DRAFT

Draft Environmental Assessment

150th Street Road Improvement Project

Verona Township, Faribault County, MN

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FEMA

List of Acronyms, Chemical Formulas, and Abbreviations

ACS American Community Survey
APE Area of Potential Effect
ATV All-Terrain Vehicle
BENCO Blue Earth Nicollet Faribault Coop
BMPs Best Management Practices
BWSR Board of Water and Soil Resources
CAA Clean Air Act
CBRS Coastal Barrier Resources System
CEQ Council on Environmental Quality
CERCLA Comprehensive Environmental Response, Compensation, and Liability Act
C.F.R. Code of Federal Regulations
CFS Cubic Feet per Second
CO Carbon Monoxide
CWA Clean Water Act
CZMA Coastal Zone Management Act
DHS Department of Homeland Security
DNR Department of Natural Resources
EA Environmental Assessment
EFH Essential Fish Habitat
EJ Environmental Justice
EO Executive Order
EPA Environmental Protection Agency
ESA Endangered Species Act
FEMA Federal Emergency Management Agency
FIRM Flood Insurance Rate Map
FONSI Finding of No Significant Impact
HSEM Homeland Security and Emergency Management
IPaC Information for Planning and Consultation
MBTA Migratory Bird Treaty Act
MDH Minnesota Department of Health
MN Minnesota
Minn. R. Minnesota Rules
MnDOT Minnesota Department of Transportation
MNOSHA Minnesota Occupational Safety and Health Administration
MPCA Minnesota Pollution Control Agency
NAVD North American Vertical Datum
NAAQS National Ambient Air Quality Standards
NEPA National Environmental Policy Act
NHPA National Historic Preservation Act
NO_2 Nitrogen Dioxide
NO_x Nitrogen Oxides
NOAA National Oceanic and Atmospheric Administration
NPDES National Pollution Discharge Elimination System
NPS National Park Service
NRCS Natural Resources Conservation Service
NRHP National Register of Historic Places
NWI National Wetlands Inventory
O_3 Ozone
OSHA Occupational Safety and Health Administration
PA Public Assistance
Pb Lead
P.L. Public Law
PM Particulate Matter
PNP Private nonprofit
RCRA Resource Conservation and Recovery Act
SDS State Disposal System
SHPO State Historic Preservation Office
SO_2 Sulfur Dioxide
SWCD Soil and Water Conservation District
SWPPP Stormwater Pollution Prevention Plan
THPO Tribal Historic Preservation Office
TMDL Total Maximum Daily Load

USACE United States Army Corps of Engineers
U.S. United States
U.S.C. United States Code
USDA United States Department of Agriculture
USFWS United States Fish and Wildlife Service
USGS United States Geological Survey
VOC Volatile Organic Compound

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1 BACKGROUND

1.1 Project Authority

Between March 12 and April 28, 2019, high winds and heavy rains resulted in flooding throughout the state of Minnesota. Effects of the storm in Verona Township, located in Faribault County, included significant erosion to the bank of the Blue Earth River adjacent to 150th Street, jeopardizing the safety of the road. President Trump issued disaster declaration DR-4442-MN for the State of Minnesota on June 12, 2019, which made disaster recovery assistance available through the Federal Emergency Management Agency (FEMA). Verona Township applied for funding from FEMA's Public Assistance (PA) Program to underwrite the proposed project. FEMA's PA grant program provides federal assistance to government organizations and certain private nonprofit (PNP) organizations following a Presidential disaster declaration. Public Assistance is authorized by Section 406 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Public Law [P.L.] 93-288), 42 U.S.C. §§ 5121-5207.

This environmental assessment (EA) was prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, 42 U.S.C. §§ 4321 -4370h; President's Council on Environmental Quality (CEQ) regulations implementing NEPA (40 Code of Federal Regulations [C.F.R.] Parts 1500 to 1508); U.S. Department of Homeland Security (DHS) Directive No. 023-01, rev. 1, *Implementation of the National Environmental Policy Act* (Oct. 31, 2014); DHS Instruction Manual No. 023-01-001-01, rev. 1, *Implementation of the National Environmental Policy Act* (Nov. 6, 2014); FEMA Directive No. 108-01, *Environmental Planning and Historic Preservation Responsibilities and Program Requirements* (Aug. 22, 2016); and FEMA Instruction No. 108-1-1, *Instruction on Implementation of the Environmental and Historic Preservation Responsibilities and Program Requirements* (Aug. 22, 2016). FEMA is required to consider potential environmental impacts before funding or approving actions and projects. The purpose of this EA is to meet FEMA's responsibilities under NEPA and to analyze the potential environmental impacts of the proposed project. FEMA will use the findings in this EA to determine whether to prepare an environmental impact statement for the proposed project or to issue a finding of no significant impact (FONSI).

In accordance with federal laws and FEMA regulations, the EA process for a proposed federal action must include an evaluation of alternatives and a discussion of the potential environmental impacts. As part of this NEPA review, the requirements of other environmental laws and executive orders are addressed.

1.2 Project Location

The proposed project is located along 150th Street in sections 23 and 24 in Verona Township, Faribault County, Minnesota. Located in south-central Minnesota (*see* **Figure 1** of **Appendix A**), the township is approximately 36 square miles in size and has a population of approximately

391, based on the 2018 5-year American Community Survey (ACS) estimates (U.S. Census Bureau 2018).

Table 1-1 Existing Road Location and Coordinates

Roadway	Midpoint	Start	End
150th Street	43.705347, -94.146732	43.708192, -94.143163	43.702529, -94.152524

The project area includes 3,550 linear feet of 150th Street, between Highway 169 and 357th Avenue. Faribault County bridge number 22577, the Blue Earth River, and nearby agricultural and hunting land are also within the project area (*see* **Figure 2** of **Appendix A**). 150th Street is a rural local gravel road providing access to residential properties, a nearby golf course, and access to agricultural land that dominates the township. The road also includes a bridge over the Blue Earth River with a nearby public water access to the river. Township officials indicate that much of the traffic using the bridge is large farm equipment and tractor trailers hauling grain or gravel. The closest bridges crossing the Blue Earth River, that can accommodate heavy loads are located four and a half miles to the north and four miles to the south.

Approximately 3,000 linear feet of 150th Street will be realigned. Beginning south of the existing bridge, the proposed roadway will be offset approximately 50 feet west of the Blue Earth River and then run roughly parallel to the existing road. This realignment will form a large curve around a portion of the riverbank being severely eroded, providing 170' between the river and the new roadway, and will then reconnect with the existing road alignment.

1.3 Purpose and Need

FEMA's PA Grant Program provides disaster recovery funds to repair damage caused by natural or man-made disasters and to help prevent similar future damages. The heavy rains affecting 150th Street during the incident period caused slope failure of the riverbank and extensive erosion, resulting in embankment failure along the adjacent portion of the Blue Earth River and damage to the road ditch. The purpose of the project is to provide the public with a safe township road and reduce the risk of future damages, closures from flooding, severe storms, and erosion to 150th Street.

The project is needed because of historically unprecedented riverbank erosion caused by the increased flows in the Blue Earth River. Though storm intensity and corresponding flows seem to be increasing in recent history, storms during the incident period caused flows in the Blue Earth River to increase to the highest level in the available record from 2012 to present, with a peak flow of 8,734 CFS as shown in **Figure 3** of **Appendix A** (Minnesota Department of Natural Resources 2020a) (*see* Section 7.3 for references listed by agency and year of publication). Just north of Blue Earth, Minnesota, approximately 5 miles upstream from the damage site, the East Branch of the Blue Earth River flows into the Blue Earth River, so the best available flow data for this site along the river is determined by combining the two water level sensors located near Blue Earth, Minnesota. One is located on the Blue Earth River just west of Blue Earth (West Site) and the other is located on the East Branch of the Blue Earth River, just east of Blue Earth (East

Site). These storm events caused significant riverbank erosion, resulting in the loss of the natural embankment and road ditch along the 150th Street roadway. The extent of the erosion has caused the riverbank to lose its slope and become near vertical, with a 36-foot drop into the river below. Measurements from the spring of 2020 have the distance from the road edge to the eroded riverbank at 12 feet, creating a very significant safety concern to the public.

Verona Township has indicated that this is one of the more heavily traveled roads within the township due to the golf course being located at the north end of 150th Street. The road sees a large amount of agricultural use, with a majority of the traffic being tractor trailers carrying grain and large farm equipment. 150th Street is one of the few roads that provide a bridge crossing over Blue Earth River. Local vehicles, including emergency responders, would need to travel approximately 4 miles to the south or 4.5 miles to the north for the next closest bridge crossings, resulting in a detour length of 7.5 or 7 miles respectively. The proposed project will ensure the transportation network continues to be available at pre-disaster conditions by creating a safe route of travel along 150th Street, which will provide the best emergency response times, maintain the connection to markets for agricultural and other products, and continue to provide safe access to recreational use of the area.

2 ALTERNATIVE ANALYSIS

NEPA requires FEMA to evaluate alternatives to the proposed project and describe the environmental impacts of each alternative. NEPA also requires an evaluation of the No Action alternative, which is the future condition without the project. This section describes the No Action alternative, the Proposed Action (realigning 150th Street and stabilizing the riverbank), and reviews the alternatives that were previously considered but dismissed (realigning the roadway, stabilizing the riverbank, and reconstructing the riverbank without any additional stabilization).

2.1 Alternative 1 – No Action

Under the No Action alternative 150th Street would remain as is. Storms and high stream flows would continue to damage the embankment and road ditch, increasing the already significant risk of catastrophic failure of the road. Over time this would eventually lead to the total destruction of the road. Additional erosion could also encroach on adjacent agricultural land and result in loss of production. With the riverbank so close to the edge of the road, the risk of losing a vehicle over the edge will continue to increase.

2.2 Action Alternative 2 – Proposed Action – Realign 150th Street and Stabilize the Riverbank

The Proposed Action would realign 150th Street to be approximately 50 feet offset but roughly parallel to the existing alignment, situating the proposed roadway 170 feet from the damaged area. To stabilize the riverbank, rip-rap would be added to the cut-bank of the river to prevent further erosion and damage to the cliff wall. This will restore the function of 150th Street,

providing local access to residential and agricultural lands without the need for a long detour. The proposed alignment is shown in **Figure 4 of Appendix A**.

Verona Township proposes the realignment of 150th Street for approximately 3,000 linear feet (realigned length, not existing length), beginning at the south end of the existing Faribault County bridge over the Blue Earth River, widening the distance between the roadway and the river, forming a large curve around the severely eroding outer bank of the Blue Earth River, and reconnecting with the existing road alignment east of the 357th Avenue intersection. No modifications are proposed to the existing bridge. The existing roadway would be removed, and the existing riverbank would be stabilized using rip-rap. The scope of work for the relocation of 150th Street and stabilization of the riverbank includes:

- Acquire new right of way 66 feet wide along the 3,000-foot-long new alignment and vacate existing road easement.
- Relocate 150th Street using a two-lane rural design with a gravel driving surface 24 feet wide, centered within the new road right of way, with the remainder of the width on each side to be used for roadside ditches to provide drainage.
- Perform grading as required to construct the roadway and associated road ditches, including importing or exporting fill as needed (portions of the existing roadway may be salvaged and used for construction of the new road).
- Remove existing gravel driving surface, disconnect existing roadway from proposed roadway where alignment diverges at each end, and establish turf in the existing gravel area.
- Follow best management practices (BMPs) for erosion and sedimentation control during construction, in accordance with the Minnesota Pollution Control Agency (MPCA) construction stormwater National Pollution Discharge Elimination System (NPDES) general permit.
- Reestablish appropriate vegetation within and adjacent to the existing roadway to provide erosion prevention, in accordance with the construction stormwater NPDES permit, and to provide a natural barrier between recreational users (snowmobile and all-terrain vehicle traffic) and the riverbank for safety.
- Install rip-rap along 300 feet of the riverbank to protect the cut-bank of the river from further erosion

2.3 Alternatives Considered and Eliminated from Further Consideration

Three options had been considered but eliminated from further consideration due to a lack of feasibility.

2.3.1 Realign 150th Street

This alternative would realign 150th Street without performing any work on the riverbank. A possible alignment for the roadway is shown in **Figure 5 of Appendix A**. The realignment would restore the function of 150th Street, but the river would continue to erode the riverbank. While

this alternative would allow for safe access of the road immediately following construction, further erosion and damage to the cut-bank of the river is likely to cause the same damage to the road in the future. Therefore, this alternative was eliminated due to being only a temporary solution.

2.3.2 Stabilize Riverbank

This alternative would involve adding riverbank stabilization to prevent further erosion and deterioration of the riverbank. This would include no work on or to 150th Street itself. The stabilization would have to address the stability of the cut-bank of the river, as well as protection from erosion by the flowing Blue Earth River. Given the unstable nature of the existing riverbank and loose cliff wall, this alternative would include advanced construction methods beyond the level of expertise available locally, but similar construction, in method and scale, has been performed in Minnesota along the Mississippi River in Minneapolis. Construction options for the cliff portion could include cement stabilization of the in-situ soils by drilling down adjacent to the cliff face and injecting cement slurry in an attempt to help solidify the soil, and installing long pieces of sheet pile or pilings to physically reinforce the riverbank. These methods could be installed between the existing cliff face and the roadway, leaving the natural face of the riverbank in place, unless additional collapse would be experienced during construction, which is a real possibility due to the nearby vibration. In the event of additional collapse, the installed reinforcement would have to function more as an exposed retaining wall.

Riverbank stabilization closer to the water level to prevent erosion from the water flowing in the river could be performed using more traditional methods such as installing large diameter rip rap or concrete revetment. This portion of the construction is within the capabilities of local contractors, and the necessary materials are available locally. Site access would be needed, which would include heavy equipment traffic on land adjacent to and within the river channel. This alternative is shown in **Figure 6 of Appendix A**.

This alternative was deemed unfeasible due to the high likelihood of additional riverbank failure during construction, and as such, was eliminated from further consideration. It was also determined that without realigning the roadway, the road would remain within 12 feet of a large vertical drop, and continue to pose a significant safety risk to the public.

2.3.3 Restore Embankment

This alternative would restore the embankment to pre-disaster condition. The construction of a 36-foot tall near vertical wall of soil would be difficult, if not impossible without significant reinforcement. Even if such construction were possible, the likelihood of failure during an upcoming storm would be very high. Therefore, this alternative was eliminated from further consideration.

3 AFFECTED ENVIRONMENT AND CONSEQUENCES

This section describes the natural and human environment potentially affected by the alternatives, evaluates potential impacts, and recommends measures to avoid or reduce those impacts. When possible, quantitative information is provided to establish potential impacts, and the potential impacts are evaluated qualitatively based on the criteria listed in **Table 3-1**. The "study area" generally includes the treatment area and access and staging areas needed for the proposed action. If the study area for a particular resource category is different from the project area, the differences will be described in the appropriate subsection.

Table 3-1 Evaluation Criteria for Potential Impacts

Impact Scale	Criteria
None/Negligible	The resource area would not be affected, or changes or benefits would be either nondetectable or, if detected, would have effects that would be slight and local. Impacts would be well below regulatory standards, as applicable.
Minor	Changes to the resource would be measurable, although the changes would be small and localized. Impacts or benefits would be within or below regulatory standards, as applicable. Mitigation measures would reduce any potential adverse effects.
Moderate	Changes to the resource would be measurable and have either localized or regional scale impacts/benefits. Impacts would be within or below regulatory standards, but historical conditions would be altered on a short-term basis. Mitigation measures would be necessary, and the measures would reduce any potential adverse effects.
Major	Changes would be readily measurable and would have substantial consequences on a local or regional level. Impacts would exceed regulatory standards. Mitigation measures to offset the adverse effects would be required to reduce impacts, but long-term changes to the resource would be expected.

3.1 Preliminary Screening of Assessment Categories

Based on a preliminary screening of resources and the project's geographic location, the following resources do not require a detailed assessment.

- *Coastal Barrier Resources System (CBRS).* The Coastal Barrier Resources Act, 16 U.S.C. §§ 3501-3510 is not applicable because the project is not within or near a CBRS unit (U.S. Fish and Wildlife Service [USFWS] 2021a). Note, full citations to reference documents found in Section 7.3 of this Environmental Assessment, listing source documents by author, or agency and year.
- *Coastal Zone Management.* The Coastal Zone Management Act (CZMA), 16 U.S.C. §§ 1451-1464, ch. 33, enacted in 1972, is not applicable because the project is not near a coast.

- *Seismic Risks.* Executive Order (EO) 12699, Seismic Safety of Federal and Federally Assisted or Regulated New Building Construction, does not apply because there is low seismic risk in the project area based on seismic hazard maps developed by the U.S. Geological Survey (USGS) and because the project area contains no buildings.
- *Sole Source Aquifers.* There are no sole-source aquifers regulated by the Safe Drinking Water Act of 1974, 42 U.S.C. §§ 300f *et seq*., in the vicinity of the project area (EPA 20120a).
- *Essential Fish Habitat (EFH).* The Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. §§ 1801 *et seq*., does not apply because there are no Habitat Areas of Particular Concern and no EFH Areas identified at the project site according to the NOAA Essential Fish Habitat Mapper (NOAA 2020).
- *Wild and Scenic Rivers.* The Wild and Scenic Rivers Act, 16 U.S.C. §§ 1271 et seq., is not applicable because there are no federally designated wild and scenic rivers in the project areas based on a review of the National Wild and Scenic Rivers System website maintained by the National Park Service (NPS 2020). The closest federally designated wild and scenic river is the St. Croix River, located along the Minnesota – Wisconsin border, approximately 100 miles northeast of the project area.

3.2 Physical Environment

3.2.1 Geology, Soils, and Topography

Bedrock geology was characterized using USGS geological maps of the U.S. (USGS 2021a). Underlying bedrock in the project area consists of shale, dolomitic limestone, and sandstone. The bedrock formed during the middle and upper Ordovician period. Most domestic wells within 2 miles of the project area range in depths between 70 and 250 feet, and well records generally indicate varying layers of sand and clay (Minnesota Department of Health (MDH) 2021).

Topography in the project area consists of a near vertical streambank approximately 36 feet tall at the location of the damage to the road ditch, and a hillside that drops somewhat uniformly from west to east, from the intersection west of the project site descending approximately 30 feet over 3000 feet in length along the road, with elevations ranging 1035 feet at the river to 1070 feet NAVD88 at the western end of the project site (USGS 2021b).

Soils in the project area were identified using the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS 2021). The NRCS reports that the soils are generally well-drained silty and clay loam soils that are typical of glaciolacustrine deposits, which is consistent with their setting in the topography of the site. These properties will form the basis for design of stormwater conveyance and erosion and sediment control features of the proposed construction.

The purpose of the Farmland Protection Policy Act of 1981, 7 U.S.C. §§ 4201 *et seq.*, is to minimize the extent that federal programs contribute to the unnecessary and irreversible conversion of prime and important farmland to non-agricultural uses. The conversion of prime or

unique farmland must be reviewed whenever Federal funding or time is used in the direct or indirect conversion of prime farmland unless an exemption exists

Alternative 1 – No Action

Under the No Action alternative, there would be no effect on geology. There would be minor to moderate long-term impacts from erosion to riverbank soils. Potential soil loss in the area could further erode the riverbank and trigger relatively larger massive loss of riverbank, potentially acutely impacting the channel morphology of the Blue Earth River and downstream sediment loading. Under the No Action alternative, erosion could change the topography by altering slopes and the river channel adjacent to the project area. There would also be no change in use of prime or unique farmland.

Action Alternative 2 – Proposed Action

Bedrock depth is well below the project site, and the geology would not be impacted by the Proposed Action.

The Proposed Action would have minor short-term impacts on soils and topography resulting from the excavation of the existing road, placement of fill to construct the relocated road, and placement of rip-rap along the riverbank. To the extent practicable, on-site materials would be salvaged and used for fill, gravel roadway construction, and topsoil. Further geotechnical engineering and detailed roadway design are required in order to quantify the amount of material to be salvaged and the amount of material to be imported to or exported from the project site. Grading operations would be required to implement erosion and sediment control, as required by the MPCA Construction Stormwater General Permit. BMPs and mitigation measures for geology, soils, and topography impacts are provided in **Section 6.2**.

Though a portion of the project area contains approximately 5.6 acres of prime and important farmland that will be directly converted for this project, the NRCS has determined that the project area meets the small acreage exemption. This exemption permits the conversion of small acreages, i.e., 10 acres or less per linear mile or 3 acres where there is a project for an existing bridge or interchange, where a local Land Evaluation and Site Assessment system has been approved by a state conservationist. NRCS established this exemption to encourage improvements to existing linear projects, such as highways (NRCS, Farmland Protection Policy Act Manual, § 523.11.E(1) (Aug. 2012)). Correspondence related to the Farmland Conversion Impact Rating and small acreage exemption is included in **Appendix D**.

3.2.2 Water Resources and Water Quality

Water resources include surface water, groundwater, stormwater, and drinking water (wetlands are evaluated in **Section 3.3.2**). The project area is adjacent to the Blue Earth River, which is regulated as a water of the state of Minnesota under state law. Surface waters and wetlands in the project area are shown in **Figure 7** of **Appendix A**.

The Clean Water Act (CWA) of 1977, 33 U.S.C. §§ 1251 et seq., regulates the discharge of pollutants into water, with various sections falling under the jurisdiction of the U.S. Army Corps of Engineers (USACE) and the EPA or as delegated to the state. Section 404 of the CWA establishes USACE permit requirements for discharge of dredged or fill materials into waters of the United States. Section 401 of the CWA is administered by MPCA and provides regulations for the protection of water quality on projects that involve dredge or fill in waters of the United States. Under the NPDES (Section 402 of the CWA), regulation of both point and nonpoint pollutant sources, including stormwater and stormwater runoff, has been delegated to the state and is administered by MPCA.

The Blue Earth River is further administered by Faribault County by way of the Faribault County Local Water Management Plan (Faribault County 2018) under the legislative authority of Minnesota Statute 103B. The plan outlines county-level priorities for water management within the county and serves as the comprehensive plan for the Faribault County Soil and Water Conservation District (SWCD).

The Blue Earth River is also listed as a Minnesota DNR Public Water (Minnesota Department of Natural Resources 1983). The Public Waters Inventory Program was established in 1976 to address the issues of which waters of the state were public waters and where they were located. Public waters are considered to be "all water basins and watercourses that meet the criteria set forth in Minnesota Statute 103G.005". DNR is given regulatory jurisdiction for all public waters in the state.

EPA defines "water quality" as "the condition of a water body as it relates to purposes such as recreation, scenic enjoyment, aquatic habitat, and human health." Water quality is regulated by both the CWA and Minnesota Administrative Rules (Minn. R. 7050). The portion of the Blue Earth River in the project area has listed impairments of E. coli and turbidity and EPA-approved Total Maximum Daily Loads (TMDLs) for mercury in fish tissue (MPCA 2017).

Stormwater runoff affects water quality in surface waters, such as the Blue Earth River and downstream rivers such as the Minnesota and Mississippi Rivers. Stormwater runoff associated with this project includes runoff during construction and runoff from the site once construction is complete. BMPs are required during construction to prevent erosion and control sediment, and permanent design features prevent erosion and trap sediment long-term. These are important steps to reduce human-caused sediment loading to the Blue Earth River and other downstream surface waters.

Groundwater underlying the project area is contained within sand layers, divided by intervening layers of clay. Project soils are well-drained, with the permanent water table generally assumed to be approximately at the elevation of the river, as evidenced in nearby well drilling bore logs (MDH 2021). Perched groundwater may be present above this level, due to the layered nature of the sand and clay soils.

Alternative 1 – No Action

Under the No Action alternative, high flows and associated streambank erosion would continue, causing long-term, moderate adverse impacts on water quality in the Blue Earth River as a result of sedimentation from soil erosion. Besides the gradual intensification of the erosion due to channelization and land use changes within the watershed, this is predominantly a natural process of stream morphology. The sediment would eventually include the existing roadway driving surface materials, some of which were imported to the site when the road was constructed, resulting in an overall slight increase in the total sediment amount compared to the amount from naturally occurring sources. No impact on, or withdrawal of, groundwater is anticipated under the No Action alternative.

Alternative 2 – Proposed Action

Minor short-term impacts on water quality would occur during construction of the Proposed Action. During construction, exposed soil is highly vulnerable to erosion by wind and water. Eroded soil endangers water resources by reducing water quality and causing the siltation of habitat for aquatic species. Grading during construction would cause the temporary loss of vegetation and exposure of soil to the elements. To mitigate potential impacts from erosion during construction, the project sponsors and the contractor would be responsible for obtaining coverage under the Construction Stormwater General Permit (NPDES/SDS Permit MNR100001) as co-permittees and for implementing BMPs and permanent erosion prevention measures as required for permit compliance, in accordance with MN Administrative Rules (Minn. R. 7090). BMPs and mitigation measures for surface water quality impacts are provided in **Section 6.2**.

The ongoing movement of the river channel and associated erosion and sedimentation would also continue, although at a slower pace due to the installation of rip rap along a portion the riverbank. Also, sections of the existing roadway will be removed, and as such will not erode into surface waters. This will result in a slight decrease of the total sediment amount from this source, as compared to the No Action alternative.

3.2.3 Floodplain Management (Executive Order 11988)

EO 11988, Floodplain Management, requires federal agencies to minimize occupancy and modification of the floodplain. Specifically, EO 11988 prohibits federal agencies from funding construction in the 100-year floodplain unless there are no practicable alternatives. FEMA's regulations for complying with EO 11988 are promulgated in 44 C.F.R Part 9.

The proposed work begins at the south end of the existing Faribault County bridge over the Blue Earth River and reconnects with the existing road alignment east of the 357th Avenue intersection. The design flood or 1-percent-annual-chance (100-year) floodplain at this location on the Blue Earth River has a base flood elevation determined to be between 1045' and 1048', as noted in the Flood Insurance Rate Map (FIRM) for Faribault County, Minnesota and Unincorporated Areas (Map number 2706690160B, Effective Date May 17, 1982) (FEMA 1982) (*see* **Figure 8** of **Appendix A**). Portions of the proposed construction are located within these

elevations, with elevations of the proposed roadway ranging from approximately 1040' to 1068' above sea level. Portions of the project are also located with the Regulatory Floodway as depicted on the Flood Boundary and Floodway map (*see* **Figure 9** of **Appendix A**). The same areas of the proposed project near the existing bridge are inside the 0.2% annual chance (500-year) floodplain, according to the FIRM. Eight step documentation for floodplain management can be found in **Appendix B.**

Alternative 1 – No Action

Under the No Action alternative, there would be no construction, and therefore, no direct modification of the floodplain. However, there would be long-term, minor impacts from continued erosion of the riverbank. Continued erosion of the riverbank would deposit soil, including the existing roadway, into the river channel, affecting the meander of the river and floodplain.

Action Alternative 2 – Proposed Action

Relocation of 150th Street and stabilization of a portion of the Blue Earth River would result in very minimal impacts to floodplains. This alternative shares the same long-term, minor impacts from continued erosion of the riverbank, but with reduced erosion along the portion of the river where rip-rap would be installed and without deposition of the existing roadway soils, since the proposed project would remove the existing roadway. All of the proposed projects will be outside of the 100-year floodplain except for the small area to connect the proposed project to the existing bridge, but there is no practicable alternative outside of the floodplain to travel across the river. *See* **Appendix B** for the eight-step documentation for floodplain management**.**

3.2.4 Air Quality

The Clean Air Act (CAA), 42 U.S.C. §§ 7401 et seq., requires EPA to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. The CAA established two types of national air quality standards. Primary standards set limits to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. Current criteria pollutants are carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), lead (Pb), particulate matter (PM), and sulfur dioxide (SO_2).

Federally funded actions in nonattainment and maintenance areas are subject to EPA conformity regulations, 40 C.F.R. Parts 51 and 93. The air conformity analysis process ensures that emissions of air pollutants from planned federally funded activities would not affect the state's ability to achieve the CAA goal of meeting the NAAQS. Section 176(c) of the CAA requires that federally funded projects must not cause any violations of the NAAQS, increase the frequency or severity of NAAQS violations, or delay timely attainment of the NAAQS or any interim milestone. Activities that would cause an exceedance of the NAAQS or cause an area to fall out of

attainment status would be considered a significant impact. The emissions from construction activities are subject to air conformity review.

Under the general conformity regulations, a determination for federal actions is required for each criteria pollutant or precursor in nonattainment or maintenance areas where the action's direct and indirect emissions have the potential to emit one or more of the six criteria pollutants at rates equal to or exceeding the prescribed *de minimis* rates for that pollutant. The prescribed annual rates are 50 tons of volatile organic compounds (VOCs) and 100 tons of nitrogen oxides (NO_X) (O_3 precursors) and 100 tons of $PM_{2.5}$, SO_2, or NO_X ($PM_{2.5}$ and precursors).

An area is classified as nonattainment when it does not meet NAAQS standards. According to EPA's NAAQS county attainment record, Faribault County is in attainment for all NAAQS criteria pollutants (EPA 2021b, and c).

Alternative 1 – No Action

Construction activities would not occur under the No Action alternative. If 150th Street was closed for traffic safety in the future resulting from further storm damage, detours from the road closure would cause a minor increase in localized emissions. Therefore, short- and long-term impacts on air quality would be minor with possible future road closure.

Action Alternative 2 – Proposed Action

The Proposed Action would have short-term impacts on air quality owing to the use of construction equipment with diesel and gasoline engines. During the construction phase, exposed soil could temporarily increase airborne particulate matter into the project area. Emissions from construction equipment could have minor temporary effects on the levels of some pollutants, including CO, VOCs, NO_2, O_3, and PM. Emissions would be temporary and localized, and only minor impacts to air quality in the project area would occur. BMPs and mitigation measures for air quality impacts are provided in **Section 6.2**.

Long-term negligible impacts on air quality are anticipated and an air permit would not be required for the Proposed Action. The Proposed Action would not increase traffic capacity and would reduce emissions from possible road closure-related detours in the long-term.

3.3 Biological Environment

3.3.1 Terrestrial and Aquatic Environment

Land use in Faribault County is dominated by row crop agriculture. The project area is located mostly within the riparian area of the Blue Earth River. The project site consists of mostly agricultural land and nearby land primarily used for hunting.

The project area is now dominated by row crops, with deciduous trees along the top of the riverbank cliff. Terrestrial wildlife in the project area may include raccoon (*Procyon lotor*), white-tailed deer (*Odocoileus virginianus*), and various species of squirrels. Reviews of the project area

indicate the possible occurrence of several migratory birds (*see* **Section 3.3.4** for an evaluation of migratory birds).

Aquatic habitat in the project area includes the Blue Earth River. River habitat consists primarily of a silty, sandy, and rocky streambed, with varying water depth and speed as the river makes its way around numerous bends. The riverbed and riverbank also feature fallen trees that provide habitat and locally vary the in-river water velocity. The riparian area of the natural floodplain varies considerably in width and vegetative cover in the miles upstream and downstream of the project site, due to varying topography and due to the irregular orientation of the river relative to the otherwise rectangular parcels and farm fields in the area. The portion of the river adjacent to, upstream of, and downstream of the project site is primarily the natural stream channel, which generally provides higher quality habitat.

The portion of the Blue Earth River in and adjacent to the project area is impaired for turbidity, which affects the use designation for aquatic life. Altered hydrology within the watershed is identified as a significant trigger for increased erosion (MPCA 2017a). MN DNR reviews of the project site did not lead to any additional recommendations or concerns. *See* correspondence with MN DNR in **Appendix D.**

Alternative 1 – No Action

Under the No Action alternative, high flows and associated riverbank erosion would continue, causing long-term, moderate adverse impacts on water quality in the Blue Earth River as a result of sedimentation from soil erosion. Besides the gradual intensification of the erosion due to channelization and land use changes within the watershed, this is predominantly a natural process of river morphology and may not be hazardous to aquatic wildlife, so long as the rate of erosion does not exceed the ability of aquatic wildlife to cope with this periodic sediment loading. The sediment would eventually include the existing roadway driving surface materials, some of which were imported to the site when the road was constructed, resulting in an overall slight increase in the total sediment amount compared to the amount from naturally occurring sources. The erosion would also result in the introduction of fallen trees into the river channel, diversifying the in-river habitat, which may have a slight positive impact to some aquatic species. As with the riverbank erosion, this is a natural process that has been intensified by increases in river flow.

Alternative 2 – Proposed Action

Minor short-term impacts on water quality would occur during construction of the Proposed Action. During construction, exposed soil is highly vulnerable to erosion by wind and water. Eroded soil endangers water resources by reducing water quality and causing the siltation of habitat for aquatic species. Grading during construction would cause the temporary loss of vegetation and exposure of soil to the elements. To mitigate potential impacts from erosion during construction, the project sponsors and the contractor would be responsible for obtaining coverage under the Construction Stormwater General Permit (NPDES/SDS Permit MNR100001) as co-permittees and for implementing BMPs and permanent erosion prevention measures as

required for permit compliance, in accordance with MN Administrative Rules (Minn. R. 7090). BMPs and mitigation measures for surface water quality impacts are provided in **Section 6.2**.

The ongoing movement of the river channel and associated erosion and sedimentation would also continue, although at a slower pace due to the installation of rip rap along a portion the riverbank. Also, sections of the existing roadway will be removed, and as such will not erode into surface waters. This will result in a slight decrease of the total sediment amount from this source, as compared to the No Action alternative.

Approximately three acres of farmland, including grasses, will be cleared for the proposed construction. Seed and mulch landscaping would be planted on either side of the relocated road in accordance with Minnesota Department of Transportation (MnDOT) BMP standards, which may include native seed mixes that include plant species beneficial to native pollinators. BMPs and mitigation measures for terrestrial and aquatic habitat impacts are provided in **Section 6.2.**

3.3.2 Wetlands (Executive Order 11990)

EO 11990, Protection of Wetlands, requires federal agencies to take action to minimize the loss of wetlands. FEMA regulation 44 C.F.R. Part 9, *Floodplain Management and Protection of Wetlands*, sets forth the policy, procedures, and responsibilities to implement and enforce EO 11990. EO 11990 prohibits FEMA from funding activities in a wetland unless no practicable alternatives are available. The NEPA compliance process requires federal agencies to consider direct and indirect impacts on wetlands which may result from federally funded actions.

USACE and EPA define wetlands as “areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (40 C.F.R. § 122.2).

The National Wetlands Inventory (NWI) was reviewed to identify potential wetlands in or near the project area (USFWS 2020b). The NWI classifies the Blue Earth River as a Riverine System, which includes both wetlands and deepwater habitats contained within a channel**.** Under federal regulations, because of a lack of vegetation, the Blue Earth River does not fit the criteria as a wetland**.** There are some areas adjacent to the channel near the project area that are classified as wetlands within the Palustrine system, however these are located outside of the project area. Therefore, measures necessary to protect the river itself from sedimentation during construction should be sufficient to also be protective of wetlands, without specific mitigation measures uniquely related to wetlands.

