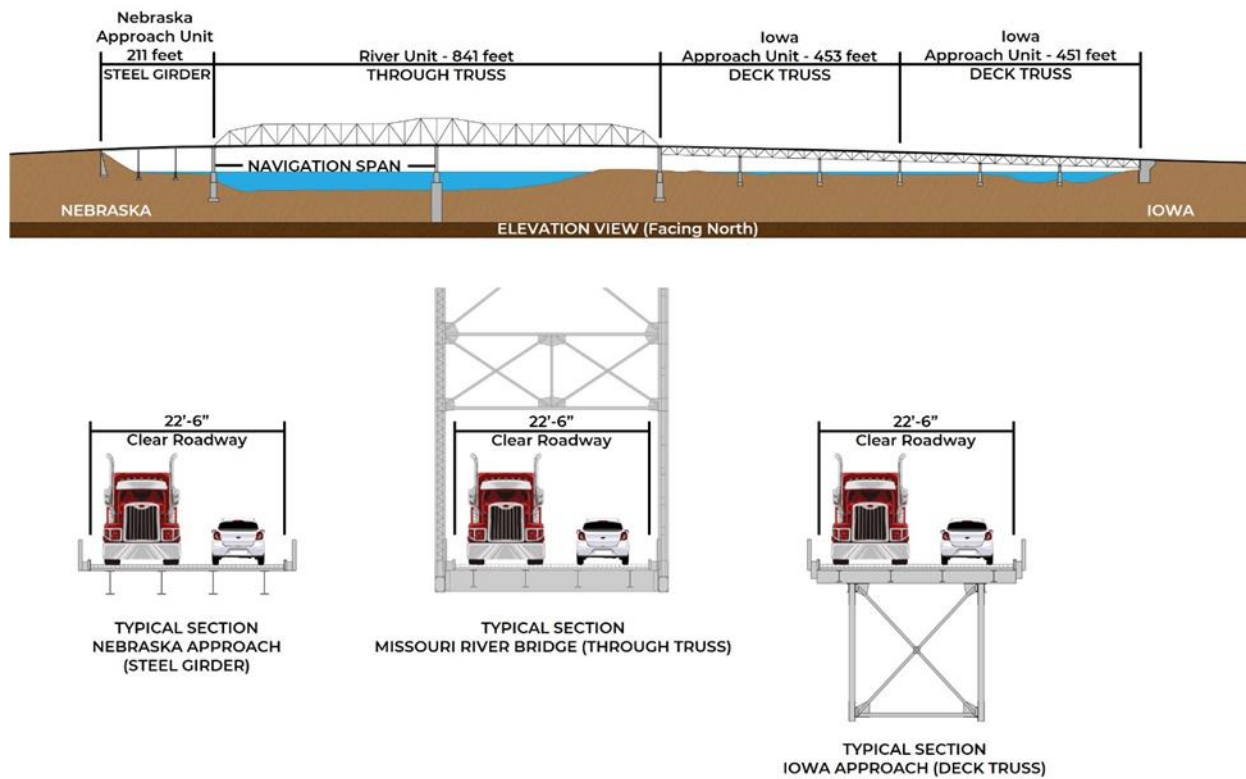


Figure 1-5: Decatur Bridge Looking West Towards Decatur, NE Along the Bridge Centerline



1.3 Functional and Structural Condition of the Decatur Bridge

The Decatur Bridge is nearing the end of its service life because of several structural and functional deficiencies. The Decatur Bridge receives a combined National Bridge Inventory (NBI), Fracture Critical (Nonredundant Steel Tension Member, or NSTM), and Element Inspection on a 2-year cycle. During the most recent inspection conducted in 2024, the deck was rated as “5 – Fair”, the superstructure was rated as “4 – Poor”, and the substructure was rated as “7 – Good”.

1.3.1 Repair History

The Decatur Bridge has undergone nine structural repair projects over its service life including two major structural repairs. Seven of these repair projects have occurred within the last 36 years (roughly half of the structure’s life) for an average repair frequency of one project every five years. The structure has undergone two major structural repair projects.

- In 2000-2001, the original concrete deck was replaced with an open steel grate deck. The deck replacement was required because of the age and deterioration of the deck concrete. Installing open steel grate decking helped maintain the functional load rating of the bridge, as the weight of the steel decking is approximately 20 percent of the weight of the original concrete deck.
- In 2017, NDOT performed a major repair project with the goal of extending the bridge’s useful life and maintaining a functional load rating. Structural steel repairs were performed on the River Unit and Iowa Approach Unit trusses. The floor beams of the River Unit were post-tensioned to increase their capacity. Concrete repair and strengthening were performed on several substructure units. Street and navigation lighting were overhauled, and the approaches and railings were updated. The entire superstructure and steel portions of the substructure were blasted and repainted.

The 2017 major repair project improved the superstructure and substructure ratings by one point each, and the superstructure rating improved from Fair condition to Satisfactory condition.

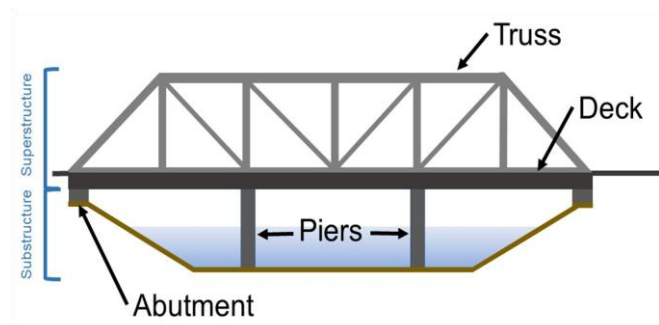
NDOT maintenance crews regularly perform structural maintenance of the Decatur Bridge in addition to structural repair projects. Deterioration of the open steel grate deck panels was noted as early as 2010, after only 10 years of service. NDOT and Iowa DOT initiated a program to repair the welds and

Figure 1-6: Bridge Component and Condition Definitions

What are bridge ratings?

Bridge condition ratings describe the existing, in-place bridge as compared to the record drawing bridge condition. Ratings range in number from 9 (excellent condition) to 0 (failed condition).

The **Deck** is the bridge component directly supporting wheel loads. The **Superstructure** includes the structural parts of the bridge that provide horizontal span (e.g., arch, truss, girders, etc.). The **Substructure** includes structural parts of the bridge that support the horizontal span (e.g., piers, bents, abutments, etc.).



What is bridge condition?

Bridge condition is determined by the lowest of the ratings for Deck, Superstructure, and Substructure. If the lowest rating is greater than or equal to 7, the bridge is classified as Good; if it is less than or equal to 4, the classification is Poor. Bridges rated 5 or 6 are classified as Fair.

replace the damaged steel grate deck panels in 2021. Under this program, the repair and replacement of damaged deck panels has an annual cost of approximately \$175,000/year (2024 dollars). Even with this program in place, the 2024 inspection identified 242 broken welds affecting nearly 50 percent of the deck panels.

1.3.2 Structural Deficiencies

The 2024 Inspection Report² identified more than 400 deficiencies, of which the vast majority are structural. Twelve of the structural deficiencies were identified as having either “high” or “medium” urgency and consisted of cracks in floorbeams, cracks in connection angles, section loss with holes and cracking in truss main tension members, fractured bolts and rivets, and barrier damage. Nine of these deficiencies are in primary load-carrying members or connections, illustrated in **Figure 1-7** and examples shown in **Figure 1-8**. The deck declined from a “7 – Good” in 2022 to a “5 – Fair” in 2024. The extensive cracking in the deck panel welds is an ongoing issue and is the primary reason for the “Fair” deck condition. The superstructure declined from a “6 – Satisfactory” in 2022 to a “4 – Poor” in 2024 due to the number and severity of the structural deficiencies in the superstructure. The 2024 Inspection Report recommended repair of all twelve of the “high” and “medium” urgency deficiencies, and repair of an additional thirteen locations and instances of “low” urgency structural deficiencies. NDOT is preparing a project to address the identified highest urgency deficiencies in late 2025 to keep the bridge in safe operation until it is closed or replaced. Although the remaining structural deficiencies identified in 2024 were labeled as “low” urgency, most could deteriorate to “high” urgency at any time. Many of these deficiencies are in the primary load-carrying members and connections (e.g., truss, beams, piers, etc.). The open steel grate deck allows rainfall, snowmelt, and road salts to drain directly onto the structural members below, leading to a highly corrosive environment that accelerates deterioration.

1.3.3 Non-Structural Deficiencies

The 2024 Inspection Report identified 15 non-structural deficiencies with seven identified as having either “high” or “medium” urgency. These non-structural deficiencies generally consisted of faulty lights, damaged approach rails, approach pavement deterioration, and cracks in the deck panel to stringer welds. All seven deficiencies are recommended for repair in 2025.

² Fracture Critical and Routine Inspections Report for S051 03644. October 21, 2024.

Figure 1-7: “High” and “Medium” Urgency Structural Deficiencies of the Decatur Bridge Identified During the 2024 Inspection

ID	Location	Member	Deficiency	"Urgency" from 2024 Inspection Report
Main Spans				
1	Span 1	L0 South	Exterior lower chord to bearing plate connection angle cracked at a bolt line	Medium
2	Span 1	FB8 Stringer 2	Broken Rivets	Medium
3	Span 2	L0' North	Exterior lower chord to bearing plate connection angle cracked at a bolt line	Medium
4	Span 2	FB L0'	North connection angle to truss cracked	Medium
5	Span 2	Pier 3 South Bearing	Fractured anchor bolt	High
Iowa Approach Spans				
6	Span 5	FB9' Stringer 2	Broken Rivets	Medium
7	Span 8	L2'L0' (North & South)	Int. bottom vertical leg heavy pitting/loss with holes & cracking	High
8	Span 8	FB U1'	Bottom of web cracked due to section loss for 30"	High
9	Span 8	FB U0'	North end top of web cracked for 7"	High
10	Span 8	FB U0'	South end top of web cracked for 6"	High
11	Span 8	FB, U0' Stringer 1	Cracks extending up from section loss in lower web	High
12	Span 8	L1'	Lower lateral strut failure	High
Deck				
13	Deck	General	Deck to stringer weld cracked or missing grate bars, multiple locations	Medium
14	Deck	General	Detached posts from deck channel and floorbeams, multiple locations	High

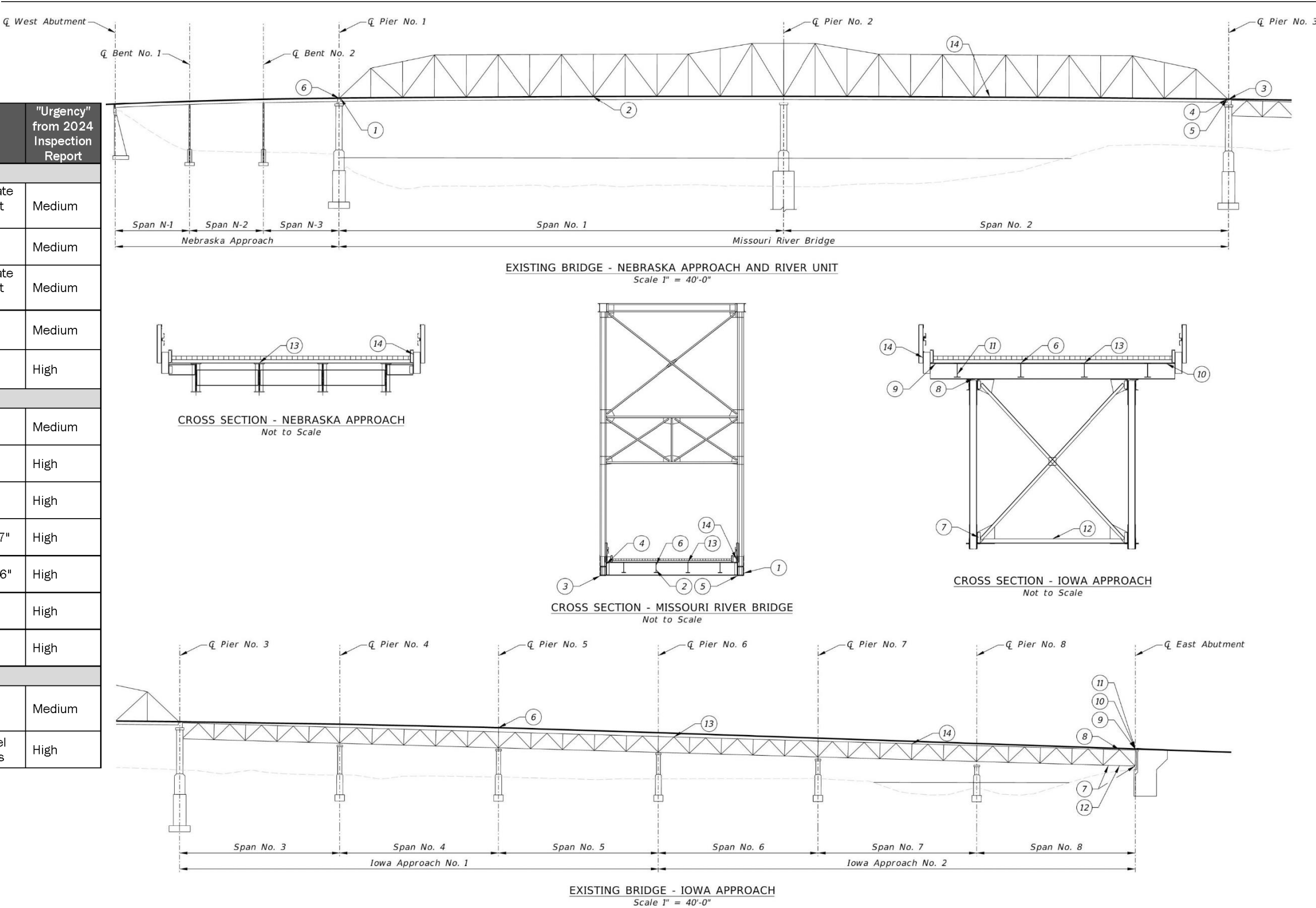
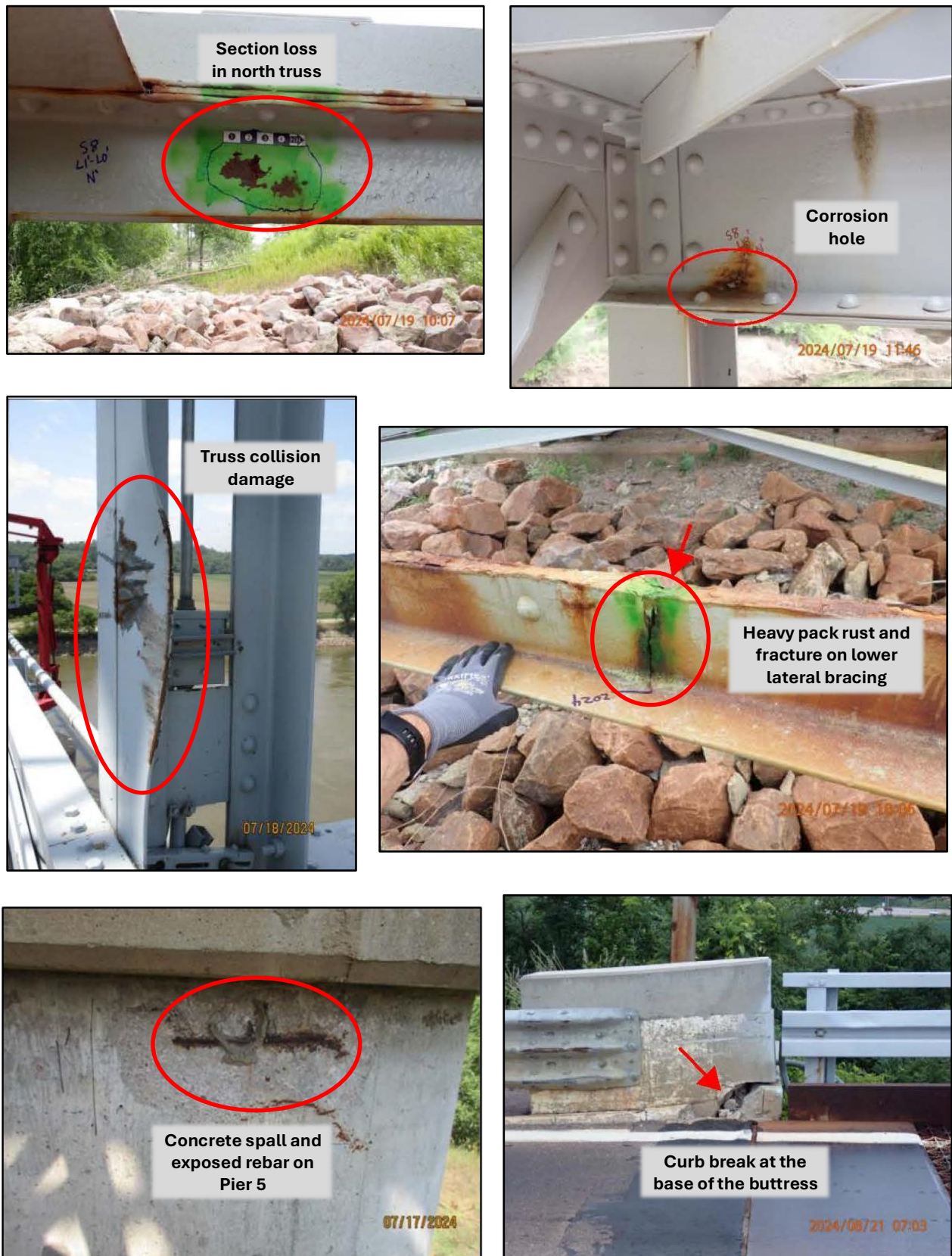


Figure 1-8: Examples of Structural Deficiencies Identified During 2024 Inspection



1.3.4 Functional Deficiencies

The Decatur Bridge has several functional deficiencies – conditions that do not meet current design criteria. The Decatur Bridge, depicted in **Figure 1-3**, has a clear roadway width of 22 feet, 6 inches composed of two 11-foot-3-inch-wide travel lanes and no shoulders, compared to current bridge design criteria that would require a minimum 6-foot-wide shoulder on each side of the bridge and 12-foot-wide travel lanes for a minimum clear roadway width of 36 feet. The narrow width limits the size of vehicles and agricultural equipment that can cross the bridge. Agricultural equipment can take up both lanes, limiting the bridge to a single lane of traffic. The bridge is an important crossing for trucks and large farm equipment as the nearest alternate river crossing involves an 80-mile round trip (approx.) from the Decatur area.

Approximately 20 of the structural deficiencies identified during the 2024 inspection appear to be the result of vehicle impacts with the River Unit through-truss superstructure. The narrow width and lack of shoulders have increased the likelihood of such impacts. The Decatur Bridge meets current design criteria for vertical clearance, but the overhead members still present a barrier to the use of the bridge by some large equipment. These overhead members also show evidence of past vehicle impacts.

The bridge's inventory rating is also less than half that of a modern bridge design. The narrow deck width and load-posting restrict the size and weight of vehicles that can legally use the bridge. As the primary load-carrying members of the bridge continue to experience corrosion and section loss, over the next several years, NDOT will further decrease the load posting, further restricting the weight of vehicles that can legally use the bridge.

The current NDOT Bridge Design Manual (NDOT BDM)³ specifies concrete rails or concrete barriers along the outside edge of the bridge deck. For state highway bridges, the Iowa DOT and NDOT BDM minimum requirement is a 3-foot-3-inch-tall concrete rail, which has been crash tested at Testing Level 4 (TL-4) per the AASHTO Manual for Assessing Safety Hardware (MASH). These concrete sections provide a higher level of crash safety than the existing built-up steel bridge rail, that has a height of approximately 2 feet 11 inches above the deck surface and has not been MASH tested. The taller rail height also reduces the risk of large vehicles rolling over the barrier on impact.

1.3.5 Service Life

Service life is the period for which the bridge provides the desired function and remains in service with appropriate preservation/maintenance activities.⁴ The Decatur Bridge is nearing the end of its service life. The frequency at which structural repairs need to occur has increased over the lifespan of the bridge, currently averaging once every five years. The bridge has already undergone two major repair projects to improve the load rating (2000 and 2017). The 2000 project replaced the original concrete deck with the open steel grate deck, and the 2017 repair project stabilized areas of deterioration and strengthened some of the structural elements. As evidenced during the 2024 inspection, various bridge ratings have decreased due to the continued deterioration of structural members including the deck grates and welds and parts of the superstructure. As deterioration continues and bridge ratings decrease, by 2030, NDOT will further reduce the load posting on the bridge as a precaution. By 2035, unless another major repair project is performed or the bridge is replaced, NDOT will close the bridge.

³ NDOT Bridge Design Manual; 2024. Accessed at: https://dot.nebraska.gov/media/4dapkdwu/24-11-12_ndot-bdm-ch-1-5-7-9-13.pdf

⁴ FHWA Bridge Preservation Guide, 2018

2.0 Purpose and Need for the Proposed Action

The purpose and need identifies the problems to be addressed by the proposed action and drives the process for considering alternatives. The purpose of the proposed action is to provide a resilient river crossing connecting Decatur, Nebraska/N-51 and Onawa, Iowa/IA-175 that maintains access to regional commerce, employment, education, health care, and recreation facilities; maintains accessibility to and by emergency services; and provides infrastructure to support current and future travel demand.

The transportation needs identified include:

2.1 Maintain Connectivity

- The existing crossing connects Decatur and Onawa area residents with services (employment, education, health care, emergency, recreation) on both sides of the river.
- Past long-term crossing closures negatively affected jobs and the regional economy.

2.2 Improve Infrastructure Condition

- Existing bridge condition - the state of the bridge in terms of structural deterioration, need for frequent and costly repairs, and issues that affect the remaining useful life of the structure.
- Existing bridge deficiencies - the design of the bridge in comparison to current standards.

2.3 Improve Resiliency Against Flooding

- Forecasted flood frequency and intensity – Recent trends on the lower Missouri River show an increase in the frequency and magnitude of major flood events at the project location. A 2023 USACE study predicts 50-year, 100-year, and 500-year floods to be 30 percent to 60 percent larger than previous estimates made in 2003, due to changing conditions within the upper Missouri River basin.
- Infrastructure stability – The crossing was closed for five months in 2011 due to foundation scour caused by the major flood event. The crossing remains susceptible to scour issues from future flood events of similar or greater magnitude.
- System reliability – The approach roadway (Iowa side) is susceptible to overtopping by updated 100-year and 500-year flood volumes.

3.0 Alternatives Considered

The *Decatur Bridge Location and Environmental Study* conducted in 2023-2024 evaluated several alternatives to improve the N-51/IA-175 crossing of the Missouri River including the No-Build, Rehabilitation of the existing bridge, Use of Another River Crossing, Transportation Systems Management (TSM)/Transportation Demand Management (TDM), and Alternate Transportation Modes. TSM/TDM and Alternate Transportation Modes did not meet the identified needs and would not provide a river crossing that meets current design standards. In addition, the population size, existing and forecasted traffic volumes, existing roadway infrastructure, including the lack of controlled intersections, and availability/accessibility to other modes were reasons why these alternatives were removed from further consideration. The remaining alternatives are described in further detail below.

3.1 No-Build Alternative

The No-Build Alternative would leave the existing Decatur Bridge crossing in place with regular and scheduled maintenance (e.g., replacement of damaged deck panels, minor repairs, etc.) occurring until a point in the future when such actions cannot sustain the continued use of the crossing and the crossing would be closed to traffic. Interim closures of the crossing to conduct scheduled maintenance and repairs would still occur when needed. During such closures, traffic would use the next available Missouri River crossings at Blair, Nebraska (approximately 37 miles south of Decatur) and Sioux City, Iowa (approximately 44 miles north of Decatur). The long-term use of these existing crossings as an alternative is further discussed in **Section 3.3**. The No-Build Alternative includes the repair project planned for late 2025 to address the “high and moderate” structural deficiencies identified in 2024, intended to keep the bridge in operation for another 10 years (2035). The No-Build Alternative does not meet the stated purpose and needs.

3.2 Rehabilitation

In general, rehabilitation involves major work required to restore the structural integrity of a bridge and to correct major safety defects.⁵ Rehabilitation may include actions that repair, strengthen, or upgrade the structural components of a bridge, including partial or complete deck replacement, superstructure strengthening or replacement, and substructure strengthening or replacement. Depending on the actions taken, the character-defining features of an NRHP-eligible bridge could be affected by rehabilitation. The Rehabilitation Alternative for the Decatur Bridge Project would repair those structural deficiencies remaining after the 2025 repair project is completed. At the time rehabilitation is conducted, it could also address the continued deterioration of load-carrying members, including activities to strengthen or replace all or part of the trusses, beams, and piers, depending on what is identified during future inspections. **Table 3.1** lists the “high and medium” deficiencies identified during the 2024 inspection that would be the subject of the 2025 repair project.

