

Minatare US-385

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Draft Environmental Assessment

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to the US Department of Transportation, Federal Highway Administration
by the Nebraska Department of Transportation

Project Sponsor signature indicates verification that the content of this document and the scope of the project are accurate. FHWA signature gives approval to distribute this information for public and agency review and comment. Such approval does not commit to approve any future grant requests to fund the Preferred Alternative.



for



10/25/2024

Date



for

Project Sponsor



10/22/2024

Date

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L	Floodplains
M	Water Quality
N	Wetlands
O	Biological Assessment and Habitat Connectivity Analysis
P	Cumulative Impacts Assessment
Q	Public and Agency Outreach

Abbreviations

3R	Restoration, Rehabilitation, and Resurfacing
AADT	Annual Average Daily Traffic
AASHTO	American Association of State Highway and Transportation Officials
ACM	Asbestos Containing Material
AJD	Approved Jurisdictional Determination
APE	Area of Potential Effects
AST	Aboveground Storage Tanks
BGS	Below Ground Surface
BIL	Bipartisan Infrastructure Law of 2021
BMP	Best Management Practice
BOR	Bureau of Reclamation
BNA	Building Nebraska Act of 2011
BUL	Biologically Unique Landscape
CAFO	Concentrated Animal Feed Operation
CAR	Closure Assessment Report
CDOT	Colorado Department of Transportation
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CIA	Community Impact Assessment
CR	County Road
CUFC/CRFC	Critical Urban Freight Connector/ Critical Rural Freight Connector
CWA	Clean Water Act of 1972
dBA	A-weighted decibel
DHHS	Department of Health and Human Services
DOT	Department of Transportation
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	US Environmental Protection Agency
ETJ	Extra Territorial Jurisdiction
FAA	Federal Aviation Administration
FAST	Fixing America's Surface Transportation Act of 2015
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact

FPPA	Farmland Protection Policy Act of 1981
FR	Federal Register
GPITC	Great Plains International Trade Corridor
GPR	Ground Penetrating Radar
HMR	Hazardous Materials Review
HPC	High Priority Corridor
HPM	Highway Project Manager
HRG	Historic Resource Group, Inc.
HSIS	Highway Safety Information Systems
HSPP	Highway Salvage Paleontology Program
IMS	Interactive Mapping System
INFRA	Infrastructure for Rebuilding America
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
IWM	Integrated Waste management
LB	Legislative Bill
LEP	Limited English Proficiency
LST	Leaking Storage Tank
LWCF	Land and Water Conservation Fund
MAP-21	Moving Ahead for Progress in the 21 st Century Act
MM	Mile Marker
MSAT	Mobile Source Air Toxics
NAFTA	North American Free Trade Agreement
NDEE	Nebraska Department of Environment and Energy
NDOR	Nebraska Department of Roads
NDOT	Nebraska Department of Transportation
NeDNR	Nebraska Department of Natural Resources
NEPA	National Environmental Policy Act of 1969
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NFIP	National Flood Insurance Program
NGPC	Nebraska Game and Parks Commission
NHFN	National Highway Freight Network
NHPA	National Historic Preservation Act of 1966
NHS	National Highway System
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places

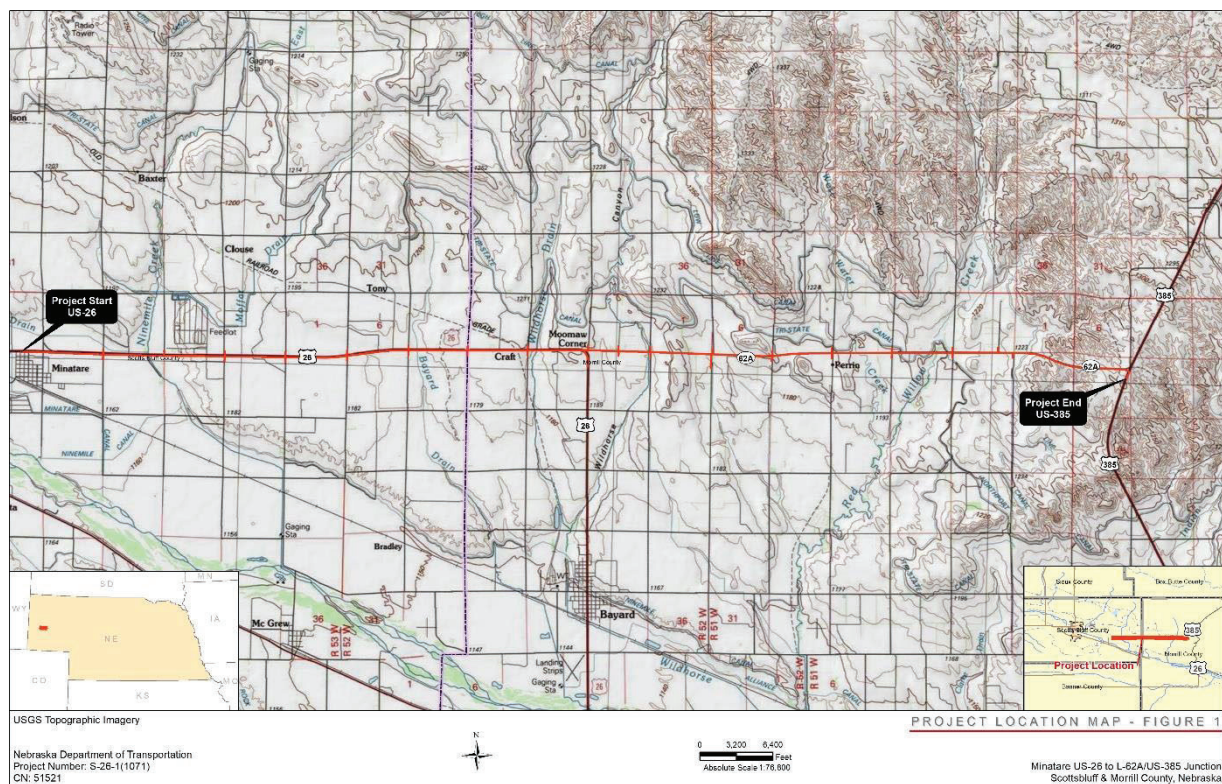
NTIP	Nebraska Transportation Information Portal
PCS	Priority Commercial System
PEM	Palustrine Emergent
PFO	Palustrine Forested
PM	Project Manager
PSS	Palustrine Scrub-Shrub
RA	Release Assessment
RBSL	Risk-based Screening Levels
RCRA	Resource Conservation and Recovery Act of 1976
RDM	NDOT Roadway Design Manual
ROW	Right-Of-Way
RRFB	Rectangular Rapid Flashing Beacons
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SFM	Nebraska State Fire Marshal
SH	State Highway
SHPO	Nebraska State Historic Preservation Office
SVE	Soil Vapor Extraction
SWPPP	Stormwater Pollution Prevention Plan
TEA-21	Transportation Equity Act for the 21 st Century
TMDL	Total Maximum Daily Load
TNM	Traffic Noise Model
Uniform Act	Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970
US	United States
USACE	US Army Corps of Engineers
USC	United States Code
USDOT	United States Department of Transportation
USFWS	US Fish and Wildlife Service
USMCA	United States-Mexico-Canada Agreement
UST	Underground Storage Tank
UWAP	Unexpected Waste Action Plan
VMT	Vehicle Miles Traveled

Chapter 1 Introduction

1.1 Background

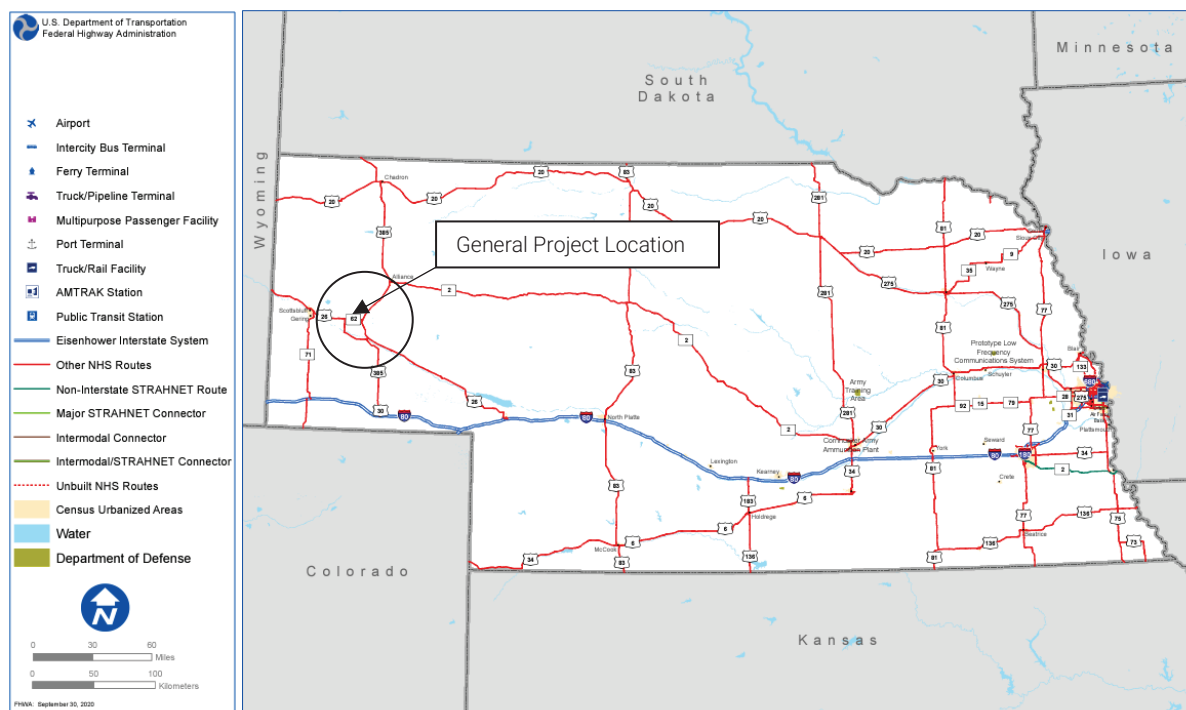
The Nebraska Department of Transportation (NDOT), in cooperation with the United States Department of Transportation's (USDOT) Federal Highway Administration (FHWA), is proposing to improve an 18-mile-long segment of United States Highway 26 (US-26) and Nebraska Highway Link 62A (L62A), both of which are on the National Highway System (NHS), beginning at the City of Minatare, Nebraska, extending east to the junction of United States Highway 385 (US-385). This segment of highway, also known as "the Project", is located within the Nebraska Panhandle, an elongated region extending west from the main portion of the state made up of eleven counties. **Figure 1.1** shows the project location.

Figure 1.1 Project Location



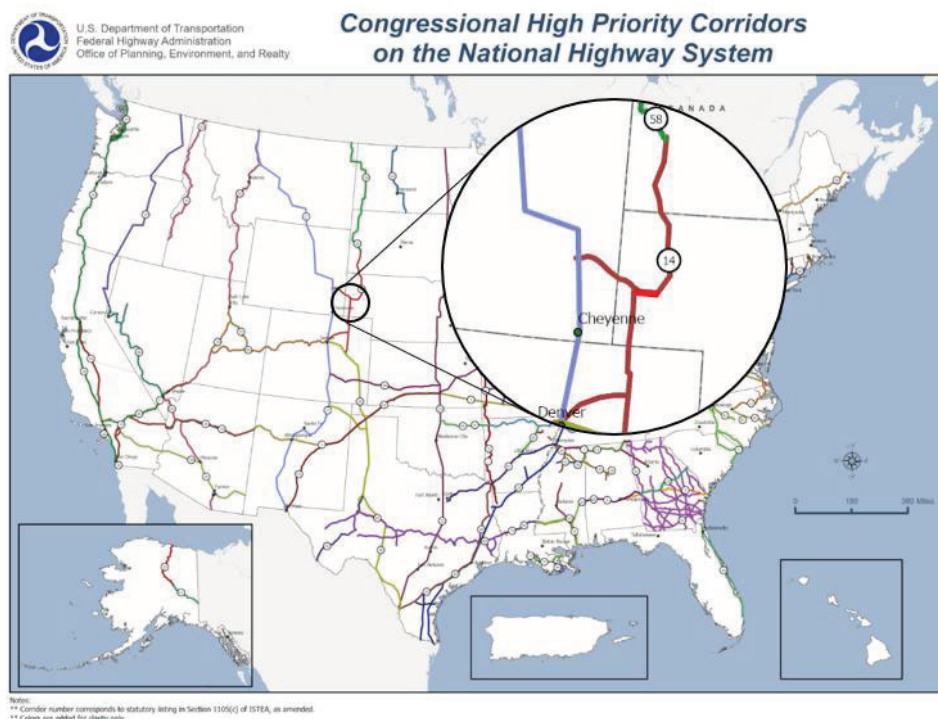
The NHS includes the Eisenhower Interstate Highway System as well as other roads considered to be important to the nation's economy, defense, and mobility. The NHS was developed by the USDOT in cooperation with states and local officials. **Figure 1.2** shows Nebraska's NHS network of roadways. Within the NHS system, Congress has designated certain roads or corridors as being high priorities. This project is part of the Heartland Expressway which is one of the routes that has been designated as a High Priority Corridor (HPC). **Figure 1.3** shows the High Priority Corridors, including the Heartland Expressway (Corridor 14). Five first class Nebraska Panhandle cities (first class cities are those with populations ranging from 5,001 to 100,000), including Scottsbluff, Alliance, Gering, Sidney, and Chadron, are located along the Heartland Expressway route.

Figure 1.2 National Highway System in Nebraska (2020)



Source: https://www.fhwa.dot.gov/planning/national_highway_system/nhs_maps/nebraska/

Figure 1.3 Congressionally Designated High Priority Corridors on the NHS



Source: https://www.fhwa.dot.gov/planning/national_highway_system/high_priority_corridors/hiprimap_lg.jpg

The Heartland Expressway connects the northern terminus of the Ports-to-Plains (P2P) Corridor with the southern terminus of the Theodore Roosevelt Expressway, forming an essential link in the transportation infrastructure for movement of goods and products between Mexico, the United States, and Canada (Figure 1.4). It also serves as the central section of the federally designated Great Plains International Trade Corridor (GPITC) connecting the four states of Colorado, Nebraska, Wyoming, and South Dakota with other States, as well as Mexico and Canada. The Heartland Expressway traverses some of the most agriculture and energy-productive rural regions in the United States and is a major route to popular tourist destinations such as the Rocky Mountains, Black Hills, Scottsbluff National Monument, and Fort Laramie.

The portion of the Heartland Expressway along US-26 and L62A between Minatare and the US-385 junction is currently a 2-lane rural highway. This segment links residents, businesses, and travelers with Interstate 80 (I-80), the largest freight transportation corridor in the United States, at Kimball, Nebraska, and with I-90 at Rapid City, South Dakota. In October 2022, according to then Nebraska Governor, Pete Ricketts, and then NDOT Director, John Selmer, this connection was stated as being a vital link for all sectors of the regional and national economy¹.

In addition to being a High Priority Corridor on the National Highway System and a vital link for Panhandle communities, this segment of US-26/L62A is part of NDOT's Priority Commercial System, a continuous network of routes within the state designed to carry higher traffic volumes, especially larger volumes of commercial vehicles (Figure 1.6).

This Draft Environmental Assessment (DEA) was prepared in compliance with the requirements of the *National Environmental Policy Act of 1969* (NEPA), the Council on Environmental Quality (CEQ) regulations in the Code of Federal Regulations (CFR) (40 CFR 1500-1508), and guidelines in FHWA's Technical Advisory T-6640.8A, *Guidance for Preparing and Processing Environmental and Section 4(f) Documents*. The intent of these regulations and guidelines are to ensure that all factors are considered in the transportation decision-making process, including a concern for the environment, and the involvement of the public.



Typical view along US-26 and L62A showing rural 2-lane highway, shoulder, roadside ditches, and farmland.

¹ <https://aashtojournal.org/2022/10/21/nebraska-dot-completes-heartland-expressway-section/>

56 **Figure 1.4 Ports to Plains Alliance Corridor Map**



PORTS-TO-PLAINS ALLIANCE
CORRIDOR MAP



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1.2 Location

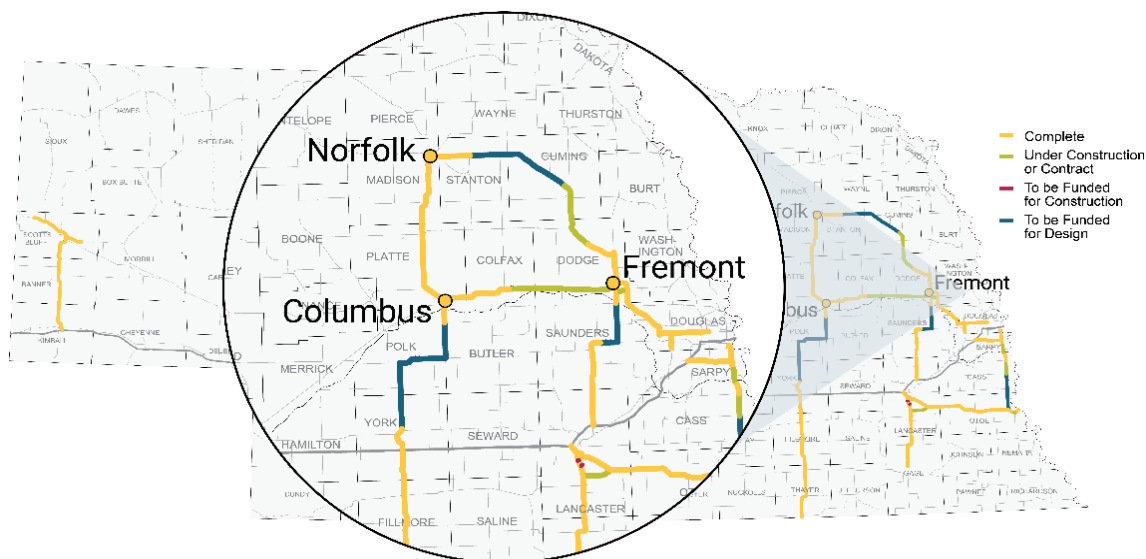
The proposed 18-mile-long project is located in the Panhandle region of western Nebraska (see **Figure 1.1**), a rural area of the state. The project straddles Scotts Bluff and Morrill Counties and is situated mostly along the upper terraces of the North Platte River Valley. The project begins at the west end of the City of Minatare, essentially in line with C Ave, and extends eastward. The easternmost portion of the project rises into the Nebraska Sandhills region where the project ends at the junction of L62A and US-385. The project area includes residences, small businesses, feedlots, and agricultural land uses. East of Minatare the project area is almost entirely in agricultural production with widespread irrigation canals as well as center-pivot irrigation, with sugar beets, potatoes, edible dry beans, corn, and wheat as the dominant crops. The cities of Scottsbluff (to the west) and Alliance (to the east) are regional economic hubs, and centers for both truck and rail transportation, manufacturing, and agricultural production and processing².

1.3 Past Planning

Nebraska Expressway System, Priority Commercial System, and National Highway System

In April 1988, the Nebraska Legislature, through the passage of LB 632 and LB 1041, among other requirements, passed into law the creation of an Expressway System. It also required the Nebraska Department of Roads (NDOR)³ to prepare an annual Needs Assessment that would lay out the financial needs, priorities, and progress of construction of the system. The first Needs Assessment was published in December 1988 and identified the highways to be designated. The expressway system included 600 miles of highways along 16 corridors of the NHS, connecting urban centers of populations greater than 15,000 to the Interstate System, adding those routes which had an average daily traffic count of 500 or more heavy commercial vehicles, and additional segments as required for continuity (see **Figure 1.5**).

Figure 1.5 Original 1988 Nebraska Expressway System (completion as of 2022)



Source: <https://dot.nebraska.gov/projects/tia/cap-improve/expressway-system/>

² Nebraska Panhandle Area Development District (<https://nepadd.com/ceds/> accessed October 2022)

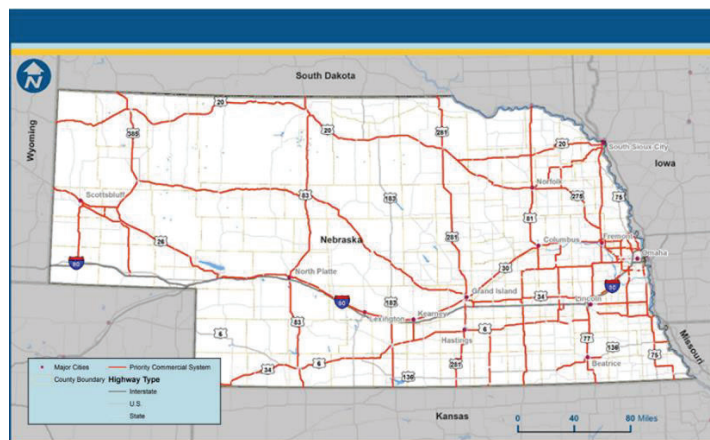
³ In 2017, the Nebraska Department of Aeronautics merged with the Nebraska Department of Roads to form the Nebraska Department of Transportation. For more history of NDOT see <https://dot.nebraska.gov/about/history/>

What is an Expressway in Nebraska?
Nebraska Revised Statute 39-1302
(14) "Expressway means a divided arterial highway for through traffic with full or partial control of access which may have grade separations at intersections;" (4) "Arterial highway means a highway primarily for through traffic, usually on a continuous route;" Source: https://nebraskalegislature.gov/laws/statutes.php?statute=39-1302
Nebraska Revised Statute 39-2103
(2) "Expressway, which shall consist of a group of highways following major traffic desires in Nebraska which rank next in importance to the National System of Interstate and Defense Highways. The expressway system is one which ultimately should be developed to multilane divided highway standards;" Source: https://nebraskalegislature.gov/laws/statutes.php?statute=39-2103
In Nebraska, this is understood to mean a 4-lane divided highway.

Also in 1988, NDOT (NDOR at the time) created and identified Nebraska's Priority Commercial System (PCS), which was intended to provide a continuous network of routes designed to carry higher traffic volumes, especially larger volumes of commercial vehicles. The PCS also includes the rural expressway system and was designed to directly serve the first-class cities, and directly or indirectly serve most of the second-class cities in the State⁴. The PCS is composed primarily of NHS routes (see Figure 1.6).

Nebraska Highway 71 (N-71) between Kimball and Scottsbluff, and US-26 from Mitchell to Minatare were included in the original 1988 Nebraska Expressway System designation, and the rest of the adjacent corridors along US-26, L62A, and US-385 (among others) were designated on the Nebraska Priority Commercial System.

Figure 1.6 Nebraska's Designated Priority Commercial System Roadways



Source: NDOT Freight Plan 2017

⁴First class cities are defined as having populations greater than 5,000 and less than 100,000. Second class cities are defined as having populations greater than 800, and less than 5,000. (<https://nebraskalegislature.gov/laws/laws-index/chap16-full.html>)

Heartland Expressway

In 1991, with the passage of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) legislation, Congress identified the full extent of the Heartland Expressway as a High Priority Corridor (Corridor 14), extending from Denver through Scottsbluff to Rapid City (Figure 1.7). The Heartland Expressway Economic and Engineering Feasibility Study (Wilbur Smith Associates, 1993) (1993 Study) was subsequently commissioned by NDOR and South Dakota DOT to make recommendations on the feasibility and best routing of the corridor between Scottsbluff and Rapid City.

The 1993 Study evaluated:

- Over 50 route combinations generally located between Wyoming State Highway (SH) 29 on the west, and US-385 and Nebraska SH 87 on the east; screened them down to three finalist routes based on logic, cost, travel time, route length, accessibility, tourism, economic potential, and feasibility; and made a recommendation of a preferred alternative; and
- Three highway type alternatives: 4-lane freeway (i.e., expressway with full access control), 4-lane expressway (i.e., 4-lane divided highway with full or partial controlled access), and 2-lane highway with some 4-lane sections (i.e., passing/climbing/auxiliary lanes).

Feasibility was evaluated based on traffic, engineering, cost, environmental impact, travel efficiency, and economic development efficiency. Expressway improvements were considered feasible based on:

- Traffic warrants during peak times of year (summer tourist and fall harvest seasons).
- The corridor area would have a positive benefit/cost ratio between 1.15 and 1.52, and an internal rate of return between 9.3 and 13.5.
- The ability to avoid or mitigate environmental impacts.
- Economic feasibility supported by economic development feasibility (but not by travel efficiency since none of the alternatives had enough traffic).

A recommended route was identified that would provide the greatest transportation and economic development benefit, while minimizing environmental impacts. The feasibility results indicated that a combination 4-lane/2-lane highway was feasible from the standpoint of Nebraska, South Dakota, and Wyoming, with the most feasible route connecting Scottsbluff/Gering to Rapid City via Alliance, Chadron, and Hot Springs utilizing existing highways, rather than constructing a new controlled access freeway on a new alignment. The segments from Scottsbluff/Gering to Alliance and from Hot Springs to Rapid City were considered feasible as 4-lane highways. The segment from Alliance to Hot Springs was deemed to be feasible as an improved 2-lane highway.

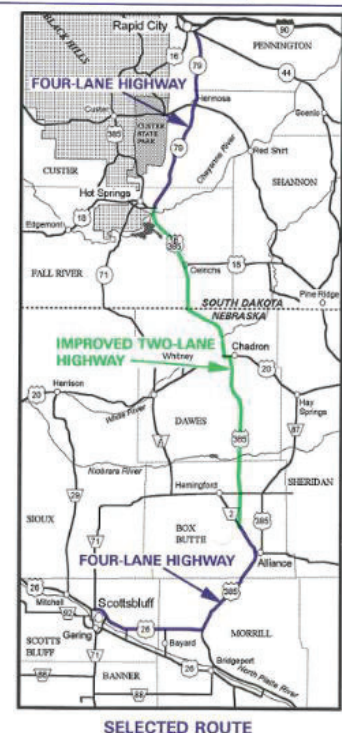
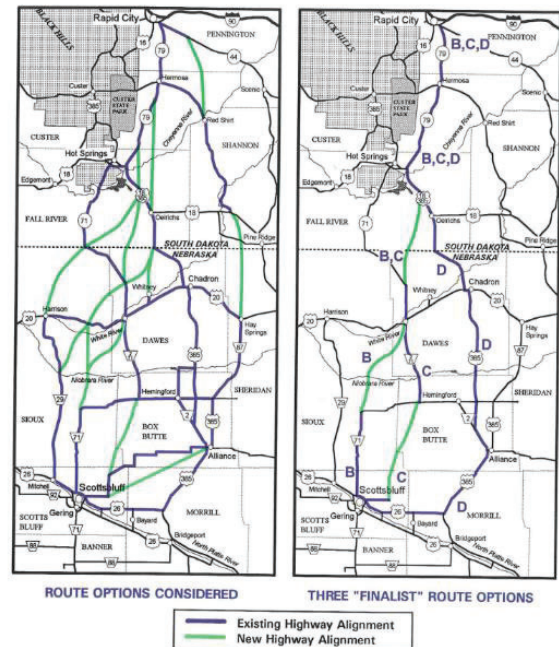
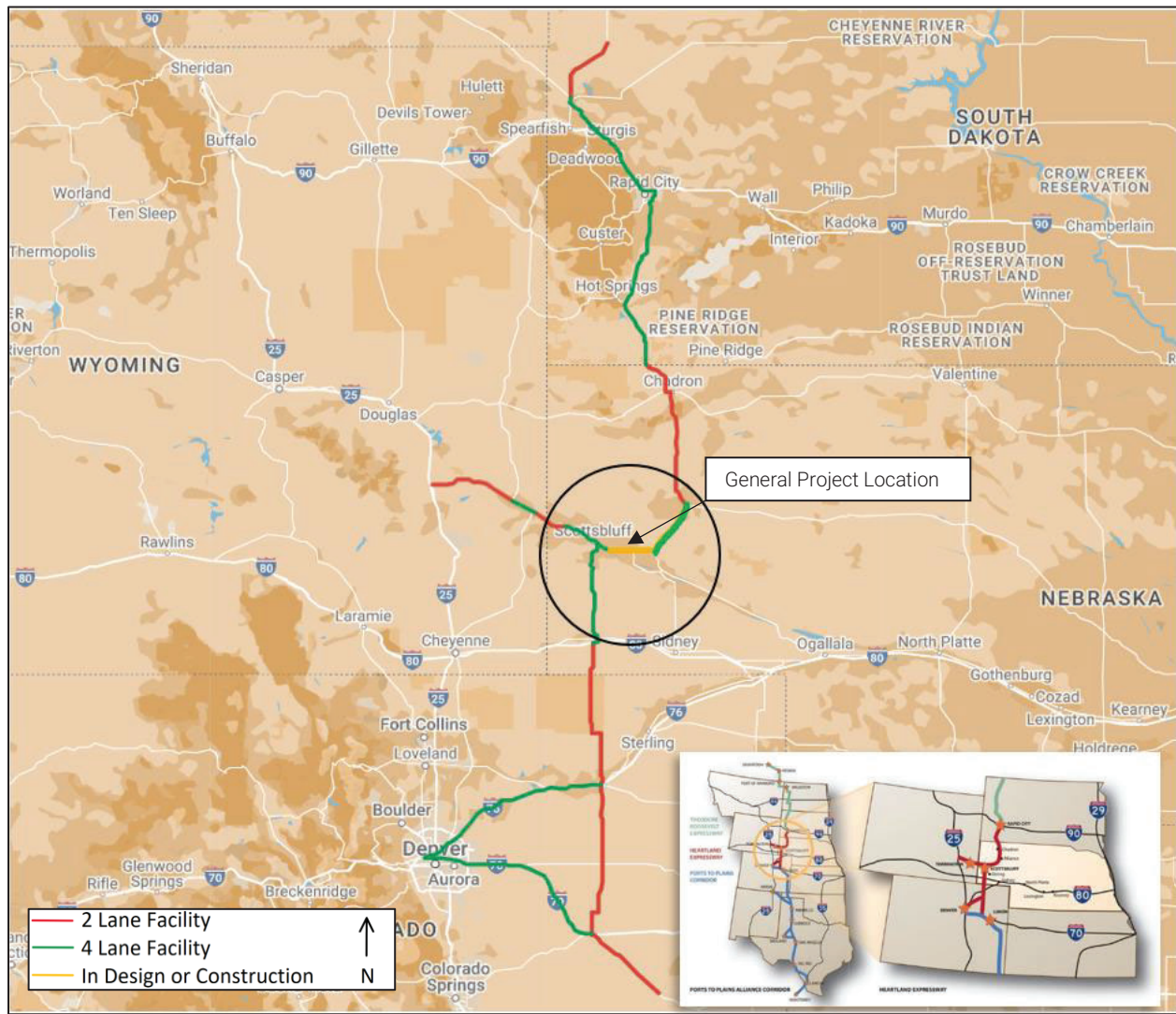


Figure 1.7 Heartland Expressway, Colorado to South Dakota (completion as of 2022)



Source: <https://heartlandexpressway.com/corridor-completion-status/> (red: 2-lane, green: 4-lane, yellow: in design or under construction for improvement to 4-lane)

The 1993 Study was updated by NDOT in 2014 (*Heartland Expressway Corridor Development and Management Plan*). The Technical Memorandum that calculated economic benefits to support this report indicated that the Heartland Expressway was likely to result in even greater economic benefits (\$452.4M) than were identified in the 1993 Study, including construction jobs, operation and maintenance jobs and purchases, and economic development impacts such as attracting new roadside services and providing a more competitive low-cost location with proximity to larger urban areas especially for businesses taking advantage of the region's significant agricultural assets and distribution facilities. The benefit/cost ratio of these improvements were calculated to be 1.88, which is an increase from the ratios calculated in the 1993 Study.

Since 1991, approximately 60 percent of the Heartland Expressway has been improved in some way, including segments in Colorado east of Denver, the entirety of the corridor within South Dakota from the Nebraska state line to Rapid City, in Nebraska from Kimball to east of Scottsbluff, and most recently, from the US-385 junction with L62A to Alliance.

Many community organizations and residents of western Nebraska and South Dakota have continued to advocate for this four-lane highway to provide an improved connection to I-80 and I-90. In the Nebraska Panhandle, the Heartland Expressway is regularly discussed as a needed stimulus for economic development of the region⁵.

Ports-to-Plains Alliance

The Heartland Expressway is also a part of the Ports-to-Plains (P2P) Alliance, a collaboration of major highway corridors covering ten rural states, as well as international corridors stretching from Mexico to Canada. Initial members included the Ports to Plains Corridor in Texas, New Mexico, Oklahoma, and Colorado; the Heartland Expressway in Colorado, Nebraska, Wyoming, and South Dakota; and the Theodore Roosevelt Expressway in South Dakota and North Dakota. Additional corridors connected to the P2P Alliance include the Camino Real Corridor in Montana; the Mexico Corridor; and the Eastern Alberta Trade Corridor.

As of 2020, the combined efforts of the P2P Alliance have resulted in more than \$2 billion in Federal and state funding⁶ to develop, build, and improve the Alliance's corridor.

The P2P Alliance is a non-profit, non-partisan, community-driven advocacy group led by mayors, councilpersons, economic development officials, business and other opinion leaders from ten US states served by a nine-state, 2,300-plus mile economic development corridor between Mexico and Canada. In the US these communities reach from Texas on the south to North Dakota and Montana on the north. The corridor extends into the energy and agriculture rich areas in Canada. The Government of Alberta joins many communities in Alberta and Saskatchewan looking to expand infrastructure serving the economic needs of their regions and the whole of the Ports-to-Plains Corridor. In Mexico development is taking place connecting the Texas/Mexico border in communities along the corridor stretching to the Ports of Mazatlán on the west coast of Mexico (Figure 1.4).

The corridor serves North America's energy heartland, including the oils sands in Alberta, Bakken, Niobrara, Permian, Cline, Eagle Ford, and emerging Mexico energy plays⁷. At the same time, it embraces America's new energy economy, and is capitalizing upon wind power, biofuels and other innovation sectors to renew one of America's greatest legacies, the rural heartland.

As of 15 March 2022, the segment of the P2P Corridor from Laredo, Texas to Raton, New Mexico has been designated by Congress as the future extension of I-27⁸. The designation was made possible by the FY22 Omnibus Appropriations Bill, and further solidifies the planning and vision for a 4-lane divided highway from Mexico to Canada along this route⁹.

Great Plains International Trade Corridor (GPITC)

The P2P Alliance is the US domestic portion of an even larger trade corridor, which would extend into both Mexico and Canada. This trade corridor is known as the Great Plains International Trade Corridor (GPITC).

The Heartland Expressway, along with two other High Priority Corridors (P2P, High Priority Corridor No. 38 and the Theodore Roosevelt Expressway, High Priority Corridor No. 58), form the central part of

⁵ <https://heartlandexpressway.com/>

⁶ P2P Alliance - 2020 Ports to Plains Policy Paper "2020 Policy Priorities – Surface Transportation Reauthorization" (<http://www.portstoplains.com> accessed October 2022).

⁷ <https://www.inboundlogistics.com/articles/ports-to-plains-trade-corridor-north-americas-energy-and-agricultural-heartland/> (accessed October 2022)

⁸ https://portstoplains.com/wp-content/uploads/2022/03/Future_Interstate_Designation_News_Release_031522.pdf

⁹ https://portstoplains.com/wp-content/uploads/2021/04/2021_ports-to-plains_policy_priorities_complete.pdf

the GPITC route connecting Monterrey, Nuevo Leon, Mexico, to Regina and Saskatoon, Saskatchewan, Canada.

The GPITC is the backbone of a north-south transportation system extending from Mexico to Canada, with direct connections to additional corridors, including:

- **SPIRIT** (High Priority Corridor No. 51, extending from Wichita, Kansas, south to El Paso, Texas),
- **La Entrada al Pacífico** (High Priority Corridor No. 56, extending from the Permian Basin in southwest Texas through Presidio, Texas, to Topolobampo, Mexico),
- **Route 50 High Plains** (High Priority Corridor No. 48, extending from Newton, Kansas to Pueblo, Colorado), and
- **Camino Real** (High Priority Corridor No. 27 which extends from El Paso, Texas to the US-Canada border south of Calgary).

By the Numbers: The Ports-to-Plains Alliance Corridor Serves:

- 5 of the top 15 wind generation states (2019)
- 27% of the nation's ethanol refineries (2018)
- 6 of the top 10 natural gas producing states (2019)
- 7 of the top 15 oil producing states (2019)
- 7 of the top 10 farm states for land in farms (2019)
- 3 of the top 10 farm states in state receipts for all farm commodities (2019)



Source: <http://portstoplains.com/about>

The Great Plains International Trade Corridor Assessment (Cambridge Systematics, 2008) indicated the need for an improved north-south route including the Heartland Expressway. The study also showed that the project roadway carries a high volume of trucks, and that traffic on the project route was likely to increase in the range of 81 to 140 percent by the year 2030.

Heartland Expressway Scottsbluff to US-385

In 2000, an EA and Finding of No Significant Impact (FONSI) was prepared for a portion of the Heartland Expressway along US-26 and L62A, extending from Scottsbluff to US-385. The proposed action was to widen 26 miles of US-26 and L62A from a 2-lane roadway to a 4-lane divided expressway, from east of Scottsbluff to the intersection of L62A with US-385, south of Alliance. The US-26/L62A corridor was divided into two project segments. The western segment, Scottsbluff to Minatare, which was included in the NDOT's (then NDOR) five-year construction program. In contrast, the eastern segment, Minatare to US-385, did not receive funding from the five year construction program and did not proceed beyond the conceptual design and environmental phase.

The EA considered two alternatives, a No Build and Build-Alternative. The Build Alternative proposed improving the existing 2-lane roadway to a 4-lane divided expressway. The typical cross-sections for the 4-lane expressway varied by location, with the widening generally achieved by adding two lanes and median either to the north or south of the existing lanes. The decision on which side to widen was based on engineering factors and efforts to minimize environmental impacts. The build alternative was identified as the preferred alternative for the portion of the Heartland Expressway on US-26 and L62A. However, due to funding constraints, the eastern segment which included Minatare to US-385 did not proceed to construction.

1.4 Logical Termini

The proposed project extends from the City of Minatare to the L62A junction with US-385. This segment is the next logical segment of the overall Heartland Expressway corridor based on the fact that it is a gap in the otherwise 4-lane highway system from Kimball to Alliance along the Heartland

236 Expressway. The start and end points of this project would connect to existing 4-lane segments on
237 either end of the project.

238 1.5 Summary

239 The purpose of this EA is to identify and evaluate the potential adverse and beneficial effects, or
240 impacts, that the Project would have on the environment and to provide an opportunity for public and
241 resource agency input in the decision-making process. FHWA considers the context (the relationship
242 between a proposed project and the local environment) and the intensity of impacts to determine the
243 significance of impacts.

244 If, based on the EA, FHWA determines that no significant impacts have been identified or that
245 significant impacts can be minimized or mitigated, FHWA would prepare a FONSI. If significant
246 environmental impacts are identified and cannot be minimized or mitigated, NEPA requires the
247 preparation of a more detailed Environmental Impact Statement (EIS).

Chapter 2 Purpose and Need

This chapter discusses the purpose of and need for the Project. Chapter 1 identified the Project location and background. Subsequent chapters address the alternatives considered (Chapter 3); the affected environment and potential environmental consequences (Chapter 4); agency coordination and public involvement efforts (Chapter 5); and mitigation measures (Chapter 6).

2.1 Purpose

This project is intended to **develop an improved transportation corridor connecting the junction of US-385 and L62A, with the city of Minatare. This highway has been identified as part of the Heartland Expressway, a Highway Priority Corridor on the National Highway System (NHS).**

The improved corridor is intended to address the following transportation purposes: *(These are all explained in greater detail in the following sections)*

- To **provide an improved highway on a congressionally designated NHS High Priority Corridor that increases the efficiency and safety of commerce and travel** as included in the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). ISTEA calls for the development of High Priority Corridors on the NHS, including the Heartland Expressway.
- To **fulfill federal legislative intent** of the ISTEA; the Transportation Equity Act for the 21st Century (TEA-21); the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), which have provided federally “earmarked” or congressionally directed funds for the development of the Heartland Expressway; and the Moving Ahead for Progress in the 21st Century Act (MAP-21), which continued authorization of funding as deemed necessary in SAFETEA-LU.
- To **fulfill state legislative intent of the Build Nebraska Act and the Transportation Innovation Act**; the State of Nebraska has identified this project as one of the high priority projects to receive funding under these acts. The bills themselves do not specify which projects are funded, but they do allow NDOT to determine funding and priorities based on various needs and safety concerns, as well as engineering performance and economic benefits. Using this authority in 2016, NDOT utilized a new process to identify and prioritize projects for planning, design, and construction; and this project was one of those advanced for construction.
- To **address roadway and operational challenges** along this segment of the Heartland Expressway corridor that are currently reducing the efficiency and safety of this highway.

2.2 Need

2.2.1 Improved Highway Corridor

National Highway System High Priority Corridor

After adoption of the North American Free Trade Agreement (NAFTA) in 1994, the Heartland Expressway HPC was designated in 1998 under the provisions of the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991. The United States-Mexico-Canada Agreement (USMCA) replaced NAFTA effective in July 2020.

Section 1105 of ISTEA, the original act in which the NHS High Priority Corridors, including the Heartland Expressway, were identified, stated that the HPC highways were of national significance and allowed the states to give priority to funding the construction of these corridors and to provide

increased funding for segments of the corridors that were identified for construction. In addition, ISTEAs stated: “In approving programs of projects under this section, the Secretary may give priority of approval to, and expedite construction of, projects to complete construction of such segments.”

The focus of ISTEAs was on improving the efficiency and safety of the NHS network, which makes up 4 percent of the nation’s roads, but carries 40 percent of the traffic and 75 percent of heavy truck traffic¹⁰. The part of the National Highway System covered by this project is particularly important to truck traffic; 2021 traffic numbers provided by the NDOT Interactive Statewide Traffic Flow Map indicate that an average of 11-16 percent of the vehicles on the project route is a truck¹¹. Based on local observations, truck traffic along this segment increases during the harvest season, typically July to February.

Section 1105 of ISTEAs spelled out the need for High Priority Corridors on the NHS as follows:

- The construction of the Interstate Highway System connected the major population centers of the Nation and greatly enhanced economic growth in the United States;
- Many regions of the nation are not now adequately served by the Interstate Highway System or comparable highways and require further highway development to serve the travel and economic development needs of the region; and
- The development of transportation corridors is the most efficient and effective way of integrating regions and improving efficiency and safety of commerce and travel and further promoting economic development.

In general, the number of central and western United States north-south highways proposed as High Priority Corridors (see **Figure 1.3**) illustrates the need for improved north-south highways in these regions, as existing ones are few and far between. In particular, this project’s segment is vitally important to the transportation network in the Panhandle region because this region has so few north-south links in the NHS. Currently, although N-71 is a NHS highway south from Scottsbluff, there are no NHS roads that cover the north-south extent of the Panhandle further west of US-385 in Nebraska (**Figure 1.2**). The closest north-south NHS highway to the west is US-85 in Wyoming, approximately 65 miles from US-385. The closest north-south NHS roadway to the east is US-83, approximately 125 miles from US-385.

As discussed previously, the Heartland Expressway has been planned for nearly 35 years. Currently, it is a 4-lane divided highway from the City of Minatare to the west, past Scottsbluff and south to I-80, as well as along US-385 from the junction with L62A north to Alliance, and from the South Dakota line northward (**Figure 1.7**). This leaves two separate 2-lane roadway gaps between the existing 4-lane sections, extending from the Nebraska/South Dakota line to Alliance, and from Minatare to the US-385 junction. As funding has become available, and the transportation needs increase for the Heartland Expressway route, these gaps are being addressed, which would provide an improved transportation network that connects not only the cities within the Heartland Expressway corridor, but others throughout the Great Plains.