The upland areas within the project area, due to topography and soil type, do not meet the inundation or saturation frequency condition to support wetland vegetative species and therefore are not wetlands and are not identified as wetlands in the NWI. Correspondence about the wetlands with MN Board of Water and Soil Resources (BWSR) can be found in **Appendix D.**

Alternative 1 – No Action

Under the No Action alternative, there would be no project-related short- or long-term impacts on wetlands.

Alternative 2 – Proposed Action

Temporary erosion prevention and sediment control BMPs during construction of the Proposed Action, as well as permanent erosion prevention elements of the project construction that are required as related to protection of the Blue Earth River, which is not a wetland, will automatically provide protection of wetlands that may be adjacent to the river. No impacts to wetlands are foreseen, and therefore no specific mitigation measures are proposed with respect to wetlands. *See* **Appendix B** for the eight-step decision-making documentation that demonstrates compliance with EO 11990.

3.3.3 Threatened and Endangered Species

The Endangered Species Act (ESA) of 1973, 16 U.S.C. §§ 1531 - 1544, provides a framework for the conservation of endangered and threatened species and their habitats. Federal agencies are required to ensure that actions they fund, authorize, or carry out are not likely to jeopardize the continued existence of any listed species (including plant species) or result in the destruction or adverse modification of designated critical habitats for such species.

In March 2021, via the Information for Planning and Consultation (IPaC) tool, FEMA obtained a list of species with the potential to occur in the project vicinity. There was no federally designated critical habitat within the project area. The IPaC tool identified the potential for one listed species to occur in or near the project area: Northern long-eared bat (*Myotis septentrionalis*).

Minnesota DNR maintains and annually updates a listing of townships in the state that contain known Northern long-eared bat roost trees and hibernacula (Minnesota Department of Natural Resources 2020b). The current listing contains no such instances in Faribault County nor the other counties nearest to the project area.

FEMA consultation with the USFWS regarding the Northern long-eared bat indicates that while the project may affect the Northern long-eared bat, any take that may occur as a result of the project is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 C.F.R. §17.40(o) and that FEMA's responsibilities for the project under ESA Section 7(a)(2) with respect to the Northern long-eared bat are concluded. Correspondence is included in **Appendix D.**

Consultation with Minnesota DNR and FEMA reviews of Natural Heritage Information System data has indicated there are no listed species occurrences within a one-mile radius of the project site. *See* **Appendix D.**

Alternative 1 – No Action

The No Action alternative would not directly impact federally listed threatened or endangered species because there would be no construction. Also, owing to the lack of suitable habitat, no listed species are expected to occur in the project vicinity.

Alternative 2 – Proposed Action

Northern long-eared bats tend to roost in trees near water; although unlikely, there is the potential that removal of less than 0.1 acres of trees under the Proposed Action could affect some bat habitat. In March 2021, FEMA submitted an online Northern long-eared bat 4(d) determination key and received verification from USFWS that any take of the bats that may occur as a result of the Proposed Action is not prohibited under the ESA Section 4(d) rule adopted for the species. Correspondence between USFWS and FEMA is provided in **Appendix D**.

3.3.4 Migratory Birds

A migratory bird is any species or family of birds that live, reproduce, or migrate within or across international borders at some point during their annual life cycle. The Migratory Bird Treaty Act (MBTA) of 1918, as amended, 16 U.S.C. §§ 703–712, protects migratory birds and their nests, eggs, and body parts from harm, sale, or other injurious actions. All native birds, including common species such as American robin (*Turdus migratorius*) and American crow (*Corvus brachyrhynchos*) are protected by the MBTA. The project area would support migratory birds.

The Bald and Golden Eagle Protection Act of 1940, 16 U.S.C. §§ 668 *et seq.*, prohibits the take, possession, sale, or other harmful action of any golden (*Aquila chrysaetos*) or bald eagle (*Haliaeetus leucocephalus*), alive or dead, including any part, nest, or egg (16 U.S.C. § 668(a)). A search of IPaC in January 2021 did not identify the bald eagle as being present in the project area, and Natural Heritage Information System review did not identify any occurrences within a mile radius of the project site.

Alternative 1 – No Action

The No Action alternative would not directly impact migratory birds because there would be no construction.

Alternative 2 – Proposed Action

Road relocation would have minimal long-term impacts from the removal of vegetation along the relocated road alignment that could serve as habitat for migratory birds. The number of trees removed during the project will be minimal.

BMPs to avoid and minimize impacts on migratory birds are provided in **Section 6.2.**

3.3.5 Invasive Species

EO 13112, Invasive Species, requires federal agencies to prevent the introduction of invasive species and provide for their control to minimize the economic, ecological, and human health impacts caused by invasive species. The State of Minnesota has also established laws related to the control or eradication of noxious weeds under MN Statutes Chapter 18, the Noxious Weed Law and related to the sale and control of seeds in general under MN Statutes Chapter 21, the Minnesota Seed Law.

Many roadside turf establishment seed mixes commonly used throughout Minnesota for decades have included large portions of non-native grass species, but the current trend is toward greater use of native seed mixes to both enhance the long-term performance of the vegetation and to provide better wildlife habitat, particularly for pollinators. Consultation with MN DNR and EPA both have included recommendations to use native, pollinator-friendly seed mixtures for permanent vegetation in the project area.

Alternative 1 – No Action

The No Action alternative would have no project-related impacts because construction would not occur. However, there could be minor long-term, adverse impacts on the area as any existing invasive plant species would continue to persist in the project area.

Action Alternative 2 – Proposed Action

The Proposed Action could have minor short-term impacts from the potential spread of invasive weeds caused by construction activities. Construction activities could result in the transport of invasive weed species both into and outside of the project area as both cuttings and seeds attached to vehicles.

Revegetation of disturbed areas of the project site using native, pollinator-friendly seed mixes would have moderate, long-term, beneficial effects by providing enhanced habitat and by replacing areas of nonnative vegetation.

BMPs to avoid and minimize the spread of invasive species are provided in **Section 6.2**.

3.4 Hazardous Materials

Hazardous materials are any items or agents (biological, chemical, radiological, or physical) that have the potential to cause harm to humans, animals, or the environment either by itself or through interaction with other factors. Sites within or adjacent to the project area, regulated by federal hazardous materials laws such as the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. §§ 9601-9675, and the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. §§ 6901 *et seq*., were identified using the EPA Envirofacts and NEPAssist websites (EPA 2021d, EPA 2021e).

Envirofacts and NEPAssist identified zero regulated sites within a 0.5-mile radius of the project area. NEPAssist did not identify any sites in the project area or vicinity listed in the toxic release inventory, water dischargers (NPDES), EPA Brownfields Program, or Superfund (National Priorities List) facilities databases (EPA 2021d, 2021e).

A similar search was also conducted using the MPCA What's in My Neighborhood mapping tool (MPCA 2021). There were zero sites identified within a 0.5-mile radius of the project area.

Alternative 1 – No Action

Because there would be no construction under the No Action alternative, there would be no impacts related to hazardous materials.

Action Alternative 2 – Proposed Action

The Proposed Action would not involve the addition of any hazardous materials or chemicals to the site. Construction equipment used for the project would have small quantities of gasoline and diesel fuel, but no releases are anticipated from these machines as they would be kept in good working order in accordance with state and local ordinances.

See **Section 6.2** for project conditions related to hazardous materials.

3.5 Socioeconomics

3.5.1 Zoning and Land Use

Faribault County is responsible for the development and enforcement of the land use ordinance (Faribault County 2020), the official zoning maps (Faribault County 1994), and the master land use plan titled *Faribault County Comprehensive Land Use Plan* (Faribault County 2015). The land use ordinance and zoning maps specify the permitted land uses within the project area, while the comprehensive plan guides potential future development for zoned areas. These documents were used to evaluate the project's consistency with local zoning and land use.

The county zoning map shows that the project area is currently zoned for agricultural uses and is within the Shoreland Agriculture zoning district (Faribault County 1994). The existing land use ordinance does not regulate the placement and design of roads in Shoreland Agriculture district areas. The alternatives, as considered herein, are all permissible per the ordinance.

Alternative 1 – No Action

The No Action alternative would have a negligible impact on existing zoning for properties within the project area, and there would be no immediate changes to existing land uses. Over time, the continued meandering of the Blue Earth River may result in loss of crop land and creation of new riparian areas. This movement of the river would also result in shifting boundaries of the Shoreland Agriculture zoning district.

Action Alternative 2 – Proposed Action

The Proposed Action would have negligible short and long-term impacts on land use as there is no conflict with any of the existing land uses or zoning in the project area. The Proposed Action would mostly swap cultivated land with the realigned road, with the existing road area being converted to undeveloped, non-cultivated land. A portion of cultivated land would be taken out of production at the location of the realignment, and it is unlikely that the existing roadway area adjacent to this would be cultivated, due to its small size and peculiar shape that is not conducive to operation of large modern agricultural equipment.

3.5.2 Noise

The Noise Control Act of 1972 defines "noise" as an undesirable sound. Noise is regulated at the federal level by the Noise Control Act of 1972, 42 U.S.C. §§ 4901, et seq.. Noise standards developed by EPA (1974) provide a basis for state and local governments' judgments in setting local noise standards. Neither Verona Township nor Faribault County have in place any noise ordinance relating to construction.

Alternative 1 – No Action

The No Action alternative would not change ambient noise levels in the project area. In the event that a road closure would be needed for traffic safety in the future due to continued erosion of the riverbank and road ditch, the closure of the road would reroute traffic noises to other routes, but that noise would likely not exceed local ordinance thresholds. There would be minimal short- or long-term changes in noise levels.

Action Alternative 2 – Proposed Action

The Proposed Action would cause short-term changes in the ambient noise levels in the area associated with construction activities. Short-term impacts related to construction activities would include trucks hauling materials to the site and the operation of equipment such as excavators for road building activities. Minor traffic noise would also be expected from construction vehicles and haul trucks arriving and departing from the project area. Reopening the road following construction would return traffic noise levels to pre-construction conditions.

3.5.3 Public Services and Utilities

Verona Township is served by the Faribault County Sheriff's Office and the neighboring municipal fire departments. No police, fire, public schools, or township facilities are located within or adjacent to the project area. The hospital closest to the project site, United Hospital District – Blue Earth Clinic is 6 miles southeast in Blue Earth.

Verona Township provides road maintenance services to the project site and bordering areas. Blue Earth Nicollet Faribault Coop (BENCO) and Blue Earth Light and Water Department provide electricity services to the project area, and existing distribution lines are present along the south portion of the project area, serving the farmsteads at the western end of the project area. The

golf course club house north of the project area is serviced by existing lines along US Highway 169. Any underground electric lines connecting the two sets of power poles at each end of the project area or other small utilities along the existing road alignment would need to be relocated as part of the proposed project.

Alternative 1 – No Action

The No Action alternative would have a minor impact on public services in the project area. Possible future road closure would require detours and could cause delays for emergency vehicles from increased travel distances on detour routes. Traffic on detoured routes is not expected to rise to a level that would impact emergency vehicle travel times.

Action Alternative 2 – Proposed Action

The Proposed Action may have a minor short-term impact on electric service and other small utilities, as the existing utilities may need to be relocated to accommodate road construction.

The Proposed Action would provide minor long-term benefits to public services by reducing the potential for future road closures due to flooding, which would provide a more reliable route for emergency vehicle access.

3.5.4 Traffic and Circulation

Traffic count data is not available for 150th Street. Typical users of the road would be rural residents, farm workers, and those operating trucks and agricultural machinery in support of farming operations throughout the township. The road also experiences traffic from the golf course on the north end of 150th Street.

Alternative 1 – No Action

The No Action alternative would have both minor short- and long-term negative impacts on traffic and circulation in the area. Damage to the road ditch would continue, and the road would need to be closed for traffic safety. Eventually the road would become completely impassible, even for any traffic that would ignore the closure.

Action Alternative 2 – Proposed Action

The Proposed Action would have minor short- and long-term positive impacts on traffic and circulation in the area. No long-term changes in local traffic are anticipated as a result of the proposed action. Moving the road further from the river will reduce safety risks to the users of the roadway.

3.5.5 Environmental Justice (Executive Order 12898)

EO 12898, Federal Actions to Address Environmental Justice (EJ) in minority and low-income Populations, requires agencies to identify and address disproportionately high and adverse human health or environmental effects their activities may have on minority or low-income

populations. EJSCREEN, a screening and mapping tool developed by EPA, was used to identify low-income and minority populations in the project area based on the 2014–2018 ACS developed by the U.S. Census Bureau (EPA 2021f).

Minority or low-income populations in a project area can be identified by meeting either one or both of the following criteria:

- The affected area (e.g., census block group) contains 50 percent or more minority persons or 25 percent or more low-income persons.
- The percentage of minority or low-income persons in an affected area (e.g., census block group) is more than 10 percent greater than the average of the surrounding county.

The project area is located within a single census block group (ID# 270434603003) in Faribault County. According to the ACS, the total population of the block group was approximately 578 persons in 2018. EPA EJScreen data indicates about 1 percent of the population in the census block group is minority and low-income residents make up 15 percent of the population of the census block group. The percentage of minority or low-income persons is also not more than 10% greater than the average in the surrounding county, therefore neither criteria for minority nor low-income populations are met.

Alternative 1 – No Action

The No Action alternative would not have any disproportionately high or adverse effects on minority or low-income populations since the project area does not meet either criteria.

Action Alternative 2 – Proposed Action

The Proposed Action would also not have any disproportionately high or adverse effects on minority or low-income populations since the project area does not meet either criteria.

3.5.6 Safety and Security

The Occupational Safety and Health Act, 29 U.S.C. §§ 651 – 678, requires safe and healthful conditions for working men and women by setting and enforcing standards; and providing training, outreach, and education and compliance assistance. The act created the Occupational Safety and Health Administration (OSHA) which established construction standards under 29 C.F.R. Part 1926. Similarly, the State of Minnesota has adopted construction safety standards, as found in MN Statutes Chapter 182 Occupational Safety and Health and in Minn. R. 5207, Standards for Construction. These Minnesota safety standards are administered by the Minnesota Occupational Safety and Health Administration (MNOSHA), within the Minnesota Department of Labor and Industry. The construction and safety standards set forth general rules for the safe use, operation, and maintenance of equipment, and for safe work practices pertaining to all employers and employees performing construction operations.

Safety risks currently at the project area include increasingly frequent storms and the unstable and failing Blue Earth River riverbank cliff.

Alternative 1 – No Action

Under the No Action alternative, construction activity would not occur. Hazardous conditions and damages would continue at the site, which would have a long-term major impact on safety if any motorist or recreational user ignored the possible future road closure.

Action Alternative 2 – Proposed Action

Standard construction-related safety risks would occur for construction workers at the project site. During construction, site safety from the equipment would be ensured by the contractors performing the work following standard industry safety practices. If all safety protocols are followed there would be a negligible impact on safety and security during construction. *See* **Section 6.2** for project conditions related to safety and security.

Post-construction, mitigation measures from the project would reduce natural hazard impacts to 150th Street, reducing safety risks to the public using the road, including motorists and recreational users by moving the road away from the cliff, removing the existing roadway, and by installing native grasses as a vegetative buffer between recreational users and the cliff.

3.6 Historic and Cultural Resources

Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended, 54 U.S. C. §§ 300101 - 307108, requires that federal agencies consider the potential effects on cultural resources of actions it proposes to fund. Cultural resources are defined as prehistoric or historic archaeology sites, historic standing structures, historic districts, objects, artifacts, cultural properties of historic or traditional significance—referred to as Traditional Cultural Properties—that may have religious or cultural significance to federally-recognized Indian Tribes (Tribes), or any other physical evidence of human activity considered important to a culture, subculture, or community for scientific, traditional, religious, or other reasons.

Cultural resources listed, eligible for listing, or potentially eligible for listing on the National Register of Historic Places (NRHP) are subject to protection from adverse impacts resulting from a federally funded undertaking. To be considered eligible, a cultural resource must meet one or more of the criteria regarding the resource's significance, as well as demonstrate integrity of features or other characteristics that are related to that significance. Eligibility criteria for listing a property in the NRHP are detailed in 36 C.F.R. Part 60. Sites not yet evaluated may be considered potentially eligible for inclusion in the NRHP and are afforded the same regulatory consideration as nominated properties. The State Historic Preservation Office (SHPO) maintains records of known historic properties in each state. In Minnesota, the SHPO is a division of the Minnesota Department of Administration.

Pursuant to 36 C.F.R. § 800.4(a)(1), the Area of Potential Effects (APE) is defined as the geographic area(s) within which the undertaking may directly or indirectly affect cultural

resources. Within the APE, impacts on cultural resources are evaluated for both historic structures (aboveground cultural resources) and archaeology (belowground cultural resources).

In addition to the NHPA, FEMA must also comply with other federal laws that relate to historic and cultural resources:

- American Indian Religious Freedom Act of 1978, 42 U.S.C. § 1996, which provides for the protection and preservation of American Indian sites, possessions, and ceremonial and traditional rites.
- Archaeological Resources Protection Act of 1979, 16 U.S.C. §§ 470aa–470 mm, which provides for the protection of archaeological resources on public lands and Indian lands.
- Native American Graves Protection and Repatriation Act, 25 U.S.C. §§ 3001–3013, in cases where Native American cultural Items are found on federal and tribal lands.

In May 2021, the subrecipient's archaeological consultant completed a Phase 1 Archaeological Survey of the project site. The survey revealed a prehistoric site represented by a single lithic projectile point. However, a follow up survey did not reveal any other cultural materials and no further archeological work was recommended (*see* Nienow Cultural Consultants LLC Phase 1 Archaeological Survey in **Appendix C).**

On June 4, 2021, FEMA initiated consultation with the SHPO to confirm the finding that no historic properties would be affected if the project were implemented. The SHPO concurred with the finding of No Effect on August 26, 2021 (*see* correspondence in **Appendix D**).

On March 2, 2021, FEMA initiated consultation with Tribal Historic Preservation Offices (THPOs) of eight potentially affected Tribes. To date, one response from a THPO has been received stating that they would like to be informed of any archeological findings. Pursuant to 36 C.F.R. § 800.4(d)(l)(i), having received no responses objecting to the proposed undertaking within 30 days from any consulting parties, FEMA's Section 106 responsibilities have been fulfilled and FEMA will proceed with the captioned undertaking. *See* **Appendix E** for documentation**.**

See **Section 6.2** for project conditions related to historic and cultural resources.

3.6.1 Historic Structures

The project area contains no structures, historic or otherwise. The only structures near the project area are located at a farm site at the western terminus of the road relocation and a golf course near the eastern terminus. The farm site is visually screened from the project site by a sparse windbreak of trees.

Alternative 1 – No Action

The No Action alternative would have no effect on structures, historic or otherwise.

Action Alternative 2 – Proposed Action

Consultation with SHPO indicated that no historic structures exist within the APE for this undertaking and that no historic properties will be affected.

3.6.2 Archaeological Resources

The 2021 Phase I Survey of the project site revealed a single prehistoric lithic projectile point. The follow up surveys did not identify any other archaeological materials and the archeologist did not recommend additional archaeological survey of the site.

Alternative 1 – No Action

The No Action alternative would have no effect on known archaeological resources as no construction or ground disturbance activities would occur and such resources are not expected to be present.

Action Alternative 2 – Proposed Action

The Proposed Action would have no effect on any known archaeological sites. The following project conditions, included in **Section 6.2**, would provide additional protection to unknown archaeological sites:

- The subrecipient will monitor ground disturbance during the construction phase. Should human skeletal remains or historic or archaeological materials be discovered during construction, all ground-disturbing activities on the project site shall cease and the subrecipient will notify the Faribault County Sheriff's office (in the case of human remains), the recipient (Minnesota Homeland Security and Emergency Management (HSEM)), and FEMA. FEMA will notify the SHPO and the Office of the State Archaeologist.

- All borrow or fill material must come from pre-existing stockpiles, material reclaimed from maintained roadside ditches (provided the designed width or depth of the ditch is not increased), or commercially procured material from a source existing prior to the event. For any FEMA-funded project requiring the use of a non-commercial source or a commercial source that was not permitted to operate prior to the event (e.g., a new pit, agricultural fields, road ROWs, etc.) in whole or in part, regardless of cost, the Applicant must notify FEMA and the Recipient prior to extracting material. FEMA must review the source for compliance with all applicable federal environmental planning and historic preservation laws and executive orders prior to a subrecipient or their contractor commencing borrow extraction. Consultation and regulatory permitting may be required. Non-compliance with this requirement may jeopardize receipt of federal funding. Documentation of borrow sources utilized is required at closeout.

3.6.3 Tribal Coordination and Religious Sites

EO 13175, Consultation and Coordination with Indian Tribal Governments, directs federal agencies, "to establish regular and meaningful consultation and collaboration with tribal officials in the development of federal policies that have tribal implications, to strengthen the United States government-to-government relationships with Indian tribes, and to reduce the imposition of unfunded mandates upon Indian tribes…."

Requests for information on the presence or absence of known archaeological and Indian religious sites within the proposed project area were submitted to federally recognized tribal nations with potential interests in the project. On March 2, 2021, FEMA initiated consultation with the following tribal nations:

- Flandreau Santee Tribe of South Dakota
- Ho-Chunk Nation
- Lower Sioux Community of Minnesota
- Prairie Island Indian Community
- Santee Sioux Tribe
- Shakopee Mdewakanton Sioux Community of Minnesota
- Spirit Lake Tribe of Fort Totten
- Upper Sioux Community of Minnesota

FEMA sent a letter to each tribe with details about the project location and proposed activity and requested comments within 30 days of the date of the letter. FEMA received a response from the Shakopee Mdewakanton Sioux Community of Minnesota requesting to be "informed should any archaeological discoveries be made during ground disturbance(s)." After the single projectile point was found, a representative from the Shakopee Mdewakanton Sioux Community was notified and given a copy of the archeological survey and FEMA received a response saying, "Due to the type of discovery, I have no concerns." Correspondence with the tribal nations is provided in **Appendix E**.

Alternative 1 – No Action

The No Action alternative would have no effect on known archaeological or Indian religious sites as no construction or ground disturbance activities would occur.

Action Alternative 2 – Proposed Action

The Proposed Action would have no effect on known archaeological or Indian religious sites. If any human or archaeological remains are encountered during project construction, work will stop immediately and the Faribault County Sheriff's office (in the case of human remains), the recipient (Minnesota HSEM), and FEMA. FEMA will then notify the SHPO, the Office of the State Archeologist, and the Shakopee Mdewakanton Sioux Community.

See **Section 6.2** for project conditions related to tribal and religious sites.

3.7 Comparison of Alternatives

Table 3-2 Comparison of Alternatives

No Action Impacts	Proposed Action Impacts	Mitigation
Geology, Soils, and Topography		
• Minor to moderate long-term impacts from continued soil erosion. • No impacts to geology	• Minor short-term impacts from excavation and site preparation. • No impacts to geology • Less than ten acres of farmland to be converted to non-agricultural use, within the limits of the small acreage exception.	• *See* **Section 6.2**, Conditions 3 and 4.
Water Resources and Water Quality		
• Moderate long-term impacts from sedimentation and soil erosion. • No impact on groundwater.	• Moderate long-term impacts from sedimentation and soil erosion. • Minor short-term impact on water quality during construction caused by excavators and other heavy equipment for fill and excavation. • Minor long-term benefit from removing existing roadway materials, thereby reducing stream sedimentation.	• *See* **Section 6.2**, Conditions 3 and 4.
Floodplain Management		
• Minor long-term impacts from continued streambank erosion.	• Minor long-term impacts from continued streambank erosion and adverse impacts from floodplain.	• *See* **Section 6.2**, Condition 5.
Air Quality		
• Minor short and long-term future impacts from added emissions from detouring vehicles due to possible road closure.	• Minor short-term impacts from construction equipment emissions and exposed soils. • Negligible long-term impact.	• *See* **Section 6.2**, Conditions 6 and 7.
Terrestrial and Aquatic Environment		
• Minor long-term impacts from continued streambank erosion.	• Minor long-term impacts from continued streambank erosion. • Minor short-term impacts from soil disturbance and removal of vegetation during construction.	• *See* **Section 6.2,** Conditions 3, 4, 9, 10, and 11.
Wetlands		
• No project-related short or long-term impacts.	• No project-related short or long-term impacts.	• None
Threatened and Endangered Species		

No Action Impacts	Proposed Action Impacts	Mitigation
• No impacts expected due to lack of suitable habitat.	• Minor long-term impacts to northern long-eared bats from removal of 0.01 acres of scattered trees.	• See **Section 6.2,** *Conditions* 3 and 4.
Migratory Birds		
• No direct short- or long-term impacts.	• Minor long-term impacts due removal of approximately 0.01 acres of scattered trees that may serve as migratory bird habitat.	• *See* **Section 6.2,** Condition 9.
Invasive Species		
• Minor long-term impact as invasive species persist in the area.	• Minor short-term impact from the potential spread of invasive weeds from construction equipment and vehicles. • Long-term benefits as invasive species would be replaced by native species.	• *See* **Section 6.2,** Conditions 10 and 11.
Hazardous Materials		
• No impact	• Potential minor short-term impact to workers and to the environment due to the use of fuels during construction.	• *See* **Section 6.2,** Conditions 8, 12, and 13.
Zoning and Land Use		
• Negligible impact on zoning and land use. • Continued meandering of the Blue Earth River may alter riparian areas.	• Negligible impact on zoning and land use. • Continued meandering of the Blue Earth River may alter riparian areas. • A small amount of cultivated land would be taken out of production.	• None
Noise		
• Negligible impact.	• Minor short-term impacts associated with construction. • Negligible long-term impact.	• None
Public Services and Utilities		
• Minor short and long-term impact to public services resources due to possible detour in future. • Minor long-term impact on utilities if exposed to erosion.	• Minor short-term impact on public services from construction detours and the operation of construction equipment to and from the site. • Minor short-term impact on utilities that may require relocation due to construction.	• None

Traffic and Circulation		
• Minor short-term and long-term impact on traffic levels on alternative routes due to possible future road closure and detour.	• Minor short-term impact from construction detours, and the operation of construction vehicles and equipment to and from the site. • Minor short-term impacts to recreational users during construction. • Long-term safety benefit to recreational users.	• None
Environmental Justice		
• No effect, not a minority or low-income population	• No effect, not a minority or low-income population	• None
Safety and Security		
• Long-term moderate impact from hazardous conditions. • No construction-related safety impacts.	• Negligible short-term impact as long as all construction safety measures are followed. • Moderate long-term benefit to safety.	• *See* **Section 6.2**, Conditions 12 and 13.
Historic Structures		
• No Effect	• No Effect	• None
Archaeological Resources		
• No Effect	• No Effect	• *See* **Section 6.2,** Conditions 14 and 15.
Tribal and Religious Sites		
• No Effect	• No Effect	• *See* **Section 6.2,** Conditions 14 and 15.

4 CUMULATIVE IMPACTS

This section evaluates the potential cumulative impacts associated with the implementation of the Proposed Action. Cumulative impacts are defined in CEQ regulations for implementing NEPA (40 C.F.R. § 1508.7) as:

> "The impacts of a proposed action when combined with impacts of past, present, or reasonably foreseeable future actions undertaken by any agency or person."

CEQ regulations require an assessment of cumulative effects during the decision-making process for federal projects. Cumulative impacts can result from individually minor but collectively significant actions.

Work has been previously completed on a portion of 150th Street. In 2016, FEMA funds were used to repair a portion of 150th Street east of the project location after flooding caused the road to wash out. The road was repaired back to existing conditions and rock was installed to avoid

the road washing out again. In 2018, a portion of the surface gravel on the western end of the site was washed away and several riverbank failures occurred during spring flooding. The road was resurfaced, but the slope failure repair needed a time extension for technical assistance. During the time extension, the same slope failed again before the township had received funds for repair. Past coordination with FEMA can be found in **Appendix D**. The proposed project will limit the need for repair in the foreseeable future. Any relocation of electric service needed as part of the project will be accomplished by the electric utility either prior to, during, or after road construction, depending on the nature of the utility conflict.

5 PUBLIC PARTICIPATION

This EA is available for agency and public review and comment for a period of 30 days. The public information process includes a public notice with information about the Proposed Action in the *Faribault County Register* of Blue Earth. This EA is available on FEMA's website at https://www.fema.gov/emergency-managers/practitioners/environmental-historic/region/5. The EA is also available on the Faribault County website at https://*co.faribault.mn.us/home/bulletins/verona-township-draft-environmental-assessment*.

A hard copy of this EA is available for review at:

Patten Roofing (attn: Nina Patten)
16789 315th Ave
Huntley, MN 56047

This EA reflects the evaluation and assessment of the federal government, the decision-maker for the federal action; however, FEMA will take into consideration any substantive comments received during the public review period to inform the final decision regarding grant approval and project implementation. The public is invited to submit written comments by emailing fema-r5-environmental@fema.dhs.gov or via mail to:

Duane Castaldi, Regional Environmental Officer
Attn: Verona Township 150th Street Road Improvement Project EA Comments
FEMA Region 5
536 South Clark Street, 6th Floor
Chicago, IL 60605

If FEMA receives no substantive comments from the public and/or agency reviewers, this EA will be adopted as final, and FEMA will issue a FONSI. If FEMA receives substantive comments, it will evaluate and address those comments as part of the FONSI documentation and may consider whether changes to the grant or project implementation are appropriate.

Subrecipient Outreach

Verona Township has discussed the damages to the road and this proposed project at several of their township board meetings during 2019 and 2020. These meetings are held the second Monday of each month at 5:15 p.m. and are open to the public. During public meetings on

March 12, 2019 and March 10, 2020, residents were concerned about a project getting done before a similar flooding event that could cause the road to be closed, which would impact the farmers, golf course, and many others who depend on that road for travel.

6 MITIGATION MEASURES AND PERMITS

6.1 Permits

The subrecipient will require the construction contractor to obtain coverage under the MPCA Construction Stormwater General Permit, which will include the subrecipient and the construction contractor as co-permittees. The Stormwater Pollution Prevention Plan (SWPPP) required by this permit will be prepared as part of the construction project plans and specifications. *See* **Appendix F** for copies of the permits.

Table 6-1 summarizes the necessary permits to implement the Proposed Action and their status.

Table 6-1: Permit Summary

Issuing Agency	Resource	Permit Title	Applicable Regulation/Law	Status
MPCA	Soils (Erosion)	Construction Stormwater General Permit	Minn. R. 7090	Not complete. To be obtained by construction contractor following project award and prior to commencing construction.
DNR	Water Quality	Public Waters Work Permit	Minnesota Statute 103G.245	Not complete. To be obtained by Bollig Inc. during preliminary design.
U.S. Army Corps of Engineers	Water Quality	Department of the Army Permit	Clean Water Act Section 404	Not complete. To be obtained by Bollig Inc. during preliminary design.

6.2 Project Conditions

The subrecipient is responsible for compliance with federal, state, and local laws and regulations, including obtaining any necessary permits prior to beginning construction activities, and adhering to any conditions laid out in these permits. Any substantive change to the scope of work will require re-evaluation by FEMA for compliance with NEPA and any other laws or EOs. Failure to comply with FEMA grant conditions may jeopardize federal funding.

General Project Conditions

1. The subrecipient is responsible for obtaining and complying with all required local, state, and federal permits and approvals.
2. If deviations from the proposed scope of work result in substantial design changes, the need for additional ground disturbance, additional removal of vegetation, or any other unanticipated changes to the physical environment, the subrecipient must contact FEMA so that the revised project scope can be evaluated for compliance with NEPA and other applicable environmental laws.

The following conditions address mitigation of impacts to ***Water Resources*** and ***Water Quality***, and ***Soils***:

3. Prior to beginning work, the subrecipient will require the construction contractor to apply for and obtain coverage from MPCA under the NPDES/SDS Construction Stormwater General Permit, MN DNR Public Water Work Permit, and USACE Department of the Army Permit. The subrecipient and the construction contractor will be co-permittees.
4. During construction, the subrecipient will require the construction contractor to comply with the temporary and permanent erosion and sedimentation controls required by the Construction Stormwater General Permit and included in the project SWPPP.

Floodplain and Floodway Management

5. During construction, fill placed within the Regulatory Floodway should be coordinated with MN DNR and permitted by the local floodplain administrator. A no rise certification may be required.

Air Quality

6. To reduce the emission of criteria pollutants, construction equipment engine idling will be minimized to the extent practicable and engines will be kept properly maintained.
7. Open construction areas will be minimized and watered as needed to minimize particulates such as fugitive dust.

Hazardous Materials

8. The subrecipient will develop a SWPPP that includes procedures for fuel storage and handling that reduces the risk of stormwater contamination during construction. The subrecipient will require the construction contractor to comply with the SWPPP.

Migratory Birds

9. Vegetation removal should be limited to as small of an area as practicable.

Invasive Species

10. The contractors will ensure that any seed and mulch landscaping comply with state regulations regarding prohibited and restricted weed species.
11. Revegetation of disturbed soils will be accomplished using MnDOT/BWSR native seed mixes appropriate for the project site.

Safety and Security

12. To minimize risks to safety and human health, construction activities will be performed using qualified personnel trained to use the required equipment properly.
13. All construction activities will be conducted in accordance with the standards specified in the Occupational Safety and Health Administration (OSHA) regulations and Minnesota DOLI construction and safety standards.

Archeological, Tribal, and Religious Sites

14. The subrecipient will monitor ground disturbance during the construction phase. Should human skeletal remains or historic or archaeological materials be discovered during construction, all ground-disturbing activities on the project site shall cease and the subrecipient will notify the Faribault County Sheriff's office (in the case of human remains), the recipient (Minnesota HSEM), and FEMA. FEMA will then notify the SHPO, the Office of the State Archaeologist, and the Shakopee Mdewakanton Sioux Community.
15. All borrow or fill material must come from pre-existing stockpiles, material reclaimed from maintained roadside ditches (provided the designed width or depth of the ditch is not increased), or commercially procured material from a source existing prior to the event. For any FEMA-funded project requiring the use of a non-commercial source or a commercial source that was not permitted to operate prior to the event (e.g., a new pit, agricultural fields, road ROWs, etc.) in whole or in part, regardless of cost, the Applicant must notify FEMA and the Recipient prior to extracting material. FEMA must review the source for compliance with all applicable federal environmental planning and historic preservation laws and executive orders prior to a subrecipient or their contractor commencing borrow extraction. Consultation and regulatory permitting may be required. Non-compliance with this requirement may jeopardize receipt of federal funding. Documentation of borrow sources utilized is required at closeout.