⁵ 23 CFR 650.403(c) and *FHWA Bridge Preservation Guide*, 2018

Table 3-1: Identified Structural Deficiencies in 2024 and Potential Repairs

Deficiency	Anticipated Repair	Approx. Number of Locations
Steel Superstructure		
Section loss and holes	Splice plates or member replacement	140
Cracks, including gusset plates and floorbeams	Splice plates, arrest holes, or member replacement	12
Pack rust	Blasting and zone painting	64
Bent, impacted, or torn members	Splice plates or member replacement	47
Cracked stringer coping and clip angles	Arrest holes or clip angle replacement	19
Cracks extending beyond arrest holes	Splice plates or member replacement	1
Missing or sheared bolts and rivets	Bolt replacement	12
Members showing sagging or tilting	Addition of stiffeners or angles	8
Localized paint peeling & rust bleeding	Blasting and zone painting	~ 0.5% of steel area
Concrete Substructure		
Extensive cracking	Concrete patching	63
Delamination and spalling at piers	Concrete patching	36
Exposed reinforcement at piers	Concrete patching w/ reinforcing replacement	12
Deck and Bridge Railing		
Cracked deck to stringer welds	Replace panels	~ 10% of panels
Under height rail (see “Functional Deficiencies”)	Replace all existing steel railing with new steel railing. Minimum height = 3'-3”.	Full length
Non structural Deficiencies		
Non-functioning lights	Replace fixtures	2
Missing/damaged guardrail blocks	Replace blocks	5
East end of paving joint failing	Replace joint	1
Heavy tree and vegetation growth	Clear growth	2
Debris collection on plates & members below deck	Powerwash plates & members below deck	Throughout

The feasibility of the following rehabilitation options – deck replacement, rail replacement, and truss expansion or replacement – are presented below.

Deck Replacement – As described in **Section 1.3.1**, the original concrete deck was removed during the 2000-2001 repair project and replaced with the open steel grate panels to help maintain the functional load rating of the bridge. The declining condition of the remainder of the structure since that time has required a load posting that restricts the bridge’s use to double axle vehicles (e.g., personal car, pick-up truck, typical delivery vehicle) weighing no more than 25 tons, and a typical semi-truck of 36 tons.⁶ The bridge’s current load rating and posting are limited by the strength capacity of the existing gusset plates and stringers. It is not possible to increase the capacity of the gusset plates or to reduce the overall weight of the bridge. Further deterioration of the structure will eventually cause the load rating and

⁶ The bridge was designed for H15 live loading, which is much less than the current HL-93 design standard. The load posting of 25 tons for special hauling vehicles is similar to the Nebraska Type 3 Legal Truck but less than larger legal single-unit trucks such as SU5 – SU7. In addition, the single-axle legal load is 20,000 pounds but the load posting restrictions may limit single-axle weight depending on the vehicle configuration, including larger trucks and farm equipment.

posting to decrease, as these and other primary load-carrying members positioned directly below the open steel grate deck continue to be exposed to moisture and de-icing salts.

Rehabilitation would not replace the existing open steel grate deck, as a heavier concrete deck would further reduce the load posting to well below legal loads for trucks. Damaged deck panels continue to be replaced on a yearly basis. The condition of the deck panels and welds would continue to be assessed and replaced in-like-and-kind as part of the current bridge management plan.

Bridge Rail Replacement - The existing steel railing⁷ cannot be upgraded to a MASH-tested concrete rail or barrier. A concrete rail or barrier requires a concrete deck for anchoring. The existing steel rail would be replaced with another steel rail that meets the minimum NDOT and Iowa DOT height requirement of 3 feet, 3 inches, but this rail would not meet current crash-testing standards. Loose or damaged posts would be re-attached or replaced during ongoing maintenance.

Truss Expansion or Replacement - Rehabilitation would not correct the functional deficiencies described in **Section 1.3.4** and outlined in **Table 3-1**. The clear roadway width is constrained by the interior width of the River Unit thru-truss and the presence of the existing rails immediately inside the vertical truss members. Neither widening the bridge by (1) building a cantilevered deck beyond the outside of the existing truss or (2) adding a third truss line outside of the existing truss lines is feasible, because both the cantilevered load and additional truss load would overload the supporting members of the bridge. Modification or replacement of the truss would affect the NRHP-eligible characteristics of the bridge. Therefore, the clear roadway width (functional deficiency) cannot be widened without replacement of the truss. Replacement of the truss would also affect the NRHP-eligible characteristics of the bridge.

In addition, and as noted in **Table 3-2**, the vertical clearance meets current NDOT, Iowa DOT, and AASHTO minimum requirements but still restricts the use of the bridge by many oversized loads, vehicles, and agricultural equipment. Modifying the truss portals cannot improve the vertical clearance, as it would affect the lateral stability of the truss.

⁷ The existing steel railing does not meet current American Association of State Highway and Transportation Officials (AASHTO) Manual for Assessing Safety Hardware (MASH) standards.

Table 3-2: Functional Deficiencies and Current Design Standards

Functional Deficiency	Existing Condition	Current Standard or Preference	Improvement w/Rehabilitation
Clear Roadway Width on Bridge	22'-6" clear width 11'-3" lanes, no shoulders	*Current standard: 36'-0" clear width (min) 12'-0" lanes, 6'-0" shoulders	None
Bridge Railing Type	Built-up Steel Rail Posts: 5" W-shape, 7'-6" spa. Rails: angles & misc. shapes Curb: C-channel **MASH Test Level: Not tested	Current NDOT BDM Standard: - Concrete Rail (NU), or - Concrete Barrier (New Jersey Section) **MASH Test Level: TL-4 or better	None
Bridge Railing Height above Riding Surface	2'-11"	Current NDOT BDM minimum: - State Hwy = 3'-3"	Improved to 3'-3"
Vertical Clearance	17.65 ft. at lowest portal	*NDOT minimum: 16'-0" AASHTO minimum: 17'-6" Preferred: no limit	None
*From NDOT Minimum Design Standards for the N-51 Highway Classification: State Functional Classification: Major Arterial National Functional Classification: Minor Arterial Estimated Average Daily Traffic (ADT) in 2029: 1830 vehicles per day **AASHTO Manual for Assessing Safety Hardware (MASH)			

Rehabilitation would continue actions to address some of the worst deficiencies identified during future yearly inspections. It is estimated that such activities would possibly extend the service life of the bridge by eight to ten years beyond that of the No-Build Alternative, to 2045. Primary load carrying members such as gusset plates and floorbeams, cannot feasibly be replaced, but extensive patching or bracing could be used (e.g., using a splice plate), but the underlying cracking and corrosion would still be present and would continue to worsen. Many of the identified corrosion holes and cracks are in tight corners with no reasonable options for applying a lasting patch or repair. Corrosion, section loss, and pack rust will continue as the new paint applied in 2017 breaks down with time and the deck continues to drain water directly onto the members below, further accelerating deterioration. The Rehabilitation Alternative would continue to replace approximately 10 percent of the worst-cast deck panels. Following the proposed 2025 repair, the maintenance program to repair welds and replace deck panels would re-start and continue until the bridge is closed or replaced. The deck panel replacement program costs approximately \$175,000 per year (in 2024 dollars).

The Decatur Bridge would continue to undergo annual NBI inspections, including Non-Redundant Steel Tension Member evaluation (NSTM, formerly known as "fracture critical"). NDOT increased the inspection frequency to yearly in 2025 due to the severity of the deficiencies identified in the 2024 inspection. Decatur Bridge inspections cost approximately \$60,000 per inspection (2024 dollars).

Rehabilitation would not modify the existing roadway profile, river channel, overbanks, or terrain below the bridge to attempt to improve the resiliency of the crossing to future flood events. The existing Iowa roadway approach would remain at risk of overtopping during a 100-year (Q100) flood event, requiring the highway to be closed. The existing pile-supported piers and abutment within the Iowa overbank would remain at risk of deep scour from large flood events, which caused the lengthy crossing closure in 2011.

Rehabilitation would not provide a long-term resilient river crossing connecting Decatur, Nebraska/N-51 and Onawa, Iowa/IA-175 to regional facilities, would not maintain accessibility to and by emergency

services, and would not provide infrastructure to support current and future travel demand. Some existing conditions could be addressed, but the long-term outcome of even major repairs would not extend the useful life of the bridge. The functional/design deficiencies cannot be addressed without replacing the truss or making other improvements that would affect the features of the bridge that make it NRHP-eligible. The flood resiliency of the crossing would not be improved, and the crossing would continue to be subject to damage and closure resulting from future flood events.

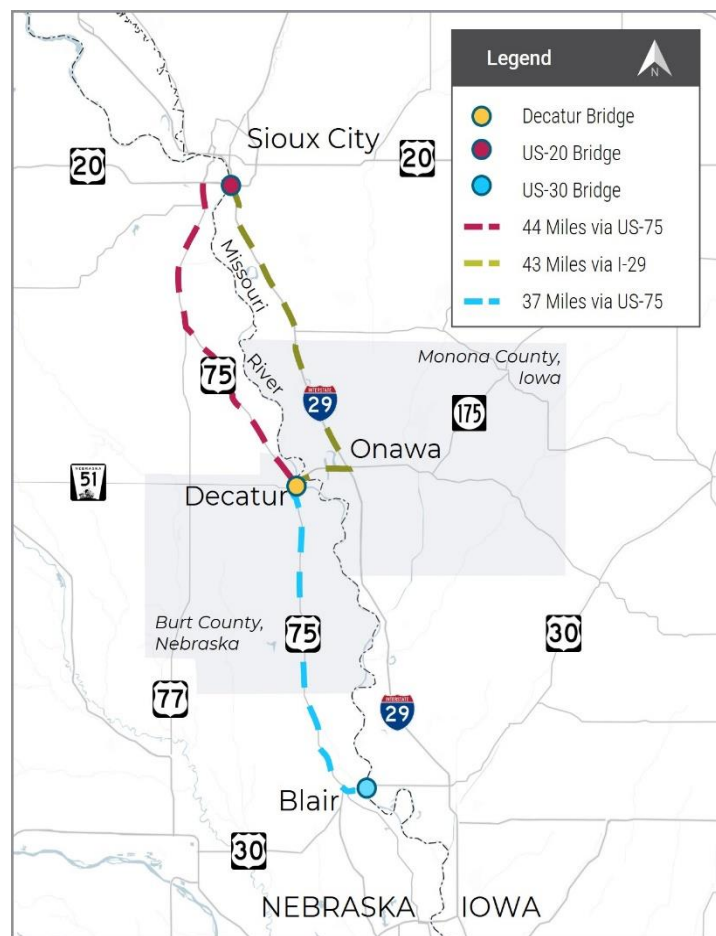
Rehabilitation is anticipated to cost \$2.8 Million (in 2025 dollars) and could potentially extend the useful life of the bridge until 2045. Based on the discussion presented, Rehabilitation does not meet the stated purpose and needs.

3.3 Use of Another River Crossing

The nearest existing Missouri River crossings (bridge to bridge) to Decatur are at Blair, Nebraska (approximately 37 miles south via US-75 and US-30) and Sioux City, Iowa (approximately 44 miles north via US-75 and US-20 Business through Nebraska or 43 miles via IA-175, I-29, and US-20 Business through Iowa) (**Figure 3-1**). Like the No-Build and Rehabilitation Alternatives, the Decatur Bridge crossing would not be improved under this alternative. Annual bridge inspections would continue. The 2025 repair project would be completed, followed by only scheduled maintenance and repairs until a point in the future when activities can no longer sustain the continued use of the Decatur Bridge crossing, and the crossing would be closed to traffic.

At that time, traffic would be rerouted along existing roadways to cross the Missouri River either at Blair or Sioux City. The existing approach roadways – N-51 and IA-175 – would be maintained to provide access to both sides of the river, but at a point in the future, the Decatur Bridge would be removed to avoid creating a hazard to river navigation and public safety. At that time, sections of N-51 and IA-175 could be removed from each state's highway system, with maintenance becoming the responsibility of each county or the Village of Decatur. Areas of the existing roadbed leading up to the riverbank may also be removed. The Use of Another River Crossing Alternative would not meet the stated purpose and needs.

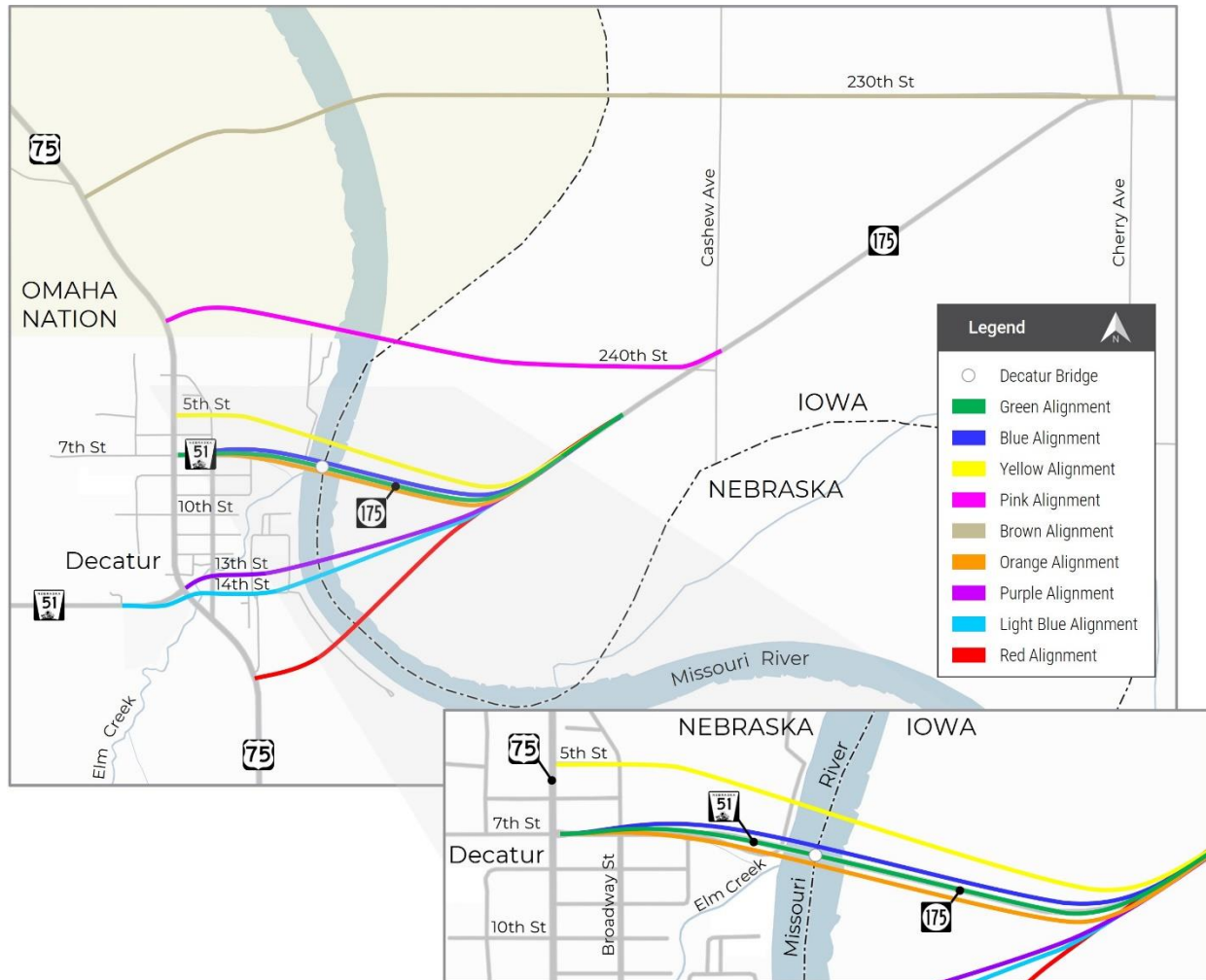
Figure 3-1: Nearest Existing Missouri River Crossings to Decatur



3.4 Build Alignments to Provide an Improved River Crossing

Several alignments were studied to provide a new river crossing including replacement of the Decatur Bridge on the existing N-51/IA-175 alignment and multiple alignments both north and south of the existing river crossing (**Figure 3-2**).

Figure 3-2: Alignments to Provide an Improved River Crossing



Green Alignment – Replace the Decatur Bridge on the Existing Alignment - Replacement of the bridge along the existing N-51/IA-175 alignment would require the crossing to be closed to traffic for two years or longer resulting in adverse out-of-direction travel of more than 80 miles round trip during construction (see **Section 3.3 Use of Another River Crossing**). The Green Alignment would severely affect access to existing businesses in Decatur and access by emergency responders from Onawa during the closure timeframe, potentially resulting in irreversible negative effects on residents and the local economy. During the Location and Environmental Study, the public and members of the Community Advisory Group (CAG) voiced strong opinions against long-term closures of the crossing for major repairs and the effects those closures had on residents accessing employment, health care, commerce, and general services in Onawa. For these reasons, the Green Alignment is not considered feasible or reasonable and was removed from further consideration.

New Location Alignments - The Yellow, Pink, Brown, Purple, Light Blue, and Red Alignments shown in **Figure 3-3** were also removed from further consideration because they did not address the connectivity and mobility needs of the communities, created additional adverse, out-of-direction travel for commuters and emergency responders, and would negatively affect the viability of the Decatur community. The Pink and Brown Alignments would cross through Omaha Reservation lands. These new location alignments would provide a long-term resilient river crossing but would require excessive out-of-direction travel for the residents of Decatur and emergency providers in Onawa. They would provide infrastructure supporting current and future travel demand, but at the cost of excessive out-of-direction travel and travel time. Like the No-Build and Use of Another River Crossing alternatives, no improvements would be made to the Decatur Bridge other than planned maintenance and repairs until a point in time when the bridge would be closed to traffic. For these reasons, the Yellow, Pink, Brown, Purple, Light Blue, and Red Alignments were not considered feasible or reasonable and were removed from further consideration.

Because of their proximity to the existing Decatur Bridge crossing and their ability to meet the stated purpose and needs, both the Blue and Orange Alignments were recommended for further study. Each Build Alternative is described in greater detail in the following sections.

3.4.1 Blue Alternative – Build New Bridge North of the Existing Crossing

The Blue Alternative (**Figure 3-3**) would construct a new river crossing approximately 80 feet north of and parallel to the existing Decatur Bridge crossing. The new bridge would be approximately 2,715 feet long, almost 760 feet longer than the existing Decatur Bridge, to provide additional flowage capacity within the floodplain and overbank area on the Iowa side of the river, replacing the separate overflow structure that exists today. The new bridge would have a total clear roadway width of 40 feet, consisting of two 12-foot-wide travel lanes (one in each direction) and 8-foot-wide shoulders on both sides of the bridge. The new River Unit of the bridge is anticipated to be supported by steel plate girders, eliminating any overhead truss components. The approach roadways and bridge units on both the Nebraska and Iowa sides would be updated to current design standards. In Decatur, the approach roadway would tie back into existing N-51 just east of Broadway Street. On the Iowa side, the approach roadway would tie back into existing IA-175 west of Cashew Avenue. The Blue Alternative would reconstruct the existing access road within the Upper Decatur Bend Wildlife Management Area (WMA) on the Iowa side of the river to maintain access to the WMA. The existing Decatur Bridge crossing would remain open to traffic during construction of the new bridge (possibly two years or more) until the approach roadways are connected to the existing highways. When construction is complete, the Decatur Bridge and sections of the existing approach roadways would be removed.

The Blue Alternative would provide a long-term resilient river crossing connecting Decatur, Nebraska/N-51 and Onawa, Iowa/IA-175 to regional facilities. Resiliency would be enhanced by building a longer River Unit without a separate overflow structure to address the scour and flowage issues within the Iowa overbank that have affected the Iowa abutment during past flood events. It would maintain accessibility between Decatur and Onawa without adding out-of-distance travel and increasing travel time. The wider bridge deck and addition of shoulders would allow most bridge maintenance and repair activities to occur without reducing lane capacity or temporarily closing the bridge.

The total construction cost estimate (construction, engineering, ROW, utility relocations, and contingency) for the Blue Alternative is \$83.2 Million (in 2025 dollars) and would provide a structure with an anticipated lifespan of between 75 and 100 years.

3.4.2 Orange Alternative – Build a New Bridge South of the Existing Crossing

The Orange Alternative (**Figure 3-4**) would construct a new river crossing approximately 80 feet south of and parallel to the existing Decatur Bridge crossing. The new bridge would be approximately 2,755 feet long, almost 800 feet longer than the existing Decatur Bridge, to provide additional flowage capacity within the floodplain and overbank area on the Iowa side of the river, replacing the existing separate overflow structure. The new bridge would have a total clear roadway width of 40 feet, consisting of two 12-foot-wide travel lanes (one in each direction) and 8-foot-wide shoulders on both sides of the bridge. The new River Unit of the bridge is anticipated to be supported by steel plate girders, eliminating any overhead truss components. The approach roadways and bridge units on both the Nebraska and Iowa sides would be updated to current design standards. In Decatur, the approach roadway would tie back into existing N-51 just east of Broadway Street. On the Iowa side, the approach roadway would tie back into existing IA-175 west of Cashew Avenue. The existing Decatur Bridge crossing would remain open to traffic during construction of the new bridge (possibly two years or more) until the approach roadways are connected to the existing highways. When construction is complete, the Decatur Bridge and sections of the existing approach roadways would be removed.

The Orange Alternative would require relocation of Marina Drive in Decatur to the north side of N-51 creating a new access road under the new bridge to access Beck Memorial Park and Campground south of N-51. The Orange Alternative would impact the City of Decatur Wastewater Treatment facility south of Marina Drive. It would also require relocation of the existing access road along the south side of IA-175 within the WMA to the north side of IA-175 to access boat ramps and parking areas within the WMA.

The Orange Alternative would provide a long-term resilient river crossing connecting Decatur, Nebraska/N-51 and Onawa, Iowa/IA-175 to regional facilities. Resiliency would be enhanced by building a longer River Unit without a separate overflow structure to address the scour and flowage issues within the Iowa overbank that have affected the Iowa abutment during past flood events. It would maintain accessibility between Decatur and Onawa without adding out-of-distance travel and increasing travel time. The wider bridge deck and addition of shoulders would allow most bridge maintenance and repair activities to occur without reducing lane capacity or temporarily closing the bridge.

The total construction cost estimate (construction, engineering, ROW, utility relocations, and contingency) for the Orange Alternative is \$85.2 Million (in 2025 dollars) and would provide a structure with an anticipated lifespan of between 75 and 100 years.