Minatare to US-385 Corridor Crash History

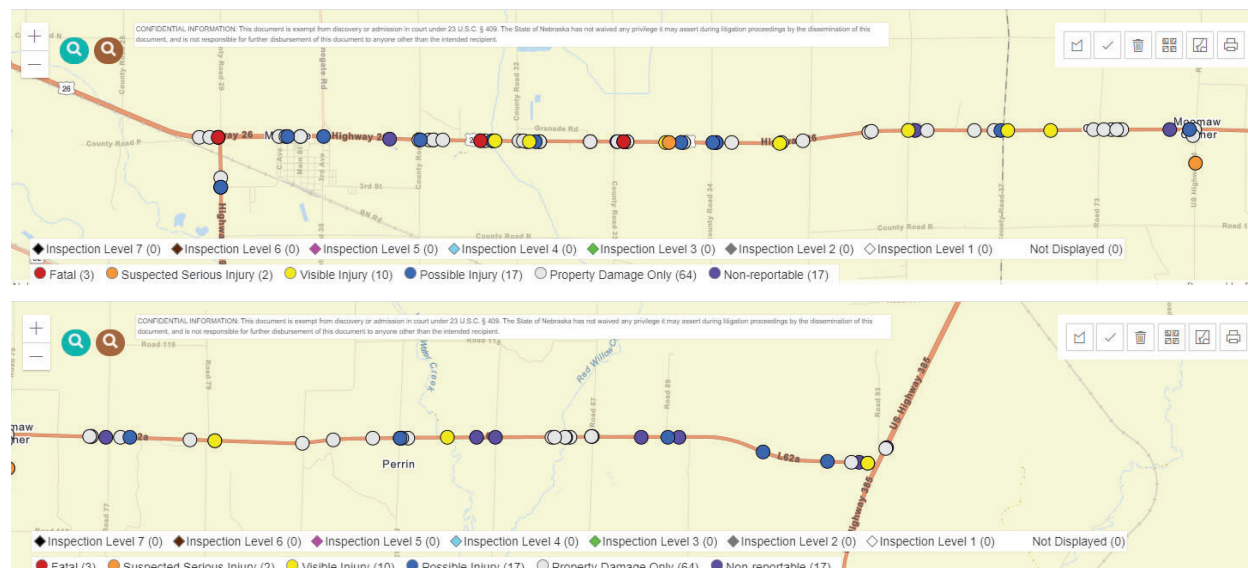
An analysis conducted in 2020 by NDOT for this project identified that in the four years between 2016 and 2019, this segment of rural 2-lane highway (US-26 and L62A between Minatare and US-385) had a calculated crash rate between 1.12 and 1.19 (**Figure 2.1**). Compared to the average crash rate for similar 2-lane highways in Nebraska over this same period (0.662), this is nearly double the average rate. Further, the 4-lane section in Minatare, where the roadway transitions from 2 to 4 lanes, had a

¹⁰ FHWA (<http://www.fhwa.dot.gov/publications/publicroads/96spring/p96sp2.cfm> accessed October 2022)

¹¹ <https://dot.nebraska.gov/travel/map-library/> accessed March 2023

crash rate of 1.84, which was also much higher than the average of 1.221 for the same period for similar 4-lane highways.

Figure 2.1 Crash History along US-26 and L62A from Minatare to US-385 (2016-2019)



Source: Nebraska Transportation Information Portal (NTIP) <https://ntip.nebraska.gov/Map>

The types of crashes are also notable, particularly in that the number of crashes that were injuries or fatalities were between 24% and 38% of the total crashes in this period. There were 2 fatalities along this segment of highway, one each in 2016 and 2017. On average, there were between 20 and 32 crashes per year in this segment of highway.

These numbers of crashes, injuries, and fatalities represent real lives affected and real damages to property and wildlife. While no specific patterns of crashes were observed, these numbers are much higher than the averages for similar roadways and support the need to address safety wherever possible.

The proposed project would fulfill the congressionally authorized directive to construct a High Priority Corridor using National Highway System routes and would thereby increase the efficiency and safety of travel and commerce as directed in ISTEA.

2.2.2 Federal and State Legislative Intent

In keeping with the development of the High Priority Corridors and as a key part of the Heartland Expressway, the federal government in the 2005 SAFETEA-LU legislation included funding to build the section between Minatare and Alliance, which is further divided into three smaller projects with logical termini: from Minatare to the Bayard turnoff (i.e. where US-26 turns south and L62A begins), from the US-26/L62A junction to the L62A/US-385 junction, and from the L62A/US-385 junction to Alliance. The L62A junction to Alliance segment was recently completed (fall 2022), leaving the two remaining segments that make up this project as the only remaining gap in the intra-state portion of the Heartland Expressway between the cities of Kimball, Scottsbluff, Gering, and Alliance.

Ongoing funding provided by the federal government and state governments represents a continued effort to complete the Heartland Expressway. **Table 2.1** and **Table 2.2** present a history of these funds. The following sections demonstrate more recent and ongoing funding commitments.

Table 2.1 Nebraska Earmarks received for the Heartland Expressway

Description	Amount	Year	Legislation	State	Comment
Heartland Expressway Corridor Development and Management Study	\$475,000	2009	Omnibus Appropriations Act	Nebraska	Sponsor - Congressman Adrian Smith
Construction of the Heartland Expressway between Alliance and Minatare	\$5,000,000	2005	SAFETEA-LU	Nebraska	NA
Construction of the Heartland Expressway between Alliance and Minatare	\$8,000,000	2005	SAFETEA-LU	Nebraska	NA
Construction of the Heartland Expressway between Alliance and Minatare	\$6,000,000	2005	SAFETEA-LU	Nebraska	NA
Construction of the Heartland Expressway between Alliance and Minatare	\$2,500,000	2005	SAFETEA-LU	Nebraska	NA
Heartland Expressway Nebraska	\$855,000	2005	SAFETEA-LU	Nebraska	NA
Heartland Expressway Nebraska	\$1,500,000	2003	TEA-21	Nebraska	NCPD program

Source: <http://earmarks.omb.gov/earmarks-public/> accessed 5 August 2014

Table 2.2 Other State Earmarks received for the Heartland Expressway

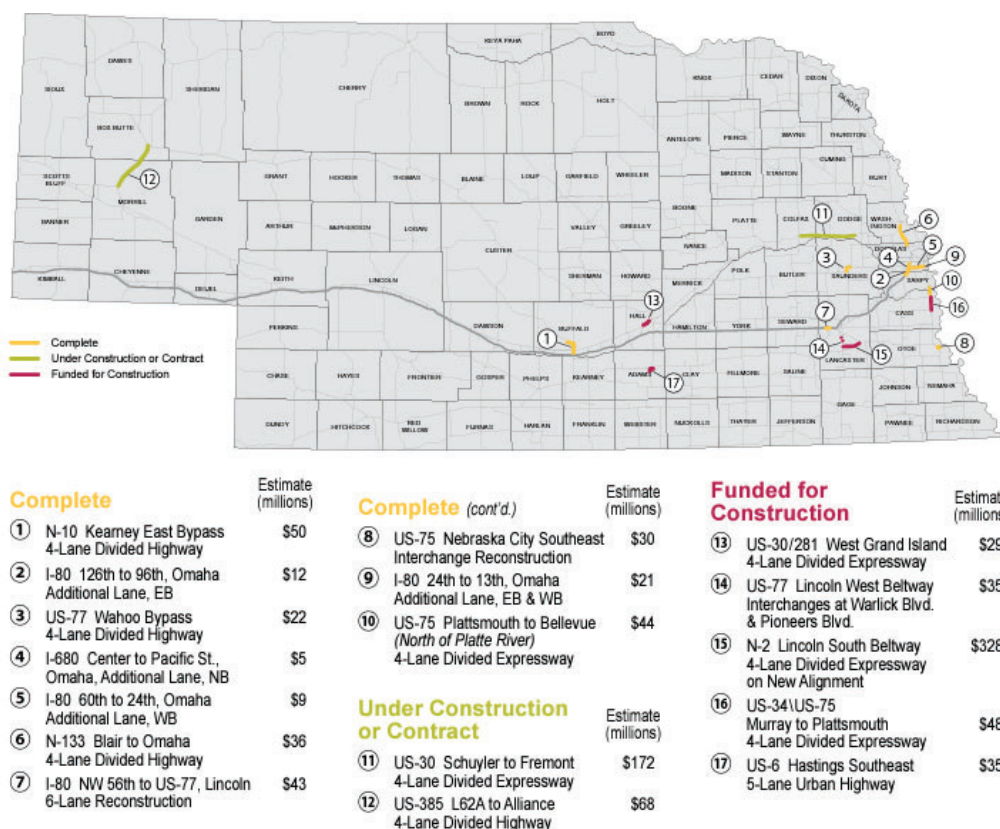
Description	Amount	Year	Legislation	State	Comment
Heartland Expressway South Dakota	\$1,968,000	2005	SAFETEA-LU	South Dakota	NA
Purchase critical conservation easements along the Heartland Expressway (Highway 79) adjacent to Custer State Park and Wind Cave National Park	\$2,000,000	2005	SAFETEA-LU	South Dakota	NA
Construct Exit 61 I-90 Rapid City (Heartland Expressway)	\$15,116,000	2005	SAFETEA-LU	South Dakota	NA
Heartland Expressway Improvements	\$5,000,000	2005	SAFETEA-LU	Colorado	NA

Source: <http://earmarks.omb.gov/earmarks-public/> accessed 5 August 2014

Build Nebraska Act, Transportation Innovation Act, and StEEP Selection Process in 2016

With the passage of the Build Nebraska Act (BNA) in 2011, the State of Nebraska embarked on a 20-year plan to improve roadway infrastructure statewide. Funding was secured by a ¼ cent increase in the gasoline tax, and the focus was placed on completing and expanding the Expressway System, the High Priority Corridors, and preservation of the existing transportation system. In November 2011, NDOT announced nearly \$600 million in investments to expand 17 expressways, interstate, or high priority corridors across the state (Figure 2.2). One of these projects was the expansion of US-385 to 4 lanes, from L62A to Alliance.

Figure 2.2 Build Nebraska Act and Transportation Innovation Act (2011 Progress)

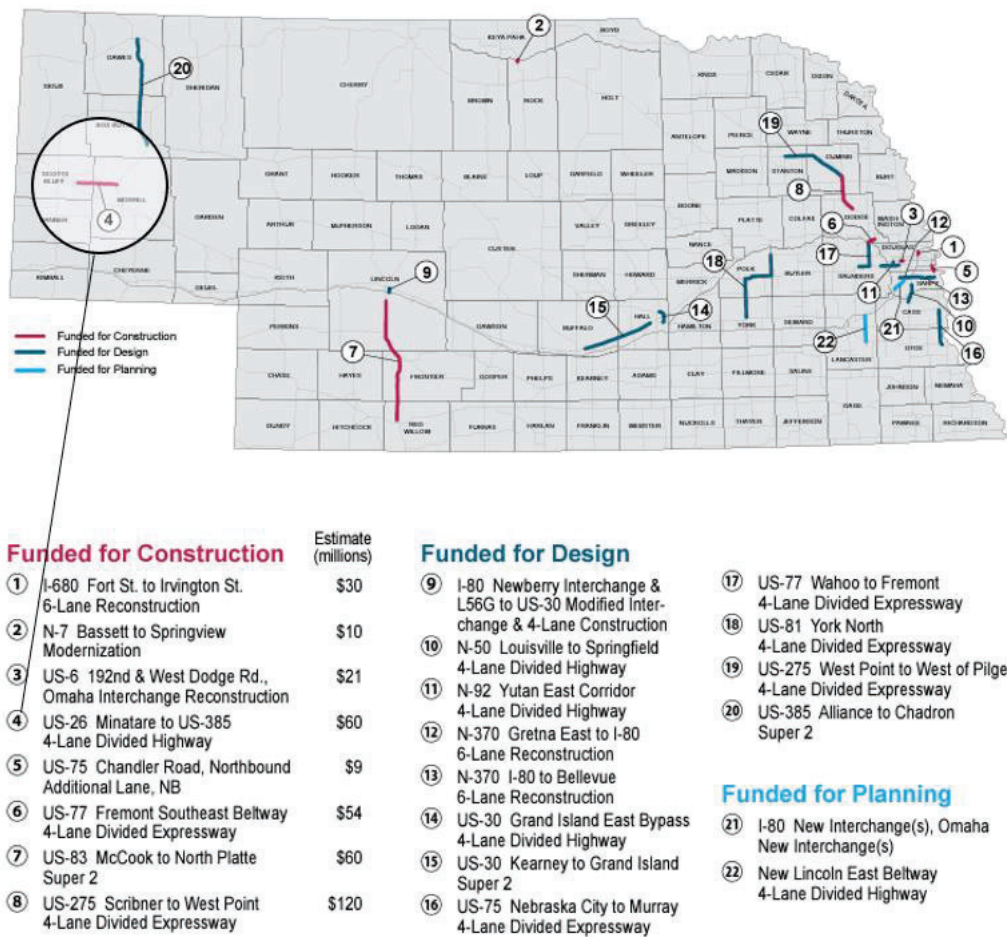


Source: 2019 BNA/TIA Status Update (<https://govdocs.nebraska.gov/epubs/R6000/Q008-2019.pdf>)

In the summer of 2016, NDOT rewrote the book on Capital Improvement selection. The new selection process was entitled “StEEP” (Stakeholder. Engineering. Economics. Priorities.) and incorporated a listening campaign that emphasized public input. StEEP was used to prioritize candidate projects that reflected the connection between transportation investments and the economy. More than 2,000 Nebraskans participated in the process that identified more than \$8 billion in potential transportation projects for funding consideration. Candidate projects were evaluated for their economic and engineering performance and given an overall performance score. Projects were selected based on performance scores and other important considerations, such as geographic inclusion, progress on the Expressway System and High Priority Corridors, Interstate and Expressway connectivity, and available supplemental funding.

The StEEP selection process resulted in a \$300 million investment in eight construction projects (including this project), 12 design projects, and the planning of two more. These selections (Figure 2.3) were funded by a combination of the BNA Next 10 Years and the TIA projected revenues anticipated by 2033. The investments will improve safety on Nebraska highways, promote economic growth throughout the state and fulfill the 1988 vision to expand Nebraska’s Expressway System. To that end, in September 2016, NDOT announced that 100 percent of the Nebraska Expressway System was either complete, under construction, or funded for construction or design.

Figure 2.3 Build Nebraska Act and Transportation Innovation Act (2016 Progress)



Source: 2019 BNA/TIA Status Update (<https://govdocs.nebraska.gov/epubs/R6000/Q008-2019.pdf>)

Minatare to US-385 (Project 4) was one of two Heartland Expressway projects selected along with Alliance North to Chadron (Project 20). This project was identified in the initial and final selection process as a 4-lane divided highway, while Alliance to Chadron was originally proposed as a 4-lane divided highway but was selected for design as a Super 2 highway due to funding limitations.

Ongoing Federal Funding and Support

There have also been several funding bills in the last decade that have been approved at the federal level, including annual appropriations, omnibus spending, and two major infrastructure bills passed by Congress that demonstrate federal support and intent for advancing the construction of the Heartland Expressway, among other major highway corridors.

In March 2024, Nebraska's Senator Deb Fischer secured \$12.865M in funding to "Expand the Heartland Expressway to four lanes" from Minatare to US-385. This congressionally authorized funding was passed in the FY 2024 Transportation, Housing and Urban Development, and Related Agencies Appropriations Act¹².

Since 2003, federal and state legislative actions have provided continued and on-going funding for the Heartland Expressway. These funds represent an obligation of resources toward the eventual completion

¹² <https://www.fischer.senate.gov/public/index.cfm/2024/3/fischer-secures-key-nebraska-priorities-in-government-funding-bill>

of the overall corridor; as such, this project fulfills this federal and state legislative intent to complete the Heartland Expressway Corridor.

2.2.3 Roadway and Operational Challenges

Existing Conditions

The existing segment of US-26 through Minatare consists of two 12-foot-wide composite lanes, a two-way center turn-lane and 10-foot-wide shoulders, of which 8 feet is surfaced with asphalt. The existing segments of US-26 and L62A, east of Minatare, consist of two 12-foot-wide asphalt lanes and 10-foot-wide shoulders, of which 8 feet is surfaced with asphalt. Just west of the US-385 junction, there is roughly one mile of climbing lane for eastbound traffic on L62A, consisting of a 12-foot-wide composite lane and no surfaced shoulder. The roadway segments are generally in “good” condition. There are four shorter stretches within the overall project limits that are characterized by different land uses and terrain, resulting in different traffic and transportation issues. These are described below:

- In Minatare – This segment extends from approximately the intersection of US-26 and Main Street to approximately 2,600 feet east of Stonegate Road, to the east corporate limits of Minatare. The segment is urban in nature with multiple access points for residences and businesses.
- Middle Section - This segment extends from approximately 2,600 feet east of Stonegate Road to west of the existing junction of US-26 and L62A. The segment is rural in nature with level terrain and multiple access points for farmsteads and businesses.
- L62A/US-26 Junction area – The junction of US-26 and L62A is approximately the mid-point of the project. At the junction, US-26 turns south and L62A begins and continues east. The north leg of the junction is County Road 75. This area is rural in nature.
- East Section – This segment begins east of the existing junction of US-26 and L62A and continues east to the junction of L62A and US-385. This segment is rural in nature with level to rolling terrain and multiple access points for farmsteads and businesses.

There are several issues that are relevant to the roadway and operational challenges seen along the project alignment:

High Volume of Truck Traffic

This segment of the NHS is particularly important to truck traffic; 2021 traffic numbers provided by the NDOT Interactive Statewide Traffic Flow Map, indicate that an average of 11-16 percent of the vehicles on the project route is a truck. The current average daily volume of trucks on this segment of roadway is approximately 914 per day according to recent NDOT counts. Based on local observations, truck traffic along this segment increases during the harvest season, typically July to February.

Longer and Heavier Trucks

US-26 and L62A were originally built as 2-lane rural highways to connect smaller Nebraska towns to the state highway system and to provide access for farm to market trucks, which were at the time, much shorter and lighter. Changes in the agricultural industry have resulted in the use of longer and heavier trucks, including tankers and semi-trailers often pulling pup trailers. According to the NDOT permit division, there were between 465 and 775 trucks annually requiring oversize and/or overweight permits on this highway segment between 2018 and 2022. It is worth noting that these figures represent only the permits issued by NDOT, and it is estimated that several thousand more oversize and/or overweight trucks utilize this stretch of highway but don't require permits under State Statutes.

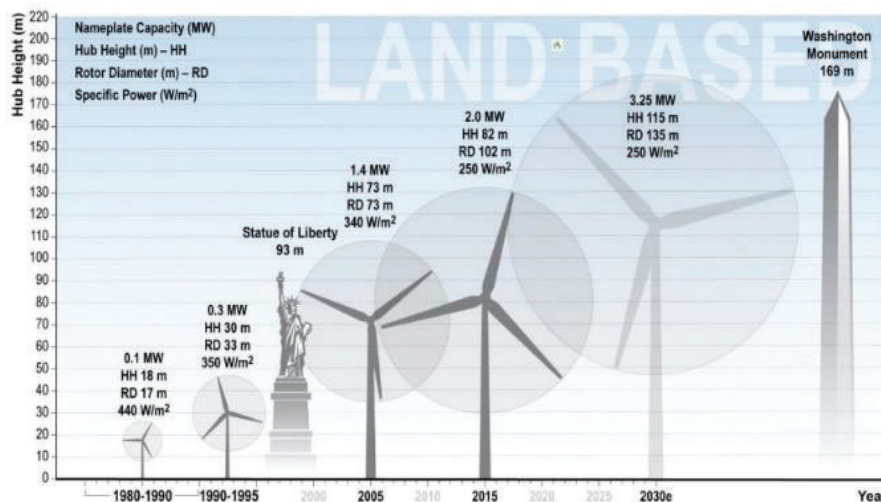
Furthermore, under Nebraska state law¹³, sugar beet trucks in this area are allowed by permit the flexibility to exceed legal length and legal weight coming out of the fields. Improvements in agricultural production have also increased the total volume of produce being transported from farm to market, and to temporary storage areas.

The number of larger trucks with trailers primarily hauling sugar beets during harvest season can create conflicts with other vehicles using these roadways. In the segment of US-26 and L62A from Minatare to US-385, there are approximately 193 access points (field drives, driveways, and county roads) where trucks may access the highway.

NDOT data shows an increase in the number of trucks utilizing this corridor to transport components for wind turbines, including blades, tower sections, nacelles (i.e., generators), and construction equipment. Many of these trucks are longer and/or heavier than those typically allowed on highways and require oversize/overweight permits from NDOT. According to the NDOT permit division, between 2018 and 2022, there were over 165 permits issued for trucks longer than 145 feet, that were noted as carrying “renewable energy components.” These trucks ranged from 145 feet to 240 feet.

According to Reuters, just a decade ago, wind turbine blades averaged approximately 120 feet; however, as wind turbine technology has improved, the size of these components has continued to increase (Figure 2.4), with future wind turbine blades expected to reach lengths of 200 feet or longer¹⁴.

Figure 2.4 Expected increase in land-based wind turbine size in the U.S.



Source: www.reutersevents.com

Larger and longer trucks accelerate slower and often travel at slower speeds, they often need to encroach into oncoming traffic lanes when entering and exiting the highway, and they also require longer passing lengths for faster moving vehicles to safely pass.

Encroachment by Turning Trucks

Turning vehicles currently encroach on opposing travel lanes to accomplish left and right turns. This is a potential hazard as vehicles heading in the opposite direction may not be able to stop in time to

¹³ <https://statepatrol.nebraska.gov/divisions/field-services/carrier-enforcement>, and <https://www.nebraskalegislature.gov/laws/statutes.php?statute=60-6,288>

¹⁴ <https://www.reutersevents.com/renewables/wind-energy-update/rising-wind-turbine-sizes-spur-new-hoisting-design-solutions>

avoid a slow-moving truck. The trucks that use US-26 and L62A are large and include tankers as well as semi-trailers often pulling pup trailers. Turning without running off the pavement can be quite challenging for these vehicles, and as described above, there are approximately 193 existing access points on the project where this can happen.

Longer Passing Distances

The longer length of trucks can increase the required distance for a passenger vehicle to complete a pass of the truck. In this case, the use of 120-foot long sugar beet trucks may warrant such consideration. Based on *NCHRP Report 505*¹⁵, the length required to complete the pass of such a sugar beet truck can be 400 to 500 feet longer than a standard pass. With the longer trucks noted above for the renewables industry, these passing lengths can be extremely long, and in some cases, trucks cannot be passed safely or at all.

Seasonal Tourist Traffic

Seasonal increases of vehicles with towed campers occur along the project alignment, as it is a direct connection to many regional tourist destinations, including Mount Rushmore National Park, Scottsbluff National Monument, Chimney Rock National Historic Site, Chadron and Fort Robinson State Parks.

Other local recreation sites nearby also include Lake Minatare State Recreation Area, North Platte National Wildlife Refuge, Lake Alice, and Nine Mile Creek State Wildlife Management Area, all of which utilize Stonegate Road and US-26 for access. Further compounding these issues, is that the summer tourist season overlaps with the local wheat harvest, and the corresponding increase in harvest trucks.

Crash History and Truck Collisions

As described previously in **Section 2.2.1**, the calculated crash rate for this segment of rural 2-lane highway is nearly double the average for similar roadways in Nebraska. The type of crashes are also more often injury and fatality crashes, and the average number of crashes per year is consistently greater than 20 per year. As it relates to truck collisions, there were 14 truck-involved collisions in the same 2016-2019 period; therefore, the percentage of truck involved crashes along this roadway is three times higher than statewide values¹⁶. The conditions described above (i.e., longer and heavier trucks, longer passing distances, and seasonal traffic) contribute to these crashes.

Public comments have cited safety and roadway operation as a major need for the project. During the public scoping process, 19 percent (10 out of 53) of commenters identified safety as a concern along the project corridor. Many of the commenters expressed concerns with unsafe passing conditions, movement of trucks and equipment, intersection safety, challenges with slow moving vehicles, and hazards on the road. To address these safety concerns on US-26 and L62A, several commenters suggested expanding the project roadway. These commenters felt that expansion of the roadway would facilitate safer passing of slower vehicles, mitigate traffic congestion, and provide adequate space for trucks, farm equipment, and other vehicles during harvest season.

Within this corridor there are several factors that present roadway and operational challenges on the existing facility, ranging from an increased number of trucks, longer and heavier trucks, slowing vehicles needing to turn and utilize the oncoming lanes to do so, longer required passing lengths, increased crash rates, and a greater number of seasonal tourist vehicles that result in sub-optimal operations.

¹⁵ https://safety.fhwa.dot.gov/speedmgt/ref_mats/fhwasa1304/Resources3/27 - Review of Truck Characteristics as Factors in Roadway Design.pdf

¹⁶ State of Nebraska 2020 Annual Report, Traffic Crash Facts - <https://dot.nebraska.gov/media/115479/facts2020.pdf>

2.3 Purpose and Need Summary

The **purpose** of the proposed project is to develop an improved transportation corridor connecting the junction of US-385 and L62A, with the city of Minatare.

The improved corridor is intended to address the following transportation related purposes:

- To provide an improved highway on a congressionally designated NHS High Priority Corridor that increases the efficiency and safety of travel;
- To fulfill federal legislative intent of ISTEA, TEA-21, SAFETEA-LU, and MAP-21;
- To fulfill state legislative intent of the Build Nebraska Act and the Transportation Innovation Act, and
- To address roadway and operational challenges of the existing facility.

An improved roadway for this section of US-26 and L62A has been planned and designated as part of the Heartland Expressway, a High Priority Corridor on the NHS, for the past 35 years. The implementation of this project is consistent with the planning for the completion of the Heartland Expressway; the development and improvement of the Nebraska Priority Commercial System; is consistent with Federal legislation, including ISTEA, TEA-21, SAFETEA-LU, and MAP-21; and is also consistent with Nebraska legislation including the Build Nebraska Act and the Transportation Innovation Act, including the highly stakeholder- and community-outreach-focused StEEP selection process in 2016.

This project is **needed** because Congress has **designated this corridor** for completion; federal and state government legislative actions have provided ongoing **funding and intent** to construct it; and there are numerous **roadway and operational challenges** with the existing facility that reduce its efficiency and safety.

Further, as stated in the 2016 StEEP selection process, additional reasons why this segment of highway was selected for funding were that it completes a **gap in the system**; it has **broad regional and local support**; and is a **federally designated High Priority Corridor**.

2.4 Goals

Goals and **objectives** are defined by FHWA under NEPA as desired project outcomes beyond the transportation issues. In addition to addressing the transportation purpose and need above, the following goals have been identified:

- To **improve the highway infrastructure to facilitate economic development** by enhancing the efficiency and mobility of Nebraska Panhandle regional commerce for residents, businesses, visitors, and interstate travel.
- To **efficiently use available funds, and maximize the use of existing infrastructure**, or in other words, make the best use of available funds for construction.

2.4.1 Goal – Economic Development

The areas adjacent to the Heartland Expressway are currently served by relatively indirect, 2-lane roadways that were originally constructed for local farm to market traffic rather than for regional or interstate traffic, and there are no other improved corridors in this region. In keeping with the intent of the High Priority Corridors on the NHS, this project is intended to facilitate economic development by improving transportation infrastructure. The improved Heartland Expressway is seen as an investment to stimulate the region's economy and to help the region's communities better compete for new industries. The opportunity for economic development is directly linked to the accessibility of the Panhandle region. As this is the primary north-south route in the Panhandle, and ultimately by completing the Heartland Expressway and connecting to other HPCs, there would be improved access between the rural Nebraska Panhandle and regional trade centers from Mexico to Canada, as well as increased economic and tourism opportunities within Panhandle communities. This goal is supported by the following key points:

Heartland Expressway Economic and Engineering Feasibility Study

The economic study conducted in 1993 was later superseded by an updated analysis in 2014 as part of the *Heartland Expressway Corridor Development Management Plan*. The 2014 study showed that improvements to the Heartland Expressway (as a whole) would have a benefit/cost ratio of at least 1.88, indicating a positive impact on the regional economy, and higher than originally estimated in the 1993 Study. These types of improvements typically provide benefits that include travel time savings (which may occur as motorists experience reduced travel times), increased safety (which may occur as the number of accidents that take place on the corridor are reduced); and operating cost savings (that may occur as the distances driven by motorists are reduced).

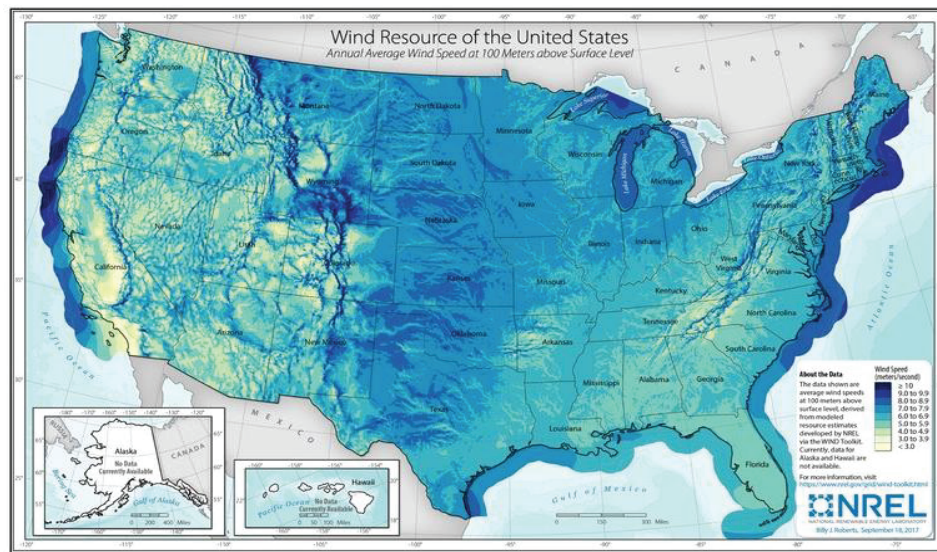
Great Plains International Trade Corridor

As mentioned earlier, the GPITC serves an energy- and agriculture-rich area. With the quickly expanding renewable fuels, wind energy, and domestic energy independence industries, either outside or within the study area, and the need to have a reliable transportation network to support the development of these resources, an improved corridor would serve as a direct route to regional trade centers further allowing Nebraska communities to gain economic benefits through the production and trade of these resources and through highway commercial businesses along the route. Indirect economic benefits would also be gained from the completion of the Heartland Expressway, through lower transportation costs and increased tourism (1993 Study, Executive Summary p.9).

Renewable Energy

As mentioned previously, western Nebraska is in the middle of what is often referred to as America's Wind Corridor, a swath of land in the middle of the country with the highest potential for wind power generation, stretching from Texas to North Dakota (**Figure 2.5**).

Figure 2.5 Wind Resources of the United States



Source: <https://www.nrel.gov/gis/wind-resource-maps.html>

The increase in wind power and investment in wind farms will continue to require workers to construct and maintain them, which will result in increased vehicular traffic, local spending, lodging, fuel consumption, and infrastructure improvements. According to the Heartland Expressway Association, a single wind turbine requires 126 trucks for major parts, 4-5 of which are super-loads¹⁷. This increase in truck traffic will continue to affect the condition of Nebraska's roadways and will result in increased costs for maintenance and negative effects on safety and mobility.

Natural Resources Tourism

While the Nebraska Panhandle would benefit from construction of the Heartland Expressway, other entities in the larger region also depend on the Heartland Expressway for economic development. Some of the most popular tourism destinations in the region are the Black Hills National Forest, Jewel Cave National Monument, Badlands National Park, Mount Rushmore National Memorial, Crazy Horse Monument, Buffalo Gap National Grasslands, Minuteman Missile National Historic Site, Fort Robinson and Chadron State Parks, Wind Cave National Park, and the Wounded Knee National Historic Site. These resources are located within an area of northwest Nebraska and southwest South Dakota.

In addition, agencies such as FHWA, South Dakota Department of Transportation, Bureau of Indian Affairs, Oglala Sioux Tribe, US Forest Service, and National Park Service have developed plans that rely on the construction of the Heartland Expressway for their visitor and economic development assumptions, and to meet their stated missions (*General Management Plan / Environmental Impact Statement for Badlands National Park/North Unit in Jackson, Pennington, and Shannon Counties, South Dakota* [2006]¹⁸; "Transportation Investments and Tourism Development at the Pine Ridge Indian Reservation" [2003]¹⁹).

Nebraska Freight Network

The 2023 NDOT Freight Plan indicates Nebraska's multimodal freight system consists of the statewide highway, freight rail, port & waterway, air cargo, and pipeline networks. **Figure 2.6** below

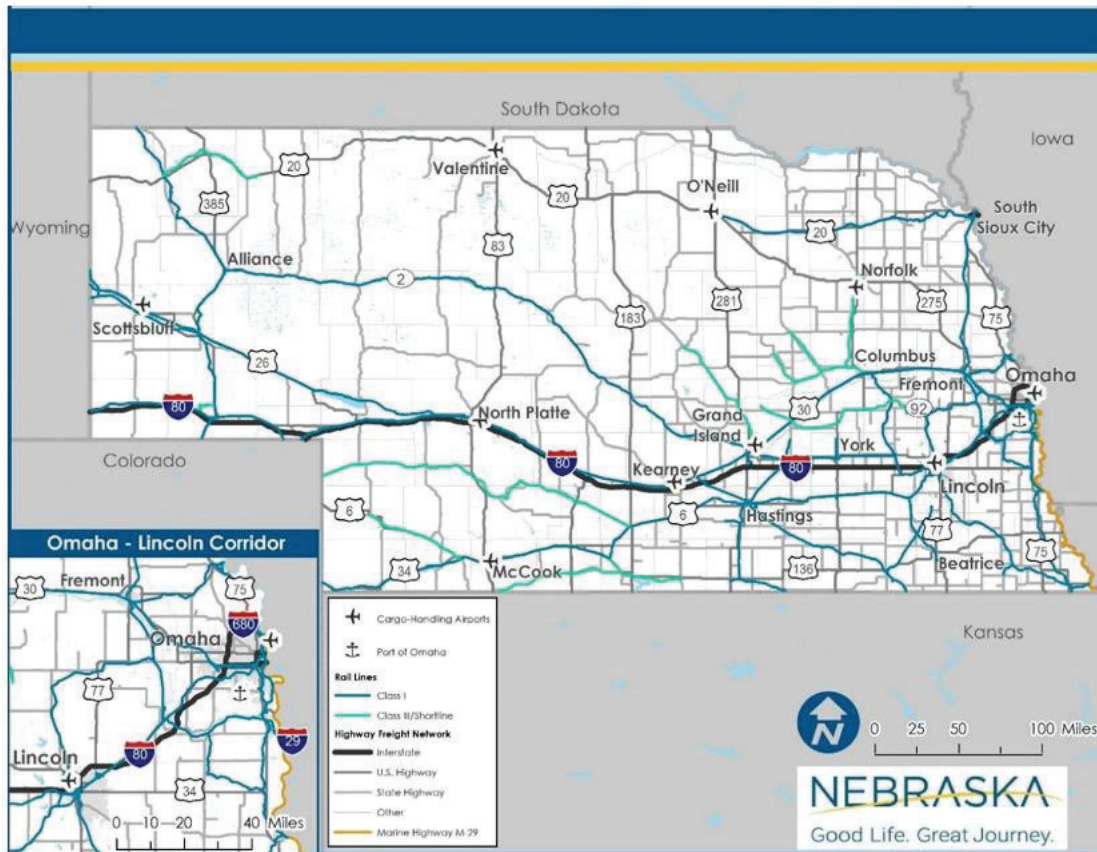
¹⁷ <https://heartlandexpressway.com/>

¹⁸ <http://npshistory.com/publications/badl/no-unit-gmp-eis-2006.pdf>

¹⁹ <https://www.readkong.com/page/transportation-investments-and-tourism-development-at-the-6754703>

identifies Nebraska's freight network and intermodal facilities. As the primary infrastructure supporting truck traffic, Nebraska's highway network is the broad foundation of the statewide freight transportation system. The Nebraska highway network covers every statewide community, including rural hamlets and urban neighborhoods.

Figure 2.6 Nebraska Freight Network & Intermodal Facilities



Source: U.S. Department of Transportation; Nebraska DOT

To comply with the FAST Act, every State must designate a Critical Urban Freight Connector/ Critical Rural Freight Connector (CUFC/CRFC) network as part of the National Highway Freight Network (NHFN). The purpose of the CUFC/CRFC network is to provide connectivity between important urban and rural freight generators and the NHFN (i.e., the interstate system). In this manner, Nebraska's Panhandle CRFC network (**Figure 2.7**) works hand-in-hand with the highway freight network. While the highway freight network facilitates statewide and interregional freight movements, the CRFC network provides access and connection to freight transportation facilities. Improving this segment of US-26 and L62A would provide needed redundancy and reliability to Nebraska's freight network, thus promoting economic development.

Figure 2.7 Critical Freight Corridor Network in Nebraska



Source: FHWA National Highway Freight Network Visualization Tool 2024

The Panhandle region of Nebraska has potential for economic development that could be realized through improvements to the roadway. Enhancing the roadway could better support seasonal tourist traffic, the movement of large trucks in the renewable energy sector, and provide redundancy in regional and rural freight traffic. Addressing these needs would help the roadway meet several economic cost-benefit metrics and support growth within the region.

2.4.2 Goal – Efficient use of Funds

2018 AASHTO Green Book Updates and Flexible Performance Based Design

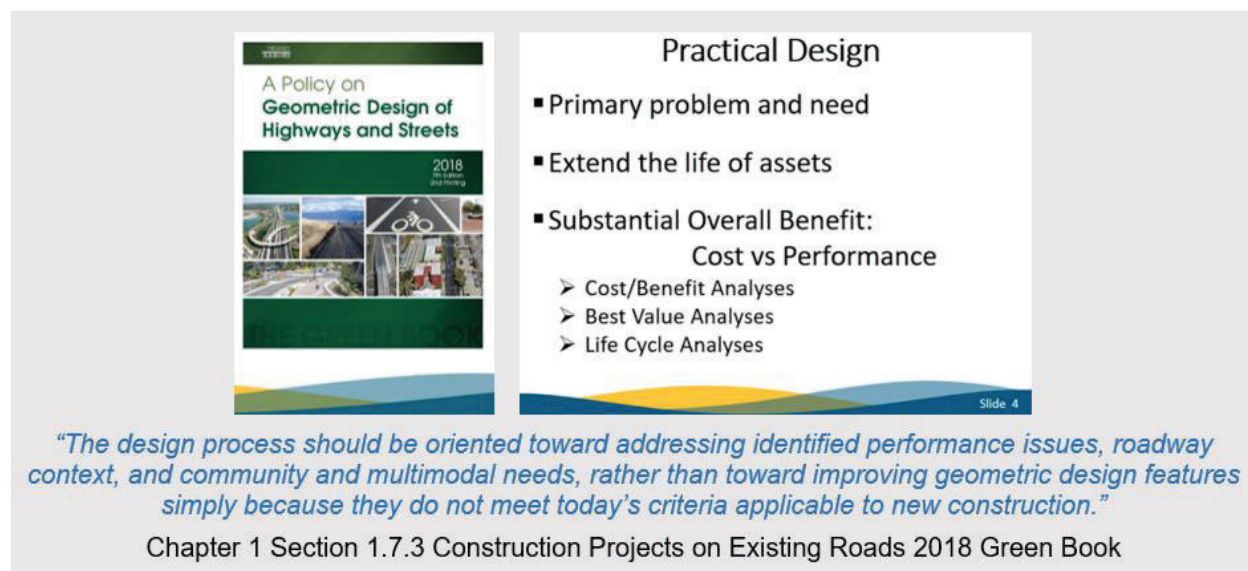
The American Association of State Highway and Transportation Officials' (AASHTO) "Green Book" contains the most current design research and practices of highway and street geometric designs. It provides guidance to roadway designers and engineers on how to meet the needs of highway and street users on a project-by-project basis. It describes how geometric design elements affect multiple transportation models and recognizes the relationship between geometric design and traffic operations. The 7th Edition of the Green Book (2018), which supersedes the 6th Edition (2011), presents an updated framework for geometric design that is more flexible, multimodal, and performance based (**Figure 2.8**) than previous editions that focused more on standard minimum design standards for geometric design²⁰.

Additionally, 23 CFR Part 625 (FHWA's Design Standards for Highways) was updated on February 2, 2022 to codify these changes into law²¹.

²⁰ <https://aashtojournal.org/2018/09/28/aashto-releases-7th-edition-of-its-highway-street-design-green-book/>

²¹ <https://www.federalregister.gov/documents/2022/01/03/2021-28236/design-standards-for-highways>

Figure 2.8 AASHTO Green Book and Practical Design Concepts



Source: NDOT

2020 NDOT Roadway Design Manual Updates

In Nebraska, the guiding document for roadway design is the NDOT Roadway Design Manual (RDM), last approved in May 2022. The RDM references state and federal standards, the primary of which is the AASHTO Green Book, as well as Minimum Design Standards and other research and publications from FHWA and the Access Board²². The RDM has been updated to align with the 2018 Green Book and includes the concepts of Practical Design as a matter of preference for Resurfacing, Restoration, and Rehabilitation (3R) projects on the NHS²³.

Incorporating practical design principles is a responsible and efficient use of public funds for this project. The updated framework provided by the 2018 AASHTO Green Book and the NDOT 2022 Roadway Design Manual emphasizes flexibility and performance-based decision-making, ensuring that design solutions meet the specific needs of each project while optimizing resources. By focusing on practical design, particularly for 3R projects, the project can address essential transportation needs without overdesigning or unnecessarily inflating costs. This approach ensures that public funds are allocated effectively, achieving functional, cost-efficient outcomes that serve the community's needs.

²² The Access Board is an independent federal agency that promotes equality for people with disabilities through leadership in accessible design and the development of accessibility guidelines and standards. (<https://www.access-board.gov/about/>)

²³ <https://dot.nebraska.gov/media/11481/d-chap-1-design-standards.pdf>

Chapter 3 Alternatives

3.1 Background

In accordance with NEPA requirements, this EA presents a preferred alternative and a No-Build Alternative for evaluation. While other alternatives have been considered, detailed descriptions are not provided throughout this document. This chapter outlines the process used to identify the range of concepts and alternatives, offering a comprehensive overview. Additionally, it provides a detailed description of the preferred alternative that is carried forward in this EA.

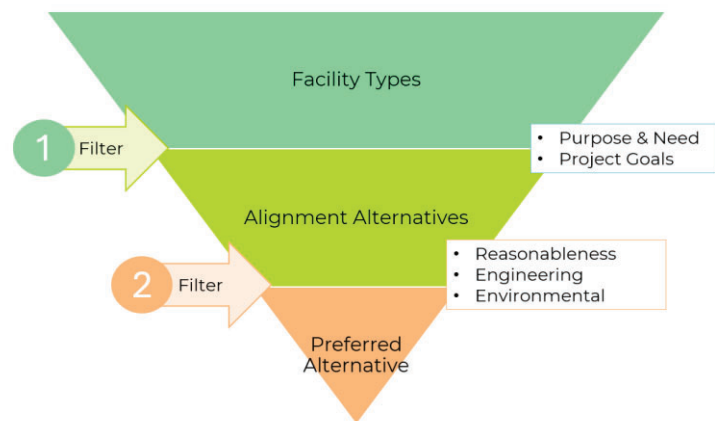
For the alternatives screening process, the analysis first evaluated several types of roadway facilities to determine if they would meet the project purpose and need, as well as project goals. Then, alignment alternatives were assessed for reasonableness, engineering feasibility, and environmental impacts. Finally, a preferred alternative was selected and evaluated in greater detail. **Figure 3.1** graphically shows how this process led to a preferred alternative.

It should be noted that this corridor and section of US-26 and L62A has been under study and development since the 1990s.

More recently, FHWA approved a FONSI in 2000 for the US-26 from Scottsbluff to Minatare, and US-26 and L62A from Minatare to US-385 project which included a build alternative for this corridor (4-lane divided highway, with full reconstruction). Due to funding constraints, the portion of that project which included this corridor, did not proceed through construction.

Along with the 2000 selected alternative, NDOT reviewed two other alignment alternatives including a center alignment and a 2+2 strategy. Descriptions of these three concepts are described below in **Section 3.3, Alignment Alternatives**.