7 CONSULTATIONS AND REFERENCES

The following agencies were consulted during the preparation of this EA:

7.1 Federal, State, and Local Agencies

- Minnesota State Historic Preservation Office (SHPO)
- Natural Resources Conservation Service (NRCS)
- U.S. Fish and Wildlife Service, Minnesota-Wisconsin Ecological Services Field Office

- U.S. Environmental Protection Agency Region V, NEPA Implementation Section
- Minnesota Pollution Control Agency (MPCA)
- Minnesota Department of Natural Resources (DNR), Environmental Assessment Ecologist
- U.S. Army Corps of Engineers, St. Paul District
- Minnesota Board of Water and Soil Resources (BWSR)

7.2 Tribal Nations

- Flandreau Santee Tribe of South Dakota
- Ho-Chunk Nation
- Lower Sioux Community of Minnesota
- Prairie Island Indian Community
- Santee Sioux Tribe
- Shakopee Mdewakanton Sioux Community of Minnesota
- Spirit Lake Tribe of Fort Totten
- Upper Sioux Community of Minnesota

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8 LIST OF PREPARERS

Federal Emergency Management Agency

Reviewers	Experience and Expertise	Role in Preparation
Duane Castaldi	Regional Environmental Officer	Project Monitor
Maureen Cunningham	Regional Counsel	Legal Review
Karie Roach	Environmental Protection Specialist	Region V Staff
Irene Henry	Environmental Protection Specialist	Environmental & Historic Preservation
Nicholas Dorochoff	Deputy REO	Technical Monitor
Brian Miller	Program Delivery Manager	Public Assistance

Bollig Inc

Preparers	Experience and Expertise	Role in Preparation
Josh Johnson, P.E.	Project Engineer	Project Management

Preparers	Experience and Expertise	Role in Preparation
Scott Kuhlman, P.E.	Project Engineer	Technical Lead

APPENDICES

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Appendix B **Floodplain Management Eight-Step Documentation**

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Appendix D **Agency Correspondence**

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Appendix F **Permits**

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Permits

Appendix G

Public Notice

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Public Comments

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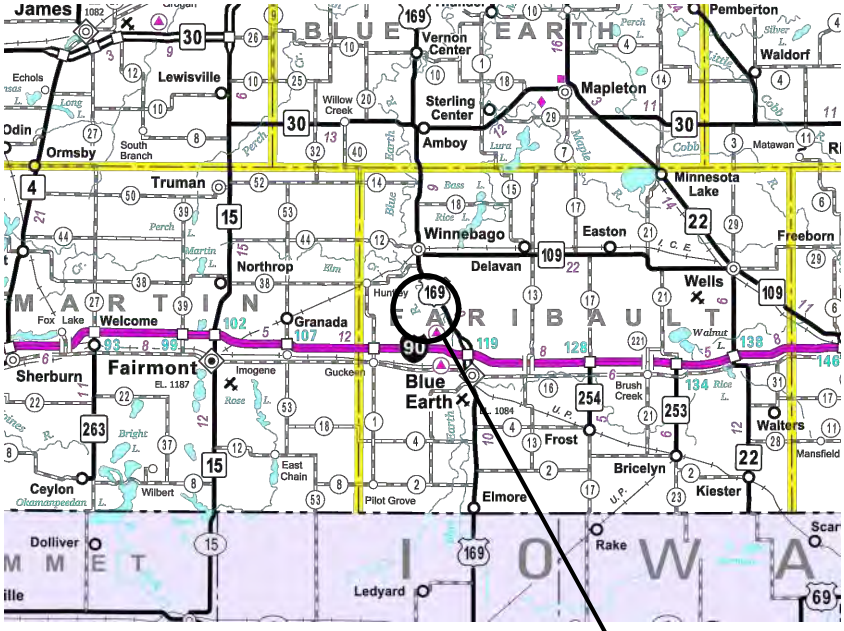
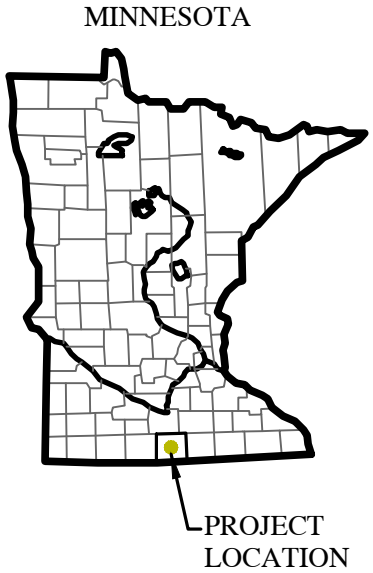
Maps and Figures





BOLLIGinc
engineering & environmental
Willmar, Minnesota
PH: 320.235.2555 FAX: 320.235.1986
www.bollig-engineering.com

Prepared for:

Verona Township

Project Location

Figure 1

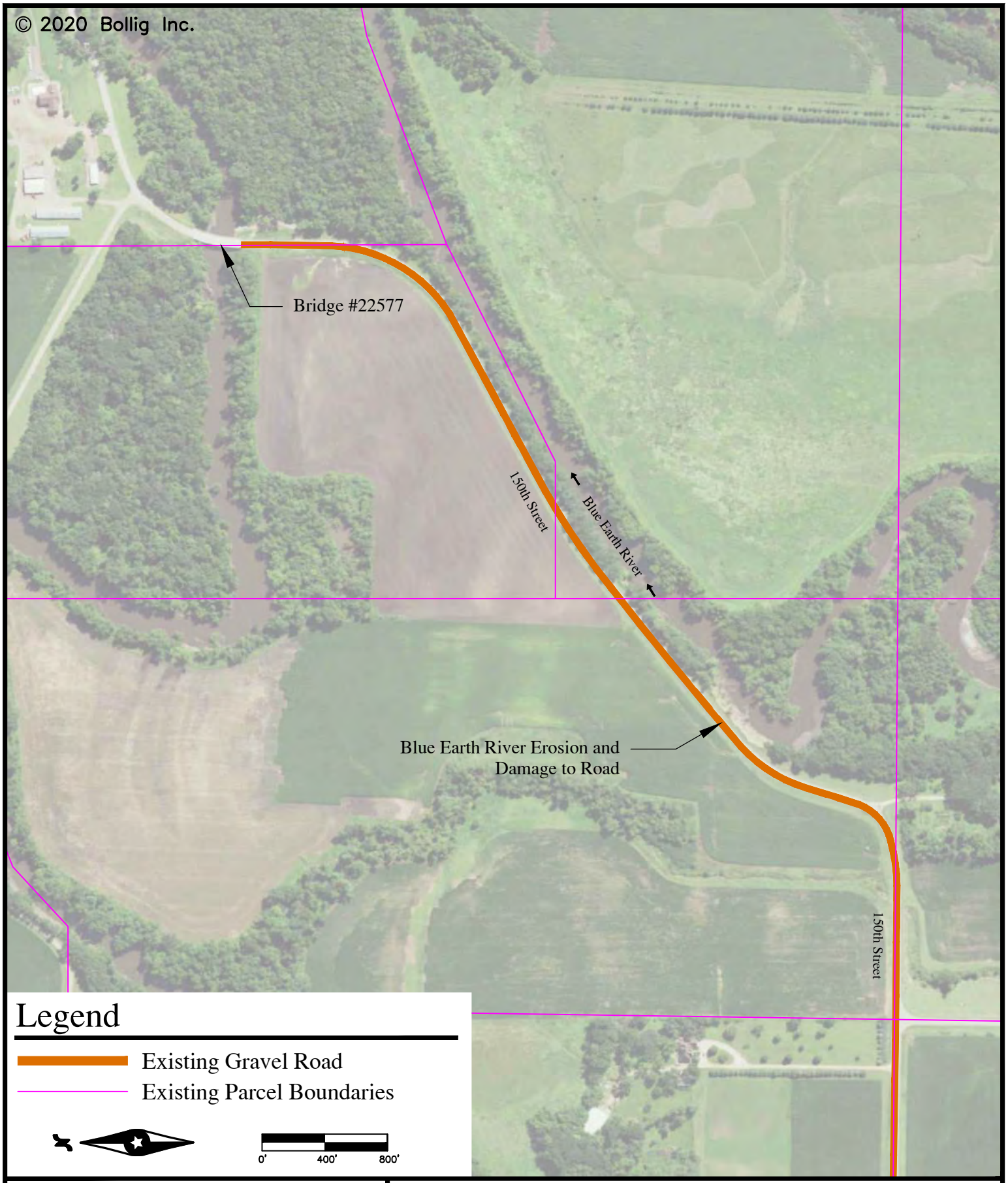


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Figure 2 - 150th Street Existing Alignment

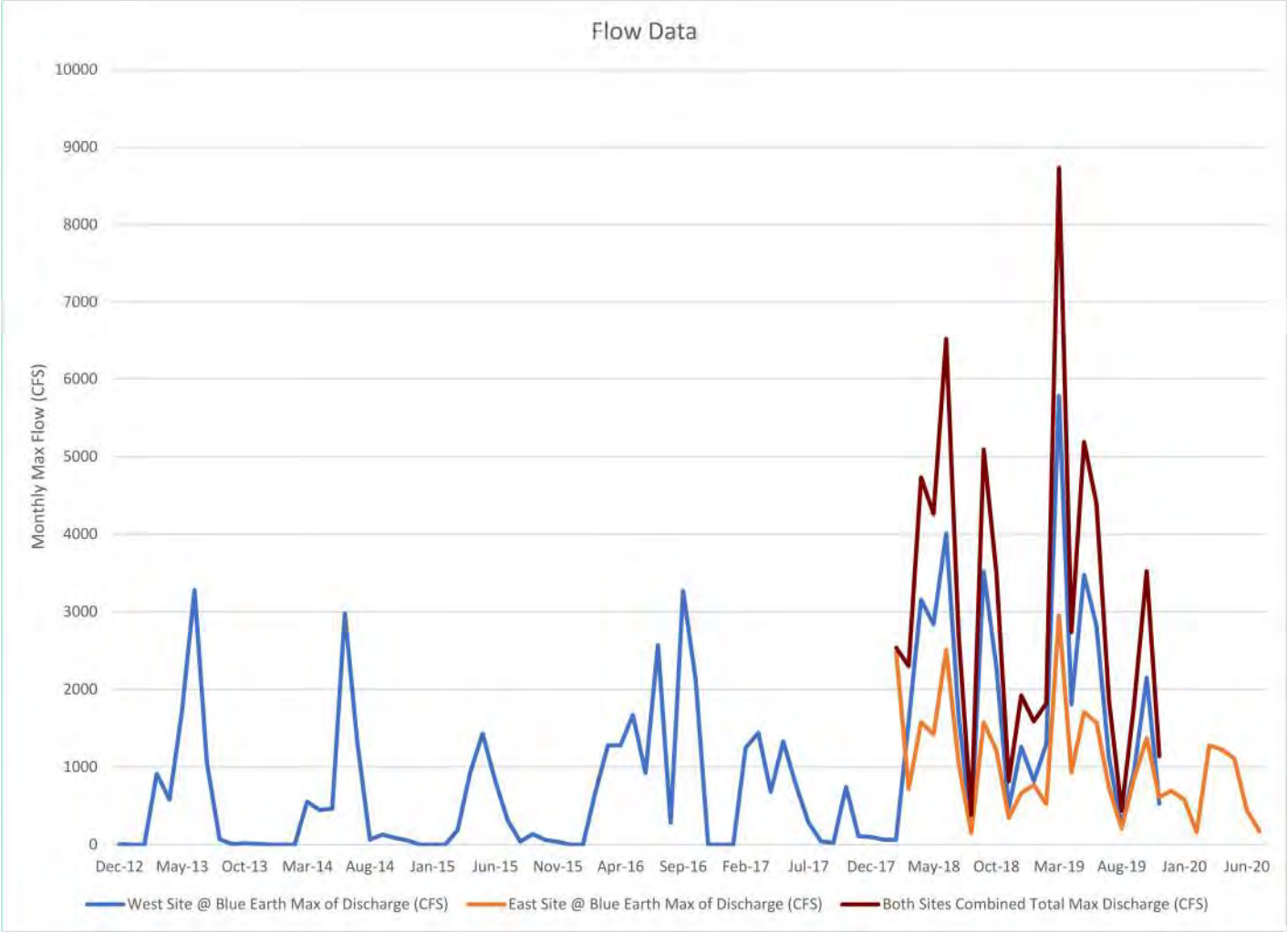

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Figure 3 - Blue Earth River Flows

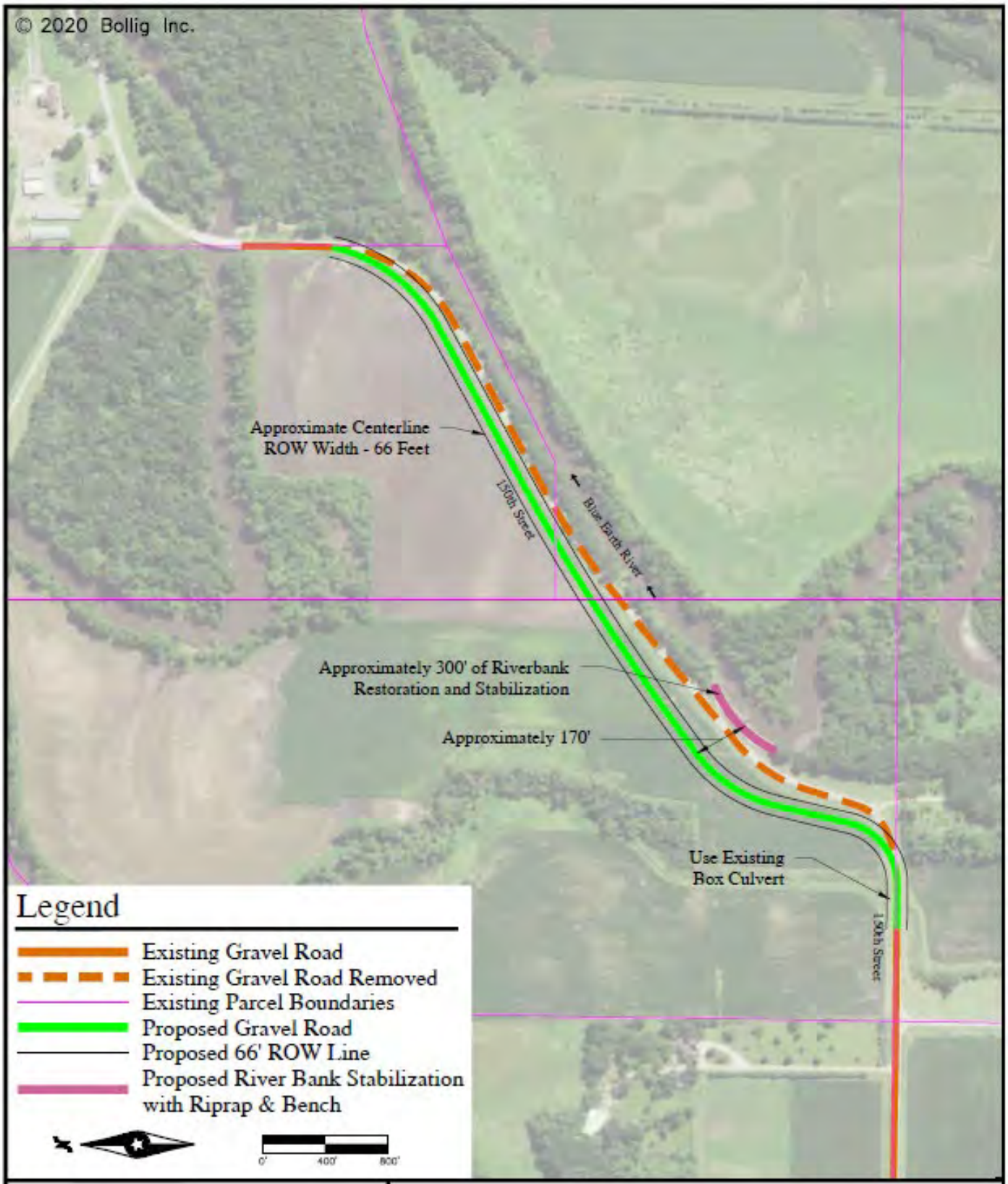

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Figure 4 - Proposed Road Realignment and Riverbank Stabilization

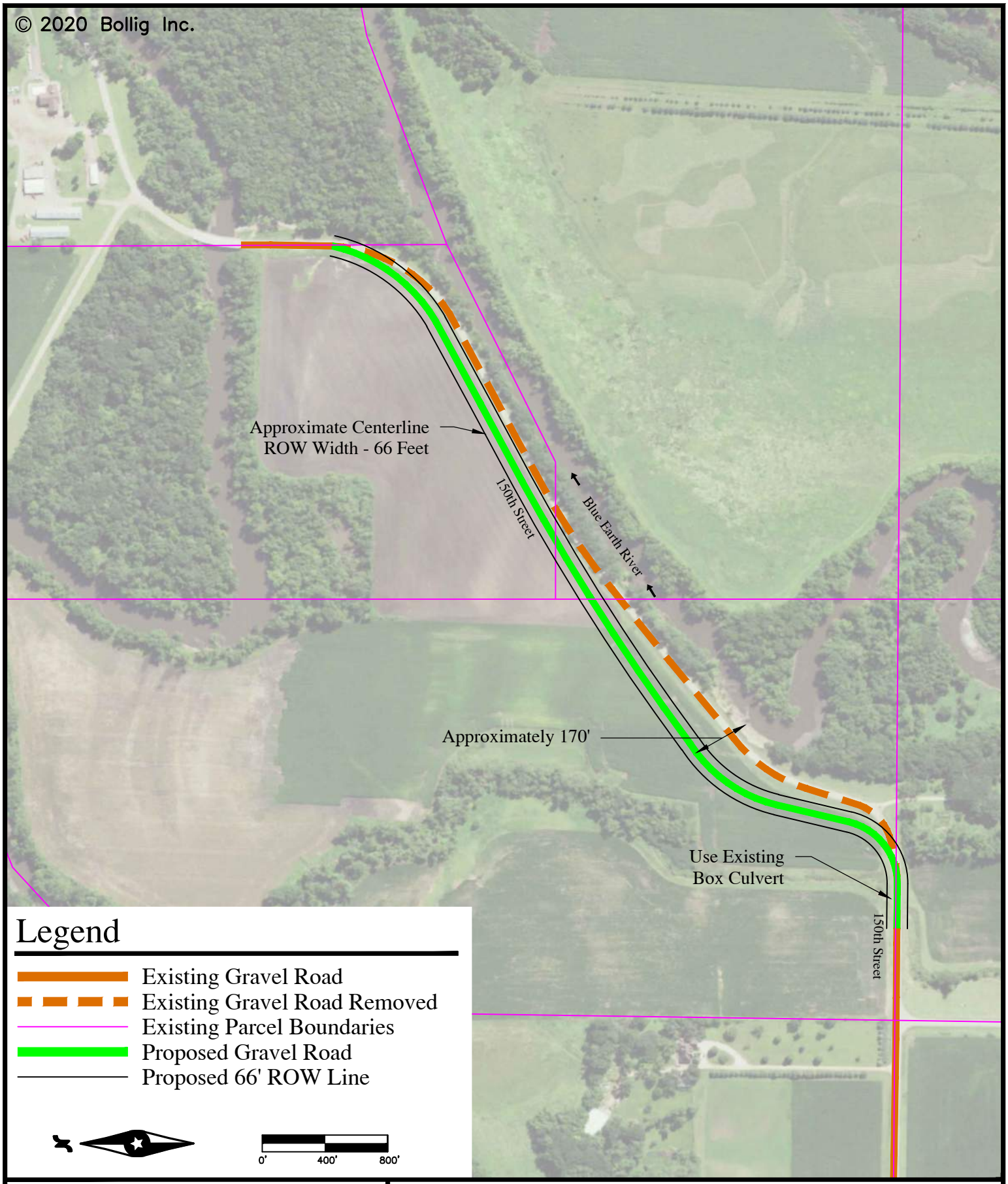

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Figure 5 - Proposed Road Realignment Only

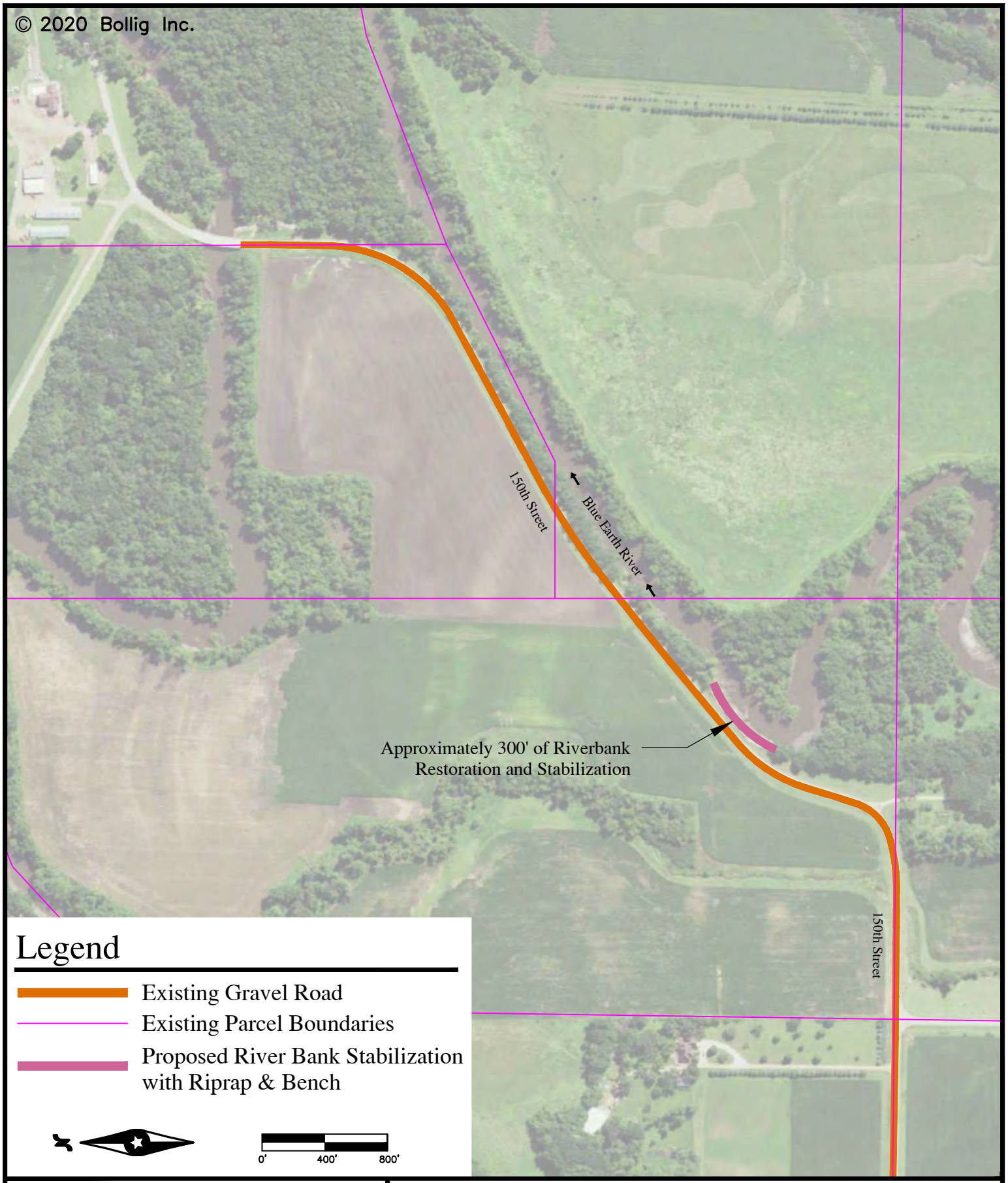

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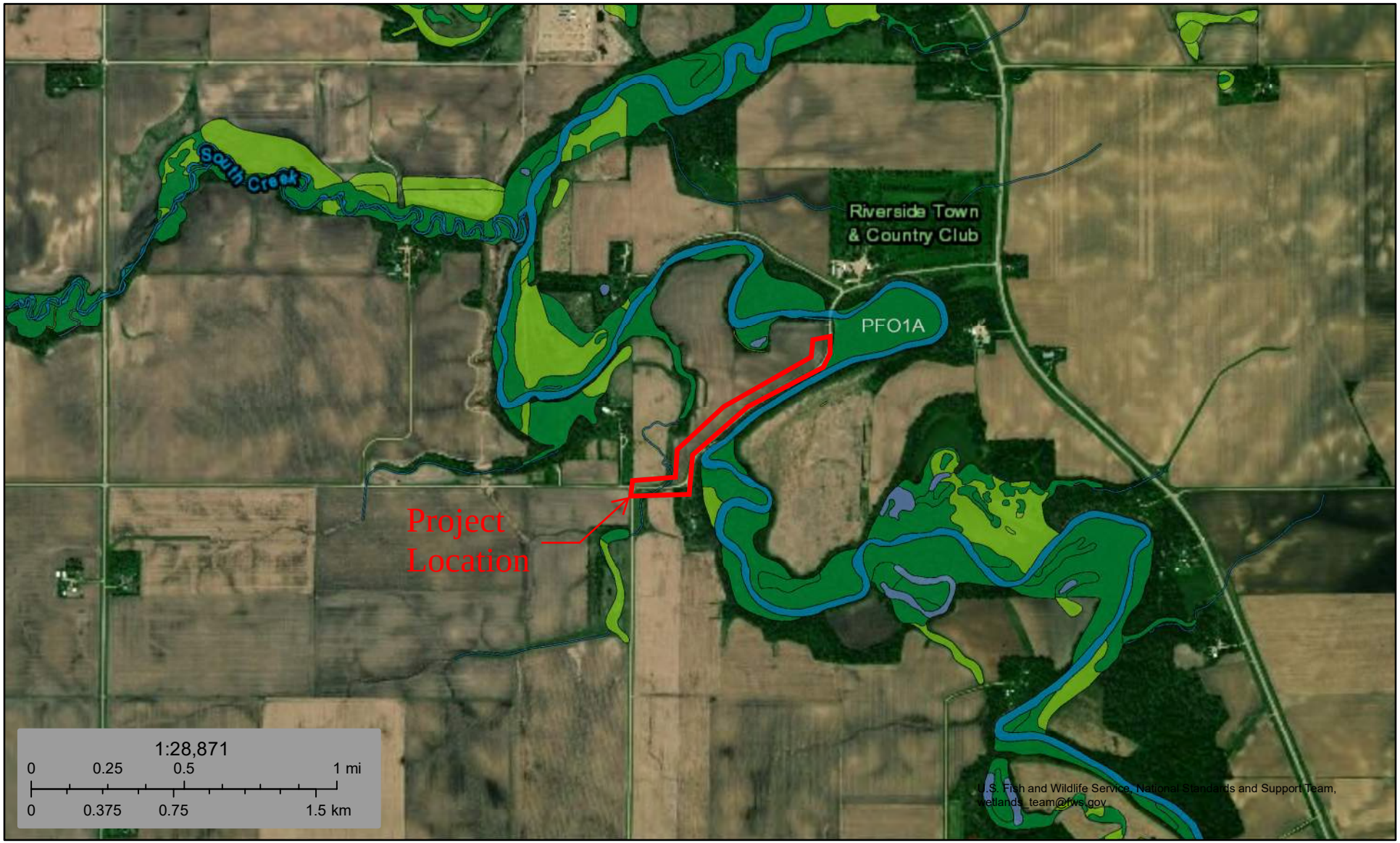
Figure 6 - Repair to Pre-Existing Conditions and Stabilize Bank

U.S. Fish and Wildlife Service
National Wetlands Inventory

Verona



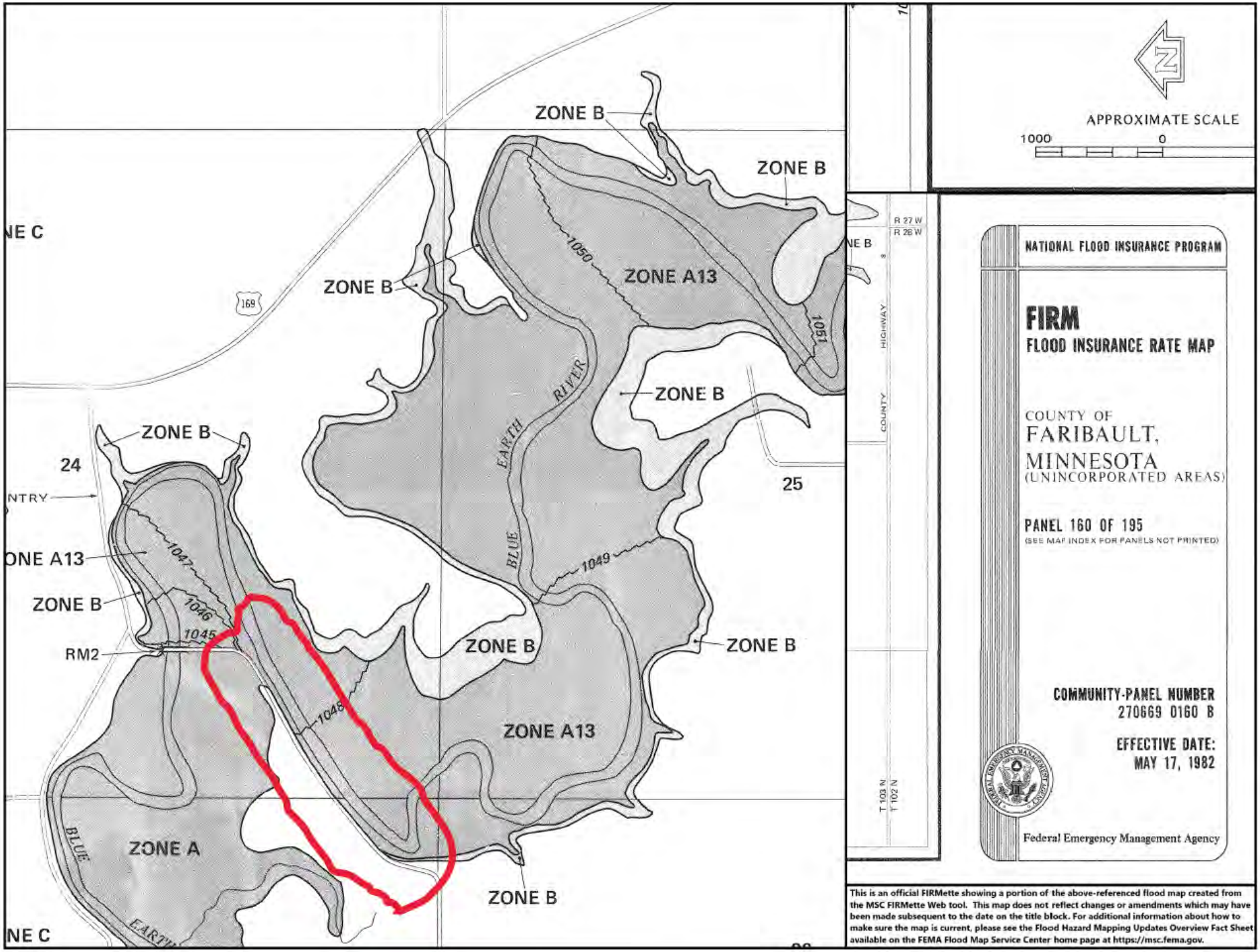
May 7, 2020

Wetlands

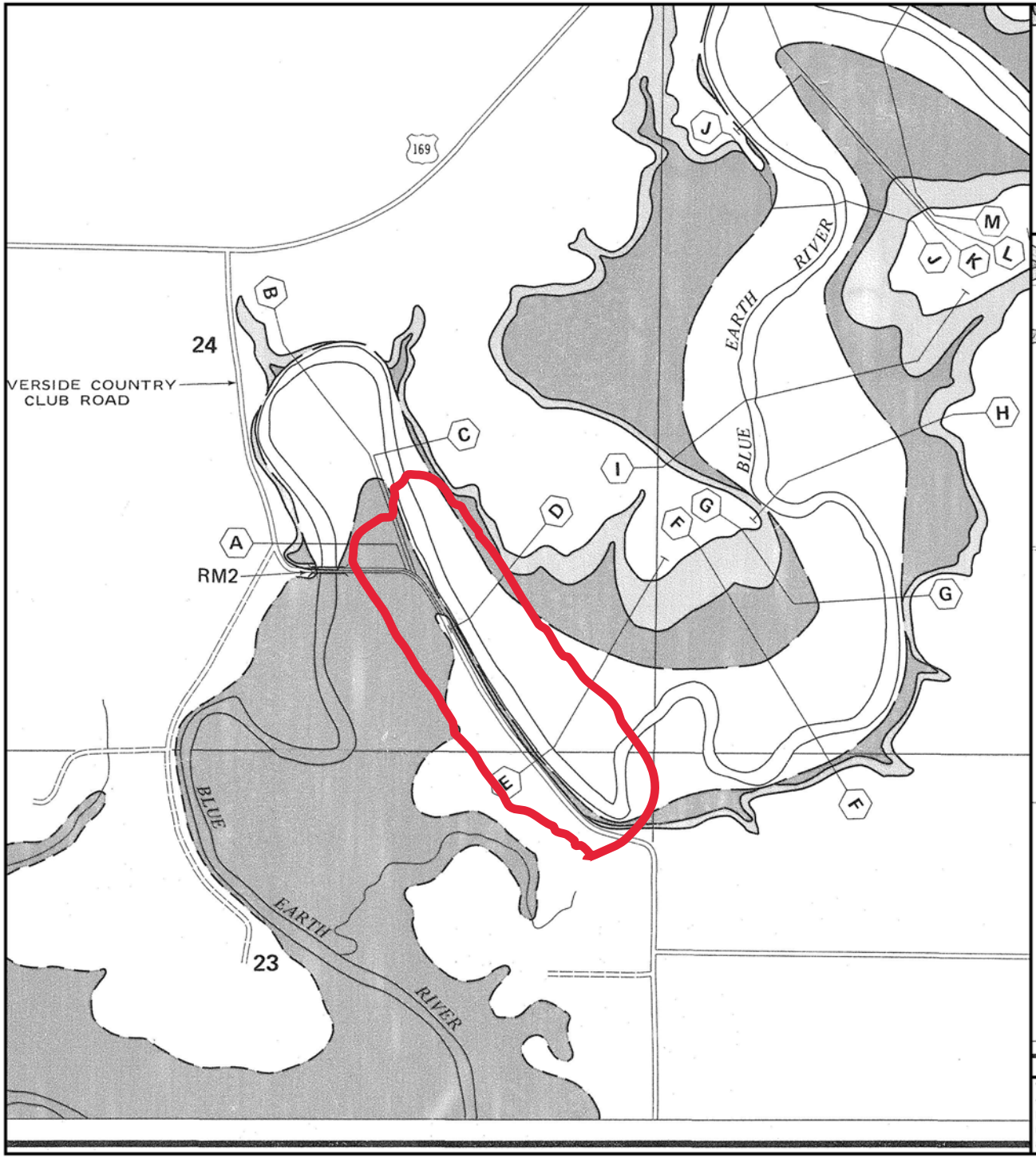
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

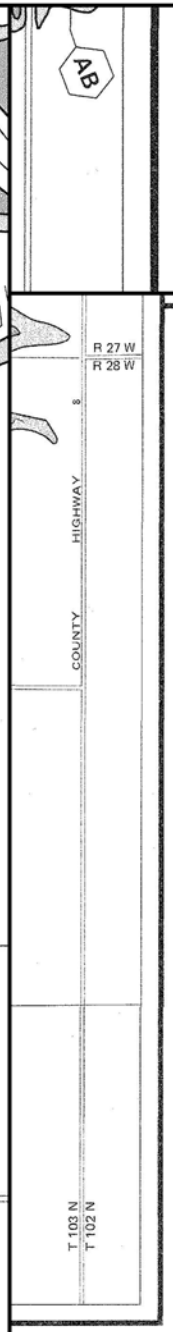
This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper



This is an official FIRMette showing a portion of the above-referenced flood map created from the MSC FIRMette Web tool. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For additional information about how to make sure the map is current, please see the Flood Hazard Mapping Updates Overview Fact Sheet available on the FEMA Flood Map Service Center home page at https://msc.fema.gov.