Figure 3-3: Blue Alternative – Build a New Bridge North of and Parallel to the Existing Decatur Bridge

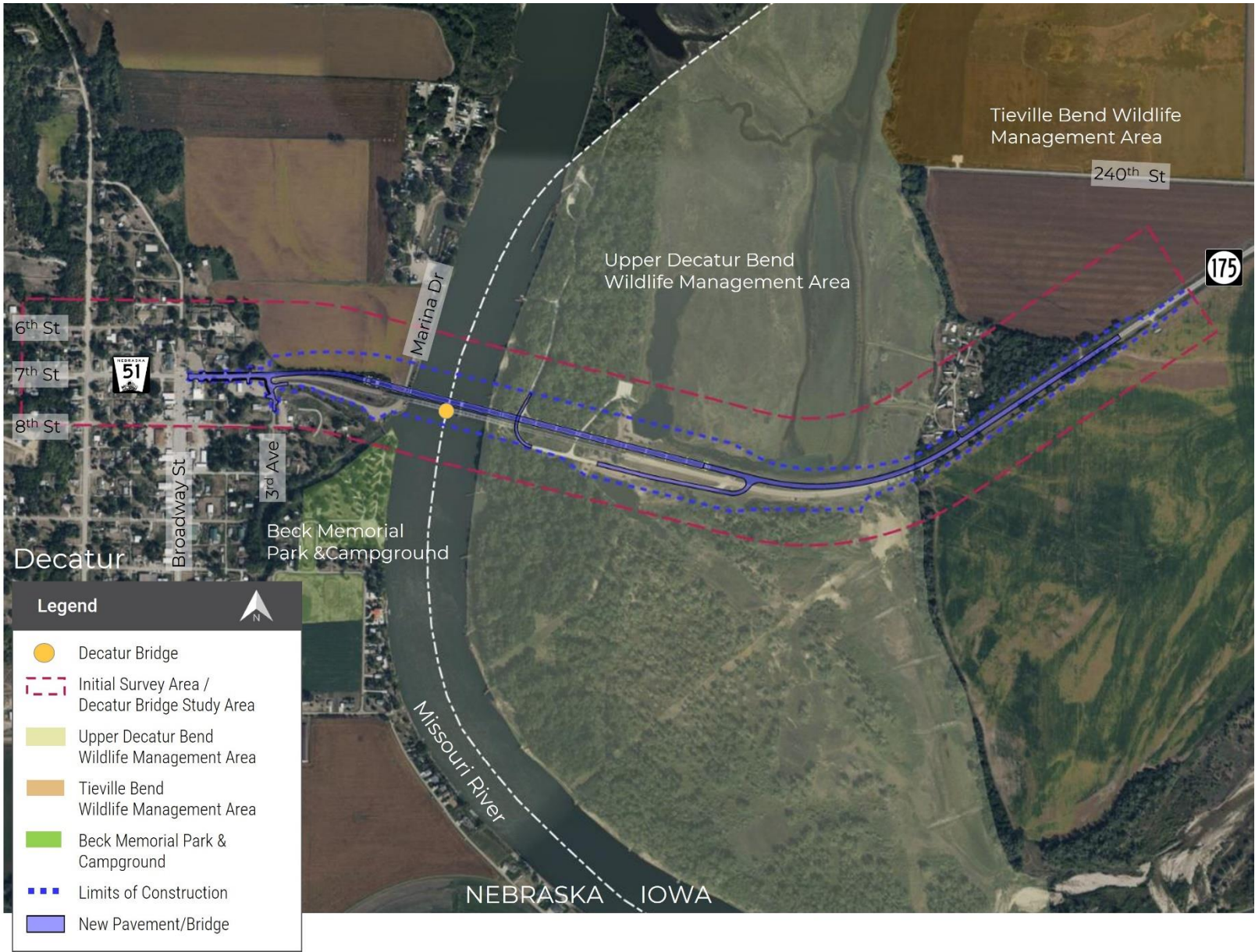
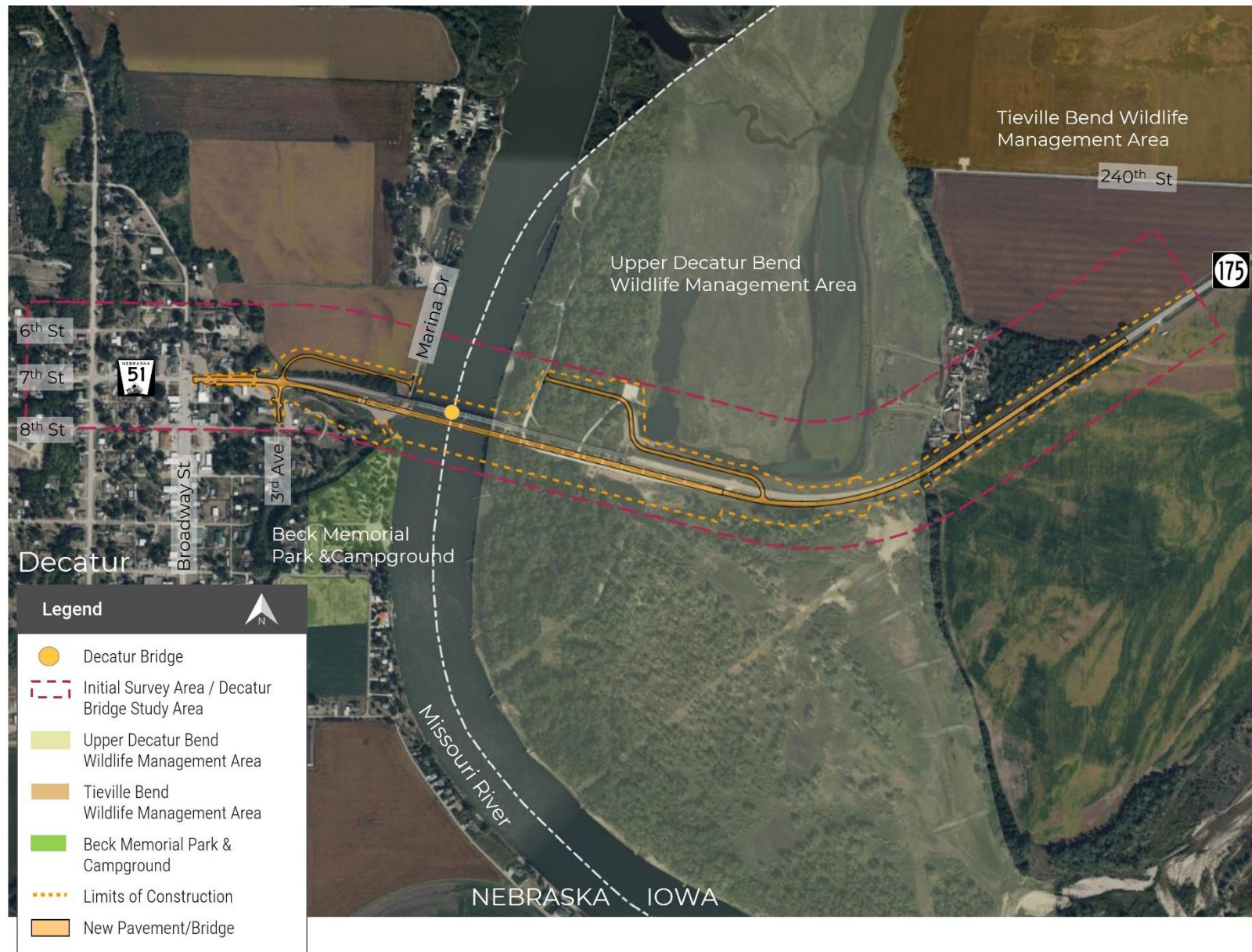


Figure 3-4: Orange Alternative – Build a New Bridge South of and Parallel to the Existing Decatur Bridge



3.5 Summary Comparison of the Alternatives Considered

The following matrices summarize the results of the alternatives screening process conducted during the *Decatur Bridge Location and Environmental Study*.

Table 3-3: Summary of the Screening of the Universe of Alternatives Against the Purpose and Need

Needs	On Existing Alignment		Alignments North of Existing					Alignments South of Existing				Other Alternatives		
	NO-BUILD	REHAB/REPAIR	GREEN	BLUE	YELLOW	PINK	BROWN	ORANGE	PURPLE	LIGHT BLUE	RED	TSM/TMD	OTHER MODES	USE ANOTHER CROSSING
Need to Maintain Connectivity														
Connect residents with critical services	✗	—	—	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗
Accommodate local and regional travel demand (personal vehicles, large trucks, agricultural traffic)	✗	✗	✓	✓	✓	—	—	✓	—	—	—	✗	✗	✗
Minimize travel times for all users (route length and connectivity)	✗	—	—	✓	—	—	✗	✓	—	—	✗	✗	✗	✗
Support local and regional economies (existing and future, access and connectivity)	✗	—	✗	✓	✓	—	—	✓	—	—	—	✗	✗	✗
Need to Improve Infrastructure Condition														
Repair structural deterioration	✗	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗
Correct width and load posting deficiencies	✗	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗
Minimize long-term maintenance costs	✗	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗
Need to Improve Resiliency Against Flooding														
Provide greater infrastructure stability and system reliability than the existing crossing	✗	—	—	—	—	—	—	—	—	—	—	✗	✗	✗
Provide a resilient crossing in the face of changing conditions within the watershed	✗	—	—	—	—	—	—	—	—	—	—	✗	✗	✗
Does the alternative meet the purpose and need?	NO	NO	NO	YES	YES	YES	NO	YES	YES	YES	NO	NO	NO	NO

Table 3-4: Summary of the Screening of the Universe of Alternatives Against the Performance Areas

Performance Areas	On Existing Alignment			Alignments North of Existing				Alignments South of Existing			
	NO-BUILD	REHAB/ REPAIR	GREEN	BLUE	YELLOW	PINK	BROWN	ORANGE	PURPLE	LIGHT BLUE	RED
Infrastructure											
Provides desired bridge lifespan (>75 years)	✗	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓
Provides typical section necessary to support current and future travel demand	✗	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓
Minimizes long-term maintenance costs	✗	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓
Accessibility											
Maintains or improves local and regional connectivity	✗	✗	✓	✓	—	✗	✗	—	✗	✗	✗
Maintains or minimizes increases in route length and travel time	✗	✗	✓	✓	—	✗	✗	✓	✗	✗	✗
Facilitates river navigation (commercial and recreational)	✗	✗	✓	✓	—	—	✓	✓	✓	✓	✓
Safety											
Provides travel lane and shoulder widths to support a variety of vehicle types, minimize conflicts with disabled vehicles, supports maintenance and emergency vehicle accessibility under traffic (most cases)	✗	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓
Minimize travel distance for emergency response vehicles	✗	✗	✓	✓	—	✗	✗	✓	✗	✗	✗
Resiliency											
Provides opportunity to implement scour risk reduction measures in design (longer bridge, relief structure)	✗	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓
Allows for an increase in approach roadway elevation to reduce overtopping risk	✗	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓

Table 3-4 continued: Summary of the Screening of the Universe of Alternatives Against the Performance Areas

Performance Areas	On Existing Alignment			Alignments North of Existing				Alignments South of Existing			
	NO-BUILD	REHAB/ REPAIR	GREEN	BLUE	YELLOW	PINK	BROWN	ORANGE	PURPLE	LIGHT BLUE	RED
Environment											
Minimizes new ROW impacts	✓	✓	✓	✓	—	✗	✗	✓	—	✗	✗
Minimizes impacts to adjacent property owners and number of potential displacements	✓	✓	✓	✓	—	—	✓	—	—	—	—
Minimizes impacts to public lands, conservation/management areas	✓	✓	✓	✓	—	✗	✗	✗	—	—	—
Minimizes impacts to wetland areas	✓	✓	✓	✓	—	✗	✗	✓	—	—	—
Minimizes impacts to wooded habitats	✓	✓	✓	✓	—	✗	✗	✓	—	—	—
Minimizes the volume of fill materials placed in the floodplain/floodway	✓	✓	✓	✓	—	✗	✗	✓	—	—	—
Constructability											
Minimizes major utility or infrastructure conflicts and potential relocations	✓	✓	✓	✓	✓	—	—	—	✓	—	—
Minimizes closure of N-51/IA-175 during construction	✗	✗	✗	✓	✓	✓	✓	✓	✓	✓	✓

Table 3-5: High-Level Impact Comparison of the New Location Build Alignments (Fall 2024)

Impact Categories	Build Alignments Remaining After Step 1 and 2 Screening					
	BLUE	YELLOW	PINK	ORANGE	PURPLE	LIGHT BLUE
Total Corridor Length ¹	1.6 miles	1.6 miles	2.1 miles	1.6 miles	1.6 miles	1.7 miles
Acres of New ROW ²	23.8 acres	25.1 acres	31.3 acres	23.5 acres	24.3 acres	25.8 acres
Total Wetland Impacts ³	6.1 acres	9.3 acres	9.9 acres	5.1 acres	8.3 acres	7.6 acres
Total Floodplain Impacts ⁴	12.3 acres	15.3 acres	12.4 acres	12.2 acres	17.4 acres	17.1 acres
Impacts to USACE-owned Lands	0 acres	0 acres	0.9 acres	0 acres	0 acres	0 acres
Impacts to IDNR-owned lands	13.2 acres	13.0 acres	12.6 acres	13.5 acres	14.5 acres	14.5 acres
ROW Needed from Omaha Reservation ⁵	0 acres	0 acres	12 acres	0 acres	0 acres	0 acres
Section 4(f) Resources Affected	Remove Decatur Bridge	Remove Decatur Bridge, IDNR boat ramp and parking area	Remove Decatur Bridge	Remove Decatur Bridge, encroach into and affect access to Beck Memorial Park & Campground	Remove Decatur Bridge	Remove Decatur Bridge
Major Utility Conflicts	None	None	Pipelines	South Dike, stormwater outfall, drainage ditch	Pipelines	Pipelines
1 – Based on length from US-75 to IA-175. 2 – Acreage estimate based on 150-foot-wide corridor for embankment sections and 80-foot-wide-corridor for at-grade sections with common endpoints at US-75 and IA-175. 3 – Total acreage from the combination of delineated wetlands within the Initial Survey Area (BLUE and ORANGE) and NWI-mapped wetlands for the remaining alignments. Includes riverine, palustrine, and lacustrine wetland types. 4 – 100-yr floodplain only mapped to state line/center of channel so quantity only accounts for areas in Iowa 5 – boundary from data obtained from the Bureau of Indian Affairs						

Table 3-6: Impact Comparison for the No-Build and Build Alternatives (Revised December 2025)

Initial impacts were calculated in July 2025 to support the recommendation of a Preferred Alternative to move forward in the NEPA process. At that time, the quantification of proposed ROW (including temporary and permanent easements), particularly within the boundaries of the WMA, included lands within existing highway ROW mapped as IDNR-owned lands, etc. The quantities in the table below have been modified since July 2025, to remove the area of those lands within existing highway rights-of-way, to provide a more accurate calculation of the new/proposed ROW that would be acquired and would impact adjacent resources. Floodplain/floodway acreages are shown as “total” with both existing and proposed/new ROW indicated for the build alternatives. Design modifications made during the NEPA process (since August 2025) have further changed the impact calculations and are reflected in the EA.

Impact Category	No Build	Blue Alternative	Orange Alternative
Total Bridge Length (ft)	1,956'	2,715'	2,755'
Lifespan of the bridge	5 years existing bridge	75-100 years new bridge	75-200 years new bridge
Marina Drive Realignment Length (LF)	NA	0 LF	1,174 LF
IDNR Access Road Realignment Length (LF)	NA	941 LF	2,163 LF
Length of IA-175 to be Removed (LF)	NA	4,333 LF	4,333 LF
Length of N-51 to be Removed (LF)	NA	1,457 LF	1,457 LF
Total Acres of Proposed/New ROW (ac)	NA	29.3 ac	36.2 ac
Acres IDNR Lands (Upper Decatur Bend WMA) Within Proposed/New ROW	NA	18.5 ac	23.8 ac
Acres of USACE Mitigation Easements Within Proposed/New ROW	NA	16.7 ac	22.1 ac
Acres of Woodland Impacts	NA	8.1 ac	15.7 ac
Acres of Permanent Wetland Impacts (all types)	NA	2.3 ac	1.9 ac
Acres of Permanent Stream Impacts (all types)	NA	0.02	0.07 ac
Acreage of Mapped 100YR Floodplain Within Existing and Proposed/New ROW	17.3 ac	40.4 ac	47.1 ac
Acreage of Regulatory Floodway Within Existing and Proposed/New ROW	5.3 ac	13.7 ac	19.3 ac
NRHP-Eligible Resources, Adverse Effect	Decatur Bridge	Decatur Bridge	Decatur Bridge
Section 4(f) Resources, “Use”	Decatur Bridge	Decatur Bridge Upper Decatur Bend WMA	Decatur Bridge Upper Decatur Bend WMA Beck Memorial Park/Campground
Total Number of Displacements – Residential, Commercial	NA	0	0
Number of Hazardous Material Properties Affected	NA	0	0
Total Estimated Construction Cost (in millions, 2025 dollars) (construction, engineering, ROW, utility relocation, contingency)	Maintenance and repair costs have not been determined.	\$83.2 M	\$85.2 M

4.0 Summary and Conclusions

Alternatives that would avoid having an adverse effect or result in use of the NRHP-eligible Decatur Bridge would not address the purpose and needs identified. The No-Build Alternative would not make any structural or functional improvements to the bridge to extend its useful life. The condition of the bridge would continue to deteriorate to where the bridge would need to be closed to traffic and eventually removed. The Rehabilitation Alternative would address only “high” and “medium” urgency deficiencies but would not address the functional deficiencies of the bridge. Rehabilitation, including the proposed major repairs to be completed in 2025, would not extend the useful life of the bridge by more than 10 years (2045).

Both Build Alternatives would remove the Decatur Bridge, resulting in an adverse effect under Section 106. Either the Blue or Orange Alternative will be selected as a Preferred Alternative early in the NEPA process. At present, relocation and reuse of the Decatur Bridge is not a feasible option to resolve the adverse effect.

5.0 References

- FHWA. 1983. Programmatic Section 4(f) Evaluation and Approval for FHWA Projects that Necessitate the Use of Historic Bridges. July 5. <https://www.environment.fhwa.dot.gov/4f/4fbridge.asp>.
- FHWA. 1991. Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, and the Nebraska State Historic Preservation Officer for the Highway Bridge Replacement and Rehabilitation Program.
- FraserDesign, and Hess, Roise and Company. 1991. Nebraska Historic Bridge Inventory and Management Plan. July. Available online at http://environment.transportation.org/pdf/historic_cultural/Nebinventory.pdf.
- Mead & Hunt. 2007. National Register Evaluation of Nebraska Bridges 1947 to 1965. May. Available online at <http://www.transportation.nebraska.gov/history/docs/HistoricBridgeReportFinal.pdf>.
- National Register of Historic Places Multiple Property Documentation Form (MPDF) 1991 *Highway Bridges in Nebraska 1870–1942*. Prepared by Charlene K. Roise, Principal. Fraserdesign and Hess, Roise and Company. Loveland, Colorado.

APPENDIX A – *Nebraska Historic Bridge Inventory and Historic
Bridge Management Plan*

The *Nebraska Historic Bridge Inventory and Historic Bridge Management Plan* (FraserDesign and Hess, Roise and Company 1991) outlines the following five priorities for treatment of historic bridges (see **Chapter 5.0** for further discussion):

1. The preferred treatment for a historic bridge is to have it continue to carry vehicular traffic at its original site with minimal modification.
2. If it is not feasible to keep the bridge at its original site, every effort should be made to find an appropriate site to which it could be relocated for vehicular use.
3. If it is determined that the bridge can no longer carry vehicular traffic or could do so only at the expense of its historic integrity, the next best solution is to retain it for non-vehicular use at its original site with minimal modification. Priority should be given to transit-related uses, such as serving bicycle and pedestrian traffic.
4. If the bridge can no longer carry vehicular traffic, no “as is” use is feasible, and cannot be left in place, adaptive use possibilities should be explored, with preference to reuses that retain the bridge at its original site. Necessary modifications should not damage or obscure the original bridge structure. If no suitable in situ adaptive use can be found, the bridge can be closed to vehicular traffic and left in place as a “moldering ruin.”
5. If the bridge cannot remain on its original site and cannot be moved, it shall be documented to the standards of the Historic American Engineering Record (HAER) before demolition, disassembly, or modifications that will destroy its historic integrity. If possible, the structure should be disassembled carefully and stored until a new location for it can be found or significant components should be incorporated into any new bridge at the site or salvaged for educational purposes.

The priorities for treatment of historic bridges as outlined in the *Nebraska Bridge Inventory and Historic Bridge Management Plan* (FraserDesign and Hess, Roise and Company 1991) were evaluated with respect to the historic Decatur Bridge (S051 03644). Each treatment priority is assessed individually below.

A.1 Priority 1

“The preferred treatment for a historic bridge is to have it continue to carry vehicular traffic at its original site with minimal modification.”

As previously discussed, the Decatur Bridge is both structurally and functionally deficient. As a result, continued use of the bridge for vehicular traffic would require these deficiencies to be addressed. Non-Redundant Steel Tension Member (NSTM), formerly known as “fracture critical”, and routine structural inspections conducted every two years and most recently conducted in July 2024, indicated the rating of the bridge’s superstructure has reached the condition threshold that requires further investigation of improvement alternatives. Because of the age and condition of the bridge, structural deficiencies are present in the superstructure, substructure, deck, and railings.

Structural deficiencies include cracks in floorbeams, cracks in connection angles, fractured rivets and anchor bolts, fractured deck-to-stringer welds, and section loss with holes and cracking in truss members. Many are in primary load carrying members. Most of the structural steel corrosion, section loss, and cracking are on members below the deck. The open steel grate deck allows water and de-icing salt spray to drain directly onto the members below, creating a corrosive environment. The protective paint added in 2017 has helped to reduce this risk; however, new heavy rust has developed in areas of localized paint failure, particularly areas that already had heavy loss and in locations where holes were painted over and

rust expansion underneath the paint is causing localized paint failure. As the paint breaks down over time, the direct exposure to deck drainage will re-initiate corrosion and section loss.

In addition to its structural deficiencies, the Decatur Bridge is functionally deficient. As described in Section 1.3.4, the bridge's width, lack of shoulders, and load rating are substandard. The clear roadway width is constrained by the interior width of the River Unit thru-truss and the presence of the existing rails immediately inside the vertical truss members. Neither widening the bridge by (1) building a cantilevered deck beyond the outside of the existing truss or (2) adding a third truss line (basically cutting the bridge in half) is feasible as both the cantilevered load and additional truss load would overload the substructure.

The existing steel railing cannot be upgraded to a MASH-tested concrete rail or barrier. A concrete rail or barrier requires a concrete deck for anchoring. The existing steel rail would be replaced with another steel rail that meets the minimum NDOT height requirement of 3-feet-3 inches, but it would not meet current crash-testing standards. Replacement of the open grate deck with a solid surface would further reduce the vehicle loads the bridge is able to support. The clear roadway width cannot be widened without replacement of the truss. These treatments to address both structural and functional deficiencies would constitute an adverse effect on the structure under Section 106 of the NHPA.

Additionally, approximately 20 of the structural deficiencies identified during the 2024 inspection appear to be the result of vehicle impact with the River Unit thru-truss superstructure. The narrow width and lack of shoulders have increased the likelihood of such impacts. The Decatur Bridge meets current design criteria for vertical clearance, but the overhead members still present a barrier to the use of the bridge by some large equipment. These overhead members also show evidence of past vehicle impacts. The inventory rating of the bridge is also less than half of that of a modern bridge design. The narrow deck width and load posting restrict the size and weight of vehicles that can legally use the bridge.

Because the functional deficiencies will persist regardless of continued rehabilitation activities, and addressing structural deficiencies will only potentially extend the useful life of the bridge another 5-10 years, the Decatur Bridge is not suitable for continued use for vehicular traffic in its current location. Continued use of the structure would require modifications that would detract from its character-defining features, including those that make it eligible for NRHP listing. Finally, retaining and rehabilitating the current structure does not meet the identified purpose and needs.

A.2 Priority 2

“If it is not feasible to keep the bridge at its original site, every effort should be made to find an appropriate site to which it could be relocated for vehicular use.”

As discussed in **Section 1.3**, the Decatur Bridge is both structurally and functionally deficient. Rehabilitation to address structural and functional deficiencies would require extensive repairs and possibly reconstruction of the existing bridge. Widening the bridge would result in the loss of historic integrity with regard to the character-defining features that qualify the structure for NRHP inclusion, thus resulting in an adverse effect on the structure and possibly resulting in loss of NRHP eligibility.

Relocation of all or part of the bridge was explored; however, several constraints are associated with relocation of all or part of a bridge of this size and design.

- The Decatur Bridge is composed of 7 spans including the 2 Warren style thru-truss River Unit Spans each 420 feet long, the 3 Nebraska Approach Unit Spans (steel girder spans totaling 211 feet long), and the 2 Iowa Approach Unit Spans (deck trusses totaling 904 feet long). Careful disassembly of the bridge components would be required to maintain the integrity of the structure to move it to a new location, including the removal of corroded rivets and damaged

components that would need to be replaced at the new bridge site. Disassembly of the bridge would need to be delayed until after the new bridge is constructed and the new approach roadways are tied back into N-51 and IA-175 removing all traffic from the Decatur Bridge. With the new bridge approximately 80 feet away from the existing bridge, additional caution would be required to dismantle and move the Decatur Bridge to a new location.

- Disassembly and reassembly could have added risk to construction as many of the members have extensive rust/corrosion and section loss that could further disintegrate upon disassembly. The bridge was inspected for asbestos containing materials (ACM) and lead-based paint in May 2024. No ACM were identified, and the existing bridge has been sand blasted and repainted since 2015.
- In addition to adding time to the construction schedule, disassembly and relocation of the bridge would add cost to the overall project (no estimate has been developed to date).
- Through marketing of the bridge, NDOT will monitor inquiries/responses from any interested parties. Coordination with Consulting Parties will continue during the Section 106 process to see if any other parties may be interested in reusing part or all of the Decatur Bridge.

Though communication with willing parties is ongoing, it is currently anticipated that relocation or reuse of all or part of the bridge in another location is not a reasonable option. Further documentation of marketing attempts and stakeholder coordination will be provided as both the NEPA and Section 106 processes progress.

A.3 Priority 3

“If it is determined the bridge can no longer carry vehicular traffic or could do so only at the expense of its historic integrity, the next best solution is to retain it for non-vehicular use at its original site with minimal modification. Priority should be given to transit-related uses, such as serving bicycle and pedestrian traffic”

Use of the Decatur Bridge for non-vehicular use was evaluated, but for the reasons outlined below, in-place bridge reuse under any ownership scenario is neither feasible nor reasonable.

As rehabilitation options do not satisfy the purpose and need requirement, Priority 3 was assessed with regard to the potential to retain the bridge for adaptive re-use in addition to the two Build Alternatives. The Blue Alternative (**Section 3.3.1**) would construct a new bridge approximately 80 feet north of and parallel to the Decatur Bridge. If this alternative is selected as the preferred alternative, demolition or removal of the Decatur Bridge would not be required, but the Blue Alternative would leave the Decatur Bridge isolated and disconnected from N-51 and IA-175. Similarly, selection of the Orange Alternative (**Section 3.3.2**) would construct a new bridge approximately 80 feet south of and parallel to the Decatur Bridge, and if selected as the preferred alternative would not necessitate demolition or removal of the Decatur Bridge but would also leave the Decatur Bridge isolated and disconnected from N-51 and IA-175.

The open grate deck of the Decatur Bridge and the lack of shoulders do not reasonably accommodate bike/ped users. None of the existing sidewalks along N-51 in Decatur connect to the bridge, and no trails or other bike/ped accommodations are planned on either side of the river. Like the rehabilitation alternative assessed, improvements could be made to the existing bridge to accommodate bike/ped use including adding a limited-width concrete deck, providing ADA-compliant railings, ramps, and walkways to access the bridge, and possibly new pedestrian-scale lighting. The limited-width solid deck would also provide access by maintenance and emergency vehicles.

Even with rehabilitation or improvements to accommodate bike/ped use, leaving the Decatur Bridge in place would ultimately create a safety hazard and would also require an undetermined level of maintenance until a time in the future when the bridge would completely close and removed. The cost estimate for both Build Alternatives includes demolition of the Decatur Bridge but not its long-term maintenance.