Figure 3.1 Alternative Selection Process



3.2 Facility Types

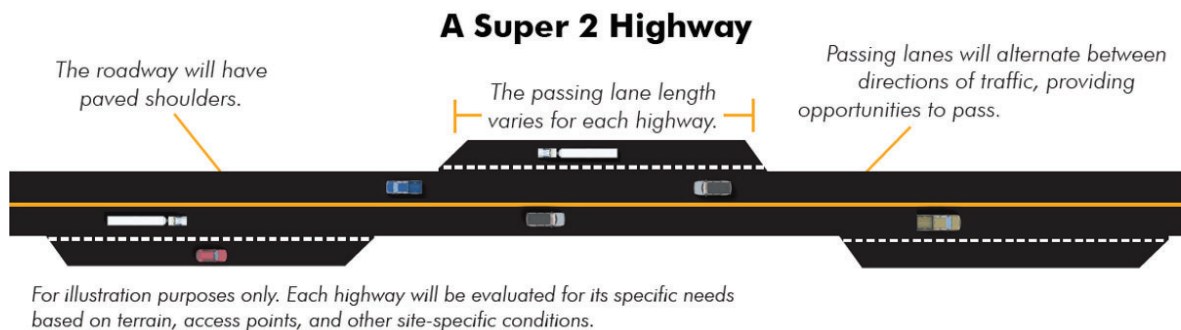
Several types of highway facilities with different configurations were evaluated regarding the project purpose and need, as well as the project goals. These configurations included:

- Super 2 Highway
- 2-Lane Highway with Climbing Lanes
- 2-Lane Highway with Auxiliary Turning Lanes
- 4-Lane Undivided Highway
- 4-Lane Divided Highway

3.2.1 Super 2 Highway

A Super 2 roadway would provide passing lanes along the project corridor at strategic locations. The purpose of passing lanes is to disperse platoons of vehicles behind slower moving vehicles such as trucks and farm equipment. **Figure 3.2** shows a typical passing lane.

Figure 3.2 Typical Passing Lane Layout



Considerations for a Super 2 Facility:

- The legislative intent for this corridor is to establish an expressway with 4-lanes and controlled access. However, a Super 2 facility falls short of meeting this legislative purpose.
- When designing a Super 2 facility it is desirable to minimize conflicts with driveways and intersections throughout the entire length of the passing lanes. Along this corridor, there are over 160 field entrances or driveways, as well as 19 county roads, for a total of 193 existing access points where slow-moving vehicles may turn on or off the highway. To meet Super 2 standards, passing lanes must be free of any driveways or access points to ensure safe and efficient use of the lane. This would likely require the construction of frontage roads to maintain access to these driveways, further expanding the project footprint and increasing costs. Additionally, careful consideration must be given to placing passing lanes near horizontal and vertical curves to provide adequate sight distance and meet driver expectancy. A preliminary review of the existing roadway's plan and profile reveals numerous conflicts between driveways, intersections, and curves which would require resolution. This would likely result in lengthening, shortening, and/or shifting of the passing lanes from their optimal positions, compromising the intended functionality of a Super 2 facility.
- Vehicle conflict points at the ends of the passing lane increase without the added benefit of median separation of opposing traffic that is present with a 4-lane roadway.

- Concern along this stretch of roadway includes accommodating the spatial requirements for trucks, especially during the harvest season when they frequently enter and exit the highway facility. The trucks navigating this corridor are known for their use of "pup" trailers, necessitating an expanded turning radius for safe and complete maneuvers. Notably, a Super 2 facility fails to address this concern comprehensively, as it does not uniformly increase the required space for turning along the entire corridor. This becomes particularly pronounced in areas where an additional passing lane is not constructed.
- Trucks entering and exiting the highway cause delays and congestion, with issues exacerbated by trucks gaining speed upon entry. While additional lanes in specific areas can alleviate congestion, the absence of passing lanes at numerous access points along the facility remains a persistent challenge. A comprehensive approach is necessary to address congestion concerns across the entire corridor.

Results of Screening. The Super 2 alternative was eliminated primarily due to its failure to meet legislative intent, as specified in ISTE, TEA-21, and SAFETEA-LU, which prioritizes a 4-lane facility. Despite incorporating passing lanes, the Super 2 configuration falls short in addressing operational challenges and vehicle conflict points, spatial constraints for trucks, and congestion exacerbated by truck traffic entering and exiting the roadway. Because this alternative does not meet the purpose and need, it was eliminated from further consideration.

3.2.2 2-Lane Highway with Climbing Lanes

This alternative would provide passing lanes to disperse platoons of vehicles that build up behind vehicles that are slowed due to steep grades. This type of passing lane is typically called a climbing lane. Along this corridor, there is one existing east bound climbing line at the far eastern end of L62A, starting where the roadway enters the hilly terrain of the project. The climbing lane is approximately one mile in length and ends approximately 0.4 miles from the junction of L62A and US-385. Since the remainder of this corridor does not include any steep grades, there are no other opportunities to provide climbing lanes.

Results of Screening. This alternative would provide very little, if any, advantage to address the roadway and operational challenges. This alternative would not meet the purpose and need of the project, and was eliminated from further consideration.

3.2.3 2-Lane Highway with Auxiliary Turn Lanes

This alternative would construct auxiliary turn lanes at major intersections along the corridor. Turning vehicles currently encroach on opposing lanes to accomplish left and right turns. If turn lanes are not added at all of the facility access points, then large trucks would continue to encroach into oncoming traffic lanes in order to make a right turn. This is a potential hazard as vehicles heading in the opposite direction may not be able to stop in time to avoid a slow moving truck. The trucks that use US-26 and L62A are large, and include tankers as well as semi-trailers often pulling pup trailers.

There are over 160 field entrances or driveways along the project, as well as 19 county roads, for a total of nearly 193 existing access points, where slow-moving vehicles can turn on or off the highway. Providing right and left turn lanes at all of these locations would result in a four- or five-lane highway for large portions of the project alignment, and this alternative would need to be constructed and maintained with lane closures.

Results of Screening. This alternative would provide very little, if any, advantage to address the roadway and operational challenges. This alternative would not meet the purpose and need of the project, and was eliminated from further consideration.

3.2.4 4-Lane Undivided Highway

This alternative would provide two through lanes for traffic in each direction which would not be physically separated by a barrier or median. Passing would be internal to the thoroughfare and would not require vehicles to cross over into oncoming traffic to pass a vehicle or slow-moving agricultural equipment. There is little to no reduction in crashes per kilometer, based on the Highway Safety Information Systems (HSIS) study on “Safety Effects of the Conversion of Rural Two-Lane Roadways to Four-Lane Roadways,” because the opposing traffic is not separated²⁴.

This alternative would not provide for the development of left turn lanes at access breaks, which are an important component of improving traffic flow, and decreasing potential for rear-end crashes. In addition, construction of the new lanes would need to match the existing roadway geometry and therefore, would not provide the improved geometry of a new divided roadway.

Results of Screening. This alternative was eliminated because it would not adequately address the roadway and operational challenges of this highway segment. Without designated left-turn lanes, this configuration increases the risk of rear-end collisions as left-turning traffic must slow or stop in the through lanes, disrupting the flow of traffic. Additionally, this layout does not allow for improved road geometry. This alternative would essentially be a lower performing version of the 4-lane divided highway alternative and would provide very little advantage over that facility type. Therefore, it was eliminated from further consideration.

3.2.5 4-Lane Divided Highway

This alternative would provide a 4-lane divided highway for the entire length of the project. The divided median could be raised or depressed. As described in chapter 1 and 2, this segment of highway has been proposed as a 4-lane divided highway since its inception and has also often been commonly described as an expressway. These terms imply a limited or partially limited access-controlled highway for high-speed traffic. During the initial proposals for the StEEP selection process in 2016, the project was presented as a 4-lane divided highway.

Results of Screening. Based on the above information and evaluations against the other alternatives, this alternative best addresses the need to correct roadway and operational challenges along this segment of highway. It also fulfills project’s need to carry out the legislative intent to construct a 4-lane facility. Therefore, the only facility type that meets purpose and need is the 4-lane divided highway.

3.3 Alignment Alternatives

Once the 4-lane divided facility type was selected, NDOT evaluated the most appropriate cross section strategy as well as the least impactful alignment location. The following cross section strategies were considered:

- 2000 Selected Alternative: Additional Lanes to be located south of US-26 from Minatare to County Road (CR) 36 and then along the north side of US-26 from CR 36 to US-385.
- Centered Alignment (Full Reconstruction): Removal of the existing lanes, and reconstructing a 4-lane facility centered on the old roadbed.
- 2+2 Strategy: This strategy would include utilizing the existing infrastructure and constructing two new lanes on either the north or south side of US-26 and L62A.

²⁴ <http://www.fhwa.dot.gov/publications/research/safety/humanfac/pdfs/99206.pdf>

Alignment alternatives were screened based on construction feasibility, operational impacts to the highway during construction, cost, social impacts, and environmental impacts.

3.3.1 2000 Selected Alternative

This alternative, as proposed in the 2000 FONSI, involves expanding the existing 2-lane roadway to a 4-lane divided expressway by constructing additional lanes along the south side of US-26 from Minatare to CR 36 and along the north side of US-26/L62A from CR 36 to US-385. This alternative would also require constructing temporary crossovers along US-26 and L62A specifically for managing traffic during construction, which would increase project's cost and cause traffic disruptions. According to the 2000 FONSI, the alternating crossover alignment from south to north was initially planned to minimize relocations and reduce impacts on historic properties, including the Trinidad Bean Company and an abandoned school house, both of which no longer exist. The selected alignment from the 2000 FONSI was anticipated to acquire 16 residential houses, which is the same number that would be impacted if this alternative were built today. In addition to the relocations, the extents of the permanent crossovers would have required complete reconstruction in those areas, further increasing costs and causing greater impacts to the traveling public during construction. Although impacts to other resources were not substantially different, this alternative was not carried forward for any further analysis.

Results of Screening. Based on the screening criteria of cost and operational impacts during construction, the 2000 Selected Alternative was not carried forward and was eliminated prior to the first public meeting.

3.3.2 Centered Alignment (Full Reconstruction)

This alternative proposes constructing a 4-lane divided highway along the center of the existing alignment. This approach would require the complete removal of the existing lanes, followed by the reconstruction of a 4-lane divided highway in the same location. Implementing this alternative would involve traffic disruptions, as existing lanes would need to be closed during the removal and reconstruction phases. Additionally, this alternative would considerably increase project costs due to the need to demolish the existing pavement and then construct the new lanes. According to other recently constructed highways in the same region of Nebraska, a full reconstruction approach would increase costs by approximately 55%.²⁶

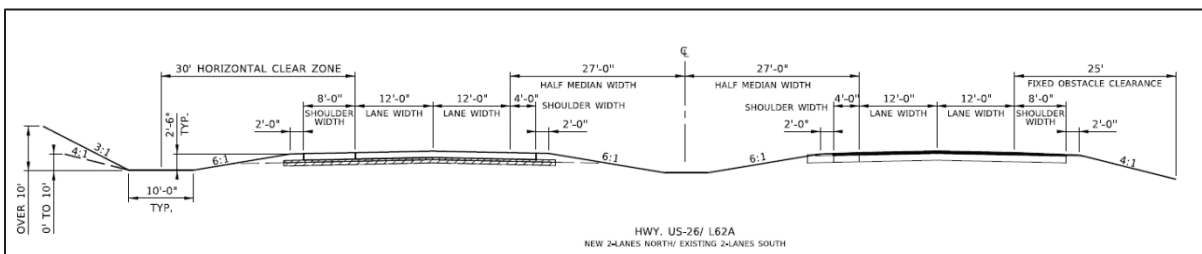
Results of Screening. Based on the screening criteria of cost and construction impacts, the Center Alignment Alternative was not carried forward.

3.2.3 2+2 Strategy

This alternative would construct two new lanes and utilize the existing two lanes to provide a 4-lane divided highway, using a 2+2 strategy as shown in **Figure 3.3**. In the interest of utilizing limited available funds efficiently, and in response to reduced buying power compounded by increasing construction costs, this method offers a substantial cost advantage. Other recently constructed highways in the same region of Nebraska were estimated to save 36% by utilizing a 2+2 approach.³⁷

²⁶ <https://dot.nebraska.gov/media/ru2eu43g/july-meeting-handouts.pdf>

Figure 3.3 Example of 2+2 Highway



Cross section of 2+2 approach with new lanes on one (left) side of the existing lanes (right).



US-385 south of Alliance – Looking north near at MM 105.5 (2018 on left, 2022 on right)

Source: NDOT and Google Maps Streetview

The 2+2 strategy could also limit impacts primarily to one side of the roadway, and could reduce the use of crossovers, which could maximize the use of existing infrastructure (i.e., by not having to reconstruct segments of the existing roadway to cross the new lanes to the opposite side), as well as minimize disruption to the traveling public during construction.

Results of Screening. By utilizing practical design concepts, the proposed project could meet the goal of efficiently utilizing available funds and maximizing the use of existing infrastructure. Furthermore, the 2+2 strategy could reduce impacts to the surrounding environment by reducing the number of residences and businesses affected, reducing impacts to farmland and other natural resources, and requiring a shorter duration for construction. Based on the screening criteria of cost, operational impacts during construction, and environmental impacts, this is the preferred cross section carried forward.

Once the 2+2 strategy was selected, NDOT evaluated whether the additional 2 lanes should be constructed on either the north or south side of the existing highway.

- South Offset Alignment Alternative: Additional lanes to be located south of the existing roadway.
- North Offset Alignment Alternative (Preferred): Additional lanes to be located north of the existing roadway.

A table summarizing the preliminary impacts of the North and South Offset Alignments can be found in **Table 3.1** below.

3.3.4 South Offset Alignment

This alternative would improve the current 2-lane roadway by transforming it into a 4-lane divided expressway. It involves adding lanes to the south side of US-26 and L62A for the entire length of the corridor. The south offset alternative is estimated to be six percent more expensive than the north offset alternative. Additionally, this alternative would require the relocation of approximately six more houses compared to other alternatives. Relocations can incur high monetary costs and are generally not favored by the public.

Results of Screening. Based on the screening criteria of cost and the anticipated impacts to residential houses, the South Offset Alternative was not carried forward.

3.3.5 North Offset Alignment

This alternative would improve the current 2-lane roadway by transforming it into a 4-lane divided expressway. This alternative involves reconstruction within Minatare and adding lanes to the north side of US-26 and L62A for the remainder of the corridor. By adding lanes to the north side of the existing roadway, traffic disruptions during construction would be minimized, and the existing facility can remain in use. Moreover, the North Offset Alignment alternative has been identified as the option that would cause the least disruption to residential homes. This alternative also impacts the least amount of supply canals, thus minimizing potential impact on the irrigation districts. These are important considerations as displacement of residents can be costly and can negatively impact the affected communities. Finally, the North Offset Alignment alternative would meet essential project considerations as it would utilize funds efficiently, while achieving the desired outcome.

Results of Screening. The North Offset Alignment alternative best addresses the screening criteria of cost and environmental impacts. This alignment would have the fewest impacts to residential and outbuilding relocations and was therefore carried forward for further evaluation.

Table 3.1 Preliminary Impacts of the North and South Alternative

Considerations	North Alternative	South Alternative
Total Relocations	26	49
Houses	13	19
Major Outbuildings	8	11
Minor Outbuildings	5	19
Utilities	Similar Level of Impact	Similar Level of Impact
Irrigation Canal Impacts Linear Feet (LF)	700	1,200
Irrigation Conveyance (LF)	15,000	18,000
Estimated Cost (\$ Millions)	\$76.70	\$81.40
Farmland Acres (AC)	220	230
Wetlands (AC)	15	12
Streams (LF)	3,400	3,000
Hazardous Materials	Medium Potential to Encounter	Low Potential to Encounter
Section 4(f) Properties	No Properties Affected	No Properties Affected
Historic Properties	1 Potential, plus 3 Canals	1 Potential, plus 3 Canals

*Note that these numbers and values are preliminary and are shown as they were presented at the September 2022 Public Meeting.

3.4 Alternatives Carried Forward for Detailed Evaluation

3.4.1 No-Build Alternative

The No-Build Alternative would perpetuate the existing L62A and US-26 roadway alignments, geometry, and cross sections. Although the No-Build Alternative would not meet the project Purpose and Need, it is being carried forward for analysis and is discussed in subsequent sections to establish a baseline for comparison of the build alternative.

3.4.2 Preferred Alternative (4-Lane Divided Highway, 2+2 Strategy with a North Alignment)

As a result of the preliminary screening and location-specific alternatives analysis, the Preferred Alternative consists of the 4-Lane Divided Highway, 2+2 Strategy with a North Offset Alignment. The Preferred Alternative includes the following design components:

- Urban cross section (4 lanes with raised median), including left turn bays, with standard “T” intersections at Main Street and 3rd Avenue/Stonegate Road
- Offset lanes to the north and relocate Minatare Drain to the south
- Realigned four-leg intersection at L62A and US-26 (with free right turn from eastbound to southbound US-26)
- Standard “T” intersection at L62A and US 385 (with free right turn from southbound US-385 to westbound L62A)

Generally, the Preferred Alternative would construct new westbound lanes north of the existing alignments of US-26 and L62A, and then utilize the existing roadways for the eastbound lanes following construction. This would allow the highway to remain open with minimal temporary closures rather than full reconstruction which would require longer closures and more complicated traffic control. Full reconstruction would be required for the urban cross section in Minatare and east of 3rd Ave, but this modification would avoid impacts to the historic buildings and the historic district at Harry’s Curve. The relocation of Minatare Drain would require new ROW and a new siphon to be constructed at Ninemile Creek; however, these impacts would be minor or temporary and would avoid long-term maintenance problems with placing an irrigation drain within the median of a 4-lane divided highway. The intersections of US-26 & L62A would be realigned as four-leg intersection and L62A & US-385 would be configured as standard “T” intersection with free-right turn maintaining driver expectancy.

3.5 Proposed Project Description

This project is 18.47 miles in length and is located on Highways US-26 and L62A in Scotts Bluff and Morrill Counties, starting 0.41 miles west of the west Minatare corporate limits at mile marker (MM) 32.63 and extending east to the junction of US-26 and L62A at MM 41.92. The project continues east on L62A from the junction with US-26 at MM 0+00 to the junction of US-385 and L62A at MM 9.19.

Construction may begin and/or end approximately 1500 feet ahead of or beyond the actual project limits to accommodate transitioning the pavement.

The existing roadway on US-26 from MM 32.63 to MM 32.98 consists of a transition section from a 4-lane divided roadway with 12-foot-wide composite pavement lanes, a 14-foot flush median and 10-foot shoulders, of which 8 feet is paved with asphalt to a 3-lane roadway. The existing roadway from MM 32.98 to MM 33.45 consists of two 12-foot-wide composite pavement lanes and a 12-foot two-way center turn lane with shoulders varying from 6 feet with curb and gutter to 10 feet, of which 8 feet is paved with asphalt. The existing roadway on US-26 from MM 33.45 to MM 41.92 and on L62A from

947 MM 0+00 to MM 9.19 consists of two 12-foot-wide composite pavement lanes and 10-foot shoulders,
948 of which 8 feet is paved with asphalt.

949 The improvements on this project consist of fully reconstructing US-26, on alignment, to a 4-lane
950 divided roadway with a raised median from the project beginning to the east corporate limits of
951 Minatare, and then widening US-26 and L62A from an existing 2-lane roadway to a 4-lane divided
952 roadway with a depressed median using the strategy of constructing new lanes on the north side of
953 the US-26/L62A corridor and milling and resurfacing the exiting lanes which would remain in place.
954 Improvements include new paving, milling and resurfacing, culvert and storm sewer work, new
955 guardrail, removing and replacing guardrail, a new bridge, new intersections, improved intersections,
956 access relocations (i.e. new frontage roads) and side road modifications.

957 Grading would be required for the entire length of this project.

958 The bridge over Ninemile Creek (Structure Number S026 03470) would be used in place and a new
959 bridge would be built with the new set of lanes. A grade raise of the entire structure is not anticipated.
960 Work would be required in the waterway. Guardrail would be built with the new bridge.

961 The following bridge-size box culverts would be extended: Structure Number S026 03505 (Minatare
962 Drain - Canal), S026 03916 (Irrigation Conveyance), S026 04114 (Wildhorse Creek), SL62A 00116
963 (Wildhorse Canyon), SL62A 00537 (Tri-State Canal), SL62A 00582 (Tri-State Canal), and SL62A 00613
964 (Tri-State Canal). The following bridge-size box culverts would be replaced: SL62A 00152 (Irrigation
965 Conveyance), SL62A 00463 (West Water Creek), SL62A 00595 (Red Willow Creek) and SL62A 00648
966 (Irrigation Conveyance).

967 This project would be constructed under traffic with lane closures controlled by appropriate traffic
968 control devices and practices.

969 Additional property rights would be required to build this project.

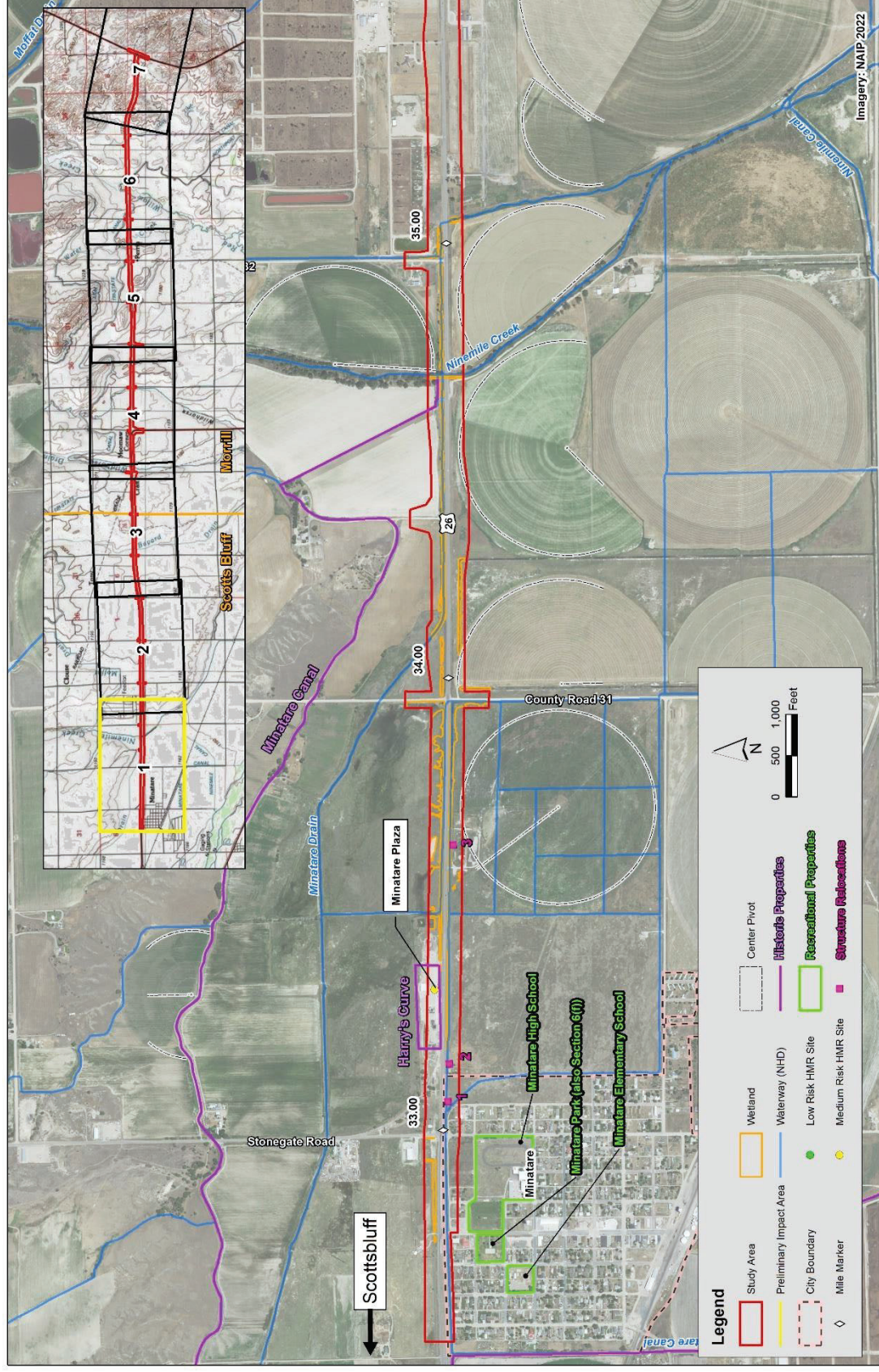
970 Access to adjacent properties would be maintained during construction but may be limited at times
971 due to phasing requirements.

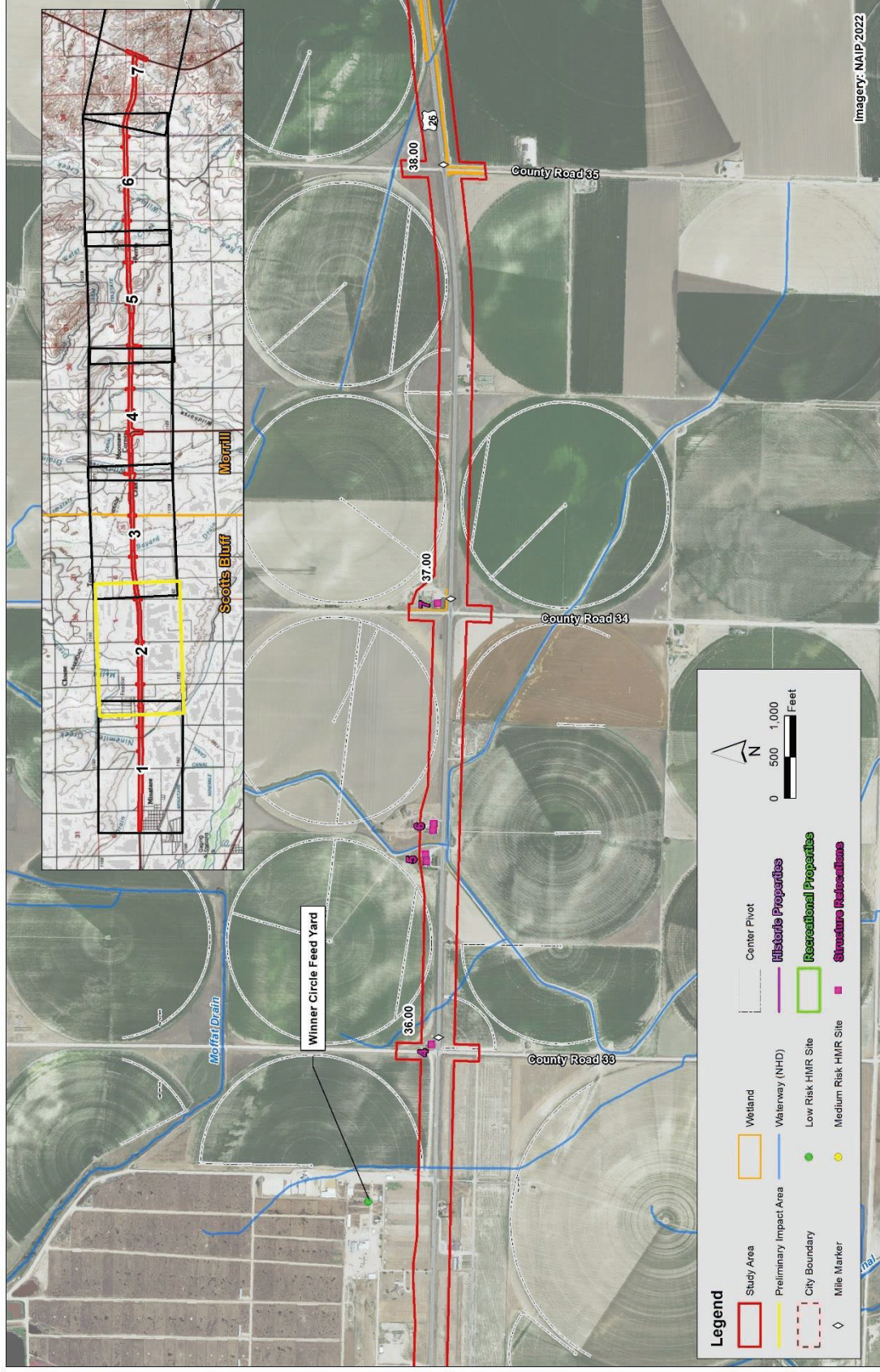
Chapter 4 Affected Environment and Environmental Impacts

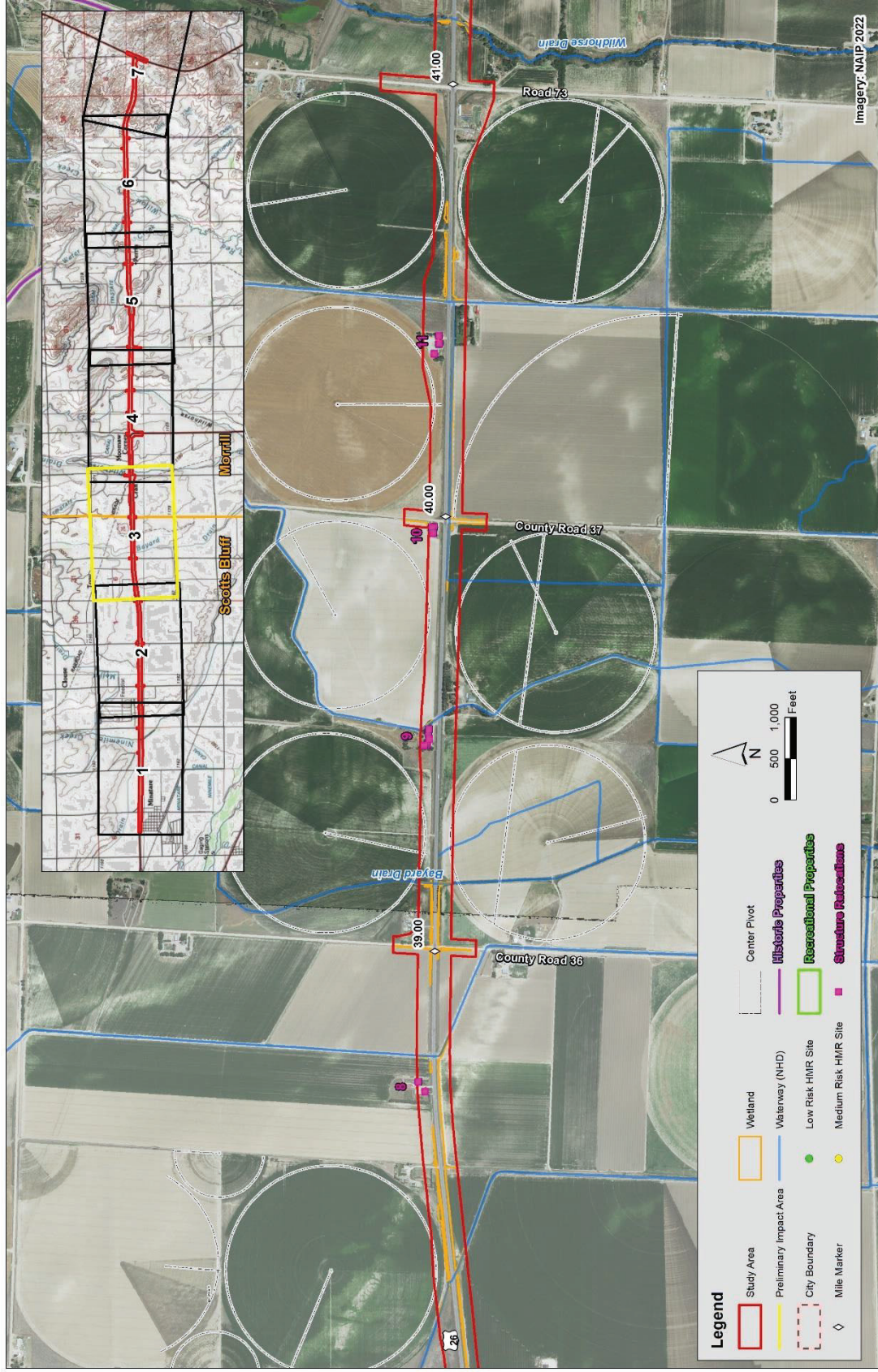
This chapter identifies environmental resources that would be affected by the proposed project and the anticipated impacts on those resources. As described in further detail in this chapter, the Study Area for the environmental analysis depends on the resource studied. In general, the Study Area includes the area between the West corporate limits of Minatare, and the junction of L62A and US-385 (**Figure 4.1**). The Study Area for each resource is large enough to identify and address potential concerns. Under NEPA, the context (the relationship between the project and its setting) and intensity of impacts determine the significance of impacts from a project. CEQ guidance on preparing NEPA analysis notes that environmental analysis should focus on significant issues and impacts should be discussed in proportion to their significance (77 FR 14473, December 2012).

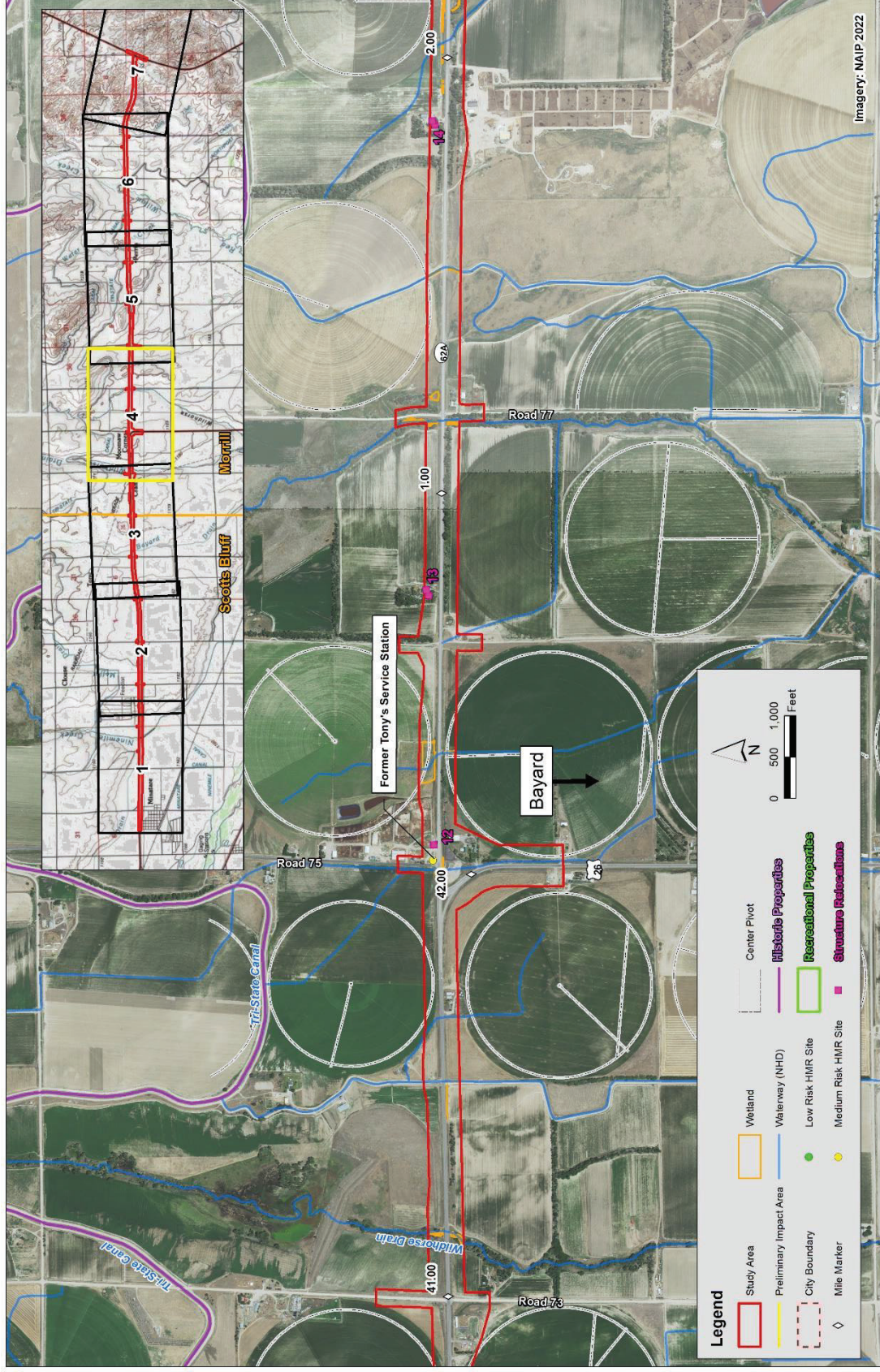
All resources considered for this project are described in the following sections. Several resources are either not present in the Study Area or may not be impacted by either Alternative; however, they are all included for completeness and thoroughness.

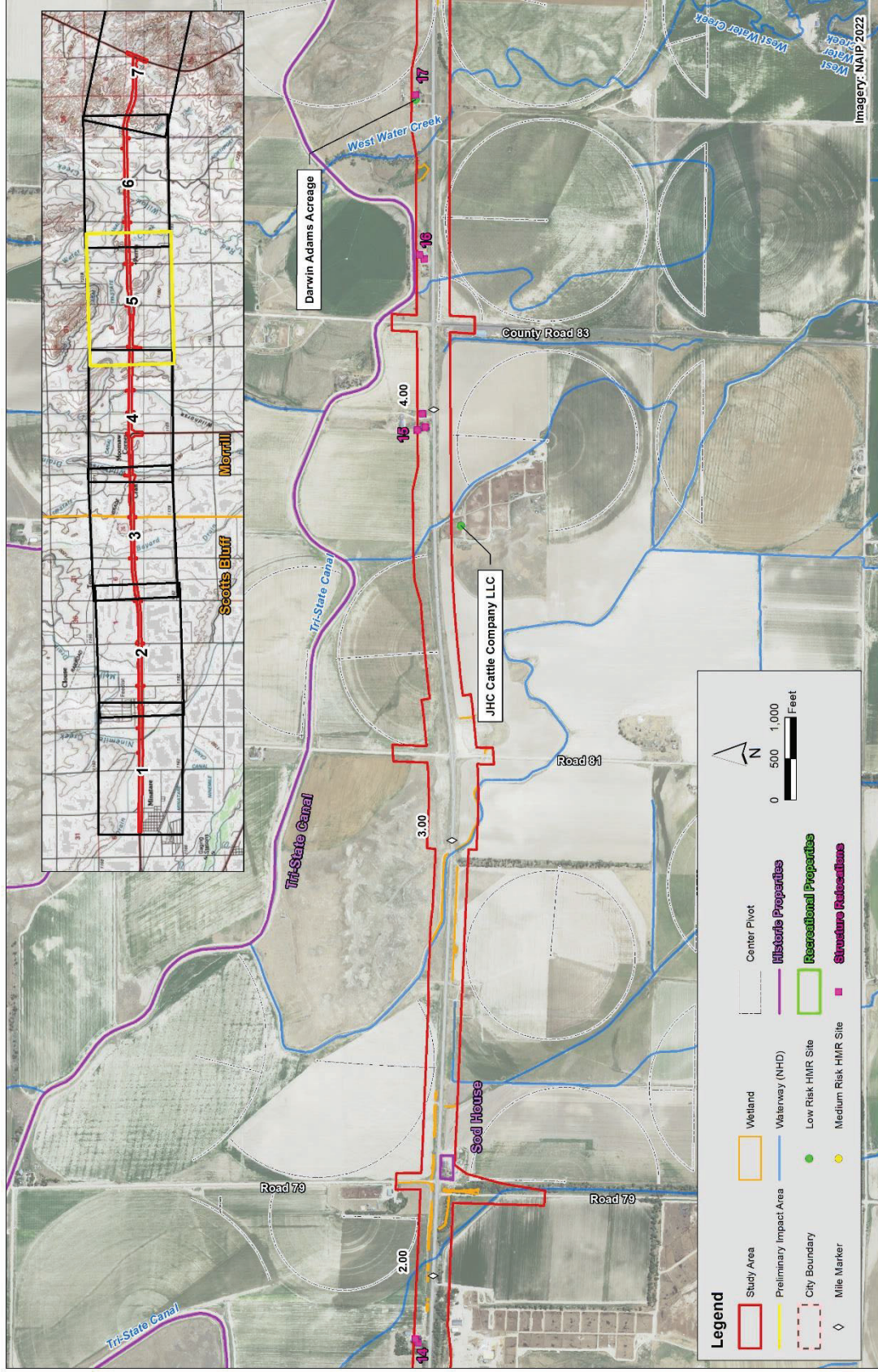
Figure 4.1 Affected Environment

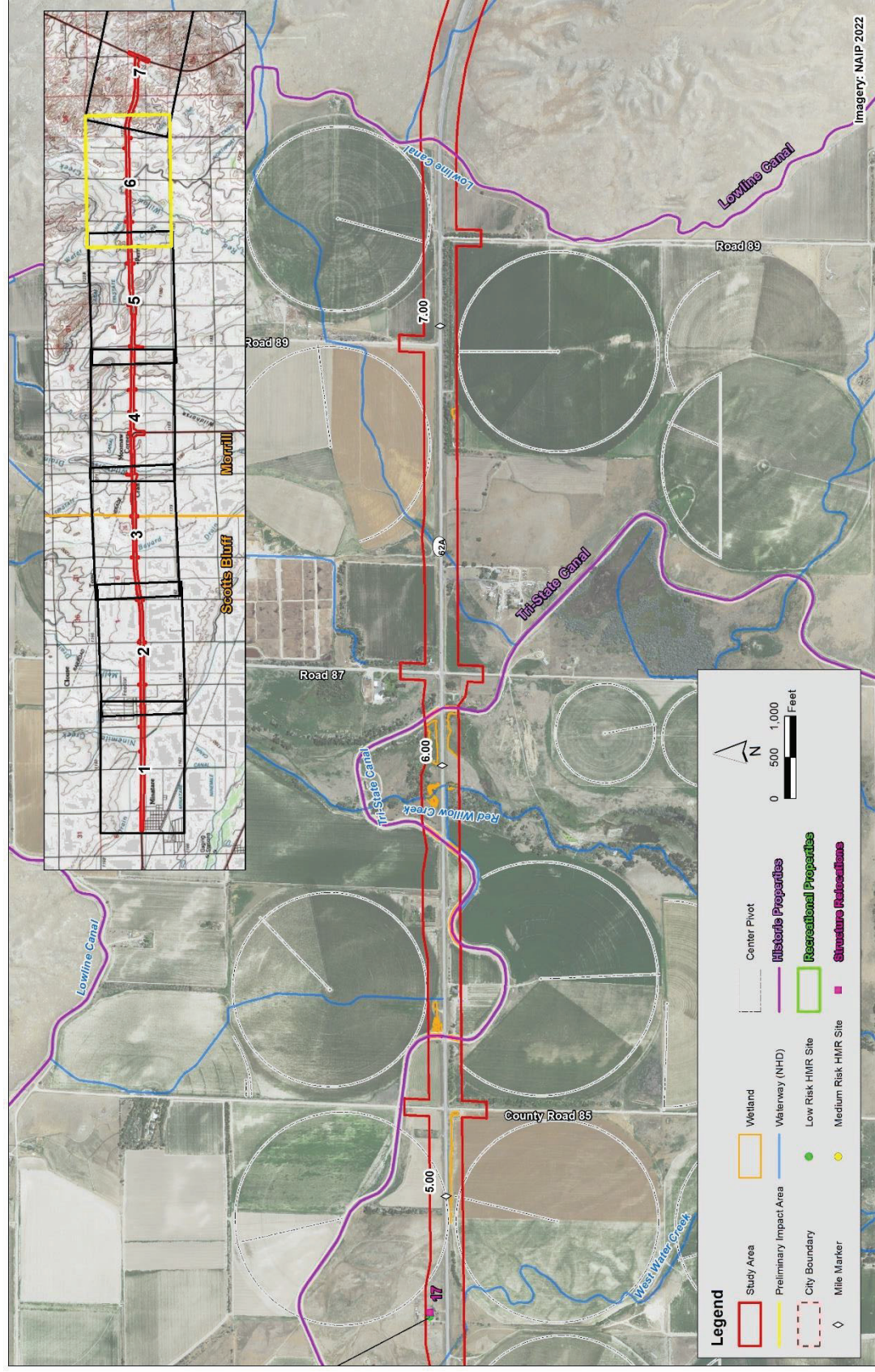


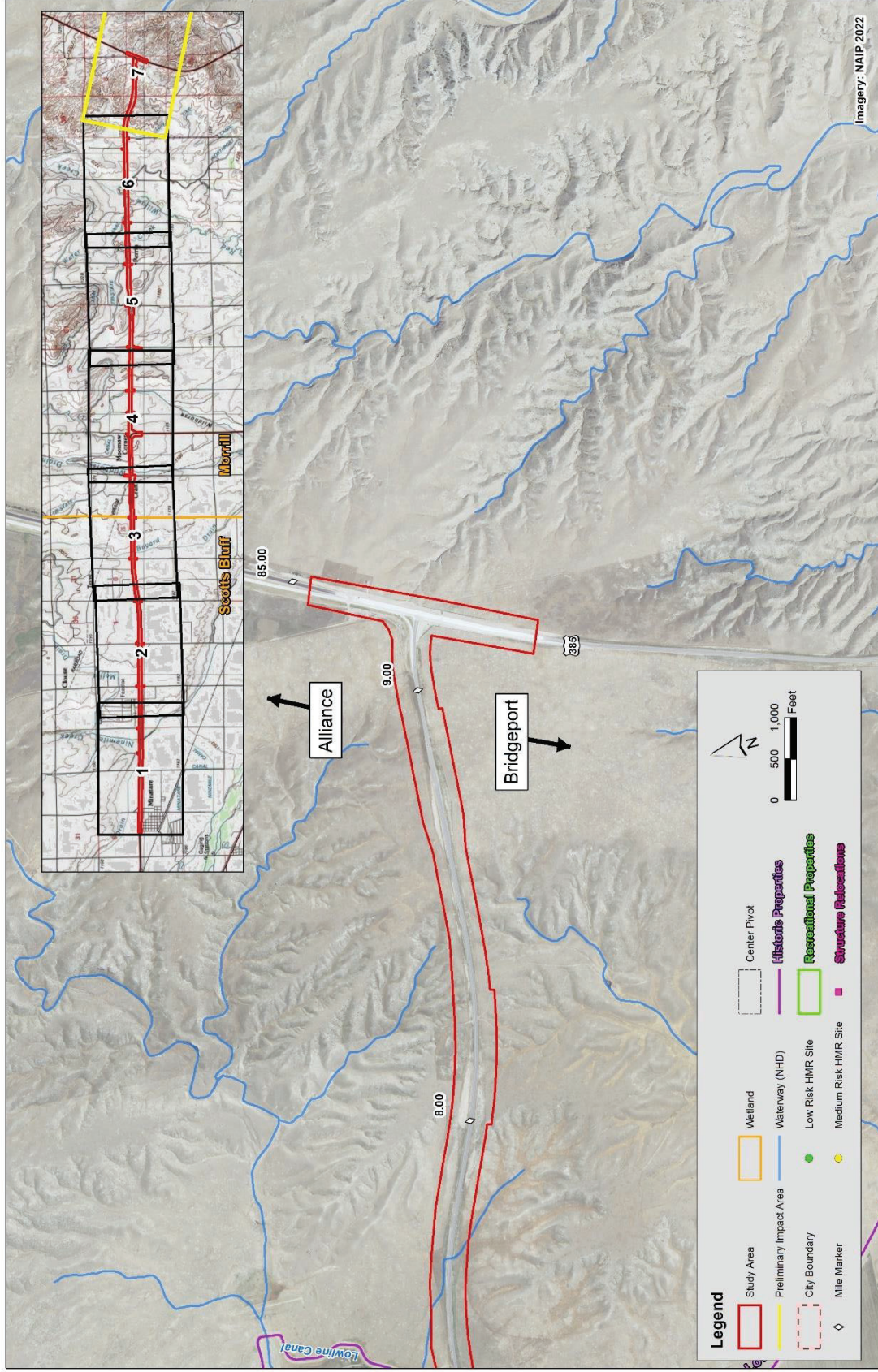












4.1 Land Use

Land use refers to the activities and purposes for which a particular piece of land is being utilized or intended to be utilized. This can include residential, commercial, industrial, agricultural, recreational, or other uses. Zoning refers to the legal method utilized by local governments to regulate land use by dividing land into different zones and establishing rules and regulations for what activities and structures are allowed in each zone.