N

APPROXIMATE SCALE

1000 0

NATIONAL FLOOD INSURANCE PROGRAM

FLOODWAY

FLOOD BOUNDARY AND FLOODWAY MAP

COUNTY OF
FARIBAULT,
MINNESOTA
(UNINCORPORATED AREAS)

PANEL 160 OF 195
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
270669 0160

EFFECTIVE DATE:
MAY 17, 1982

Federal Emergency Management Agency

Appendix B

Floodplain Management Eight Step Documentation

EXECUTIVE ORDER 11988

FLOODPLAIN MANAGEMENT CHECKLIST (44 CFR Part 9)

TITLE: Verona Township Embankment on River

DR/PROGRAM: DR 4442/PA

PROJECT NO: 115472

DATE: 6/21/2021

REVIEWER: Portia Caldwell

PROPOSED ACTION: The Applicant proposes to realign sections 23 and 24 of 150th street (43.708192, -94.143163 to 43.702529, -94.152524) approximately 50 feet away from the Blue Earth River, remove damaged portions of the current road and stabilize the embankment with riprap. Total Cost $1,385,000

APPLICABLILITY: Actions which have the potential to affect floodplains or their occupants, or which are subject to potential harm by location in floodplains.

☐ **YES** ☒ **NO** The proposed action could potentially adversely affect the floodplain.

☒ **YES** ☐ **NO** The proposed action could potentially be adversely affected by the floodplain.

Remarks: This action is located with the Special Flood Hazard Area and the property has a known history of flood damage. Not moving the road may lead to additional future damages.

IF BOTH ANSWERS ARE NO, REVIEW IS COMPLETED, OTHERWISE CONTINUE WITH REVIEW.

Mark the review steps required per applicability: ☒ 1 / ☒ 2 / ☒ 3 / ☒ 4 / ☒ 5 / ☒ 6 / ☒ 7 / ☒ 8

CRITICAL ACTION: ☐ **YES** Review against 500 Year floodplain

☒ **NO** Review against 100 Year floodplain

SCOPE OF WORK: The proposed action is to realign 150th Street for approximately 3,000 linear feet, beginning at the south end of the existing Faribault County bridge over the Blue Earth River, and reconnect with the existing road alignment and associated ditches east of the 357th Avenue intersection. The existing roadway will be removed and restored with topsoil, plants and trees, and the existing riverbank would be stabilized using rip rap and bench.

STEP NO. 1: **Determine whether the proposed action is in the 100-year floodplain, or, for critical actions, in the 500-year floodplain.**

Flood Hazard Data

☒ **YES** ☐ **NO** The project is located within an “A” zone area of 100-year flooding, per Flood Insurance Rate Map (FIRM) panel # 2706690160B, dated 5/17/1982.

Wetland Data

☐ **YES** ☐ **NO** The project is located in a wetland as mapped by the U.S. Fish and Wildlife Service’s National Wetlands Inventory. Wetland Classification Code: Dated: .

☒ **YES** ☐ **NO** The proposed action may be in a wetland based on evaluation from soil surveys, aerial photographs, site visit or other data

☐ **YES** ☐ **NO** The project is outside of a designated wetland but has potential to affect the wetland, including support or encouragement of wetland development

IF ANY ANSWERS IS YES, CONTINUE WITH THE FOLLOWING STEPS; OTHERWISE REVIEW IS COMPLETE.

STEP NO. 2: Notify the public at the earliest possible time of the intent to carry out an action in a floodplain and involve the affected and interested public in the decision-making process.

☒ Notice was provided as part of a disaster cumulative notice.

Newspaper: Mankato Free Press

Date: July 23, 2019

☐ Project-specific notice provided.

Publication: *Click or tap here to enter text.*

Date: Click or tap here to enter text.

☐ Per allowances noted at 44 CFR Part 9.12(d)6, this notice is understood to meet the requirements of both Steps 2 and 7.

STEP NO. 3: Identify and evaluate practicable alternatives to locating the proposed action in a floodplain (including alternatives sites, actions and the "no action" option). If a practicable alternative exists outside the floodplain, FEMA must locate the action at the alternative site.

☐ **YES** ☒ **NO** Is there a practicable alternative site location outside of the floodplain / wetland?

Remarks: There is not a practicable alternative site location that relocates the entire roadway outside of the floodplain/wetland. The proposed realignment is approximately 3,000 linear feet, starting south of the existing bridge and will be offset 50 ft. away from the Blue Earth River, thus relocating a portion of the road outside of the floodplain/ wetland.

☐ **YES** ☒ **NO** Is there a practicable alternative action outside of the floodplain / wetland that will not affect the floodplain / wetland?

Remarks: There is not a practicable alternative action outside of the floodplain/ wetland. Although a portion of the road will be relocated outside of the floodplain/wetland, stabilization of the river embankment is required to prevent further erosion and road damage.

☐ **YES** ☒ **NO** Is the No Action Alternative the most practicable alternative?

Remarks: The No Action Alternative is not practicable. Storms and high stream flows would continue to damage the embankment, and lead to further deterioration of the roadway.

IF ANY ANSWER IS YES, THEN FEMA SHALL TAKE THAT ACTION AND THE REVIEW IS CONCLUDED.

STEP NO. 4: Identify and evaluate practicable alternatives to locating the proposed action in a floodplain (including alternatives sites, actions and the "no action" option). If a practicable alternative exists outside the floodplain, FEMA must locate the action at the alternative site.

☐ **YES** ☒ **NO** Is the Proposed Action based on incomplete information?

☒ **YES** ☐ **NO** Is the proposed action in compliance with the NFIP?

☐ **YES** ☒ **NO** Does the proposed action increase the risk of flood loss?

☐ **YES** ☒ **NO** Will the proposed action result in an increased base discharge or increase the flood hazard potential to other properties or structures?

☒ **YES** ☐ **NO** Does the proposed action minimize the impact of floods on human health, safety and welfare?

☐ **YES** ☒ **NO** Will the proposed action induce future growth and development, which will potentially adversely affect the floodplain?

☒ **YES** ☐ **NO** Does the proposed action involve dredging and/or filling of a floodplain?

☐ **YES** ☒ **NO** Will the proposed action result in the discharge of pollutants into the floodplain?

☒ **YES** ☐ **NO** Does the proposed action avoid long- and short-term adverse impacts associated with the occupancy and modification of floodplains?

☒ **YES** ☐ **NO** Will the proposed action result in any indirect impacts that will affect the natural values and functions of floodplains or wetlands?

☐ **YES** ☒ **NO** Will the proposed action forego an opportunity to restore the natural and beneficial values served by floodplains?

☒ **YES** ☐ **NO** Does the proposed action restore and/or preserve the natural and beneficial values served by floodplains?

☒ **YES** ☐ **NO** Will the proposed action result in an increase to the useful life of a structure or facility?

Remarks: The proposed action will relocate a portion of 150th Street outside of the floodplain, which will extend the useful life of the road. The damaged portion of the road will be removed to restore the natural and beneficial values served by the floodplains/ wetlands by placing topsoil and planting grasses and trees. Additionally, the embankment will be stabilized using riprap.

STEP NO. 5: Minimize the potential adverse impacts to or within floodplains identified under Step 4; restore and preserve the natural and beneficial values served by floodplains.

☐ **YES** ☐ **NO** For sites in the 500-Year floodplain, were flood hazard reduction techniques applied to the proposed action to minimize the flood impacts?

☒ **YES** ☐ **NO** Were avoidance and minimization measures applied to the proposed action to minimize the short and long-term impacts on the 100-Year floodplain?

☒ **YES** ☐ **NO** Were measures implemented to restore and preserve the natural and beneficial values of the floodplain?

Remarks: The Applicant will follow best management practices for erosion and sedimentation control during construction, in accordance with the Minnesota Pollution Control Agency (MPCA) construction stormwater National Pollution Discharge Elimination System (NPDES) general permit. Additionally, the damaged portion of the road will be removed to restore the natural and beneficial values of the floodplain/ wetland by placing topsoil and planting grasses and trees.

STEP NO. 6: Reevaluate the proposed action to determine first, if it is still practicable in light of its exposure to flood hazards, the extent to which it will aggravate the hazards to others, and its potential to disrupt floodplain values and second, if alternatives preliminarily rejected at Step 3 are practicable in light of the information gained in Steps 4 and 5. FEMA shall not act in a floodplain unless it is the only practicable location.

☒ **YES** ☐ **NO** The action is still practicable at a floodplain site considering the exposure to flood risk and ensuing disruption of natural values.

☒ **YES** ☐ **NO** The floodplain site is the only practicable alternative.

☐ **YES** ☒ **NO** There is no potential for limiting the action to increase the practicability of previously rejected sites outside the floodplain and alternative actions.

☒ **YES** ☐ **NO** Minimization of harm to or within the floodplain can be achieved using all practicable means.

☒ **YES** ☐ **NO** The action in a floodplain clearly outweighs the requirement of E.O. 11988.

Remarks: The Proposed Action is still practicable. It will realign a portion of the 150th Street outside of the floodplain and restore the natural and beneficial values of the damaged roadway and embankment. Additionally, the embankment stabilization will prevent further erosion, and reduce future adverse impacts to the road.

STEP NO. 7: Prepare and provide the public with a finding and public explanation of any final decision that the floodplain is the only practicable alternative.

☐ Per allowances noted at 44 CFR Part 9.12(d)6, notice provided under Step 2 is understood to meet the requirements of both Steps 2 and 7.

☒ Notice was provided as part of a disaster cumulative notice.

Newspaper: Mankato Free Press

Date: July 23, 2019

☐ Project-specific notice provided.

Publication: *Click or tap here to enter text.*

Date: Click or tap here to enter text.

AFTER PROVIDING THE FINAL NOTICE, FEMA SHALL, WITHOUT GOOD CAUSE SHOWN, WAIT AT LEAST 15 DAYS BEFORE CARRYING OUT THE PROPOSED ACTION.

STEP NO. 8: Review the implementation and post-implementation phases of the proposed action to ensure that the requirements stated in Section 9.11 are fully implemented. Oversight responsibility shall be integrated into existing processes (44 CFR §9.11).

☒ **YES** ☐ **NO** Was Grant conditioned on review of implementation and post-implementation phases to ensure compliance with EO 11988?

Remarks: The Applicant is required to coordinate with the local floodplain administrator regarding floodplain permit(s) prior to the start of any activities.

FAILURE TO COMPLY WITH CONDITIONS ENUMERATED IN THE RECORD OF ENVIRONMENTAL CONSIDERATION MAY JEOPARDIZE FEDERAL FUNDING.

Appendix C

Archeological Survey

Phase I Archaeological Survey of Proposed 150th Street Realignment and Bank Stabilization in Verona Township, Faribault County, Minnesota

Principal Investigators and Report Authors:

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Zooarchaeo Consulting, LLC
Registered Professional Archaeologist #18060

Final Report
May 31, 2021

Phase I Archaeological Survey of Proposed 150th Street Realignment and Bank Stabilization in Verona Township, Faribault County, Minnesota

Submitted To:

Neal Mensing
Verona Township

Submitted By:

Nienow Cultural Consultants LLC
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May 31, 2021

Management Summary

There is a proposed project including 300 feet of bank stabilization along Blue Earth River in association with relocating a portion of 150th Street in Verona Township, Faribault County, Minnesota. The project area, approximately 4 acres in size, is located in the SE ¼ of the SE ¼ of Section 23 Township 103N, Range 28W and NW ¼ of SW ¼ of Section 24 of Township 103N, Range 28W in Archaeological Region 2s: Prairie Lake South. The project area consists of agricultural fields northwest of existing 150th Street, and the bank of the Blue Earth River southeast of 150th Street.

Funding for the project is provided by the Federal Emergency Management Agency (FEMA) Public Assistance Program, which requires the completion of an Environmental Assessment. This Environmental Assessment includes the need for a Phase I Archaeological Review. Nienow Cultural Consultants LLC (NCC) was contracted to complete a Phase I Archaeological Survey in March of 2021. NCC's Principal Investigators for this project were Jeremy Nienow, Ph.D., RPA and Laura Koski, MSc, RPA. Work began with a literature review March 23 followed by fieldwork completed April 22 and May 24, 2021. Fieldwork completed on April 22 included completion of a pedestrian survey on a 5-meter interval along the proposed stretch of the 150th Street road realignment, four shovel tests along the required bank stabilization area, an additional fifth shovel test at a single find spot location identified during the surface survey, and a final sixth shovel test on a high point overlooking the find spot. Shovel tests were typically 35-40 centimeters (cm) wide and at least 60cm deep. All soils were screened through ¼" mesh screen, detailed profile notes completed, photographs taken, and GPS points collected for each shovel test. A single artifact was recovered on April 22. To complete additional surface survey around the find spot area with better ground visibility, NCC returned to the project area May 24 after the field had been planted, and completed a surface-survey on a seven to ten-meter interval surrounding the find spot area and further southwest across the proposed road realignment.

A single prehistoric archaeological site was identified during the April 22 field survey. It is represented by a single lithic projectile point. No additional cultural materials were identified during the follow-up survey on May 24, 2021. This artifact has been reported to the Office of the State Archaeologist and received site number 21FA0164. This site is not considered eligible for the National Register of Historic Places. Based on these results, Nienow Cultural Consultants recommends no further archaeological work be completed.

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1.0 INTRODUCTION

There is a proposed project including 300 feet of bank stabilization along Blue Earth River in association with relocating a portion of 150th Street in Verona Township, Faribault County, Minnesota (Figure 1). The project area, approximately 4 acres in size, is located in the SE ¼ of the SE ¼ of Section 23 Township 103N, Range 28W and NW ¼ of SW ¼ of Section 24 of Township 103N, Range 28W in Archaeological Region 2s: Prairie Lake South. The project area consists of agricultural fields northwest of existing 150th Street, and the bank of the Blue Earth River southeast of 150th Street (Figure 2).

Funding for the project is provided by the Federal Emergency Management Agency (FEMA) Public Assistance Program, which requires the completion of an Environmental Assessment. This Environmental Assessment includes the need for a Phase I Archaeological Review. Nienow Cultural Consultants LLC (NCC) was contracted to complete a Phase I Archaeological Survey in March of 2021. NCC's Principal Investigators for this project were Jeremy Nienow, Ph.D., RPA and Laura Koski, MSc, RPA. NCC contracted an additional three individuals to assist in completing research, fieldwork, and lab processing for the project: Alex Hedquist (Hedquist Archaeological Consulting, LLC), Fred Sutherland (Sutherland Relics and Rust LLC), and John Strot (John's Archaeological Consulting). The investigation was guided by the Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation (48FR44716), the State Historic Preservation Office's (SHPO) Manual for Archaeological Projects in Minnesota (Anfinson 2005), and the State Archaeologist's Manual for Archaeological Projects in Minnesota (Minnesota Office of the State Archaeologist 2011). Research and report preparation were accomplished by professional archaeologists meeting the standards set forth in 35CFR61.

Work began with a literature review March 23 followed by fieldwork completed April 22 and May 24, 2021. Fieldwork completed on April 22 included completion of a pedestrian survey on a 5-meter interval along the proposed stretch of the 150th Street road realignment, four shovel tests along the required bank stabilization area, an additional fifth shovel test at a single find spot location identified during the surface survey, and a final sixth shovel test on a high point overlooking the find spot. Shovel tests were typically 35-40 centimeters (cm) wide and at least 60cm deep. All soils were screened through ¼" mesh screen, detailed profile notes completed, photographs taken, and GPS points collected for each shovel test. A single artifact was recovered on April 22. To complete additional surface survey around the find spot area with better ground visibility, NCC returned to the project area May 24 after the field had been planted, and completed a surface-survey on a seven to ten-meter interval surrounding the find spot area and further southwest across the proposed road realignment.

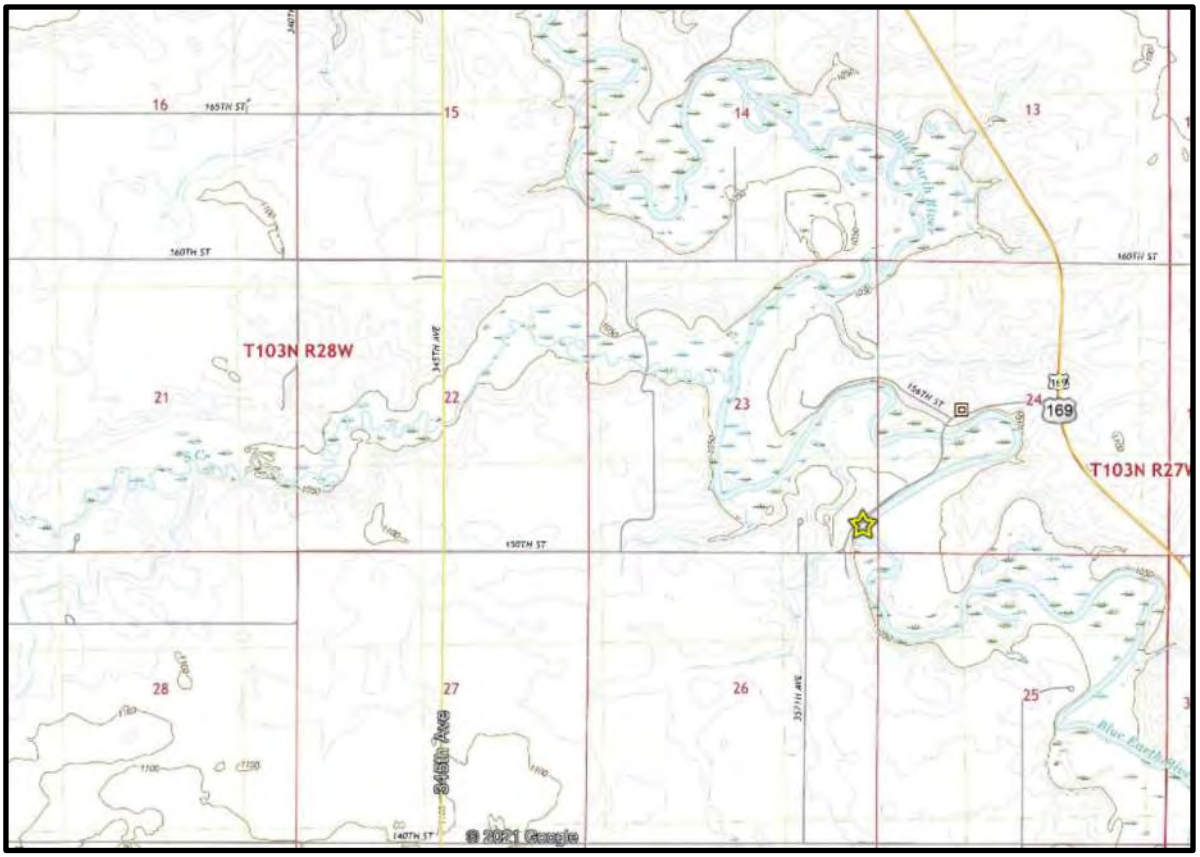

Figure 1: USGS Topographic Map Illustrating Project Area (starred).
(USGS 7.5' Topographic Map, Huntley Quadrangle, 2019, 1:24,000)

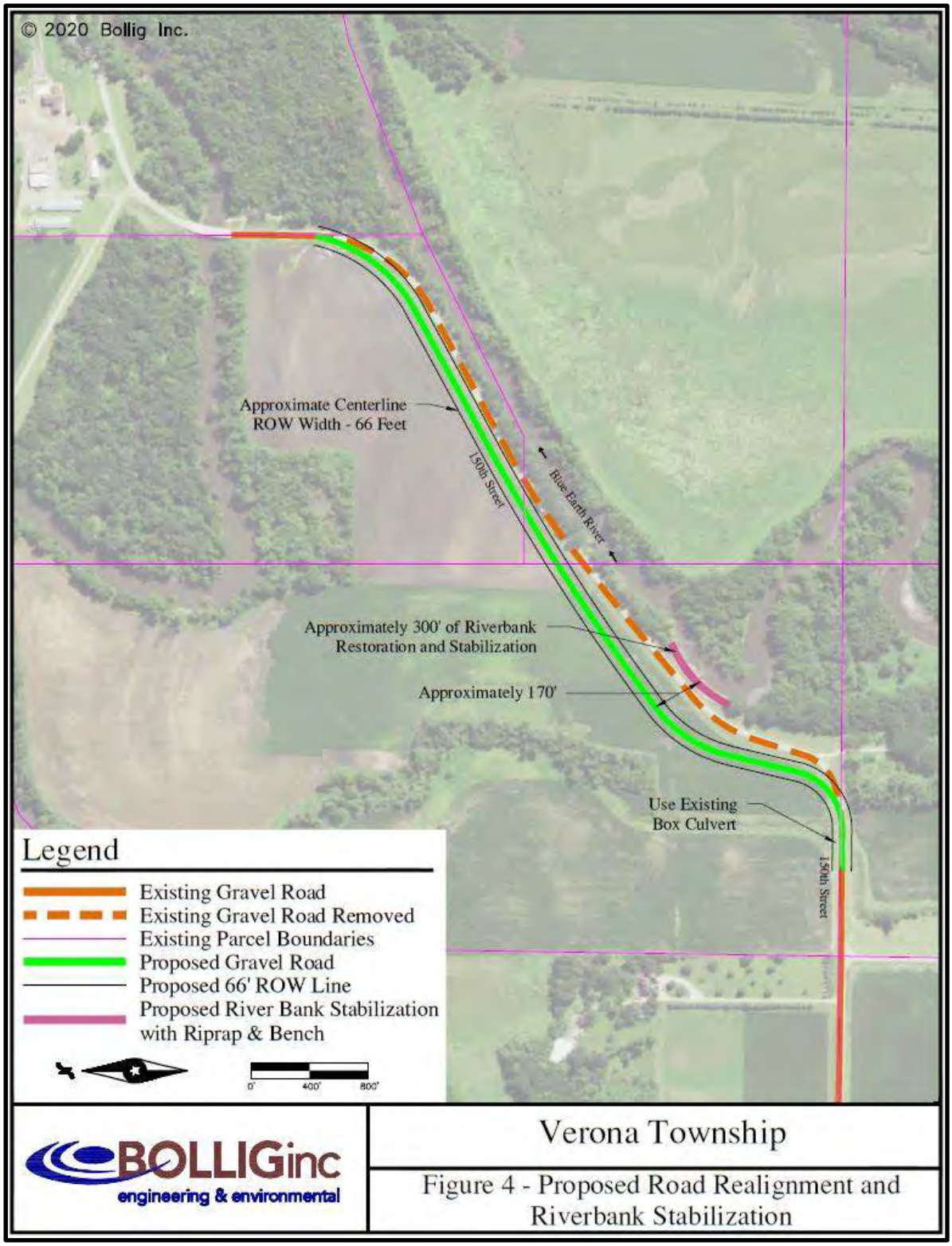

Figure 2: Sketch Plan of Project Area.
(Provided by Bollig Engineering)

2.0 RESEARCH DESIGN AND METHODOLOGY

2.1 Literature Review

A literature review was completed on March 23, 2021. Typically, the literature review would be completed by visiting the Office of the State Archaeologist and the State Historic Preservation Office. Unfortunately, both of these offices were closed due to safety precautions surrounding SARS-CoV-2 spread prevention. Instead, previously identified archaeological sites were noted for a two-mile radius surrounding the project area using the online Minnesota Office of the State Archaeologist archaeological sites portal (OSA Portal). In addition, the Township/Range/Sections within the two-mile radius were sent to the State Historic Preservation Office to generate an internal database archaeological and architectural sites search. The Township/Range/Section search did not yield any additional sites not included on the OSA Portal.

2.2 Fieldwork

Fieldwork was completed April 22 and May 24, 2021. Fieldwork completed on April 22 included completion of a pedestrian survey on a 5-meter interval along the proposed stretch of the 150th Street road realignment and the excavation of six total shovel tests. Four shovel tests were along the required bank stabilization area, an additional fifth shovel test at a single find spot location identified during the surface survey, and a final sixth shovel test on a high point overlooking the find spot. Shovel tests were typically 35-40 centimeters (cm) wide and at least 60cm deep. All soils were screened through ¼" mesh screen, detailed profile notes completed, photographs taken, and GPS points collected for each shovel test. The May 24 survey consisted of a tight interval surface-survey on a seven to ten-meter interval surrounding the find spot area and further southwest across the proposed road realignment after the field had been freshly plowed.

2.3 Artifact Processing

When the single artifact was identified during the initial survey, it was bagged and a GPS point was recorded for its location. In the lab, the artifact was washed, photographed, lotted, and cataloged. The artifact and its location has been reported to the Minnesota OSA as an archaeological site. The OSA has assigned it site number 21FA0164. The landowner will be contacted first to determine if they would like the artifact returned to them. If they do not want the artifact, it will be curated with MNHS.

3.0 ENVIRONMENTAL SETTING

3.1 Geological Background and Soils

In his 1990 publication *Archaeological Regions in Minnesota and the Woodland Period*, former State Archaeologist Scott Anfinson divides the state of Minnesota into nine environmental-archaeological regions based on natural resources available within each region. This classification allows archaeologists to research and analyze prehistoric environments in the state, as well as predict where archaeological sites may be located.

The project area falls within the eastern portion of Anfinson's region 2s: Prairie Lake south Sub-Region. The region sits within central to western-southern Minnesota, spanning Faribault to Grant Counties. Topographically, the region consists of ground moraines with hilly end moraines found along the northern, eastern, and southern edges of the region along with numerous lake basins. The major river in the region is the Minnesota, bisecting the region from east to west and acting as the major stream drainage system for the majority of the region's streams. Average precipitation ranges from 28 inches per year in the southeast to 22 inches per year in the northwest. High winter temperatures average at around 24 degrees Fahrenheit (F) while average high summer temperatures reach approximately 85 degrees F. The frost-free season ranges from 140 to 160 days (Anfinson 1990).

Approximately 14,000 years ago, the entire region was covered by glacial ice during the Late Wisconsin maximum. At approximately 12,500 years ago, the Des Moines lobe began to retreat from the region, and the region was mostly ice free by 11,700 years ago. Soils in the region would have been deposited during this time, and alluvial soils associated with proglacial lakes Lake Minnesota and Lake Benson should be notable in those areas. Soil texture in the central and western part of the region ranges from medium to fine prairie soils, and fine to medium textured prairie border soils in the eastern part of the region (Anfinson 1990). Bedrock outcrops are rare in the Prairie Lake region, especially those with quality stone tool material. Occasional outcrops of Paleozoic rocks containing high quality chert occur in the eastern part of the region near the confluence of the Blue Earth and Minnesota Rivers. The western part of the region contains some outcrops of Sioux Quartzite in Cottonwood County. Otherwise, granites and poorly consolidated Cretaceous rocks can be found in the Minnesota River Valley (Anfinson 1990).

The project area is comprised of five soil series: Coland clay loam, Lomax loam, Grogan silt loam, Dickinson fine sandy loam, and Shorewood silty clay loam. The Coland clay loam series consists of poorly drained soils on 0 to 2 percent slopes found on flood plains. The series contains clay loam from 0 to111cm, followed by loam from 111 to 200cm. The Lomax loam series consists of well drained soils found on terraces. The complex contains loam from 0 to 86cm, followed by sandy loam from 86 to 152cm. The Grogan silt loam series consists of well drained soils on 1 to 6 percent slopes found on hills on lake plains. The typical profile for the series contains silt loam from 0 to 46cm, followed by very fine sandy loam from 46 to 76cm, and finally stratified loamy very find sand to silt loam from 76 to 152cm. The Dickinson fine sandy loam series consists of well drained soils on 0 to 6 percent slopes found on outwash plains. The series typically contains fine sandy loam from 0 to 99cm, followed by loamy fine sand from 99 to 152cm. The Shorewood

silty clay loam series consists of moderately well drained soils on 6 to 12 percent slopes found on hills on lake plains. The typical soil profile for the series contains silty clay loam from 0 to 23cm, silty clay from 23 to 74cm, and silty clay loam from 74 to 152cm (NRCS 2021).

3.2 Regional Flora and Fauna

During the Early Prehistoric, the spruce forest dominant throughout the region was succeeded by mixed deciduous forests comprised primarily by birch and alter and later by oak and elm. By approximately 9,000 years ago, at the beginning of the Middle Prehistoric, prairie encroached into the southwestern part of the region and soon dominated. About 5,000 years ago as the climate cooled, oak woodlands became more prominent in the eastern part of the region. The prairie-forest border as it was known to Euro-American settlers was established by approximately 2,500 years ago with a mix of Big Woods vegetation (elm, maple, basswood) pushing out the northeastern oak woodlands approximately 300 years ago. At the time of Euro-American settlement, the region was dominated by tallgrass prairie with narrow river bottom forests and oak woods along the major river valleys.

During the Early Prehistoric, the region was likely home to now-extinct megafauna. Bison would have likely been a major resource during the Middle Prehistoric, and were documented as the dominant upland fauna during the Early Historic period with scattered large elk herds. Other fauna included deer along the prairie-forest border, and various fish and waterfowl within the Minnesota River Valley.

4.0 CULTURAL HISTORY

The Minnesota State Historic Preservation Office (SHPO) has developed statewide contexts examining Minnesota's Prehistoric through recent past. These contexts are laid out on the Minnesota Archaeological Site Form (Minnesota Office of the State Archaeologist 2016). Generally, they describe the history of the state and assist in predicting where specific types of sites may occur.

Native American contexts are commonly divided into three major traditions: Paleoindian, Archaic, and Woodland. Late Woodland is further subdivided into Plains Village, Mississippian, and Oneota Traditions. These divisions are based on significant changes in how these communities lived, with a special focus on subsistence strategies. Historic contexts are generally divided into Contact and Post-Contact periods. The Contact period begins with early European exploration and continues through the Post-Contact period including Euro-American settlement and Minnesota statehood. The following is a general summary of these traditions using the Author's general knowledge and various disseminated sources for information including the OSA's website, Elden Johnson's 1988 *The Prehistoric Peoples of Minnesota*, Gibbon and Anfinson's 2008 *Minnesota Archaeology: The First 13,000 Years*, and Gibbon's 2012 *Archaeology of Minnesota: The Prehistory of the Upper Mississippi River Region*.

4.1 Pre-Contact Period

4.1.1 Paleoindian Tradition (11,500 to 7,500 B.C.)

The Paleoindian Tradition in Minnesota is divided into two periods: Early Paleoindian and Late Paleoindian/Early Archaic (Gibbon and Anfinson 2008). Throughout the Paleoindian, Native American communities were small, mobile, and focused on hunting. However, between the early and late periods, the environment and available food resources changed dramatically. The beginning of the Early Paleoindian Tradition is characterized by retreat of glacial ice and the growth of spruce forests. During this time, now extinct megafauna like mastodon, mammoth, and large bison were available for hunting. The Early Paleoindian period is poorly understood in Minnesota because most evidence for Paleoindian lifeways comes from isolated finds of large fluted projectile points (Gibbon and Anfinson 2008). Based on more plentiful sites in the southeastern and southwestern portions of the United States, it is generally assumed Native American populations were small, consisting of highly-mobile hunters and foragers who followed large game throughout the landscape (Gibbon and Anfinson 2008).

By the Late Paleoindian period, modern vegetation zones had established themselves in Minnesota. Modern animal species like white tail deer, grouse, and fish were available for Native American communities to hunt and fish. Lithic tool evidence from Late Paleoindian sites in Minnesota take the form of stemmed rather than fluted points and a wider range of tool types including groundstone tools (Gibbon and Anfinson 2008). Again, lifeways during this time are poorly understood, but based on three well-documented sites found in Minnesota (Cedar Creek-21AK58, Bradbury Brook-21ML42, and Browns Valley-21TR5), communities are still small, highly-mobile and focused on hunting larger animals and foraging for wild plants. However, stone toolkits did diversify and communities began exploiting smaller territories. It is also likely populations started to increase (Gibbon and Anfinson 2008).

4.1.2 Archaic Tradition (7,500 to 800 B.C.)

The Archaic Tradition continues the trend of resource diversification startied in the Late Paleoindian period. Native American communities developed broader toolkits, used a wider array of foods, and became less mobile over the course of the Archaic. Additionally, by the end of the Archaic, communities were using communal burial sites. Stemmed and notched points, groundstone tools, particularly those for woodworking, and cold-hammered copper tools are hallmarks of the Archaic Tradition in the archaeological record (Anfinson 1997; Gibbon and Anfinson 2008). By the end of this period the climate shifted to a cooler, wetter pattern up until the strong, human-driven, warmer climates of the modern era. Resource gathering technologies during the Archaic included the aforementioned hunting, as well as trapping, fishing, foraging, woodworking and plant processing. Many of the larger, documented sites in the central portion of the state likely began during the end of this period.

4.1.3 Woodland Tradition (800 B.C. to European Contact)

In the Midwest region, archaeologists tend to divide the Woodland Tradition into three periods: Early, Middle, and Late. However, Anfinson (1987) and Gibbon (2012) suggest in Minnesota it is more appropriate to divide the era into Initial and Terminal Woodland periods. This view is not as widespread as research would at first suggest, with work including Arzigian's *Statewide Multiple Property Documentation Form for the Woodland Tradition* (2008), and Buhta et. al. *On the Periphery?: Archaeological Investigations of the Woodland Tradition in West- Central Minnesota* (2014), retaining the more traditional use of Early, Middle, and Late designations. Beginning approximately 2,800 years ago, peoples in the region experienced increases in population with the advent of first horticultural and then agricultural subsistence strategies to augment already extant systems of hunting, gathering, etc. As populations increased, settlements near favorable transportation and resource corridors shifted from seasonal to year-round occupations as they made forays to collect necessary resources (Johnson 1988; Anfinson 1987:222).