A.4 Priority 4

“If the bridge can no longer carry vehicular traffic, no ‘as is’ use is feasible, and cannot be left in place, adaptive use possibilities should be explored, with preference to reuses that retain the bridge at its original site. Necessary modifications should not damage or obscure the original bridge structure. If no suitable in situ adaptive reuse can be found, the bridge can be closed to vehicular traffic and left in place as a ‘moldering ruin.’”

As established in the previous treatment discussions, the Decatur Bridge is both structurally and functionally deficient in its existing location, and no *in situ* adaptive reuse has been assessed as reasonable or feasible. Continued use of the bridge in any capacity would require that the identified deficiencies be addressed, necessitating structural changes that may reduce the historic integrity of the bridge. These changes would result in an adverse effect to the bridge under Section 106. Furthermore, closing and leaving the bridge crossing as a “moldering ruin” would impede construction of either Build Alternatives, pose a safety hazard to the public, and would not satisfy the identified purpose and needs, which are to maintain connectivity, improve infrastructure condition, and improve resiliency against flooding.

Furthermore, without continued repair and upkeep, the existing bridge would eventually fail, potentially causing damage to other bridge components, creating a river obstruction, or creating a hazard to motor vehicles. As a result, leaving the existing bridge as a “moldering ruin” would go against the project’s purpose to provide a resilient river crossing that maintains access to regional commerce, employment, education, health care, and recreation facilities; maintains accessibility to and by emergency services; and provides infrastructure to support current and future travel demand.

A.5 Priority 5

“If the bridge cannot remain on its original site and cannot be moved, it shall be documented to the standards of the Historic American Engineering Record (HAER) before demolition, disassembly or modifications that will destroy its historic integrity. If possible, the structure should be disassembled carefully and stored until a new location for it can be found or significant components should be incorporated into any new bridge at the site or salvaged for educational purposes.”

Restoration or rehabilitation for vehicular or non-vehicular use that preserves the bridge’s historic character is not feasible for the reasons identified above. Furthermore, the disassembly and relocation of the bridge would result in destruction of the character-defining features of the bridge. For these reasons, bridge documentation followed by demolition (or repair of the existing structure in a manner that would destroy its historic integrity) is the preferred treatment. Though attempts to market all or part of the bridge to potential new owners for possible reuse are ongoing, it is not anticipated that this treatment would be feasible with regard to the subject bridge. Recordation of the bridge using HAER guidelines would be conducted prior to demolition and would preserve the bridge’s historic elements through documentation. Furthermore, additional mitigative stipulations as outlined in a Memorandum of Agreement (MOA) would be conducted prior to or as part of the demolition of the historic structure.

APPENDIX B – Consideration of Adaptive Reuse of the Decatur Bridge

Although not a standalone alternative, adaptive reuse of the Decatur Bridge was considered in concert with the two Build Alternatives. Leaving the Decatur Bridge in its current location and building either the Blue or Orange Alternative would isolate the bridge within each State's respective right-of-way, potentially leaving it as a 'moldering ruin.' The existing roadways accessing the bridge today would be disconnected and regraded. At the time this document was developed, no existing or planned recreational trails or sidewalks extend along IA-175, and only sidewalks extend along N-51 through Decatur. Therefore, the project area lacks the need and infrastructure to support bike/pedestrian (bike/ped) connectivity.

If Burt and/or Monona counties or the Village of Decatur were to take ownership of the bridge, improvements could be made to make it compatible with bike/ped use. The party taking responsibility for the bridge would be required to maintain it, including making repairs to keep the structure open to public use, and would be responsible for all liability associated with continued use of the bridge. As per the priorities for the treatment of historic bridges as outlined in the *Nebraska Historic Bridge Inventory and Historic Bridge Management Plan* (FraserDesign, and Hess, Roise and Company 1991), NDOT will market the Decatur Bridge for reuse following coordination with the Nebraska SHPO. The Iowa DOT will also market the bridge following coordination with the Iowa SHPO on the Iowa DOT Historic Bridge website during the same timeframe.

The existing bridge could be used in place to support bike/ped-only access across the river. Improvements would include construction of a concrete deck on top of the existing interior stringers and floorbeams, installation of a new railing, and the addition of lighting and signage along with appropriate Americans with Disability Act (ADA) compliant features such as ramps or elevators, if needed, due to the existing slopes and roadway grades leading to the bridge. The new concrete deck would provide a 12-foot-wide surface for bike/ped use but would need to be 7 inches thick to still support the use of on-bridge maintenance equipment (e.g., snoop truck) and small emergency response vehicles. The new concrete deck would add weight to the structure. Further analysis is required to determine if the bridge structural members have the capacity to support the additional load and the use of maintenance vehicles.

A typical NDOT chain-link pedestrian railing 5 feet tall would need to be installed along the edge of the concrete deck, keeping users away from the remaining open grate deck area and the existing bridge rails for safety purposes. Lighting of the bridge, particularly at the portals, along with signage and removable bollards to obstruct access to the bridge by unauthorized motor vehicles, could also be considered.

The components added to accommodate bike/ped-only use of the bridge would add different stresses to the structure. Although a major bridge repair is anticipated to occur in 2025 to address the deficiencies identified during the 2024 inspection, the underlying section loss, cracks, and other deficiencies would remain and would require continued monitoring. The 2025 repairs are anticipated to only extend the useful life of the bridge no more than 15 years following the completion of any bike/ped-only improvements. At that time, because the bridge is no longer used by vehicles and has been removed from both states' highway system, the bridge would most likely be closed and removed to avoid creating a hazard to the public and to river traffic. The estimated cost for making the improvements to accommodate bike/ped-only use of the Decatur Bridge could be on the order of \$2 M or more.

Because no third party has expressed interest in taking over ownership of the bridge, the lack of existing or planned bike/ped infrastructure along N-51 or IA-175, and the limited service life of the bridge under bike/ped-only use, adaptive re-use of the bridge alone or as a component of either Build Alternative is not considered feasible and reasonable and has been removed from further consideration.

APPENDIX C – Agency Coordination and Public Involvement

NDOT has engaged stakeholders, agencies, and elected officials in the early planning efforts for the project. The following summarizes the engagement that has occurred as well as additional involvement that will occur as the study progresses.

C.1 Early Agency Coordination – October 2023 – September 2024

Early outreach to regulatory and reviewing agencies was initiated during the Location and Environmental Study to inform them of the potential project and obtain information with regards to their jurisdiction by law, properties they may own or manage, and design or operational criteria applicable to the design and construction of the project.

Coordination with most of the agencies listed in **Table C.1** will continue throughout the duration of the project. Meeting notes and presentations are included in the project file.

Table C-1: Early Agency Coordination Summary

DATE	AGENCY ATTENDEES	DISCUSSION TOPICS
October 19, 2023	USCG, NDOT, Iowa DOT	Project Kick-Off and description, project timeline, coordination permission, bridge rehabilitation, bridge horizontal clearance (existing and new location alignments), bridge vertical clearance (key elevations), river navigation (allision history, typical barge traffic, vessel collision), removal depth for existing piers, navigation lighting and clearance gage requirements, construction requirements, USCG industry meeting.
November 3, 2023	USACE, IDNR, NDOT, Iowa DOT	
November 17, 2023	USFWS, NGPC, NDOT, Iowa DOT	Project Kick-Off and description, project timeline and scope, Initial Survey Area, public lands, protected species, and wetland delineation/mitigation.
January 4, 2024	USACE, NDOT	Hydraulics – interpolation of flow data, stage-flow relationships at Decatur, 2% flow line, pier removal elevations
February 9, 2024	IDNR, NDOT, NDNR	Floodplain Permitting - Project Kick-Off and description, project timeline, data collected to date (floodplain, property boundaries), USACE Missouri River Flow Frequency Study (2023), USACE HEC-RAS model, bridge history/scour issues, flood map updates, permits by state, potential CLOMR.
May 9, 2024	USCG, FHWA, NDOT, Iowa DOT	Project schedule including NEPA and permits, upcoming meeting with USACE (5/17/2024), water surface elevations, existing bridge clearances, new vertical clearance, horizontal clearance, pier placement, conceptual alignments, vessel traffic, construction considerations, USCG industry meeting in 2025.
May 17, 2024	USACE, FHWA, NDOT, Iowa DOT	Project update – purpose and need, alignment/alternative screening process, impacts that could trigger reviews under Section 404 and 408 and by the USACE Real Estate Division, reviewed USACE real estate process (acquisition/easements), anticipated NEPA schedule and permits.
September 25, 2024	USACE, USCG, IDNR, FHWA, NDOT, Iowa DOT	Project update –reviewed anticipated NEPA schedule and unified timeline for USCG, USACE and IDNR permits/approvals after NEPA.

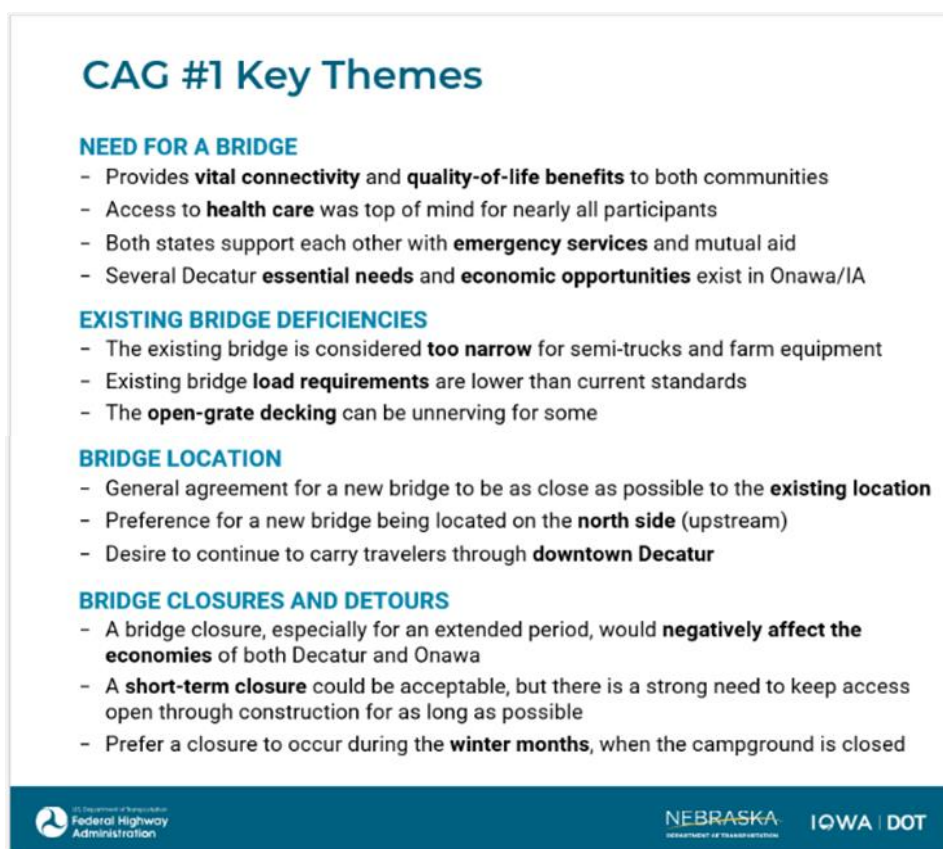
C.2 Community Advisory Group

NDOT and Iowa DOT identified representatives from Study Area communities on both sides of the river to participate in a Community Advisory Group (CAG). CAG members reflected a cross-section of the Decatur and Onawa communities including city and county officials, including sheriff, fire and EMS, healthcare providers, economic development and business owners, state agencies, the Omaha Nation, and educational institutions, including the Nebraska Indian Community College, and other interested parties. A total of 37 people were invited to participate in the CAG. Two CAG meetings were held – the first on January 18, 2024, in Onawa, and the second on April 25, 2024, in Decatur. Members were added to the CAG as the study progressed.

C.2.1 CAG Meeting #1 – January 2024

The initial CAG meeting introduced the proposed project and solicited feedback on the purpose and need for improving the river crossing. CAG members provided input on key issues and needs to be addressed during the study along with indicating initial preferences for new river crossing locations. Discussion themes from the CAG meeting are shown in **Figure C-1**:

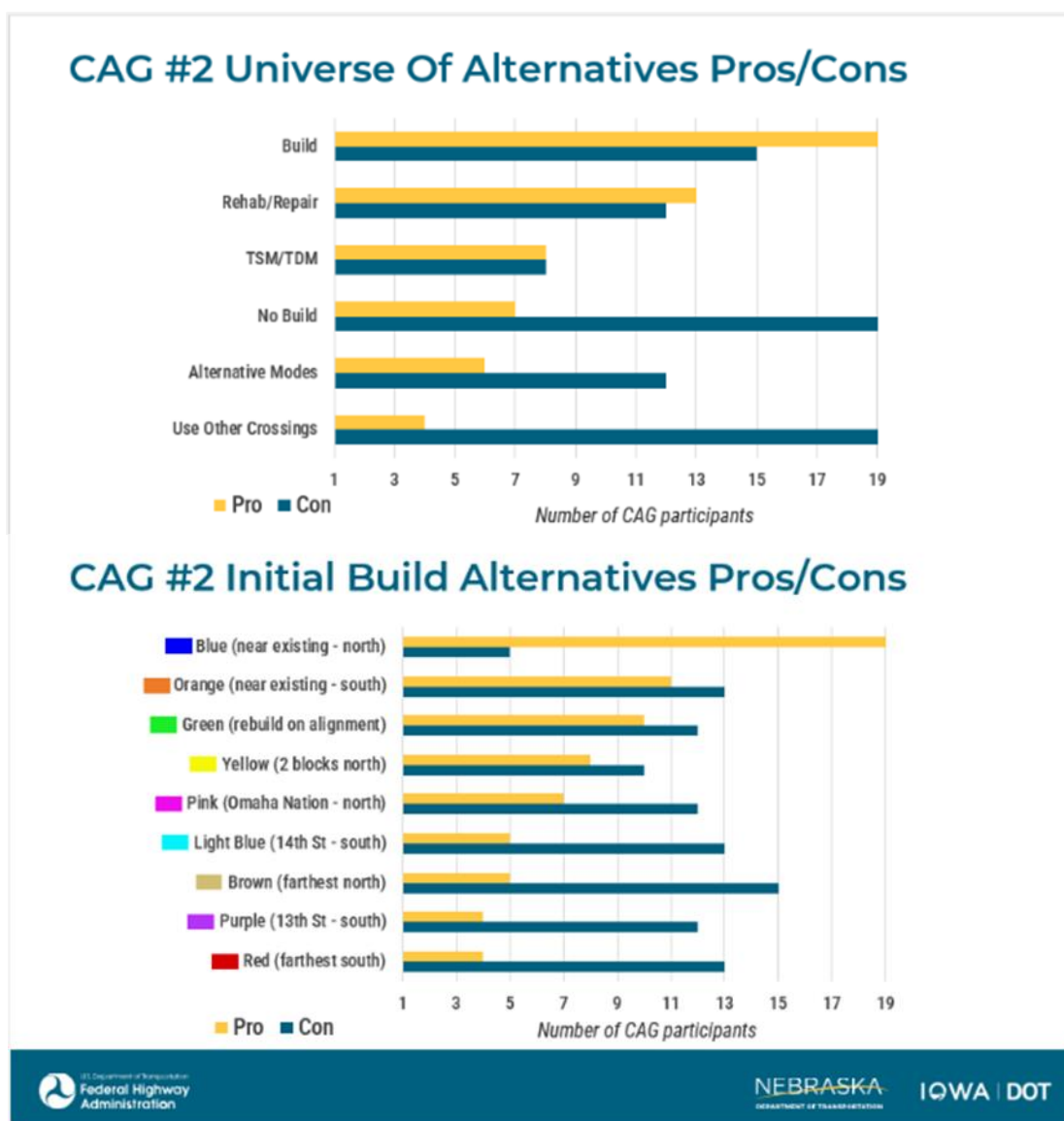
Figure C-1: Key Themes from CAG Meeting #1



C.2.2 CAG Meeting #2 - April 2024

The second CAG meeting focused on the needs to be addressed by the universe of alternatives including the build alignments developed in consideration of input received from the CAG and the public. CAG members shared their preferences for which alternatives should be studied further as shown in **Figure C-2**. In general, the CAG indicated a preference for building a new river crossing north of and adjacent to the existing crossing.

Figure C-2: CAG Input on the Universe of Alternatives Including the Build Alignments



C.3 Public Outreach and Engagement

Outreach to interested parties identified early during the Location and Environmental Study included local officials from both Nebraska and Iowa, resource and regulatory agencies, and CAG members. An email sign-up form was available on the project website with more than 200 added to the contact list since September 2024. Both NDOT and Iowa DOT coordinated with the federally recognized tribes with potential interests in the Study Area through early coordination under Section 106 of the NHPA. Outreach to the Omaha Tribe of Nebraska and the Nebraska Indian Community College in Macy, Nebraska (north of Decatur) included requesting their participation in the CAG. Blackbird Bend Casino and WinnaVegas Casino, both in Monona County, Iowa were also contacted to participate in the CAG.

C.3.1 February 2024 Community Survey

A community survey was conducted between February 1 and March 15, 2024, hosted online through the project website and with hardcopy surveys available for pickup and drop-off at five community locations in Decatur and Onawa. The survey was promoted by social media and word of mouth; news releases were distributed by both DOTs, promotional flyers were made available at community facilities, and CAG members were encouraged to share the survey email with friends and family members. A total of 1,092 surveys were submitted with 58 percent of respondents indicating they heard about the survey through social media and 20 percent by word of mouth. By the end of March 2024, more than 3,500 people had visited the Decatur Bridge project website. More than 80 comments were received by dropping pins on a virtual map of the Study Area, and 164 people signed up for email updates. Survey results indicated that 34 percent of respondents use the Decatur Bridge crossing four or more times a week and 35 percent use the crossing 1 to 4 times per month. In doing so, 73 percent of respondents indicated they would be severely affected if the bridge was permanently closed.

C.3.2 August 2024 Public Meetings

Two public information open house meetings were held, one in Nebraska and one in Iowa. Meetings originally scheduled for June 2024 were postponed to August 2024 because of flooding along the Missouri River and across the Study Area. The first meeting was held at the Onawa Community and Recreation Center, 320 10th Street, in Onawa, Iowa on Wednesday, August 28, 2024, from 11:30 AM – 1:30 PM, with 57 people attending. The second meeting was held at the Decatur City Hall, 913 S. Broadway Street, in Decatur, Nebraska on Thursday, August 29, 2024, from 5:00 – 7:00 PM, with 81 people attending.

Nearly 750 residents and business owners within the vicinity of the Decatur Bridge were notified by postcard (via the mail) prior to both meeting timeframes. Additionally, 325 public and private agencies with potential interest in the project, including the Nebraska Trucking Association, were notified. CAG members were also invited and encouraged to share information about the meeting with friends, family members, and the community in general. The public comment period extended from June 5, 2024, through September 16, 2024. A total of 49 comments were received during the extended comment period.

Comments generally favored building a new bridge, with commenters preferring alignments that would maintain connectivity between Decatur and Onawa, minimize disruption to existing N-51 and IA-175 during construction (especially through Decatur), and remain as close to the existing bridge as possible. In general, the public comments submitted reflected the feedback communicated by the CAG. More than 53 percent of the comments received mentioned the Blue alignment (north of and parallel to the existing

bridge) as a preferred location with 32 percent of the comments mentioning the Orange alignment (south of and parallel to the existing bridge) as a preferred location.

C.4 Engagement of Consulting Parties Under Section 106

NDOT will continue to engage stakeholders, property owners, and “certain individuals and organizations with a demonstrated interest in the undertaking to participate as consulting parties due to the nature of their legal or economic relation to the undertaking or affected properties, or their concern with the undertaking’s effects on historic properties” (36 CFR 800.2(c)).

NDOT has identified the following entities as potential Consulting Parties under Section 106 of the NHPA. The list of potential Consulting Parties includes the following Federal and State agencies, local organizations, and federally recognized tribes:

- US Army Corps of Engineers, Omaha District
- US Coast Guard, Eighth Coast Guard District
- Nebraska State Historic Preservation Office
- Iowa State Historic Preservation Office
- Burt County, Nebraska
- Monona County, Iowa
- Village of Decatur, Nebraska
- City of Onawa, Iowa
- Arapahoe Tribe of the Wind River Reservation, Wyoming
- Cheyenne and Arapaho Tribes
- Flandreau Santee Sioux
- Iowa Tribe of Kansas and Nebraska
- Iowa Tribe of Oklahoma
- Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation, Montana
- Oglala Sioux Tribe
- Omaha Tribe of Nebraska
- Otoe-Missouria Tribe of Indians
- Pawnee Nation of Oklahoma
- Peoria Tribe of Indians of Oklahoma
- Ponca Tribe of Nebraska
- Prairie Band Potawatomi Nation
- Prairie Island Indian Community
- Rosebud Sioux Tribe
- Sac & Fox Nation of Oklahoma
- Sac & Fox Tribe of the Mississippi in Iowa
- Santee Sioux Nation
- Sisseton-Wahpeton Oyate
- Spirit Lake Tribe

- Three Affiliated Tribes
- Upper Sioux Community
- Winnebago Tribe of Nebraska
- Yankton Sioux Tribe

The Iowa DOT identified the following consulting Tribes/Nations with interest in the project and coordinated cultural resource field surveys conducted on the Iowa side of the river with their representatives:

- Flandreau Santee Sioux
- Omaha Tribe of Nebraska
- Winnebago Tribe of Nebraska

After potential Consulting Parties are identified, NDOT will contact them via mail or email and formally invite them to participate in the Section 106 process. The invitation will explain the benefits and requirements associated with acting as a Consulting Party under Section 106 and provide a 30-day response period for those parties who choose to participate. If no response is received within 30 days, the team will assume the individual or entity does not wish to become a Consulting Party. Attempts to contact potential Consulting Parties and their responses will be documented for the administrative record. Additional Consulting Parties may be identified and invited to participate as the study process proceeds.

Through the public involvement effort, NDOT and Iowa DOT will seek out interested members of the public and provide opportunities for public comment on the Section 106 process and associated resources. Some of these interested members of the public may request Consulting Party status. All requests for Consulting Party status will be vetted through NDOT, Iowa DOT, and both SHPOs (Nebraska and Iowa). NDOT and Iowa DOT Historians will make final determinations regarding the designation of additional Consulting Parties.

Appendix D

Historic Properties

Accessibility Support

This document may contain elements that are not fully accessible to screen readers. For a detailed explanation of the content or to request an alternative format, please contact Marissa Kuehn, NDOT Public Involvement Manager at marissa.kuehn@nebraska.gov or 402-479-4514

The following document is currently undergoing NDOT Legal Review. This draft MOA is provided for the public, potential consulting parties, Native American Tribes, and other interested parties to review and comment as part of the Section 106 and NEPA processes for the Decatur Bridge Project. Comments will be considered following the Decatur Bridge Public Hearing.