4.1.1 Affected Environment

The study area for this analysis is approximately 0.25 miles wide along the project corridor. This study area would encompass all potentially affected properties. Current land ownership, jurisdiction, and use were determined through review of aerial photography, county assessor data, and zoning maps from Scotts Bluff and Morrill counties.

Land ownership in the environmental study area is predominantly privately held, except for the right-of-way (ROW) for US-26, L62A, and US-385, which is owned by NDOT. The independent jurisdictional authorities governing within the environmental study area are Scotts Bluff County, Morrill County, and the City of Minatare. County roadways in the study area are governed by a presumed 66-foot-wide ROW owned by the respective county, per state statute. The City of Minatare, located on the western edge of the project, is a developed area that is also present within the study area. Minatare is primarily zoned for residential use, and has a one-mile extra territorial jurisdiction (ETJ) for zoning. The surrounding area heading east out of Minatare consists of agricultural land and undeveloped land, with scattered rural residences. Several cattle feedlots exist along US-26 and L62A. In general, cultivated fields and range lands dominate the land uses in the environmental study area.

4.1.2 Impacts of the No Build Alternative

Under the No-Build Alternative, the proposed project would not be built. Additional ROW would not be acquired. All current highway access points would remain as is, and there would be no impact on existing or future land uses. Typical growth and development patterns are anticipated to continue. The City of Minatare would continue to manage zoning in their ETJ, and new uses may be proposed within or around the City.

4.1.3 Impacts of the Preferred Alternative

The preferred Alternative would create two new lanes of highway along the existing US-26 and L62A corridors. These lanes would be constructed along the north side of the existing lanes and would require the acquisition of approximately 260 acres of land. See **Section 4.2, Agriculture and Farmland** for more information on Farmland impacts and **Section 4.3, Right-of-Way and Relocations**, for more information on ROW acquisition.

The conversion of 260 acres from agricultural, farming, farmsteads, and residential uses would be a direct impact of the preferred alternative. However, this conversion would not accelerate or promote further conversion of land. Houses that are within the land acquired for new ROW could be relocated or reconstructed and farmsteads could continue to operate as before. Changes to irrigation patterns and field access would be modified but would still be compatible with existing land uses in the Study Area.

Except for land purchased for the project, no additional changes in land use are expected. There would be a potential for residences that exist to the north of the highway to become displaced. These displacements are discussed more in **Section 4.3**. It should be noted that any property acquisition would be conducted by payment of fair market value for the property rights in conformance with the

Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act), as amended (42 USC 4601 et seq.). Since this project would widen along the existing US-26 and L62A corridor, no changes to the existing land use or zoning requirements would be anticipated. The City of Minatare would still function as a residential hub and the rural agricultural area to the east of Minatare would be maintained.

4.1.4 Avoidance, Minimization, and Mitigation

Given that the project's design adheres to engineering standards and best practices, the land required for construction was minimized to the necessary extent. Based on the information provided above, no additional mitigation measures for Land Use and Zoning are required.

4.2 Agriculture and Farmland

The Federal Farmland Protection Policy Act (FPPA) was enacted to minimize unnecessary conversion of farmland to other uses, resulting from federal decisions. In addition, the FPPA states that federal programs should be compatible with state and local policies or programs that protect farmland. The Natural Resources Conservation Service (NRCS) oversees FPPA compliance.

Prime farmland is considered to be of national importance and is defined as land with the best characteristics for producing food, feed, forage, fiber, and oilseed crops, and is available for these uses. Unique farmland is land other than prime farmland that is used for the production of specific high-value crops. Farmland of statewide or local importance is land, in addition to prime and unique farmland, that is of statewide or local importance for the production of food, feed, forage, fiber, and oilseed crops (7 CFR 657.5). Prime farmland does not have to be currently used for farming to be protected under the FPPA.

4.2.1 Affected Environment

According to the Soil Surveys of Scotts Bluff and Morrill Counties, most of the farmland within the Study Area is classified as prime farmland.

Much of the study area is predominantly used for agricultural production, featuring widespread irrigation canals and center-pivot irrigation systems. The dominant crops are sugar beets, potatoes, edible dry beans, corn, and wheat. Irrigation districts supply most of the water used, with gravity flow irrigation systems commonly associated with the irrigation canals. Gates along the canal flow into lateral concrete or earthen channels on the upper edges of fields. Land leveling, terracing and contour farming are commonly used to promote efficient water flow and to prevent erosion. Tailwater recovery pits are used to conserve water by collecting and reusing excess runoff. Numerous small irrigation ditches are situated along the existing highway. Private wells are often used to supplement irrigation water from the irrigation districts. Wells are also used in conjunction with sprinkler irrigation systems. For additional information on irrigation canals and irrigation districts, see **Section 4.8**.

Some other portions of the study area are used as dryland pasture, rangeland and hayland. Soils with low permeability and a high water table, highly alkaline soils and shallow/doughty soils are commonly included in this category. Areas which are too steep to farm are also used as rangeland. Smooth brome and orchard grass are the most common grasses used to establish irrigated pastures and haylands. Pasture on alkali sites includes native species such as alkali sacaton, saltgrass, wheatgrass and bluegrass.

4.2.2 Impacts of the No Build Alternative

The No Build Alternative would not affect farmlands because no construction would occur and no ROW would be required to construct the new highway lanes.

4.2.3 Impacts of the Preferred Alternative

The proposed project requires the acquisition of approximately 260 acres of land for ROW and roadway construction purposes. This represents 0.02 percent of the total farmland within the two counties. Of the 260 acres, approximately 188 acres are designated as prime farmland if irrigated or farmland of statewide importance. This represents 0.015 percent of the total acreage of prime farmland if irrigated within the two counties. Acquisition of ROW would primarily take place adjacent to the north of the existing ROW.

The completed Farmland Conversion Impact Rating Forms (**Appendix B**) resulted in a corridor assessment of 139 points for the portion of the project in Scotts Bluff County, and 143 points for the portion in Morrill County. The NRCS confirmed these point totals on May 13, 2024, and indicated that no further coordination would be required. Coordination with the NRCS can be found in **Appendix B**.

The Preferred Alternative also has the potential to impact 22 existing center pivot irrigation systems. Two center pivots may require relocation; the final determination on whether they would require relocation would be made during final design. These center pivots are located at approximately US-26 MM 37.50 (halfway between County Road 34 and County Road 35 along US-26) and L62A MM 3.45 (halfway between County Road 81 and County Road 82 along L62A). The remaining 20 center pivots would be shortened but would remain functional following construction of the Preferred Alternative. Landowners would be compensated for the removal or relocation of the center pivots and storage buildings as described in **Section 4.3, Right-of-Way and Relocations**.

Temporary impacts during construction may occur in the form of temporary easements for access or modification of center pivots. Any farmland acquired for temporary easements would be returned to farmland following construction. Modifications to center pivots would be coordinated with the property owner or lessee prior to the modification.

The acquisition of additional ROW would also affect approximately 9 acres of feedlot pens at two locations: 7 acres at Winner Circle Feed Yard, and 2 acres at the feedlot northeast of the intersection of US-26 and L62A. These impacts may result in the reconfiguration of the feedlot operations, but no buildings would be acquired.

One tailwater reuse pit would be impacted along the north side of L62A near MM 5.45 (1/4 mile east of County Road 85). Reconfiguration or relocation of the pit may be necessary.

None of the additional property rights acquisition involves the entire center-pivot system, feedlot, or an entire parcel of farmland. Therefore, the alterations would be minor in nature and have little effect on farming operations.

4.2.4 Avoidance, Minimization, and Mitigation

Although mitigation of farmland impacts is not required, measures would be used which could reduce impacts as much as practicable. Impacts would be mitigated on a case-by-case basis because of the uniqueness of each situation. Impacts to the flow of irrigation water in irrigation canals and lateral ditches would be minimized by completing construction of these areas during the off-season. Any impacted irrigation ditches would be surveyed and addressed during the final design phase of this project.

Commitments:

NDOT would compensate the landowners and/or current leaseholders for impacts on the center pivot irrigation systems. Compensation would include, but not be limited to, relocating the center pivot system, modifying the center pivot equipment, and/or relocating the well supplying the center pivot system. NDOT would coordinate with the landowner during the ROW process. (NDOT)

4.3 Right-of-Way and Relocations

The evaluation of existing highway ROW and property acquisitions from adjacent properties considers the current land use and ownership of a parcel. Any property acquisition would be conducted by payment of fair market value for the property rights in conformance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act), as amended (42 USC 4601 et seq.), Title VI of the Civil Rights Act of 1964, and the Nebraska Relocation Assistance Act (Nebraska Revised Statutes Section 76-1214 et seq.).

4.3.1 Affected Environment

As discussed in **Section 4.1**, existing land use within the Study Area consists of rural, row crop agricultural land use and includes rural residences, farmsteads, and modern livestock production facilities. Commercial areas are located in Minatare. There are nearly 190 parcels within the Study Area, the majority of which are privately owned. Additional property owners include the State of Nebraska, NDOT, irrigation districts, and the Minatare School District.

4.3.2 Impacts of the No Build Alternative

There would be no construction of the Project with the No Build Alternative. ROW impacts may occur as part of other routine roadway and bridge maintenance activities; however, acquisitions for those projects would be evaluated on a project-by-project basis.

4.3.3 Impacts of the Preferred Alternative

The Preferred Alternative would require the acquisition of approximately 260 acres of new ROW and permanent easements, primarily north of US-26 and L62A, between the east side of Minatare and US-385. In the one-mile section of roadway that is being reconstructed in Minatare to the east side of town, ROW would be acquired primarily along the south side of US-26. The new ROW (on either side) would be needed to construct new traffic lanes, county road realignments, bridges, culverts, and access driveways. Most of the ROW acquisition would be minor, generally less than 10 percent of the total parcel. Existing land use of these parcels is predominantly irrigated cropland and farmsteads. More than minor ROW acquisition may be needed from farmsteads that are smaller parcels, as discussed in more detail below.

Relocation and removal of structures and houses would be required. **Table 4.1** describes these properties and potential impacts. These impacts are based on conceptual design, and full or partial acquisitions would be determined during the final design and ROW phases. ROW acquisition and relocations would be conducted in accordance with the Uniform Act, Title VI of the Civil Rights Act of 1964, and the Nebraska Relocation Assistance Act (Nebraska Revised Statutes Section 76-1214 et seq.). Additional information regarding the NDOT ROW and relocation procedures can be found on NDOT's website: <https://dot.nebraska.gov/business-center/row/>.

1158 **Table 4.1 Structure Relocations for the Preferred Alternative**

Site ID	MM	Property Description	Impact
1	33.05	Pasture with an outbuilding.	Relocation or removal of the outbuilding. The property would remain functional as a pasture.
2	33.13	Farmstead with a house and an unmaintained outbuilding.	Relocation or removal of the outbuilding. The property would remain functional as a farmstead following construction.
3	33.63	Confined animal feeding operation with an outbuilding and cropland.	Relocation or removal of the animal building. The property would remain functional as an animal feeding operation following construction.
4	36.00	Farmstead with an unmaintained house, two unmaintained sheds, and maintained cropland.	Relocation or removal of the unmaintained house. The property would remain functional as cropland. Driveway access would be moved north on County Road 33.
5	36.42	Maintained farmstead with a house and a large outbuilding.	Relocation or removal of the house and large outbuilding. The property may not remain functional as a farmstead following construction but would function as a farm storage area.
6	36.44	Farmstead with two unmaintained houses, maintained shed, and maintained cropland to the east.	Relocation or removal of the two houses. The property may remain functional as a farmstead following construction.
7	37.00	Farmstead with a house and six sheds.	Relocation or removal of the house. The property may not remain functional as a farmstead following construction but would function as a farm storage area. Driveway access would be moved north on County Road 34.
8	38.70	Farmstead with two houses, two sheds, a silo, and cropland.	Relocation or removal of both houses. The property would remain functional as a farmstead following construction.

Site ID	MM	Property Description	Impact
9	39.49	Farmstead with two homes, three sheds, and a coop.	Relocation or removal of the coop, the sheds, and both houses. The property may not remain functional as a farmstead following construction.
10	39.98	Farmstead with a house, two sheds, and cropland to the west.	Relocation or removal of the farmhouse and sheds. The property may not remain functional as a farmstead following construction but would still function for agricultural use.
11	40.40	Farmstead with a house, garage, shed, and a barn.	Relocation or removal of the farmhouse, garage, and shed. The property would remain functional as a farmstead following construction.
12	0.05	Outbuilding near livestock facility.	Relocation or removal of the outbuilding. The property would remain functional for agricultural use.
13	0.62	Wooded farmstead with house, garage, shed, and surrounding cropland.	Relocation or removal of the house and garage. The property would remain functional as a farmstead following construction.
14	1.70	Wooded farmstead with house, barn, silo, four sheds, and surrounding cropland.	Relocation or removal of the house and a small shed. The property would remain functional as a farmstead following construction.
15	3.80	Farmstead with a house, a barn, a silo, and two sheds.	Relocation or removal of the house, barn, and silo. The property would remain functional as a farmstead following construction.
16	4.19	Cattle operation, with a barn, and a shed with access to pasture.	Relocation or removal of the barn and shed. The property may not remain functional as a cattle operation nor farm storage.
17	4.57	A large farmhouse.	Relocation or removal of the farmhouse. The property may remain functional following construction.

As part of the Preferred Alternative, access control would be purchased along the entire Project in accordance with NDOT's Access Control Policy, generally allowing no more than three accesses to adjacent properties per mile of roadway, typically between county roads. Existing field access drives and residential driveways would be relocated or realigned as needed throughout the Project to comply with the Access Control Policy.

As noted in **Chapter 3**, there are over 160 private driveways and field access drives along the corridor. The Preferred Alternative would result in modifications or removal of approximately 100 of these drives. Additional access points would be added in some cases, other drives would be consolidated into frontage roads, accessible either from the highway or along County Roads. In some cases, access would be removed due to the removal of the structures as well. In most cases (approximately 50 driveways), the distance is less than 330 feet, or 1/16 mile. Approximately another 15 are between 1/16 mile and 1/8 mile, another 15 are between 1/8 and 1/4 mile, and the remaining 10 are between 1/4 mile and 1/2 mile. The longer distances correspond to field access points that would be relocated farther to align with other nearby access points, or where access would be provided from the adjacent County Roads. There are no access drive relocations greater than 1/2 mile. A table of these access changes is on file with the NDOT.

ROW acquisition and relocations would be conducted in accordance with the Uniform Act, Title VI of the Civil Rights Act of 1964, and the Nebraska Relocation Assistance Act. Due to the nature of 2 to 4-lane highway expansions, uneconomic remnants may be possible. An uneconomic remnant is defined as "a parcel of real property in which the owner is left with an interest after the partial acquisition of the owner's property, and which the acquiring agency has determined has little or no value or utility to the owner" (49 CFR 24.2). If an uneconomic remnant is identified during the ROW acquisition process, per 49 CFR 24.102(k) NDOT would offer to purchase the remnant.

Temporary impacts during construction may occur in the form of temporary easements or temporary access restrictions. Any parcel or portion of a parcel acquired for temporary easements would be returned to their original owner and condition following construction. Access to residential properties would be maintained throughout construction and would be coordinated with the property owner prior to any restrictions.

4.3.4 Avoidance, Minimization, and Mitigation

Commitments:

ROW acquisitions, types, and amounts are based on conceptual design. Impacts on ROW and properties would be further refined and minimized to the extent possible during the final design phase of the Project. (NDOT)

Access to adjacent properties would be maintained throughout construction. Access restrictions would be coordinated with the property owner prior to the restriction. (NDOT, Contractor)

Property rights acquisition would be conducted by paying fair market value for the property rights and damages that may occur. ROW acquisition would be conducted in conformance with the Uniform Act (42 USC 4601 et seq.), Title VI of the Civil Rights Act of 1964, and the Nebraska Relocation Assistance Act (Nebraska Revised Statutes Section 76-1214 et seq.). (NDOT)

4.4 Community Impact Assessment

A Community Impact Assessment (CIA) is a component of the environmental review process that considers how a proposed project may affect the people, institutions, neighborhoods, communities, organizations, and larger social and economic systems in the project's vicinity. A CIA helps assess the

impacts to local communities, their characteristics, and cohesion, including distinct populations, housing, income and tax base, access to public services, and community facilities and resources.

4.4.1 Affected Environment

A CIA for the proposed Study Area was conducted to gain a better understanding of the surrounding communities, identify and evaluate potential impacts to residents or community resources as a result, and develop measures for mitigating impacts. The CIA process included developing a Community Profile of existing community facilities, resources, public services, and socioeconomic characteristics based on available GIS layers, online data sources, and demographic data from the US Census Bureau's American Community Survey (ACS) 2022 5-Year Estimates at the Census Block Groups level of detail. Community resources within at least a half-mile from the proposed project were identified and evaluated for impacts, along with socioeconomic data for the six Block Groups comprising the Study Area for these purposes:

- Census Tract 9532, Block Group 1
- Census Tract 9529, Block Group 1
- Census Tract 9529, Block Group 2
- Census Tract 9525, Block Group 1
- Census Tract 9525, Block Group 2
- Census Tract 9525, Block Group 4

A socioeconomic summary of the Study Area is shown in **Table 4.2** and the full Community Impact Assessment Technical Memorandum can be found in **Appendix C**.

Table 4.2 Demographics Summary of Community Characteristics

Area	Population	Median Age	Minority Population	Households	Median Household Income
Study Area	7,099	40.9*	20.7%	2,798	\$65,032*
Census Tract 9532; Block Group 1 (Scotts Bluff County)	942	43.1	27.9%	349	\$68,125
Census Tract 9529; Block Group 1 (Scotts Bluff County)	975	45.5	45.0%	412	\$47,955
Census Tract 9529; Block Group 2 (Scotts Bluff County)	1,994	38.7	7.4%	750	\$73,684
Census Tract 9525; Block Group 1 (Morrill County)	760	57.7	13.3%	365	\$41,875
Census Tract 9525; Block Group 2 (Morrill County)	1,594	38.1	30.1%	593	\$68,125
Census Tract 9525; Block Group 4 (Morrill County)	834	37.5	5.3%	329	\$61,938

*Represents the median value of the six Block Group estimates. The actual median age and income for the study area cannot be determined without the individual disaggregated data for each Block Group (Source: US Census Bureau, ACS 2022 5-Yr Estimates)

4.4.2 Impacts of the No Build Alternative

There would be no construction of the proposed project with the No Build Alternative. As a result, there would be no direct impacts, adverse or beneficial, to communities surrounding the study area. There may be long-term, indirect impacts associated with the No Build Alternative that adversely affect communities in the form of a lack of economic growth associated with improved freight and commuting opportunities.

4.4.3 Impacts of the Preferred Alternative

The proposed project would have both beneficial and adverse short-term and long-term impacts to local communities as discussed below:

In the long-term, it would impact populations in the study area and surrounding communities beneficially by creating a more efficient roadway and reduced travel times. In the short-term, these populations and the transportation network would be impacted adversely by construction activities. The proposed project would have major, long-term, beneficial impacts on the transportation network in the study area and beyond. The improvements would result in increased roadway efficiency, reliability, safety, and travel conditions, and a more complete and connected freight network for moving produce and goods throughout the region. Local communities would also experience short-term beneficial economic impacts from construction-related jobs and increased business from construction workers patronizing local businesses and service establishments.

Local property owners would experience long-term, adverse impacts resulting from the ROW acquisitions, relocations, and permanent easements required for its construction. Re-purposing this property for use as public ROW, however, is compatible with local land use plans, and would not have a significant financial impact on the community in terms of reducing local tax revenues or removing property that currently serves a better public use.

Local community or seasonal events may incur minor, short-term, adverse impacts during construction activities, and moderate, long-term, beneficial impacts beyond that due to improved connectivity and cohesion resulting from a more efficient and reliable roadway. During public involvement for this project, several commenters expressed concerns about pedestrian access in Minatare, particularly regarding safe crossings to access businesses north of US-26, such as the Dollar General. NDOT has indicated it would explore design considerations for pedestrian access and crossing facilities to address these concerns.

Access to community resources, area schools, and emergency response services would not be impacted by the proposed project because improvements would be constructed under traffic, with access maintained throughout, and any required detours would have limited effect and duration. Access to businesses, community resources, and residences would also be maintained, and disruptions to utility services are not anticipated. No communities would be isolated from or divided by the proposed project.

4.4.4 Avoidance, Minimization, and Mitigation

Commitments:

The design and construction phases of the project would incorporate and follow the NDOT Roadway Design Manual's standards related to work zone traffic control plans, NDOT's Standard Specifications for Highway Construction, and adherence to all federal, state, and local laws and regulations. Construction activities would be coordinated with annual local events in an effort to minimize traffic delays and travel pattern disruptions, where possible. (NDOT Design)

Efforts would be made during the final design phase to minimize necessary property acquisition and relocations, where feasible. Property rights acquisition would be conducted by paying fair market value for the property rights and damages that may occur. Right-of-way acquisition would be conducted in conformance with the Uniform Act (42 USC 4601 et seq.), Title VI of the Civil Rights Act of 1964, and the Nebraska Relocation Assistance Act (Nebraska Revised Statutes Section 76-1214 et seq.). The design process will also take into consideration the community concern related to the need for pedestrian crossing facilities in the City of Minatare to maintain existing community connectivity and access to the City's only grocery store on the north side of US-26. Elements for enhancing non-motorized safety at this location would be considered and incorporated, where feasible. (NDOT Design)

4.5 Environmental Justice

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (issued February 11, 1994) directs federal agencies to take the appropriate and necessary steps to identify and address "disproportionately high and adverse" effects of federal projects on the human health or environment of low-income and minority populations. Additionally, representatives of any low-income or minority populations in the community that may be affected by a project must be given the opportunity to be included in the impact assessment and public involvement process. Title VI of the Civil Rights Act of 1964 ensures that "no person in the United States shall, on the grounds of race, color, or national origin, be subjected to discrimination under any program or activity receiving Federal financial assistance". Title VI prevents discrimination, whether intentional or unintentional in any program or activity receiving Federal financial assistance.

4.5.1 Affected Environment

An environmental justice review was completed for the Project and can be found in **Appendix D**. The environmental justice study area spans multiple block groups within Census Tracts 9525 and 9529 in Scotts Bluff and Morrill counties, Nebraska, including parts of the city of Minatare. Recent data highlights that Block Group 1 of Census Tract 9529 contains meaningfully greater percentages of minority (primarily Hispanic/Latino) and low-income populations compared to statewide figures. However, the study area does not contain Limited English Proficiency (LEP) populations that meet or exceed the NDOT thresholds for translations or specialized LEP, which are either 5% of the population or 1,000 persons for any specific language.

After review of the study area, the following businesses and agencies were identified as likely to serve a minority and/or low-income population and/or provide services:

- Assembly of God Church
- Minatare Park
- Minatare High School Football Field
- Minatare High School Track
- Dollar General

4.5.2 Impacts of the No Build Alternative

There would be no construction of the Project with the No Build Alternative. As a result, there would be no effects to minority and/or low income populations identified in the study area.

4.5.3 Impacts of the Preferred Alternative

Minority populations and low-income populations were identified in the Study Area. However, there are no anticipated disproportionately high and adverse human health or environmental effects to these

groups, as defined in FHWA Order 6640.23A. This is because the project would be constructed under traffic with lane closures controlled by appropriate traffic control devices and practices. Additionally, the project is not expected to result in temporary or permanent adverse effects to through-traffic dependent businesses, nor would it cause substantial permanent traffic pattern changes or disruptions. Access to adjacent properties and local businesses would be maintained throughout the construction period, although access may occasionally be limited. During public involvement for this project, several commenters expressed concerns about pedestrian access in Minatare, particularly regarding safe crossings to access businesses north of US-26, such as the Dollar General. NDOT has indicated it would explore design considerations for pedestrian access and crossing facilities to address these concerns. The project would not restrict access to emergency services, and all ROW acquisitions and property relocations required would not affect the block group associated with the identified Environmental Justice population. Moreover, there would be no isolation, exclusion, or separation of minority or low-income individuals within a given community or from the broader community. Lastly, although night-time work may occur, it would be planned to minimize overall disruption to the community

4.5.4 Avoidance, Minimization, and Mitigation

Commitments:

The contractor shall maintain access for both vehicles and pedestrians during the construction phase to facilitate travel across US-26 to and from Minatare to the Dollar General store located at 130910 Stonegate Rd, Minatare, NE 69356. (Contractor)

The project design shall explore the creation of pedestrian refuge areas within the US-26 raised median while crossing the highway. (NDOT Design)

NDOT shall ensure the businesses and organizations, identified in the following bullet points, are included on the distribution list for the pending project Public Hearing. (NDOT Public Involvement)

- Assembly of God Church, located at 907 Main St, Minatare, NE 69356
- Minatare Park, located at 909 Main St, Minatare, NE 69356
- Minatare High School Football Field, located at 1107 7th St, Minatare, NE 69356
- Minatare High School Track, located at 1107 7th St, Minatare, NE 69356
- Dollar General, located at 130910 Stonegate Rd, Minatare, NE 69356

4.6 Transportation

A transportation network consists of all modes of transportation for goods and people including road, air, transit, trails, and rail. Access to and transport via these facilities are considered in evaluating impacts by the alternatives.

4.6.1 Affected Environment

There are two highways in the Study Area. The first, US-26, would be improved as part of the Project. US-26 is a major east-west transportation corridor in Nebraska, and in this corridor, is part of the Heartland Expressway. US-26 serves several communities in western Nebraska, including Scottsbluff, Minatare, Bayard, Bridgeport, and Ogallala. The second highway in the Study Area is L62A, which serves as a link between US-26 and US-385. L62A would also be improved as part of this project.

There are numerous county roads in the Study Area, which cross the highways at perpendicular angles. Most of these roads are aligned directly across the highway, however, there are two that are not aligned, due to other physical constraints, such as streams. The intersection of US-26 and L62A is an offset "T" intersection, with a slip lane for eastbound traffic on US-26 to continue south toward

Bayard, and the intersection of County Road 79 is offset to avoid a stream on the south side of the highway.

The nearest public use airport to the Study Area is the Western Nebraska-Scottsbluff Regional Airport, approximately 5 miles northwest of the west end of the Project. There would be no impacts to the airport, its operations, or access changes for travelers going to or from the airport. For additional information regarding airspace and airport coordination, see **Appendix E**.

There are no trails or railroads within the Study Area. Open Plains Transit, an intercity bus service in the Nebraska Panhandle does serve the region, stopping in Minatare at the junction of US-26 and Main Street. There are no physical transit facilities within the corridor.

4.6.2 Impacts of the No Build Alternative

There would be no construction of the Project with the No Build Alternative. As a result, there would be no impacts on the transportation network or access to properties beyond those needed to complete routine roadway and bridge maintenance activities.

4.6.3 Impacts of the Preferred Alternative

The Project is anticipated to have minor, short-term, adverse impacts on the transportation network during construction. Construction would be completed under traffic, allowing continuous movement through the Study Area. Traffic would remain open on the existing lanes while the new lanes are constructed. Traffic would shift to the new lanes while work is completed on the existing lanes. County roads would be detoured while being reconstructed to connect to the new lanes. The adverse out-of-direction travel would be approximately 1 to 5 miles in a rural setting. Adjacent county roads would not be closed at the same time.

After construction, the Project would have major, long-term, beneficial impacts on the transportation network in the Study Area and in western Nebraska. The approximately 18 miles that would be improved represents the final piece of the Heartland Expressway from Kimball to Alliance.

The offset "T" intersection at US-26 and L62A would be reconstructed with a 4-leg intersection and would focus the priority movement to the through movements for the eastbound and westbound lanes. Left-turning movements in both directions along US-26 would be provided with protected turn lanes. The US-26 eastbound to southbound movement (i.e., right turn) would remain as a free-flowing curve, providing drivers with a familiar movement. Northbound traffic on US-26 would stop at L62A before continuing east on L62A or west on US-26. This configuration would improve safety and operations.

The offset intersection of County Road 79 would be realigned evenly across the highway (i.e., by shifting the south leg to the east), resulting in a standard intersection. This would improve safety and driver expectancy. Protected left-turn lanes would be provided at this and all other county roads.

The intersection of L62A and US-385 would be reconstructed as a standard "T" intersection, similar to what exists currently, with a southbound to westbound slip lane for vehicles traveling from Alliance to Scottsbluff. This slip lane would be situated approximately 150 feet to the northwest of where the existing slip lane is currently situated. This would be to allow for safer movements at higher speeds.

4.6.4 Avoidance, Minimization, and Mitigation

Commitments:

For county roadway realignments, county roads adjacent to the closed roadway would not be closed at the same time and would remain open to traffic. (NDOT, Contractor)

Access to properties may be limited at times throughout construction but would remain open. The Contractor would coordinate with property owners to maintain access to fields and residences. (Contractor)

Any contractor involved in the project shall file a 7460-1 Form with the FAA for all structures or equipment over 200' tall, or that break a 100:1 slope from a public-use airport. This includes any trucks, cranes, or any equipment used on the project. A 7460-1 form will need to be filed for each new structure that may be part of this project, like bridges or overpasses or if an existing structure's elevation would change. (Contractor)

4.7 Utilities

The potential of the Project to Affect utilities in the Study Area was considered by identifying utility resources and their location and orientation in relation to the Project. These effects were evaluated with respect to utilities crossed by or located within the Preliminary Impact Area.

NDOT has the authority and responsibility to regulate utility occupancy on all state highway ROWs. In exercising this responsibility, NDOT may enter into agreements with political subdivisions regarding state highways located within their geographical boundaries. All other public roads and streets not designated as state highways are under the jurisdiction of the local political subdivisions in accordance with state statutes and local ordinances.

4.7.1 Affected Environment

The utilities listed in **Table 4.3** are located within the project corridor:

Table 4.3 Utilities in the Study Area

Utility Type	Utility Companies/Providers
Gas	Black Hills Energy Tallgrass Energy
Power	Chimney Rock Public Power District Nebraska Public Power District
Telecommunication	Century Link (Lumen) Spectrum (Charter) Nebraska Link (OPTK) Viaero Wireless and Fiber Network
Municipal	City of Minatare City of Scottsbluff Nebraska Department of Energy and Environment Pathfinder Irrigation Minatare (Mutual) Irrigation Farmers Irrigation District

4.7.2 Impacts of the No Build Alternative

There would be no construction of the Project with the No Build Alternative. Impacts on utilities may occur as part of other routine roadway and bridge maintenance activities; however, these impacts would be evaluated on a project-by-project basis.

4.7.3 Impacts of the Preferred Alternative

For the Preferred Alternative, several utilities within and adjacent to the ROW would require relocation to accommodate project developments. The primary utilities affected include power lines, gas lines, and telecommunications infrastructure, all of which are widespread along the project corridor. See **Section 4.8, Irrigation Canals and Districts** for additional information regarding irrigation canals.

NDOT notified utility companies, via letter in June 2024, that the project construction is upcoming. In this letter, NDOT alerted utility companies that the Project would likely require utility relocations. NDOT would continue to coordinate with utility companies during final design to identify specific utility impacts and needed relocations.

Utilities would be relocated in accordance with NDOT's utility relocation policy. Impacted utility companies would be responsible for relocating their own facilities within the highway ROW at their own cost. Utility relocation may be eligible for reimbursement in certain circumstances. All required utility adjustments would be coordinated through NDOT and the Contractor in accordance with NDOT's Standard Specifications for Highway Construction during the appropriate phase of construction. Additional environmental impacts are not anticipated. The utility owner is responsible for obtaining any environmental permits and approvals required for utility relocation.

4.7.4 Avoidance, Minimization, and Mitigation

Commitments:

Impacts on utilities are not avoidable because several utilities are located near or within the existing ROW. The Contractor should follow the guidelines of NDOT's Utility Accommodation Policy (NDOT 2024). It is NDOT's responsibility to notify utility companies of the need for relocation during the design stage of the Project. The NDOT Utility Section would coordinate utility agreements with the utility companies prior to construction. It is the Contractor's responsibility to notify utility companies of relocation needs during the construction phase of the Project for utilities that were not relocated before construction. (NDOT, Utility Provider(s))

If utility relocation or replacement is required in a later phase of the Project, a re-evaluation would be required if (1) federal funds will be used for the utility work, or (2) the Project construction contractor will be responsible for the work.

If this utility work is identified during final design, NDOT would initiate the re-evaluation prior to Project letting. If the work is identified during construction, NDOT would initiate the re-evaluation prior to commencing utility work. (NDOT Environmental, NDOT District)

If either one of the above two conditions does not apply, later relocation or replacement of utilities would be coordinated through NDOT and the Contractor per NDOT's Standard Specifications for Highway Construction, Subsection 105.06. Any environmental permits required for these utility relocations or replacements would be the responsibility of the utility. (NDOT District, Utility Provider(s))

4.8 Irrigation Canals and Districts

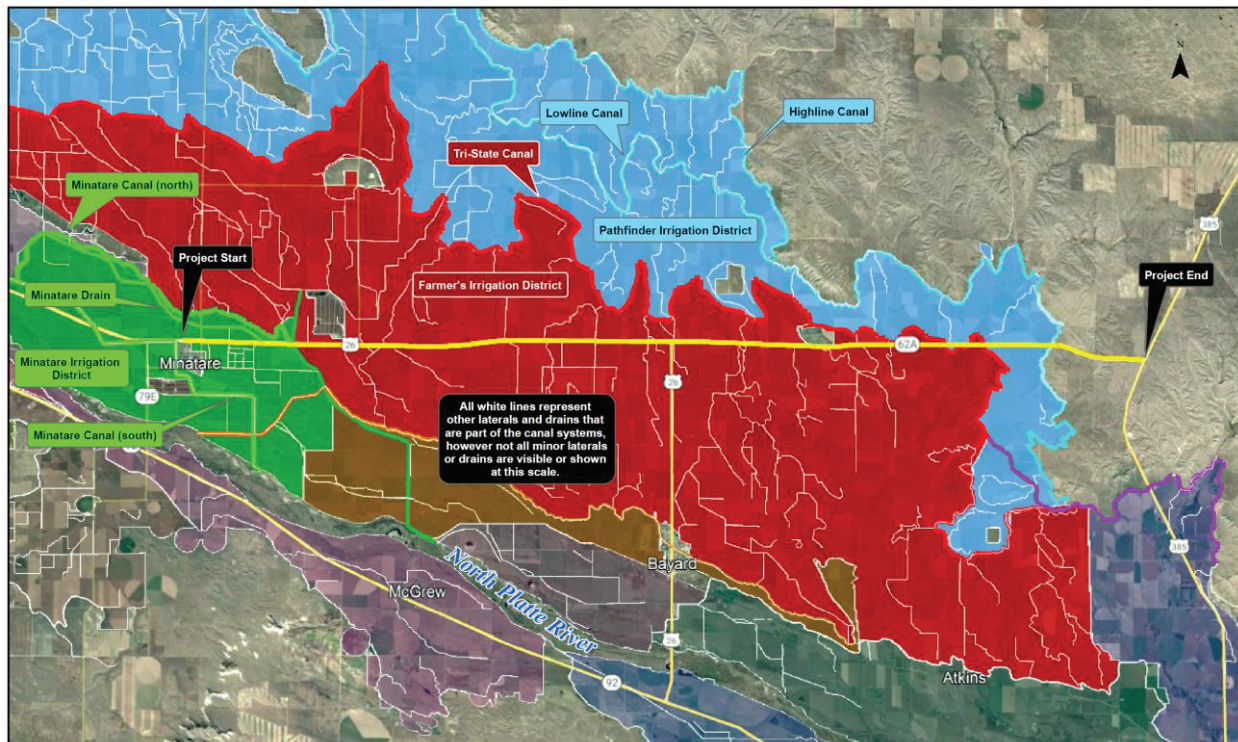
Nebraska has a long history of supplementing cultivated fields with the assistance of irrigation. Extensive canal systems exist along the valley of the North Platte River. Within the vicinity for this

undertaking, numerous canal features are present, including canal channels, conveyance systems or laterals, and drains. The main intake structures (e.g. Platte River, Lake Alice and Lake Minatare) are at the head to the system as a whole, and direct water from the source, the Platte River, into the irrigation system. Irrigation systems are maintained by private irrigation companies, which have obtained water rights from the State of Nebraska or the Federal Government (Bureau of Reclamation). Additional water rights and regulations are in place through the Nebraska Department of Natural Resources (NEDNR). Furthermore, the regional governmental organizations of the Natural Resources Districts (NRDs), maintain maps and provide assistance to the irrigation districts.

4.8.1 Affected Environment

Three canal systems, the Minatare Canal, the Tri-State Canal, and the Interstate Canal cross the study area (**Figure 4.2**). Canals represent significant planning and structural systems necessary for successful farming in the semi-arid conditions of the Great Plains. Irrigation systems are comprised of multiple components that together create a functional system serving miles of rural landscape, often crossing state lines. The three irrigation canals in this study area were established more than 100 years ago and remain in operation today. The North Platte Project was built under direction of the U.S. Bureau of Reclamation, and was the first major publicly financed irrigation project constructed on the Platte River. The Pathfinder Dam in south-central Wyoming is the principal feature of the North Platte Project and was completed in 1909. It stores water to supply other irrigation projects, including the Interstate Canal, Tri-State Canal, Minatare Canal, among others, with lands in Nebraska.

Figure 4.2 Irrigation Canals and Districts



Source: North Platte Natural Resources District (annotated for clarity and emphasis)

The Minatare Canal Company was formed by a group of local residents in 1887. Company organizers included George W. Fairfield and Thomas Harshman along with several others. They obtained a water right dated January 14, 1888, to divert water from the left bank of the North Platte River at a point about 3.5 miles southeast of Scottsbluff, Nebraska. Approximately eight miles of what would become

the **Minatare Canal** were built, and water diverted to irrigate lands during the late summer of 1888. This was widely considered the first canal in the upper valley of the North Platte River that diverted water for crop irrigation. The canal was constructed using a horse-drawn slip scraper, and lumber for bridges and headgates was hauled from the Wildcat Hills and sawed lumber from the Pine Ridge. The first water started flowing on August 15, 1888. During 1889, the canal was extended with both a high-line (north) and low-line (south) segment, each approximately 9 miles long. In 1895 the company was reorganized to the Minatare Mutual Canal & Irrigation Company. Part of the original system has since been abandoned (i.e. the south segment), and in the 1970s the Minatare Canal (i.e. the north segment) was approximately 9.7 miles long. Further modifications were made to the north canal segment since that time, shortening its overall length to approximately 9.1 miles. It is used to irrigate approximately 9,000 acres near the town of Minatare. The Minatare Canal terminates along the north side of US-26 at MM 34.64, where it enters the Minatare Drain.

The **Minatare Drain** is a return water feature that was dug to relieve groundwater ponding caused by the Minatare Canal in the fields north of Minatare in the 1920's. The Minatare Drain runs along the north side of US-26, essentially serving as a roadside ditch, from MM 34.12 to MM 34.67, siphons under Ninemile Creek and continues along the north side of US-26 to MM 35.03, where it crosses under the roadway, before reentering Ninemile Creek farther downstream.

The **Tri-State Canal** began in 1887 when a group of local farmers formed the Farmers Canal Company and by 1890, had constructed approximately ten miles of canal. William H. Wright took leadership of Farmers Canal Company in 1891 and by June 1893, approximately twenty total miles of canal had been constructed. In 1901 the Farmers Canal Company and its water rights were sold to Robert Walker under foreclosure. The Tri-State Land Company acquired the Canal in 1904 and by 1905 extended the canal 96 miles, with an additional 28-mile extension called the Northport Canal. The canal carries water released from Pathfinder Reservoir and return flow from the Pathfinder Irrigation District to Northport Project lands. By 1907 it reached a point north of Minatare. Landowners voted bonds to purchase the canal system in 1912. The main canal is 96 miles long with 285 miles of laterals and 80 miles of drainage ditches to accommodate seepage and floodwaters.¹³ Tri-State Canal is part of the North Platte Project located in Nebraska and Wyoming. The project extends 111 miles along the North Platte River Valley from Guernsey, Wyoming to Bridgeport, Nebraska. The project provides irrigation for approximately 226,000 acres which are divided into four irrigation districts. Project features include five storage dams, four diversion dams, one pumping plant, one powerplant and about 2,000 miles of canals, laterals, and drains. Electric power is generated at Guernsey Power Plant and supplied to the Study Area by four substations and about 160 miles of transmission lines. The Tri-State Canal crosses L62A at several points along the corridor, at MMs 5.37, 5.81, and 6.13.

The **Interstate Canal** was built under the Reclamation Act of 1902 with the North Platte Project authorized in 1903 and constructed between 1905 and 1915. Localized irrigation was possible in 1908 through canal features that followed land contours for 95 miles to Lake Alice and Lake Minatare Reservoirs northeast of Scotts Bluff. The 35-mile long **High-Line Canal** (north branch of Interstate) extends from Lake Alice to the southwest while the **Low-Line Canal** (south branch of the Interstate) extends from Lake Minatare southwest. It is 43 miles long. The canal totals 179 miles in length and in addition to the canal there are 670 miles of laterals and 115 miles of drains. The canal extends east from the point of diversion to Lake Alice (completed 1913) and then into Lake Minatare (completed 1915). The High Line Canal then continues east to a point about six miles north of Bayard and the Low Line Canal from Lake Minatare east to a point about eight miles northeast of Bridgeport. The Low Line Canal crosses L62A near MM 7.42.