The period also witnessed the technical transition from spear/atlatl to bow and arrow weaponry useful for both hunting and warfare. This change in technology lead to the use of smaller projectile points or arrow heads. Similarly, the period also saw the invention of ceramic vessels and it is these vessels and their change over time, from thick walled, grit tempered, conoidal vessels, to thinner walled, shell tempered, globular vessels, which has greatly assisted the archaeological community in further refining their understanding of group identity, cohesion, and integration throughout the region. Indeed, there are more than ten major recognized ceramic complexes for the state with many temporal overlaps, often based more on location than visual representation. A final example representing not only identity and permanence on the landscape, but also religious practices, was the use of earthen burial mounds. Although community size was likely similar between the Early Woodland and Late Archaic periods, by the Late Woodland period, populations were certainly on the rise.

4.2 Contact/Post-Contact Period (1630 A.D. to Present)

This period generally refers to the span of time extending from the first European explorations until intensive Euro-American settlement of the region. Minnesota's historic period began in 1673 when French explorers Marquette and Joliet discovered the upper portion of the Mississippi River. Ten years later, Catholic Missionary Father Louis Hennepin told his story of exploring Minnesota and being held captive by Dakota Indians in the first book written about Minnesota, *Description de la Louisiane* (Hennepin 1683).

The territory containing modern-day Minnesota was claimed at various periods of time by Spain, France, Great Britain, and the United States. Lieutenant Zebulon Montgomery Pike led the first United States expedition through the area in 1805, which would ultimately become Minnesota in 1858. Fort St. Anthony (later Ft. Snelling) was completed between 1819 and 1824, and in 1836 the Wisconsin Territory, including a portion of Minnesota, was formed. Just one year later, on September 29th, 1837, during treaty negotiations in Washington, D.C., Dakota leaders ceded their

lands between the Mississippi and St. Croix Rivers.

The fur trade drove much of European exploration and settlement into Minnesota prior to territorial frontier settlement in the mid-1800s. While the fur trade impacted Native American communities throughout all of Minnesota, the heaviest impacts came with later Euro-American settlement. Intensive settlement and agriculture dramatically transformed the landscape, displacing large numbers of Native Americans and their communities. In 1862 tensions between white settlers and Native Americans resulted in the Dakota War. Ultimately, this war left 462 whites and "an unknown but substantial number" of Native Americans dead (Anderson and Woolworth 1988). The conflict concluded with the largest mass execution in United States history with the hanging of 38 Dakota on December 26, 1862 at Mankato and the deportation of remaining tribal members to Santee, Nebraska.

Native American archaeological site types associated with this period are generally consistent with those of earlier periods, but European and Euro-American traders, missionaries, settlers, and industries affected the locations of these sites. This period also includes Euro-American immigrant settlement patterns, subsistence activities, and economic strategies. Sites associated with Euro-American immigrants appear in the mid-nineteenth century. Associated archaeological and historic site types categorized in the Contact/Post-Contact period include standing structures as well as archaeological sites.

5.0 LITERATURE REVIEW

Twenty-six previously identified archaeological sites and one alpha site are located within two miles of the project area (Table 1). Alpha sites are possible archaeological sites which have been reported as *potential* sites based on mentions in literature, historic mapping (i.e. the 1874 Andreas Atlas), or by individuals reporting casually finding cultural materials; these sites have yet to be field verified through systematic archaeological research and survey.

Table 1. Previously Identified Archaeological Sites Within Two Miles

Site Number	Site Name	Site Description	Cultural Affiliation	Miles from Project Area	TRS
21FA0063	-	Artifact Scatter	Pre-Contact	0.03	SE ¼ of SE ¼ T103N, R28W, S23
21FA0062	-	Artifact Scatter	Pre-Contact: Oneota	0.1	NW ¼ of SE ¼ and SW ¼ of NE ¼ of SE ¼ T103N, R28W, S23
21FA0049	-	Lithic Scatter	Pre-Contact	0.45	SE ¼ of SW ¼ of NE ¼ T103N, R28W, S23
21FA0155	-	Single Artifact	Pre-Contact	0.51	NE ¼ of SW ¼ of T103N, R28W, S23

Table 1. Previously Identified Archaeological Sites Within Two Miles

Site Number	Site Name	Site Description	Cultural Affiliation	Miles from Project Area	TRS
21FA0154	-	Lithic Scatter	Pre-Contact	0.57	NE ¼ of SW ¼ of T103N, R28W, S23
21FA0060	-	Artifact Scatter	Pre-Contact: Oneota	0.59	NW ¼ of SE ¼ of SW ¼ of T103N, R28W, S23
21FA0061	-	Artifact Scatter	Pre-Contact: Oneota	0.62	NE ¼ of SW ¼ of T103N, R28W, S23
21FA0096	-	Lithic Scatter	Pre-Contact	0.64	T103N, R28W, S23
21FA0095	-	Artifact Scatter	Pre-Contact	0.7	NW ¼ of NW ¼ of NE ¼ of SW ¼ of T103N, R28W, S23
21FA0110	Moran	Lithic Scatter	Pre-Contact	0.77	SE ¼ of NW ¼ of SE ¼ of T103N, R28W, S24
21FA0042	-	Lithic Scatter	Pre-Contact: Oneota	0.78	SE ¼ of NW ¼ of T103N, R28W, S23
21FA0046	-	Lithic Scatter	Pre-Contact	0.85	NW ¼ of NW ¼ of NE ¼ of T103N, R28W, S23
21FA0041	-	Artifact Scatter	Pre-Contact	0.87	SW ¼ of NE ¼ of NW ¼ of T103N, R28W, S23
21FA0109	Riverside County Club	Lithic Scatter	Pre-Contact	0.89	SW ¼ of NW ¼ of NE ¼ of T103N, R28W, S24
21FA0040	Durkee	Artifact Scatter	Pre-Contact: Late Woodland	1.02	SW ¼ of NW ¼ of NW ¼ of T103N, R28W, S23
21FA0147	Morse	Artifact Scatter	Pre-Contact and Post-Contact	1.02	SW ¼ of SE ¼ of T103N, R28W, S14
21FA0050	-	Habitation	Pre-Contact: Mississippian/Oneota	1.04	N ½ of SE ¼ of SE ¼ of T103N, R28W, S14
21FA0108	Poverty Acres	Artifact Scatter	Pre-Contact	1.18	T103N, R28W, S13
21FA0146	-	Single Artifact	Not Determined	1.19	NE ¼ of SW ¼ of T103N, R28W, S14
21FA0107	Perry	Lithic Scatter	Pre-Contact	1.3	NE ¼ of NE ¼ of SW ¼ of T103N, R28W, S13
21FA0153	-	Artifact Scatter	Pre-Contact: Oneota and Post-Contact: Euro-American	1.51	SW ¼ of SE ¼ of T103N, R28W, S15
21FA0150	-	Artifact Scatter	Pre-Contact: Oneota and Post-Contact: Euro-American	1.72	SE ¼ of SW ¼ of T103N, R28W, S15

Table 1. Previously Identified Archaeological Sites Within Two Miles

Site Number	Site Name	Site Description	Cultural Affiliation	Miles from Project Area	TRS
21FA0143	-	Single Artifact	Pre-Contact	1.79	NW ¼ of NE ¼ of T103N, R28W, S14
21FA0144	-	Single Artifact	Pre-Contact	1.88	NE ¼ of NW ¼ of T103N, R28W, S14
21FA0039	Hacklander II	Lithic Scatter	Pre-Contact	2	W ½ of NE ¼ of SW ¼ of T103N, R27W, S31
21FA0151	-	Artifact Scatter	Pre-Contact: Oneota with possible Woodland component	2	NE ¼ of SW ¼ and NW ¼ of SW ¼ of T103N, R28W, S15
21FAt	Halliday Mill/Verona Star Mill	Mill Site	Post-Contact: Euro-American	0.53	NE ¼ of SW ¼ of T103N, R28W, S24

No previously identified archaeological sites are located within the project area, though two pre-contact village sites are located within 100 meters of the project area. These sites consist of artifact scatters including pottery, lithic debitage, and stone tools. Sites located within two miles are comprised of pre-contact lithic and artifact scatters and a single habitation site. Those with diagnostic cultural materials date to the Late Prehistoric with a handful attributed to the Woodland, Oneota, and Mississippian Traditions. Only three of the 26 recorded sites contain components from the Post-Contact Period. Two of these sites are artifact scatters, but one, Alpha Site 21FAt, is an historical mill site.

6.0 RESULTS

Fieldwork was completed on April 22 and May 24, 2021 (Figure 3). The April 22 fieldwork consisted of a surface survey on a 5-meter interval across the agricultural fields where the road realignment is proposed to take place. Surface visibility ranged between 30% and 60%. A single projectile point was noted during the surface survey in the agricultural field. This is a Prairie side-notched projectile point made of Prairie du Chien chert from the Willow River Member Shakopee Formation (Figure 4). The Prairie side-notched point style dates to approximately 700 to 1300 CE (Morrow 2015:226). The base of the riverbank was also walked in an attempt to identify any cultural materials visible in the eroding bank. No cultural materials were noted in the riverbank.

Six shovel tests were completed in total. Four were completed at an approximately 15m interval along the top ridge of the proposed riverbank stabilization. A fifth shovel test was excavated at the single find spot identified during the surface survey, and a sixth shovel test was completed at a high point just southwest of and overlooking the find spot location. All shovel tests reflected a similar soil profile of 10YR 4/1 Brown Fine Sandy Silt Loam from 0 to an average of 25cmbs, followed by 10YR 4/3 Fine Sandy Clay from 25cmbs to shovel test termination. All shovel tests were terminated at at least 60cmbs, well into subsoils. All shovel tests were negative for cultural materials.

Figure 3: Map of Surface Surveyed Areas and Shovel Test Locations Within Greater Project area. (Basemap provided by 2016 Google Satellite Imagery)

Considering surface visibility within the southern field where the find spot was located on April 22 was approximately 30%, a follow-up surface survey was completed May 24, a day after the field had been planted, increasing surface visibility to approximately 70%. Additional surface survey was completed on a seven to ten-meter interval surrounding the find spot and continuing southwest following the roadway. No additional cultural materials were identified.

Figure 4: Of Prairie Side-Notched Projectile Point Recovered During Surface Survey (Site 21FA0164).

7.0 CONCLUSION AND RECOMMENDATIONS

There is a proposed project including 300 feet of bank stabilization along Blue Earth River in association with relocating a portion of 150th Street in Verona Township, Faribault County, Minnesota. The project area, approximately 4 acres in size, is located in the SE ¼ of the SE ¼ of Section 23 Township 103N, Range 28W and NW ¼ of SW ¼ of Section 24 of Township 103N, Range 28W in Archaeological Region 2s: Prairie Lake South. The project area consists of agricultural fields northwest of existing 150th Street, and the bank of the Blue Earth River southeast of 150th Street.

Work began with a literature review March 23 followed by fieldwork completed April 22 and May 24, 2021. Fieldwork completed on April 22 included completion of a pedestrian survey on a 5-meter interval along the proposed stretch of the 150th Street road realignment, four shovel tests along the required bank stabilization area, an additional fifth shovel test at a single find spot location identified during the surface survey, and a final sixth shovel test on a high point overlooking the find spot. Shovel tests were typically 35-40 centimeters (cm) wide and at least 60cm deep. All soils were screened through ¼" mesh screen, detailed profile notes completed, photographs taken, and GPS points collected for each shovel test. A single artifact was recovered on April 22. To complete additional surface survey around the find spot area with better ground visibility, NCC returned to the project area May 24 after the field had been planted, and completed a surface-survey on a seven to ten-meter interval surrounding the find spot area and further southwest across the proposed road realignment.

A single prehistoric archaeological site was identified during the April 22 field survey. It is represented by a single lithic projectile point. No additional cultural materials were identified during the follow-up survey on May 24, 2021. This artifact has been reported to the Office of the State Archaeologist and received site number 21FA0164. This site is not considered eligible for the National Register of Historic Places. Based on these results, Nienow Cultural Consultants recommends no further archaeological work be completed.

With any project there is the chance of unanticipated discovery. Should archaeological materials surface during any future construction, it is advised a professional archaeologist be consulted. Minnesota Statute 307.08 protects unplatted cemeteries (including burial mounds) and issues guidelines for dealing with unexpected finds. Should human remains be encountered during earth moving activity, all work must stop and local law enforcement must be called.

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APPENDIX A:

FIELDWORK PHOTOGRAPHS

Image 1: Of Surface Visibility Facing Southeast on May 24, 2021.

Image 2: Of Field Crew Surveying Project Area on May 24, 2021.

Image 3: Of Riverbank Where Stabilization is Planned Facing Northeast.

Image 4: Of Example Shovel Test (STP2).

APPENDIX B:

SHOVEL TEST FORMS

NCC Shovel Test Form
– Generic 2021

Date: 4/22/21 Personal Initials: JLN JFS LJK

Additional Notes: Verona Township

GIS Information: GPS points taken on JFS device

Shovel Test Location: STP 1 Along Bank

0cm-- 10YR4/1 Brown Fine Sandy Silt Loam

10cm--

20cm-- ↑ Mottled Transition ↓ 10YR

30cm-- 10YR5/3 mottled w/ 10YR4/6 Clay

40cm--

50cm--

60cm--

70cm--

80cm--

90cm--

100cm--

Max Depth: 60cmbs

☒ No Artifacts Found in STP (Check Box)

Sampled Items: / Weight (lbs):

☐ Coal _____ ☐ Clinker _____

☐ Brick _____ ☐ Concrete _____

☐ Limestone _____ ☐ Asphalt _____

☐

Prehistoric _____

Photographed: (Yes) Photo #s: Acc 7m

NAD 83 43.70374, -94.141929

Shovel Test Location: STP 2

0cm-- 10YR4/1 Brown Fine Sandy Silt Loam

10cm--

20cm-- 22cmbs

30cm-- 10YR5/3 Fine Sandy Clay

40cm--

50cm--

60cm-- 60cmbs

70cm--

80cm--

90cm--

100cm--

Max Depth: 60cmbs

☒ No Artifacts Found in STP (Check Box)

Sampled Items: / Weight (lbs):

☐ Coal _____ ☐ Clinker _____

☐ Brick _____ ☐ Concrete _____

☐ Limestone _____ ☐ Asphalt _____

☐

Prehistoric _____

Photographed: (Yes) Photo #s: Acc. 3 meters

NAD 83 43.70396, -94.141599

NCC Shovel Test Form
– Generic 2021

Date: 4/27/21 Personal Initials: JLN JFS LJK

Additional Notes: VERONA Twsp

GIS Information:

Shovel Test Location: STP3 Along Bank	Shovel Test Location: STP 4 Along Bank
0cm-- 10YR4/1 Brown Fine Silt Loam	0cm-- 10YR4/1 Brown Fine Silt Loam
10cm--	10cm--
20cm--	20cm--
30cm-- mottled transition	30cm-- mottled transition
40cm--	40cm-- 10YR5/3 Fine Sandy Clay
50cm-- 10YR5/3 Fine Sandy Clay	50cm--
60cm--	60cm Loamy
70cm--	70cm--
80cm--	80cm--
90cm--	90cm--
100cm--	100cm--
Max Depth: 60cmbs	Max Depth: 60cmbs
☒ No Artifacts Found in STP (Check Box)	☒ No Artifacts Found in STP (Check Box)
Sampled Items: / Weight (lbs):	Sampled Items: / Weight (lbs):
☐ Coal _____ ☐ Clinker _____	☐ Coal _____ ☐ Clinker _____
☐ Brick _____ ☐ Concrete _____	☐ Brick _____ ☐ Concrete _____
☐ Limestone _____ ☐ Asphalt _____	☐ Limestone _____ ☐ Asphalt _____
☐	☐
Prehistoric _____	Prehistoric _____
Photographed: (Yes) Photo #s:	Photographed: (Yes) Photo #s:
NAD 83 Acc. 4 13. 70410 -94. 10882	NAD83 Acc. 4 13. 70416 -94. 10863

NCC Shovel Test Form
– Generic 2021

Date: 4/22/21 Personal Initials: JLN JFS KJK

Additional Notes: VERONA TOWNSHIP

GIS Information: GPS Points taken of JFS Device

Shovel Test Location: STP5 At FS 1

0cm--

10cm-- 10YR2/1 Fine Sandy Silt

20cm--

30cm-- 35cmbs

40cm--

50cm-- 10YR4/3 Fine Sandy Clay

60cm-- 65cmbs

70cm--

80cm--

90cm--

100cm--

Max Depth: 65cmbs

☒ No Artifacts Found in STP (Check Box)

Sampled Items: / Weight (lbs):

☐ Coal _____ ☐ Clinker _____

☐ Brick _____ ☐ Concrete _____

☐ Limestone _____ ☐ Asphalt _____

☐

Prehistoric _____

Photographed: Yes Photo #s:

NAD 83 43.70435

Acc. 4m -94.14907

Shovel Test Location: STP6 At high point FS1 (STP5)

0cm--

10cm-- 10YR2/1 Fine Sandy Silt

20cm--

30cm-- 34cmbs

40cm--

50cm-- 10YR3/3 Fine Sandy Clay

60cm-- 60cmbs

70cm--

80cm--

90cm--

100cm--

Max Depth: 60cmbs

☒ No Artifacts Found in STP (Check Box)

Sampled Items: / Weight (lbs):

☐ Coal _____ ☐ Clinker _____

☐ Brick _____ ☐ Concrete _____

☐ Limestone _____ ☐ Asphalt _____

☐

Prehistoric _____

Photographed: Yes Photo #s:

NAD 83 43.70408

Acc 4m -94.14949

APPENDIX C

SITE FORM

Rev. 7/1/09

MINNESOTA ARCHAEOLOGICAL SITE FORM

OFFICE OF THE STATE ARCHAEOLOGIST
Fort Snelling History Center, St. Paul, MN 55111 (612) 725-2729

SITE #: 21-FA0164 *(OSA assigns if New Site)* Site Name: Agency/Field #: **VTFS1**

_X_ New Site __ Site Update OSA License #: **N/A, Private Land** SHPO RC #:

Type of Fieldwork: **X** _ Reconnaissance/Phase I Date(s) of This Fieldwork: **April 22, May 24, 2021**
___ Evaluation/Phase II
___ Excavation/Phase III

NRHP Status: __ Listed __ Determined Eligible __ CEF(106) _X_ CNEF(106) __ Undetermined

LOCATIONAL INFORMATION

County: **Faribault** City/Twp. Name: **Verona Township** SHPO Sub-Region: **2s** *(see map in instructions)*

USGS 7.5' Quadrangle Map *(name and year)*: **Huntley Quadrangle, 2019**

Township: **103N**	Range: **28W**	Section: **23**	¼ Sections (at least 2): **SE ¼ of SE ¼ of SE ¼**
Township:	Range:	Section:	¼ Sections (at least 2):
Township:	Range:	Section:	¼ Sections (at least 2):

UTM Coordinates: (*less than 10 acres use center; over 10 acres define polygon around site; draw points on USGS*)
Zone: **15N**_ Datum: ___ 1927 X_ 1983 Method: ___ USGS Map X_ GPS ___ Other

Point 1: Easting	**407409.61**	Northing **4839651.98**
Point 2: Easting		Northing
Point 3: Easting		Northing
Point 4: Easting		Northing
Point 5: Easting		Northing

SITE CHARACTERISTICS

Acreage: **0.01** Site Dimensions: N-S __**1m**___ E-W ___**1m**__ Maximum Cultural Depth (if known) _____

Site Description (*√all that apply, but only one check per line*):
_X_ single artifact __ lithic scatter __ artifact scatter
__ burial mound (number of mounds _____) __ non-mound lone grave __ non-mound cemetery
__ petroglyph __ pictograph __ petroform
__ surface features (list below)
__ other: _____

Surface Features (*√all that apply*): __ earthwork __ pit/depression __ foundation/ruin __ other: _____

Inferred Site Function (*√all that apply*): __ habitation __ mortuary __ farm __ industrial __ transportation
_X_ Other (*list*): **Likely Hunting** __ unknown

Current Land Use (*list approximate % for all that apply*):
100% cultivated ___ fallow ___ commercial ___ recreational ___ industrial ___ residential
___ woodland ___ grassland ___ water-covered ___ other: _____

Surface Visibility (*list approximate % for all that apply*):
___ excellent **100%** good ___ fair ___ poor/none

Degree of Disturbance (*list approximate % for all that apply or √ unassessed*):
___ minimal **100%** moderate ___ heavy ___ completely destroyed ___ unassessed

Current Threats to Site: (*√all that apply or √ none known*)
__ erosion __ development __ agricultural _X_ other: **150th Street Realignment**

Rev. 7/1/09

MINNESOTA ARCHAEOLOGICAL SITE FORM

SITE #: 21-FA0164 Site Name: Agency/Field #: **VTFS1**

CULTURAL/TEMPORAL AFFILIATION

(list all that apply by level of certainty: 1 = confirmed; 2 = probable or √"not determined"):

Period:
__ not determined
X Precontact (9500 BC - 1650 AD)
__ Contact (1650-1837)
__ Post-Contact (1837-1945)

Precontact Context: *(list all that apply by level of certainty; if unable to discern specific context, √here __)*

Paleoindian Tradition __ not determined __ Folsom __ Lanceolate Point/Plano
__ Clovis __ Eastern Fluted __ other: _____

Archaic Tradition __ not determined __ Prairie __ Riverine
__ Shield __ Lake-Forest __ other: _____

Woodland Tradition __ not determined __ Fox Lake __ Laurel
__ SE Mn Early __ C Mn Transitional __ Lake Benton
__ Brainerd __ Blackduck-Kathio __ Psinomani/Sandy Lake
__ Havana-Related __ SE Mn Late __ Rainy River Late
__ other: _____

Plains Village Tradition X not determined __ Cambria __ Great Oasis __ Big Stone
__ other: _____

Mississippian Tradition __ not determined __ Silvernale __ other: _____

Oneota Tradition __ not determined __ Blue Earth __ Orr __ other: _____

Contact Context: *(list all that apply by level of certainty; if unable to discern specific context, √here __)*

American Indian __ not determined __ Dakota __ Ojibwe __ other: _____

Euro-American __ not determined __ British __ other: _____
__ French __ Initial US

Post-Contact Context: *(list all that apply by level of certainty; if unable to discern specific context, √here __)*

__ Indian Communities & Reservations (1837-1934)
__ Early Agriculture & River Settlement (1840-1870)
__ Northern MN Lumbering (1870-1930s)
__ Tourism & Recreation (1870-1945)
__ St. Croix Triangle Lumbering (1830s-1900s)
__ Railroads & Agricultural Development (1870-1940)
__ Iron Ore Industry (1880s-1945)
__ Urban Centers (1870-1940)

Approximate Post-Contact Occupation/Site Formation Date(s): _____

Context Assignment/Dating Methods *(√all that apply):*

X artifact type/style __ feature type __ radiometric __ relative stratigraphy __ geomorphology
__ historic accounts (list) _____
__ historic maps (list) _____
__ other(s) (*specify*): _____

(For radiometric dates, attach photocopies of laboratory sheets if available.)

MATERIALS PRESENT *(√all that apply):*

Basic Artifact Categories

Ceramics	*Lithics*	*Biological Remains*	*Historic Materials*
__ Aboriginal	X projectile points	__ animal	__ glass
__ Euro-American	__ other chipped stone tools	__ human	__ metal
	__ debitage	__ unidentified bone	__ brick
	__ ground/pecked stone	__ seeds/nuts	__ other: _____
	__ FCR	__ charcoal	
	__ aboriginal copper	__ wood	

SITE #: 21-FA0164 Site Name: Agency/Field #: **VTFS1**

Major Exotic Materials *(√all that apply):*

__ catlinite __ native copper __ Hixton orthoquartzite
__ Knife River Flint __ obsidian __ other: _____

Diagnostic Artifacts:

Ceramics: Prehistoric Types/Wares/Temper _____
Historic _____
Prehistoric Lithics: **Prairie side-notched projectile point (approx. 700-1300 CE, Morrow 2015:226)**
Glass: _____
Metal: _____
Other: _____

ENVIRONMENTAL DATA **Current Topographic Setting** *(√all that apply):*

Away from Water	*Riverine*	*Lacustrine*
__ general upland	__ fan	__ inlet/outlet
__ terrace edge	X terrace/bluff top	__ peninsula
__ hilltop	__ stream-stream junction	__ island
__ glacial beach ridge	__ bluff-base	__ isthmus
__ rock outcrop	__ cave/rockshelter	__ general shoreline
__ other: _____	__ floodplain	__ bog/slough/lake bottom
	__ other: _____	__ other: _____

Topographic Feature Name from USGS Map: **Blue Earth River, approx. 25 meters to the southeast**

OWNERSHIP INFORMATION

Source and Date of Ownership Information *(e.g., plat map, county recorder's office, personal communication, etc.):*
Faribault County Beacon Property Viewer GIS, 2021

Ownership Type *(list approximate % for all that apply; if unknown √here __):*

___ Federal ___ State ___ Local (public) __ Tribal X Private

Land Owner *(name and address if known):*
George Bassett, 4929 Georgia Lane, White Bear Lake, MN 55110

CURRENT INVESTIGATION INFORMATION

Methods/Techniques Employed *(√all that apply):*

__ informant report __ small diameter soil coring (≈ 1" diameter) X surface survey
X shovel testing __ formal test units __ mechanical testing max. test depth _____
__ geomorphological survey *(specify)*: _____
__ geophysical survey *(specify)*: _____
__ other: _____

Informant Name and Address (if known): **No informant.**

Known Collectors/Collections: **None known.**

Artifact Repository *(name and accession numbers or repository agreement number):* **Waiting for response from landowner. If landowner does not want artifact, it will be curated with MNHS (repository agreement #953)**

Most Recent Survey Report – Title, Author, Date: **Phase I Archaeological Survey of Proposed 150th Street Realignment and Bank Stabilization in Verona Township, Faribault County, Minnesota (Jeremy Nienow and Laura Koski 2021)**

Major Previous Bibliographic Reference(s) to Site: **None.**

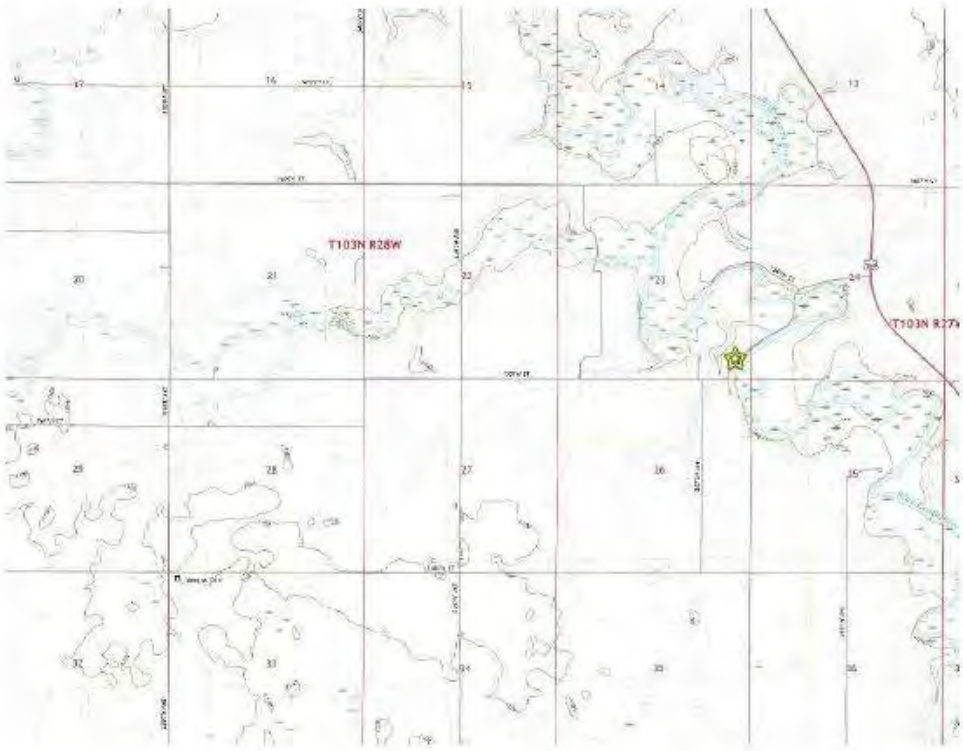
Principal Investigator *(name and affiliation):* Dr. **Jeremy Nienow, PhD, RPA (Nienow Cultural Consultants LLC) and Laura Koski, MSc, RPA (Zooarchaeo Consulting, LLC)**

Form Completed By *(name and date):* **Laura Koski, May 2021**

Rev. 7/1/09 **MINNESOTA ARCHAEOLOGICAL SITE FORM - CONTINUATION SHEET** page 4

SITE #: 21-FA0164 Site Name: Agency/Field #: **VTFS1**

MAPS: *Attach/include original scale copy of 7.5' USGS map with site location clearly outlined or designated. Attach a sketch map if surface features present, if sub-surface testing done, or if complicated boundaries/setting. Sketch map must have re-locatable datum, scale, north arrow, and legend if symbols are used.*



Map 1: Topographic Map of Site Location (starred)
USGS Topographic Map, Huntley Quadrangle, 2019, 1:24,000

SITE #: 21-FA0164 Site Name: Agency/Field #: VTFS1

Map 2: Map of Fieldwork Along Project Area. FS1 is where the single artifact for this site was recovered.

SITE #: 21-FA0164 Site Name: Agency/Field #: **VTFS1**

ADDITIONAL INFORMATION *(Reason for Update or Survey, Location, Site Characteristics, Materials Present, Setting, Archaeological Methods, etc.; attach extra sheets as needed.)*

At the time of this site form, the Federal Emergency Management Agency (FEMA) is requiring approximately 300 feet of bank stabilization along Blue Earth River in association with road realignment of adjacent 150th Street in Verona Township, Faribault County, Minnesota. Nienow Cultural Consultants LLC (NCC) was contracted to complete a Phase I Archaeological Survey in March of 2021.

Fieldwork was completed on April 22 and May 24, 2021. The April 22 fieldwork consisted of a surface survey on a 5-meter interval across the agricultural fields where the road realignment is proposed to take place. Surface visibility ranged between 30% and 60%. A single projectile point was noted during the surface survey in the agricultural field. This is a Prairie side-notched projectile point made of Prairie du Chien chert from the Willow River Member Shakopee Formation (Image 1). The Prairie side-notched point style dates to approximately 700 to 1300 CE (Morrow 2015:226). The base of the riverbank was also walked in an attempt to identify any cultural materials visible in the eroding bank. No cultural materials were noted in the riverbank.

Six shovel tests were completed in total. Four were completed at an approximately 15m interval along the top ridge of the proposed riverbank stabilization. A fifth shovel test was excavated at the single find spot identified during the surface survey, and a sixth shovel test was completed at a high point just southwest of and overlooking the find spot location. All shovel tests reflected a similar soil profile of 10YR 4/1 Brown Fine Sandy Silt Loam from 0 to an average of 25cmbs, followed by 10YR 4/3 Fine Sandy Clay from 25cmbs to shovel test termination. All shovel tests were terminated at at least 60cmbs, well into subsoils. All shovel tests were negative for cultural materials.

Considering surface visibility within the southern field where the find spot was located on April 22 was approximately 30%, a follow-up surface survey was completed May 24, a day after the field had been planted, increasing surface visibility to approximately 70%. Additional surface survey was completed on a seven to ten-meter interval surrounding the find spot and continuing southwest following the roadway. No additional cultural materials were identified.

Image 1: Of Prairie side-notched projectile point recovered during survey.

Appendix D

Agency Correspondence

United States Department of Agriculture

Natural Resources Conservation Service
1485 Industrial Dr NW
Rochester, MN 55901

Phone: (507) 289-7454

Fax: (507) 289-3742

June, 10th, 2021

Duane Castaldi Regional Environmental Officer
Federal Emergency Management Agency
536 S. Clark St.
Chicago, IL 60605

Re: 027043 Verona Township road relocation

Dear Mr. Castaldi,

The purpose of the Farmland Protection Policy Act (FPPA) as you are aware is to minimize the extent that federal programs contribute to the unnecessary and irreversible conversion of prime and important farmland to non-agricultural uses. The FPPA requires federal agencies involved in projects that may convert farmland to determine whether the proposed conversion is consistent with the FPPA. The FPPA is only a part of the EIS and NEPA process and compliance with the FPPA process does not guarantee compliance with other laws.

Upon reviewing the area of this project, I found that there is prime farmland in the proposed project area and meets exemption 523.11 E. (1) (7.7 acres/linear mile). There is no attached CPA-106 as it is an exempt project.

If you have any questions, please contact me via e-mail or at the above number.

Daniel Nath, CPSS# 446666, MN PSS# 57667
Resource Soil Scientist USDA/NRCS
Rochester, MN

U.S. Department of Homeland Security
536 South Clark Street, 6th Floor
Chicago, Illinois 60605-1521

FEMA

May 17, 2021

Brandon DeFoe
Resource Soil Scientist
Natural Resource Conservation Service
110 2nd Street S, Suite 128
Waite Park, MN 56387

Re: 150th Street Realignment, Verona Township, Faribault County
DR-4442-MN, PW 1439 – 115472
GPS: 43.70411, -94.14882; T103N R28W S23 & 24

Dear Mr. DeFoe:

In accordance with the Farmland Protection Policy Act (FPPA) and other legislation, FEMA has determined that the captioned project constitutes a federally assisted undertaking, requiring review under FPPA. In response to severe storms, straight-line winds, and flooding between March 12, 2019 and April 28, 2019, the President declared disaster DR-4442-MN on June 12, 2019. Under this declaration, Verona Township has applied for FEMA's Public Assistance (PA) program funding to repair and mitigate future flooding damage to 150th Street, a rural gravel road.

During the event, the Blue Earth River flooded and significantly eroded and undermined 150th Street, leaving the road's edge approximately 12 feet from the riverbank edge at its closest. In the interest of public safety, Verona Township closed the road to traffic, causing transportation difficulties. It is considered technically infeasible and prohibitively costly to stabilize the nearly vertical eroding riverbank. Doing nothing will likely result in future additional flooding damage to the roadway.

Verona Township proposes to use FEMA funding to offset the cost of relocating 150th Street approximately 50 feet north and west of its current alignment. The new road curvature will place the road approximately 170 feet from the most severely eroded part of the riverbank. This realignment will best serve public safety concerns and prevent potential future damage to the roadway.

The new 2,990-foot-long and 66-foot-wide right-of-way (ROW) will contain a 24-foot wide centered two-lane gravel roadway, ditched on either side. The soils map Area of Interest (AOI) is based on a shapefile of only this new ROW and contains 4.5 acres. The total area of 5.61 acres discussed on the Farmland Conversion Impact Rating Form AD-1006 includes the ROW area and the land riverward from the new ROW. The township will remove the old roadway's gravel base and pavement and will grade and seed the disturbed land with native species, allowing it to naturalize. The existing 2984-foot-long and 66-foot-wide ROW was already converted from farmland to road use. Both the new and existing road ROWs contain a mixture of prime farmland and farmland of statewide importance, with a small portion of lands considered not prime farmland, or lands that would be considered prime farmland were it to be drained.

Please find attached Form AD-1006, soils map, and table of prime farmlands. FEMA requests your assistance in evaluating potential conversion of prime, unique or important farmland outside that existing ROW and within the proposed project location.