**MEMORANDUM OF AGREEMENT
AMONG THE FEDERAL HIGHWAY ADMINISTRATION, THE
NEBRASKA DEPARTMENT OF TRANSPORTATION, THE IOWA
DEPARTMENT OF TRANSPORTATION, THE NEBRASKA STATE
HISTORIC PRESERVATION OFFICER, AND THE IOWA STATE
HISTORIC PRESERVATION OFFICER REGARDING THE DECATUR
BRIDGE REPLACEMENT PROJECT IN BURT COUNTY, NEBRASKA
AND MONONA COUNTY, IOWA
PROJECT NUMBERS STP-51-7-(109) & STP-175-1(106)-2C-67
CONTROL NUMBER 32395
R&C NUMBER 20231067477**

WHEREAS, the National Register of Historic Places (NRHP)-eligible Decatur Bridge carrying Nebraska Highway 51 (N-51)/ Iowa Highway 175 (IA-175) over the Missouri River between Decatur in Burt County, Nebraska and Monona County, Iowa is jointly owned and maintained by the Nebraska Department of Transportation (NDOT) and the Iowa Department of Transportation (Iowa DOT); and,

WHEREAS, NDOT and Iowa DOT plan to carry out the Decatur Bridge Project (the Project), which will replace the existing Decatur Bridge (NDOT Bridge Structure #S051 03644/Iowa DOT Bridge Structure #67-00750) using funds from the Federal Highway Administration (FHWA) (Attachment A: Exhibit 1); and,

WHEREAS, FHWA has determined that the condition of this bridge does not make it suitable to use in place, to make available for an alternative use, to relocate, or to market to a third party; and,

WHEREAS, the bridge was marketed for reuse from December 9, 2025, through January 19, 2026 online and in local newspapers and no letters of interest or proposals were received; and

WHEREAS, NDOT, on behalf of FHWA, is leading Section 106 of the National Historic Preservation Act (NHPA) and National Environmental Policy Act (NEPA) compliance and approval processes regarding the Project; and

WHEREAS, pursuant to 36 CFR 800, regulations implementing Section 106 of the NHPA (54 USC § 306108), *Protection of Historic Properties*, FHWA is required to take into account the effects of Federal undertakings on properties included in, or eligible for inclusion in, the NRHP; and

WHEREAS, NDOT and Iowa DOT have defined the undertaking's Physical Area of Potential Effects (APE) as an area comprising approximately 30.9-acres in Nebraska and 487.4-acres in Iowa to accommodate rights-of-way acquisition and overall construction including a buffer to account for visual effects (Attachment A: Exhibit 2); and,

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WHEREAS, NDOT and Iowa DOT, on behalf of FHWA, have consulted with the Nebraska State Historic Preservation Officer (NeSHPO) and Iowa State Historic Preservation Officer (Iowa SHPO) pursuant to 36 CFR Part 800 and determined that the undertaking will have an adverse effect on the NRHP-eligible Decatur Bridge (SO51 03644/67-00750), and the determination is included in letters dated September 5, 2025 (NeSHPO), and October 6, 2025 (Iowa SHPO); and,

WHEREAS, NDOT and Iowa DOT, on behalf of FHWA, provided the public with the opportunity to comment on the undertaking as part of the NEPA compliance process, including Community Advisory Group meetings (January 18 and April 25, 2024), a community input survey (February 1 and March 15, 2024), and public meetings (August 28 and 29, 2024); and,

WHEREAS, in accordance with 36 CFR § 800.6(a)(1), FHWA notified the Advisory Council on Historic Preservation (ACHP) of its adverse effect determination with specified documentation, and the ACHP decline to participate in consultation via letter on November 4, 2025; and

WHEREAS, FHWA determined the following Federally-recognized Indian tribes may have interest in the undertaking, invited them to participate in Section 106 consultation (October 2023), and notified them regarding the adverse effect to the Decatur Bridge (September 2025): Lower Sioux Indian Community, Flandreau Santee Sioux, Iowa Tribe of Kansas and Nebraska, Omaha Tribe of Nebraska, Winnebago Tribe of Nebraska, Northern Arapaho Tribe, Northern Cheyenne Nation, Pawnee Nation, Iowa Tribe of Oklahoma, Otoe-Missouria Tribe, Peoria Tribe of Indians, Ponca Tribe of Nebraska, Prairie Band Potawatomi Nation, Prairie Island Indian Community, Sac and Fox Nation of Oklahoma, Sac and Fox Tribe of the Mississippi in Iowa, Sisseton – Wahpeton Oyate, Spirit Lake Tribe, Three Affiliated Tribes – Mandan, Hidatsa & Arikara, Upper Sioux Community, and Yankton Sioux Tribe; and,

WHEREAS, the Lower Sioux Indian Community deferred to the expertise of the local tribes of Nebraska on September 30, 2025; and,

WHEREAS, the Iowa Tribe of Kansas and Nebraska accepted the invitation to be a consulting party on August 27, 2025; and,

WHEREAS, the Omaha Tribe of Nebraska requested joint field review with NDOT and Iowa DOT and expressed concern about the potential for cultural materials to be encountered in roadway fill on December 3, 2024; and,

WHEREAS, the Winnebago Tribe of Nebraska requested joint field review with NDOT and Iowa DOT and expressed concern about the potential for cultural materials to be encountered in roadway fill on December 3, 2024; and,

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WHEREAS, the Northern Arapaho Tribal Historic Preservation Office indicated the Project Area has a high probability to contain properties of religious and cultural significance to the tribe; and,

WHEREAS, the Northern Cheyenne Nation requested a Class I and Class III report on July 24, 2024, and concurred with the adverse effect to the bridge on September 18, 2025; and,

WHEREAS, NDOT invited additional potential consulting parties to participate in Section 106 consultation including: the United States Coast Guard (USCG), Eighth Coast Guard District, the United States Army Corps of Engineers (USACE) Omaha District, Burt County, Nebraska, Monona County, Iowa, the Monona County Historic Preservation Commission, Monona County Historical Museum, the Village of Decatur, Nebraska, the City of Onawa, Iowa, the NeSHPO, and the Iowa SHPO pursuant to 36 CFR Part 800, the regulations implementing Section 106 of the NHPA (54 U.S.C. § 306108); and,

WHEREAS, the USCG, USACE, Monona County Historic Preservation Commission, have accepted consulting party status; and,

NOW, THEREFORE, FHWA, NDOT, Iowa DOT, the NeSHPO, and the Iowa SHPO agree that the undertaking shall be implemented in accordance with the following stipulations to take into account the effect of the undertaking on historic properties.

STIPULATIONS

I. MITIGATION

1. **Documentation:** The NDOT and the Iowa DOT shall record the bridge to include the following information:
 - a. Digital photographs of the bridge prior to any demolition activity at the site. Photographs shall be numbered and labeled according to NRHP standards and include at a minimum the following images:
 - i. Images of the structural components of the bridge including but not limited to the superstructure, substructure, floor system, and approach spans.
 - ii. Images of the setting and surrounding area, including landscape and highway to place the bridge into a geographical context.
 - iii. Images of the traveling surface of the bridge itself.
 - iv. A site plan and photo key to identify the location of digital images.
 - v. A narrative description of the bridge documenting the current condition.
 - vi. An index and copies of pertinent documents identifying the evolution of the project including the historic bridge inventory form, the

alternatives analysis, the structural deficiency report, and any and all appropriate correspondence and supporting documentation.

- vii. One (1) electronic copy of the recordation package shall be submitted for storage at NDOT, one (1) at Iowa DOT, and one (1) at each SHPO office.

2. **Production of a Documentary Video:** The NDOT and the Iowa DOT shall produce a short documentary type video (minimum 15 minutes in length) that focuses on history of the bridge and its private origins, the local communities and stakeholders, its historic connections to the USACE, as well as nearby and relevant transportation history. The Nebraska DOT and the Iowa DOT shall continue to work with stakeholders and ensure that their participation is documented in the for-public-benefit effort. Minimally, the video shall be made available to the public via social media. The communities of Decatur, Nebraska and Onawa, Iowa will be provided with the opportunity to hold community screenings of the film before it is released to the general public.

3. **Relocation and Improvements to the Existing Decatur Bridge Historical Marker:** The NDOT and the Iowa DOT will coordinate with the NeSHPO regarding the disposition of the existing historic marker commemorating the Decatur Bridge. As per consultation with NeSHPO and other consulting parties, replacement or additional signage regarding the bridge and its significance will be sited at an agreed upon location on the Nebraska side of the crossing.

II. RESEARCHER QUALIFICATIONS

All historical research for this project will be completed by a Secretary of the Interior (SOI) qualified architectural historian/historian (48 FR 44738-9). All materials prepared for the technical and non-technical stipulations of this MOA shall be prepared in consultation with the signatories; a 30-day comment period shall be provided.

III. DURATION

This MOA will expire if its terms are not carried out within five (5) years from the date of its execution. Prior to such time, NDOT and Iowa DOT may consult with the other signatories to reconsider the terms of the MOA and amend it in accordance with Stipulation VII below.

IV. POST-REVIEW DISCOVERIES

1. **Nebraska:** If properties are discovered after project construction begins that may be historically significant, or unanticipated effects on historic properties are found, NDOT shall follow Stipulation XI (C) of the *Programmatic Agreement Among The Federal Highway Administration, The Nebraska State Historic Preservation Officer, The Advisory Council on Historic Preservation And The*

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Nebraska Department of Transportation to Satisfy the Requirements of Section 106 for the Federal-Aid Highway Program in the State of Nebraska (Attachment B).

2. **Iowa:** If post-review discoveries (architectural remains, archaeological features, artifacts, etc.) are identified (e.g. under pavement or structures), Iowa DOT shall ensure the ***Post-Review Discoveries*** procedures located in the 2018 Section 106 Programmatic Agreement for Federal Aid Highway Program in Iowa (Attachment C) shall be followed upon the ***unlikely*** event that historic resources are discovered during construction.

V. TREATMENT OF HUMAN REMAINS IN IOWA

The Iowa Code protects all human burials in the state of Iowa. Ancient remains are protected under Chapter 263B, 523I.316(6), and 716.5 of the Iowa Code. The Iowa DOT shall ensure the ***Treatment of Human Remains*** procedures located in the 2018 Section 106 Programmatic Agreement for Federal Aid Highway Program in Iowa shall be followed upon the ***unlikely*** event of that human remains are discovered during construction.

VI. MONITORING AND REPORTING

Each year following the execution of this MOA until it expires or is terminated, NDOT, on behalf of FHWA, shall provide all parties to this MOA a summary report detailing work undertaken pursuant to its terms. The summary report shall include any scheduling changes proposed, any problems encountered, and any disputes and objections received in NDOT's efforts to carry out the terms of this MOA. If the stipulations identified herein are carried out prior to the yearly anniversary, then no reporting is required.

VII. DISPUTE RESOLUTION

Should any signatory or concurring party to this MOA object at any time to any actions proposed or the manner in which the terms of this MOA are implemented, NDOT, on behalf of FHWA, shall consult with such party to resolve the objection. If NDOT determines that such objections cannot be resolved, NDOT will:

1. Forward all documentation relevant to the dispute, including the NDOT's proposed resolution, to the ACHP. The ACHP shall provide NDOT with its advice on the resolution of the objection within thirty (30) days of receiving adequate documentation. Prior to reaching a final decision on the dispute, NDOT shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP, signatories, and concurring parties, and provide them with a copy of this written response. NDOT will then proceed according to its final decision.

2. If the ACHP does not provide its advice regarding the dispute within the thirty (30)-day time period, NDOT may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, NDOT shall prepare a written response that takes into account any timely comments regarding the dispute from the signatories and concurring parties to the MOA and provide them and the ACHP with a copy of such written response.
3. NDOT's responsibility to carry out all other actions subject to the terms of this MOA that are not the subject of the dispute remain unchanged.

VIII. AMENDMENTS

This MOA may be amended when such an amendment is agreed to in writing by all signatories. The amendment will be effective on the date a copy signed by all of the signatories is filed with the ACHP.

IX. TERMINATION

If any signatory to this MOA determines that its terms will not or cannot be carried out, that party shall immediately consult with the other signatories to attempt to develop an amendment per Stipulation VII, above. If within thirty (30) days (or another time period agreed to by all signatories) an amendment cannot be reached, any signatory may terminate the MOA upon written notification to the other signatories.

Once the MOA is terminated, and prior to work continuing on the undertaking, NDOT must either (a) execute an MOA pursuant to 36 CFR Section 800.6 or (b) request, take into account, and respond to the comments of the ACHP under 36 CFR Section 800.7. NDOT shall notify the signatories as to the course of action it will pursue.

Execution of this MOA by the FHWA, NDOT, Iowa DOT, NeSHPO, and Iowa SHPO, and implementation of its terms is evidence that FHWA has taken into account the effects of this undertaking on historic properties and afforded the ACHP an opportunity to comment.

[Signature Pages to follow]

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DEPARTMENT OF TRANSPORTATION, THE NEBRASKA STATE
HISTORIC PRESERVATION OFFICER, AND THE IOWA STATE
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CONTROL NUMBER 32395
R&C NUMBER 20231067477**

**SIGNATORY
FEDERAL HIGHWAY ADMINISTRATION**

Date _____
INSERT NAME
Director
Federal Highway Administration

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CONTROL NUMBER 32395
R&C NUMBER 20231067477**

**SIGNATORY
NEBRASKA STATE HISTORIC PRESERVATION OFFICER**

Date _____
INSERT NAME
Director / State Historic Preservation Officer
Nebraska State Historic Preservation Office

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HISTORIC PRESERVATION OFFICER, AND THE IOWA STATE
HISTORIC PRESERVATION OFFICER REGARDING THE DECATUR
BRIDGE REPLACEMENT PROJECT IN BURT COUNTY, NEBRASKA
AND MONONA COUNTY, IOWA
PROJECT NUMBERS STP-51-7-(109) & STP-175-1(106)-2C-67
CONTROL NUMBER 32395
R&C NUMBER 20231067477**

**SIGNATORY
IOWA STATE HISTORIC PRESERVATION OFFICER**

Date _____
INSERT NAME
Director / State Historic Preservation Officer
Iowa State Historic Preservation Office

The following document is currently undergoing NDOT Legal Review. This draft MOA is provided for the public, potential consulting parties, Native American Tribes, and other interested parties to review and comment as part of the Section 106 and NEPA processes for the Decatur Bridge Project. Comments will be considered following the Decatur Bridge Public Hearing.

**MEMORANDUM OF AGREEMENT
AMONG THE FEDERAL HIGHWAY ADMINISTRATION, THE
NEBRASKA DEPARTMENT OF TRANSPORTATION, THE IOWA
DEPARTMENT OF TRANSPORTATION, THE NEBRASKA STATE
HISTORIC PRESERVATION OFFICER, AND THE IOWA STATE
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PROJECT NUMBERS STP-51-7-(109) & STP-175-1(106)-2C-67
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R&C NUMBER 20231067477**

**INVITED SIGNATORY
NEBRASKA DEPARTMENT OF TRANSPORTATION**

Date _____

INSERT NAME
Director
Nebraska Department of Transportation

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**INVITED SIGNATORY
IOWA DEPARTMENT OF TRANSPORTATION**

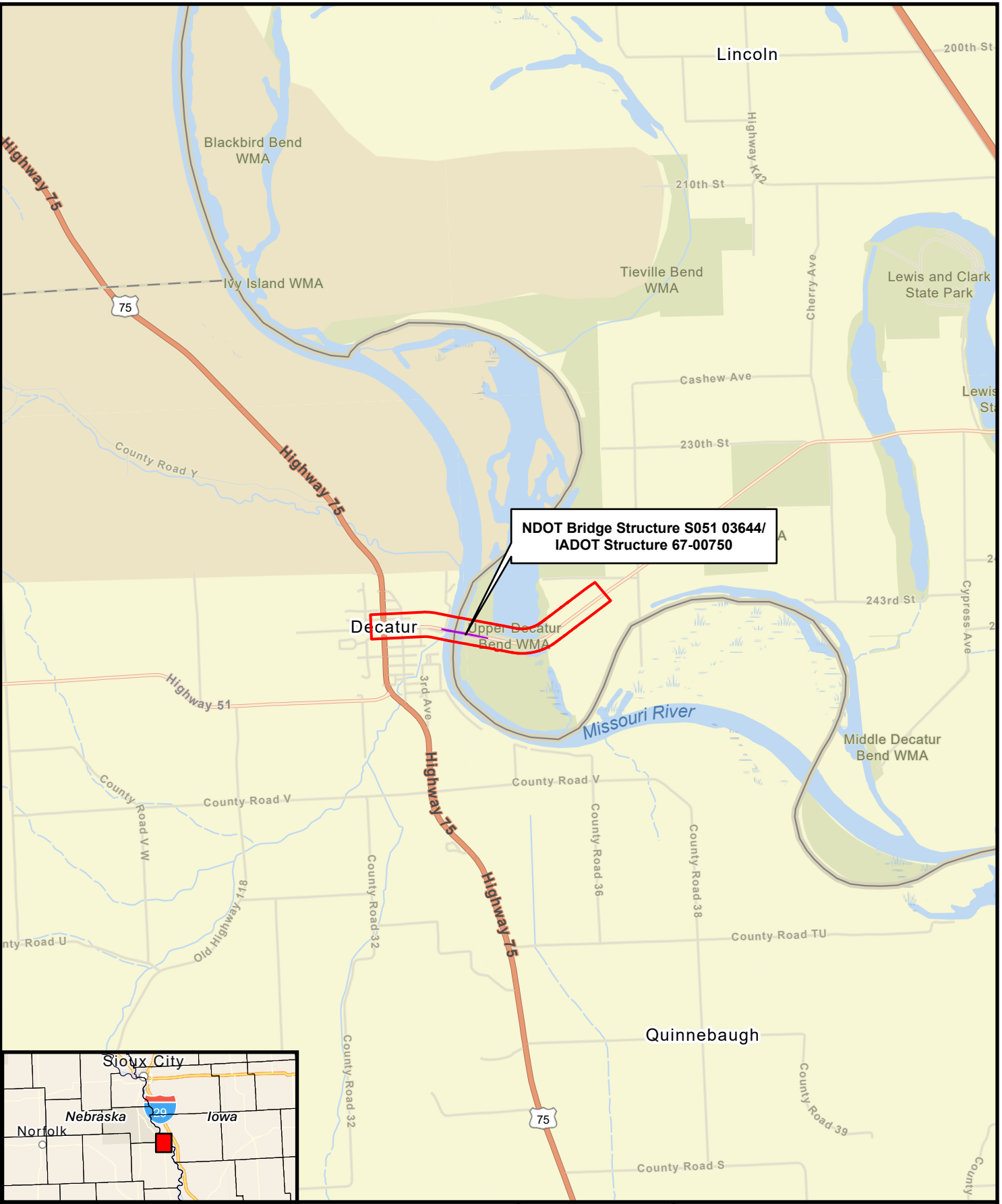
Angela L. Poole
Director, Location and Environment Bureau
Iowa Department of Transportation

Date

ATTACHMENT A - FIGURES

Exhibit 2 - Physical and Visual APE

Path: <LINK>C:\Users\sspurgeon\OneDrive\Links - Burns & McDonnell\Desktop\Projects\157887 - NDOT - NE Decatur\MapFiles\Databases\Decatur Bridge_cultural.aprx ssurgeon 9/24/2025
Service Layer Credits: Iowa Department of Transportation - Bureau of Locations and Environment, Iowa Department of Transportation - Bureau of Systems Planning, Iowa DNR
World Street Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Navigation Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, (c) OpenStreetMap contributors, and the GIS User Community
NE counties: FracTracker Alliance



-  Initial Survey Area
-  Decatur Bridge

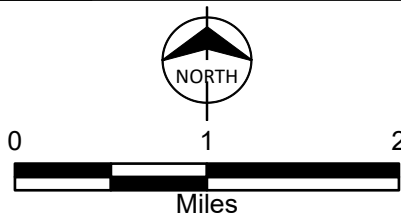


Figure 1
Project Location
Decatur Bridge
STP-51-7(109) CN 32395
Burt County, Nebraska and
Monona County, Iowa

Exhibit 1 - Project Location

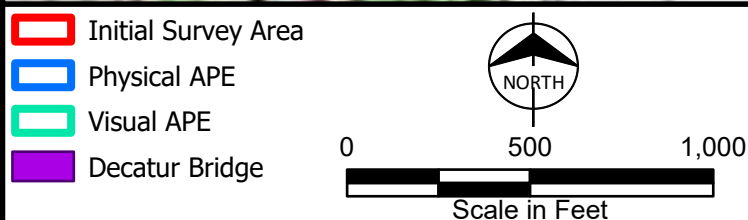
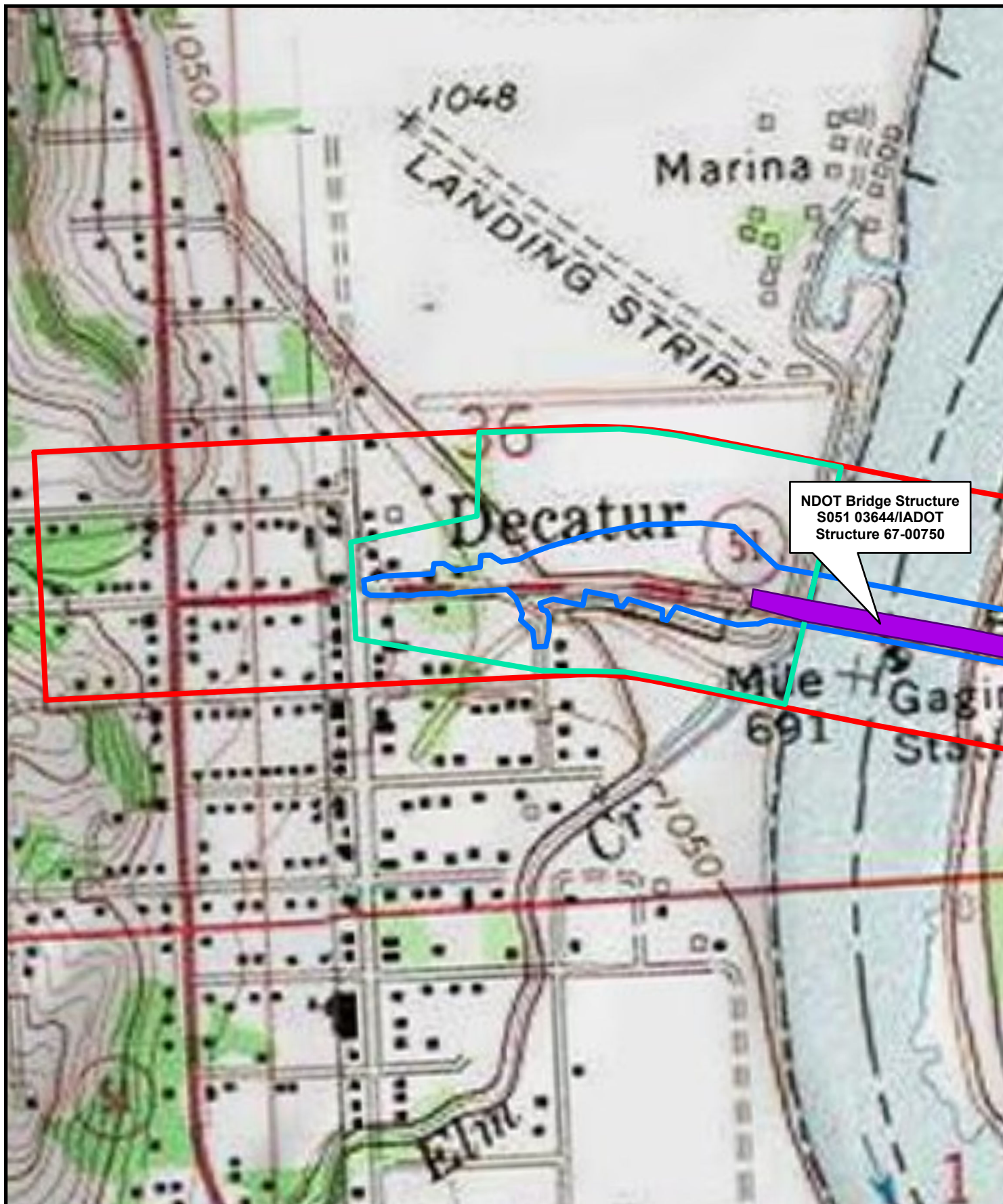
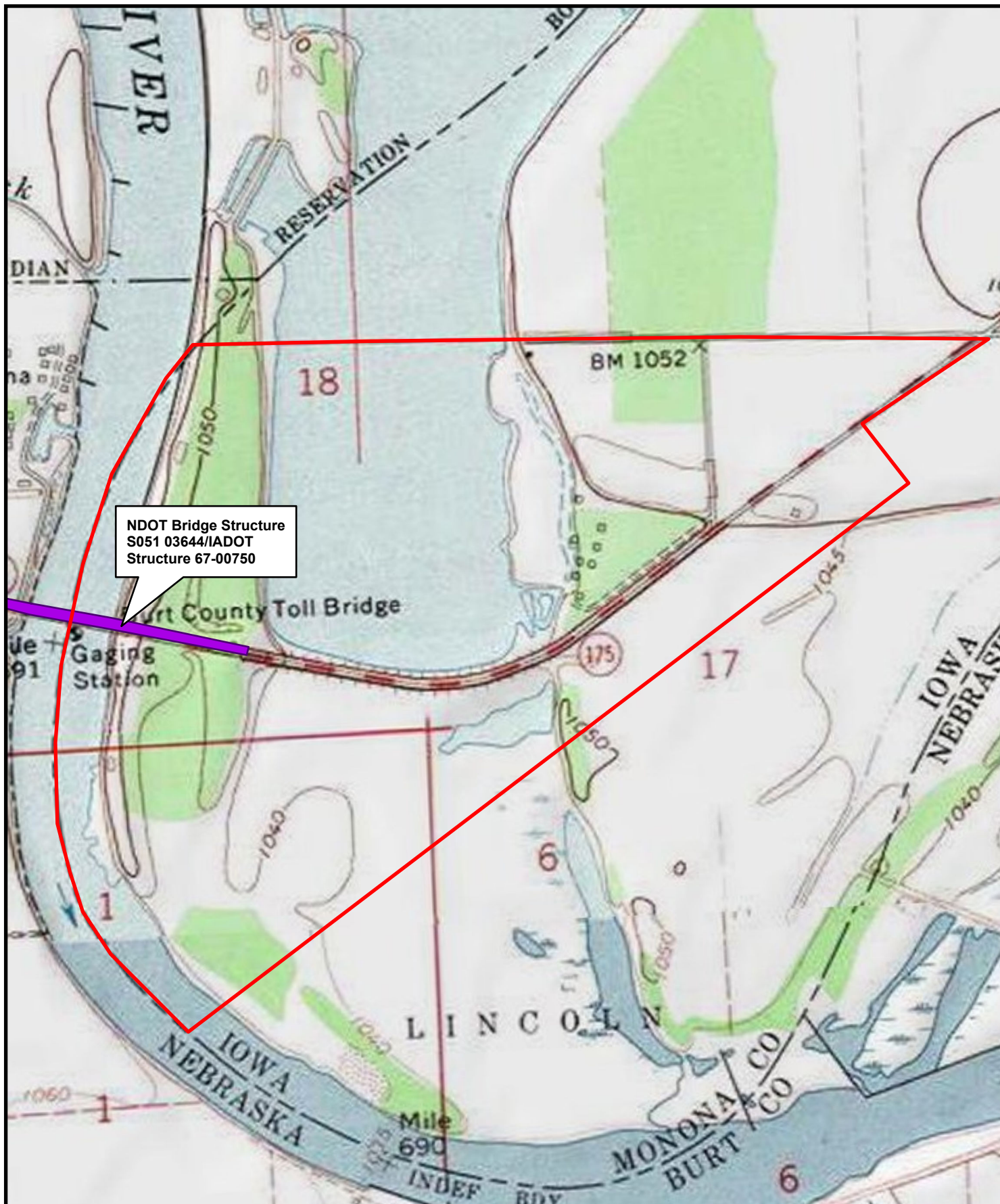
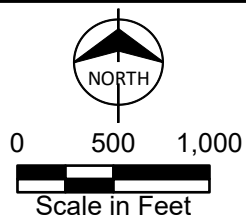