Irrigation Districts

The three main irrigation canals are managed by three separate irrigation districts; the Minatare Mutual Canal & Drainage District (Minatare Canal and Minatare Drain), the Farmers Irrigation District (Tri State Canal), and the Pathfinder Irrigation District (Interstate Canal, High Line and Low Line

Canals). There are additional irrigation districts in the project vicinity, including the Winter's Creek Irrigation District, Northport Irrigation District, and the Ninemile Creek Irrigation District. These districts receive overflow or return water from upstream districts, or may pass water downstream for re-use and eventual return to the North Platte River.

In addition to the main supply canals described above, there exist hundreds of miles of laterals and drains that branch off from the supply canals, deliver water to fields, and then collect runoff before returning it to the system. These laterals and drains can be open or closed features, and are often re-built, re-aligned, or modified over time, even in the course of an irrigation season. Laterals and drains are essentially service lines (i.e., utility features) and are the responsibility of the irrigation districts and landowners to maintain and modify. Laterals and drains also have gates, valves, pumps, or meters that are used to maintain operations and to gauge water use throughout the system.

There are also numerous maintenance roads and access roads along the irrigation canals, or from the highway to reach them. These 'ditch roads' need to be maintained and kept clear so that the irrigation district staff can use them to maintain the canals, assess damage, or make repairs.

4.8.2 Impacts of the No Build Alternative

There would be no construction of the Project with the No Build Alternative. As a result, there would be no impacts on the irrigation canals or districts listed above beyond those needed to complete routine maintenance activities, for both the irrigation canals themselves, or for roadway and bridge activities. The irrigation districts would continue to maintain and improve the canals, laterals, and drains, which may involve enclosing them in pipes or moving them to improve operations.

4.8.3 Impacts of the Preferred Alternative

The Preferred Alternative would impact all three irrigation canals in some fashion. These impacts are described further in the following narrative. Additional information concerning the impact lengths can be found in Section 4.20.

The **Minatare Canal** does not cross US-26, but it does empty into the **Minatare Drain** on the north side of US-26 at MM 34.65. Minatare Drain flows along the north side of the corridor for approximately 1.0 mile, from approximately MM 34.09 to MM 35.05. The Minatare Drain would be relocated to the south side of the roadway prior to crossing Ninemile Creek at MM 34.09. A new siphon structure would need to be constructed to cross under Ninemile Creek. The relocated Minatare Drain would continue along the south side of US-26 until it would re-enter the existing Minatare Drain at MM 35.05. The termination point of the Minatare Canal would be extended under the highway at MM 34.65 to empty into the Minatare Drain on the south side of the highway. Coordination has occurred with the Minatare Mutual Canal & Drainage District and they are in favor of relocating the Minatare Drain to the south side of the roadway. A formal agreement between the Minatare Mutual Canal & Drainage District and the NDOT would be completed prior to construction.

The **Tri-State Canal** crosses L62A three times (MM 5.37, MM 5.81, MM 6.13), and at each location, the box culvert through which the canal flows would be extended. Work would be required in the canal to extend the box culverts. This work would be performed when the irrigation facilities are not in operation, generally from October through April. Maintenance access points from L62A would be provided, and existing access from adjacent County Road 85 and County Road 87 would remain in place. Coordination has occurred with the Farmers Irrigation District and they are in agreement that extending the box culverts to accommodate roadway widening is feasible. A formal agreement between the Farmers Irrigation District and the NDOT would be completed prior to construction.

The **Low Line (Interstate) Canal** crosses L62A once (MM 7.42), and the box culvert through which the canal flows would be extended. Work would be required in the canal to extend the box culvert. This

work would be performed when the irrigation facilities are not in operation, generally from October through April. Maintenance access points from L62A would be provided, and the existing access from County Road 89 would remain in place. Coordination has occurred with the Pathfinder Irrigation District and they are in agreement that extending the box culvert to accommodate roadway widening is feasible. A formal agreement between the Pathfinder Irrigation District and the NDOT would be completed prior to construction.

4.8.4 Avoidance, Minimization, and Mitigation

Mitigation measures would be added once adequate coordination with the districts has been completed.

4.9 Historic Properties

An evaluation of the potential for cultural resources was completed in support of the Project. Cultural resources include a broad pattern of tangible and/or intangible evidence of past or present human lifeways and/or practices. Section 106 of the National Historic Preservation Act of 1966, as amended, (NHPA) and implementing regulations at 36 CFR 800(1)(a), requires projects using federal land, funds, or permitting to consider any effects a proposed action may have on historic properties. A historic property is a property listed on or eligible for listing on the National Register of Historic Places (NRHP). Historic property types include buildings, structures, objects, archeological sites, and districts. A cultural resource is a historic property if the property is 50 years old or older and possesses significance in one or more of these criteria:

- **Criterion A:** Is associated with events that have made a significant contribution to the broad pattern of history.
- **Criterion B:** Is associated with the lives of persons significant in the past.
- **Criterion C:** Embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or that possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction.
- **Criterion D:** Has yielded, or may be likely to yield, information important in history or pre-history.

A historic property must also retain sufficient integrity to convey its NRHP significance. For the NRHP, there are seven aspects of integrity: location; design; setting; materials; workmanship; feeling; and association.

4.9.1 Affected Environment

The historic properties study area is known as the Area of Potential Effects (APE). The APE for Section 106 purposes is defined at 36 CFR 800.16(d) as the geographic area or areas within which an action may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The APE for this project was identified in consultation with FHWA and NDOT. A narrative of the APE and maps depicting the APE are included in **Appendix F**.

An evaluation of the potential for archeological resources within the APE was completed in 2022 by John R. Bozell. An evaluation of the potential for architectural and structural resources within the APE was completed by Historic Resources Group, Inc. (HRG) in 2022. The evaluation for cultural resources did not identify any archeological historic properties present within the APE. The evaluation for cultural resources identified five architectural historic properties present within the APE:

- **Harry's Curve Historic District** is a grouping of automotive resources at the northeast corner of US-26 and Stonegate Rd. in Minatare. The property consists of a restaurant/café, motel, and service station. Constructed between 1955-1970, this historic district is NRHP eligible under Criterion A as a significant example of a related complex associated with transportation services in the area of Commerce. This property represents the definition of a district where each individual component may not be significant but taken collectively and as a whole the components combined tell a story that is expressed through the physical relationship of the buildings, the signage, and their function. The boundary for this property is roughly defined by the concrete parking and driving areas connecting the buildings.
- **The Minatare Canal:** The Minatare Canal enters into the Study Area from the north just east of County Road 31 and crosses the northern boundary of the APE three times before terminating at the north side of US-26 between County Roads 31 and 32. The canal is recommended NRHP eligible under Criterion A for its significant association with Agriculture/Subsistence as an irrigation facility. This canal is among the oldest and smallest in the area. The boundaries are defined as the canal itself. Associated with the canals are contemporary canal access roads typically established for repairs and maintenance. These are not considered contributing features to the canal system. This resource has been identified as eligible for listing in the NRHP under Criterion A for a significant association with Agriculture/Subsistence as an irrigation facility.
- **MO00-073, Sod House-7943 L62A, Bayard.** Constructed c. 1910, this sod house has been previously surveyed and recommended NRHP eligible. The exterior has been clad with stucco, but the depth of the walls because of the sod construction is evidence of its underlying materials. There are no other historic outbuildings associated with this property. This building is eligible because of its exceedingly rare and significant property type. Sod house construction is important to the development of agriculture and settlement in Morrill County and despite the alterations this is a good example of early 20th century vernacular building styles on the western edge of the Sandhills. It retains the general form and design intent of the historic building. Sod buildings are routinely clad with an alternate material as soon as possible after their construction, to diminish deterioration common among the building form, from the elements, pest infestation, and structural issues. It was more typical for the sod structures to be torn down or converted to storage and not maintained. They are therefore becoming rare resources in the built environment. This building is eligible under Criterion C for its significant association with Architecture and as a representative example of a building type. The boundary of this property includes the lot associated with the residence and no other acreage. Historic out buildings are no longer present to contribute to an expanded farmyard.
- **The Tri-State Canal:** This is a linear resource that crosses through the APE. The boundaries include the entirety of the linear resource. The canal dips into the APE beginning on the north side just east of Road 81 and continues to dip in and out of the APE until it crosses Highway 62A east of Road 85. Between Road 85 and Road 87 the canal crosses the highway three times. It has a broad dirt shoulder with graded access drive that follows the contour of the canal. The width of the boundary includes these features. The canal is eligible under Criterion A for its significant association with Agriculture/Subsistence as an irrigation facility. Associated with the canals are contemporary canal access roads typically established for repairs and maintenance. These are not considered contributing features to the canal system.
- **SX00-060 The Interstate Canal:** The canal crosses the APE at the east end, entering from the north and crossing just east of Road 89 in Morrill County. Associated with the canals are contemporary canal access roads typically established for repairs and maintenance. These are not considered contributing features to the canal system. The canal is eligible under Criterion A for its significant association with Agriculture/Subsistence as an irrigation facility.

1670 The Nebraska State Historic Preservation Office (SHPO) concurred with the NRHP eligibility
1671 determinations, the level of effort, and the project effects determination on June 6, 2024. This
1672 coordination can be found in **Appendix F**).

1673 In addition to the SHPO, NDOT invited local organizations, municipalities, counties, and tribes to
1674 participate in consultation under Section 106 as part of a Stakeholder Meeting held on September 8,
1675 2022 held in Minatare and through a comment period from May 23, 2024 through June 22, 2024. No
1676 substantive comment was received. Consulting parties and their comments are shown in **Table 4.4**.

1677 **Table 4.4 Consulting Parties**

Consulting Party	Response
Apache Tribe of Oklahoma	None
Arapaho Tribe of the Wind River Reservation, Wyoming	None
Cheyenne and Arapaho Tribes, Oklahoma	None
Cheyenne River Sioux Tribe of the Cheyenne River Reservation, South Dakota	None
Comanche Nation of Oklahoma	On June 5, 2024, the Commanche Nation indicated that the project location was cross referenced with Comanche Nation site file and an indication of "No Properties" have been identified.
Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation, Montana	On May 22, 2023, the Northern Cheyenne Tribe asked FHWA clarifying questions. FHWA responded on May 25, 2023.
Pawnee Nation of Oklahoma	On September 9, 2022, the Pawnee Nation responded that the proposed project should not affect the cultural landscape of the Pawnee Nation On May 16, 2023, the Pawnee Nation responded that the project should not adversely affect the cultural landscape of the Pawnee Nation.
Rosebud Sioux Tribe of the Rosebud Indian Reservation, South Dakota	None
Yankton Sioux Tribe of South Dakota	None
Pathfinder Irrigation District	On May 30, 2024, Dennis Strauch of the Pathfinder Irrigation District agreed with the "finding of no historical impact to the Interstate Canal properties".
Farmers Irrigation District	None
Minatare Mutual Canal & Irrigation	None

Consulting Party	Response
Winters Creek Canal Company	None
Bureau of Reclamation (BOR)	On April 28, 2023, the BOR Wyoming Area Office concurred with NRHP eligibility recommendations for the Tri-State Canal and the Interstate Canal.
Scotts Bluff County	None
Morrill County	None
City of Minatare	None
Legacy of the Plains Museum	On August 26, 2022, Jack Preston with Legacy of the Plains Museum telephoned and indicated that he would be the project contact. He is interested in the project, but not overly concerned. He did attend the stakeholder meeting. On May 23, 2024, Legacy of the Plains Museum presented their concurrence.
KAJO Management, Inc. (property owner)	On September 7, 2022, Robert with KAJO Management, who owns the sod house responded. He lives in Florida and appreciates the invitation but did not attend the meeting. He did not know that the house was made of sod and was interested.
Mr. and Mrs. Skinner (property owner)	None
Nebraska SHPO (concurring party)	None

1678 The 30-day comment period expired on June 22, 2024 without receiving responses from the
1679 remaining consulting parties. This coordination can be found in **Appendix F**.

1680 4.9.2 Impacts of the No Build Alternative

1681 There would be no construction of the Project, or use of temporary detours, with the No Build
1682 Alternative. As a result, there would be no impacts on the properties listed above beyond those needed
1683 to complete routine roadway and bridge maintenance activities.

1684 4.9.3 Impacts of the Preferred Alternative

1685 The Preferred Alternative would have **no effect** on the **Harry's Curve Historic District**. Construction
1686 activity would not occur within the boundaries of the historic property. There is no proposed ROW
1687 acquisition, though some temporary easements may be required to access the property. There are
1688 multiple entrances onto the property from US-26, and the redesign would retain one access point to
1689 the highway from the property. Culverts in the area would be removed and replaced. Historic signs
1690 would remain and would not be affected. The collection of buildings and their relationship to the
1691 highway are the key character defining features of this property that convey NRHP significance. These
1692 would not be impacted by the project.

The preferred alternative would have **no effect** on the **Minatare Canal & Irrigation system**. Unlike the other two canals, this canal terminates near the project corridor and the end of the canal would be shifted north where a new pipe may be added that extends to the Minatare drain. All connectivity of the canal and its connection to the larger system would be maintained.

The preferred alternative would **not adversely affect** the **sod house M000-073**. Work at this intersection would realign the south leg of Co Rd 79 to line up with the north intersection. ROW would be required. The realignment of the county road will bring it closer to the historic property. However, the creation of new highway lanes to the north of the historic property will divert much of the traffic away, leading to an expected reduction in noise at the property. Given the low traffic volumes on the county road, no significant change in noise levels is anticipated. This activity and ROW acquisition do not impact the characteristics that make this property NRHP eligible.

The preferred alternative would have **no effect** on the **Tri-State Canal system**. This canal crosses the road three times and there would be construction activity in those places. The significance of the canal remains in its connectivity to provide water to the area. These changes are examples of ongoing maintenance and have no impact on the characteristics that make this canal eligible.

The preferred alternative would have **no effect** on the **Interstate Canal system (SX00-060)**. One single barrel culvert would be extended where the system crosses the highway. This construction activity would have no impact on the characteristics that make the system eligible, which includes system connectivity to deliver water to the area.

4.9.4 Avoidance, Minimization, and Mitigation

Commitments:

Five Sensitive Areas have been identified along this project. These Sensitive Area(s) shall be indicated on project plans. (Design)

Five Sensitive Areas have been identified along this project.

- 1) Harry's Curve, US-26, MM 33.19 – 33.38, north side (STA 113+27 R to 123+00 L). No grading or project activities, including but not limited to, working, staging, borrowing, stockpiling, or storing material and/or equipment, shall occur beyond the temporary easement. (Contractor)
- 2) Sod House, US-26, MM 1.19 – 1.21, south side & an area along CR 77 (see stationing) (STA 635+00 – 636+21 R & STA 5601+00 – 5602+65 R). No grading or project activities, including but not limited to, working, staging, borrowing, stockpiling, or storing material and/or equipment, shall occur beyond the newly acquired ROW. (Contractor)
- 3) Tri-State Canal (3 locations), L62A, MM 5.37, north & south side (STA 854+77 L&R); L62A, MM 5.81, north & south side (STA 879+74 L&R); L62A, MM 6.13, north & south side (STA 894+36 L&R). No grading or project activities, including but not limited to, working, staging, borrowing, stockpiling, or storing material and/or equipment, shall occur beyond the temporary or permanent easement. (Contractor)
- 4) Interstate Canal, L62A, MM 7.43, north & south side (STA 963+52 L&R). No grading or project activities, including but not limited to, working, staging, borrowing, stockpiling, or storing material and/or equipment, shall occur beyond the temporary or permanent easement. (Contractor)
- 5) Minatare Canal, US-26, MM 34.64, north side (STA 191+57 R). No grading or project activities, including but not limited to, working, staging, borrowing, stockpiling, or storing material and/or equipment, shall occur beyond the temporary or permanent easement required to move the end point of the canal north. (Contractor)

4.10 Paleontology

In 1959, Nebraska's Legislature passed a law authorizing NDOT to enter into agreements with the appropriate state agencies to remove and preserve paleontological remains when such remains were to be disturbed by highway construction. This legislation also authorized the use of highway funds for this specific purpose. This was the country's first paleontological salvage program, the Highway Salvage Paleontology Program (HSPP), which is based on close cooperation among Contractors, NDOT, and the University of Nebraska State Museum. In areas where new construction threatens paleontologically sensitive areas, museum paleontologists follow a basic three-phase strategy of salvage preconstruction, during construction, and post construction to recover the maximum amount of scientific information without causing construction delays.

4.10.1 Affected Environment

The University of Nebraska State Museum has no vertebrate paleontology localities within the study area of the project. There are noted rhino bones within 3 miles of the eastern end of the project, as well as some quarries in the same vicinity. The canyons in the eastern part of the project were walked in 2008 or 2009, without any major discoveries. Shane Tucker from the museum was present at the Agency Scoping Meeting in February 2023, and indicated that they are not anticipating any great accumulations of fossils, and if any were found, they would likely be isolated and able to be dealt with during construction.

4.10.2 Impacts of the No Build Alternative

There would be no construction of the Project, including grading, with the No Build Alternative. As a result, there would be no impacts on paleontological resources beyond those needed to complete routine roadway and bridge maintenance activities.

4.10.3 Impacts of the Preferred Alternative

The Preferred Alternative has moderate potential to impact previously unidentified paleontological resources during construction because it would impact areas that have been previously disturbed only at the surface level for agricultural production. Previous deep grading (greater than 3 feet) in these areas is not evident on aerial imagery. Additionally, if there is gravel mined for aggregate from the floodplain, there may be Pleistocene fossil remains encountered. Because paleontological resource locations are difficult to locate due to the vegetative cover and/or the nature of preservation, these resources could be identified during construction, and appropriate coordination protocols with the HSPP would occur if resources were discovered.

4.10.4 Avoidance, Minimization, and Mitigation

Commitments:

For paleontological resources, additional field surveys and test excavations would be conducted prior to construction by the HSPP. The HSPP would be informed throughout the planning process with regard to alignment choice, grading details, and borrow pit locations. On-site monitoring and the fossil mitigation plan would be implemented throughout all phases of construction. (NDOT, Contractor)

In the event of a discovery of paleontological materials during construction, NDOT Standard Specifications for Highway Construction, Subsection 107.10 (2017, pg. 64) states, "The Engineer should be immediately notified when any such articles are uncovered, and the Contractor should immediately suspend operations in the area involved until such time that arrangements are made for their removal and preservation." (Contractor)

4.11 Visual Effects

Visual resources are those physical features that make up the visible landscape, including land, water, vegetative, and man-made elements (FHWA 1986). Visual considerations are given for general resources (public) and specific sensitive resources (including some parks, landscapes, and historic properties).

4.11.1 Affected Environment

Visual impacts and aesthetics refer to the way the project may affect the visual quality of the surrounding environment, and the overall aesthetic experience of the project for users and observers. Visual impacts can include any changes to the landscape or viewshed caused by the project. Aesthetics refer to the visual qualities and design elements of the highway construction project itself. The highway alignment, bridges, and intersection configurations could be considered aesthetics of the corridor. When evaluating this corridor for any visual or aesthetic impacts, the surrounding area that can be viewed by visual reconnaissance becomes the study area.

The Study Area contains one sensitive visual resource, Chimney Rock National Historic Site located near Bayard in Morrill County, south of the corridor. At approximately 500 feet tall, this formation served as a signpost for settlers traveling the Oregon Trail.

4.11.2 Impacts of the No Build Alternative

The No Build Alternative would not change the current visual or aesthetic landscape of the Study Area.

4.11.3 Impacts of the Preferred Alternative

The preferred alternative for the corridor would result in visual changes, with the most significant being the addition of extra lanes to the north of the existing 2-lane facility. These new lanes would be separated from the existing lanes by a depressed median, and intersections would be redesigned to standard "T" intersections. Specifically, the intersection of US-26 and L62A would be realigned with CR 75 to the north, resulting in an improvement in aesthetics and alignment with driver expectations. In Minatare, raised medians would be added for traffic control, which is a departure from the current road design.

The preferred alternative would have no impact to the Chimney Rock National Historic Site as this site is nearly 8 miles south of the project, and the view of the site would not be obstructed.

4.11.4 Avoidance, Minimization, and Mitigation

Based on the information provided above, no mitigation measures for visual and aesthetic impacts would be required for the project.

4.12 Section 4(f) Properties

Section 4(f) of the US Department of Transportation Act of 1966 (49 USC 303) provides special protection for **publicly owned parks and recreational lands, wildlife and waterfowl refuges, and significant public or private historic properties**. An impact, either direct or indirect, on one of these resources is considered a "use." A "use" of a Section 4(f) resource, as defined in 23 CFR 774.17, occurs: (1) when land is permanently incorporated into a transportation facility, (2) when there is a temporary occupancy of land that is adverse in terms of the statute's preservationist purpose, or (3) when there is a "constructive" (that is, indirect) use of land. The Project alternatives were evaluated based on impacts on Section 4(f) resources identified within the Study Area.

4.12.1 Affected Environment

Eight resources were studied as part of the Section 4(f) review. These include the Minatare Canal, the Tri-State Canal, the Lowline Canal (Interstate Canal), Sod House (MO00-073), Harry's Curve Historic District, Minatare Park, Minatare Elementary School, and Minatare High School (**Figure 4.1**).

As discussed in **Section 4.4, Community Impact Assessment**, there are three recreational properties within the Study Area: Minatare Elementary School, Minatare High School, and Minatare City Park. Minatare High School, including the track, football field, and practice field, is located one block south of US-26 between Main Street and 3rd Avenue in Minatare. Minatare High School is a multi-use property. The buildings located on the north side of the parcel are not intended for recreational use and are not open to the public. The track, football field, and practice field are always open for public use when not in use by the school and fall under Section 4(f) protection. Minatare Elementary School is located two blocks south of US-26 between Avenue A and Avenue B in Minatare. Minatare Elementary School is a multi-use property. The buildings located on the west side of the parcel are not intended for recreational use and are not open to the public. The playground is always open for public use when not in use by the school and falls under Section 4(f) protection. Minatare Park is located one block south of US-26 between Avenue A and Main Street in Minatare. Minatare Park is a recreational property and is always open for public use and falls under Section 4(f) protection.

As discussed in **Section 4.9, Historic Properties**, there are five NRHP-eligible properties within the Study Area: Harry's Curve Historic District, Sod House (MO00-073), Minatare Canal, Tri-State Canal, and Interstate Canal Lowline Canal. Harry's Curve Historic District, the Tri-State Canal, the Minatare Canal, and the Interstate Canal are eligible for listing in the NRHP under Criteria A. The Sod House (MO00-073) is eligible for listing in the NRHP under Criterion C. The Nebraska SHPO concurred with this finding on June 6, 2024. Historic properties are also protected under Section 4(f) and require consideration of potential use separately from the determination effects under Section 106.

The NDOT Section 4(f) Initial Assessment Form, which describes the potential Section 4(f) resources in the area and how they were identified and evaluated, is provided in **Appendix G**.

4.12.2 Impacts of the No Build Alternative

There would be no construction of the Project with the No Build Alternative. As a result, there would be no impacts on the properties listed above beyond those needed to complete routine roadway and bridge maintenance activities.

4.12.3 Impacts of the Preferred Alternative

As discussed in **Section 4.9, Historic Properties**, the Preferred Alternative would impact the **Sod House**, including removal of a windbreak and acquisition of ROW on the west side of the NRHP site boundary. The Preferred Alternative would impact approximately 0.029 acres of this 0.25-acre NRHP boundary. The Nebraska SHPO concurred with the "No Adverse Effect" determination on June 6, 2024. A Section 4(f) de minimis for Historic Sites (23 CFR 774.3(b)) applies and can be found in **Appendix G**.

Approximately 6,430 square feet of temporary easement would be required to construct the new westbound lanes of US-26 along the south side of the **Harry's Curve Historic District** property. There are multiple driveways onto the property from US-26, and the construction of the new lanes and new access control would result in the retention of one driveway. Existing culverts parallel and adjacent to the property would be removed and replaced. The historic signs would remain and would not be affected. Overall, there would be no effect to Harry's Curve Historic District. The Nebraska SHPO concurred with the "No Historic Properties Affected" determination on June 6, 2024. A Section 4(f) de minimis for Historic Sites (23 CFR 774.3(b)) applies and can be found in **Appendix G**.

Construction activities at the Minatare Canal, Tri-State Canal, and Interstate Canal would involve extension of the box culverts as described in **Section 4.8 Irrigation Canals and Districts**. These impacts would not affect the historic properties, as described in **Section 4.9 Historic Properties**, but would require further consideration under Section 4(f).

Minatare Canal

As part of the project, the endpoint of the Minatare Canal (US-26 MM 34.64) would be shifted slightly north, with a new pipe installation to connect to the Minatare drain. All connectivity with the larger canal system would be maintained, ensuring no adverse effects on historic properties. NDOT may acquire additional property rights, such as temporary or permanent easements, or new ROW, but these acquisitions would not impact the canal's historic significance. Visual, noise, and vibratory effects during construction would be minimal and temporary. No long-term or cumulative effects are expected, and the Minatare Canal & Irrigation Company would retain its NRHP significance under Criterion A. A Section 4(f) de minimis for Historic Sites (23 CFR 774.3(b)) applies and can be found in **Appendix G**.

Tri-State Canal

The Tri-State Canal crosses L62A three times (MM 5.37, MM 5.81, MM 6.13), with construction planned at each crossing to extend culverts. The project would not disrupt the canal's connectivity or its NRHP significance, as the system's function will remain intact. NDOT would acquire additional permanent easements, generally extending about 20 feet beyond construction limits, but these would not impact the canal's historic characteristics. Any visual, noise, or vibratory effects during construction would be minimal and temporary. No long-term or cumulative effects are expected, and the Tri-State Canal will continue to retain its NRHP significance under Criterion A. A Section 4(f) de minimis for Historic Sites (23 CFR 774.3(b)) applies and can be found in **Appendix G**.

Interstate Canal

At approximately MM 7.43 along L62A, a single-barrel culvert would be extended to the north. This improvement would maintain the system's functionality, without impacting historic properties. NDOT would acquire an additional permanent easement extending about 20 feet beyond the current limits of construction (LOCs) to maintain highway assets. The new easement would not affect the canal's historic characteristics. Visual, noise, and vibratory effects during construction would be minimal and temporary, with no long-term or cumulative impacts anticipated. The Interstate Canal would retain its NRHP significance under Criterion A. A Section 4(f) de minimis for Historic Sites (23 CFR 774.3(b)) applies and can be found in **Appendix G**.

No temporary easements or other property acquisitions are proposed for Minatare Elementary School, Minatare High School, or Minatare City Park. Access to all three properties would be maintained at all times, and access to US-26 would remain open at one of the intersections, either Main Street or 3rd Street, during the closure of the other.

4.12.4 Avoidance, Minimization, and Mitigation

ROW acquisition is proposed at Sod House (M000-073). Other alternatives considered earlier in project development involved removing most or all of the historic property. The current alignment reduced the impacts to ROW acquisition and tree removal only. The limits of construction are being kept outside the NRHP boundary for the site.

Temporary easements would be required for the construction along Harry's Curve. No construction would occur within the boundary of this NRHP eligible property. There are three access drives to Harry's Curve that would be consolidated into one access drive. There would be no impacts to the property or the character defining features that protect it for Section 4(f).

1909 The design at canal locations has been minimized to the extent practicable to construct the new box
1910 culverts while maintaining the integrity of the irrigation system. Construction activities will be
1911 scheduled and managed to ensure that irrigation water flow is not disrupted during periods of required
1912 use.

1913 There would be no use of the remaining Section 4(f) properties as they are outside of the limits of
1914 construction and have no potential to be impacted. Specifically, construction would not impact these
1915 properties, property rights would not be required, and access would not be restricted.

1916 **Commitments**

1917 The contractor shall not complete work, stage, stockpile or store materials within the boundaries of
1918 the following Section 4(f) properties: Minatare Elementary School, Minatare High School, and Minatare
1919 City Park. If it is determined that temporary or permanent right-of-way is required from or access is
1920 restricted to a Section 4(f) property, coordination shall occur with NDOT Environmental. (Contractor)

1921 The following properties shall be marked on the project plans as sensitive areas: Minatare Elementary
1922 School, Minatare High School, and Minatare City Park. (Design)

1923 **4.13 Section 6(f) Properties**

1924 Section 6(f) of the Land and Water Conservation Fund (LWCF) Act of 1965 (54 USC 200301–2000310)
1925 restricts the conversion of recreational land to non-recreational land if the land was acquired with
1926 money from the LWCF. The Nebraska Game and Parks Commission (NGPC) reviewed the project for
1927 LWCF Act encumbered lands on June 14, 2024. The review found that there was one property within
1928 the Study Area, Minatare City Park. As described in **Section 4.12, Section 4(f) Properties**, there would
1929 be no direct impacts to this park, and there would also be no restriction of access to the park.
1930 Therefore, no further action is needed. Coordination with NGPC can be found in **Appendix H**.

1931 **4.14 Hazardous Materials**

1932 Hazardous materials, defined as substances that, because of their quantity, concentration, or physical,
1933 chemical, or infectious characteristics, may present a threat to public health or the environment.

1934 Hazardous materials are regulated by EPA and other federal and state agencies under the Toxic
1935 Substances Control Act of 1976 (15 USC 2601 et seq.); the Comprehensive Environmental Response,
1936 Compensation, and Liability Act of 1980 (42 USC 9601 et seq.); the Resource Conservation and
1937 Recovery Act of 1976 (RCRA; 42 USC 6901 et seq.); the Superfund Amendments and Reauthorization
1938 Act of 1986; and the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 355).
1939 RCRA gives EPA the authority to control hazardous waste from “cradle to grave.” This includes the
1940 generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a
1941 framework for the management of non-hazardous solid waste. The 1986 amendments to RCRA
1942 enabled EPA to address environmental problems that could result from underground tanks storing
1943 petroleum and other hazardous substances. Nebraska Administrative Code Title 128, Nebraska
1944 Hazardous Waste Regulations regulates hazardous wastes in the state.

1945 **4.14.1 Affected Environment**

1946 An initial Hazardous Materials Review (HMR) was prepared in 2021 by Benesch to identify
1947 environmental concerns associated with hazardous materials and petroleum products which could
1948 potentially be encountered during the construction project. The HMR included the review of the
1949 Nebraska Department of Environment & Energy (NDEE) Interactive Mapping System (IMS),
1950 Environmental Protection Agency (EPA) Enviromapper website, Nebraska State Fire Marshal (SFM)
1951 underground storage tank (UST) database, review of historical records, reviewing US Geological

Survey topographic maps and historic aerial photography, an inquiry to the Minatare-Melbeta Fire Department, a visual reconnaissance, and a subsurface investigation.

A visual reconnaissance was conducted on July 29, 2021 to assess the Study Area for potential hazardous materials concerns associated with current land use and observable site activities. The visual reconnaissance identified several current and historical cattle feedlots (CAFOs) and are located adjoining the project corridor. Two farmsteads with aboveground storage tanks (ASTs) were also observed. It was noted that the One Stop gasoline service station is located approximately ¼ mile east of Minatare, and is located adjacent to the project alignment. The visual reconnaissance also identified a natural gas pipeline that intersects the project corridor.

Upon review of the HMR, NDOT found that two medium potential sites, Minatare Plaza (aka Harry's Curve or Harry's One Stop) and Tony's Service Station, required further investigation due to the potential for petroleum contamination. As both sites were former gas stations, a subsurface investigation was deemed necessary to accurately locate any potential underground storage tanks (USTs). Thus, Benesch and NDOT conducted a subsurface investigation on December 3, 2022, using Ground Penetrating Radar (GPR) at the two sites. The investigation revealed that no USTs were present at Harry's One Stop, while Tony's Service Station had one UST identified and a potential second.

In 2024, NDOT prepared an updated HMR utilizing their latest guidance and the current project description. The results of this HMR (**Appendix I**) are considered the final report and are presented below.

Medium potential sites:

Minatare Plaza (Harry's One Stop) is a facility located near the City of Minatare, adjacent to the project limits, with active Leaking Storage Tank (LST) and Release Assessment (RA) designations, as well as an inactive Integrated Waste Management (IWM) designation. Petroleum contamination related to releases occurring at this service station is currently being monitored. Groundwater is impacted with two groundwater wells having benzene sampled above Risk-based Screening Levels (RBSLs) near the project. However, remedial excavation has removed a significant amount of source area contamination from the soil. With a depth of groundwater at 5ft below ground surface (bgs) and grading for the north alignment running through the monitoring area, this facility has a medium potential to impact human health or the environment, requiring contamination and monitoring well commitments.

Former Tony's Service Station is an abandoned gasoline station located on the NE corner of the intersection at US-26 and L62A, east side of CR 75. Ground Penetrating Radar (GPR) revealed one underground storage tank (UST), and a possible second UST, which need to be excavated before construction can proceed. It is unclear if there is contamination on the site. Due to the discovery of the USTs and uncertainty regarding the presence of contamination, the property has a medium potential to impact human health or the environment, and a medium potential contamination commitment would be required.

Low potential sites:

The JHC Cattle Company LLC, Darwin Adams Acreage, and Winner Circle Feedyard are facilities with a low potential to impact human health or the environment. JHC Cattle Company LLC had a 400-gallon fertilizer leak, but the case closed with no further action anticipated. Darwin Adams Acreage has an inactive IWM designation, but no documentation is available to determine if there are any persisting hazardous materials of concern. Winner Circle Feedyard had contamination during the removal of fuel tanks, over-excavation was performed during clean-up, and no groundwater was found during excavation. Therefore, due to the scope of work, distance to the project, and findings reported; these facilities have a low potential to impact human health or the environment.

Table 4.5 identifies these sites and anticipated impacts to the project. **Figure 4.1** shows the locations of the sites.

Table 4.5 Hazardous Materials Sites in the Study Area

Facility name	Location	Facility Status	Potential to Impact	Distance Relative to Project
Minatare Plaza (Harry's One Stop)	300294 Highway 26, Minatare, NE	IWM (I), LST (A), RA	Medium	Adjacent
Former Tony's Service Station	NE corner of the intersection at US-26 and L62A, east side of County Road 75.	UST (unknown if active/inactive)	Medium	Adjacent
JHC Cattle Company LLC	L62A MM 3.74	IWM (I)	Low	100ft south
Darwin Adams Acreage	8527 L62A, Bayard, NE	IWM (I)	Low	200ft north
Winner Circle Feedyard	320094 Granada Rd, Bayard, NE	LST (I)	Low	500ft north

¹ IWM = Integrated Waste Management; LST = Leaking Storage Tanks; UST = Underground Storage Tank.

² (A) = Active; (I) = Inactive.

4.14.2 Impacts of the No Build Alternative

The No Build Alternative does not involve any new ROW or construction activities other than general maintenance to existing roadways. As a result, the No Build Alternative does not have any effect to or from any known hazardous materials sites.

4.14.3 Impacts of the Preferred Alternative

Two hazardous material sites were identified that could impact the project. The Preferred Alternative and associated new ROW and construction activities would intersect the Minatare Plaza (Harry's One Stop) and Tony's Service Station locations. Based on the database search, aerial photography review, site reconnaissance, and the Preferred Alternative alignment, both of these sites are identified as having a medium potential to affect construction or cause a material management or worker health and safety concern, or both, related to construction of the Preferred Alternative.

Due to the findings of hazardous material impacts, there is a medium potential of encountering contamination during project excavations. It is recommended that no further investigation is necessary. A Medium Potential Commitment would be required. Any building structures to be demolished would require inspections for asbestos and there is the potential need for toxic metal/lead paint disposal.

4.14.4 Avoidance, Minimization, and Mitigation

Commitments:

The following commitments are needed for the preferred alternative. It should be noted that the specific “Contractor Commitments” are those that would be included in the contract documents and provide more basic information for field personnel. All commitments below are included in **Chapter 6**.

Unexpected Waste:

If contaminated soils/groundwater or unexpected wastes are discovered, The Contractor shall stop all work within the immediate area. The Contractor shall secure the area of the discovery and notify the Highway Project Manager (HPM). The Contractor shall not re-enter the discovery area until notified by the HPM. At the time of discovery, the HPM and Contractor shall utilize the NDOT Unexpected Waste Action Plan (UWAP) to coordinate appropriate actions. The actions to be carried out by the HPM are (but not limited to): verification that the Contractor has suspended construction activities in the area of the discovery, contact the Roadside Development & Compliance Unit (RDCU) hazmat representative and make an entry into AASHTOware Project that an unexpected waste discovery was made. The HPM shall then utilize the UWAP Notification Form (NDOT Form 691) to properly document the extent and type of waste. The HPM will ensure that proper disposal of the waste and any required health and safety mitigation is implemented by the Contractor. The Contractor is required by NDOT's Standard Specification section 107.11 (Hazardous Material Discoveries) to handle and dispose of regulated material in accordance with applicable laws.

Contractor Commitment: If contaminated soils/groundwater or unexpected wastes are discovered, The Contractor shall stop all work within the immediate area. The Contractor shall limit access to authorized personnel within the area of the discovery and notify the Highway Project Manager (HPM). The Contractor shall not re-enter the discovery area until notified by the HPM. At the time of discovery, the HPM and Contractor shall utilize the NDOT Unexpected Waste Action Plan (UWAP) to coordinate appropriate actions. The Contractor is required by NDOT's Standard Specification section 107.11 (Hazardous Material Discoveries) to handle and dispose of regulated material in accordance with applicable laws.

Encountering Contamination:

There is a medium potential for petroleum contamination to be present in the soils/groundwater at project Minatare-US-385 (CN 51521), as well as at least one confirmed UST that will require excavation. Two locations identified below will have a medium potential for contamination to impact the project:

Minatare Plaza: North side of US-26 from MM 33.30 to 33.40. Potential to encounter existing petroleum contamination in active monitoring area during grading.

Former Tony's Service Station: NE corner of US-26 and L62A intersection from L62A MM 0.15 to 0.20. Existence of at least one underground storage tank in the SW corner of this parcel was confirmed with ground penetrating radar. Potential for a second tank exists adjacent to the north of the first tank.

The Contractor shall be aware of the possibility of encountering contamination in this area during construction activities and look for signs such as odor and/or discolored soil. The Highway Project Manager shall be notified seven days prior to when construction is expected to begin in the suspect area. If contamination is discovered, all work in the immediate area shall be stopped until the Nebraska Department of Environment & Energy (NDEE) and NDOT RDCU hazmat representative are notified, and a materials management plan has been developed and approved. The Contractor shall manage the waste in accordance with Title 128, Nebraska Hazardous Waste Regulations and/or Title 132 Integrated Solid Waste Management Regulations. The Contractor is required by Standard

2066 Specification Section 107, Legal Relations and Responsibilities To The Public, to handle and dispose
2067 of contaminated material in accordance with applicable laws.

2068 A licensed contractor will be required to remove the tank/s at the former Tony's Service Station
2069 location. The licensed contractor shall provide Closure Assessment Report (CAR) services, including
2070 excavation pit field samples, for submittal to the Nebraska State Fire Marshal. The CAR will be
2071 conducted in accordance with NDEE regulations detailed in Petroleum Underground Storage Tanks:
2072 Closure Assessment Sample Collection and Over-Excavation, Revised September 2022.

2073 Remediation of hazardous materials at the Minatare Plaza located between MM 33.30 and 33.40 on
2074 US-26, if any, will be paid for as extra work according to Subsection 104.02, paragraph 5 and
2075 Subsection 109.05 of the Standard Specifications. Removal of the tank(s) at the former Tony's Service
2076 Station located at MM 0.18 on L62A will be paid for as "Clear Tract" in accordance with the Special
2077 Provision titled "Clear Tract at MM 0.18 on L62A".

2078 **Monitoring/Remediation Wells:**

2079 There are one or more monitoring wells and/or soil vapor extraction (SVE) wells at Minatare Plaza
2080 located on US-26 between MM 33.30 to 33.40 at the Minatare Plaza facility. The monitoring/SVE wells
2081 will be located and marked by the Highway Project Manager (HPM) in the field. Construction activities
2082 near the wells will be performed as to avoid damage to the wells. In the event that a monitoring/SVE
2083 well is damaged, the Contractor shall notify the HPM immediately. The NDOT HPM will coordinate
2084 with the NDOT RDCU hazmat representative for guidance regarding remediation of the damage. The
2085 Contractor shall remediate any damaged monitoring/SVE wells as directed by the Engineer. The HPM
2086 will upload documentation of the Contractor's remediation to OnBase (NDOT Dist. Environmental,
2087 description: monitoring well remediation).

2088 Contractor Commitment: The Contractor shall avoid damaging any monitoring or SVE well as marked
2089 in plans or in the field. In the event that a monitoring well/SVE well is damaged, the Contractor shall
2090 stop work at that location and notify the Highway Project Manager immediately. The Contractor shall
2091 comply with the Engineer's direction concerning remediation of damaged monitoring/SVE wells and
2092 shall not continue construction activities in the vicinity of the damaged well until notified by the
2093 Engineer.

2094 **Asbestos:**

2095 The Contractor shall survey any building structures acquired for demolition for the presence or
2096 absence of asbestos containing material (ACM). The inspector must be certified in accordance with
2097 the Nebraska Department of Health and Human Services (DHHS) Nebraska Asbestos Control
2098 Program Regulations, Title 178. A list of Licensed Asbestos Inspectors can be found at:
2099 <http://dhhs.ne.gov/Pages/Asbestos.aspx>. Documentation of the survey shall be provided to the
2100 Highway Project Manager by the Contractor prior to structure demolition. The Highway Project
2101 Manager will record survey documentation in OnBase.

2102 If ACM is found to be present, removal and disposal of the ACM shall be in accordance with DHHS
2103 Nebraska Asbestos Control Program Regulations, Title 178 and will occur prior to any bridge
2104 demolition or renovation activities. The Contractor shall develop a removal and disposal plan in
2105 coordination with a licensed asbestos removal contractor and NDOT. A list of licensed asbestos
2106 removal contractors can be found at: <http://dhhs.ne.gov/Pages/Asbestos.aspx>

2107 Contractor Commitment: The Contractor shall survey any building structures acquired for demolition
2108 for the presence or absence of asbestos containing material (ACM). The Contractor's inspector must
2109 be certified in accordance with the Nebraska Department of Health and Human Services (DHHS)
2110 Nebraska Asbestos Control Program Regulations, Title 178. If ACM is found to be present, the
2111 Contractor shall develop a removal and disposal plan in coordination with a licensed asbestos
2112 removal contractor.

Building Removal:

(Standard Specifications for Highway Construction 2017 Section 203.01; paragraph 4.)

a. It shall be the responsibility of the Contractor to determine if any of the buildings to be removed have materials containing asbestos. If it is determined that some or all of the buildings contain asbestos, the asbestos shall be removed prior to the building removal. All asbestos shall be removed in accordance with State of Nebraska Health and Human Services Department, Environmental Protection Agency, and the Nebraska Department of Environment and Energy regulations. A Contractor trained and certified in asbestos handling shall perform all asbestos removal and handling operations.

b. The work of determining if any of the buildings contain asbestos shall be considered subsidiary to the item "Remove Building at ____."

c. The work of asbestos abatement will be paid for as "Extra Work" as described in Subsection 104.04.

Contractor Commitment: The Contractor shall submit a written National Emissions Standards for Hazardous Air Pollutants (NESHAP) notification to the Nebraska Department of Environment and Energy (NDEE) and a Department of Health and Human Services (DHHS) Form 5 at least 10 business days prior to demolition/renovation. The 10-day clock starts when the NESHAP and Form 5 notifications are post marked, hand delivered, or picked up by a commercial delivery service. Faxing documents is prohibited. The Contractor shall provide the Highway Project Manager copies of the notifications and their submittal date prior to demolition/renovation activities. The Highway Project Manager will upload NDEE NESHAP and DHHS Form 5 documentation to OnBase.

Toxic Metal-Based Paint/Lead-Based Paint:

There is potential for lead or toxic metal-based paint to be found on the structures to be demolished or repaired. Regardless of toxicity, extreme caution shall be taken to minimize the amount of painted material or debris from causing or threatening to cause pollution of the air, land, and waters of the State. The Contractor shall create an implementation plan to dispose of paint waste in accordance with NDOT's Standard Specification for Highway Construction Section 732 (Lead-based Paint Removal) and Title 128 Nebraska Hazardous Waste Regulations. The Contractor's implementation plan shall be provided to the HPM and documented in OnBase.