If you have questions or information that will help us fulfill our responsibility under the Farmland Protection Policy Act, do not hesitate to contact Karie Roach at (312) 618-8516 or FEMA-R5-Environmental@fema.dhs.gov. We would appreciate a response by mail or email from your office within thirty (30) days. Thank you for your consideration.

Sincerely,

Duane Castaldi
Regional Environmental Officer
FEMA Region V

Enclosures: Maps and Figures, Farmland Conversion Impact Rating, & Farmland Classification

U.S. DEPARTMENT OF AGRICULTURE
Natural Resources Conservation Service

NRCS-CPA-106
(Rev. 1-91)

FARMLAND CONVERSION IMPACT RATING FOR CORRIDOR TYPE PROJECTS

PART I *(To be completed by Federal Agency)*	3. Date of Land Evaluation Request **5/12/21**	4. Sheet 1 of _____
1. Name of Project **Verona Township Road Relocation**	5. Federal Agency Involved **FEMA**	
2. Type of Project **Roadway Relocation**	6. County and State **Faribault County, Minnesota**	

PART II *(To be completed by NRCS)*	1. Date Request Received by NRCS	2. Person Completing Form
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES ☐ NO ☐		4. Acres Irrigated | Average Farm Size
5. Major Crop(s)	6. Farmable Land in Government Jurisdiction **Acres:** **%**	7. Amount of Farmland As Defined in FPPA **Acres:** **%**
8. Name Of Land Evaluation System Used	9. Name of Local Site Assessment System	10. Date Land Evaluation Returned by NRCS

PART III *(To be completed by Federal Agency)*	Alternative Corridor For Segment _____			
	Corridor A	**Corridor B**	**Corridor C**	**Corridor D**
A. Total Acres To Be Converted Directly	**5.61**			
B. Total Acres To Be Converted Indirectly, Or To Receive Services				
C. Total Acres In Corridor	**5.61**			
PART IV *(To be completed by NRCS) Land Evaluation Information*				
A. Total Acres Prime And Unique Farmland				
B. Total Acres Statewide And Local Important Farmland				
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted				
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value				
PART V *(To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)*				
PART VI *(To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))* — **Maximum Points**				
1. Area in Nonurban Use — **15**				
2. Perimeter in Nonurban Use — **10**				
3. Percent Of Corridor Being Farmed — **20**				
4. Protection Provided By State And Local Government — **20**				
5. Size of Present Farm Unit Compared To Average — **10**				
6. Creation Of Nonfarmable Farmland — **25**				
7. Availablility Of Farm Support Services — **5**				
8. On-Farm Investments — **20**				
9. Effects Of Conversion On Farm Support Services — **25**				
10. Compatibility With Existing Agricultural Use — **10**				
TOTAL CORRIDOR ASSESSMENT POINTS — **160**	**0**	**0**	**0**	**0**
PART VII *(To be completed by Federal Agency)*				
Relative Value Of Farmland (From Part V) — **100**	**0**	**0**	**0**	**0**
Total Corridor Assessment (From Part VI above or a local site assessment) — **160**	**0**	**0**	**0**	**0**
TOTAL POINTS *(Total of above 2 lines)* — **260**	**0**	**0**	**0**	**0**

1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used? YES ☐ NO ☐

5. Reason For Selection:

Signature of Person Completing this Part: | DATE

NOTE: Complete a form for each segment with more than one Alternate Corridor

CORRIDOR - TYPE SITE ASSESSMENT CRITERIA

The following criteria are to be used for projects that have a linear or corridor - type site configuration connecting two distant points, and crossing several different tracts of land. These include utility lines, highways, railroads, stream improvements, and flood control systems. Federal agencies are to assess the suitability of each corridor - type site or design alternative for protection as farmland along with the land evaluation information.

(1) How much land is in nonurban use within a radius of 1.0 mile from where the project is intended?
More than 90 percent - 15 points
90 to 20 percent - 14 to 1 point(s)
Less than 20 percent - 0 points

(2) How much of the perimeter of the site borders on land in nonurban use?
More than 90 percent - 10 points
90 to 20 percent - 9 to 1 point(s)
Less than 20 percent - 0 points

(3) How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last 10 years?
More than 90 percent - 20 points
90 to 20 percent - 19 to 1 point(s)
Less than 20 percent - 0 points

(4) Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?
Site is protected - 20 points
Site is not protected - 0 points

(5) Is the farm unit(s) containing the site (before the project) as large as the average - size farming unit in the County ? (Average farm sizes in each county are available from the NRCS field offices in each state. Data are from the latest available Census of Agriculture, Acreage or Farm Units in Operation with $1,000 or more in sales.)
As large or larger - 10 points
Below average - deduct 1 point for each 5 percent below the average, down to 0 points if 50 percent or more below average - 9 to 0 points

(6) If the site is chosen for the project, how much of the remaining land on the farm will become non-farmable because of interference with land patterns?
Acreage equal to more than 25 percent of acres directly converted by the project - 25 points
Acreage equal to between 25 and 5 percent of the acres directly converted by the project - 1 to 24 point(s)
Acreage equal to less than 5 percent of the acres directly converted by the project - 0 points

(7) Does the site have available adequate supply of farm support services and markets, i.e., farm suppliers, equipment dealers, processing and storage facilities and farmer's markets?
All required services are available - 5 points
Some required services are available - 4 to 1 point(s)
No required services are available - 0 points

(8) Does the site have substantial and well-maintained on-farm investments such as barns, other storage building, fruit trees and vines, field terraces, drainage, irrigation, waterways, or other soil and water conservation measures?
High amount of on-farm investment - 20 points
Moderate amount of on-farm investment - 19 to 1 point(s)
No on-farm investment - 0 points

(9) Would the project at this site, by converting farmland to nonagricultural use, reduce the demand for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area?
Substantial reduction in demand for support services if the site is converted - 25 points
Some reduction in demand for support services if the site is converted - 1 to 24 point(s)
No significant reduction in demand for support services if the site is converted - 0 points

(10) Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of surrounding farmland to nonagricultural use?
Proposed project is incompatible to existing agricultural use of surrounding farmland - 10 points
Proposed project is tolerable to existing agricultural use of surrounding farmland - 9 to 1 point(s)
Proposed project is fully compatible with existing agricultural use of surrounding farmland - 0 points

Soil Map—Faribault County, Minnesota
(VeronaTwp150thStRealignROW)

Map Scale: 1:4,760 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 50 100 200 300

Feet
0 200 400 800 1200

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Faribault County, Minnesota
Survey Area Data: Version 17, Jun 5, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 12, 2010—Feb 17, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
27B	Dickinson fine sandy loam, 0 to 6 percent slopes	1.5	33.0%
128B	Grogan silt loam, 1 to 6 percent slopes	0.6	14.3%
248	Lomax loam	0.7	15.1%
286C2	Shorewood silty clay loam, 6 to 12 percent slopes, eroded	0.3	6.0%
336	Delft clay loam, 0 to 2 percent slopes	0.2	5.2%
920C2	Clarion-Storden-Pilot Grove complex, 6 to 10 percent slopes, moderately eroded	0.7	16.2%
1834	Coland clay loam, 0 to 2 percent slopes, frequently flooded	0.5	10.1%
Totals for Area of Interest		**4.5**	**100.0%**

Report — Prime and other Important Farmlands

Faribault County, Minnesota

Map Symbol	Map Unit Name	Farmland Classification
27B	Dickinson fine sandy loam, 0 to 6 percent slopes	All areas are prime farmland
128B	Grogan silt loam, 1 to 6 percent slopes	All areas are prime farmland
248	Lomax loam	All areas are prime farmland
286C2	Shorewood silty clay loam, 6 to 12 percent slopes, eroded	Farmland of statewide importance
336	Delft clay loam, 0 to 2 percent slopes	Prime farmland if drained
920C2	Clarion-Storden-Pilot Grove complex, 6 to 10 percent slopes, moderately eroded	Farmland of statewide importance
1834	Coland clay loam, 0 to 2 percent slopes, frequently flooded	Not prime farmland

From: Dapo, Jack
To: Roach, Karie
Subject: FEMA - Verona Township - Licensee Review of DNR NHIS Data
Date: Friday, March 12, 2021 9:44:06 AM
Attachments: image003.png

Project Location:

TABLE 1
Existing Road Location and Coordinates

Roadway	Midpoint		Start		End	
	Latitude	Longitude	Latitude	Longitude	Latitude	Longitude
150th Street	43.705347	-94.146732	43.708192	-94.143163	43.702529	-94.152524

Project Description - to realign the endangered portion of 150th Street approximately 170 feet northwest of the affected area to best serve public safety concerns and prevent the potential for reoccurring damage. The Applicant will acquire approximately three additional acres of property northwest of the affected area currently used as cropland to accommodate the new right-of-way. The new road section will tie into the existing roadway. Construction of the new 66-foot wide gravel-surfaced road section will include clearing and grubbing of trees, excavation, grading, and the stabilization of the river embankment with Class III and Class V rip-rap and a benched embankment. The new roadway and shoulder will consist of Class 5 aggregate base, granular material, Class 1 shoulder base, and topsoil. The undertaking will also involve approximately three acres of turf establishment and restoration, and the installation of new road signage and erosion control. The old roadway will be excavated and removed. The original alignment will be restored to a natural condition by placing topsoil and planting grasses and trees. The eroded riverbank, outside the area stabilized by rip-rap and a benched embankment, will be allowed to naturally stabilize.

Review of NHIS Data - There is no occurrences within a mile radius of project site.

Jack Dapo
Environmental Protection Specialist | Mitigation Division | FEMA Region 5
Office: (312) 408-5372 | Mobile: (202) 717-0219

jack.dapo@fema.dhs.gov

Federal Emergency Management Agency
fema.gov

From:	Boettcher, Joanne (DNR)
To:	FEMA-R5-Environmental
Cc:	Girolamo, Daniel (DNR)
Subject:	RE: New FEMA NEPA Scoping Document - Verona Township, Faribault County, Minnesota
Date:	Monday, May 10, 2021 5:07:54 PM
Attachments:	image002.png image003.png

Hi Karie,

We do not have any additional recommendations or concerns other than to continue working with the Area Hydrologist (Dan Girloamo) as a Public Waters Work Permit will be necessary. An NHIS (rare species) review will be done as part of that permitting process.

Thank you,

Joanne Boettcher
Regional Environmental Assessment Ecologist
MNDNR – Mankato
(507) 389-8813

DEPARTMENT OF NATURAL RESOURCES

From: FEMA-R5-Environmental <fema-r5-environmental@fema.dhs.gov>
Sent: Wednesday, April 14, 2021 9:18 AM
To: Boettcher, Joanne (DNR) <Joanne.Boettcher@state.mn.us>
Subject: New FEMA NEPA Scoping Document - Verona Township, Faribault County, Minnesota

Good Morning.

Minnesota Homeland Security and Emergency Management and Verona Township have requested funding from the Federal Emergency Management Agency (FEMA) to support a Public Assistance (PA) project.

The attached scoping document sets forth the draft purpose and need as well as areas of environmental review and study associated with the proposed project. The information is provided here in accord with the Council on Environmental Quality's regulations for complying with the National Environmental Policy Act to advise other agencies of FEMA's intent to prepare an Environmental Assessment for this project, note areas of expected environmental concern, and solicit any early comment regarding the project.

Per prior instruction from DNR, FEMA only sends NEPA Scoping Documents to the Minnesota DNR Regional Environmental Ecologist who will route to other Divisions within DNR and consolidate comments.

FEMA looks forward to any comments you may have on this project as we prepare the Environmental Assessment. We would appreciate a response by e-mail to Karie Roach at fema-r5-environmental@fema.dhs.gov by April 30, 2021.

Environmental Planning and Historic Preservation | Mitigation Division | FEMA Region 5
Office: 312-408-5549 | Email: fema-r5-environmental@fema.dhs.gov

Federal Emergency Management Agency
fema.gov

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, ST. PAUL DISTRICT
180 FIFTH STREET EAST, SUITE 700
ST. PAUL, MN 55101-1678

April 20, 2021

Regulatory File No. MVP-2021-00411-MAD

FEMA, Region 5
c/o Karie Roach
536 South Clark Street, 6th Floor
Chicago, Illinois 60605

Dear Karie Roach:

This letter is in response to correspondence we received from FEMA regarding the Verona Township 150th Street Realignment project. This letter contains our initial comments on this project for your consideration. The purpose of this letter is to inform you that based on the Environmental Assessment Scoping Document for the project referenced above a Department of the Army (DA) permit would be required for the proposed installation of riprap into the Blue Earth River. In lieu of a specific response, please consider the following general information concerning our regulatory program that may apply to the proposed project.

If the proposal involves activity in navigable waters of the United States, it may be subject to the Corps of Engineers' jurisdiction under Section 10 of the Rivers and Harbors Act of 1899 (Section 10). Section 10 prohibits the construction, excavation, or deposition of materials in, over, or under navigable waters of the United States, or any work that would affect the course, location, condition, or capacity of those waters, unless the work has been authorized by a Department of the Army permit.

If the proposal involves discharge of dredged or fill material into waters of the United States, such as riprap or other bank stabilizing material, it may be subject to the Corps of Engineers' jurisdiction under Section 404 of the Clean Water Act (CWA Section 404). Waters of the United States include navigable waters, their tributaries, and adjacent wetlands (33 CFR § 328.3). CWA Section 301(a) prohibits discharges of dredged or fill material into waters of the United States, unless the work has been authorized by a Department of the Army permit under Section 404. Information about the Corps permitting process can be obtained online at http://www.mvp.usace.army.mil/regulatory.

The Corps evaluation of a Section 10 and/or a Section 404 permit application involves multiple analyses, including (1) evaluating the proposal's impacts in accordance with the National Environmental Policy Act (NEPA) (33 CFR part 325), (2) determining whether the proposal is contrary to the public interest (33 CFR § 320.4), and (3) in the case of a Section 404 permit, determining whether the proposal complies with the Section 404(b)(1) Guidelines (Guidelines) (40 CFR part 230).

If the proposal requires a Section 404 permit application, the Guidelines specifically require that "no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic

ecosystem, so long as the alternative does not have other significant adverse environmental consequences" (40 CFR § 230.10(a)). Time and money spent on the proposal prior to applying for a Section 404 permit cannot be factored into the Corps' decision whether there is a less damaging practicable alternative to the proposal.

If an application for a Corps permit has not yet been submitted, the project proposer may request a pre-application consultation meeting with the Corps to obtain information regarding the data, studies or other information that will be necessary for the permit evaluation process. A pre-application consultation meeting is strongly recommended if the proposal has substantial impacts to waters of the United States, or if it is a large or controversial project.

If you have any questions, please contact me in our St. Paul office at (651) 290-5266 or Maria.A.DeLaundreau@usace.army.mil. In any correspondence or inquiries, please refer to the Regulatory file number shown above.

Sincerely,

Maria DeLaundreau
Project Manager

FEMA-R5-Environmental

From: Core, Alyssa (BWSR) <alyssa.core@state.mn.us>
Sent: Wednesday, April 14, 2021 9:28 AM
To: FEMA-R5-Environmental; Sackett Eberhart, Jill (BWSR); Keseley, Shaina (BWSR)
Subject: RE: New FEMA NEPA Scoping Document - Verona Township, Faribault County, Minnesota

Good Morning Karie,
Any wetlands within the project boundary should be identified in order to ensure that the Wetland Conservation Act requirements are met. Because this is a public road project, any wetland impacts would likely be covered under the Local Government Road Wetland Replacement Program at no cost to the applicant.

Thanks,
Alyssa

Alyssa Core | Wetland Specialist
Minnesota Board of Water & Soil Resources
2118 Campus Dr. SE, Suite 100
Rochester, Minnesota 55904
Cell: 507-923-5414
Alyssa.Core@state.mn.us

From: FEMA-R5-Environmental <fema-r5-environmental@fema.dhs.gov>
Sent: Wednesday, April 14, 2021 9:08 AM
To: Core, Alyssa (BWSR) <alyssa.core@state.mn.us>; Sackett Eberhart, Jill (BWSR) <jill.sackett.eberhart@state.mn.us>; Keseley, Shaina (BWSR) <shaina.keseley@state.mn.us>
Subject: New FEMA NEPA Scoping Document - Verona Township, Faribault County, Minnesota

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Good Morning.

Minnesota Homeland Security and Emergency Management and Verona Township have requested funding from the Federal Emergency Management Agency (FEMA) to support a Public Assistance (PA) project.

The attached scoping document sets forth the draft purpose and need as well as areas of environmental review and study associated with the proposed project. The information is provided here in accord with the Council on Environmental Quality's regulations for complying with the National Environmental Policy Act to advise other agencies of FEMA's intent to prepare an Environmental Assessment for this project, note areas of expected environmental concern, and solicit any early comment regarding the project.

This project does not include any work in water or any work to the Blue Earth River embankment. FEMA is notifying the Minnesota Board of Water and Soil Resources of the project and welcomes any input on the project.

FEMA looks forward to any comments you may have on this project as we prepare the Environmental Assessment. We would appreciate a response by e-mail to Karie Roach at fema-r5-environmental@fema.dhs.gov by April 30, 2021.

Environmental Planning and Historic Preservation | Mitigation Division | FEMA Region 5
Office: 312-408-5549 | Email: fema-r5-environmental@fema.dhs.gov

Federal Emergency Management Agency
fema.gov

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Minnesota-Wisconsin Ecological Services Field Office
4101 American Blvd E
Bloomington, MN 55425-1665
Phone: (952) 252-0092 Fax: (952) 646-2873
http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html

In Reply Refer To: March 12, 2021
Consultation code: 03E19000-2021-TA-1014
Event Code: 03E19000-2021-E-03118
Project Name: 4442-MN Verona Road Relocation

Subject: Verification letter for the '4442-MN Verona Road Relocation' project under the January 5, 2016, Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-eared Bat and Activities Excepted from Take Prohibitions.

Dear seth bell:

The U.S. Fish and Wildlife Service (Service) received on March 12, 2021 your effects determination for the '4442-MN Verona Road Relocation' (the Action) using the northern long-eared bat (*Myotis septentrionalis*) key within the Information for Planning and Consultation (IPaC) system. This IPaC key assists users in determining whether a Federal action is consistent with the activities analyzed in the Service's January 5, 2016, Programmatic Biological Opinion (PBO). The PBO addresses activities excepted from "take"[1] prohibitions applicable to the northern long-eared bat under the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based upon your IPaC submission, the Action is consistent with activities analyzed in the PBO. The Action may affect the northern long-eared bat; however, any take that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o). Unless the Service advises you within 30 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the PBO satisfies and concludes your responsibilities for this Action under ESA Section 7(a)(2) with respect to the northern long-eared bat.

Please report to our office any changes to the information about the Action that you submitted in IPaC, the results of any bat surveys conducted in the Action area, and any dead, injured, or sick northern long-eared bats that are found during Action implementation. If the Action is not completed within one year of the date of this letter, you must update and resubmit the information required in the IPaC key.

If the Action may affect other federally listed species besides the northern long-eared bat, a proposed species, and/or designated critical habitat, additional consultation between you and this Service office is required. If the Action may disturb bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act is recommended.

---

[1]Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct [ESA Section 3(19)].

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

4442-MN Verona Road Relocation

2. Description

The following description was provided for the project '4442-MN Verona Road Relocation':

> Verona, WI. (43.708192, -94.143163 to -43.702529, -94.152524) Project is to realign the endangered portion of 150th Street approximately 170 feet northwest of the affected area to best serve public safety concerns and prevent the potential for reoccurring damage. The Applicant will acquire approximately three additional acres of property northwest of the affected area currently used as cropland to accommodate the new right-of-way. The new road section will tie into the existing roadway. Construction of the new 66-foot wide gravel-surfaced road section will include clearing and grubbing of trees, excavation, grading, and the stabilization of the river embankment with Class III and Class V rip-rap and a benched embankment. The new roadway and shoulder will consist of Class 5 aggregate base, granular material, Class 1 shoulder base, and topsoil. The undertaking will also involve approximately three acres of turf establishment and restoration, and the installation of new road signage and erosion control.
> The old roadway will be excavated and removed. The original alignment will be restored to a natural condition by placing topsoil and planting grasses and trees. The eroded riverbank, outside the area stabilized by rip-rap and a benched embankment, will be allowed to naturally stabilize.

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@43.705475449999994,-94.14658473770336,14z

Determination Key Result

This Federal Action may affect the northern long-eared bat in a manner consistent with the description of activities addressed by the Service's PBO dated January 5, 2016. Any taking that may occur incidental to this Action is not prohibited under the final 4(d) rule at 50 CFR §17.40(o). Therefore, the PBO satisfies your responsibilities for this Action under ESA Section 7(a)(2) relative to the northern long-eared bat.

Determination Key Description: Northern Long-eared Bat 4(d) Rule

This key was last updated in IPaC on May 15, 2017. Keys are subject to periodic revision.

This key is intended for actions that may affect the threatened northern long-eared bat.

The purpose of the key for Federal actions is to assist determinations as to whether proposed actions are consistent with those analyzed in the Service's PBO dated January 5, 2016.

Federal actions that may cause prohibited take of northern long-eared bats, affect ESA-listed species other than the northern long-eared bat, or affect any designated critical habitat, require ESA Section 7(a)(2) consultation in addition to the use of this key. Federal actions that may affect species proposed for listing or critical habitat proposed for designation may require a conference under ESA Section 7(a)(4).

DOIUnited States Department of the Interior
FISH AND WILDLIFE SERVICE
Minnesota-Wisconsin Ecological Services Field Office
4101 American Blvd E
Bloomington, MN 55425-1665 Phone: (952)
252-0092 Fax: (952) 646-2873
http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html

In Reply Refer To: March 12, 2021
Consultation Code: 03E19000-2021-SLI-1014
Event Code: 03E19000-2021-E-03117
Project Name: 4442-MN Verona Road Relocation

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The attached species list identifies any federally threatened, endangered, proposed and candidate species that may occur within the action area – the area that is likely to be affected by your proposed project. The list also includes any designated and proposed critical habitat that overlaps with the action area. This list is provided to you as the initial step of the consultation process required under section 7(c) of the Endangered Species Act, also referred to as Section 7 Consultation.

Section 7 of the Endangered Species Act of 1973 requires that actions authorized, funded, or carried out by Federal agencies not jeopardize federally threatened or endangered species or adversely modify designated critical habitat. To fulfill this mandate, Federal agencies (or their designated non-federal representatives) must consult with the Service if they determine their project may affect listed species or critical habitat. Agencies must confer under section 7(a)(4) if any proposed action is likely to jeopardize species proposed for listing as endangered or threatened or likely to adversely modify any proposed critical habitat.

Under 50 CFR 402.12(e) (the regulations that implement Section 7 of the Endangered Species Act) the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally. You may verify the list by visiting the ECOS-IPaC website http://ecos.fws.gov/ipac/ at regular intervals during project planning and implementation and completing the same process you used to receive the attached list. As an alternative, you may contact this Ecological Services Field Office for updates.

Please use the species list provided and visit the U.S. Fish and Wildlife Service's Region 3 Section 7 Technical Assistance website at - http://www.fws.gov/midwest/endangered/section7/s7process/index.html. This website contains step-by-step instructions that will help you

determine if your project will have an adverse effect on listed species or critical habitat and will help lead you through the Section 7 process.

For all wind energy projects and projects that include installing towers that use guy wires or are over 200 feet in height, please contact this field office directly for assistance, even if no federally listed plants, animals or critical habitat are present within the action area.

Although no longer protected under the Endangered Species Act, be aware that bald eagles (Haliaeetus leucocephalus) are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.) and Migratory Bird Treaty Act (16 U.S.C. 703 et seq), as are golden eagles (Aquila chrysaetos). Projects affecting these species may require measures to avoid harming eagles or may require a permit. If your project is near a bald eagle nest or winter roost area, see our Eagle Permits website at http://www.fws.gov/midwest/midwestbird/EaglePermits/index.html. The information available at this website will help you determine if you can avoid impacting eagles or if a permit may be necessary.

We appreciate your concern for threatened and endangered species. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- Migratory Birds

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Minnesota-Wisconsin Ecological Services Field Office
4101 American Blvd E
Bloomington, MN 55425-1665
(952) 252-0092

Project Summary

Consultation Code: 03E19000-2021-SLI-1014
Event Code: 03E19000-2021-E-03117
Project Name: 4442-MN Verona Road Relocation
Project Type: ** OTHER **
Project Description: Verona, WI. (43.708192, -94.143163 to -43.702529, -94.152524) Project is to realign the endangered portion of 150th Street approximately 170 feet northwest of the affected area to best serve public safety concerns and prevent the potential for reoccurring damage. The Applicant will acquire approximately three additional acres of property northwest of the affected area currently used as cropland to accommodate the new right-of-way. The new road section will tie into the existing roadway.

Construction of the new 66-foot wide gravel-surfaced road section will include clearing and grubbing of trees, excavation, grading, and the stabilization of the river embankment with Class III and Class V rip-rap and a benched embankment. The new roadway and shoulder will consist of Class 5 aggregate base, granular material, Class 1 shoulder base, and topsoil. The undertaking will also involve approximately three acres of turf establishment and restoration, and the installation of new road signage and erosion control.

The old roadway will be excavated and removed. The original alignment will be restored to a natural condition by placing topsoil and planting grasses and trees. The eroded riverbank, outside the area stabilized by rip-rap and a benched embankment, will be allowed to naturally stabilize.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@43.705475449999994,-94.14658473770336,14z

Counties: Faribault County, Minnesota

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis*	Threatened

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9045

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

---

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31
Bobolink *Dolichonyx oryzivorus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Jul 31

NAME	BREEDING SEASON
Nelson's Sparrow *Ammodramus nelsoni* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 15 to Sep 5
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Semipalmated Sandpiper *Calidris pusilla* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Short-billed Dowitcher *Limnodromus griseus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480	Breeds elsewhere

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

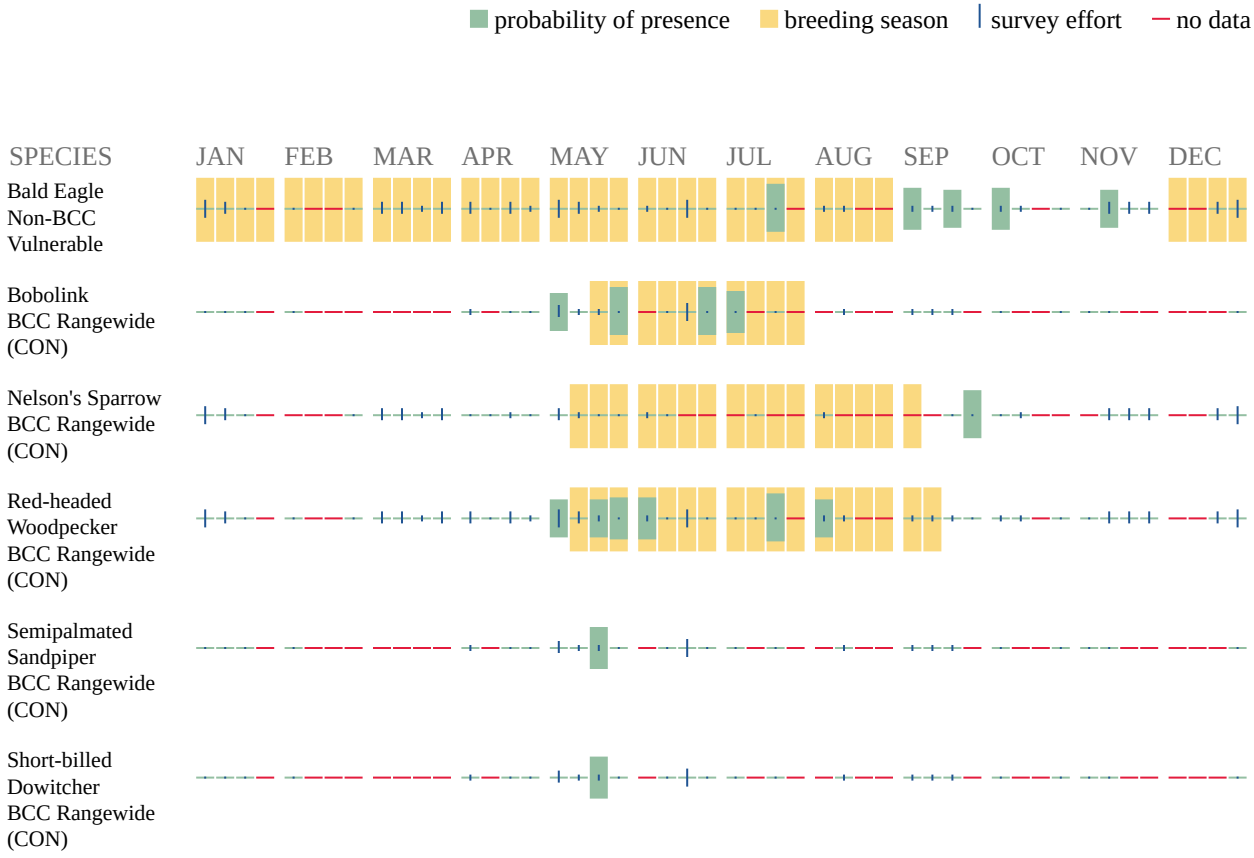
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/ management/project-assessment-tools-and-guidance/ conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.
Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?
The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?
The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?
To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?
Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects
For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?
If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report
The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Determination Key Result

This project may affect the threatened Northern long-eared bat; therefore, consultation with the Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.) is required. However, based on the information you provided, this project may rely on the Service's January 5, 2016, *Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-Eared Bat and Activities Excepted from Take Prohibitions* to fulfill its Section 7(a)(2) consultation obligation.

Qualification Interview

1. Is the action authorized, funded, or being carried out by a Federal agency?

   Yes

2. Have you determined that the proposed action will have "no effect" on the northern long-eared bat? (If you are unsure select "No")

   No

3. Will your activity purposefully **Take** northern long-eared bats?

   No

4. [Semantic] Is the project action area located wholly outside the White-nose Syndrome Zone?

   Automatically answered
   No

5. Have you contacted the appropriate agency to determine if your project is near a known hibernaculum or maternity roost tree?

   Location information for northern long-eared bat hibernacula is generally kept in state Natural Heritage Inventory databases – the availability of this data varies state-by-state. Many states provide online access to their data, either directly by providing maps or by providing the opportunity to make a data request. In some cases, to protect those resources, access to the information may be limited. A web page with links to state Natural Heritage Inventory databases and other sources of information on the locations of northern long-eared bat roost trees and hibernacula is available at www.fws.gov/midwest/endangered/mammals/nleb/nhisites.html.

   Yes

6. Will the action affect a cave or mine where northern long-eared bats are known to hibernate (i.e., hibernaculum) or could it alter the entrance or the environment (physical or other alteration) of a hibernaculum?

   No

7. Will the action involve Tree Removal?

   Yes

8. Will the action only remove hazardous trees for the protection of human life or property?

   No

9. Will the action remove trees within 0.25 miles of a known northern long-eared bat hibernaculum at any time of year?

   No

10. Will the action remove a known occupied northern long-eared bat maternity roost tree or any trees within 150 feet of a known occupied maternity roost tree from June 1 through July 31?

    No

Project Questionnaire

If the project includes forest conversion, report the appropriate acreages below. Otherwise, type '0' in questions 1-3.

1. Estimated total acres of forest conversion:

0.001

2. If known, estimated acres of forest conversion from April 1 to October 31

0

3. If known, estimated acres of forest conversion from June 1 to July 31

0

If the project includes timber harvest, report the appropriate acreages below. Otherwise, type '0' in questions 4-6.

4. Estimated total acres of timber harvest

0

5. If known, estimated acres of timber harvest from April 1 to October 31

0

6. If known, estimated acres of timber harvest from June 1 to July 31

0

If the project includes prescribed fire, report the appropriate acreages below. Otherwise, type '0' in questions 7-9.

7. Estimated total acres of prescribed fire

0

8. If known, estimated acres of prescribed fire from April 1 to October 31

0

9. If known, estimated acres of prescribed fire from June 1 to July 31

0

If the project includes new wind turbines, report the megawatts of wind capacity below. Otherwise, type '0' in question 10.

10. What is the estimated wind capacity (in megawatts) of the new turbine(s)?

0

++++++++*You may email this page to* fema-r5-environmental@fema.dhs.gov.++++++++

Re: 150th Street Realignment, Verona Township, Faribault County
GPS: 43.70411, -94.14882; T103N R28W S23&24
DR-4442-MN, PW 1439 [115472]

☒ Under the authority of the National Historic Preservation Act of 1966, as amended, the Minnesota State Historic Preservation Office ***concurs*** with FEMA's finding that the captioned undertaking will result in ***no historic properties affected.***

☐ Under the authority of the National Historic Preservation Act of 1966, as amended, the Minnesota State Historic Preservation Office ***objects*** to FEMA's finding that the captioned undertaking will result in ***no historic properties affected*** for the reasons provided below.

Sarah Beimers — 8/26/2021

Minnesota State Historic Preservation Office — Date

U.S. Department of Homeland Security
536 South Clark Street, 6th Floor
Chicago, Illinois 60605-1521

FEMA

June 4, 2021

Sarah Beimers, Environmental Review Program Manager
Minnesota State Historic Preservation Office
Administration Building, Suite 203
50 Sherburne Avenue
Saint Paul, MN 55155

Re: 150th Street Realignment, Verona Township, Faribault County, Minnesota
DR-4442-MN, PW 1439 [115472]
GPS: 43.70411, -94.14882/T103N R28W S23 & 24

Dear Ms. Beimers:

Pursuant to the Section 106 of the National Historic Preservation Act, I am writing this letter to initiate and conclude consultation regarding the captioned Public Assistance Grant Program project.

In accordance with 36 CFR §800.11, I am enclosing documentation regarding this undertaking and its effect on historic properties. The documentation provides the justification for FEMA's finding of no historic properties affected; the purpose of this communication is to seek concurrence in that finding.

Due to workplace restrictions in response to COVID-19, we are using email to deliver this Section 106 consultation. We understand the impacts COVID-19 has had on your operations and we did receive your March 27th tolling notification. We understand you may need more than 30 days and will wait for your reply. Because our reliance on digital communications must continue until our offices reopen, we would appreciate a response by email from your office. For your convenience, we have included a response area below. If you have questions, do not hesitate to contact Karie Roach of my staff at 312-408-5549 or at fema-r5-environmental@fema.dhs.gov.