Figure 3
Decatur Bridge
Nebraska Area of Potential Effects
STP-51-7(109) CN 32395
Burt County, Nebraska and
Monona County, Iowa



-  Decatur Bridge
-  Area of Potential Effects



NEBRASKA
Good Life. Great Journey.
DEPARTMENT OF TRANSPORTATION

Figure 4
Decatur Bridge
Iowa Area of Potential Effects
STP-51-7(109) CN 32395
Burt County, Nebraska and
Monona County, Iowa

ATTACHMENT B – SECTION 106 PROGRAMMATIC AGREEMENTS

<https://dot.nebraska.gov/media/lljfb2n/nebraska-section-106-pa.pdf>

<https://iowadot.gov/media/3472/download?inline>

Appendix E

Section 4(f)

Accessibility Support

This document may contain elements that are not fully accessible to screen readers. For a detailed explanation of the content or to request an alternative format, please contact Marissa Kuehn, NDOT Public Involvement Manager at marissa.kuehn@nebraska.gov or 402-479-4514

Technical Report

Historic Bridge Treatment/Alternatives Evaluation

Decatur Bridge Burt County, Nebraska and Monona County, Iowa STP-51-7(100-9) CN32395

1.0 INTRODUCTION

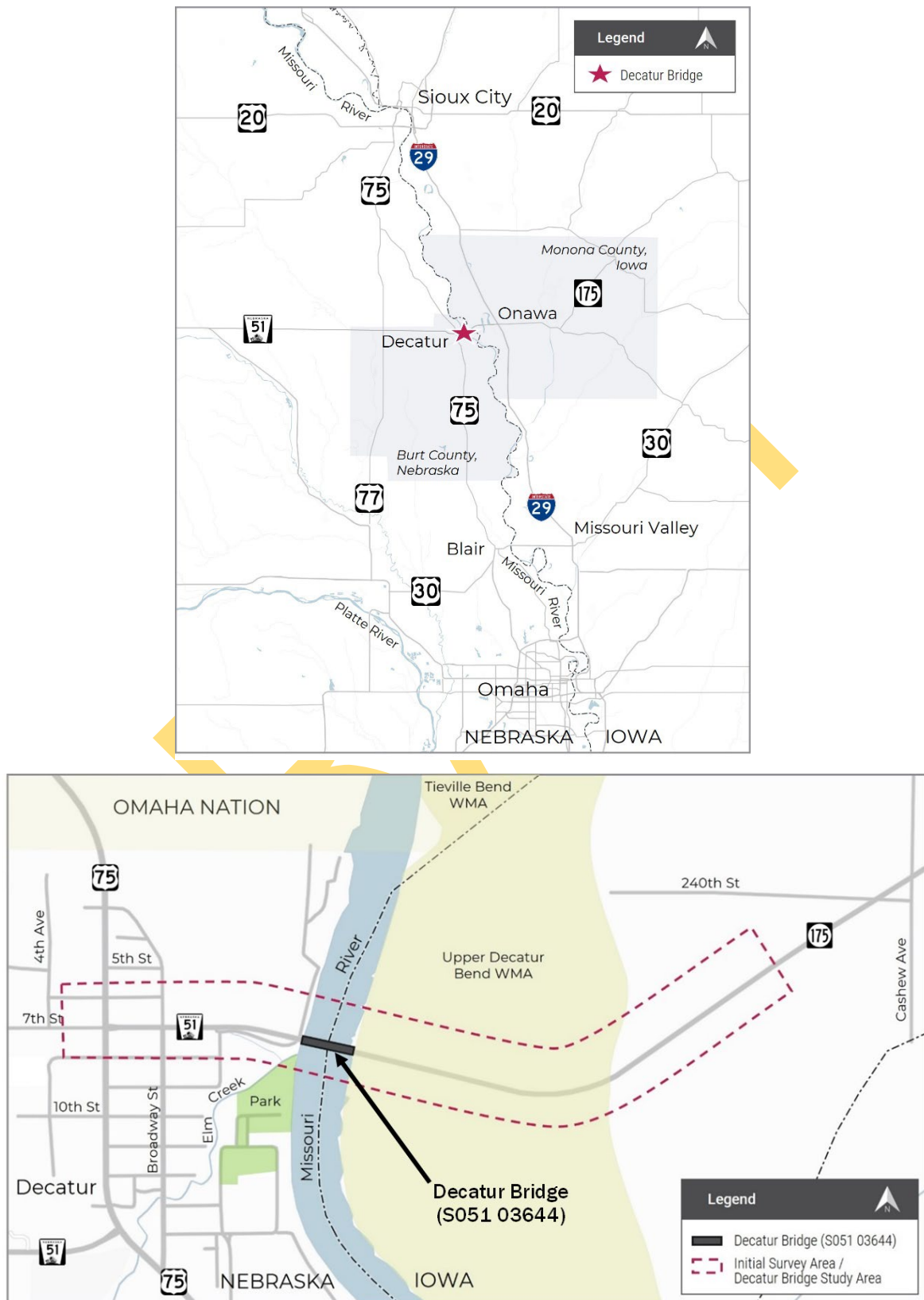
This Historic Bridge Treatment/Alternatives Evaluation is being provided for the Decatur Bridge Project (Project) in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA), and Section 4(f) of the U.S. Department of Transportation (DOT) Act of 1966 (Section 4(f)). The Project involves the Decatur Bridge that carries Nebraska Highway 51 (N-51) and Iowa Highway 175 (IA-175) over the Missouri River connecting Burt County, Nebraska and Monona County, Iowa. The improvements would remove a National Register of Historic Places (NRHP)-eligible bridge (Structure Number S051 03644) and construct a new bridge north of and roughly parallel to the current alignment to connect Nebraska and Iowa. The Project would span a total of 1.47 miles (7,750 feet) comprised of the 1,331-foot-long Nebraska approach roadway segment, the 3,687-foot-long Iowa approach roadway segment, and the 2,732-foot-long new bridge spanning the Missouri River (**Figure 1**).

The purpose of the proposed Project is to provide a resilient river crossing connecting Decatur, Nebraska/N-51 and Onawa, Iowa/IA-175 that maintains access to regional commerce, employment, education, health care, and recreation facilities; maintains accessibility to and by emergency services; and provides infrastructure to support current and future travel demand. The Project would address both structural and functional deficiencies identified by NDOT's Bridge Inventory Rating System, Bridge Division, and NDOT District 3. The transportation needs identified include:

- Maintain Connectivity – provide a crossing to connect area residents with services on both sides of the river without excessive out-of-direction travel.
- Improve Infrastructure Condition – address structural (the condition of the bridge) and functional (the design of the bridge) deficiencies.
- Improve Resiliency Against Flooding – provide a crossing to address forecasted increases in the frequency and magnitude of flood events along the Missouri River.

This technical report describes the historic property, the proposed alternatives, and the finding of a Programmatic Use of the Decatur Bridge under Section 4(f) of the DOT Act.

Figure 1: Project Location



2.0 BACKGROUND

The following sections provide background information on the historic property, its condition, the public outreach process, and Section 106 consultation regarding Project effects.

2.1 Nebraska Historic Bridge Inventory and Management Plan

Historic (NRHP-listed or eligible) bridges are protected under Section 106 of the NHPA. The Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation and the Nebraska State Historic Preservation Officer for the Highway Bridge Replacement and Rehabilitation Program (PA) executed in 1991 established the review parameter priorities regarding the evaluation of historic bridges in Nebraska. The PA led to the development of the Nebraska Historic Bridge Inventory and Historic Bridge Management Plan (described below), and although expired, the PA and inventory and management plan established protocols for consideration of historic bridges in Nebraska and priorities for their treatment. The bridge inventory is updated periodically, in accordance with the PA, and was most recently updated in 2007 (Mead and Hunt 2007).

The *Nebraska Historic Bridge Inventory and Historic Bridge Management Plan* (FraserDesign and Hess, Roise and Company 1991) outline the following priorities for treatment of historic bridges:

1. The preferred treatment for a historic bridge is to have it continue to carry vehicular traffic at its original site with minimal modification.
2. If it is not feasible to keep the bridge at its original site, every effort should be made to find an appropriate site to which it could be relocated for vehicular use.
3. If it is determined that the bridge can no longer carry vehicular traffic, or could do so only at the expense of its historic integrity, the next best solution is to retain it for non-vehicular use at its original site with minimal modification. Priority should be given to transit-related uses, such as serving bicycle and pedestrian traffic.
4. If the bridge can no longer carry vehicular traffic, no “as is” use is feasible, and cannot be left in place, adaptive use possibilities should be explored, with preference to reuses that retain the bridge at its original site. Necessary modifications should not damage or obscure the original bridge structure. If no suitable in situ adaptive use can be found, the bridge can be closed to vehicular traffic and left in place as a “moldering ruin.”
5. If the bridge cannot remain on its original site and cannot be moved, it shall be documented to the standards of the Historic American Engineering Record before demolition, disassembly, or modifications that will destroy its historic integrity. If possible, the structure should be disassembled carefully and stored until a new location for it can be found or significant components should be incorporated into any new bridge at the site or salvaged for educational purposes.

2.2 Bridge Eligibility

The Decatur Bridge was previously determined NRHP eligible under Criterion A: Transportation “for establishing a first highway crossing of a major waterway and as a major state bridge building initiative” and under Criterion C: Engineering, as a “steel continuous through-truss bridge of an exceptional span length” under the update to the Multiple Property Documentation (MPD) Form, *Intensive Architectural Survey of Iowa Primary and Secondary Road Bridges Built Between 1942 and 1970* (Baynard et al. 2011). The registration requirements include spans of over 400 feet in length as exceptional. With a main span of 421 feet, the Decatur bridge meets this requirement.

The Decatur Bridge represents a 1,956-foot-long continuous through-truss steel bridge over the Missouri River between Burt County, Nebraska, and Monona County, Iowa. Designed by the firm of Kirkham, Michael & Associates of Omaha, Nebraska, construction commenced in 1950 under the

oversight of the William J. Howard Company, Inc. of Chicago. Funding and river diversion and dredging delays extended construction time, but the bridge formally opened to traffic in January 1956 carrying I-175 into Nebraska (Baynard, et al. 2011).

The Decatur Bridge consists of a three-span Nebraska approach unit, a two-span Warren through truss River Unit, and two Iowa approach units, each three spans long. The bridge has a clear roadway width of 22 feet, 6 inches, consisting of two 11-foot 3-inch-wide lanes and no shoulders. The deck is comprised of open steel grate panels, with a steel C-channel curb. The bridge railing is a built-up steel rail with W-shaped posts spaced 7 feet 6 inches apart, with the rail extending approximately 2 feet 11 inches above the riding surface.

In 1927, Nebraska approved legislation to build a bridge across the Missouri River, using Decatur's natural rock bottom as a suitable river crossing. In 1928, the US Congress approved funds to assist with constructing the bridge; however, with the onset of the Great Depression in 1929, plans for the bridge never came to fruition, and Decatur residents continued to rely on ferry services to cross the Missouri River.

After World War II, the Burt County Nebraska Bridge Commission was formed with the intent of spanning the Missouri River between Decatur and Onawa. In 1946, President Harry Truman signed legislation approving construction of the bridge; however, a steel strike later that year, followed by a change in the river's course in 1947, caused further delays. The United States Army Corps of Engineers (USACE) approved the site for the Decatur crossing in 1950, with the groundbreaking on the Decatur side of the river on April 21, 1950. At the time the bridge was being built, the Missouri River changed its course, leaving the proposed bridge site nearly a quarter of a mile west of the river channel, earning the project the nickname of the bridge "that went nowhere, because it lost its river."

Construction of the bridge proceeded on dry land as a cost-cutting measure, with the intent to re-channel the river once construction was completed. Dredging for the river channel under the new bridge began in January 1955, with the bridge opening to traffic as a toll bridge in December 1955. The Decatur Bridge was formally dedicated in May 1956 during Decatur's centennial celebration.

2.3 Bridge Condition

The Decatur Bridge is nearing the end of its service life because of several structural and functional deficiencies. The Decatur Bridge receives a combined National Bridge Inventory (NBI), Fracture Critical (Nonredundant Steel Tension Member, or NSTM), and Element Inspection on a 2-year cycle. During the most recent inspection conducted in 2024, the deck was rated as "5 – Fair," the superstructure was rated as "4 – Poor," and the substructure was rated as "7 – Good."

2.3.1 Structural Deficiencies

The 2024 Inspection Report¹ identified more than 400 deficiencies, of which the vast majority are structural. Twelve of the structural deficiencies were identified as having either "high" or "medium" urgency and consisted of cracks in floorbeams, cracks in connection angles, section loss with holes and cracking in truss main tension members, fractured bolts and rivets, and barrier damage. Nine of these deficiencies are in primary load-carrying members or connections (see Figures 1-7 and 1-8 in the *Decatur Bridge Alternatives Analysis to Support Coordination Under Section 106 of the NHPA* included in Attachment 1). The deck declined from a "7 – Good" in 2022 to a "5 – Fair" in 2024. The extensive cracking in the deck panel welds is an ongoing issue and is the primary reason for the "Fair" deck condition. The superstructure declined from a "6 – Satisfactory" in 2022 to a "4 – Poor" in 2024 due to the number and severity of the structural deficiencies in the superstructure. The 2024 Inspection Report recommended repair of all twelve of the "high" and "medium" urgency deficiencies and repair of an additional thirteen locations and instances of "low" urgency structural deficiencies. NDOT is preparing a project to address the identified highest urgency deficiencies in

1 Fracture Critical and Routine Inspections Report for S051 03644. October 21, 2024.

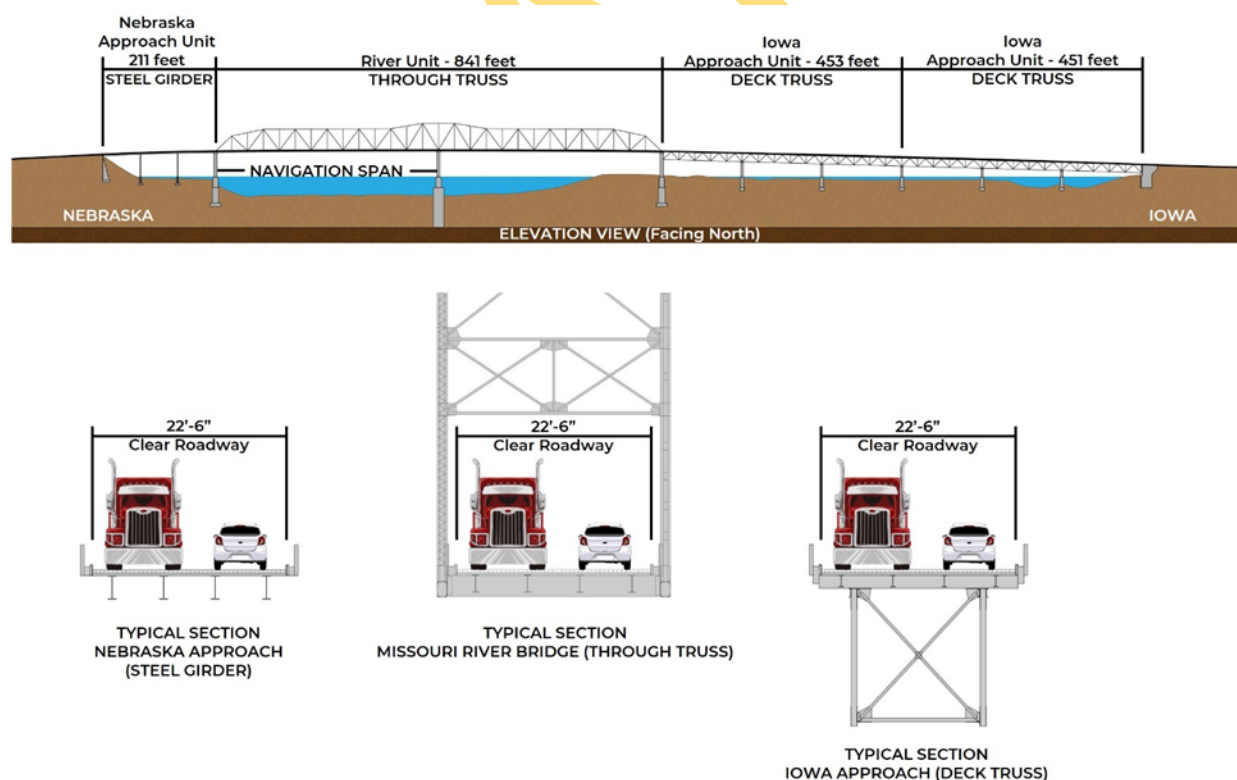
2026 to keep the bridge in safe operation until it is closed or replaced. Although the remaining structural deficiencies identified in 2024 were labeled as “low” urgency, most could deteriorate to “high” urgency at any time. Many of these deficiencies are in the primary load-carrying members and connections (e.g., truss, beams, piers, etc.). The open steel grate deck allows rainfall, snowmelt, and road salts to drain directly onto the structural members below, leading to a highly corrosive environment that accelerates deterioration.

The 2024 Inspection Report identified 15 non-structural deficiencies with seven identified as having either “high” or “medium” urgency. These non-structural deficiencies generally consisted of faulty lights, damaged approach rails, approach pavement deterioration, and cracks in the deck panel to stringer welds. All seven deficiencies are recommended for repair in 2026.

2.3.2 Functional Deficiencies

The Decatur Bridge has several functional deficiencies – conditions that do not meet current design criteria. The Decatur Bridge, depicted in **Figure 2**, has a clear roadway width of 22 feet, 6 inches composed of two 11-foot-3-inch-wide travel lanes and no shoulders, compared to current bridge design criteria that would require a minimum 6-foot-wide shoulder on each side of the bridge and 12-foot-wide travel lanes for a minimum clear roadway width of 36 feet. The narrow width limits the size of vehicles and agricultural equipment that can cross the bridge. Agricultural equipment can take up both lanes, limiting the bridge to a single lane of traffic. The bridge is an important crossing for trucks and large farm equipment as the nearest alternate river crossing involves an 80-mile round trip (approx.) from the Decatur area.

Figure 2: Components of the Decatur Bridge



Approximately 20 of the structural deficiencies identified during the 2024 inspection appear to be the result of vehicle impacts with the River Unit through-truss superstructure. The narrow width and lack of shoulders have increased the likelihood of such impacts. The Decatur Bridge meets current design criteria for vertical clearance, but the overhead members still present a barrier to the use of

the bridge by some large equipment. These overhead members also show evidence of past vehicle impacts.

The bridge's inventory rating is less than half that of a modern bridge design. The narrow deck width and load posting restrict the size and weight of vehicles that can legally use the bridge. As the primary load-carrying members of the bridge continue to experience corrosion and section loss over the next several years, NDOT will further decrease the load posting, further restricting the weight of vehicles that can legally use the bridge.

The current NDOT Bridge Design Manual (NDOT BDM)² specifies concrete rails or concrete barriers along the outside edge of the bridge deck. For state highway bridges, the NDOT BDM minimum requirement is a 3-foot-3-inch-tall concrete rail, which has been crash tested at Testing Level 4 (TL-4) per the American Association of State Highway and Transportation Officials (AASHTO) Manual for Assessing Safety Hardware (MASH). These concrete sections provide a higher level of crash safety than the existing built-up steel bridge rail which has a height of approximately 2 feet 11 inches above the deck surface and has not been MASH tested. The taller rail height also reduces the risk of large vehicles rolling over the barrier on impact.

2.3.3 Previous Rehabilitation

The Decatur Bridge has undergone nine structural repair projects over its service life including two major structural repairs. Seven of these repair projects have occurred within the last 36 years (roughly half of the structure's life) for an average repair frequency of one project every five years. The structure has undergone two major structural repair projects.

- In 2000-2001, the original concrete deck was replaced with an open steel grate deck. The deck replacement was required because of the age and deterioration of the deck concrete. Installing open steel grate decking helped maintain the functional load rating of the bridge, as the weight of the steel decking is approximately 20 percent of the weight of the original concrete deck.
- In 2017, NDOT performed a major repair project with the goal of extending the bridge's useful life and maintaining a functional load rating. Structural steel repairs were performed on the River Unit and Iowa Approach Unit trusses. The floorbeams of the River Unit were post-tensioned to increase their capacity. Concrete repair and strengthening were performed on several substructure units. Street and navigation lighting were overhauled, and the approaches and railings were updated. The entire superstructure and steel portions of the substructure were blasted and repainted.

The 2017 major repair project improved the superstructure and substructure ratings by one point each, and the superstructure rating improved from Fair condition to Satisfactory condition.

NDOT regularly performs structural maintenance of the Decatur Bridge in addition to structural repair projects. Deterioration of the open steel grate deck panels was noted as early as 2010, after only 10 years of service. NDOT and Iowa DOT initiated a program to repair the welds and replace the damaged steel grate deck panels in 2021. Under this program, the repair and replacement of damaged deck panels has an annual cost of approximately \$175,000/year (2024 dollars). Even with this program in place, the 2024 inspection identified 242 broken welds affecting nearly 50 percent of the deck panels.

2 NDOT Bridge Design Manual; 2024. Accessed at:
https://dot.nebraska.gov/media/4dapkdwu/24-11-12_ndot-bdm-ch-1-5-7-9-13.pdf

2.4 Consultation and Public Engagement

2.4.1 Community Advisory Group

NDOT and Iowa DOT identified representatives from Study Area communities on both sides of the river to participate in a Community Advisory Group (CAG). CAG members reflected a cross-section of the Decatur and Onawa communities including city and county officials – sheriff, fire and EMS, healthcare providers, economic development and business owners, educational institutions – and the Nebraska Indian Community College, the Omaha Nation, state agencies, and other interested parties. A total of 37 people were invited to participate in the CAG. Two CAG meetings were held – the first on January 18, 2024, in Onawa, and the second on April 25, 2024, in Decatur. Members were added to the CAG as the study progressed.

CAG Meeting #1 – January 18, 2024 (Onawa, IA)

The initial CAG meeting introduced the proposed project and solicited feedback on the purpose and need for improving the river crossing. CAG members provided input on key issues and needs to be addressed during the study along with indicating initial preferences for new river crossing locations. Discussion themes included: need for a bridge, existing bridge deficiencies, bridge location, and bridge closures and detours.

CAG Meeting #2 – April 25, 2024 (Decatur, NE)

The second CAG meeting focused on the needs to be addressed by the universe of alternatives including the build alignments developed in consideration of input received from the CAG and the public. CAG members shared their preferences for which alternatives should be studied further. These alternatives included Rehabilitation/Repair and Build Alternatives (build a new bridge). In general, the CAG indicated a preference for building a new river crossing north of and adjacent to the existing crossing.

2.4.2 Public Meetings

An interested parties contact list was established and maintained throughout the *Decatur Bridge Location and Environmental Study* that included local officials from both Nebraska and Iowa, resource and regulatory agencies, and CAG members. More than 200 email contacts have been maintained throughout the study and now during the NEPA process, that have and continue to be used to engage the public and other interested parties. Outreach during the *Decatur Bridge Location and Environmental Study* included a community survey and two open house, public information meetings conducted in Nebraska and Iowa to share the progress of the study and set the stage for the NEPA process.

Community Survey – February 2024

A community survey was conducted between February 1 and March 15, 2024, hosted online through the project website and with hardcopy surveys available for pickup and drop-off at five community locations in Decatur and Onawa. The survey was promoted by social media and word of mouth; news releases were distributed by both DOTs, promotional flyers were made available at community facilities, and CAG members were encouraged to share the survey email with friends and family members. A total of 1,092 surveys were submitted with 58 percent of respondents indicating they heard about the survey through social media and 20 percent by word of mouth. By the end of March 2024, more than 3,500 people had visited the Decatur Bridge project website. More than 80 comments were received by dropping pins on a virtual map of the Study Area, and 164 people signed up for email updates. Survey results indicated that 34 percent of respondents use the Decatur Bridge crossing four or more times a week, and 35 percent use the crossing 1 to 4 times per month. In doing so, 73 percent of respondents indicated they would be severely affected if the bridge was permanently closed.

Public Meeting – August 2024

Two public information open house meetings were held, the first meeting on August 28, 2024, at the Onawa Community and Recreation Center, 320 10th Street, in Onawa, Iowa (57 attendees), and the second on August 29, 2024, at the Decatur City Hall, 913 S. Broadway Street, in Decatur, Nebraska (81 attendees). Because of flooding along the Missouri River and through the study area in June, the meetings were postponed to August, creating an extended comment period (described below).