4.15 Air Quality

The Clean Air Act Amendments of 1990 (42 USC 7401 et seq.) control air toxic emissions in the United States and regulate 188 air toxics, including Mobile Source Air Toxics (MSAT). FHWA has developed a tiered approach with the following three categories for analyzing MSATs in NEPA documents, depending on specific project circumstances:

- MSAT I – No analysis for projects with no potential for meaningful MSAT effects
- MSAT II – Qualitative analysis for projects with low potential MSAT effects
- MSAT III – Qualitative analysis to differentiate alternatives for projects with higher potential MSAT effects

In addition to MSAT concerns, FHWA has developed mitigation strategies to reduce transportation greenhouse gas emissions. NDOT and the Nebraska Department of Environment and Energy (NDEE) entered into a Memorandum of Understanding in 2021 where NDOT adheres to the MSAT guidance and NDEE monitors National Ambient Air Quality Standards (NDOT and NDEE 2021). Under the Memorandum of Understanding, NDOT and NDEE commit to future exchanges of information regarding non-attainment determinations, future highway projects, potential environmental issues, and other issues of common interest.

4.15.1 Affected Environment

The US Environmental Protection Agency (EPA) publishes a list of the annual nonattainment and maintenance status for each county by state under the National Ambient Air Quality Standards (EPA 2023). Any county not listed has been designated in attainment since 1992. Scotts Bluff and Morrill Counties are currently in attainment for all criteria pollutants. In consideration of the scope of the Project, an MSAT II Qualitative Memo was developed and is located in **Appendix J**. For each alternative of the EA, the amount of MSAT emitted was assessed in relation to vehicle miles traveled (VMT).

4.15.2 Impacts of the No Build Alternative

There would be no construction of the Project with the No Build Alternative. As a result, there would be no new ROW or construction activities beyond those needed to complete routine roadway and bridge maintenance activities. The amount of MSATs emitted would be proportional to the VMT, assuming that other variables such as fleet mix are the same. Therefore, there would be no impacts on air quality.

4.15.3 Impacts of the Preferred Alternative

The VMT estimated for the Preferred Alternative is slightly higher than that for the No Build Alternative because the additional capacity would increase the efficiency of the roadway and would attract rerouted trips from elsewhere in the transportation network. This increase in VMT would lead to higher MSAT emissions along the highway corridor, along with a corresponding decrease in MSAT emissions along the parallel routes. The emissions increase is offset somewhat by lower MSAT emission rates due to increased speeds. According to EPA's MOVES2014 model, emissions of all priority MSATs decrease as speed increases. Because the estimated cumulative VMT is nearly the same, it is expected that there would be no appreciable difference in overall MSAT emissions. The annual average daily traffic (AADT) for this Project through 2045 is forecast to be no more than 4,665 in any given year; this is well below the threshold of 140,000 to 150,000 AADT that would require MSAT III analysis.

Emissions would likely be lower than present levels in the design year because of EPA's national control programs that are projected to reduce annual MSAT emissions by over 90 percent between 2010 and 2050 (FHWA 2016). Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great, even after accounting for VMT growth, that MSAT emissions of the Preferred Alternative are likely to be lower in the future.

Temporary impacts on air quality during construction may occur due to emissions and dust from construction equipment. These impacts would be temporary and would not create a non-attainment status within the Study Area.

4.15.4 Avoidance, Minimization, and Mitigation

Short-term adverse effects on air quality resulting from construction would be addressed or minimized through NDOT's Standard Specifications for Highway Construction. Since Scotts Bluff and Morrill Counties are currently in attainment, and the Preferred Alternative would result in no appreciable difference in overall MSAT emissions, no project-specific mitigation is proposed.

4.16 Noise

Automobile noise primarily comprises sounds from engine exhaust, drive train, and tire/roadway interaction. This Draft EA is supported by an analysis of noise that is presented in the Traffic Noise Technical Memorandum found in **Appendix K**, which has been prepared in accordance with 23 CFR 772, *Procedures for Abatement of Highway Traffic Noise and Construction Noise*; the FHWA *Highway Traffic Noise Analysis and Abatement Policy and Guidance* (FHWA 1995), and NDOT *Noise Analysis and Abatement Policy* (NDOT 2024).

FHWA's *Procedures for Abatement of Highway Traffic Noise* (23 CFR 772) state that a noise impact occurs when the predicted traffic noise levels for a project approach²⁷ or exceed noise abatement criteria for the land use activity categories shown in **Table 4.6**.

Table 4.6 Noise Abatement Criteria per Land Use Activity

Activity Category	Activity ¹ Leq(h)	Activity Description
A	57 (exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need.
B ²	67 (exterior)	Exterior residential (single-family and multi-family dwellings)
C ²	67 (exterior)	Exterior non-residential lands (schools, parks, cemeteries, etc.)
D	52 (interior)	Interiors of Category C facilities
E ²	72 (exterior)	Exterior developed land less sensitive to highway noise
F	---	Land uses not sensitive to highway traffic noise (agriculture)
G	---	Undeveloped lands

Leq(h) = 1-hour equivalent sound level

¹ The Leq(h) Activity Criteria values are for impact determination only and are not design standards for noise abatement.

² Includes undeveloped lands permitted for this activity category.

4.16.1 Affected Environment

NDOT conducted a noise study for the proposed project (**Appendix K**). The primary tasks for the study were to identify receivers that approached or exceeded the Noise Abatement Criteria determined for different types of receivers and to determine the relative change in traffic noise levels anticipated due to the changes in alignment. Noise levels were predicted for 2021 Existing, 2045 No-Build conditions, and 2045 Build conditions. The Traffic Noise Model (TNM) was applied using the appropriate roadway, traffic, and sensitive receiver information to predict the noise levels for each scenario.

Much of the project alignment is in a rural environment with ranching and farming land uses. Highway traffic influences ambient noise levels in these rural areas. The west end of the project alignment is located within the City of Minatare and has a variety of land uses that influence ambient noise; including highway traffic, industrial, and residential uses.

²⁷ Approach is defined as noise levels within 1 A-weighted decibel (dBA) of the Noise Abatement Criteria for the activity category.

2223 In the Study Area, noise levels were measured at seventy-four (74) noise-sensitive receptors
2224 representing sixty (60) residences, four receivers were identified to represent businesses along the
2225 corridor and one receiver each was placed to represent a church and an agricultural shed. Additional
2226 information on noise levels within the Study Area is in **Appendix K**.

2227 4.16.2 Impacts of the No Build Alternative

2228 Its anticipated that traffic would increase throughout this corridor, therefore even with a no build
2229 alternative, there would be minimal noise impacts associated with this alternative.

2230 4.16.3 Impacts of the Preferred Alternative

2231 The predicted noise levels indicated that there are no instances of build condition noise levels
2232 substantially exceeding no-build condition noise levels in the study area (increase of 15 dBA [A
2233 weighted decibels] over the existing levels).

2234 Results of the analysis showed that:

2235 No receivers experienced noise levels approaching or exceeding the Noise Abatement Criteria for the
2236 future build scenario.

2237 2045 no-build noise levels increased between one (1) and two (2) dBA compared to existing levels
2238 (2021). Note that in general, a 1 dBA change is the smallest change in noise level a person can hear in
2239 a quiet environment, and changes in traffic noise levels of one or two dBA typically cannot be detected
2240 by humans (**Appendix K**, Noise Study).

2241 Noise levels typically increased by 1 or 2 dBA when comparing the 2045 No-Build and 2045 Build
2242 scenarios.

2243 The noise analysis indicates that no receivers analyzed would have a noise impact in the year 2045
2244 Build scenario due to noise levels approaching or exceeding the Noise Abatement Criteria. Six (6)
2245 receptors are anticipated to have noise impacts resulting from the build alternative, however, the
2246 residential structures represented by these receptors are all planned for relocation or removal as part
2247 of the planned construction activities within the build alternative.

2248 4.16.4 Avoidance, Minimization, and Mitigation

2249 **Commitments:**

2250 Exhaust and muffler systems on construction equipment would be in good working order.
2251 Construction equipment would be maintained on a regular basis, and equipment may be subject to
2252 inspection by the construction project manager to ensure maintenance. (Contractor, NDOT Project
2253 Manager [PM])

2254 The Contractor would locate noise-emitting stationary equipment (for example, compressors, and
2255 generators) to avoid unnecessary impacts on residents and businesses. (Contractor, NDOT PM)

2256 Noise impacts are based on conceptual design. Additional design refinement and coordination
2257 regarding noise abatement would occur during the final design stages per NDOT's Noise Analysis and
2258 Abatement Policy. (NDOT Environmental)

4.17 Wild and Scenic Rivers

The National Wild and Scenic Rivers System preserves certain rivers with outstanding natural, cultural, and recreational values. Two rivers within Nebraska are designated as part of the National Wild and Scenic Rivers System, the Missouri River and Niobrara River (Interagency Wild and Scenic Rivers Coordinating Council 2019). The Project is not located within the Missouri River or Niobrara River reaches. No Nationwide Rivers Inventory resources were identified in the Study Area (National Park Service 2017).

4.18 Floodplains

A floodplain is any land area susceptible to being inundated by floodwaters from any source. A flood zone is a defined geographic area with a specific flood hazard risk based on the probability and impact of flooding on that area and is used to determine insurance requirements and costs. The Federal Emergency Management Agency (FEMA) classifies flood zones among five categories: low risk, moderate risk, high risk, coastal high risk, and undetermined risk. FEMA defines high risk areas as Zone A (or AE, AH, AO, AR, and A99), which are subject to inundation by the 1 percent annual chance exceedance event, also known as the 100-year or base flood event. A floodway is defined by FEMA as the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. Executive Order 11988, *Floodplain Management*, directs federal agencies to avoid long- and short-term adverse impacts associated with modifying floodplains. FHWA regulations governing encroachments in floodplains are found in 23 CFR 650. FEMA administers the National Flood Insurance Program (NFIP), which also establishes standards for compliance.

Local jurisdictions (counties and cities) enforce the federal requirements to maintain participation in the FEMA NFIP. In Nebraska, floodplain regulations require a floodplain permit for any project that could affect a mapped, regulated 100-year floodplain or floodway.

4.18.1 Affected Environment

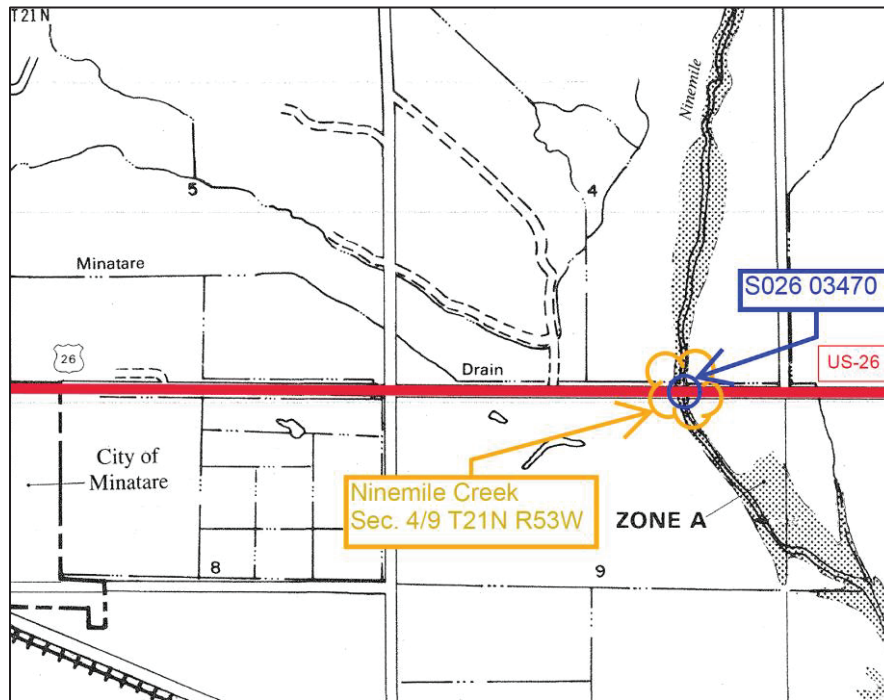
The project was reviewed for its impact to floodplains within the State of Nebraska. The following floodplains communities are located within the Study Area: City of Minatare, County of Scotts Bluff, and County of Morrill.

In Scottsbluff County, FEMA's Flood Insurance Rate Maps have designated the Ninemile Creek (US-26 MM 34.70) floodplain as Zone A, located within the study area as shown in **Figure 4.3**. This designation is based on the Flood Insurance Study dated June 18, 1990, and signifies areas inundated by the 100-year flood where no base flood elevations are determined. See **Appendix L** for more information.

The unincorporated areas of Morrill County do not currently participate in the FEMA National Flood Insurance Program (NFIP), and thus, have no Special Flood Hazard Areas identified. This absence does not imply a lack of flood hazard areas but indicates areas yet to be assessed. Although these communities are considered non-participating, state minimum standards would apply. A review of topographic and flood awareness mapping shows the project overlaps upon one or more Potential Base Floodplains within the non-participating community. The following floodplain encroachments were identified in Morrill County:

- Wildhorse Drain (US-26 MM 41.15)
- Wildhorse Canyon (L62A MM 1.17)
- West Water Creek (L62A MM 4.63)
- Red Willow Creek (L62A MM 5.95)

Figure 4.3 Ninemile Creek Zone A Floodplain



Source: <https://msc.fema.gov/portal/home>

4.18.2 Impacts of the No Build Alternative

There would be no construction of the Project with the No Build Alternative. Floodplain and floodway impacts may occur as part of other routine roadway and bridge maintenance activities; however, these impacts would be evaluated on a project-by-project basis.

4.18.3 Impacts of the Preferred Alternative

Based on FEMA Flood Insurance Rate Maps, topographic maps, and flood awareness mapping the Preferred Alternative encroaches on the following floodplains: Ninemile Creek, Wildhorse Drain, Wildhorse Creek, West Water Creek and Red Willow Creek. However, the Preferred Alternative is not anticipated to cause greater than 1 foot of rise in the base flood elevation of the floodplains it crosses, nor increase the potential for property loss and hazard of life.

Per 23 CFR 650.111; the Preferred Alternative would result in functionally dependent floodplain uses. A functionally dependent use is one that involves water conveyance at structures such as bridges and culverts. There would be limited impacts on the natural and beneficial floodplain values of the floodplains along this Project. Because there would be temporary soil disturbance during construction activities, sediment and erosion control best management practices (BMP) would be used during construction, and disturbed areas would be seeded following construction.

There would be no significant encroachment to a base floodplain. The Preferred Alternative would not result in a base flood causing significant potential interruption or termination of this transportation facility, which is needed for emergency vehicles or a community's only evacuation route. It also would not result in a significant risk or potential for loss of life or property due to the base flood. This Project would not result in a substantial adverse impact on natural and beneficial floodplain values. An alternatives analysis related to the significance of encroachment into a base floodplain is not warranted based on the above rationale. This highway improvement project would maintain existing

local and regional access to municipal, rural, and agricultural areas, and would not support incompatible floodplain development. Therefore, an alternatives analysis related to incompatible floodplain development is not warranted. A review of floodplain impacts can be found in the NDOT Floodplain PQS memo found in **Appendix L**.

Temporary impacts on floodplains during construction may occur in the form of construction access and temporary structures. Floodplain development permits would be obtained prior to construction, and the Preferred Alternative would comply with local floodplain regulations.

4.18.4 Avoidance, Minimization, and Mitigation

The US-26 and L62A roadway and bridges would be designed to adequately convey flood flows along existing drainage patterns. Construction of the Project would have floodplain encroachments, but Project impacts would be certified that federal, state, and local floodplain regulations are met, and a Floodplain Development Permit would be obtained from the appropriate jurisdictions prior to construction. All conditions of the permit would be adhered to during construction. (NDOT Environmental, Contractor)

4.19 Water Quality

Surface Waters (Streams and Lakes)

Nebraska's surface water resources are surprisingly extensive, including approximately 18,000 miles of continuously flowing rivers and streams and about 430 square miles of lakes. Wildlife, including many native fish species, rely on Nebraska's streams for survival and prosperity. The Nebraska Department of Environment and Energy (NDEE) develops water quality standards that designate the beneficial uses to be made of surface waters and the water quality criteria to protect the assigned uses. Title 117 - Nebraska Surface Water Quality Standards forms the basis of water quality protection for all surface water quality programs conducted by the department.

Impaired Waters

Section 303(d) of the Clean Water Act (CWA) (33 USC 1251 et seq.) requires states, territories, and authorized tribes (states) to identify and establish a priority ranking for all waterbodies to determine which ones are impaired. Once identified, states are to establish total maximum daily loads (TMDL) for the pollutants causing impairment in those waterbodies and to submit the list of impaired or unique waterbodies and TMDLs biannually to EPA.

In Nebraska, the 303(d) List of Waters are identified through programs administered by NDEE and documented in the 2022 Water Quality Integrated Report (NDEE 2023). The 303(d) List of Waters reports on streams and lakes identified as impaired for one or more pollutants and that do not meet one or more water quality standards. It also identifies streams and lakes characterized as unique and sensitive. Impaired and unique waters are identified through assessment and monitoring programs administered by NDEE and other federal, state, and local agencies.

Groundwater

Groundwater is defined as "water occurring beneath the surface of the ground that fills available openings in rock or soil materials such that they may be considered saturated" (Nebraska Administrative Code Title 118). Nebraska Administrative Code Title 118, Ground Water Quality Standards and Use Classification, is the foundation of the regulatory programs in Nebraska that protect groundwater quality and prevent contamination in designated areas. Administered by NeDNR, it provides numerical standards for many parameters and requires that any substance introduced to groundwater, directly or indirectly, not cause the groundwater to exceed those standards. The NeDNR

2372 is responsible for permitting and maintaining records related to groundwater wells throughout the
2373 state.

2374 **Water Supply and Wellhead Protection Areas**

2375 The Wellhead Protection Area Act (Nebraska Revised Statutes Section 46-1501 et seq.) regulates
2376 potential sources of contamination near municipal and other public wells used to provide drinking
2377 water. The program is managed and enforced by NDEE, which also manages residential, irrigation,
2378 and monitoring wells in Nebraska.

2379 **Stormwater**

2380 Stormwater runoff is regulated through Section 402 of the CWA, and the National Pollution Discharge
2381 Elimination System (NPDES) permit procedures (40 CFR Part 122) . NDEE administers this permit
2382 program and has specific requirements for the control of storm water runoff. NPDES permits are
2383 required for projects involving more than one acre of land disturbance.

2384 **4.19.1 Affected Environment**

2385 **Surface Water (Streams and Lakes)**

2386 There are numerous surface water features along the corridor in the form of irrigation canals, drains,
2387 and streams. No lakes were identified in the study area, with the closest large body of water being the
2388 Minatare Reservoir, approximately 7 miles north. While the irrigation systems are quite complex, a
2389 discussion of their impacts on the corridor can be found in **Section 4.8, Irrigation Canals and Districts**.
2390 The natural surface water streams that intersect the project include Ninemile Creek (US-26 MM
2391 34.70), Wild Horse Drain (US-26 MM 41.15), Wild Horse Canyon (L62A MM 1.17), West Water Creek
2392 (L62A MM 4.63), and Red Willow Creek (L62A MM 5.95) (**Figure 4.1**).

2393 **Impaired Waters**

2394 The 2022 Water Quality Integrated Report was reviewed for the project (**Appendix M**). Ninemile Creek
2395 (US-26 MM 34.70) and Wildhorse Drain (US-26 MM 41.15) are both impaired waterbodies identified in
2396 the Study Area. Ninemile Creek (NP3-11800) and Wildhorse Drain (NP3-10920) were determined to be
2397 recreationally impaired due to *Escherichia coli* (E. coli), but their Aquatic Life and Agricultural Water
2398 Supply uses are supported. These waterbodies are considered Category 5, meaning one or more
2399 beneficial uses are determined to be impaired by one or more pollutants (**Figure 4.1**).

2400 **Groundwater**

2401 The High Plains Aquifer underlies most of Nebraska with much of the geological unit identified as the
2402 Ogallala Formation. In the Study Area from Minatare to the US-26/L62A intersection, alluvium (sand
2403 and gravel) is present which is a good groundwater source. From the US-26/L62A intersection turnoff
2404 to US-385 the Brule Formation is present. It is difficult to find groundwater in this formation. There are
2405 approximately sixteen (16) registered active groundwater wells within the environmental study area:
2406 six (6) irrigation wells, four (4) groundwater quality monitoring wells, three (3) domestic drinking water
2407 wells, two (2) commercial wells, and one (1) livestock drinking water well (NeDNR, 2024).

2408 Because wells in place before 1993 are not required by law to be registered with NeDNR, an unknown
2409 number of unregistered wells may be located within and along the Study Area.

2410 **Water Supply and Wellhead Protection Areas**

2411 The City of Minatare obtains its municipal water supply from the City of Scottsbluff. Residential and
2412 agricultural buildings throughout the rest of the corridor obtain water from groundwater wells, as
2413 explained above.

2414 There was previously one wellhead protection area along the project corridor for the City of Minatare,
2415 but as described above, the City now receives its municipal water supply from the City of Scottsbluff,
2416 and the wellhead protection area has been removed.

2417 **Stormwater**

2418 The entire corridor is currently a 2-lane roadway, with paved shoulders and no curbs or gutters.
2419 Therefore, for most of the corridor, there is no stormwater collection system and runoff flows directly
2420 into roadside ditches; however, there are a few places where there are stormwater inlets to direct flow
2421 into the ditches. Some of the ditches (as explained in **Section 4.8 Irrigation Canals and Districts**) are
2422 both irrigation drains and roadside ditches. Otherwise, there are no stormwater management facilities
2423 along the corridor.

2424 **4.19.2 Impacts of the No Build Alternative**

2425 There would be no construction of the Project with the No Build Alternative. As a result, there would be
2426 no impacts on water quality, current groundwater levels, groundwater quality, or wells beyond those
2427 needed to complete routine roadway and bridge maintenance activities.

2428 **4.19.3 Impacts of the Preferred Alternative**

2429 **Surface Water (Streams and Lakes)**

2430 Impacts on streams, irrigation canals, and drains would be limited to lengthening box culverts or
2431 bridges. Additional information on these impacts can be found in **Section 4.8, Irrigation Canals and**
2432 **Districts** and **Section 4.20, Wetlands and Water Resources**. Information regarding the improvements
2433 at each of the following surface water resources is below.

- 2434 • Ninemile Creek (US26 MM 34.70)
 - 2435 ○ No work on the existing bridge
 - 2436 ○ New bridge to be constructed upstream of the existing to accommodate the proposed
 - 2437 WB lanes
- 2438 • Wild Horse Drain (US26 MM 41.15)
 - 2439 ○ Twin 12' x 12' CBC Bridge to be extended to the north to accommodate the proposed
 - 2440 WB lanes
- 2441 • Wild Horse Canyon (L62A MM 1.17)
 - 2442 ○ MM 1.16 Twin 10' x 10' concrete box culvert. Remove and Build Twin 10' x 10' CBC.
- 2443 • West Water Creek (L62A MM 4.65)
 - 2444 ○ MM 4.63 Twin 10' x 4' concrete box culvert. Remove and Build Twin 10' x 4' CBC.
- 2445 • Red Willow Creek (L62A MM 5.95)
 - 2446 ○ MM 5.95 Quad 13' x 8' concrete box culvert. Remove and Build Quad 13' x 8' CBC.

2447 **Impaired Waters**

2448 According to the NDOT Water Quality PQS Memo prepared on March 29, 2024 (**Appendix M**), the
2449 Preferred Alternative, would not negatively affect Ninemile Creek or Wildhorse Drain because, as a
2450 roadway project, it would not result in the release of E. coli, and, therefore, would not contribute to
2451 additional impairment. While manure is not specified for this project, the preferred alternative would
2452 encounter several feedlots. The Manure Topdressing Special Provisions would identify these locations
2453 and accommodate possible re-use of these stockpiled soils.

2454 **Groundwater**

2455 Due to the inconsistent precision of the well locations in the NeDNR groundwater wells dataset, wells
2456 were buffered 100 feet when calculating impacts to account for potential error in well location. The
2457 Preliminary Impact Area would affect 12 wells: six (6) irrigation wells, three (3) groundwater quality

2458 monitoring wells, two (2) domestic drinking water wells, and one (1) commercial well. Impacts on
2459 active listed wells would be determined during final design. Any registered wells within the ROW would
2460 be properly decommissioned. NDOT would coordinate with the owners of any wells directly affected
2461 by the Preferred Alternative.

2462 **Stormwater**

2463 This project exceeds the one (1) acre threshold; therefore, this project would require a NPDES permit
2464 to ensure that the runoff impacts are addressed. Temporary construction impacts on water quality are
2465 anticipated but would be mitigated through the acquisition of the permit and implementation of an
2466 associated Stormwater Pollution Prevention Plan (SWPPP). Appropriate erosion control plans would
2467 be included with construction documents in the final design process. There are no permanent
2468 stormwater quality control measures proposed.

2469 **4.19.4 Avoidance, Minimization, and Mitigation**

2470 **Commitments:**

2471 NDOT would coordinate with the owners of wells that would be directly impacted by the Project during
2472 the ROW process. If the well is actively used, NDOT would have the well relocated and replaced. If a
2473 well is not currently in use, the Contractor would decommission the well, as needed, during
2474 construction in accordance with Nebraska Administrative Code Title 178, Chapter 13. (NDOT Right-of-
2475 Way, Contractor)

2476 A licensed Water Well Contractor will decommission any wells in accordance with the Department of
2477 Health and Human Services (DHHS) regulations under Nebraska Administrative Code Title 178, Water
2478 Well Standards, Chapter 12, Water Well Construction, Pump Installation, and Water Well
2479 Decommissioning Standards (Nebraska DHHS 2005). (NDOT, Contractor)

2480 This project requires a Construction Stormwater Permit and that a Storm Water Pollution Prevention
2481 Plan (SWPPP) be maintained for the project. The Contractor shall understand the terms and
2482 conditions of the general National Pollutant Discharge Elimination System (NPDES) permit that
2483 authorizes the storm water discharges associated with activity from the construction site. For
2484 reference, the general permit is posted on the Department's website. (Contractor)

2485 Manure has not been specified for this project, however, existing soil material from former feedlot
2486 pens may be encountered during grading operations. Stockpiled material from the locations identified
2487 in the Special Provision will be utilized on the project as prescribed by the Manure Topdressing Special
2488 Provision. (NDOT Roadway Design)

2489 **4.20 Wetlands and Water Resources**

2490 Wetlands are "those areas that are inundated or saturated by surface or groundwater at a frequency
2491 and duration sufficient to support, and that under normal circumstances do support, a prevalence of
2492 vegetation typically adapted for life in saturated soil conditions" (33 CFR 328). A water resource in the
2493 context of this Project includes waterways (rivers, streams, and intermittent and ephemeral
2494 drainageways) or open water areas.

2495 Wetlands and water resources are defined as waters of the US or waters of the State. A water of the
2496 US is defined as "the territorial seas, and waters which are currently used, or were used in the past, or
2497 may be susceptible to use in interstate or foreign commerce, including waters which are subject to the
2498 ebb and flow of the tide; tributaries, lakes and ponds, and impoundments of jurisdictional waters; and
2499 adjacent wetlands" (33 CFR 328.3(a)). Waters of the State are defined as "all waters within the
2500 jurisdiction of this state, including all streams, lakes, ponds, impounding reservoirs, marshes,
2501 wetlands, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and all other

bodies or accumulations of water, surface or underground, natural or artificial, public or private, situated wholly or partly within or bordering upon the state” (Nebraska Administrative Code Title 126, Chapter 1).

The US Army Corps of Engineers (USACE) is the agency charged with administering and enforcing federal laws related to wetlands under CWA Section 404 (33 USC 1344). The USACE Omaha District has jurisdiction over wetlands affected by the Project. NDEE is responsible for Section 401 Water Quality Certification for any project requiring a federal permit or license that includes a discharge into a water of the State. In addition, NDEE determines whether projects comply with Nebraska Administrative Code Title 117, Nebraska Surface Water Quality Standards.

Executive Order 11990, *Protection of Wetlands*, requires federal agencies (including FHWA) to implement “no net loss” measures for wetlands (42 FR 26961). These measures include a phased approach to implement wetland impact avoidance, then minimization of impacts if wetlands cannot be avoided, and finally mitigation. In Nebraska, “no net loss” is tracked and applied on an annual, program-wide basis for federally funded projects rather than on an individual-project basis.

4.20.1 Affected Environment

Wetlands and other waters of the US were identified within the Study Area during wetland and water resource delineations conducted on July 26 – July 29, 2021. The findings of the delineation can be found in **Appendix N**.

Wetlands:

One hundred and fifteen (115) wetlands were identified within the Study Area. All delineated wetlands were classified as either palustrine emergent (PEM), palustrine scrub-shrub (PSS), or palustrine forested (PFO) and total of 20.594 acres. Refer to **Table 4.7** for a summary of wetland and waterway types and acreage/linear feet. Locations of wetlands in the Study Area are shown in **Figure 4.1** and **Appendix N**.

Table 4.7 Wetland and Water Resources Identified in the Study Area

Wetlands		Waterways		
Wetland Type ¹	Acreage	Waterway Type		Linear Feet
PEMA/C	19.298	Streams	Ephemeral	600
PEMF	1.065		Intermittent	3,081
PFOA	0.174		Perennial	1,622
PSSA	0.057	Streams Subtotal		5,303
Reuse Pit	0.239^	Irrigation	Drain	5,150
			Canal	17,066
			Conveyance	6,498
		Irrigation Subtotal		28,714
Total	20.594	Total		34,017

1 PEM/C = palustrine emergent temporarily / seasonally flooded; PEMF = Palustrine emergent semi-permanently flooded; PFOA = palustrine forested temporarily flooded; PSSA = palustrine scrub-shrub temporarily flooded;

2 ^ - Not calculated in total, other water features were exempt.

Waterways:

Ten (10) waterways were documented within the Study Area: three (3) unnamed intermittent channels, two (2) unnamed ephemeral channels, Wildhorse Creek, Ninemile Creek, Wildhorse Canyon, Red Willow Creek, and West Water Creek. Sixty-two canals, drains, and irrigation conveyance structures were also observed. Of these 62 features, those named included the Tri-State Canal, Lowline Canal, Branch Canal, Minatare Canal, Bayard Drain, and Minatare Drain. Waterways, canals, drains and irrigation conveyance structures are shown in **Figure 4.1** and **Appendix N**.

4.20.2 Impacts of the No Build Alternative

There would be no construction of the Project with the No Build Alternative. Wetland and water resources impacts may occur as part of other routine roadway and bridge maintenance activities; however, these impacts would be evaluated on a project-by-project basis.

4.20.3 Impacts of the Preferred Alternative

The Preferred Alternative would permanently affect approximately 13.452 acres of wetlands and approximately 7,253 linear feet (1.571 acres) of waterways including Ninemile Creek, Wildhorse Creek, Wildhorse Creek, Red Willow Creek, West Water Creek, Minatare Canal, Minatare Drain, Bayard Drain; other unnamed perennial, intermittent, and ephemeral channels; and several unnamed drains, canals and irrigation conveyance structures, as shown in **Table 4.8**. Construction of the Preferred Alternative would require a CWA Section 404 Individual Permit from USACE.

Table 4.8 Wetland and Water Resource Impacts

Wetland Impacts		Waterway Impacts		
Wetland Type ¹	Acreage	Waterway Type		Linear Feet / Acreage
PEMA/C	13.198	Streams	Ephemeral	239 / 0.04
PFOA	0.209		Intermittent	1,703 / 0.31
PSSA	0.045		Perennial	601 / 0.33
		Streams Subtotal		2,543/0.68
		Irrigation	Drain	4,130 /0.856
			Canal	80 / 0.003
			Irrigation Conveyance	500 / 0.061
		Irrigation Subtotal		4,710/0.92
Total	13.452	Total		7,253 / 1.571

¹ PEMA/C = palustrine emergent temporarily / seasonally flooded; PFOA = palustrine forested temporarily flooded; PSSA = palustrine scrub-shrub temporarily flooded.

Temporary impacts to wetlands and water resources during construction are anticipated. These impacts would be included in the Section 404 permitting process. Any resources that would be temporarily impacted would be restored to pre-construction condition or better and planted with an appropriate seed mix.

4.20.4 Avoidance, Minimization, and Mitigation

Based on the preliminary impacts, wetland and stream mitigation is anticipated. Where wetland impacts could not be avoided or minimized, mitigation would occur at ratios determined by USACE and at locations approved by USACE. Mitigation ratios are determined based on the type and location of mitigation proposed for the affected wetlands. Required mitigation would be completed at a minimum 1:1 ratio. All impacts are expected to be mitigated at a permittee-responsible mitigation site.

The Scottsbluff Mitigation Bank is located near the Project. If the bank is not capable of handling the mitigation needs, other mitigation sites would be identified. Once a mitigation site (or combination of sites) is determined, NDOT would reinitiate consultation with USACE. A Nebraska Stream Condition Assessment Procedure would be completed as part of the CWA Section 404 permitting process to determine stream mitigation needs.

Commitments:

All wetlands within the Project limits that are not permitted for impact would be marked on the Project plans and the E Sheet as avoidance areas. (NDOT Roadway Design, NDOT Environmental)

The Contractor shall not stage, store, waste, or stockpile materials and equipment in undisturbed locations or in known/potential wetlands and/or known/potential streams that exhibit a clear “bed and Bank” channel. Potential wetland areas consist of any area that is known to pond water, swampy areas, or areas supporting known wetland vegetation or areas where there is a distinct difference in vegetation (at lower elevations) from the surrounding upland areas. (Contractor)

The Project will require an Individual Permit for impacts to waters of the US. The Contractor shall adhere to all permit conditions, including regional and general conditions, during construction. All wetlands/waters within the project area that are not permitted for impacts shall be marked on the project plan aerial sheets for the Contractor as avoidance areas. (NDOT Design, NDOT Environmental, Contractor)

Avoidance and minimization measures would be further refined during the preliminary and final design processes as appropriate. The design would comply with the policy of Executive Order 11990 (42 FR 26961) regarding impacts on wetlands. Additionally, any project using federal transportation funds must adhere to the net gain of wetland policy (23 CFR 777.11(g)), where there would be no net loss of wetlands across the program in a given year. (NDOT Roadway Design, NDOT Environmental)

4.21 Threatened and Endangered Species

The Endangered Species Act of 1973, as amended (16 USC 1531–1544), protects federally listed endangered and threatened species, and the Nebraska Nongame and Endangered Species Conservation Act of 1975 (Nebraska Revised Statutes Section 37-801 to 37-811) provides protection for State-listed species. Other species with special protection are bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) under the Bald and Golden Eagle Protection Act of 1940, as amended (16 USC 668–668d) and migratory birds under the Migratory Bird Treaty Act of 1918, as amended (16 USC 703–712). Violation of these laws can be charged as misdemeanors or felonies, and conviction can result in fines of more than \$100,000 and/or imprisonment.

USFWS, FHWA, NDOT, and NGPC have developed a programmatic biological assessment protocol for all federally and state-listed species in Nebraska to streamline the Section 7 coordination process. The 2023 Nebraska Biological Evaluation Programmatic Agreement was signed by all parties on March 8, 2023, with USFWS concurrence on March 14, 2023, and NGPC concurrence on March 20, 2023. The agencies have developed a list of construction activities that occur as part of transportation projects and have reviewed the potential for impacts on the federally and state-listed species in Nebraska. The

Programmatic process includes the following steps; only the first four steps are required for projects that would not affect listed species or are not likely to adversely affect species with the implementation of standard conservation conditions:

- Complete a Biological Evaluation Form to document the habitat characteristics of a project's Action Area.
- Identify species or critical habitat potentially present in a project's Action Area.
- Screen species and critical habitat based on characteristics of the Action Area.
- Identify the potential for impact on individual species and/or critical habitat based on the construction activities that would be conducted for the project.
- Complete an Individual Project Level Evaluation if a project may have an effect on a listed species or if conservation conditions are recommended for a species not likely to be present.
- Complete a biological evaluation, which may be required if adverse effects on a species are anticipated even with the implementation of conservation conditions.

4.21.1 Affected Environment

The data for federally listed and state-listed threatened and endangered species in Scotts Bluff and Morrill Counties were reviewed, and each species was assessed individually to determine the potential presence or absence of suitable habitat within the Study Area, as described in the following paragraphs.

For the Project Action Area, USFWS lists 12 federally protected species and NGPC lists 12 state protected species. **Table 4.9** lists federally and state-listed threatened and endangered species with potential for occurrence in the Project Action Area, as well as a brief description of suitable habitat for the listed species.

Table 4.9 Federally and State Listed Threatened and Endangered Species in the Project Action Area

Status ¹	Common Name	Scientific Name	Habitat Description
FE, SE	Black-footed ferret	<i>Mustela nigripes</i>	Prairie dog town or complexes 1,000 acres or more in size.
FE, SE	Blowout Penstemon	<i>Penstemon haydenii</i>	Open areas of bare sands, or blowouts, in the Sandhills of north-central Nebraska
FT, ST	Eastern black rail	<i>Laterallus jamaicensis</i>	Wetlands containing herbaceous, persistent, emergent wetland plant cover, dense overhead cover, soils that are moist to saturated, and interspersed with, or adjacent to, very shallow water.
FE, SE	Eskimo curlew	<i>Numenius borealis</i>	Wet meadows, burned over prairies, or newly plowed fields.
FE, SE	Gray wolf	<i>Canus lupus</i>	Wide range of habitats including prairie, mountains, temperate forests, wetlands, tundra, and taiga. Areas where they are accepted by people.
FE, SE	Northern long-eared bat	<i>Myotis septentrionalis</i>	Hibernates in caves and mines. Swarms in surrounding wooded areas in autumn. During late spring and summer, roosts and forages in upland forests.

Status ¹	Common Name	Scientific Name	Habitat Description
FE, SE	Pallid sturgeon	<i>Scaphirhynchus albus</i>	Large river systems such as the Platte River or lower tributaries. Preferred habitat has a diversity of depths and velocities formed by braided channels, sand bars, islands, sand flats and gravel bars.
FT, ST	Piping plover	<i>Charadrius melodus</i>	Barren to sparsely vegetated sandbars along rivers, sand and gravel pits, and lake and reservoir shorelines.
FT, ST	Rufa red knot	<i>Calidris canutus rufa</i>	Open mud flats and/or mud and sandy shorelines free of vegetation.
Proposed FE ²	Tri-colored bat	<i>Perimyotis subflavus</i>	Hibernates in caves and mines. Swarms in surrounding wooded areas in autumn. During late spring and summer, roosts and forages in woodland.
SE	Swift Fox	<i>Vulpes velox</i>	Open short-grass prairies that contain vegetation <6 inches in height, including gently rolling to level intact upland grasslands and field borders that are outside of densely populated areas
FT, ST	Western prairie fringed orchid	<i>Platanthera praeclara</i>	Wet prairies and sedge meadows.
FE, SE	Whooping crane	<i>Grus americana</i>	Sub-irrigated grasslands, meadows, shallow wetland habitat, farm ponds, major rivers, agricultural land outside of densely populated residential, commercial, or industrial areas.

Sources: USFWS 2024; NGPC 2024.

Note:

¹ FT=Federally Threatened; FE = Federally Endangered; ST=State Threatened; SE=State Endangered

² Tri-colored bat is proposed to be federally listed as endangered; an official federal listing opinion is anticipated in 2024. All species federally listed as threatened or endangered are also listed by the state of Nebraska under State Statute 37-802(1).

According to Natural Heritage Records, there are documented occurrences of swift fox and whooping crane within 5 miles of the Project Action Area within the last 30 years, and the swift fox has been identified within 1 mile of the Project Action Area. There is no critical habitat present within the Project Action Area.

While there is a documented occurrence of whooping crane within 5 miles of the Project Action Area, the NGPC-estimated primary occurrence area for the species is approximately 60 miles southeast of the Project Action Area, near Lake McConaughy. Furthermore, the Project Action Area lacks the suitable habitat required for this avian species.

Of the species identified within **Table 4.9**, suitable habitat exists within the Project Action Area for the black-footed ferret, eskimo curlew, swift fox, northern long-eared bat, and the tricolored bat.

Eskimo curlew may use a portion of the Project Action Area for foraging habitat. Agricultural fields, grassland/pasture, emergent wetlands, and open water areas provide suitable habitat for the species. However, there are no known recent records or extant populations that currently exist in Nebraska.

Along the eastern edge of the project alignment, within the escarpment landscape, prairie dog colonies exist on both sides of L62A and east US-385. This area, part of the shortgrass prairie ecosystem would provide suitable habitat for both the black-footed ferret and swift fox. However, it should be noted that native populations of black-footed ferret have been extirpated from Nebraska and no known populations exist.

Waterways in the form of creeks, canals, and drainages exist throughout the project alignment. The major waterways include: Ninemile Creek, Wildhorse Drain, Wildhorse Canyon, Red Willow Creek, Minatare Drain, Tri State Canal, and Interstate Canal. These waterways have associated drainage ditches that feed the irrigated farmland throughout the corridor. Several of these waterways support wooded riparian corridors that may be suitable for the northern long-eared bat and tri-colored bat. Beyond the riparian corridors associated with waterways, wooded areas across the Project Action Area include farmsteads and windbreaks. However, most of the woodland areas along the project alignment are isolated, and are not well connected to other suitable habitat. It's likely that the northern long-eared bat and tricolored bat would utilize the larger woodland tracts associated with the riparian corridors, although either species may use any of these habitats for summer roosting and foraging activities.

Northern long-eared bat and tri-colored bat have been known to use human-made structures for occasionally roosting, such as barns and sheds. The bats may also use bridge and large culvert structures for summer roosting. There are approximately sixteen bridge or bridge-sized culverts in the Project Action Area. The NDOT conducted a survey in April of 2024 to inspect these structures along US-26 and L62A for evidence of bats. After assessment, no bats or evidence of bat usage was detected.

The federally endangered and threatened species review was conducted according to the Programmatic Agreement for the Nebraska Federal Aid Transportation Program. **Appendix O** contains the forms completed for the Project based on this Programmatic Agreement.

4.21.2 Impacts of the No Build Alternative

There would be no construction of the Project with the No Build Alternative. As a result, there would be no impacts on protected species beyond those needed to complete routine roadway and bridge maintenance activities.

4.21.3 Impacts of the Preferred Alternative

Based on the analysis conducted using the Programmatic Agreement review process, the preferred alternative may affect, but is not likely to adversely affect, swift fox, black footed ferret, northern long-eared bat, and tricolored bat with the conservation conditions listed below in **Section 4.21.4**. These species are the only listed species identified through the programmatic process that may potentially be impacted by the Preferred Alternative.

The USFWS has reviewed the draft biological assessment for this project and has provided "Reasonable Assurance" that their requirements can be met. Upon completion of the consultation with the USFWS, a summary of the findings will be incorporated into this document, and supporting documentation would be added to **Appendix O**.

Swift Fox

Potentially suitable habitat for Swift Fox is present, and there are historical records for this species within the Project Action Area. When reviewing the project's activities and effects, it was determined that construction activities, including the installation of fencing, could impact the species by directly harming animals, disturb breeding or foraging behaviors, and affect occupied or suitable unoccupied dens, or indirectly modifying habitat. However, with the implementation of conservation conditions listed in **Section 4.21.4**, potential impacts would be minimized; therefore, these activities may affect, but are not likely to adversely affect the species, Swift fox.

Black Footed Ferret

Potentially suitable habitat for the black-footed ferret exists along the project, particularly within the prairie dog complex near the L-62A and US-385 intersection; however, there are no historical records of black-footed ferrets in the area. Given the absence of ferrets in Nebraska and that re-introductions are not planned for this site, NDOT has determined that the project may affect, but is not likely to adversely affect, the black-footed ferret or its habitat.

Northern Long-eared Bat and Tri-colored Bat

Potentially suitable habitat for northern long-eared bat and tri-colored bat is present, but there are no historic records for either species within the Project Action Area and there are no identified hibernacula or maternity roosts within 1 mile of the Preferred Alternative. Tree clearing, wood vegetation removal, and structure removal activities associated with the Preferred Alternative have the potential to impact both bat species. Based on NDOT's commitment to implement the avoidance and minimization measures listed in **Section 4.21.4**, the Preferred Alternative may affect, but is not likely to adversely affect, northern long-eared bat or tri-colored bat.

4.21.4 Avoidance, Minimization, and Mitigation

To minimize any potential impacts on protected species, specific conservation conditions would be implemented during design and construction (see **Appendix O**).