Sincerely,

Duane Castaldi
Regional Environmental Officer
FEMA Region V

Enclosures

++++++++*You may email this page to* fema-r5-environmental@fema.dhs.gov.++++++++

Re: 150th Street Realignment, Verona Township, Faribault County
GPS: 43.70411, -94.14882; T103N R28W S23&24
DR-4442-MN, PW 1439 [115472]

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Minnesota State Historic Preservation Office _____ Date _____

U.S. Department of Homeland Security
FEMA Region 5
536 South Clark Street, 6th Floor
Chicago, Illinois 60605-1521

FEMA

June 4, 2021

Documentation Initiating and Concluding Section 106 Consultation for a FEMA-Funded Undertaking

Project Information:

Project ID: DR-4442-MN, PW 1439 - 115472
Title: 150th Street Realignment
Address: Verona Township
Location: Faribault County, Minnesota
GPS: 43.70411, -94.14882
PLSS: T103N R28W S23&24
T103N R28W S23 and T103N R28W S24

Description of Undertaking and APE:

In response to severe storms, straight-line winds, and flooding between March 12, 2019 and April 28, 2019, the President declared disaster DR-4442-MN on June 12, 2019. This declaration made Public Assistance (PA) available to state and eligible local governments and certain private nonprofit organizations on a cost-sharing basis for emergency work and repair or replacement of damaged facilities. This declaration also made Hazard Mitigation Grant Program assistance requested by the Governor available for hazard mitigation measures statewide.

During the incident period, the Blue Earth River flooded with abnormally high velocities and depth, significantly eroding the outer curve of the riverbank and undermining 150th Street, in Verona Township, Faribault County (43.70411, -94.14882), The affected area lies within Section 23 and Section 24, Township 103N and Range 28 W approximately one quarter mile south of the 150th Street bridge over the Blue Earth River. The applicant proposes to use federal funds authorized under the Stafford Act to realign the endangered portion of 150th Street approximately 170 feet northwest of the affected area to best serve public safety concerns and prevent the potential for reoccurring damage.

The Applicant will acquire approximately three additional acres of property northwest of the affected area, currently used as cropland, to accommodate the new right-of-way. The new road section will tie into the existing roadway. Construction of the new 66-foot wide gravel-surfaced road section will include clearing and grubbing of trees, excavation, grading, and the stabilization of the river embankment with Class III and Class V rip-rap and a benched embankment. The new roadway and shoulder will consist of Class 5 aggregate base, granular material, Class 1 shoulder base, and topsoil. The undertaking will also involve approximately three acres of turf establishment and restoration, and the installation of new road signage and erosion control.

The old roadway will be excavated and removed. The original alignment will be restored to a natural condition by placing topsoil and planting grasses .and trees. The eroded

riverbank, outside the area stabilized by rip-rap and a benched embankment, will be allowed to naturally stabilize.

As defined in 36 CFR §800.16(d), the area of potential effects (APE) is the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties if any such properties exist. Based on this definition and the nature and scope of the undertaking, FEMA has determined that the APE is limited to the areas within which all construction and ground disturbing activity would be confined and the viewshed of the proposed project. No potential for effects outside of the viewshed of the proposed project exists. The APE is denoted on Figures 1 and 4.

Steps Taken to Identify Historic Properties and the Description of Historic Properties:

Archaeology

A search of the Minnesota Historical Society's archaeological inventory conducted on September 11, 2020 indicated that there are sixteen (16) previously recorded archaeological sites in the same quarter section as the project location, or the quarter sections surrounding it. These are: 21FA0040, 21FA0041, 21FA0042, 21FA0046, 21FA0049, 21FA0060, 21FA0061, 21FA0062, 21FA0063, 21FA0095, 21FA0096, 21FA0154, 21FA0155, 21FA0109, 21FA0110, and 21Ft.

A Phase I Archaeological Survey of the proposed route, including the land to be acquired and used for the roadway relocation was completed between March and May, 2021. The survey identified one prehistoric find spot, represented by a single lithic projectile point. The artifact was reported to the Office of the State Archaeologist and was given site number 21FA0164. This site is not considered eligible for the National Register of Historic Places and no additional archaeological work was recommended (Nienow Cultural Consultants, LLC and Zooarchaeo Consulting, LLC, final report May 31, 2021, attached).

Standing Structures

FEMA-qualified staff consulted the National Register of Historic Places (NRHP) database and the Minnesota State Historic Preservation Office (SHPO) Historic Inventory and identified Bridge 1098/65556 carrying 860th Avenue over Hawk Creek within the same quarter section of the project location. Based upon the Minnesota Structure Inventory Report for the bridge, it was constructed in 1996. The bridge is located outside of the APE and therefore is not subject to review. As a result, FEMA-qualified staff has determined that no previously identified resources listed in or determined eligible for listing in the NRHP exist within the APE for this undertaking

Determination of Eligibility:

Based on the information provided here, and in the absence of any evidence to the contrary, FEMA has determined that ***no properties eligible for listing on the National Register of Historic Places exist in the APE*** for this undertaking.

Finding:

FEMA finds that this undertaking will result in ***no historic properties affected.***

Figures:

Figure 1: Undertaking site marked in red.
USGS National Map "Huntly Quadrangle, MN 2019," 1:24000, enlarged to show detail.

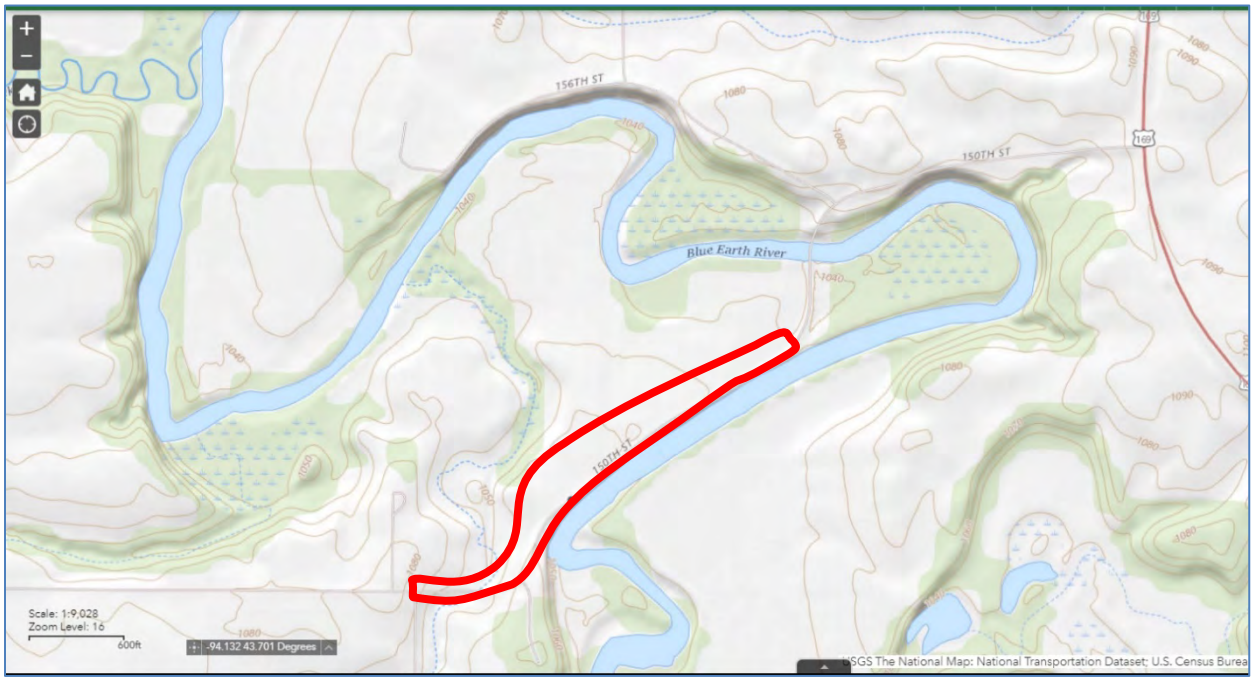


Figure 2: Aerial Image indicating project location
Google Earth June 8, 2016 imagery, graphic scale.

Figure 3: Proposed new road alignment
Bollig Engineering and Environmental, Inc. July 7, 2020, graphic scale.

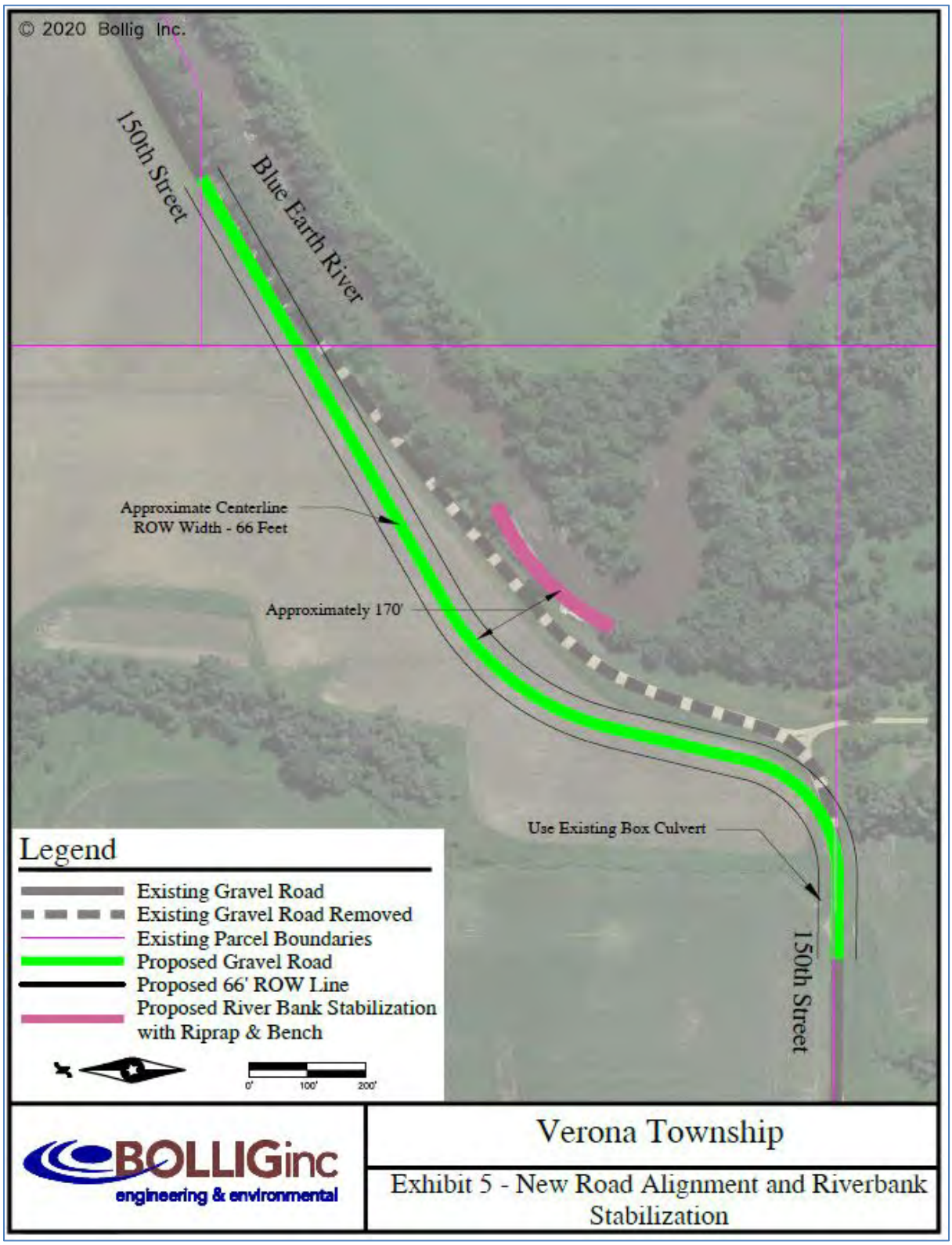


Figure 4: Proposed new road alignment, APE noted in red
Bollig Engineering and Environmental, Inc., July 7, 2020, graphic scale..

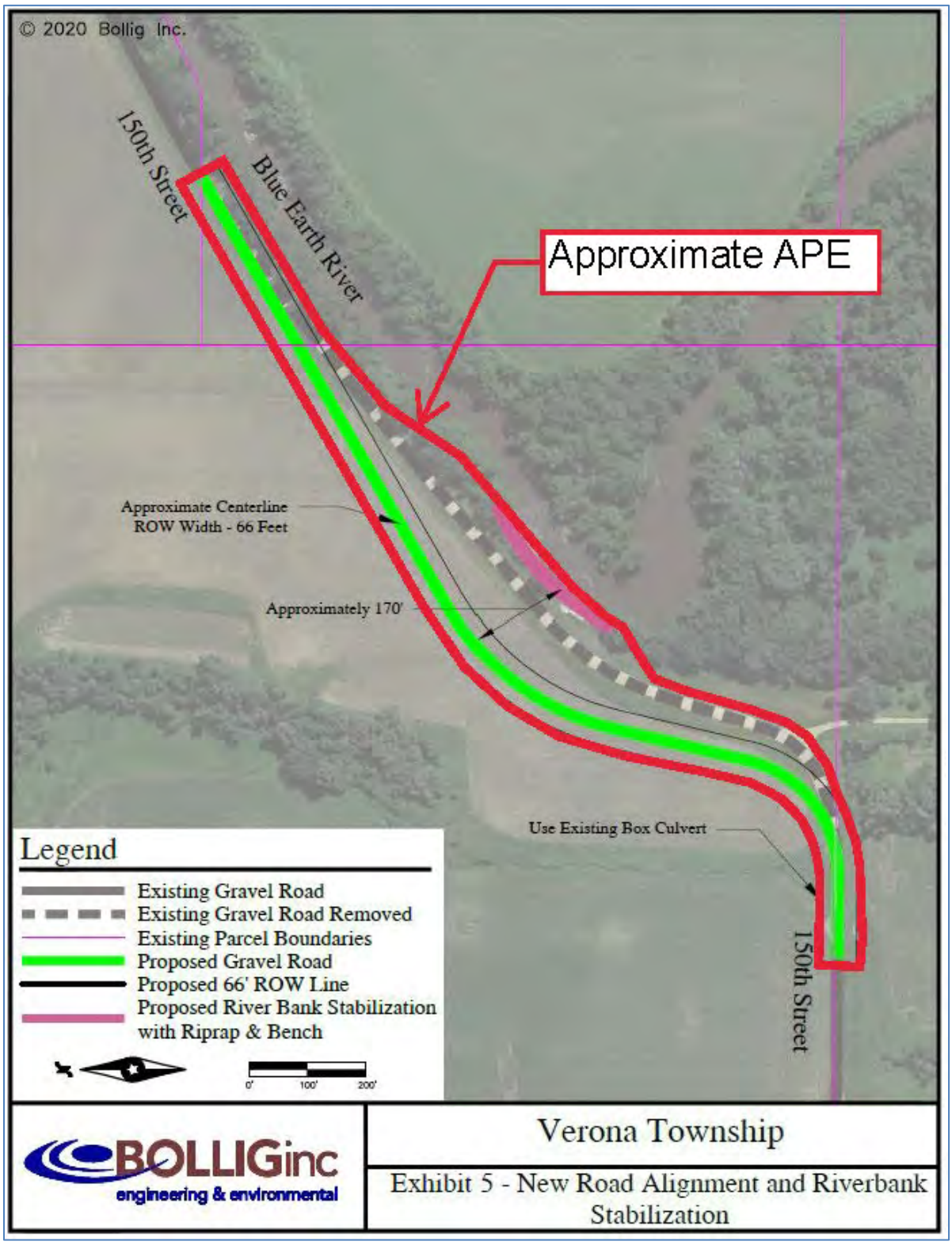
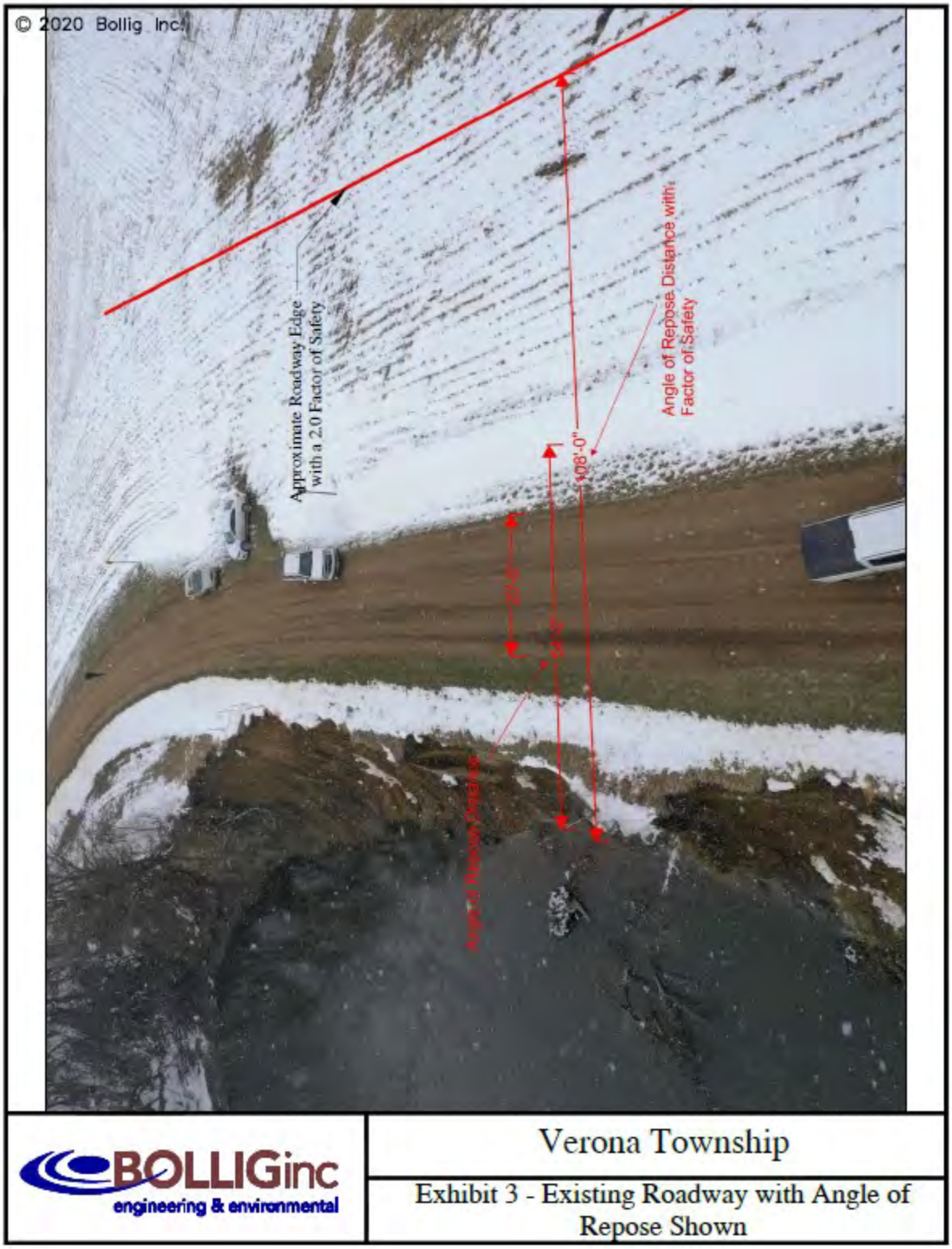


Figure 5: Overview of riverbank and existing roadway, facing north.
Bollig Engineering and Environmental, Inc. image, 2019.

Figure 6: Overview of riverbank and existing roadway, facing northeast.
Bollig Engineering and Environmental, Inc. image, 2019.

Figure 7: Aerial Photograph with notations regarding location of new roadway.
Bollig Engineering and Environmental, Inc. image, 2019.



Phase I Archaeological Survey of Proposed 150th Street Realignment and Bank Stabilization in Verona Township, Faribault County, Minnesota

Principal Investigators and Report Authors:

Jeremy L. Nienow, Ph.D., RPA
Nienow Cultural Consultants LLC
Registered Professional Archaeologist #12071

Laura Koski, MSc, RPA
Zooarchaeo Consulting, LLC
Registered Professional Archaeologist #18060

Final Report
May 31, 2021

Phase I Archaeological Survey of Proposed 150th Street Realignment and Bank Stabilization in Verona Township, Faribault County, Minnesota

Submitted To:

Neal Mensing
Verona Township

Submitted By:

Nienow Cultural Consultants LLC
200 Plato Blvd East
St. Paul, MN 55107

Principal Investigators and Report Authors:

Jeremy L. Nienow, Ph.D., RPA
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Registered Professional Archaeologist #12071

Laura Koski, MSc, RPA
Zooarchaeo Consulting, LLC
Registered Professional Archaeologist #18060

Final Report
May 31, 2021

Management Summary

There is a proposed project including 300 feet of bank stabilization along Blue Earth River in association with relocating a portion of 150th Street in Verona Township, Faribault County, Minnesota. The project area, approximately 4 acres in size, is located in the SE ¼ of the SE ¼ of Section 23 Township 103N, Range 28W and NW ¼ of SW ¼ of Section 24 of Township 103N, Range 28W in Archaeological Region 2s: Prairie Lake South. The project area consists of agricultural fields northwest of existing 150th Street, and the bank of the Blue Earth River southeast of 150th Street.

Funding for the project is provided by the Federal Emergency Management Agency (FEMA) Public Assistance Program, which requires the completion of an Environmental Assessment. This Environmental Assessment includes the need for a Phase I Archaeological Review. Nienow Cultural Consultants LLC (NCC) was contracted to complete a Phase I Archaeological Survey in March of 2021. NCC's Principal Investigators for this project were Jeremy Nienow, Ph.D., RPA and Laura Koski, MSc, RPA. Work began with a literature review March 23 followed by fieldwork completed April 22 and May 24, 2021. Fieldwork completed on April 22 included completion of a pedestrian survey on a 5-meter interval along the proposed stretch of the 150th Street road realignment, four shovel tests along the required bank stabilization area, an additional fifth shovel test at a single find spot location identified during the surface survey, and a final sixth shovel test on a high point overlooking the find spot. Shovel tests were typically 35-40 centimeters (cm) wide and at least 60cm deep. All soils were screened through ¼" mesh screen, detailed profile notes completed, photographs taken, and GPS points collected for each shovel test. A single artifact was recovered on April 22. To complete additional surface survey around the find spot area with better ground visibility, NCC returned to the project area May 24 after the field had been planted, and completed a surface-survey on a seven to ten-meter interval surrounding the find spot area and further southwest across the proposed road realignment.

A single prehistoric archaeological site was identified during the April 22 field survey. It is represented by a single lithic projectile point. No additional cultural materials were identified during the follow-up survey on May 24, 2021. This artifact has been reported to the Office of the State Archaeologist and received site number 21FA0164. This site is not considered eligible for the National Register of Historic Places. Based on these results, Nienow Cultural Consultants recommends no further archaeological work be completed.

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1.0 INTRODUCTION

There is a proposed project including 300 feet of bank stabilization along Blue Earth River in association with relocating a portion of 150th Street in Verona Township, Faribault County, Minnesota (Figure 1). The project area, approximately 4 acres in size, is located in the SE ¼ of the SE ¼ of Section 23 Township 103N, Range 28W and NW ¼ of SW ¼ of Section 24 of Township 103N, Range 28W in Archaeological Region 2s: Prairie Lake South. The project area consists of agricultural fields northwest of existing 150th Street, and the bank of the Blue Earth River southeast of 150th Street (Figure 2).

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Work began with a literature review March 23 followed by fieldwork completed April 22 and May 24, 2021. Fieldwork completed on April 22 included completion of a pedestrian survey on a 5-meter interval along the proposed stretch of the 150th Street road realignment, four shovel tests along the required bank stabilization area, an additional fifth shovel test at a single find spot location identified during the surface survey, and a final sixth shovel test on a high point overlooking the find spot. Shovel tests were typically 35-40 centimeters (cm) wide and at least 60cm deep. All soils were screened through ¼" mesh screen, detailed profile notes completed, photographs taken, and GPS points collected for each shovel test. A single artifact was recovered on April 22. To complete additional surface survey around the find spot area with better ground visibility, NCC returned to the project area May 24 after the field had been planted, and completed a surface-survey on a seven to ten-meter interval surrounding the find spot area and further southwest across the proposed road realignment.

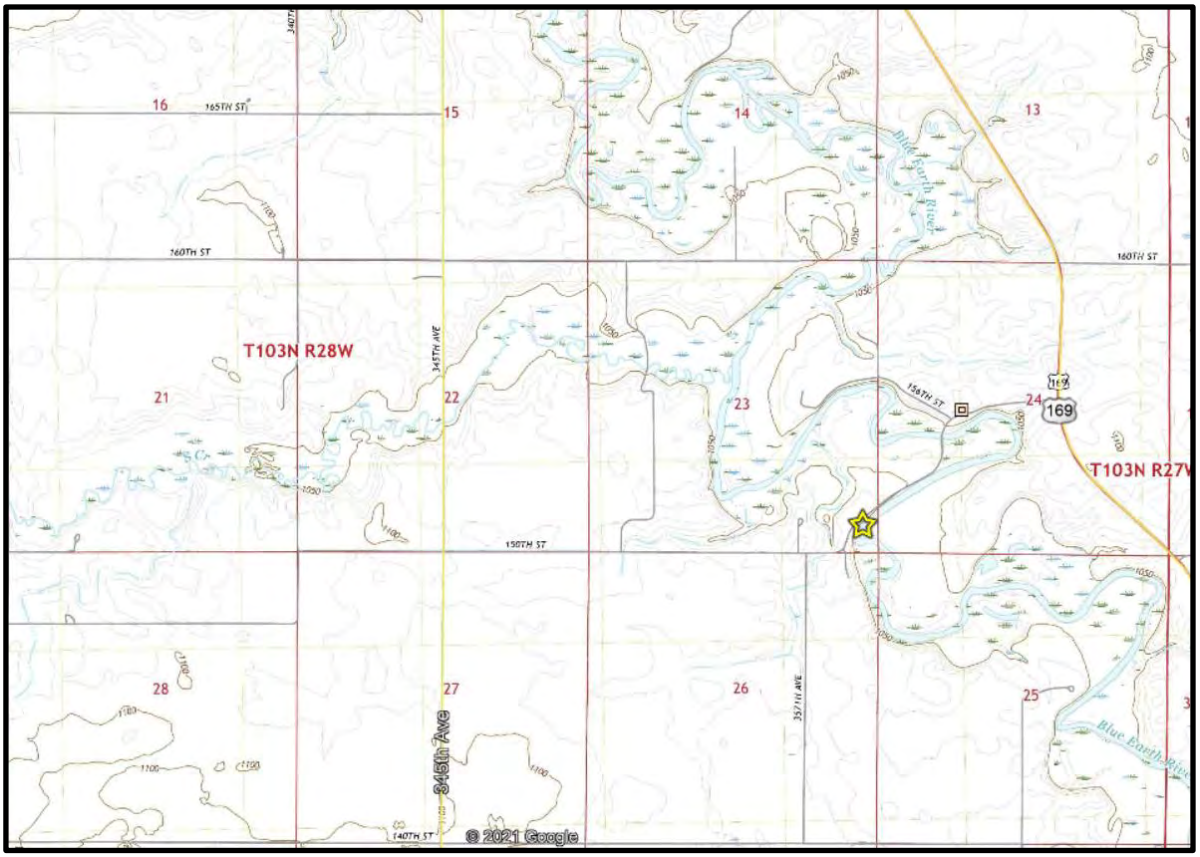

Figure 1: USGS Topographic Map Illustrating Project Area (starred).
(USGS 7.5' Topographic Map, Huntley Quadrangle, 2019, 1:24,000)

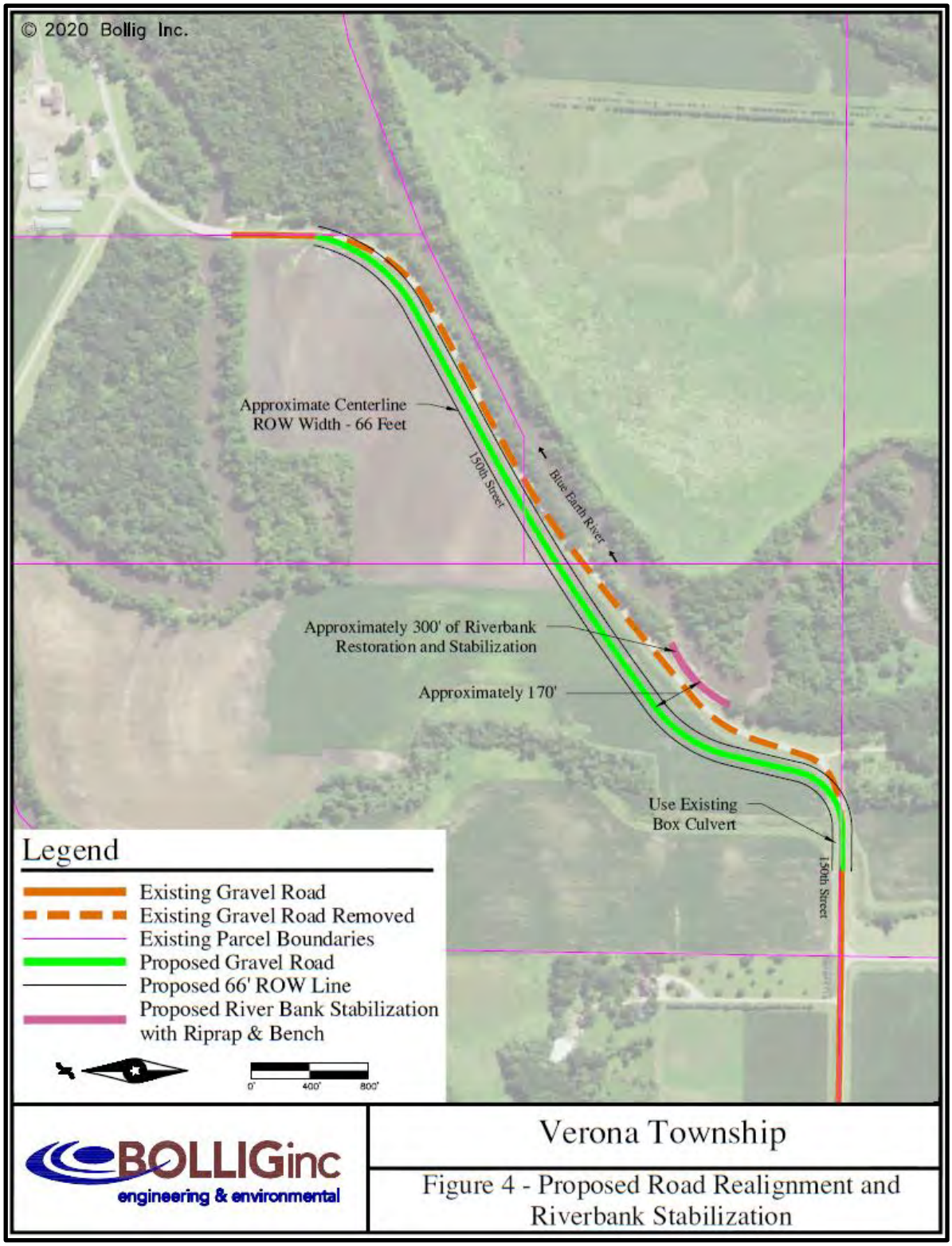

Figure 2: Sketch Plan of Project Area.
(Provided by Bollig Engineering)

2.0 RESEARCH DESIGN AND METHODOLOGY

2.1 Literature Review

A literature review was completed on March 23, 2021. Typically, the literature review would be completed by visiting the Office of the State Archaeologist and the State Historic Preservation Office. Unfortunately, both of these offices were closed due to safety precautions surrounding SARS-CoV-2 spread prevention. Instead, previously identified archaeological sites were noted for a two-mile radius surrounding the project area using the online Minnesota Office of the State Archaeologist archaeological sites portal (OSA Portal). In addition, the Township/Range/Sections within the two-mile radius were sent to the State Historic Preservation Office to generate an internal database archaeological and architectural sites search. The Township/Range/Section search did not yield any additional sites not included on the OSA Portal.

2.2 Fieldwork

Fieldwork was completed April 22 and May 24, 2021. Fieldwork completed on April 22 included completion of a pedestrian survey on a 5-meter interval along the proposed stretch of the 150th Street road realignment and the excavation of six total shovel tests. Four shovel tests were along the required bank stabilization area, an additional fifth shovel test at a single find spot location identified during the surface survey, and a final sixth shovel test on a high point overlooking the find spot. Shovel tests were typically 35-40 centimeters (cm) wide and at least 60cm deep. All soils were screened through ¼" mesh screen, detailed profile notes completed, photographs taken, and GPS points collected for each shovel test. The May 24 survey consisted of a tight interval surface-survey on a seven to ten-meter interval surrounding the find spot area and further southwest across the proposed road realignment after the field had been freshly plowed.

2.3 Artifact Processing

When the single artifact was identified during the initial survey, it was bagged and a GPS point was recorded for its location. In the lab, the artifact was washed, photographed, lotted, and cataloged. The artifact and its location has been reported to the Minnesota OSA as an archaeological site. The OSA has assigned it site number 21FA0164. The landowner will be contacted first to determine if they would like the artifact returned to them. If they do not want the artifact, it will be curated with MNHS.

3.0 ENVIRONMENTAL SETTING

3.1 Geological Background and Soils

In his 1990 publication *Archaeological Regions in Minnesota and the Woodland Period*, former State Archaeologist Scott Anfinson divides the state of Minnesota into nine environmental-archaeological regions based on natural resources available within each region. This classification allows archaeologists to research and analyze prehistoric environments in the state, as well as predict where archaeological sites may be located.

The project area falls within the eastern portion of Anfinson's region 2s: Prairie Lake south Sub-Region. The region sits within central to western-southern Minnesota, spanning Faribault to Grant Counties. Topographically, the region consists of ground moraines with hilly end moraines found along the northern, eastern, and southern edges of the region along with numerous lake basins. The major river in the region is the Minnesota, bisecting the region from east to west and acting as the major stream drainage system for the majority of the region's streams. Average precipitation ranges from 28 inches per year in the southeast to 22 inches per year in the northwest. High winter temperatures average at around 24 degrees Fahrenheit (F) while average high summer temperatures reach approximately 85 degrees F. The frost-free season ranges from 140 to 160 days (Anfinson 1990).

Approximately 14,000 years ago, the entire region was covered by glacial ice during the Late Wisconsin maximum. At approximately 12,500 years ago, the Des Moines lobe began to retreat from the region, and the region was mostly ice free by 11,700 years ago. Soils in the region would have been deposited during this time, and alluvial soils associated with proglacial lakes Lake Minnesota and Lake Benson should be notable in those areas. Soil texture in the central and western part of the region ranges from medium to fine prairie soils, and fine to medium textured prairie border soils in the eastern part of the region (Anfinson 1990). Bedrock outcrops are rare in the Prairie Lake region, especially those with quality stone tool material. Occasional outcrops of Paleozoic rocks containing high quality chert occur in the eastern part of the region near the confluence of the Blue Earth and Minnesota Rivers. The western part of the region contains some outcrops of Sioux Quartzite in Cottonwood County. Otherwise, granites and poorly consolidated Cretaceous rocks can be found in the Minnesota River Valley (Anfinson 1990).