Nearly 750 residents and business owners within the vicinity of the Decatur Bridge were notified by postcard (via the mail) prior to both meeting timeframes. Additionally, 325 public and private agencies with potential interest in the project, including the Nebraska Trucking Association, were notified. CAG members were also invited and encouraged to share information about the meeting with friends, family members, and the community in general. The public comment period extended from June 5, 2024 through September 16, 2024. A total of 49 comments were received during the extended comment period.

Comments generally favored building a new bridge, with commenters preferring alignments that would maintain connectivity between Decatur and Onawa, minimize disruption to existing N-51 and IA-175 during construction (especially through Decatur), and remain as close to the existing bridge as possible. In general, the public comments submitted reflected the feedback communicated by the CAG. More than 53 percent of the comments received mentioned the Blue alignment (north of and parallel to the existing bridge) as a preferred location with 32 percent of the comments mentioning the Orange alignment (south of and parallel to the existing bridge) as a preferred location.

2.4.3 Summary of Consultation Under Section 106

NDOT and Iowa DOT have coordinated with stakeholders and potential consulting parties including the Nebraska State Historic Preservation Office (NESHPO), the Iowa State Historic Preservation Office (IASHPO), several Tribal Historic Preservation Offices (THPOs) and tribal nations in both states, the Advisory Council on Historic Preservation (ACHP), and the USACE and U.S. Coast Guard (USCG). A summary of the consultation is included in the NDOT PQS Memorandum for this Project (Attachment 2 – DRAFT MOA).

On May 19, 2025, NDOT, on behalf of the FHWA, sent agency scoping and Section 106 early coordination letters to potential cooperating and participating agencies and tribal entities. Information included the project location, the purpose and need for the proposed project, the alternatives considered during the *Decatur Bridge Location and Environmental Study* completed in May 2025 (a link to the study report was provided in the letter), and a comparison of the alternatives recommended for further study during the NEPA process including the No-Build, Rehabilitation, and two Build Alternatives (Blue and Orange).

In addition, on April 22, 2025, FHWA invited the USACE Omaha District and the USCG (an updated invitation was sent to the Rock Island Districts and the USCG to be cooperating agencies. The invitation was extended to the USACE Rock Island District on May 28, 2025. The USACE Omaha District accepted on May 28, 2025, the USACE Rock Island District accepted on May 30, 2025, and the USCG accepted on April 24, 2025. The Prairie Band Potawatomi Nation replied on July 23, 2025, that *due to the project's location, they will defer to the Omaha and Winnebago tribes*. FHWA received no other input during the scoping/early coordination period that concluded on June 13, 2025.

On August 20, 2025, FHWA, Nebraska Division, sent a letter to the IADOT indicating that, based on FHWA's review of the Project materials compiled to date, the proposed undertaking would have an adverse effect on the NRHP-eligible Decatur Bridge. The FHWA recommended that there are no feasible and prudent alternatives to the use of the historic bridge, and FHWA recommended this use would fall under the *Programmatic Section 4(f) Evaluation and Approval of FHWA Projects that Necessitate the Use of Historic Bridges*.

On August 26, 2025, FHWA sent a Section 106 Adverse Effect Consultation package indicating FHWA's determination that the proposed action would result in an adverse effect on the NRHP-eligible Decatur Bridge to the potential consulting parties outlined in Attachment 3.see Attachment 3 – NDOT PQS Memorandum). The following responses were received:

- On September 5, 2025, NESHPO indicated its concurrence with FHWA's finding that the proposed action would constitute an adverse effect on the NRHP-eligible Decatur Bridge and noted the FHWA will be required to invite the ACHP to consult on the Decatur Bridge Project.
- On August 26, 2025, the Omaha Tribe of Nebraska acknowledged receipt of the Project information and would review accordingly.
- On August 26, 2025, the Iowa Tribe of Kansas and Nebraska indicated they had no concerns.
- On August 27, 2025, the Winnebago Tribe of Nebraska indicated the proposed *project is not located near any known sites affiliated with our Tribe, nor does it appear to have the potential to affect properties of cultural, historical, or religious significance to us. Accordingly, the Winnebago Tribe of Nebraska has no further interest in this project.*
- On September 18, 2025, the Northern Cheyenne Tribe concurred with findings of Adverse Effect.

On September 5, 2025, the IADOT sent a Section 106 Adverse Effect Consultation package to the IASHPO (see Attachment 3 – NDOT PQS Memorandum). The IASHPO responded on October 6, 2025, indicating that they *concur with the federal agency* regarding the Adverse Effect.

On September 16, 2025, the IADOT sent a Section 106 Adverse Effect Consultation package to the following tribes and interested parties: Flandreau Santee Sioux, Iowa Tribe of Kansas and Nebraska, Iowa Tribe of Oklahoma, Lower Sioux Indian Community, Omaha Tribe of Nebraska, Otoe-Missouria Tribe, Peoria Tribe of Indians of Oklahoma, Ponca Tribe of Nebraska, Prairie Band Potawatomi Nation, Prairie Island Indian Community, Sac and Fox Nation of Oklahoma, Sac and Fox Tribe of the Mississippi in Iowa, Sisseton-Wahpeton Oyate, Spirit Lake Tribe, Three Affiliated Tribes – Mandan, Hidatsa & Arikara, Upper Sioux Community, Yankton Sioux Tribe, Monona County Historical Museum, and the Monona County Historic Preservation Commission (see Attachment 3 – NDOT PQS Memorandum). The following responses were received:

- On September 16, 2025, the Lower Sioux Indian Community indicated *no archaeology or cultural concerns* and asked that *if any archaeology or cultural inadvertent discoveries are made that you contact the appropriate parties and agencies to assure the matter is properly addressed.*

On September 22, 2025, the FHWA sent a Section 106 Adverse Effect consultation package to the USACE and USCG] (see Attachment 3 – NDOT PQS Memorandum). USACE responded on [DATE]. USCG responded on [DATE].

On October 27, 2025, NDOT notified the ACHP of the adverse effect determination for the proposed replacement of the Decatur Bridge, invited ACHP to participate in consultation, and indicated an intent to develop an MOA for the project. The ACHP responded on November 4, 2025 indicating they did not want to participate in the consultation to resolve adverse effects to the historic property (see Attachment 3 -NDOT PQS Memorandum).

On November 21, 2025, FHWA, NDOT, and IADOT held a multi-agency (NESHPO, IASHPO, USACE, USCG, ACHP, University of Iowa Office of the State Archaeologist, Winnebago Tribe of Nebraska, Omaha Tribe of Nebraska, and Burt County, NE) discussion regarding mitigation of the adverse effect

under Section 106. A follow up meeting was held on January 7, 2026. The resulting mitigation stipulations will be included in a draft Memorandum of Agreement (MOA) to be circulated among consulting parties for review and comment(see Attachment 2 – MOA).

On [DATE], the draft MOA was sent to consulting parties for their review and comment.

On [DATE], the MOA was executed by all signatories (Attachment 2 - MOA).

DRAFT

3.0 BUILD ALTERNATIVES CONSIDERED

Several alignments were studied to provide a new river crossing including replacement of the Decatur Bridge on the existing N-51/IA-175 alignment and multiple alignments both north and south of the existing river crossing (Attachment 1: Alternatives Analysis). Of the alternatives, only the Blue and Orange were carried forward for consideration during the NEPA process (Figures 3 and 4). They are described individually below.

3.1 Blue Alternative – Build New Bridge North of the Existing River Crossing

The Blue Alternative (Figure 3) would construct a new river crossing approximately 80 feet north of and parallel to the existing Decatur Bridge crossing. The new bridge would be approximately 2,715-feet-long, almost 760 feet longer than the existing Decatur Bridge, to provide additional flowage capacity within the floodplain and overbank area on the Iowa side of the river, replacing the separate overflow structure that exists today. The new bridge would have a total clear roadway width of 40 feet, consisting of two 12-foot-wide travel lanes (one in each direction) and 8-foot-wide shoulders on both sides of the bridge. The new River Unit of the bridge is anticipated to be supported by steel plate girders, eliminating any overhead truss components. The approach roadways and bridge units on both the Nebraska and Iowa sides would be updated to current design standards. In Decatur, the approach roadway would tie back into existing N-51 just east of Broadway Street. On the Iowa side, the approach roadway would tie back into existing IA-175 west of Cashew Avenue. The Blue Alternative would reconstruct the existing access road within the Upper Decatur Bend Wildlife Management Area (WMA) on the Iowa side of the river to maintain access to the WMA. The existing Decatur Bridge crossing would remain open to traffic during construction of the new bridge (possibly two years or more) until the approach roadways are connected to the existing highways. When construction is complete, the Decatur Bridge and sections of the existing approach roadways would be removed.

3.2 Orange Alternative – Build a New Bridge South of the Existing Crossing

The Orange Alternative (Figure 4) would construct a new river crossing approximately 80 feet south of and parallel to the existing Decatur Bridge crossing. The new bridge would be approximately 2,755-feet-long, almost 800 feet longer than the existing Decatur Bridge, to provide additional flowage capacity within the floodplain and overbank area on the Iowa side of the river, replacing the separate overflow structure that exists today. The new bridge would have a total clear roadway width of 40 feet, consisting of two 12-foot-wide travel lanes (one in each direction) and 8-foot-wide shoulders on both sides of the bridge. The new River Unit of the bridge is anticipated to be supported by steel plate girders, eliminating any overhead truss components. The approach roadways and bridge units on both the Nebraska and Iowa sides would be updated to current design standards. In Decatur, the approach roadway would tie back into existing N-51 just east of Broadway Street. On the Iowa side, the approach roadway would tie back into existing IA-175 west of Cashew Avenue. The existing Decatur Bridge crossing would remain open to traffic during construction of the new bridge (possibly two years or more) until the approach roadways are connected to the existing highways. When construction is complete, the Decatur Bridge and sections of the existing approach roadways would be removed.

Figure 3 – Preferred (Blue) Alternative

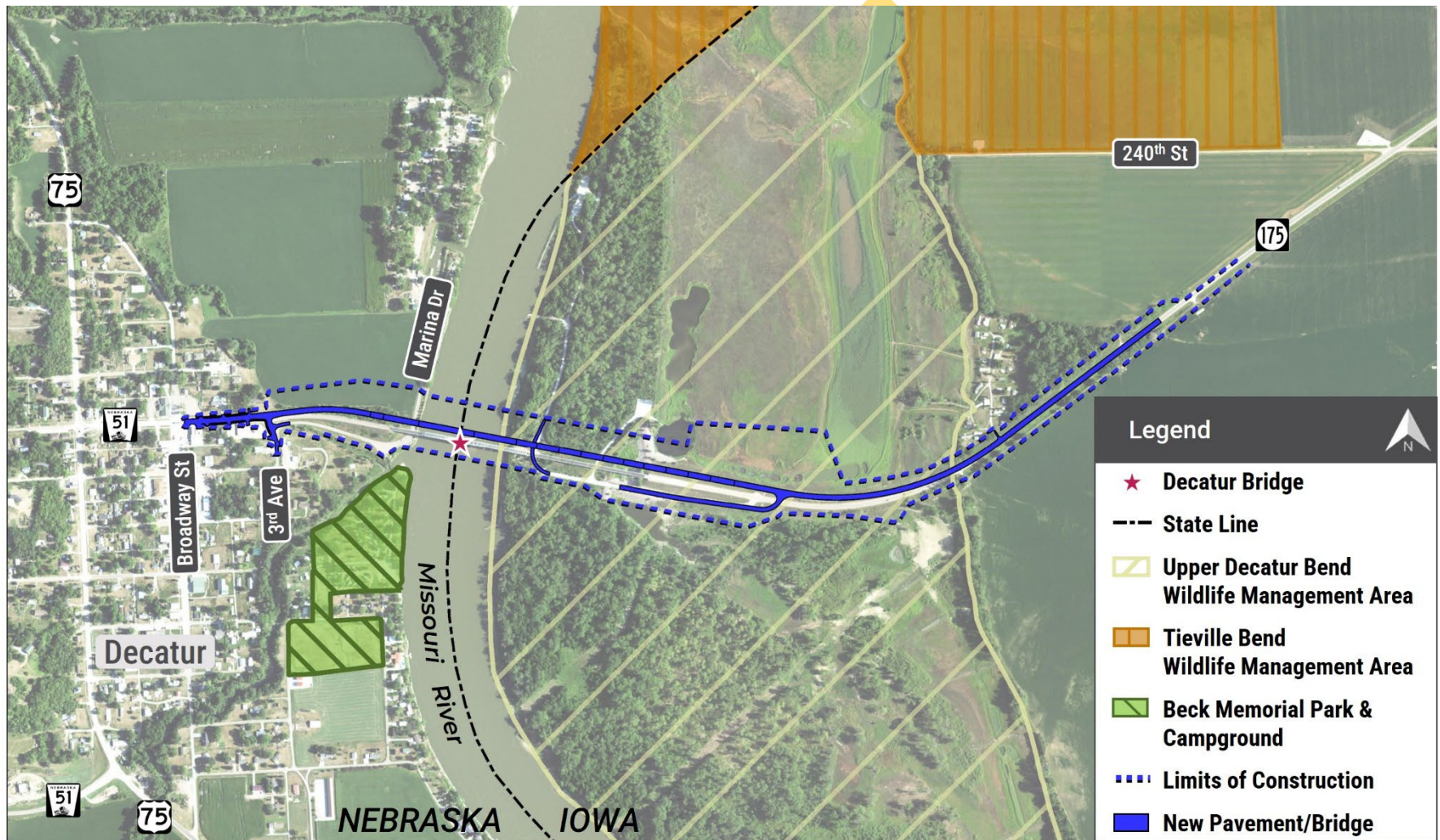
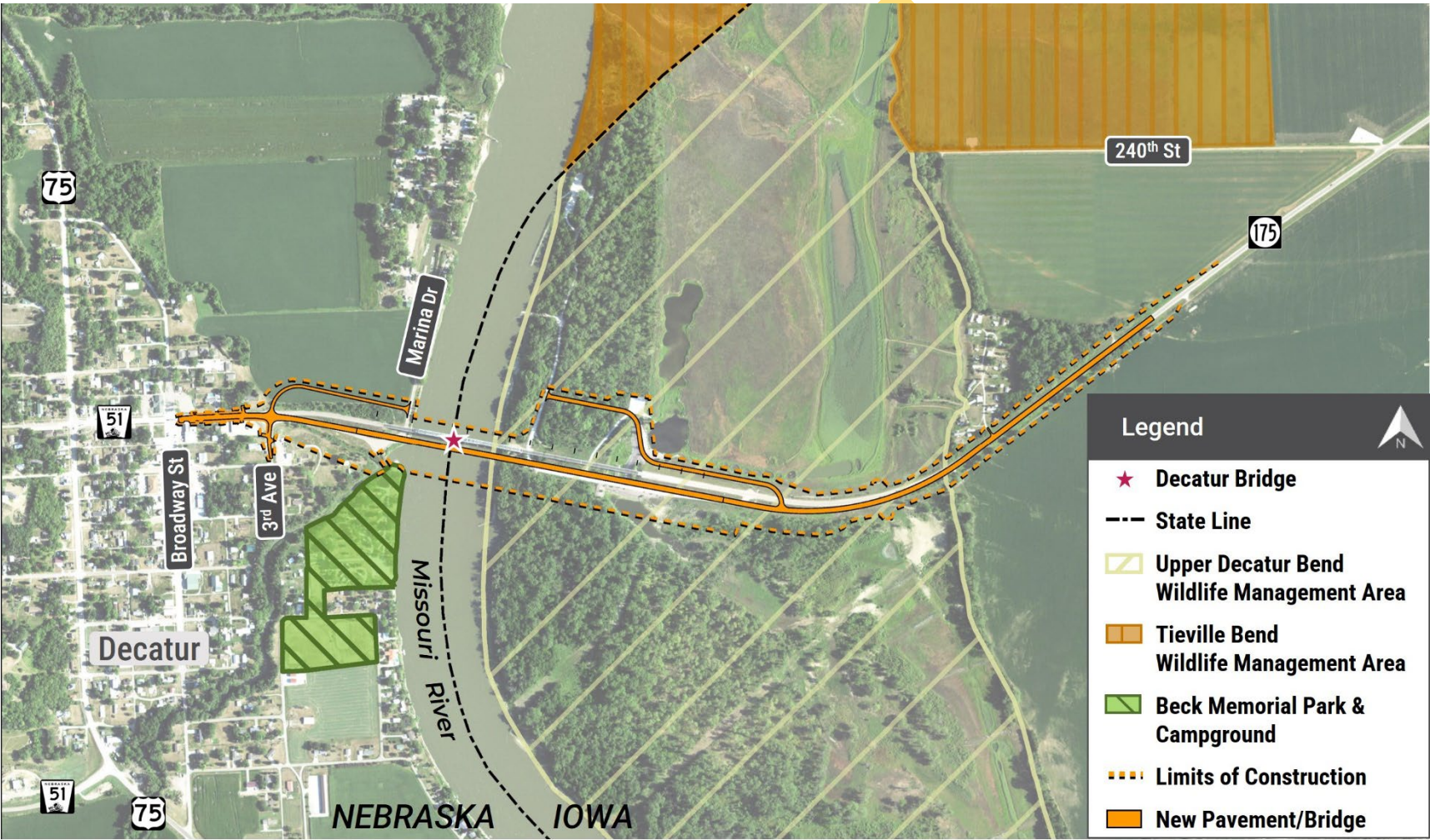


Figure 4 – Orange Alternative



4.0 PRIORITIES FOR TREATMENT OF HISTORIC BRIDGES

The following section assesses the Project as per the five priorities for the treatment of historic bridges outlined in the *Nebraska Historic Bridge Inventory* and *Historic Bridge Management Plan* (FraserDesign and Hess, Roise and Company 1991).

Priority 1: “The preferred treatment for a historic bridge is to have it continue to carry vehicular traffic at its original site with minimal modification.”

As previously discussed, the Decatur Bridge is both structurally and functionally deficient. As a result, continued use of the bridge for vehicular traffic would require these deficiencies to be addressed. NSTM, formerly known as “fracture critical,” and routine structural inspections conducted every two years and most recently conducted in July 2024, indicated the rating of the bridge’s superstructure has reached the condition threshold that requires further investigation of improvement alternatives. Because of the age and condition of the bridge, structural deficiencies are present in the superstructure, substructure, deck, and railings.

Structural deficiencies include cracks in floorbeams, cracks in connection angles, fractured rivets and anchor bolts, fractured deck-to-stringer welds, and section loss with holes and cracking in truss members. Many are in primary load carrying members. Most of the structural steel corrosion, section loss, and cracking are on members below the deck. The open steel grate deck allows water and deicing salt spray to drain directly onto the members below, creating a corrosive environment. The protective paint added in 2017 has helped to reduce this risk; however, new heavy rust has developed in areas of localized paint failure, particularly areas that already had heavy loss and in locations where holes were painted over and rust expansion underneath the paint is causing localized paint failure. As the paint breaks down over time, the direct exposure to deck drainage will re-initiate corrosion and section loss.

In addition to its structural deficiencies, the Decatur Bridge is functionally deficient. As described in Section 1.3.4, the bridge’s width, lack of shoulders, and load rating are substandard. The clear roadway width is constrained by the interior width of the River Unit through-truss and the presence of the existing rails immediately inside the vertical truss members. Neither widening the bridge by (1) building a cantilevered deck beyond the outside of the existing truss or (2) adding a third truss line (basically cutting the bridge in half) is feasible as both the cantilevered load and additional truss load would overload the substructure.

The existing steel railing cannot be upgraded to a MASH-tested concrete rail or barrier. A concrete rail or barrier requires a concrete deck for anchoring. The existing steel rail would be replaced with another steel rail that meets the minimum NDOT height requirement of 3-feet-3 inches, but it would not meet current crash-testing standards. Replacement of the open grate deck with a solid surface would further reduce the vehicle loads the bridge is able to support. The clear roadway width cannot be widened without replacement of the truss. These treatments to address both structural and functional deficiencies would constitute an adverse effect on the structure under Section 106 of the NHPA.

Additionally, approximately 20 of the structural deficiencies identified during the 2024 inspection appear to be the result of vehicle impact with the River Unit through-truss superstructure. The narrow width and lack of shoulders have increased the likelihood of such impacts. The Decatur Bridge meets current design criteria for vertical clearance, but the overhead members still present a barrier to the use of the bridge by some large equipment. These overhead members also show evidence of past vehicle impacts. The inventory rating of the bridge is also less than half of that of a modern bridge design. The narrow deck width and load posting restrict the size and weight of vehicles that can legally use the bridge.

Because the functional deficiencies will persist regardless of continued rehabilitation activities, and addressing structural deficiencies will only potentially extend the useful life of the bridge another 5-10 years, the Decatur Bridge is not suitable for continued use for vehicular traffic in its current location. Continued use of the structure would require modifications that would detract from its character-defining features, including those that make it eligible for NRHP listing. Finally, retaining and rehabilitating the current structure does not meet the identified purpose and needs.

Priority 2: “If it is not feasible to keep the bridge at its original site, every effort should be made to find an appropriate site to which it could be relocated for vehicular use.”

As discussed in Section 2.3, the Decatur Bridge is both structurally and functionally deficient. Rehabilitation to address structural and functional deficiencies would require extensive repairs and possibly reconstruction of the existing bridge. Widening the bridge would result in the loss of historic integrity with regard to the character-defining features that qualify the structure for NRHP inclusion, thus resulting in an adverse effect on the structure and possibly resulting in loss of NRHP eligibility.

Relocation of all or part of the bridge was explored; however, several constraints are associated with relocation of all or part of a bridge of this size and design.

- The Decatur Bridge is composed of 7 spans including the 2 Warren style through-truss River Unit Spans each 420 feet long, the 3 Nebraska Approach Unit Spans (steel girder spans totaling 211 feet long), and the 2 Iowa Approach Unit Spans (deck trusses totaling 904 feet long). Careful disassembly of the bridge components would be required to maintain the integrity of the structure to move it to a new location, including the removal of corroded rivets and damaged components that would need to be replaced at the new bridge site. Disassembly of the bridge would need to be delayed until after the new bridge is constructed and the new approach roadways are tied back into N-51 and IA-175 removing all traffic from the Decatur Bridge. With the new bridge approximately 80 feet away from the existing bridge, additional caution would be required to dismantle and move the Decatur Bridge to a new location.
- Disassembly and reassembly could have added risk to construction as many of the members have extensive rust/corrosion and section loss that could further disintegrate upon disassembly. The bridge was inspected for asbestos containing materials (ACM) and lead-based paint in May 2024. No ACM were identified, and the existing bridge has been sand blasted and repainted since 2015.
- In addition to adding time to the construction schedule, disassembly and relocation of the bridge would add cost to the overall project (no estimate has been developed to date).
- Through marketing of the bridge, NDOT will monitor inquiries/responses from any interested parties. Coordination with Consulting Parties will continue during the Section 106 process to see if any other parties may be interested in reusing part or all of the Decatur Bridge.

Though communication with potentially interested parties is ongoing, it is currently anticipated that relocation or reuse of all or part of the bridge in another location is not a reasonable option. Further documentation of marketing attempts and stakeholder coordination will be provided as both the NEPA and Section 106 processes progress.

Priority 3: “If it is determined that the bridge can no longer carry vehicular traffic, or could do so only at the expense of its historic integrity, the next best solution is to retain it for non-vehicular use at its original site with minimal modification. Priority should be given to transit-related uses, such as serving bicycle and pedestrian traffic.”

Use of the Decatur Bridge for non-vehicular use was evaluated (Attachment B of the *Decatur Bridge Alternatives Analysis to Support Coordination Under Section 106 the NHPA*), but for the reasons outlined below, in-place bridge reuse under any ownership scenario is neither feasible nor reasonable.

As rehabilitation options do not satisfy the purpose and need requirement, Priority 3 was assessed with regard to the potential to retain the bridge for adaptive re-use in addition to the Preferred (Blue) Alternative. The Blue Alternative would construct a new bridge approximately 80 feet north of and parallel to the Decatur Bridge. Demolition or removal of the Decatur Bridge would not be required, but the Blue Alternative would leave the Decatur Bridge isolated and disconnected from N-51 and IA-175.

The open grate deck of the Decatur Bridge and the lack of shoulders do not reasonably accommodate bike/ped users. None of the existing sidewalks along N-51 in Decatur connect to the bridge, and no trails or other bike/ped accommodations are planned on either side of the river. Like the rehabilitation alternative assessed, improvements could be made to the existing bridge to accommodate bike/ped use including adding a limited-width concrete deck, providing ADA-compliant railings, ramps, and walkways to access the bridge, and possibly new pedestrian-scale lighting. The limited-width solid deck would also provide access by maintenance and emergency vehicles.

Even with rehabilitation or improvements to accommodate bike/ped use, leaving the Decatur Bridge in place would ultimately create a safety hazard and would also require an undetermined level of maintenance until a time in the future when the bridge would completely close and removed. The cost estimate for both Build Alternatives includes demolition of the Decatur Bridge but not its long-term maintenance.

Therefore, retaining the bridge for non-vehicular use was determined not feasible and prudent.