A-1 Changes in Project Scope. If there is a change in the project scope, the project limits, or environmental commitments, the Highway Project Manager shall coordinate with the NDOT Environmental Section to evaluate potential impacts prior to implementation. Environmental commitments are not subject to change without prior written approval from the NDOT Environmental Section. (*District Construction*)

A-2 Conservation Conditions. Conservation conditions are to be fully implemented within the project limits as shown on the plans. (*District Construction, Contractor*)

A-3 Early Construction Starts. Contractor request for early construction starts must be coordinated by the Project Construction Engineer with NDOT Environmental for approval of early start to ensure avoidance of listed species sensitive lifecycle timeframes. Work in these timeframes could require consultation with the USFWS and NGPC. (*District Construction, Contractor*)

A-4 T&E Species. If federal or state listed species are observed during construction, the Highway Project Manager will contact NDOT Environmental Section to determine if additional species conservation conditions would be required prior to continuing project construction activities. Contact NDOT Environmental for a reference of federal and state listed species. Coordination with the USFWS and NGPC may be required depending on the species identified and construction activities. (*NDOT Environmental, District Construction, Contractor*)

A-5 Refueling. Refueling will be conducted outside of those sensitive areas identified on the plans, in the contract, and/or marked in the field. (*Contractor*)

A-6 Restricted Activities. The following project activities shall, to the extent possible, be restricted to between the beginning and ending points (stationing, reference posts, mile markers, and/or section-township-range references) of the project, within the right-of-way designated on the project plans: borrow sites, burn sites, construction debris waste disposal areas, concrete and asphalt plants, haul roads, stockpiling areas, staging areas, and material storage sites.

For activities outside the project limits, the contractor should refer to the Nebraska Game and Park Commission website to determine which species ranges occur within the off-site area. The contractor should plan accordingly for any species surveys that may be required to approve the use of a borrow

site, or other off-site activities. The contractor should review the T&E Matrix agreement (on NDOT's website), where species survey protocols can be found, to estimate the level of effort and timing requirements for surveys.

Any project related activities that occur outside of the project limits must be environmentally cleared/permitted with the Nebraska Game and Parks Commission as well as any other appropriate agencies by the contractor and those clearances/permits submitted to the District Construction Project Manager prior to the start of the above listed project activities. The contractor shall submit information such as an aerial photo showing the proposed activity site, a soil survey map with the location of the site, a plan-sheet or drawing showing the location and dimensions of the activity site, a minimum of 4 different ground photos showing the existing conditions at the proposed activity site, depth to ground water and depth of pit, and the "Platte River depletion status" of the site. The contractor must receive notice of acceptance from NDOT environmental, prior to starting the above listed project activities. These project activities cannot adversely affect state and/or federally listed species or designated critical habitat. (*NDOT Environmental, District Construction, Contractor*).

A-7 Waste/Debris. Construction waste/debris will be disposed of in areas or a manner which will not adversely affect state and/or federally listed species and/or designated critical habitat. (*Contractor*)

A-8 Post Construction Erosion Control. Erosion control activities carried out by NDOT Maintenance or others after construction is complete, but prior to project close-out, shall adhere to any standard conservation conditions for species designated for the project limits during construction. (*NDOT Maintenance, District Construction, Contractor*)

S-1 Fencing. When project-related fence construction/relocation work is required to be done prior to the start of construction, and if the fence work occurs outside urban or cropland areas that are not within swift fox range, then fencing can be installed/relocated at any time using the following criteria:

- a. the fencing is temporary in nature and/or consists of only hand-driven posts
- b. the work does not compact the soils (ex. through the use of heavy equipment) or cause soil disturbance beyond the driving of posts

If the fencing work cannot meet these criteria, then NDOT Right-of-Way Division shall coordinate with NDOT Environmental Section prior to the completion of Right-of-way negotiations.

S-2 Platte River Depletions To the maximum extent practical, efforts will be made to design the project and select borrow sites to prevent depletions to the Platte River. If there is any potential to create a depletion, NDOT (during design) and the Contractor (for borrow sites) shall follow the current Platte River depletion protocols for coordination, minimization, and mitigation. In general, the following are considered de minimis depletions, but may still require agency coordination; a project which: a) creates an annual depletion less than 0.1 acre feet, b) creates a detention basin that detains water for less than 72 hours, c) diverted water that will be returned to its natural basin within 30 days, or d) creates a one-time depletion of less than 10 acre feet. (*NDOT Roadway Design, Contractor*)

S-3 Revegetation. All permanent seeding and plantings (excluding managed landscaped areas) shall use species and composition native to the project vicinity as shown in the Plan for the Roadside Environment. However, within the first 16 feet of the road shoulder or within high erosion prone locations, tall fescue or perennial ryegrass may be used at minimal rates to provide quick groundcover to prevent erosion, unless state or federally listed threatened or endangered plants were identified in the project area during surveys. If listed **plants** were identified, any seed mix requirements identified during resource agency consultations shall be used for the project. (*NDOT Environmental*)

S-4 Sensitive Areas. Environmentally Sensitive Areas will be marked on the plans, in the field, or in the contract by NDOT Environmental for avoidance. (*NDOT Environmental, NDOT Roadway Design, District Construction*)

S-5 Species Surveys. If species surveys are required during the construction phase of the project (including pre-construction surveys), results will be sent by NDOT Environmental Section to the USFWS, NGPC, and if applicable the USACE. (*NDOT Environmental, District Construction*)

S-6 Permanent LED Lighting (NDOT Design Commitment): Only LED roadway luminaries listed on the NDOT “Nebraska Qualified Material Vendors List” will be considered for use on Nebraska highway lighting projects. Proposed changes to the following LED lighting requirements would require resource agency (USFWS and/or NGPC) coordination and approval prior to installation:

- Nominal CCT – 3000 +/- 300 K
- BUG Ratings – Maximum nominal Backlight (N/A), Uplight (0), Glare (N/A)
- Lumen Output – N/A

Any proposed changes to the listed requirement(s) must be presented to the NDOT Environmental Section for Agency Coordination and approval.

Swift Fox:

SF-1 Two weeks prior to the start of construction, a qualified biologist shall survey the environmental study area according to protocol to determine if active swift fox den sites are present. If an active den with young is located and it is outside the project limits, then a buffer zone shall be established around the den and all construction activities shall avoid the buffer until the den is abandoned. If an occupied den with or without young is identified within the project limits or staging areas, NDOT shall immediately coordinate with the NGPC to determine how to proceed. A buffer zone shall be established around the den and all construction activities shall avoid the buffer until NDOT gives approval to enter the buffer area. Between April 1 and August 31, the buffer zone shall be 250 yards around the active den site; other times of the year, the buffer shall be 100 yards around the active den site. (*NDOT Environmental*)

SF-2 Fencing shall be designed for wildlife safety and wildlife friendly passage with a bottom wire at least 16” from the ground. If different fencing design is required for safety or access control, additional coordination with resource agencies shall be required. (*NDOT Design, NDOT Environmental*)

SF-3 Fence posts shall not be placed within potential den sites that appear to have animal activity. If fence posts cannot avoid potential den sites that appear to have animal activity, NDOT Environmental will be notified and will re-initiate consultation with resource agencies. Work will not commence until agency concurrence is received. (*Contractor*)

SF-A NDOT shall coordinate with the NGPC regarding the installation of artificial escape dens in suitable locations along the L62A corridor. Swift Fox Escape Den Installation protocols shall be utilized. (*NDOT Environmental, NDOT Design*)

Northern long-eared Bat / Tri-colored Bat

NLEB / TCB -3: All phases and aspects of the project shall be modified, to the extent practicable, to avoid tree removal in excess of what is required to implement the project safely. Tree removal shall be limited to removals specified in the project plans, which will be clearly marked in the field. (*Design, Contractor*)

NLEB / TCB CM-2: No removal of suitable trees or roosting structures between May 15 and July 31 (maternity roosting season) (*Contractor*)

4.22 Fish, Wildlife, and Vegetation

This section describes the fish and wildlife species that inhabit the Study Area as well as the vegetation in the Study Area. Threatened or endangered species and their associated habitat are discussed in **Section 4.21**. Applicable federal and state legislation is summarized below.

The Migratory Bird Treaty Act of 1918, as amended (16 USC 703–712), states that construction activities in grassland, wetland, stream, and woodland habitats, and those that occur on bridges (for example, that may affect swallow nests on bridge girders) that would otherwise result in the taking of migratory birds, eggs, young, and/or active nests should be avoided. Although the provisions of Migratory Bird Treaty Act are applicable year-round, most migratory bird nesting activity in Nebraska occurs from April 1 to September 1.

The Nebraska Nongame and Endangered Species Conservation Act of 1975 (Nebraska Revised Statutes Section 37-801 et seq.) specifies that the state should conserve non-game species, as well as species determined to be endangered or threatened, for human enjoyment, for scientific purposes, and to ensure their continued existence as a part of our natural world.

Noxious weeds are typically invasive species that harm natural ecosystems. Several regulations and guidelines have been issued to help limit the spread of noxious weeds, including Executive Order 13112, *Invasive Species*; the Nebraska Noxious Weed Control Act (Nebraska Revised Statutes Sections 2-945.01 to 2-970); and the Nebraska Noxious Weeds Regulations (Nebraska Administrative Code Title 25, Chapter 10).

4.22.1 Affected Environment

This project is located within the topographic Region of the Valleys and Valley-Side Slopes, which consists of flat-lying land along major streams (North Platte River) and moderately sloping land between the escarpments (rock outcrops) located on the eastern edge of the project. According to the Nebraska Natural Legacy Project, the project is located within the Shortgrass Prairie Ecoregion of Nebraska. Although referred to as the Shortgrass Prairie Ecoregion, much of western Nebraska supports dry mixed-grass prairie in addition to the area of short grass. The predominant vegetation type in this ecoregion is the threadleaf sedge western mixed grass prairie, while true short-grass prairie is limited to dry knobs and areas with very clayey soils. The ecoregion features diverse topography, including several areas of rocky escarpments and soils ranging from sand to clay.

The North Platte River, just southwest of this project, bisects the ecoregion and has wet meadows, deciduous woodlands, and numerous tributary streams, many of which are coldwater. Natural wetlands are somewhat limited in this ecoregion, but playa wetlands are abundant in areas of the southwest, and are scattered northward. Five large reservoirs exist within this ecoregion with the closest reservoir to this project being Lake Minatare State Recreation area, located approximately 7 miles north of the project. This ecoregion contains numerous small streams, many of which are ephemeral.

The Panhandle Mixedgrass Prairies Biologically Unique Landscape (BUL) intersects the project just east of the US-26 and L62A intersection. This landscape occupies the plains and rolling hills of the northern Panhandle from the Pine Ridge south to the North Platte River valley. This BUL supports extensive, intact native prairie inhabited by swift fox, prairie dogs, and grassland birds.

More than 300 species of resident and migratory birds have been recorded in the short-grass prairie ecoregion. Common short-grass prairie species include McCown's and chestnut-collared longspurs, brewer's sparrow, horned lark, burrowing owl and the state threatened mountain plover. Species commonly found in the mixed-grass prairie community include western meadowlark, grasshopper sparrow, and lark bunting. The region's wetlands support many species of waterfowl including Canada

2863 goose, mallard, and northern pintail, and shorebirds such as western sandpiper and greater
2864 yellowlegs.

2865 A variety of mammals are known to occur in the ecoregion. Ungulates include both white-tailed and
2866 mule deer, elk, pronghorn, and bighorn sheep. Coyotes and bobcats are the most common large
2867 predators but in recent years, mountain lions have also been recorded in the Panhandle. The
2868 ecoregion serves as one of the remaining strongholds for the diminutive swift fox, a state endangered
2869 species. Prairie dogs are locally abundant, and the endangered black-footed ferret was once present in
2870 the ecoregion. Other mammals include the black-tailed jackrabbit, American badger, plains pocket
2871 gopher, and northern grasshopper mouse.

2872 The lesser-known lakes, river backwaters, side-channels, and oxbows are frequently occupied by
2873 brook trout and rainbow trout have been stocked in cold water streams in the ecoregion.

2874 In the study area, natural vegetation remains confined to small pockets due to the agricultural
2875 character of the corridor, with much of the existing vegetation along the alignment having been
2876 previously disturbed by road construction grading or farming activities. The grassland cover
2877 encompasses various land uses, including the existing ROW, which consists of mowed areas, irrigated
2878 pastureland, hayland, and rangeland. Rangeland vegetation is predominantly composed of native
2879 species such as bluestem, grama switchgrass, Indiangrass, buffalograss, and sedges, while
2880 vegetation in the ROW, irrigated pasture, and hayland may consist of both native and introduced
2881 species.

2882 Project-specific wetland and waters of the US delineations were conducted in the Study Area in 2021.
2883 The delineation documented vegetation found within and beyond US-26 and L62A ROW and areas
2884 surrounding waterways. The land in the Study Area, including the existing riparian areas near streams,
2885 is highly disturbed due to agricultural practices, and road construction. Vegetative species commonly
2886 occurring in upland areas include smooth brome (*Bromus inermis*), cheatgrass (*Bromus tectorum*),
2887 intermediate wheatgrass (*Thinopyrum intermedium*), and kochia (*Brassica kochia*). Reed canary grass
2888 (*Phalaris arundinacea*), narrowleaf cattail (*Typha latifolia*), and prairie cordgrass (*Spartina pectinate*)
2889 were common species identified in wetland areas. Trees and shrubs documented were associated
2890 with waterways and included black willow (*Salix nigra*), sandbar willow (*Salix interior*) and cottonwood
2891 shrubs (*Populus deltoides*).

2892 Habitat connectivity and fragmentation was evaluated for the Project, and detailed findings can be
2893 found in **Appendix O** Intensive agriculture has fragmented and reduced the amount of habitat available
2894 for wildlife and has decreased the quality of wildlife habitat that remains within and adjacent to the
2895 Study Area. Through this habitat connectivity analysis, three wildlife corridors, or areas that wildlife
2896 regularly traverse, were identified within the Study Area (**Table 4.10**). These wildlife corridors were
2897 identified using wildlife strike data in conjunction with structural features (culverts and bridges), and
2898 habitat availability in the surrounding area.

2899 **Table 4.10 Wildlife Corridors**

Wildlife Corridor (Mile Markers)	Crash Locations (Mile Marker)	Habitat Description	Structure that could be used for Movement	Appendix, Sheet No.
US-26 41.00 – 41.35	41.11 41.13 41.17 41.20	The Wildhorse Drain intersects US-26 within this designated wildlife corridor. The riparian zone along the drain is lined with deciduous trees, creating a forested buffer along the waterway's banks. Adjacent to this riparian habitat, Palustrine Emergent Wetlands provide aquatic and semi-aquatic environments that support a variety of wetland-dependent species. Beyond the riparian boundaries, the landscape transitions into extensive areas of row crop agriculture on both sides of the creek. Westward from the creek, a linear stand of deciduous trees runs parallel to the highway, providing additional ecological connectivity and habitat structure. The roadway ditches, vegetated with herbaceous grasses, serve as ecological linkages that facilitate wildlife movement into the surrounding agricultural fields.	MM 41.15 – 8 foot by 12 foot concrete box culvert	8
L62A 0.65 – 1.35	1.00 1.00 1.25 1.15	The Wildhorse Canyon intersects L62A within this designated wildlife corridor. The canyon's riparian zone features an established forest of deciduous trees along its banks, providing habitat and ecological connectivity. Adjacent to this, Palustrine Emergent and Palustrine Forested wetlands complement the creek's riparian environment. Beyond the riparian boundaries, deciduous woodland habitats dominate the southern landscape parallel to the roadway, offering additional ecological connectivity. A small farmstead located on the southeast side introduces a modified landscape element to the corridor. The surrounding area predominantly consists of cropland interspersed with pockets of grassland, which contribute to the mosaic of habitats.	MM 1.17 – 10 foot by 10 foot concrete box culvert	9,10

Wildlife Corridor (Mile Markers)	Crash Locations (Mile Marker)	Habitat Description	Structure that could be used for Movement	Appendix, Sheet No.
L62A 5.60 – 6.30	5.67 5.78 5.81 5.92 5.99 6.20 6.20	This wildlife corridor intersects the Tri-State Canal at two separate points and crosses Red Willow Creek directly at the corridor's center. Adjacent to these water bodies, wetland habitats, classified as Palustrine Emergent, Palustrine Forested, and Palustrine Forested Open Water, are prevalent, providing aquatic environments. These wetlands, coupled with abundant forested habitats along both sides of the highway, enhance the corridor's biodiversity and ecological functionality. The outer edges of the corridor transition into agricultural landscapes, predominantly cropland interspersed with small pockets of grassland.	MM 5.81 - - 10 foot by 10 foot concrete box culvert MM 5.96 – 13 foot by 8 foot concrete box culvert MM 6.13 – 10 foot by 10 foot concrete box culvert	14

2900 The common habitat features shared among the three wildlife corridors include their proximity to
 2901 waterways, the presence of wooded areas, and a diverse mix of habitat types such as wetlands. This
 2902 habitat diversity adjacent to the corridors is associated with increased species diversity, enhancing the
 2903 ecological richness of these areas. Each corridor encompasses a waterway paired with a structural
 2904 feature, such as a culvert that spans at least 12 square feet and is flanked by forested habitats
 2905 adjacent to the roadway.

2906 The Director of the Nebraska Department of Agriculture has identified 12 species as noxious weeds
 2907 throughout Nebraska (Nebraska Invasive Species Program 2024), as shown in **Table 4.11**.

2908 **Table 4.11. State Noxious Weeds**

Common Name	Scientific Name
Canada thistle	<i>Cirsium arvense</i>
Japanese knotweed	<i>Fallopia japonica</i>
Giant knotweed	<i>Fallopia sachalinensis</i>
Leafy spurge	<i>Euphorbia esula</i>
Musk thistle	<i>Carduus nutans</i>
Phragmites / Common reed	<i>Phragmites australis</i>
Plumless thistle	<i>Carduus acanthoides</i>
Purple loosestrife	<i>Lythrum salicaria</i> , <i>L. virgatum</i>
Saltcedar	<i>Tamarix ramosissima</i>
Sericea lespedeza	<i>Lespedeza cuneata</i>
Spotted knapweed	<i>Centaurea biebersteinii</i>
Diffuse knapweed	<i>Centaurea diffusa</i>

Source: Nebraska Invasive Species Program 2024.

The Nebraska Invasive Species Program has developed Nebraska’s Invasive Plants Watch List, which is an ecoregion-based list of invasive plants to monitor. The listed plants are separated into three categories. Category 1 species are future invasive species that are not known to exist in an ecoregion but would pose a significant threat if introduced. Category 2 species are those considered a top priority for eradication for new and existing populations, while Category 3 species are established and prevention of spread to new areas is a top priority (Nebraska Invasive Species Program 2023). Note that no Category 3 Terrestrial Plant Species occur in the shortgrass prairie ecoregion. The Invasive Plants Watch List species occurring in the Shortgrass Prairie Ecoregion, which includes Scotts bluff and Morrill Counties, are shown in **Table 4.12**.

Table 4.12 Nebraska’s Invasive Plants Watch List for Shortgrass Prairie Ecoregion

Common Name	Scientific Name
Category 1	
Giant Reed	<i>Arundo donax</i> L.
Ripgut Brome	<i>Bromus diandrus</i>
Flowering Rush	<i>Butomus umbellatus</i>
Oriental Bittersweet	<i>Celastrus orbiculatus</i>
Yellow Starthistle	<i>Centaurea solstitialis</i>
Medusahead	<i>Taeniatherum caput-medusae</i>
Ventenata	<i>Ventenata dubia</i>
Category 2	
Russian knapweed	<i>Acroptilon repens</i>
Absinth wormwood	<i>Artemisia absinthium</i> L.
Caucasian bluestem	<i>Bothriochloa bladhii</i>
Yellow bluestem	<i>Bothriochloa ischaemum</i>
Houndstongue	<i>Cynoglossum officinale</i>
Henbane	<i>Hyoscyamus niger</i>
Yellow flag iris	<i>Iris pseudacorus</i>
Dalmatian Toadflax	<i>Linaria dalmatica</i>
Common buckthorn	<i>Rhamnus cathartica</i>

Source: Nebraska Invasive Species Program 2024

4.22.2 Impacts of the No Build Alternative

There would be no construction of the Project with the No Build Alternative. Impacts on fish, wildlife, and vegetation may occur as part of other routine roadway and bridge maintenance activities. Impacts on fish, wildlife, and vegetation for those projects would be evaluated on a project-by-project basis.

In addition, the No Build Alternative would result in neither disturbance nor improvement of the area's vegetation composition. There would be no new disturbances to vegetation beyond those needed to complete routine roadway and bridge maintenance activities.

4.22.3 Impacts of the Preferred Alternative

The increased distance for wildlife to cross the expanded highway may pose additional challenges. However, the depressed median that would be constructed could serve as a refuge for wildlife attempting to cross the highway. Improved driver visibility with the 4-lane divided roadway configuration is expected to reduce wildlife-vehicle crashes by allowing earlier detection of wildlife. Additionally, the project includes maintaining existing drainage systems and integrating new box culverts and bridges where crossings currently exist, which facilitate wildlife mobility. These measures ensure that the wildlife corridors would continue to function effectively. While the expansion increases the crossing distance, the overall connectivity for wildlife movement is expected to be preserved, and the risk of wildlife-vehicle crashes is likely to be maintained or minimized.

The project's expansion area would primarily impact cropland and grassland cover types, which are abundant in Scotts Bluff and Morrill Counties, resulting in minimal impacts relative to the overall area of the two counties. Based on the wetlands and waters of the US delineation report, the species documented in the Study Area are typical of vegetation associated with much of the state highway ROW in western Nebraska. Vegetation disturbed during Project construction would consist mainly of introduced species, such as smooth brome and reed canary grass, found commonly throughout the area. Some disturbance to riparian vegetation near identified waterways would occur during bridge/culvert construction activities. However, revegetation in all disturbed areas would use native seed mixes that would improve plant species composition. Furthermore, roadside ditches and other disturbed areas may naturally re-establish wetland vegetation post-construction.

Temporary construction impacts on adjacent vegetation are expected. Areas disturbed during construction would be planted with an NDOT-approved seed mix following construction. Temporary construction impacts on fish and wildlife are not anticipated. Waterways disturbed during construction would require having flow maintained through temporary means identified during final design or by the Project Contractor.

4.22.4 Avoidance, Minimization, and Mitigation

In accordance with NDOT's Avian Protection Plan (NDOT 2018), NDOT would make every effort to schedule clearing and grubbing, large tree removal, or other work activities that may impact migratory bird nests, outside of the primary Nebraska nesting season of April 1 to September 1. If any of the aforementioned activities would be required during this period, a nesting survey would be completed by a qualified biologist prior to work commencing. Specific to bridge and culvert work, the required survey period extends through September 30. (NDOT Environmental, Contractor)

In efforts to maintain aquatic wildlife connectivity, the Preferred Alternative may use temporary structures during construction. The use of temporary structures would facilitate aquatic life movements during construction in accordance with CWA Section 404 Nationwide Permit General Condition No. 2: Aquatic Life Movements. Proposed structures would be constructed at appropriate sizes and elevations so as not to impede aquatic life movements. (NDOT Environmental, Contractor)

To avoid impacts on fish and other aquatic organisms, an erosion control plan and a SWPPP would be developed and implemented. In accordance with the SWPPP and the requirements in the General Construction Storm Water Permit, NDOT would inspect all erosion and sediment control BMPs every 14 days and after every precipitation event of 0.5 inch or greater. Any BMP adjustments and repairs would occur within 7 days of the inspection to ensure that water quality is being protected to the

maximum extent practicable. The SWPPP would be maintained, and discharge points would be monitored by NDOT until the site is 70 percent revegetated. (NDOT Environmental, Contractor)

According to NDOT's Standard Specifications for Highway Construction, Subsection 202.01(2)(b), the Contractor would be responsible for disposal of all vegetation for NDOT ROW and the limits of construction. Disturbed areas would be seeded in accordance with NDOT's Standard Specifications, Subsection 803.02. Revegetation of the area following construction would occur using seed mixtures containing native grasses, legumes, and forbs to appropriately landscape the region, as specified in NDOT's Plan for the Roadside Environment for a rural highway corridor (NDOT 2008). (NDOT Environmental, Contractor)

As stated in NDOT's Standard Specifications for Highway Construction, Subsection 107.12, "The Contractor should prevent the transfer of invasive plant and animal species and should wash all equipment at the Contractor's storage facility prior to entering the construction site. The Contractor should inspect all construction equipment and remove all attached vegetation and animal prior to leaving the construction site." (NDOT Environmental, Contractor)

Appropriate mulching materials, as defined in NDOT's Standard Specifications for Highway Construction, Subsection 806.02(1), should be applied and should not include brome hay, rushes, cattails, reed canary grass, wide-bladed grass, or invasive species. All sod, if required, to be applied to the Project should be free from noxious weeds and all other weeds. (NDOT Environmental, Contractor)

4.23 Cumulative Impacts

Assessing cumulative impacts considers whether adding "one more project" to what is already going on in the Study Area would be the tipping point into making the overall impact significant. Indirect impacts are from actions, often taken by others, at a later time, as a result of the Project.

The following definitions apply to this section and are based on 40 CFR 1500–1508:

- **Direct effect** – caused by the Project and occurs at the same time and place. [Note: The direct effects of the Preferred Alternative were described in the previous sections of this Draft EA].
- **Indirect effects** – caused by the Project but occur later in time or are farther removed in distance but are still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems.
- **Cumulative impact** – change in the environment resulting from the incremental impact of the project when added to other past, present, and reasonably foreseeable future actions in the Study Area.

4.23.1 Affected Environment

The methodology used to address cumulative impacts involves identifying **past, present, and reasonably foreseeable future** projects; reviewing resources that would be affected by the Project; determining the approximate time frames and locations of impacts; considering the types of impacts likely; and selecting the resources requiring detailed evaluation of cumulative impacts.

Past and present projects can include those that are currently under construction and would be completed prior to the analyzed project. Reasonably foreseeable future projects can include ongoing projects, such as transportation and commercial or industrial development, that are not expected to be completed by the time the analyzed project would begin construction or are planned projects that are included in planning documents for the area.

The following projects were identified as past, present and reasonably foreseeable:

- EACNH-26-1(146) CN 50826, US-26 from Scottsbluff to Minatare (past)
- Private development, construction of a Dollar General, at US-26 and Stonegate Road, Minatare (past)
- NDOT CN 51432, TCSP-71-2(112), Heartland Expressway, US-385 from Highway L62A to Alliance (past)
- John McLellan Jr Expressway, N-71 from US-26 to Scotts Bluff County/Banner County line (past)
- NDOT CN 51665, MISC-385-3(1025), US-385 South of Bridgeport (present)
- NDOT CN 51654, NH-71-2(116), Heartland Expressway, N-71 from I-80 to US-26 (future)
- NDOT CN 51642, NH-STP-25-1(17), US-26 and US-385 in Bridgeport; and N-88 south of Bridgeport (future)
- NDOT CN 51637, STP-L79E(113), L79E over the North Platter River between Melbeta and Minatare (future)
- Western Nebraska Regional Airport taxiway (future)

See **Appendix P Cumulative Impacts Technical Memo** for further discussion on these actions.

Resources Considered for Impacts Analysis

Based on the impacts from the Project and the nature of the above-identified projects, no resources were carried forward for a detailed cumulative impacts evaluation. The cumulative impact analysis can be found in Appendix P.

4.23.2 Impacts of the No Build Alternative

Direct impacts associated with the No Build Alternative are evaluated in this Draft EA. Additionally, all past, present, and reasonably foreseeable actions have been or would be permitted based on federal, state, and local resource requirements prior to construction. There would be no cumulative impacts associated with the No Build Alternative and the projects listed above.

4.23.3 Impacts of the Preferred Alternative

Direct impacts associated with the Preferred Alternative are evaluated in this Draft EA. According to the 2014 Heartland Expressway Corridor Development and Management Plan, indirect effects of the project could include economic expansion in select locations along the corridor. The improved infrastructure is expected to attract new long-distance users, likely increasing demand for roadside services such as lodging, food, fuel, and retail. Additionally, the enhancements may encourage growth in sectors like food processing and manufacturing, which could leverage the area's agricultural strengths, as well as in distribution facilities that benefit from low costs and proximity to larger urban centers. However, it would be presumptive to expect consistent development along the entire route. Large portions, including the segment from Minatare to US-385, are likely to retain their rural character. Nonetheless, some development near Minatare would be a reasonable expectation, as the area could support increased traffic and economic opportunities brought by the project.

No adverse cumulative impacts are anticipated for any resources discussed due to the Preferred Alternative or past actions, as these actions were permitted under federal, state, and local requirements. Likewise, no adverse cumulative impacts are expected from present or future actions associated with the Preferred Alternative. Identified projects are expected to have only minor impacts on adjacent resources, as they will be permitted according to all relevant federal, state, and local requirements before construction.

4.23.4 Avoidance, Minimization, and Mitigation

No mitigation with respect to cumulative impacts would be required or is proposed for this project.

4.24 Summary of Impacts

A summary of the impacts resulting from the Preferred Alternative is provided in **Table 4.13**.

Table 4.13 Summary of Impacts

Resource	Impacts
Land Use	The Preferred Alternative would convert approximately 260 acres of land, predominantly farmland, to NDOT ROW. Conversion of this land would be compatible with land use plans. Temporary impacts during construction may occur in the form of temporary easements for access.
Farmland	The Preferred Alternative would convert 188 acres of farmland to an expressway system. The NRCS-CPA-106 forms show that the point total for Part VI, Corridor Assessment Criteria, for Scotts Bluff County is 139 and Morrill County is 143. The NRCS confirmed these point totals on May 13, 2024, and indicated that no further coordination would be required. Coordination with the NRCS can be found in Appendix B. The Preferred Alternative has the potential to impact 22 existing center pivots. Two (2) center pivots may require relocation with the remaining 20 center pivots would be shortened but would remain functional following construction of the Preferred Alternative. Temporary impacts during construction may occur in the form of temporary easements for access of modification of center pivots.
Right-of-Way and Relocations	The Preferred Alternative would require the acquisition of approximately 260 acres of new ROW and permanent easements. Most of the ROW acquisition would be minor, generally less than then (10) percent of the total parcel. The Preferred Alternative is anticipated to relocate fifteen (15) houses, eight (8) sheds, four (4) outbuildings, two (2) detached garages, two (2) barns, one (1) silo, one (1) coop, and one (1) animal building. Approximately 100 existing field access drives and residential driveways would be relocated or realigned as needed throughout the Project.
Community Impact Assessment	The Project would have minor, short- and long-term, beneficial impacts on the populations in and near the Community Impact Assessment (CIA) Study Area. Long-term beneficial population and economic impacts would result from expanding US-26 and L62A to a 4-lane facility. Access to community resources and community facilities, cohesion between communities, and quality of life for residents along the Project would benefit from the moderate, long-term impacts. Minor, short-term, adverse impacts on the tax base would occur in and near the CIA Study Area as portions of property parcels are acquired for expansion of US-26 and L62A.
Environmental Justice	Minority and low-income populations were identified in the Study Area based on NDOT's Environmental Justice methodology developed in coordination with FHWA. However, there are no anticipated disproportionately high and adverse human health or environmental effects to these groups, as defined in FHWA Order 6640.23A. No translations or specialized outreach for limited English proficiency persons are required for this Project because a population with limited English proficiency was not identified for the total population affected by the Project. NDOT would provide language assistance if requested.

Resource	Impacts
Transportation	The Project is anticipated to have minor, short-term, adverse impacts on the transportation network during construction. Construction would be completed under traffic, allowing continuous movement through the Study Area. After construction, the Project would have major, long-term, beneficial impacts on the transportation network in the Study Area and in western Nebraska.
Utilities	Utilities would need to be relocated for the Preferred Alternative. The utilities located within the ROW would be responsible for relocating their own facilities at their own cost. Utilities outside of the ROW may be eligible for compensation as determined by NDOT; federal funding would not be used for utility relocations.
Irrigation Canals and Districts	Three (3) canal systems, the Interstate Canal, the Tri-State Canal, and the Minatare Canal cross the study area. The Preferred Alternative would impact all three irrigation canals in some capacity. The Pathfinder Irrigation District and Farmers Irrigation District agree that extending box culverts to accommodate the roadway widening is feasible. The Minatare Mutual Canal and Drainage District is in favor of relocating the Minatare Drain to the south side of the roadway and reconnecting the terminus of the Minatare Canal. A formal agreement between each canal's irrigation district and the Nebraska Department of Transportation would be completed prior to construction.
Historic Properties	The Preferred Alternative would have no effect on Harry's Curve Historic District, the Tri-State Canal system, the Interstate Canal system (SX00-060), or the Minatare Canal and Irrigation system. The Preferred Alternative would not adversely affect the sod house M000-073.
Paleontology	The Preferred Alternative has moderate potential to impact previously unidentified paleontological resources. Resources would be identified during construction, and appropriate coordination protocols with the Highway Salvage Paleontology Program would occur if resources were discovered.
Visual	The Preferred Alternative for the corridor would not result in adverse impacts on the aesthetic value of the area. The intersection of US-26 and L62A would be realigned with CR 75 to the north, resulting in an improvement in aesthetics and alignment with driver expectations.
Section 4(f)	The Preferred Alternative would impact the Sod House, including the removal of a windbreak and acquisition of ROW on the west side of the NRHP site boundary. Approximately 0.0029 acres of the NRHP boundary would be impacted. A Section 4(f) de minimis was applied to this impact. The Preferred Alternative would require a temporary easement of 6,340 square feet from the Harry's Curve Historic District. No work would occur within the boundary of this property; however, the three access drives would be consolidated into one drive. A Section 4(f) de minimis was applied to this impact. The Preferred Alternative would require minor impacts to the Minatare Canal, the Tri-State Canal, and the Interstate Canal to extend box culverts. A Section 4(f) de minimis was applied to these impacts.
Section 6(f)	The 2024 Nebraska Game and Parks Commission review found that there is one (1) Land and Water Conservation Fund Act encumbered property within the Study Area, Minatare City Park. Impacts on Minatare Park would be avoided, and no further action is needed.

Resource	Impacts
Hazardous Materials	Minatare Plaza (aka Harry's Curve or Harry's One Stop) and Tony's Service Station have a medium potential to affect construction of the Preferred Alternative or to cause a materials management or work health and safety concern, or both, related to construction of the Preferred Alternative. Any building structures to be demolished would require inspections for asbestos and there is the potential need for toxic metal/lead paint disposal.
Air Quality	The vehicle miles traveled estimated for the Preferred Alternative is slightly higher than that for the No Build Alternative. The emissions increase would be offset by lower Mobile Source Air Toxic emission rates due to increased speeds.
Noise	In the Study Area, noise levels were measured at seventy-four (74) noise-sensitive receptors representing sixty (60) residences, four receivers were identified to represent businesses along the corridor and one receiver each was placed to represent a church and an agricultural shed. The noise analysis indicates that no receivers analyzed would have a noise impact in the year 2045 Build scenario due to noise levels approaching or exceeding the Noise Abatement Criteria. Six (6) receptors are anticipated to have noise impacts resulting from the build alternative, however, the residential structures represented by these receptors are all planned for relocation or removal as part of the planned construction activities within the build alternative.
Wild and Scenic Rivers	There are no Wild and Scenic Rivers present, and there would be no impacts.
Floodplains	The Preferred Alternative would encroach on five (5) creeks and drains in Scotts Bluff and Morrill County. In the Study Area, Ninemile Creek is located in Scotts Bluff County while Wildhorse Drain, Wildhorse Creek, West Water Creek, and Red Willow Creek are all in Morrill County. The Preferred Alternative is not anticipated to cause greater than one (1) foot of rise in the Base Flood Elevation of any of the floodplains it crosses, nor increase the potential for property loss and hazard to life. Per 23 CFR 650.111, the Preferred Alternative would result in functionally dependent floodplain uses. The Preferred Alternative would not result in a base flood causing significant potential interruption or termination of the transportation facility, which is needed for emergency vehicles or a community's only evacuation route. It also would not result in a significant risk or potential for loss of life or property due to the base flood. This Project would not result in a substantial adverse impact on natural and beneficial floodplain values. A floodplain development permit and certifications would be obtained prior to construction, and the Project would comply with local floodplain regulations.

Resource	Impacts
Water Quality	Impacts on streams, irrigation canals, and drains would be limited to lengthening box culverts or bridges. The Preferred Alternative would not impair waters of Ninemile Creek or Wildhorse Drain. The Preliminary Impact Area would affect twelve (12) wells. Any registered wells within the ROW would be properly decommissioned. NDOT would coordinate with the owners of any wells directly affected by the Preferred Alternative. Temporary construction impacts on water quality are anticipated but would be mitigated through the acquisition of a National Pollutant Discharge Elimination System permit and implementation of an associated Stormwater Pollution Prevention Plan.
Wetlands and Water Resources	The Preferred Alternative would permanently affect approximately 13.452 acres of wetlands and 7,253 linear feet (1.571 acre) of nine (9) waterways and other unnamed channels, drains, canals and irrigation conveyance structures. Construction of the Preferred Alternative would require a CWA Section 404 Individual Permit from the US Army Corps of Engineers. In addition, temporary impacts to wetlands and water resources during construction are anticipated. These impacts would also be included in the Section 404 permitting process.
Threatened and Endangered Species	NDOT determined that the proposed Project may affect, but is not likely to temporarily or permanently adversely affect, the swift fox, black footed ferret, northern long-eared bat, and tricolored bat. Avoidance and minimization measures for the bat species and conservation conditions for the swift fox to prevent an adverse effect would be utilized during construction.
Fish, Wildlife, and Vegetation	The increased distance for wildlife to cross the expanded highway may pose additional challenges. However, the depressed median that would be constructed would serve as a refuge for wildlife attempting to cross the highway. While the expansion increases the crossing distance, the overall connectivity for wildlife movement is expected to be preserved, and the risk of wildlife-vehicle crashes is likely to be maintained or minimized. Vegetation disturbed during Project construction would consist mainly of introduced species found commonly throughout the area. Revegetation in all disturbed areas would use native seed mixes that would improve plant species composition
Cumulative Impacts	No adverse, cumulative impacts are anticipated for any of the resources discussed above due to the Preferred Alternative and past, present, and reasonably foreseeable actions. These projects would be permitted based on federal, state, and local resource requirements prior to construction.

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3062 4.25 Permits and Approvals

3063 Permits and approvals that would be required to implement the Project are listed in **Table 4.14**.

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Table 4.14 Permits and Approvals

Permit or Approval	Granting Agency(ies)	Reason
Clean Water Act Section 404 permit	USACE	Authorization is required for placement of dredged or fill material in wetlands or other waters of the US. An Individual Permit with mitigation is anticipated.
Clean Water Act Section 401 Water Quality Certification	NDEE	This certification is required as part of the Section 404 permit issuance.
National Pollutant Discharge Elimination System (NPDES) general stormwater discharge permit for construction activities, Clean Water Act, including a Stormwater Pollution Prevention Plan (SWPPP)	NDEE	The NPDES permit, required for construction sites greater than 1 acre in size, authorizes (with the implementation of permit-specified mitigation) the discharge of stormwater associated with activities from a construction site. A SWPPP is required under the general permit to help prevent stormwater pollution, and control erosion and sedimentation.
Floodplain Development Permit	Scotts Bluff County	As a participating party in FEMA's National Flood Insurance Program, Scotts Bluff County regulate activities that encroach within their FEMA-designated Zone A 100-year floodplains.
Section 106 consultation, National Historic Preservation Act	Nebraska SHPO	The Nebraska SHPO concurred with the No Adverse Effect finding on June 6, 2024.
Section 4(f) of the US Department of Transportation Act	FHWA	FHWA must approve the use of properties protected by Section 4(f). <i>De minimis</i> uses are expected at Harry's Curve Historic District, Sod House, Minatare Canal, Tri-State Canal, and the Interstate Canal. Section 4(f) documentation and coordination would occur following the public hearing.
Air Quality Construction Permit	NDEE	This permit would be required if a new emission unit (such as a portable batch plant for paving applications) were needed for construction. It has not yet been determined if a portable plant would be needed for the Project. Acquisition of this permit, if needed, would be the responsibility of the roadway construction Contractor.
Section 7 of the Endangered Species Act	USFWS	Section 7 consultation with USFWS must occur regarding potential impacts on threatened and endangered species and their habitat. Evaluation according to the 2023 NDOT Programmatic Agreement for Biological Assessment with USFWS, FHWA, and NGPC has indicated a "May Affect, Not Likely to Adversely Affect" determination for the swift fox, northern long-eared bat, and tri-colored bat with implementation of conservation conditions and avoidance and minimization measures.

Permit or Approval	Granting Agency(ies)	Reason
Nebraska Nongame and Endangered Species Conservation Act	NGPC	Consultation with NGPC must occur regarding potential impacts on state-listed threatened and endangered species and their habitat. Evaluation according to the 2023 NDOT Programmatic Agreement for Biological Assessment with USFWS, FHWA, and NGPC has indicated a "May Affect, Not Likely to Adversely Affect" determination for the swift fox, northern long-eared bat, and tri-colored bat with implementation of conservation conditions and avoidance and minimization measures.

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Chapter 5 Agency and Public Coordination

This chapter summarizes agency coordination and public involvement that have taken place during the development of this EA. NDOT used a variety of methods for providing information to and getting input from stakeholders. A project stakeholder is anyone who has an interest in or may be affected by the proposed Project, either directly or indirectly, including businesses, resource agencies, elected officials, and public officials. **Appendix Q** contains agency coordination including coordination letters, scoping meeting materials, and comments received. **Appendix Q** also contains public meeting materials and comments received from the public as well as stakeholder input.

5.1 Resource Agency Coordination

A resource agency is a division of government with a specific regulatory role and technical expertise that can provide knowledge or assistance. Involving agencies early and throughout development of the Project can help identify potential issues and streamline permitting processes. Agencies have had the opportunity to comment on the Project three times during Project development.

5.1.1 Pre-Application Meeting

A Section 404 pre-application meeting was held on August 26, 2022, via a conference call. The purpose of the meeting was to present to USACE the two preliminary Build Alternatives, their potential impacts, and the potential wetland mitigation sites that NDOT had identified.

USACE was in attendance. During the meeting, NDOT presented a project overview, sharing the wetland details as well as the impact summary for the north and south options. USACE also shared a Jurisdictional Determination update as well as discussed alternatives that were being considered. NDOT shared mitigation options which include the Scottsbluff Wetland Mitigation Bank. Additional topics discussed during the meeting are summarized in the meeting minutes in **Appendix Q**.

5.1.2 Agency Scoping Meeting

An agency scoping meeting was held on February 15, 2023, at NDOT Headquarters in Lincoln, Nebraska. Nine local, state and federal agencies were in attendance. The purpose of the meeting was to present the Project to the agencies and to seek input on the Project purpose and need, preliminary alternatives, potential resources of concern, and schedule. Topics discussed during the meeting are summarized in the meeting minutes in **Appendix Q**.

5.1.3 Jurisdictional Determination Meeting

A Jurisdictional Determination meeting was held on May 24, 2024, via a conference call. The purpose of the meeting was to discuss the AJD map and wetland delineations. USACE was in attendance. USACE discussed updates that needed to be applied to the AJD map to increase wetland boundaries in three locations. Wetlands discussed included S-40, S-42/S-44, S-52/S-54, Tri-State Canal, S-9, S-15 and S-83. Additional topics discussed during the meeting are summarized in the meeting minutes in **Appendix Q**.

5.2 Public and Stakeholder Coordination

The purpose of public involvement during the NEPA process is two-fold: (1) it provides stakeholders with information about the proposed Project and its status; and (2) it allows NDOT to get input on the proposed Project or Project Study Area. Ideally, public involvement builds agreement about a project solution by determining benefits and impacts while addressing concerns that have been identified.

3106 5.2.1 Stakeholder Meeting with City of Minatare

3107 A meeting was held with the City of Minatare on November 3, 2021, at the Minatare Head Start Center.
3108 NDOT, NDOT District 5 representatives, City of Minatare representatives, and the City Engineer were in
3109 attendance. The purpose of the meeting was to update the City of Minatare regarding the project
3110 status, tentative project schedule, relevant issues and concerns from Minatare and NDOT District 5,
3111 and access points through Minatare. During the discussion, concerns were shared regarding the
3112 project schedule and if there is ample time for right-of-way acquisitions, relocations and
3113 condemnations, and utility relocations. The City of Minatare also expressed their concerns regarding
3114 the project impacting new development and new infrastructure including a new water line, a new
3115 sanitary force main, a Dollar General under construction, and the potential construction of a new fuel
3116 station and convenience store. NDOT requested contact information for Dollar General to analyze their
3117 site plan. NDOT also requested plans and files for recent water and sewer improvements. Notes from
3118 the meeting are included in **Appendix Q**.