Priority 4: “If the bridge can no longer carry vehicular traffic, no ‘as is’ use is feasible, and cannot be left in place, adaptive use possibilities should be explored, with preference to reuses that retain the bridge at its original site. Necessary modifications should not damage or obscure the original bridge structure. If no suitable *in situ* adaptive reuse can be found, the bridge can be closed to vehicular traffic and left in place as a ‘moldering ruin.’”

As established in the previous treatment discussions, the Decatur Bridge is both structurally and functionally deficient in its existing location, and no *in situ* adaptive reuse has been assessed as reasonable or feasible. Continued use of the bridge in any capacity would require that the identified deficiencies be addressed, necessitating structural changes that may reduce the historic integrity of the bridge. These changes would result in an adverse effect to the bridge under Section 106. Furthermore, closing and leaving the bridge crossing as a “moldering ruin” would impede construction of either Build Alternatives, pose a safety hazard to the public, and would not satisfy the identified purpose and needs, which are to maintain connectivity, improve infrastructure condition, and improve resiliency against flooding.

Furthermore, without continued repair and upkeep, the existing bridge would eventually fail, potentially causing damage to other bridge components, creating a river obstruction, or creating a hazard to motor vehicles. As a result, leaving the existing bridge as a “moldering ruin” would go against the project’s purpose to provide a resilient river crossing that maintains access to regional commerce, employment, education, health care, and recreation facilities; maintains accessibility to and by emergency services; and provides infrastructure to support current and future travel demand.

Therefore, adaptive re-use of the Decatur Bridge or any of its components was determined not feasible and prudent.

Priority 5: “If the bridge cannot remain on its original site and cannot be moved, it shall be

documented to the standards of the Historic American Engineering Record before demolition, disassembly or modifications that will destroy its historic integrity. If possible, the structure should be disassembled carefully and stored until a new location for it can be found or significant components should be incorporated into any new bridge at the site or salvaged for educational purposes.”

Restoration or rehabilitation for vehicular or non-vehicular use that preserves the bridge’s historic character is not feasible for the reasons identified above. Furthermore, the disassembly and relocation of the bridge would result in destruction of the character-defining features of the bridge. For these reasons, bridge documentation followed by demolition (or repair of the existing structure in a manner that would destroy its historic integrity) is the preferred treatment. Though attempts to market all or part of the bridge to potential new owners for possible reuse are ongoing (Attachment 4 – Bridge Marketing Materials), it is not anticipated that this treatment would be feasible with regard to the subject bridge. Recordation of the bridge using Nebraska state standards would be conducted prior to demolition and would preserve the bridge’s historic elements through documentation. Furthermore, additional mitigative stipulations as outlined in an MOA (see Attachment 2) would be conducted prior to or as part of the demolition of the historic structure.

5.0 SECTION 4(f) FINDINGS

NDOT prepared the *Decatur Bridge Alternatives Analysis to Support Coordination Under Section 106 the NHPA* (Attachment 1) to comply with the requirements of Section 106 and the *Programmatic Section 4(f) Evaluation and Approval for FHWA Projects that Necessitate the Use of Historic Bridges* (FHWA 1983). In order for this programmatic Section 4(f) evaluation to be applied to a project, each of the following findings must be supported by the circumstances, studies, and consultations on the project:

- I. **Do Nothing.** The “do nothing” or “No Build” alternative has been studied. The do nothing alternative ignores the basic transportation need. For the following reasons this alternative is not feasible and prudent:
 - a. Maintenance - The do nothing alternative does not correct the situation that caused the bridge to be considered structurally deficient or deteriorated. These deficiencies can lead to sudden collapse and potential injury or loss of life. Normal maintenance is not considered adequate to cope with the situation.
 - b. Design Deficiencies - The do nothing alternative does not correct the situation that causes the bridge to be considered deficient. Because of the structural and functional deficiencies, the bridge poses hazards to the traveling public and places restrictions on transport and travel.
- II. **Build on New Location Without Using the Old Bridge.** Investigations have been conducted to construct a bridge on a new, further location or parallel to the old bridge, allowing for a one-way couplet that would include using the old bridge in place with both lanes of traffic traveling in one direction. However, for one or more of the following reasons, this alternative is not feasible and prudent:
 - a. Adverse Social, Economic, or Environmental Effects - Building a new bridge away from the present site would result in social, economic, or environmental impacts of extraordinary magnitude. Such impacts as extensive severing of productive farmlands, displacement of a significant number of families or businesses, serious disruption of established travel patterns, and access and damage to wetlands may individually or cumulatively weigh heavily against relocation to a new site.
 - b. Engineering and Economy - Where difficulty associated with the new location is less extreme than those encountered above, a new site would not be feasible and prudent where cost and engineering difficulties reach extraordinary magnitude. Factors supporting this conclusion include significantly increased roadway and structure costs, serious foundation problems, or extreme difficulty in reaching the new site with construction equipment. Additional design and safety factors to be considered include an ability to achieve minimum design standards or to meet requirements of various permitting agencies such as those involved with navigation, pollution, and the environment.
 - c. Preservation of Old Bridge - It is not feasible and prudent to preserve the existing bridge, even if a new bridge were to be built at a new location. This could occur when the historic bridge is beyond rehabilitation for transportation or an alternative use, when no responsible party can be located to maintain and preserve the bridge, or when a permitting authority, such as the USCG requires removal or demolition of the old bridge.

III. Rehabilitation Without Affecting the Historic Integrity of the Bridge. Studies have been conducted of rehabilitation measures, but, for one or more of the following reasons, this alternative is not feasible and prudent:

- a. The bridge is so structurally deficient that it cannot be rehabilitated to meet minimum acceptable load requirements without affecting the historic integrity of the bridge.
- b. The bridge has significant geometric deficiencies and cannot be widened to meet the minimum required capacity of the highway system on which it is located without affecting the historic integrity of the bridge. Flexibility in the application of the AASHTO geometric standards should be exercised as permitted in 23 CFR Part 625 during the analysis of this alternative.

The Blue Alternative, construction of a new bridge north of and parallel to the existing Decatur Bridge, was selected as the Preferred Alternative. Based on the information provided herein and in the associated Alternatives Analysis (Attachment 1), the project meets all of the applicability criteria set forth in the Programmatic Section 4(f) Evaluation. All alternatives required for consideration under the Programmatic Section 4(f) Evaluation have been fully evaluated, and the findings made are clear and supported by the circumstances, studies, and consultations on the Project. No feasible and prudent alternative was identified that could maintain the existing bridge for vehicular traffic. Therefore, the Project would result in a use of the Decatur Bridge (S051 03644) as defined in Section 4(f).

IV. Measures to Minimize Harm

In accordance with the *Programmatic Section 4(f) Evaluation and Approval for FHWA Projects that Necessitate the Use of Historic Bridges* (FHWA 1983), the Project includes all possible planning to minimize harm. The Project would replace the Decatur Bridge (S051 03644). Fully adequate recordation of the historic bridge, in accordance with the Nebraska state standards, would be completed prior to demolition of the bridge.

Federal law requires any state proposing demolition of a historic bridge involved in a bridge replacement project using federal funds to “first make the historic bridge available for donation to a State, locality, or responsible private entity” provided the recipient agrees to maintain the bridge and the features that give it historic significance and assume all future legal and financial responsibility for the bridge [see 23 USC 144(g)]. From December 18, 2025 through January 19, 2026, NDOT and IADOT advertised the bridge for reuse. No parties expressed interest in the acquisition of all or part of the bridge. Copies of the advertising materials are included in Attachment 4.

The Section 106 process of the NHPA determined that the proposed Project will have an adverse effect on the NRHP-eligible Decatur Bridge. Coordination between NDOT, IADOT, NESHPO, IASHPO, and Consulting Parties resulted in a MOA executed by NDOT, IADOT, NESHPO, and IASHPO on [DATE]. The MOA contains a requirement for photographic documentation of the bridge prior to demolition and complies with the *Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, and the Nebraska State Historic Preservation Officer for the Highway Bridge Replacement and Rehabilitation Program* (FHWA 1991) and the *Programmatic Agreement Among the Federal Highway Administration, the Nebraska State Historic Preservation Officer, the Advisory Council on Historic Preservation, and the Nebraska Department of Transportation to Satisfy the Requirements of Section 106 for the Federal-Aid Highway Program in the State of Nebraska* (2023).

6.0 SUMMARY

All avoidance alternatives or treatments would require the replacement, substantial repair, or modification of the existing Decatur Bridge (S051 03644) and its character-defining features, including its Warren-type through-truss River Unit design. The loss of the character-defining features contributing to the bridge's historic significance and the subsequent loss of historic integrity would render the bridge no longer eligible for listing on the NRHP.

FHWA has determined that this project qualifies for the *Programmatic Section 4(f) Evaluation and Approval for FHWA Projects that Necessitate the Use of Historic Bridges* (FHWA 1983).

DRAFT

7.0 REFERENCES

Baynard, Kristie, Camilla Deiber, Patti Kuhn, and Mike Yengling

- 2011 *Intensive Architectural Survey of Iowa Primary and Secondary Road Bridge Built Between 1942 and 1970*. Prepared for the Iowa Department of Transportation by The Louis Berger Group, Inc. July 2011.

Federal Highway Administration (FHWA)

- 1983 Department of Transportation Federal Highway Administration Programmatic Section 4(f) Evaluation and Approval for FHWA Projects that Necessitate the Use of Historic Bridges. July 5, 1983.
https://www.environment.fhwa.dot.gov/legislation/section4f/4f_bridges.aspx.

FraserDesign and Hess, Roise and Company

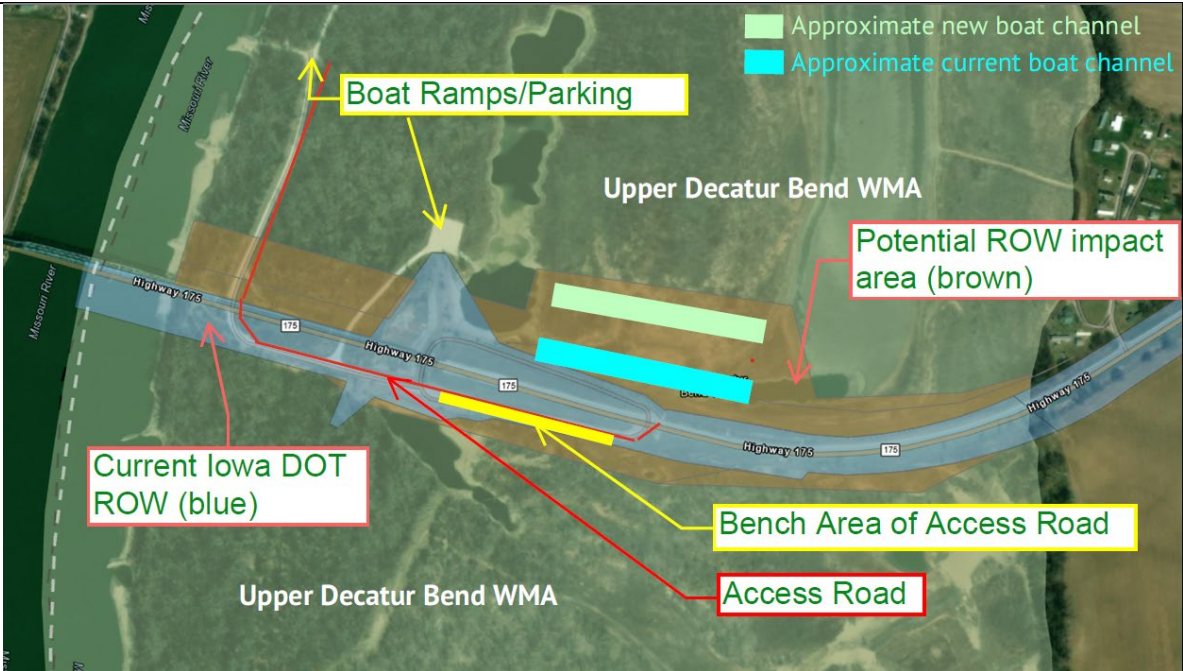
- 1991 Management Plan. Nebraska Historic Bridge Inventory. July.

Mead and Hunt

- 2007 National Register Evaluation of Nebraska Bridges, 1947 to 1965 (including the reassessment of select pre-1947 bridges). Prepared for the Nebraska Department of Roads by Mead & Hunt.

National Park Service

- 1997 "How to Apply the National Register Criteria for Evaluation." National Register Bulletin.
https://www.nps.gov/subjects/nationalregister/upload/NRB-15_web508.pdf.

County: Monona Project Code: 24-67-175-010 Phase Number: STP-175-1(106)--2C-67 Location: US 175 Decatur Bridge over the Missouri River	NEPA Classification: EA NEPA Project Type: Bridge NEPA ID: 15074
FHWA determines the applicability of 49 USC 303 (Section 4(f) of the DOT Act of 1966) to impacts your project may have on a public park, recreation area, or wildlife and waterfowl refuge. This is part of the Section 4(f) determination process for this project. To complete the determination, FHWA is gathering input from the official with jurisdiction over the property to establish the function, designation, and significance of the property. As the official with jurisdiction, we are providing you information regarding the proposed impacts to the property listed below.	
<u>Upper Decatur Bend WMA Multiple-Use Land</u>	
	
Ownership: Public Open to the Public? Yes Is the primary function recreation? No Or is the secondary function recreation if the primary is not? Yes Do you as the OWJ consider the property significant to the community for recreation? Yes	

Property details:	Impact to the property:	Duration of impact:
642 Acres	A new bridge will be constructed north of the existing IA-175 bridge, construction will require the use of approximately 23 acres of the WMA. Once construction of the new bridge is complete, the existing bridge will be removed. The affected attributes of the property are listed below.	Temporary construction impact permitted through a Sovereign Lands Permit. Minor amount of permanent easement for new ROW.

Attributes of the property:	Affected attributes:
Boat Ramp	Yes – Access
Boating	Yes – Access
Fishing	Yes – Access
Hunting	Yes
Green Space	Yes
Nature/Bird Watching	Yes
Off Highway Vehicle Park	Yes – Access

Describe impact avoidance, minimization, and mitigation or enhancement measures incorporated into the project:

The impact to the Upper Decatur Bend WMA (WMA) is minimized to the extent possible while also incorporating an improvement to the access road and the power line to the pump house.

The access road entrance off IA-175 will be shifted east from its original location due to the adjustment of the east abutment. This access road leads to the boat ramps, off highway vehicle parking, and fishing ponds, and will be inaccessible to the public during its reconstruction and for temporary periods during the bridge construction. The portion that runs parallel to the south side of the bridge, through the "bench" area before turning north, will be lowered to an elevation that allows for better water flow between the north and south wetland areas. This portion of the access road will also be paved to prevent washout during the more frequent flood events with the addition of strategic riprap to reduce the risk of erosion. These changes provide a mutual benefit to the WMA and public by improving the flow of water during a flood and shorter closure of the access road after a flood. To the extent possible, closure of the access road and parking areas will be minimized during peak recreation seasons.

The overhead power line that is located north of the current bridge will need to be relocated. Iowa DNR has requested that this line be reburied at the new location, as it was prior to the flood in 2011.

The new alignment will also impact the boat channel north of the bridge. The channel will be filled to allow proper slope, so a new channel will be dug approximately 250 ft. to the north to reduce the risk of scour on the new bridge piers. To minimize the impact to this recreational feature, work will be done, to the extent possible, during off-season periods of low water.

Coordination will occur with Iowa DNR during final design to confirm the elevations of the inlet and outlet of the culvert extensions. The culvert extension will keep an upstream gate, and the Iowa DNR is open to an alternative gate style if elevations and functionality are maintained.

The project contract will include Special Provisions to ensure Iowa DNR staff are allowed access to areas of the WMA, including agreed use of contractor temporary access roads if necessary, to complete any maintenance activities. Coordination between the contractor and Iowa DNR will be ongoing to ensure any construction and/or maintenance activities are mutually beneficial and not negatively impactful to the conservation goals of the WMA.

After project completion and the old bridge is removed, any ROW no longer needed within the WMA will be transferred back to the Iowa DNR. Preliminary design estimates the transfer of approximately

10 acres from Iowa DOT to Iowa DNR, and 4 acres from Iowa DNR to Iowa DOT. All temporary construction impacts expect to be permitted with the use of a Sovereign Lands Permit. These acres are also in an easement with the USACE for the Missouri River Recovery Program (MRRP) and may need to be amended as required.

Does this adversely affect the activities, features, or attributes that qualify the resource for protection under Section 4(f)?

No. The impacts to the recreational features of the Upper Decatur Bend WMA will continue to operate as before. The transportation use of the Section 4(f) property, together with any impact avoidance, minimization, and mitigation or enhancement measures incorporated into the project, does not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f).

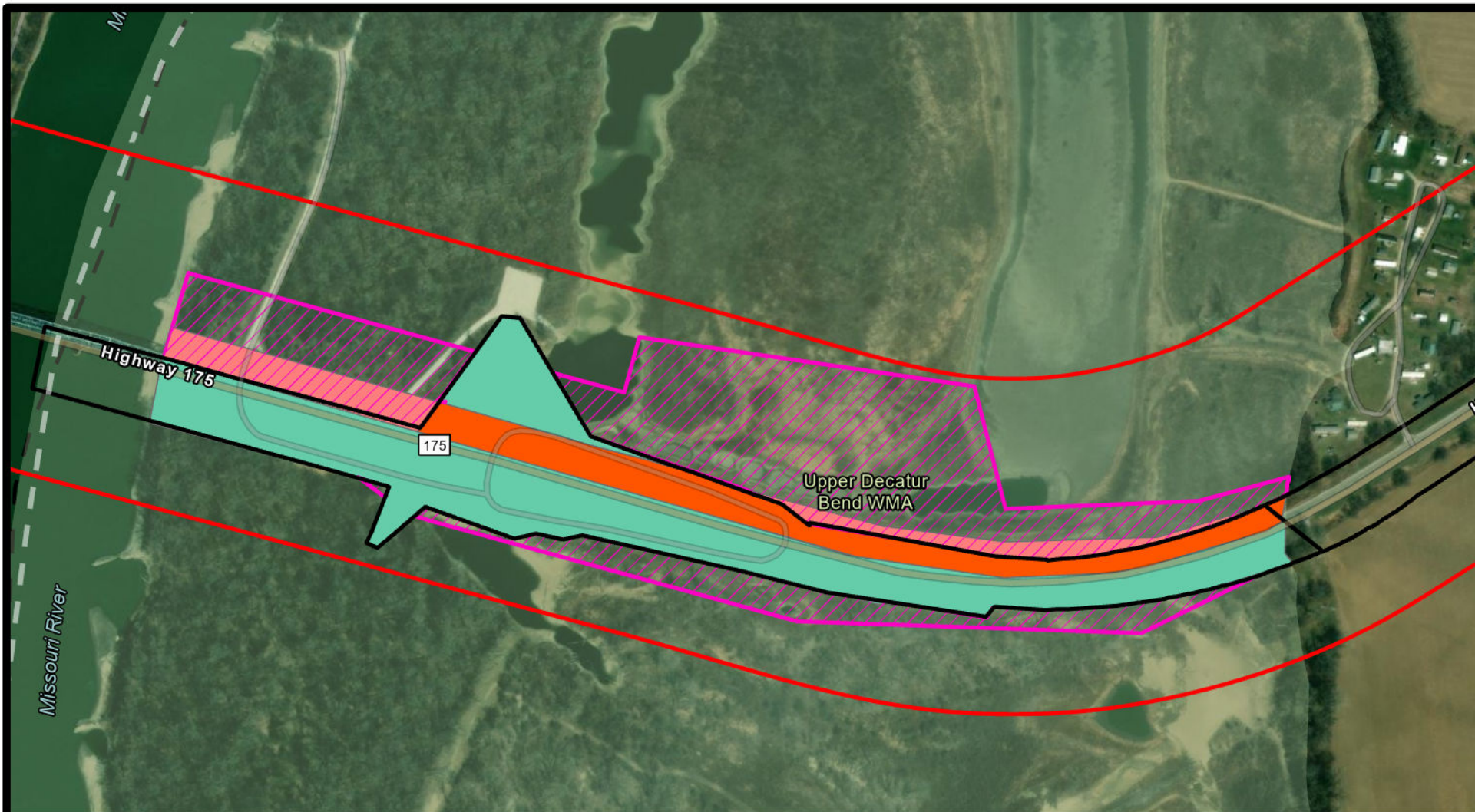
Describe the public involvement method and the outcome:

This proposed de minimis finding will be presented to the public for comment alongside the Environmental Assessment during the public hearing on March 31, 2026. There will be a comment period of 17 days closing on April 17, 2026. Once complete, all comments will be reviewed and considered in further project design. A summary of those comments will be included in the final form sent for signature.

OWJ	Date	Comments
Doug Chafa/IDNR	02/03/2025	confirmed significance
Doug Chafa/IDNR	07/28/2025	Project Management Team (IA DOT, NE DOT, Consultant) reviewed current design & potential impacts
Doug Chafa/IDNR	10/17/2025	Project Management Team (IA DOT, NE DOT, Consultant) revisited potential impacts based on design changes

The official(s) with jurisdiction over the property, after being informed of the public comments and FHWA's intent to make the de minimis impact finding, concur in writing that the project will not adversely affect the activities, features, or attributes that qualify the property for protection under Section 4(f).

	Signature	Date
IA DOT:	Christine Schwienebart	12/11/25
Official with Jurisdiction:		
Official with Jurisdiction:		



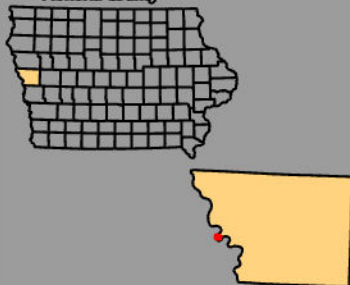
IOWA DOT

Location & Environment
Bureau

Created February, 2026



Project Location in
Monona County



Legend

- Initial Survey Area
- Existing Right of Way
- LOC outside of ROW
- New DOT ROW
- Existing DOT ROW not to be transferred
- ROW to Transfer to WMA

Section 4(f) Impacts

STP-175-1(106)--2C-67
Decatur Bridge

Monona County, Iowa

Winkelmann, Michelle L

Subject: FW: Iowa DOT Project - STP-175-1(106)--2C-67

From: Bentzinger, Ruth E CIV USARMY CENWO (USA) <Ruth.E.Bentzinger@usace.army.mil>

Sent: Tuesday, March 3, 2026 1:49 PM

To: Schwienebart, Christine <Christine.Schwienebart@iowadot.us>

Cc: Pitts, Luke (FHWA) <luke.pitts@dot.gov>

Subject: RE: Iowa DOT Project - STP-175-1(106)--2C-67

CAUTION:

This email originated from outside the Iowa Department of Transportation.
Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hello Christine,

Yes, please include me as an OWJ for the Upper Decatur Bend property. I have reviewed and concur with the minimization/mitigation measures as detailed in the Section 4(f) de minimis document for the Upper Decatur Bend WMA and the information is correct to the best of my knowledge.

USACE's congressional authorization and primary interest in the property is to mitigate for the loss of fish and wildlife habitat as a result of past channelization efforts on the Missouri River.

Recreational purposes (fishing, hunting, hiking, nature activities, etc.) are deemed as secondary or indirect benefits to the states.

Please don't hesitate to contact me for any questions or additional information. ~Ruth

Ruth Bentzinger

Natural Resources Specialist

Missouri River Project Office

(402) 996-3761 office

(402) 806-0163 work cell

ruth.e.bentzinger@usace.army.mil

From: Schwienebart, Christine <Christine.Schwienebart@iowadot.us>

Sent: Thursday, February 26, 2026 1:36 PM

To: Bentzinger, Ruth E CIV USARMY CENWO (USA) <Ruth.E.Bentzinger@usace.army.mil>

Subject: [Non-DoD Source] Iowa DOT Project - STP-175-1(106)--2C-67

Hi Ruth,

I am contacting you in regard to the US 175 Decatur Bridge over the Missouri River joint project between Iowa DOT and NE DOT. As you know from our USACE update meetings, we've been working with Doug Chafa from IA DNR to document the *de minimis* exception for impacts to the Upper Decatur Bend WMA. It has been our understanding from those conversations that the USACE defers to the IA DNR for management of the WMA, including the area that is within the USACE easement. As we've progressed through FHWA review of the draft EA, FHWA has asked us to determine and document if USACE would also like to be considered an OWJ for the property identified.

For reference: An OWJ for public recreation and/or wildlife refuge is defined as the agency or agencies that own or administer the property in question and who are empowered to represent the agency on matters related to the property. (23 CF 774.17 "Official(s) with jurisdiction")

Please respond if you would also like to be identified as an OWJ for the WMA. And if yes we ask you to respond if you agreeable to the mitigation/minimization measures described in the attached document for mitigation information in the document is correct to the best of your knowledge. Doing this is responded that it is agreeable to the measures outlined and that the information is correct. Then also if you respond that you would like to be an OWJ we would ask you to sign the final form once the public comment period closes and all comments have been considered.

Thank you

Christine Schwienebach
NEPA Manager

Location and Administration Bureau
Iowa Department of Transportation
800 Lincoln Way
Ames, IA 50010
(515) 239-1999
Christine.Schwienebach@iowa1ot.us
iowa1ot.gov