3119 5.2.2 Irrigation Districts Meeting

3120 A stakeholder meeting was held with the irrigation districts on November 3, 2021, at the Minatare
3121 Head Start Center. NDOT, NDOT District 5 representatives, Farmers Irrigation District, Minatare
3122 Drainage, Minatare Mutual Canal, and Pathfinder Irrigation District were in attendance. The purpose of
3123 the meeting was to update the irrigation districts regarding the project status, tentative project
3124 schedule, Section 106 National Register Eligible Properties, relevant issues and concerns for the
3125 irrigation districts as well as mitigation and timing. The discussion covered the historical summary of
3126 each of the canals, including the Interstate Canal, the Tri-State Canal, Minatare Mutual Canal and
3127 Irrigation. Regarding relevant issues and concerns, NDOT clarified nomenclature regarding the
3128 irrigation facilities and the districts shared concerns regarding the proposed project. The districts
3129 prefer all canal and drainage work to be completed prior to commencement of the roadway
3130 construction. Notes from the meeting are included in **Appendix Q**.

3131 5.2.3 Stakeholder Meeting

3132 NDOT identified 6 stakeholders as having an interest in the Project, including local irrigation districts,
3133 the City of Minatare, Scotts Bluff County Public Works and Morrill County Highway Superintendent.
3134 The list of attendees is included in **Appendix Q**. A stakeholder meeting was held on September 8, 2022,
3135 at Minatare High School, in Minatare, Nebraska. The purpose of the meeting was to present the
3136 Project to the stakeholders, to receive feedback, and to address any concerns that the stakeholders
3137 had. Questions and comments that the stakeholders had are summarized in Appendix Q. Discussions
3138 with stakeholders involved the feasibility of a potential irrigation siphon at a canal conveyance
3139 structure, concerns about the impacts to canal conveyance and a request that Minatare Drain be tied
3140 into Nine Mile Creek to eliminate the remaining drain and its crossing. Notes from the meeting are
3141 included in **Appendix Q**.

3142 5.2.4 Public Meeting

3143 A public information open house meeting was held on September 8, 2022, at Minatare High School, in
3144 Minatare, Nebraska. Approximately 103 people were in attendance. At the meeting, NDOT presented
3145 the purpose and need and the two alternatives developed for the proposed Project, and allowed
3146 feedback from the public. NDOT received 53 comments during the specified comment period (August
3147 17 through September 23, 2022). Several comments were regarding if a super two concept was
3148 considered and questions regarding potential project impacts. The comments and corresponding
3149 responses are summarized in **Table 5.1** and are detailed in the public meeting summary in **Appendix**
3150 **Q**.

3151 Table of public comments and responses (Comments from the same person were merged):

3152 **Table 5.15 Comments and Responses**

Comment	Response Summary
Does not like the "Super Two" suggested by Senator Steve Erdman. Thinks majority of people would like a four lane highway with 70 m.p.h. speed.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
North alternative best logical route to choose. If the south route were chosen, cause hardship for the county road department. Mechanic would close business rather than rebuild.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; ROW impacts unknown. additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
Liked the process. Thinks staff have done through research.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; if share address, can add to project distribution list.
Public meeting informative. State individuals knowledgeable in answering questions. Project needed. Currently has farms that will be affected but project worth the sacrifice.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; ROW impacts unknown. additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
Do not put a 4-lane from Hwy 385 to Minatare. Concerned re: impacts. Wants a Super 2 Highway.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; ROW impacts unknown. additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.

Comment	Response Summary
4-lane will bring more businesses to the area. Hoping project gets going soon. Let District 5 help with informing people; thinks a lot of people didn't hear about project. Pedestrian Refuge by Stonegate for future sidewalks from town to business on north side. Wants Stonegate intersection big enough to handle trucks & equipment turning.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
Concern about impact on the people and environment. Would like to know more about Super Two.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; ROW and environmental impacts unknown. additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
Provide utility companies with road move prints at lease year in advance.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; ROW impacts unknown. additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
Concern about property impacts. This would only be effected by the south route. Impact to crop production when construction occurs.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; ROW impacts unknown. additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
Concern about Hwys 26 and Link 62 travel with farm equipment and winter. Expansion of lanes appreciated.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
Believes 4 lane will help travel safer.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
Requests a Super 2 Way Highway to be put in, instead of a 4 lane.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; ROW impacts unknown. additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.

Comment	Response Summary
Wants consideration for affects like shortened pivots. Wants an alternate route going northeast for Scottsbluff considered. Thinks super 2 highway a better option.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; ROW impacts unknown. additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
Wants 2 lane super highway instead of a 4 lane highway. Concerned regarding ROW impacts to house currently building.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; ROW impacts unknown. additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
Wants 2 lane super highway instead of a 4 lane highway. Concerned regarding ROW impacts to property.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; ROW impacts unknown. additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
Concerns regarding possible ROW impacts to acreage.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; ROW impacts unknown. additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
Believes project great benefit for the City of Minatare. Wonders if going be lights/crossing to the Dollar Store.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
Wants Super 2 Highway instead. Unethical to take homes.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
No build option should be considered; second choice is Super 2.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
Owner of "Harry's" Truck Stop on the north side of the US 26; looking into potentially adding the property to Federal Historical Register. Concern regarding ROW impacts.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.

Comment	Response Summary
Prefer the south way.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
Crosswalk at Dollar General; Speed of vehicles; prefers Super 2 Highway instead of the 4 lane highway.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
Money wasted; wants US 26 from I-25 to Ogallala 4 lanes.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
In favor of 4 lanes – either north route or south.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
North alternative preferred if only 2 options; super 2 a possibility?	Appreciated input. Project in the very early stages of preliminary engineering and plan development; additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
Wants Super 2 Highway rather than a 4 lane; concerned will disrupt homes.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; ROW impacts unknown. additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
Wants cattle underpass.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
Concerned regarding ROW impacts to property; not for project.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; ROW impacts unknown. additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
Wants to be contacted regarding project updates; likes Super 2.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.

Comment	Response Summary
No strong opinion of north or south route. Concerned regarding impacts to irrigation districts.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
Supports project.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
Better communication & notification on meeting times. Decisions need to be made soon.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
For a Super 2 highway. Concerned regarding possible ROW impacts to farms and access.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; ROW impacts unknown. additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
Concerned property at County Road 36 and US HWY 26 a historical homestead. Concerned about ice buildup at location.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
Concerned regarding ROW impacts to property if north side decided. Concern with the increase in traffic and higher speeds. Wants south side or no build option. Ok with “super-two” if no ROW impact to property. Concern regarding drainage.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; ROW impacts unknown. additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
Thank you; looks forward to project moving forward.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
Ensure adequate ingress and egress at Stonegate Road as well as Main Street.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.

Comment	Response Summary
Prefers north side. Ok with impacts to Harry's Truck Stop.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
Wants 62A and Hwy 385 intersection reconfigured to prioritize through traffic. Does not want stop sign on expressway.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
Supports north option. Maybe a 4-lane highway with a center turn lane. A Super 2 highway from Angora to Minatare makes no sense.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
Does not want project built. Concern regarding impacts. Wants super 2 considered. Why all North or all South route instead of older zig-zagging plan. Concern regarding impacts to property and business.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; ROW impacts unknown. additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
Possible historic fountain at Moomaw's corner. Concerned regarding impacts to fountain and Harry's truck stop.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; ROW and environmental impacts unknown. additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
Scotts Bluff County Road Department prefers north side of Highway 26.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
(N/A) (Two emails with no content)	Appreciated input. Project in the very early stages of preliminary engineering and plan development; additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
Thinks 4 lane highway unnecessary; thinks super 2 highway better.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; ROW impacts unknown. additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.

Comment	Response Summary
Wants super 2 highway. Thinks super 2 has less impacts.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; ROW impacts unknown. additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
Thinks Super Highway logical solution.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; ROW impacts unknown. additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
Supports four lane route. Drives route frequently.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
City attorney, including Minatare city limits map. Concern regarding impacts to Harry's truck stop. Concerned regarding north impacts and pedestrians crossing. City of Minatare would like to meet with NDOT.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; additional public meeting planned in future. NDOT District 5 staff met with of Minatare November 10, 2022. Can subscribe for updates on project website; will add to project distribution list.
Does not believe 4 lane highway should be built. Concerned regarding ROW impacts. Wants only to be built with passing lanes.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; ROW impacts unknown. additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.
Thinks expressway does not require a 4 lane highway. Thinks only needs passing lanes. Concerned regarding impacts.	Appreciated input. Project in the very early stages of preliminary engineering and plan development; ROW impacts unknown. additional public meeting planned in future. Committed to working with project stakeholders as advance. Can subscribe for updates on project website; will add to project distribution list.

5.2.5 Irrigation Districts & Stakeholder Meeting

A stakeholder meeting was held on April 19, 2023, at NDOT Headquarters in Lincoln, Nebraska, with NDOT, FHWA, NDOT District 5 representatives, City of Minatare city engineer, Farmers Irrigation District and Minatare Mutual Canal and Drainage District in attendance. The purpose of the meeting was to provide an overview of the project and schedule. NDOT also discussed concerns with the City of Minatare City Engineer, Minatare Mutual Canal and Drainage District and Farmers Irrigation District. The City of Minatare shared that are several utilities within the Minatare corporate limits not currently shown in the topographic survey and Century Link intends to install fiber nearby the project. NDOT will coordinate with Century Link regarding their proposed fiber installation. Minatare Mutual Canal District and NDOT had a discussion regarding the desire to move the Minatare Drain off state right-of-way

with this project. Farmers Irrigation District shared they were creating maps of their underground systems to provide the project team and stated the majority of irrigation districts upstream from their facilities have contracts through the federal government. The design team shared plans to digitize maps provided by the irrigation districts and then send plans back to the irrigation district for confirmation. Notes from the meeting are included in **Appendix Q**.

5.2.6 Irrigation Districts Meeting

An additional stakeholder meeting was held with the irrigation districts on July 28, 2023, at NDOT Headquarters in Lincoln, Nebraska. NDOT, NDOT District 5 representatives, Farmers Irrigation District and Minatare Drainage were in attendance. The purpose of the meeting was to share an update from Farmers Irrigation, an overview of the NDOT relocation process, the feasibility of design alternatives and project next steps. Farmers Irrigation shared they were working to finalize mapping facilities with sizes, depths, and flows, from the Scotts Bluff/Morrill County line to US 385. NDOT shared regarding the relocation process and discussed two examples of past agreements. NDOT also discussed design alternatives for Minatare Drain relocation, the twin Box Culvert near L62A MM 1.52, and culvert sedimentation. Notes from the meeting are included in **Appendix Q**.

5.3 Public Hearing

Following the approval and publication of the Draft EA by FHWA, a public hearing will be held to seek comments on the Draft EA and present the Preferred Alternative. The hearing will also provide a public forum to allow members of the public to comment on the Project. A public notice advertising the hearing time and location will be provided in newspapers and targeted mailers as was done for the public information open house.

The Public Hearing is scheduled for November 21, 2024, at Minatare Elementary School, Minatare, NE from 5:30pm until 7:30. Materials and staff will be available for questions, and a presentation will be given at 6:05pm, with a public forum to be held immediately following.

5.4 Availability of Draft EA for Review

An electronic version of the Draft EA is available for review on the NDOT website at:

- <https://dot.nebraska.gov/projects/environment/pubs/project-docs/>

Hard copies of the Draft EA are available for review at the following locations:

- NDOT Headquarters (1500 Nebraska Parkway, Lincoln, NE)
- FHWA Nebraska Division (100 Centennial Mall N., Lincoln, NE)
- NDOT District 5 Headquarters (140375 Rundell Rd, Gering, NE)
- Minatare Public Library (309 Main St, Minatare, NE)

Chapter 6 Commitments and Mitigation

This chapter summarizes the commitments and mitigation measures identified in **Chapter 4** of this Environmental Assessment. The mitigation measures include resource-specific strategies and special provisions that have been identified through the NEPA process to address potential environmental impacts. These commitments are designed to avoid, minimize, or compensate for the effects of the proposed project on the environment.

6.1 Land Use

No mitigation with respect to land use will be required for the project.

6.2 Agriculture and Farmland

NDOT would compensate the landowners and/or current leaseholders for impacts on the center pivot irrigation systems. Compensation would include, but not be limited to, relocating the center pivot system, modifying the center pivot equipment, and/or relocating the well supplying the center pivot system. NDOT would coordinate with the landowner during the ROW process. (NDOT)

6.3 Right-of-Way and Relocations

ROW acquisitions, types, and amounts are based on conceptual design. Impacts on ROW and properties would be further refined and minimized to the extent possible during the final design phase of the Project. (NDOT)

Access to adjacent properties would be maintained throughout construction. Access restrictions would be coordinated with the property owner prior to the restriction. (NDOT, Contractor)

Property rights acquisition would be conducted by paying fair market value for the property rights and damages that may occur. ROW acquisition would be conducted in conformance with the Uniform Act (42 USC 4601 et seq.), Title VI of the Civil Rights Act of 1964, and the Nebraska Relocation Assistance Act (Nebraska Revised Statutes Section 76-1214 et seq.). (NDOT)

6.4 Community Cohesion and Community Facilities

The design and construction phases of the project would incorporate and follow the NDOT Roadway Design Manual's standards related to work zone traffic control plans, NDOT's Standard Specifications for Highway Construction, and adherence to all federal, state, and local laws and regulations.

Construction activities would be coordinated with annual local events in an effort to minimize traffic delays and travel pattern disruptions, where possible. (NDOT Design)

Efforts would be made during the design phase to minimize necessary property acquisition and relocations, where feasible. Property rights acquisition would be conducted by paying fair market value for the property rights and damages that may occur. Right-of-way acquisition would be conducted in conformance with the Uniform Act (42 USC 4601 et seq.), Title VI of the Civil Rights Act of 1964, and the Nebraska Relocation Assistance Act (Nebraska Revised Statutes Section 76-1214 et seq.). The design process will also take into consideration the community concern related to the need for pedestrian crossing facilities in the City of Minatare to maintain existing community connectivity and access to the City's only grocery store on the north side of US-26. Elements for enhancing non-motorized safety at this location would be considered and incorporated, where feasible. (NDOT Design)

3234 6.5 Environmental Justice

3235 The contractor shall maintain access for both vehicles and pedestrians during the construction phase
3236 to facilitate travel across US-26 to and from Minatare to the Dollar General store located at 130910
3237 Stonegate Rd, Minatare, NE 69356. (Contractor)

3238 The project design shall explore the creation of pedestrian refuge areas within the US-26 raised
3239 median while crossing the highway. (NDOT Design)

3240 NDOT shall ensure the businesses and organizations, identified in the following bullet points, are
3241 included on the distribution list for the pending project Public Hearing. (NDOT Public Involvement)

- 3242 • Assembly of God Church, located at 907 Main St, Minatare, NE 69356
- 3243 • Minatare Park, located at 909 Main St, Minatare, NE 69356
- 3244 • Minatare High School Football Field, located at 1107 7th St, Minatare, NE 69356
- 3245 • Minatare High School Track, located at 1107 7th St, Minatare, NE 69356
- 3246 • Dollar General, located at 130910 Stonegate Rd, Minatare, NE 69356

3247 6.6 Transportation

3248 For county roadway realignments, county roads adjacent to the closed roadway would not be closed
3249 at the same time and would remain open to traffic. (NDOT, Contractor)

3250 Access to properties may be limited at times throughout construction but would remain open. The
3251 Contractor would coordinate with property owners to maintain access to fields and residences.
3252 (Contractor)

3253 Any contractor involved in the project shall file a 7460-1 Form with the FAA for all structures or
3254 equipment over 200' tall, or that break a 100:1 slope from a public-use airport. This includes any
3255 trucks, cranes, or any equipment used on the project. A 7460-1 form would need to be filed for each
3256 new structure that may be part of this project, like bridges or overpasses or if an existing structure's
3257 elevation would change. (Contractor)

3258 6.7 Utilities

3259 Impacts on utilities are not avoidable because several utilities are located near or within the existing
3260 ROW. The Contractor should follow the guidelines of NDOT's Utility Accommodation Policy (NDOT
3261 2024). It is NDOT's responsibility to notify utility companies of the need for relocation during the
3262 design stage of the Project. The NDOT Utility Section would coordinate utility agreements with the
3263 utility companies prior to construction. It is the Contractor's responsibility to notify utility companies of
3264 relocation needs during the construction phase of the Project for utilities that were not relocated
3265 before construction. (NDOT, Utility Provider(s))

3266 If utility relocation or replacement is required in a later phase of the Project, a re-evaluation would be
3267 required if (1) federal funds will be used for the utility work, or (2) the Project construction contractor
3268 will be responsible for the work.

3269 If this utility work is identified during final design, NDOT would initiate the re-evaluation prior to Project
3270 letting. If the work is identified during construction, NDOT would initiate the re-evaluation prior to
3271 commencing utility work. (NDOT Environmental, NDOT District)

3272 If either one of the above two conditions does not apply, later relocation or replacement of utilities
3273 would be coordinated through NDOT and the Contractor per NDOT's Standard Specifications for

3274 Highway Construction, Subsection 105.06. Any environmental permits required for these utility
3275 relocations or replacements would be the responsibility of the utility. (NDOT District, Utility Provider(s))

3276 6.8 Irrigation Canals and Districts

3277 Mitigation measures would be added once adequate coordination with the districts has been
3278 completed.

3279 6.9 Historic Properties

3280 Five Sensitive Areas have been identified along this project. These Sensitive Area(s) shall be indicated
3281 on project plans. (Design)

3282 Five Sensitive Areas have been identified along this project.

3283 6) Harry's Curve, US-26, MM 33.19 – 33.38, north side (STA 113+27 R to 123+00 L). No grading
3284 or project activities, including but not limited to, working, staging, borrowing, stockpiling, or
3285 storing material and/or equipment, shall occur beyond the temporary easement. (Contractor)

3286 7) Sod House, US-26, MM 1.19 – 1.21, south side & an area along CR 77 (see stationing) (STA
3287 635+00 – 636+21 R & STA 5601+00 – 5602+65 R). No grading or project activities, including
3288 but not limited to, working, staging, borrowing, stockpiling, or storing material and/or
3289 equipment, shall occur beyond the newly acquired ROW. (Contractor)

3290 8) Tri-State Canal (3 locations), L62A, MM 5.37, north & south side (STA 854+77 L&R); L62A, MM
3291 5.81, north & south side (STA 879+74 L&R); L62A, MM 6.13, north & south side (STA 894+36
3292 L&R). No grading or project activities, including but not limited to, working, staging, borrowing,
3293 stockpiling, or storing material and/or equipment, shall occur beyond the temporary or
3294 permanent easement. (Contractor)

3295 9) Interstate Canal, L62A, MM 7.43, north & south side (STA 963+52 L&R). No grading or project
3296 activities, including but not limited to, working, staging, borrowing, stockpiling, or storing
3297 material and/or equipment, shall occur beyond the temporary or permanent easement.
3298 (Contractor)

3299 10) Minatare Canal, US-26, MM 34.64, north side (STA 191+57 R). No grading or project activities,
3300 including but not limited to, working, staging, borrowing, stockpiling, or storing material and/or
3301 equipment, shall occur beyond the temporary or permanent easement required to move the
3302 end point of the canal north. (Contractor)

3303 6.10 Paleontology

3304 For paleontological resources, additional field surveys and test excavations would be conducted prior
3305 to construction by the HSPP. The HSPP would be informed throughout the planning process with
3306 regard to alignment choice, grading details, and borrow pit locations. On-site monitoring and the fossil
3307 mitigation plan would be implemented throughout all phases of construction. (NDOT, Contractor)

3308 In the event of a discovery of paleontological materials during construction, NDOT Standard
3309 Specifications for Highway Construction, Subsection 107.10 (2017, pg. 64) states, "The Engineer
3310 should be immediately notified when any such articles are uncovered, and the Contractor should
3311 immediately suspend operations in the area involved until such time that arrangements are made for
3312 their removal and preservation." (Contractor)

6.11 Visual Effects

No mitigation measures for visual and aesthetic impacts will be required for the project.

6.12 Section 4(f) Properties

The contractor shall not complete work, stage, stockpile or store materials within the boundaries of the following Section 4(f) properties: Minatare Elementary School, Minatare High School, and Minatare City Park. If it is determined that temporary or permanent right-of-way is required from or access is restricted to a Section 4(f) property, coordination shall occur with NDOT Environmental. (Contractor)

The following properties shall be marked on the project plans as sensitive areas: Minatare Elementary School, Minatare High School, and Minatare City Park. (Design)

6.13 Section 6(f) Properties

No mitigation measures for Section 6(f) properties will be required for the project.

6.14 Hazardous Materials

The following commitments are needed for the preferred alternative. It should be noted that the specific “Contractor Commitments” are those that would be included in the contract documents and provide more basic information for field personnel. All commitments below are included in Chapter 6.

Unexpected Waste:

If contaminated soils/groundwater or unexpected wastes are discovered, The Contractor shall stop all work within the immediate area. The Contractor shall secure the area of the discovery and notify the Highway Project Manager (HPM). The Contractor shall not re-enter the discovery area until notified by the HPM. At the time of discovery, the HPM and Contractor shall utilize the NDOT Unexpected Waste Action Plan (UWAP) to coordinate appropriate actions. The actions to be carried out by the HPM are (but not limited to): verification that the Contractor has suspended construction activities in the area of the discovery, contact the Roadside Development & Compliance Unit (RDCU) hazmat representative and make an entry into AASHTOware Project that an unexpected waste discovery was made. The HPM shall then utilize the UWAP Notification Form (NDOT Form 691) to properly document the extent and type of waste. The HPM will ensure that proper disposal of the waste and any required health and safety mitigation is implemented by the Contractor. The Contractor is required by NDOT's Standard Specification section 107.11 (Hazardous Material Discoveries) to handle and dispose of regulated material in accordance with applicable laws.

Contractor Commitment: If contaminated soils/groundwater or unexpected wastes are discovered, The Contractor shall stop all work within the immediate area. The Contractor shall limit access to authorized personnel within the area of the discovery and notify the Highway Project Manager (HPM). The Contractor shall not re-enter the discovery area until notified by the HPM. At the time of discovery, the HPM and Contractor shall utilize the NDOT Unexpected Waste Action Plan (UWAP) to coordinate appropriate actions. The Contractor is required by NDOT's Standard Specification section 107.11 (Hazardous Material Discoveries) to handle and dispose of regulated material in accordance with applicable laws.

Encountering Contamination:

There is a medium potential for petroleum contamination to be present in the soils/groundwater at project Minatare-US-385 (CN 51521), as well as at least one confirmed UST that will require

excavation. Two locations identified below will have a medium potential for contamination to impact the project:

Minatare Plaza: North side of US-26 from MM 33.30 to 33.40. Potential to encounter existing petroleum contamination in active monitoring area during grading.

Former Tony's Service Station: NE corner of US-26 and L62A intersection from L62A MM 0.15 to 0.20. Existence of at least one underground storage tank in the SW corner of this parcel was confirmed with ground penetrating radar. Potential for a second tank exists adjacent to the north of the first tank.

The Contractor shall be aware of the possibility of encountering contamination in this area during construction activities and look for signs such as odor and/or discolored soil. The Highway Project Manager shall be notified seven days prior to when construction is expected to begin in the suspect area. If contamination is discovered, all work in the immediate area shall be stopped until the Nebraska Department of Environment & Energy (NDEE) and NDOT RDCU hazmat representative are notified, and a materials management plan has been developed and approved. The Contractor shall manage the waste in accordance with Title 128, Nebraska Hazardous Waste Regulations and/or Title 132 Integrated Solid Waste Management Regulations. The Contractor is required by Standard Specification Section 107, Legal Relations and Responsibilities To The Public, to handle and dispose of contaminated material in accordance with applicable laws.

A licensed contractor will be required to remove the tank/s at the former Tony's Service Station location. The licensed contractor shall provide Closure Assessment Report (CAR) services, including excavation pit field samples, for submittal to the Nebraska State Fire Marshal. The CAR will be conducted in accordance with NDEE regulations detailed in Petroleum Underground Storage Tanks: Closure Assessment Sample Collection and Over-Excavation, Revised September 2022.

Remediation of hazardous materials at the Minatare Plaza located between MM 33.30 and 33.40 on US-26, if any, will be paid for as extra work according to Subsection 104.02, paragraph 5 and Subsection 109.05 of the Standard Specifications. Removal of the tank(s) at the former Tony's Service Station located at MM 0.18 on L62A will be paid for as "Clear Tract" in accordance with the Special Provision titled "Clear Tract at MM 0.18 on L62A".

Monitoring/Remediation Wells:

There are one or more monitoring wells and/or soil vapor extraction (SVE) wells at Minatare Plaza located on US-26 between MM 33.30 to 33.40 at the Minatare Plaza facility. The monitoring/SVE wells will be located and marked by the Highway Project Manager (HPM) in the field. Construction activities near the wells will be performed as to avoid damage to the wells. In the event that a monitoring/SVE well is damaged, the Contractor shall notify the HPM immediately. The NDOT HPM will coordinate with the NDOT RDCU hazmat representative for guidance regarding remediation of the damage. The Contractor shall remediate any damaged monitoring/SVE wells as directed by the Engineer. The HPM will upload documentation of the Contractor's remediation to OnBase (NDOT Dist. Environmental, description: monitoring well remediation).

Contractor Commitment: The Contractor shall avoid damaging any monitoring or SVE well as marked in plans or in the field. In the event that a monitoring well/SVE well is damaged, the Contractor shall stop work at that location and notify the Highway Project Manager immediately. The Contractor shall comply with the Engineer's direction concerning remediation of damaged monitoring/SVE wells and shall not continue construction activities in the vicinity of the damaged well until notified by the Engineer.

3397 **Asbestos:**

3398 The Contractor shall survey any building structures acquired for demolition for the presence or
3399 absence of asbestos containing material (ACM). The inspector must be certified in accordance with
3400 the Nebraska Department of Health and Human Services (DHHS) Nebraska Asbestos Control
3401 Program Regulations, Title 178. A list of Licensed Asbestos Inspectors can be found at:
3402 <http://dhhs.ne.gov/Pages/Asbestos.aspx>. Documentation of the survey shall be provided to the
3403 Highway Project Manager by the Contractor prior to structure demolition. The Highway Project
3404 Manager will record survey documentation in OnBase.

3405 If ACM is found to be present, removal and disposal of the ACM shall be in accordance with DHHS
3406 Nebraska Asbestos Control Program Regulations, Title 178 and will occur prior to any bridge
3407 demolition or renovation activities. The Contractor shall develop a removal and disposal plan in
3408 coordination with a licensed asbestos removal contractor and NDOT. A list of licensed asbestos
3409 removal contractors can be found at: <http://dhhs.ne.gov/Pages/Asbestos.aspx>

3410 Contractor Commitment: The Contractor shall survey any building structures acquired for demolition
3411 for the presence or absence of asbestos containing material (ACM). The Contractor's inspector must
3412 be certified in accordance with the Nebraska Department of Health and Human Services (DHHS)
3413 Nebraska Asbestos Control Program Regulations, Title 178. If ACM is found to be present, the
3414 Contractor shall develop a removal and disposal plan in coordination with a licensed asbestos
3415 removal contractor.

3416 **Building Removal:**

3417 (Standard Specifications for Highway Construction 2017 Section 203.01; paragraph 4.)

3418 a. It shall be the responsibility of the Contractor to determine if any of the buildings to be
3419 removed have materials containing asbestos. If it is determined that some or all of the
3420 buildings contain asbestos, the asbestos shall be removed prior to the building removal. All
3421 asbestos shall be removed in accordance with State of Nebraska Health and Human Services
3422 Department, Environmental Protection Agency, and the Nebraska Department of Environment
3423 and Energy regulations. A Contractor trained and certified in asbestos handling shall perform
3424 all asbestos removal and handling operations.

3425 b. The work of determining if any of the buildings contain asbestos shall be considered
3426 subsidiary to the item "Remove Building at ____."

3427 c. The work of asbestos abatement will be paid for as "Extra Work" as described in Subsection
3428 104.04.

3429 Contractor Commitment: The Contractor shall submit a written National Emissions Standards for
3430 Hazardous Air Pollutants (NESHAP) notification to the Nebraska Department of Environment and
3431 Energy (NDEE) and a Department of Health and Human Services (DHHS) Form 5 at least 10 business
3432 days prior to demolition/renovation. The 10-day clock starts when the NESHAP and Form 5
3433 notifications are post marked, hand delivered, or picked up by a commercial delivery service. Faxing
3434 documents is prohibited. The Contractor shall provide the Highway Project Manager copies of the
3435 notifications and their submittal date prior to demolition/renovation activities. The Highway Project
3436 Manager will upload NDEE NESHAP and DHHS Form 5 documentation to OnBase.

3437 **Toxic Metal-Based Paint/Lead-Based Paint:**

3438 There is potential for lead or toxic metal-based paint to be found on the structures to be demolished or
3439 repaired. Regardless of toxicity, extreme caution shall be taken to minimize the amount of painted
3440 material or debris from causing or threatening to cause pollution of the air, land, and waters of the
3441 State. The Contractor shall create an implementation plan to dispose of paint waste in accordance
3442 with NDOT's Standard Specification for Highway Construction Section 732 (Lead-based Paint

3443 Removal) and Title 128 Nebraska Hazardous Waste Regulations. The Contractors implementation
3444 plan shall be provided to the HPM and documented in OnBase.

3445 6.15 Air Quality

3446 No mitigation measures for air quality will be required for the project.

3447 6.16 Noise

3448 Exhaust and muffler systems on construction equipment would be in good working order.
3449 Construction equipment would be maintained on a regular basis, and equipment may be subject to
3450 inspection by the construction project manager to ensure maintenance. (Contractor, NDOT Project
3451 Manager [PM])

3452 The Contractor would locate noise-emitting stationary equipment (for example, compressors, and
3453 generators) to avoid unnecessary impacts on residents and businesses. (Contractor, NDOT PM)

3454 Noise impacts are based on conceptual design. Additional design refinement and coordination
3455 regarding noise abatement would occur during the final design stages per NDOT's Noise Analysis and
3456 Abatement Policy. (NDOT Environmental)

3457 6.17 Wild and Scenic Rivers

3458 No mitigation measures for wild and scenic rivers will be required for the project.

3459 6.18 Floodplains

3460 The US-26 and L62A roadway and bridges would be designed to adequately convey flood flows along
3461 existing drainage patterns. Construction of the Project would have floodplain encroachments, but
3462 Project impacts would be certified that federal, state, and local floodplain regulations are met, and a
3463 Floodplain Development Permit would be obtained from the appropriate jurisdictions prior to
3464 construction. All conditions of the permit would be adhered to during construction. (NDOT
3465 Environmental, Contractor)

3466 6.19 Water Quality

3467 NDOT would coordinate with the owners of wells that would be directly impacted by the Project during
3468 the ROW process. If the well is actively used, NDOT would have the well relocated and replaced. If a
3469 well is not currently in use, the Contractor would decommission the well, as needed, during
3470 construction in accordance with Nebraska Administrative Code Title 178, Chapter 13. (NDOT Right-of-
3471 Way, Contractor)

3472 A licensed Water Well Contractor will decommission any wells in accordance with the Department of
3473 Health and Human Services (DHHS) regulations under Nebraska Administrative Code Title 178, Water
3474 Well Standards, Chapter 12, Water Well Construction, Pump Installation, and Water Well
3475 Decommissioning Standards (Nebraska DHHS 2005). (NDOT, Contractor)

3476 This project requires a Construction Stormwater Permit and that a Storm Water Pollution Prevention
3477 Plan (SWPPP) be maintained for the project. The Contractor shall understand the terms and
3478 conditions of the general National Pollutant Discharge Elimination System (NPDES) permit that
3479 authorizes the storm water discharges associated with activity from the construction site. For
3480 reference, the general permit is posted on the Department's website. (Contractor)

3481 Manure has not been specified for this project, however, existing soil material from former feedlot
3482 pens may be encountered during grading operations. Stockpiled material from the locations identified
3483 in the Special Provision will be utilized on the project as prescribed by the Manure Topdressing Special
3484 Provision. (NDOT Roadway Design)

3485 6.20 Wetlands and Water Resources

3486 All wetlands within the Project limits that are not permitted for impact would be marked on the Project
3487 plans and the E Sheet as avoidance areas. (NDOT Roadway Design, NDOT Environmental)

3488 The Contractor shall not stage, store, waste, or stockpile materials and equipment in undisturbed
3489 locations or in known/potential wetlands and/or known/potential streams that exhibit a clear “bed and
3490 Bank” channel. Potential wetland areas consist of any area that is known to pond water, swampy
3491 areas, or areas supporting known wetland vegetation or areas where there is a distinct difference in
3492 vegetation (at lower elevations) from the surrounding upland areas. (Contractor)

3493 The Project will require an Individual Permit for impacts to waters of the US. The Contractor shall
3494 adhere to all permit conditions, including regional and general conditions, during construction. All
3495 wetlands/waters within the project area that are not permitted for impacts shall be marked on the
3496 project plan aerial sheets for the Contractor as avoidance areas. (NDOT Design, NDOT Environmental,
3497 Contractor)

3498 Avoidance and minimization measures would be further refined during the preliminary and final design
3499 processes as appropriate. The design would comply with the policy of Executive Order 11990 (42 FR
3500 26961) regarding impacts on wetlands. Additionally, any project using federal transportation funds
3501 must adhere to the net gain of wetland policy (23 CFR 777.11(g)), where there would be no net loss of
3502 wetlands across the program in a given year. (NDOT Roadway Design, NDOT Environmental)

3503 6.21 Threatened and Endangered Species

3504 **A-1 Changes in Project Scope.** If there is a change in the project scope, the project limits, or
3505 environmental commitments, the Highway Project Manager shall coordinate with the NDOT
3506 Environmental Section to evaluate potential impacts prior to implementation. Environmental
3507 commitments are not subject to change without prior written approval from the NDOT Environmental
3508 Section. (*District Construction*)

3509 **A-2 Conservation Conditions.** Conservation conditions are to be fully implemented within the project
3510 limits as shown on the plans. (*District Construction, Contractor*)

3511 **A-3 Early Construction Starts.** Contractor request for early construction starts must be coordinated
3512 by the Project Construction Engineer with NDOT Environmental for approval of early start to ensure
3513 avoidance of listed species sensitive lifecycle timeframes. Work in these timeframes could require
3514 consultation with the USFWS and NGPC. (*District Construction, Contractor*)

3515 **A-4 T&E Species.** If federal or state listed species are observed during construction, the Highway
3516 Project Manager will contact NDOT Environmental Section to determine if additional species
3517 conservation conditions would be required prior to continuing project construction activities. Contact
3518 NDOT Environmental for a reference of federal and state listed species. Coordination with the USFWS
3519 and NGPC may be required depending on the species identified and construction activities. (*NDOT
3520 Environmental, District Construction, Contractor*)

3521 **A-5 Refueling.** Refueling will be conducted outside of those sensitive areas identified on the plans, in
3522 the contract, and/or marked in the field. (*Contractor*)

A-6 Restricted Activities. The following project activities shall, to the extent possible, be restricted to between the beginning and ending points (stationing, reference posts, mile markers, and/or section-township-range references) of the project, within the right-of-way designated on the project plans: borrow sites, burn sites, construction debris waste disposal areas, concrete and asphalt plants, haul roads, stockpiling areas, staging areas, and material storage sites.

For activities outside the project limits, the contractor should refer to the Nebraska Game and Park Commission website to determine which species ranges occur within the off-site area. The contractor should plan accordingly for any species surveys that may be required to approve the use of a borrow site, or other off-site activities. The contractor should review the T&E Matrix agreement (on NDOT's website), where species survey protocols can be found, to estimate the level of effort and timing requirements for surveys.

Any project related activities that occur outside of the project limits must be environmentally cleared/permitted with the Nebraska Game and Parks Commission as well as any other appropriate agencies by the contractor and those clearances/permits submitted to the District Construction Project Manager prior to the start of the above listed project activities. The contractor shall submit information such as an aerial photo showing the proposed activity site, a soil survey map with the location of the site, a plan-sheet or drawing showing the location and dimensions of the activity site, a minimum of 4 different ground photos showing the existing conditions at the proposed activity site, depth to ground water and depth of pit, and the "Platte River depletion status" of the site. The contractor must receive notice of acceptance from NDOT environmental, prior to starting the above listed project activities. These project activities cannot adversely affect state and/or federally listed species or designated critical habitat. (*NDOT Environmental, District Construction, Contractor*).

A-7 Waste/Debris. Construction waste/debris will be disposed of in areas or a manner which will not adversely affect state and/or federally listed species and/or designated critical habitat. (*Contractor*)

A-8 Post Construction Erosion Control. Erosion control activities carried out by NDOT Maintenance or others after construction is complete, but prior to project close-out, shall adhere to any standard conservation conditions for species designated for the project limits during construction. (*NDOT Maintenance, District Construction, Contractor*)

S-1 Fencing. When project-related fence construction/relocation work is required to be done prior to the start of construction, and if the fence work occurs outside urban or cropland areas that are not within swift fox range, then fencing can be installed/relocated at any time using the following criteria:

- c. the fencing is temporary in nature and/or consists of only hand-driven posts
- d. the work does not compact the soils (ex. through the use of heavy equipment) or cause soil disturbance beyond the driving of posts

If the fencing work cannot meet these criteria, then NDOT Right-of-Way Division shall coordinate with NDOT Environmental Section prior to the completion of Right-of-way negotiations.

S-2 Platte River Depletions To the maximum extent practical, efforts will be made to design the project and select borrow sites to prevent depletions to the Platte River. If there is any potential to create a depletion, NDOT (during design) and the Contractor (for borrow sites) shall follow the current Platte River depletion protocols for coordination, minimization, and mitigation. In general, the following are considered de minimis depletions, but may still require agency coordination; a project which: a) creates an annual depletion less than 0.1 acre feet, b) creates a detention basin that detains water for less than 72 hours, c) diverted water that will be returned to its natural basin within 30 days, or d) creates a one-time depletion of less than 10 acre feet. (*NDOT Roadway Design, Contractor*)

S-3 Revegetation. All permanent seeding and plantings (excluding managed landscaped areas) shall use species and composition native to the project vicinity as shown in the Plan for the Roadside

Environment. However, within the first 16 feet of the road shoulder or within high erosion prone locations, tall fescue or perennial ryegrass may be used at minimal rates to provide quick groundcover to prevent erosion, unless state or federally listed threatened or endangered plants were identified in the project area during surveys. If listed **plants** were identified, any seed mix requirements identified during resource agency consultations shall be used for the project. (*NDOT Environmental*)

S-4 Sensitive Areas. Environmentally Sensitive Areas will be marked on the plans, in the field, or in the contract by NDOT Environmental for avoidance. (*NDOT Environmental, NDOT Roadway Design, District Construction*)

S-5 Species Surveys. If species surveys are required during the construction phase of the project (including pre-construction surveys), results will be sent by NDOT Environmental Section to the USFWS, NGPC, and if applicable the USACE. (*NDOT Environmental, District Construction*)

S-6 Permanent LED Lighting (NDOT Design Commitment): Only LED roadway luminaries listed on the NDOT "Nebraska Qualified Material Vendors List" will be considered for use on Nebraska highway lighting projects. Proposed changes to the following LED lighting requirements would require resource agency (USFWS and/or NGPC) coordination and approval prior to installation:

- Nominal CCT – 3000 +/- 300 K
- BUG Ratings – Maximum nominal Backlight (N/A), Uplight (0), Glare (N/A)
- Lumen Output – N/A

Any proposed changes to the listed requirement(s) must be presented to the NDOT Environmental Section for Agency Coordination and approval.

Swift Fox:

SF-1 Two weeks prior to the start of construction, a qualified biologist shall survey the environmental study area according to protocol to determine if active swift fox den sites are present. If an active den with young is located and it is outside the project limits, then a buffer zone shall be established around the den and all construction activities shall avoid the buffer until the den is abandoned. If an occupied den with or without young is identified within the project limits or staging areas, NDOT shall immediately coordinate with the NGPC to determine how to proceed. A buffer zone shall be established around the den and all construction activities shall avoid the buffer until NDOT gives approval to enter the buffer area. Between April 1 and August 31, the buffer zone shall be 250 yards around the active den site; other times of the year, the buffer shall be 100 yards around the active den site. (*NDOT Environmental*)

SF-2 Fencing shall be designed for wildlife safety and wildlife friendly passage with a bottom wire at least 16" from the ground. If different fencing design is required for safety or access control, additional coordination with resource agencies shall be required. (*NDOT Design, NDOT Environmental*)

SF-3 Fence posts shall not be placed within potential den sites that appear to have animal activity. If fence posts cannot avoid potential den sites that appear to have animal activity, NDOT Environmental will be notified and will re-initiate consultation with resource agencies. Work will not commence until agency concurrence is received. (*Contractor*)

SF-A NDOT shall coordinate with the NGPC regarding the installation of artificial escape dens in suitable locations along the L62A corridor. Swift Fox Escape Den Installation protocols shall be utilized. (*NDOT Environmental, NDOT Design*)

Northern long-eared Bat / Tri-colored Bat

NLEB / TCB -3: All phases and aspects of the project shall be modified, to the extent practicable, to avoid tree removal in excess of what is required to implement the project safely. Tree removal shall be

3613 limited to removals specified in the project plans, which will be clearly marked in the field. (Design,
3614 Contractor)

3615 **NLEB / TCB CM-2:** No removal of suitable trees or roosting structures between May 15 and July 31
3616 (maternity roosting season) (Contractor)

3617 6.22 Fish, Wildlife, and Vegetation

3618 In accordance with NDOT's Avian Protection Plan (NDOT 2018), NDOT would make every effort to
3619 schedule clearing and grubbing, large tree removal, or other work activities that may impact migratory
3620 bird nests, outside of the primary Nebraska nesting season of April 1 to September 1. If any of the
3621 aforementioned activities would be required during this period, a nesting survey would be completed
3622 by a qualified biologist prior to work commencing. Specific to bridge and culvert work, the required
3623 survey period extends through September 30. (NDOT Environmental, Contractor)

3624 In efforts to maintain aquatic wildlife connectivity, the Preferred Alternative may use temporary
3625 structures during construction. The use of temporary structures would facilitate aquatic life
3626 movements during construction in accordance with CWA Section 404 Nationwide Permit General
3627 Condition No. 2: Aquatic Life Movements. Proposed structures would be constructed at appropriate
3628 sizes and elevations so as not to impede aquatic life movements. (NDOT Environmental, Contractor)

3629 To avoid impacts on fish and other aquatic organisms, an erosion control plan and a SWPPP would be
3630 developed and implemented. In accordance with the SWPPP and the requirements in the General
3631 Construction Storm Water Permit, NDOT would inspect all erosion and sediment control BMPs every
3632 14 days and after every precipitation event of 0.5 inch or greater. Any BMP adjustments and repairs
3633 would occur within 7 days of the inspection to ensure that water quality is being protected to the
3634 maximum extent practicable. The SWPPP would be maintained, and discharge points would be
3635 monitored by NDOT until the site is 70 percent revegetated. (NDOT Environmental, Contractor)

3636 According to NDOT's Standard Specifications for Highway Construction, Subsection 202.01(2)(b), the
3637 Contractor would be responsible for disposal of all vegetation for NDOT ROW and the limits of
3638 construction. Disturbed areas would be seeded in accordance with NDOT's Standard Specifications,
3639 Subsection 803.02. Revegetation of the area following construction would occur using seed mixtures
3640 containing native grasses, legumes, and forbs to appropriately landscape the region, as specified in
3641 NDOT's Plan for the Roadside Environment for a rural highway corridor (NDOT 2008). (NDOT
3642 Environmental, Contractor)

3643 As stated in NDOT's Standard Specifications for Highway Construction, Subsection 107.12, "The
3644 Contractor should prevent the transfer of invasive plant and animal species and should wash all
3645 equipment at the Contractor's storage facility prior to entering the construction site. The Contractor
3646 should inspect all construction equipment and remove all attached vegetation and animal prior to
3647 leaving the construction site." (NDOT Environmental, Contractor)

3648 Appropriate mulching materials, as defined in NDOT's Standard Specifications for Highway
3649 Construction, Subsection 806.02(1), should be applied and should not include brome hay, rushes,
3650 cattails, reed canary grass, wide-bladed grass, or invasive species. All sod, if required, to be applied to
3651 the Project should be free from noxious weeds and all other weeds. (NDOT Environmental, Contractor)

3652 6.23 Cumulative Impacts

3653 No mitigation with respect to cumulative impacts will be required for the project.