The project area is comprised of five soil series: Coland clay loam, Lomax loam, Grogan silt loam, Dickinson fine sandy loam, and Shorewood silty clay loam. The Coland clay loam series consists of poorly drained soils on 0 to 2 percent slopes found on flood plains. The series contains clay loam from 0 to111cm, followed by loam from 111 to 200cm. The Lomax loam series consists of well drained soils found on terraces. The complex contains loam from 0 to 86cm, followed by sandy loam from 86 to 152cm. The Grogan silt loam series consists of well drained soils on 1 to 6 percent slopes found on hills on lake plains. The typical profile for the series contains silt loam from 0 to 46cm, followed by very fine sandy loam from 46 to 76cm, and finally stratified loamy very find sand to silt loam from 76 to 152cm. The Dickinson fine sandy loam series consists of well drained soils on 0 to 6 percent slopes found on outwash plains. The series typically contains fine sandy loam from 0 to 99cm, followed by loamy fine sand from 99 to 152cm. The Shorewood

silty clay loam series consists of moderately well drained soils on 6 to 12 percent slopes found on hills on lake plains. The typical soil profile for the series contains silty clay loam from 0 to 23cm, silty clay from 23 to 74cm, and silty clay loam from 74 to 152cm (NRCS 2021).

3.2 Regional Flora and Fauna

During the Early Prehistoric, the spruce forest dominant throughout the region was succeeded by mixed deciduous forests comprised primarily by birch and alter and later by oak and elm. By approximately 9,000 years ago, at the beginning of the Middle Prehistoric, prairie encroached into the southwestern part of the region and soon dominated. About 5,000 years ago as the climate cooled, oak woodlands became more prominent in the eastern part of the region. The prairie-forest border as it was known to Euro-American settlers was established by approximately 2,500 years ago with a mix of Big Woods vegetation (elm, maple, basswood) pushing out the northeastern oak woodlands approximately 300 years ago. At the time of Euro-American settlement, the region was dominated by tallgrass prairie with narrow river bottom forests and oak woods along the major river valleys.

During the Early Prehistoric, the region was likely home to now-extinct megafauna. Bison would have likely been a major resource during the Middle Prehistoric, and were documented as the dominant upland fauna during the Early Historic period with scattered large elk herds. Other fauna included deer along the prairie-forest border, and various fish and waterfowl within the Minnesota River Valley.

4.0 CULTURAL HISTORY

The Minnesota State Historic Preservation Office (SHPO) has developed statewide contexts examining Minnesota's Prehistoric through recent past. These contexts are laid out on the Minnesota Archaeological Site Form (Minnesota Office of the State Archaeologist 2016). Generally, they describe the history of the state and assist in predicting where specific types of sites may occur.

Native American contexts are commonly divided into three major traditions: Paleoindian, Archaic, and Woodland. Late Woodland is further subdivided into Plains Village, Mississippian, and Oneota Traditions. These divisions are based on significant changes in how these communities lived, with a special focus on subsistence strategies. Historic contexts are generally divided into Contact and Post-Contact periods. The Contact period begins with early European exploration and continues through the Post-Contact period including Euro-American settlement and Minnesota statehood. The following is a general summary of these traditions using the Author's general knowledge and various disseminated sources for information including the OSA's website, Elden Johnson's 1988 *The Prehistoric Peoples of Minnesota*, Gibbon and Anfinson's 2008 *Minnesota Archaeology: The First 13,000 Years*, and Gibbon's 2012 *Archaeology of Minnesota: The Prehistory of the Upper Mississippi River Region*.

4.1 Pre-Contact Period

4.1.1 Paleoindian Tradition (11,500 to 7,500 B.C.)

The Paleoindian Tradition in Minnesota is divided into two periods: Early Paleoindian and Late Paleoindian/Early Archaic (Gibbon and Anfinson 2008). Throughout the Paleoindian, Native American communities were small, mobile, and focused on hunting. However, between the early and late periods, the environment and available food resources changed dramatically. The beginning of the Early Paleoindian Tradition is characterized by retreat of glacial ice and the growth of spruce forests. During this time, now extinct megafauna like mastodon, mammoth, and large bison were available for hunting. The Early Paleoindian period is poorly understood in Minnesota because most evidence for Paleoindian lifeways comes from isolated finds of large fluted projectile points (Gibbon and Anfinson 2008). Based on more plentiful sites in the southeastern and southwestern portions of the United States, it is generally assumed Native American populations were small, consisting of highly-mobile hunters and foragers who followed large game throughout the landscape (Gibbon and Anfinson 2008).

By the Late Paleoindian period, modern vegetation zones had established themselves in Minnesota. Modern animal species like white tail deer, grouse, and fish were available for Native American communities to hunt and fish. Lithic tool evidence from Late Paleoindian sites in Minnesota take the form of stemmed rather than fluted points and a wider range of tool types including groundstone tools (Gibbon and Anfinson 2008). Again, lifeways during this time are poorly understood, but based on three well-documented sites found in Minnesota (Cedar Creek-21AK58, Bradbury Brook-21ML42, and Browns Valley-21TR5), communities are still small, highly-mobile and focused on hunting larger animals and foraging for wild plants. However, stone toolkits did diversify and communities began exploiting smaller territories. It is also likely populations started to increase (Gibbon and Anfinson 2008).

4.1.2 Archaic Tradition (7,500 to 800 B.C.)

The Archaic Tradition continues the trend of resource diversification startied in the Late Paleoindian period. Native American communities developed broader toolkits, used a wider array of foods, and became less mobile over the course of the Archaic. Additionally, by the end of the Archaic, communities were using communal burial sites. Stemmed and notched points, groundstone tools, particularly those for woodworking, and cold-hammered copper tools are hallmarks of the Archaic Tradition in the archaeological record (Anfinson 1997; Gibbon and Anfinson 2008). By the end of this period the climate shifted to a cooler, wetter pattern up until the strong, human-driven, warmer climates of the modern era. Resource gathering technologies during the Archaic included the aforementioned hunting, as well as trapping, fishing, foraging, woodworking and plant processing. Many of the larger, documented sites in the central portion of the state likely began during the end of this period.

4.1.3 Woodland Tradition (800 B.C. to European Contact)

In the Midwest region, archaeologists tend to divide the Woodland Tradition into three periods: Early, Middle, and Late. However, Anfinson (1987) and Gibbon (2012) suggest in Minnesota it is more appropriate to divide the era into Initial and Terminal Woodland periods. This view is not as widespread as research would at first suggest, with work including Arzigian's *Statewide Multiple Property Documentation Form for the Woodland Tradition* (2008), and Buhta et. al. *On the Periphery?: Archaeological Investigations of the Woodland Tradition in West- Central Minnesota* (2014), retaining the more traditional use of Early, Middle, and Late designations. Beginning approximately 2,800 years ago, peoples in the region experienced increases in population with the advent of first horticultural and then agricultural subsistence strategies to augment already extant systems of hunting, gathering, etc. As populations increased, settlements near favorable transportation and resource corridors shifted from seasonal to year-round occupations as they made forays to collect necessary resources (Johnson 1988; Anfinson 1987:222).

The period also witnessed the technical transition from spear/atlatl to bow and arrow weaponry useful for both hunting and warfare. This change in technology lead to the use of smaller projectile points or arrow heads. Similarly, the period also saw the invention of ceramic vessels and it is these vessels and their change over time, from thick walled, grit tempered, conoidal vessels, to thinner walled, shell tempered, globular vessels, which has greatly assisted the archaeological community in further refining their understanding of group identity, cohesion, and integration throughout the region. Indeed, there are more than ten major recognized ceramic complexes for the state with many temporal overlaps, often based more on location than visual representation. A final example representing not only identity and permanence on the landscape, but also religious practices, was the use of earthen burial mounds. Although community size was likely similar between the Early Woodland and Late Archaic periods, by the Late Woodland period, populations were certainly on the rise.

4.2 Contact/Post-Contact Period (1630 A.D. to Present)

This period generally refers to the span of time extending from the first European explorations until intensive Euro-American settlement of the region. Minnesota's historic period began in 1673 when French explorers Marquette and Joliet discovered the upper portion of the Mississippi River. Ten years later, Catholic Missionary Father Louis Hennepin told his story of exploring Minnesota and being held captive by Dakota Indians in the first book written about Minnesota, *Description de la Louisiane* (Hennepin 1683).

The territory containing modern-day Minnesota was claimed at various periods of time by Spain, France, Great Britain, and the United States. Lieutenant Zebulon Montgomery Pike led the first United States expedition through the area in 1805, which would ultimately become Minnesota in 1858. Fort St. Anthony (later Ft. Snelling) was completed between 1819 and 1824, and in 1836 the Wisconsin Territory, including a portion of Minnesota, was formed. Just one year later, on September 29th, 1837, during treaty negotiations in Washington, D.C., Dakota leaders ceded their

lands between the Mississippi and St. Croix Rivers.

The fur trade drove much of European exploration and settlement into Minnesota prior to territorial frontier settlement in the mid-1800s. While the fur trade impacted Native American communities throughout all of Minnesota, the heaviest impacts came with later Euro-American settlement. Intensive settlement and agriculture dramatically transformed the landscape, displacing large numbers of Native Americans and their communities. In 1862 tensions between white settlers and Native Americans resulted in the Dakota War. Ultimately, this war left 462 whites and "an unknown but substantial number" of Native Americans dead (Anderson and Woolworth 1988). The conflict concluded with the largest mass execution in United States history with the hanging of 38 Dakota on December 26, 1862 at Mankato and the deportation of remaining tribal members to Santee, Nebraska.

Native American archaeological site types associated with this period are generally consistent with those of earlier periods, but European and Euro-American traders, missionaries, settlers, and industries affected the locations of these sites. This period also includes Euro-American immigrant settlement patterns, subsistence activities, and economic strategies. Sites associated with Euro-American immigrants appear in the mid-nineteenth century. Associated archaeological and historic site types categorized in the Contact/Post-Contact period include standing structures as well as archaeological sites.

5.0 LITERATURE REVIEW

Twenty-six previously identified archaeological sites and one alpha site are located within two miles of the project area (Table 1). Alpha sites are possible archaeological sites which have been reported as *potential* sites based on mentions in literature, historic mapping (i.e. the 1874 Andreas Atlas), or by individuals reporting casually finding cultural materials; these sites have yet to be field verified through systematic archaeological research and survey.

Table 1. Previously Identified Archaeological Sites Within Two Miles

Site Number	Site Name	Site Description	Cultural Affiliation	Miles from Project Area	TRS
21FA0063	-	Artifact Scatter	Pre-Contact	0.03	SE ¼ of SE ¼ T103N, R28W, S23
21FA0062	-	Artifact Scatter	Pre-Contact: Oneota	0.1	NW ¼ of SE ¼ and SW ¼ of NE ¼ of SE ¼ T103N, R28W, S23
21FA0049	-	Lithic Scatter	Pre-Contact	0.45	SE ¼ of SW ¼ of NE ¼ T103N, R28W, S23
21FA0155	-	Single Artifact	Pre-Contact	0.51	NE ¼ of SW ¼ of T103N, R28W, S23

Table 1. Previously Identified Archaeological Sites Within Two Miles

Site Number	Site Name	Site Description	Cultural Affiliation	Miles from Project Area	TRS
21FA0154	-	Lithic Scatter	Pre-Contact	0.57	NE ¼ of SW ¼ of T103N, R28W, S23
21FA0060	-	Artifact Scatter	Pre-Contact: Oneota	0.59	NW ¼ of SE ¼ of SW ¼ of T103N, R28W, S23
21FA0061	-	Artifact Scatter	Pre-Contact: Oneota	0.62	NE ¼ of SW ¼ of T103N, R28W, S23
21FA0096	-	Lithic Scatter	Pre-Contact	0.64	T103N, R28W, S23
21FA0095	-	Artifact Scatter	Pre-Contact	0.7	NW ¼ of NW ¼ of NE ¼ of SW ¼ of T103N, R28W, S23
21FA0110	Moran	Lithic Scatter	Pre-Contact	0.77	SE ¼ of NW ¼ of SE ¼ of T103N, R28W, S24
21FA0042	-	Lithic Scatter	Pre-Contact: Oneota	0.78	SE ¼ of NW ¼ of T103N, R28W, S23
21FA0046	-	Lithic Scatter	Pre-Contact	0.85	NW ¼ of NW ¼ of NE ¼ of T103N, R28W, S23
21FA0041	-	Artifact Scatter	Pre-Contact	0.87	SW ¼ of NE ¼ of NW ¼ of T103N, R28W, S23
21FA0109	Riverside County Club	Lithic Scatter	Pre-Contact	0.89	SW ¼ of NW ¼ of NE ¼ of T103N, R28W, S24
21FA0040	Durkee	Artifact Scatter	Pre-Contact: Late Woodland	1.02	SW ¼ of NW ¼ of NW ¼ of T103N, R28W, S23
21FA0147	Morse	Artifact Scatter	Pre-Contact and Post-Contact	1.02	SW ¼ of SE ¼ of T103N, R28W, S14
21FA0050	-	Habitation	Pre-Contact: Mississippian/Oneota	1.04	N ½ of SE ¼ of SE ¼ of T103N, R28W, S14
21FA0108	Poverty Acres	Artifact Scatter	Pre-Contact	1.18	T103N, R28W, S13
21FA0146	-	Single Artifact	Not Determined	1.19	NE ¼ of SW ¼ of T103N, R28W, S14
21FA0107	Perry	Lithic Scatter	Pre-Contact	1.3	NE ¼ of NE ¼ of SW ¼ of T103N, R28W, S13
21FA0153	-	Artifact Scatter	Pre-Contact: Oneota and Post-Contact: Euro-American	1.51	SW ¼ of SE ¼ of T103N, R28W, S15
21FA0150	-	Artifact Scatter	Pre-Contact: Oneota and Post-Contact: Euro-American	1.72	SE ¼ of SW ¼ of T103N, R28W, S15

Table 1. Previously Identified Archaeological Sites Within Two Miles

Site Number	Site Name	Site Description	Cultural Affiliation	Miles from Project Area	TRS
21FA0143	-	Single Artifact	Pre-Contact	1.79	NW ¼ of NE ¼ of T103N, R28W, S14
21FA0144	-	Single Artifact	Pre-Contact	1.88	NE ¼ of NW ¼ of T103N, R28W, S14
21FA0039	Hacklander II	Lithic Scatter	Pre-Contact	2	W ½ of NE ¼ of SW ¼ of T103N, R27W, S31
21FA0151	-	Artifact Scatter	Pre-Contact: Oneota with possible Woodland component	2	NE ¼ of SW ¼ and NW ¼ of SW ¼ of T103N, R28W, S15
21FAt	Halliday Mill/Verona Star Mill	Mill Site	Post-Contact: Euro-American	0.53	NE ¼ of SW ¼ of T103N, R28W, S24

No previously identified archaeological sites are located within the project area, though two pre-contact village sites are located within 100 meters of the project area. These sites consist of artifact scatters including pottery, lithic debitage, and stone tools. Sites located within two miles are comprised of pre-contact lithic and artifact scatters and a single habitation site. Those with diagnostic cultural materials date to the Late Prehistoric with a handful attributed to the Woodland, Oneota, and Mississippian Traditions. Only three of the 26 recorded sites contain components from the Post-Contact Period. Two of these sites are artifact scatters, but one, Alpha Site 21FAt, is an historical mill site.

6.0 RESULTS

Fieldwork was completed on April 22 and May 24, 2021 (Figure 3). The April 22 fieldwork consisted of a surface survey on a 5-meter interval across the agricultural fields where the road realignment is proposed to take place. Surface visibility ranged between 30% and 60%. A single projectile point was noted during the surface survey in the agricultural field. This is a Prairie side-notched projectile point made of Prairie du Chien chert from the Willow River Member Shakopee Formation (Figure 4). The Prairie side-notched point style dates to approximately 700 to 1300 CE (Morrow 2015:226). The base of the riverbank was also walked in an attempt to identify any cultural materials visible in the eroding bank. No cultural materials were noted in the riverbank.

Six shovel tests were completed in total. Four were completed at an approximately 15m interval along the top ridge of the proposed riverbank stabilization. A fifth shovel test was excavated at the single find spot identified during the surface survey, and a sixth shovel test was completed at a high point just southwest of and overlooking the find spot location. All shovel tests reflected a similar soil profile of 10YR 4/1 Brown Fine Sandy Silt Loam from 0 to an average of 25cmbs, followed by 10YR 4/3 Fine Sandy Clay from 25cmbs to shovel test termination. All shovel tests were terminated at at least 60cmbs, well into subsoils. All shovel tests were negative for cultural materials.

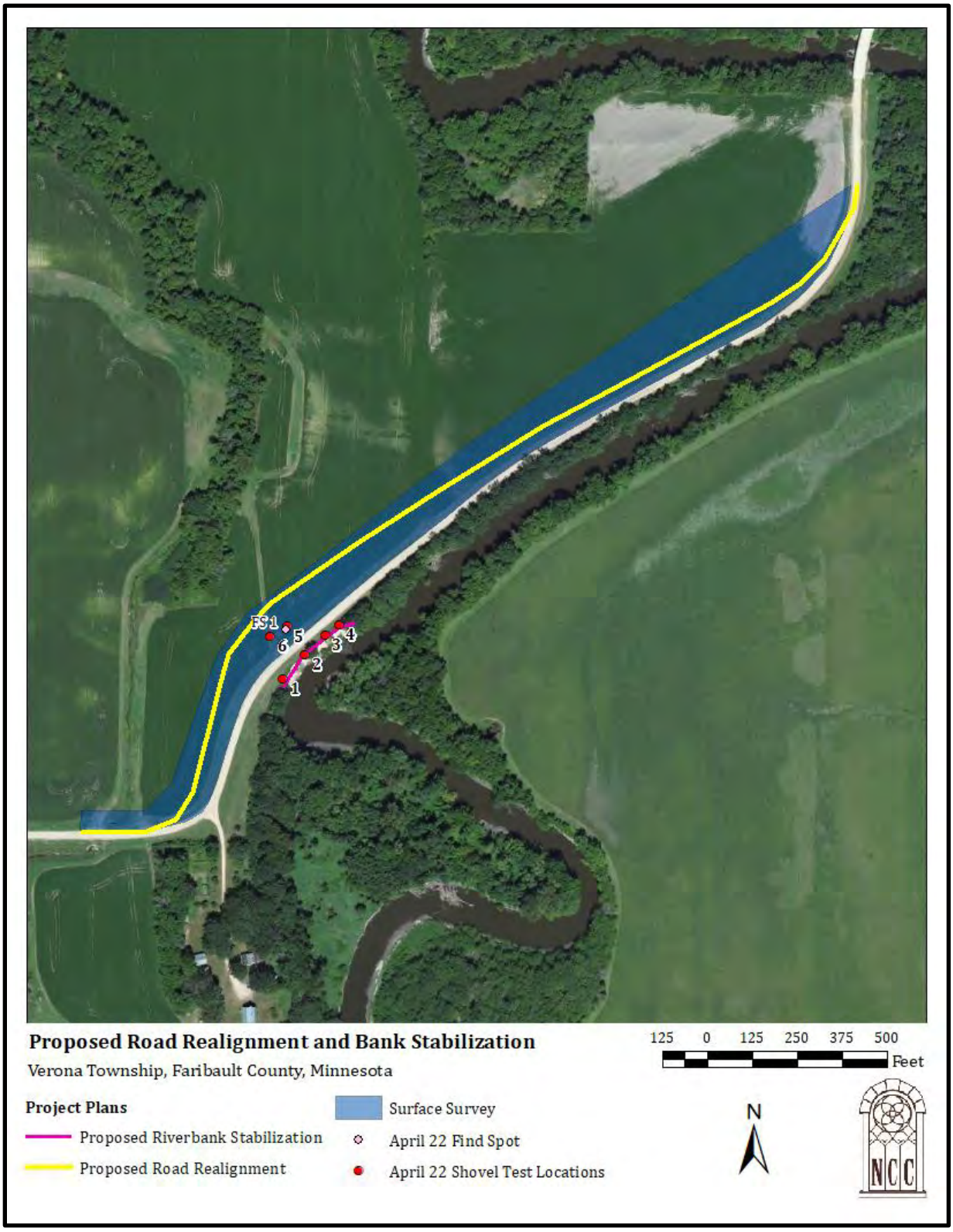

Figure 3: Map of Surface Surveyed Areas and Shovel Test Locations Within Greater Project area. (Basemap provided by 2016 Google Satellite Imagery)

Considering surface visibility within the southern field where the find spot was located on April 22 was approximately 30%, a follow-up surface survey was completed May 24, a day after the field had been planted, increasing surface visibility to approximately 70%. Additional surface survey was completed on a seven to ten-meter interval surrounding the find spot and continuing southwest following the roadway. No additional cultural materials were identified.

Figure 4: Of Prairie Side-Notched Projectile Point Recovered During Surface Survey (Site 21FA0164).

7.0 CONCLUSION AND RECOMMENDATIONS

There is a proposed project including 300 feet of bank stabilization along Blue Earth River in association with relocating a portion of 150th Street in Verona Township, Faribault County, Minnesota. The project area, approximately 4 acres in size, is located in the SE ¼ of the SE ¼ of Section 23 Township 103N, Range 28W and NW ¼ of SW ¼ of Section 24 of Township 103N, Range 28W in Archaeological Region 2s: Prairie Lake South. The project area consists of agricultural fields northwest of existing 150th Street, and the bank of the Blue Earth River southeast of 150th Street.

Work began with a literature review March 23 followed by fieldwork completed April 22 and May 24, 2021. Fieldwork completed on April 22 included completion of a pedestrian survey on a 5-meter interval along the proposed stretch of the 150th Street road realignment, four shovel tests along the required bank stabilization area, an additional fifth shovel test at a single find spot location identified during the surface survey, and a final sixth shovel test on a high point overlooking the find spot. Shovel tests were typically 35-40 centimeters (cm) wide and at least 60cm deep. All soils were screened through ¼" mesh screen, detailed profile notes completed, photographs taken, and GPS points collected for each shovel test. A single artifact was recovered on April 22. To complete additional surface survey around the find spot area with better ground visibility, NCC returned to the project area May 24 after the field had been planted, and completed a surface-survey on a seven to ten-meter interval surrounding the find spot area and further southwest across the proposed road realignment.

A single prehistoric archaeological site was identified during the April 22 field survey. It is represented by a single lithic projectile point. No additional cultural materials were identified during the follow-up survey on May 24, 2021. This artifact has been reported to the Office of the State Archaeologist and received site number 21FA0164. This site is not considered eligible for the National Register of Historic Places. Based on these results, Nienow Cultural Consultants recommends no further archaeological work be completed.

With any project there is the chance of unanticipated discovery. Should archaeological materials surface during any future construction, it is advised a professional archaeologist be consulted. Minnesota Statute 307.08 protects unplatted cemeteries (including burial mounds) and issues guidelines for dealing with unexpected finds. Should human remains be encountered during earth moving activity, all work must stop and local law enforcement must be called.

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APPENDIX A:

FIELDWORK PHOTOGRAPHS

Image 1: Of Surface Visibility Facing Southeast on May 24, 2021.

Image 2: Of Field Crew Surveying Project Area on May 24, 2021.

Image 3: Of Riverbank Where Stabilization is Planned Facing Northeast.

Image 4: Of Example Shovel Test (STP2).

APPENDIX B:

SHOVEL TEST FORMS

NCC Shovel Test Form
– Generic 2021

Date: 4/22/21 Personal Initials: JLN JFS LJK

Additional Notes: Verona Township

GIS Information: GPS points taken on JFS device

Shovel Test Location: STP 1 Along Bank	Shovel Test Location: STP 2
0cm-- 10YR4/1 Brown Fine Sandy Silt Loam	0cm-- 10YR4/1 Brown Fine Sandy Silt Loam
10cm--	10cm--
20cm-- ↑ Mottled Transition ↓	20cm-- 22cmbs
30cm-- 10YR5/3 mottled with 10YR6/6 Clay	30cm-- 10YR 5/3
40cm--	40cm-- Fine Sandy Clay
50cm--	50cm--
60cm--	60cm 60cmbs
70cm--	70cm--
80cm--	80cm--
90cm--	90cm--
100cm--	100cm--
Max Depth: 60cmbs	Max Depth: 60cmbs
☒ No Artifacts Found in STP (Check Box)	☒ No Artifacts Found in STP (Check Box)
Sampled Items: / Weight (lbs):	Sampled Items: / Weight (lbs):
☐ Coal ____ ☐ Clinker ____	☐ Coal ____ ☐ Clinker ____
☐ Brick ____ ☐ Concrete ____	☐ Brick ____ ☐ Concrete ____
☐ Limestone ____ ☐ Asphalt ____	☐ Limestone ____ ☐ Asphalt ____
☐ Prehistoric ____	☐ Prehistoric ____
Photographed: (Yes) Photo #s: Acc 7m	Photographed: (Yes) Photo #s: Acc. 3 meters
NAD 83 43.70374, -94.14929	NAD 83 43.70396, -94.14599

NCC Shovel Test Form
– Generic 2021

Date: 4/27/21 Personal Initials: JLN JFS LJK

Additional Notes: VERONA TOWN

GIS Information:

Shovel Test Location: STP3 Along Bank	Shovel Test Location: STP 4 Along Bank
0cm-- 10YR4/1 Brown Fine Silt Loam	0cm-- 10YR4/1 Brown Fine Silt Loam
10cm--	10cm--
20cm--	20cm--
30cm-- mottled transition	30cm-- mottled transition
40cm--	40cm-- 10YR5/3 Fine Sandy Clay
50cm-- 10YR5/3 Fine Sandy Clay	50cm--
60cm--	60cm Loamy
70cm--	70cm--
80cm--	80cm--
90cm--	90cm--
100cm--	100cm--
Max Depth: 60cmbs	Max Depth: 60cmbs
☒ No Artifacts Found in STP (Check Box)	☒ No Artifacts Found in STP (Check Box)
Sampled Items: / Weight (lbs):	Sampled Items: / Weight (lbs):
☐ Coal _____ ☐ Clinker _____	☐ Coal _____ ☐ Clinker _____
☐ Brick _____ ☐ Concrete _____	☐ Brick _____ ☐ Concrete _____
☐ Limestone _____ ☐ Asphalt _____	☐ Limestone _____ ☐ Asphalt _____
☐	☐
Prehistoric _____	Prehistoric _____
Photographed: Yes Photo #s: 43. 70410 - 94. 10882	Photographed: Yes Photo #s: 43. 70416 - 94. 10863
NAD 83 Acc. 4	NAD 83 Acc 4

NCC Shovel Test Form
– Generic 2021

Date: 4/22/21 Personal Initials: JLN JFS LJK

Additional Notes: VERONA TOWNSHIP

GIS Information: GPS Points takes of JFS Device

Shovel Test Location: STP5 At FS 1

0cm--
10cm-- 10YR2/1 Fine Sandy Silt
20cm--
30cm-- 35cmbs
40cm--
50cm-- 10YR4/3 Fine Sandy Clay
60cm-- 65cmbs
70cm--
80cm--
90cm--
100cm--

Max Depth: 65cmbs

☒ No Artifacts Found in STP (Check Box)

Sampled Items: / Weight (lbs):

☐ Coal _____ ☐ Clinker _____
☐ Brick _____ ☐ Concrete _____
☐ Limestone _____ ☐ Asphalt _____
☐

Prehistoric _____

Photographed: (Yes) Photo #s:

NAD 83 43.70435
Acc. 4m -94.14907

Shovel Test Location: STP6 At high point South of FS1 (STP5)

0cm--
10cm-- 10YR2/1 Fine Sandy Silt
20cm--
30cm-- 34cmbs
40cm--
50cm-- 10YR3/3 Fine Sandy Clay
60cm-- 60cmbs
70cm--
80cm--
90cm--
100cm--

Max Depth: 60cmbs

☒ No Artifacts Found in STP (Check Box)

Sampled Items: / Weight (lbs):

☐ Coal _____ ☐ Clinker _____
☐ Brick _____ ☐ Concrete _____
☐ Limestone _____ ☐ Asphalt _____
☐

Prehistoric _____

Photographed: (Yes) Photo #s:

NAD 83 43.70408
Acc 4m -94.14949

APPENDIX C

SITE FORM

Rev. 7/1/09

MINNESOTA ARCHAEOLOGICAL SITE FORM

OFFICE OF THE STATE ARCHAEOLOGIST
Fort Snelling History Center, St. Paul, MN 55111 (612) 725-2729

SITE #: 21-FA0164 *(OSA assigns if New Site)* Site Name: Agency/Field #: **VTFS1**

_X_ New Site __ Site Update OSA License #: **N/A, Private Land** SHPO RC #:

Type of Fieldwork: X _ Reconnaissance/Phase I ___ Evaluation/Phase II ___ Excavation/Phase III Date(s) of This Fieldwork: **April 22, May 24, 2021**

NRHP Status: __ Listed __ Determined Eligible __ CEF(106) _X_ CNEF(106) __ Undetermined

LOCATIONAL INFORMATION

County: **Faribault** City/Twp. Name: **Verona Township** SHPO Sub-Region: **2s** *(see map in instructions)*

USGS 7.5' Quadrangle Map *(name and year)*: **Huntley Quadrangle, 2019**

Township: **103N** Range: **28W** Section: **23** ¼ Sections (at least 2): **SE ¼ of SE ¼ of SE ¼**
Township: Range: Section: ¼ Sections (at least 2):
Township: Range: Section: ¼ Sections (at least 2):

UTM Coordinates: (*less than 10 acres use center; over 10 acres define polygon around site; draw points on USGS*)
Zone: **15N**_ Datum: ___ 1927 X_ 1983 Method: ___ USGS Map X_ GPS ___ Other
Point 1: Easting **407409.61** Northing **4839651.98**
Point 2: Easting Northing
Point 3: Easting Northing
Point 4: Easting Northing
Point 5: Easting Northing

SITE CHARACTERISTICS

Acreage: **0.01** Site Dimensions: N-S __**1m**___ E-W ___**1m**__ Maximum Cultural Depth (if known) _____

Site Description (*√all that apply, but only one check per line*):
_X_ single artifact __ lithic scatter __ artifact scatter
__ burial mound (number of mounds _____) __ non-mound lone grave __ non-mound cemetery
__ petroglyph __ pictograph __ petroform
__ surface features (list below)
__ other: _____

Surface Features (*√all that apply*): __ earthwork __ pit/depression __ foundation/ruin __ other: _____

Inferred Site Function (*√all that apply*): __ habitation __ mortuary __ farm __ industrial __ transportation
_X_ Other (*list*): **Likely Hunting** __ unknown

Current Land Use (*list approximate % for all that apply*):
100% cultivated ___ fallow ___ commercial ___ recreational ___ industrial ___ residential
___ woodland ___ grassland ___ water-covered ___ other: _____

Surface Visibility (*list approximate % for all that apply*):
___ excellent **100%** good ___ fair ___ poor/none

Degree of Disturbance (*list approximate % for all that apply or √ unassessed*):
___ minimal **100%** moderate ___ heavy ___ completely destroyed ___ unassessed

Current Threats to Site: (*√all that apply or √ none known*)
__ erosion __ development __ agricultural _X_ other: **150th Street Realignment**

SITE #: 21-FA0164 Site Name: Agency/Field #: **VTFS1**

CULTURAL/TEMPORAL AFFILIATION
(list all that apply by level of certainty: 1 = confirmed; 2 = probable or √"not determined"):

Period:
__ not determined
X Precontact (9500 BC - 1650 AD)
__ Contact (1650-1837)
__ Post-Contact (1837-1945)

Precontact Context: *(list all that apply by level of certainty; if unable to discern specific context, √here __)*

Paleoindian Tradition __ not determined __ Folsom __ Lanceolate Point/Plano
__ Clovis __ Eastern Fluted __ other: _____

Archaic Tradition __ not determined __ Prairie __ Riverine
__ Shield __ Lake-Forest __ other: _____

Woodland Tradition __ not determined __ Fox Lake __ Laurel
__ SE Mn Early __ C Mn Transitional __ Lake Benton
__ Brainerd __ Blackduck-Kathio __ Psinomani/Sandy Lake
__ Havana-Related __ SE Mn Late __ Rainy River Late
__ other: _____

Plains Village Tradition X not determined __ Cambria __ Great Oasis __ Big Stone
__ other: _____

Mississippian Tradition __ not determined __ Silvernale __ other: _____

Oneota Tradition __ not determined __ Blue Earth __ Orr __ other: _____

Contact Context: *(list all that apply by level of certainty; if unable to discern specific context, √here __)*

American Indian __ not determined __ Dakota __ Ojibwe __ other: _____

Euro-American __ not determined __ British __ other: _____
__ French __ Initial US

Post-Contact Context: *(list all that apply by level of certainty; if unable to discern specific context, √here __)*

__ Indian Communities & Reservations (1837-1934)
__ Early Agriculture & River Settlement (1840-1870)
__ Northern MN Lumbering (1870-1930s)
__ Tourism & Recreation (1870-1945)
__ St. Croix Triangle Lumbering (1830s-1900s)
__ Railroads & Agricultural Development (1870-1940)
__ Iron Ore Industry (1880s-1945)
__ Urban Centers (1870-1940)

Approximate Post-Contact Occupation/Site Formation Date(s): _____

Context Assignment/Dating Methods *(√all that apply):*

X artifact type/style __ feature type __ radiometric __ relative stratigraphy __ geomorphology
__ historic accounts (list) _____
__ historic maps (list) _____
__ other(s) (*specify*): _____

(For radiometric dates, attach photocopies of laboratory sheets if available.)

MATERIALS PRESENT *(√all that apply):*

Basic Artifact Categories

Ceramics	*Lithics*	*Biological Remains*	*Historic Materials*
__ Aboriginal	X projectile points	__ animal	__ glass
__ Euro-American	__ other chipped stone tools	__ human	__ metal
	__ debitage	__ unidentified bone	__ brick
	__ ground/pecked stone	__ seeds/nuts	__ other: _____
	__ FCR	__ charcoal	
	__ aboriginal copper	__ wood	

SITE #: 21-FA0164 Site Name: Agency/Field #: **VTFS1**

Major Exotic Materials *(√all that apply):*

__ catlinite __ native copper __ Hixton orthoquartzite
__ Knife River Flint __ obsidian __ other: _____

Diagnostic Artifacts:

Ceramics: Prehistoric Types/Wares/Temper _____
Historic _____
Prehistoric Lithics: **Prairie side-notched projectile point (approx. 700-1300 CE, Morrow 2015:226)**
Glass: _____
Metal: _____
Other: _____

ENVIRONMENTAL DATA **Current Topographic Setting** *(√all that apply):*

Away from Water	*Riverine*	*Lacustrine*
__ general upland	__ fan	__ inlet/outlet
__ terrace edge	X terrace/bluff top	__ peninsula
__ hilltop	__ stream-stream junction	__ island
__ glacial beach ridge	__ bluff-base	__ isthmus
__ rock outcrop	__ cave/rockshelter	__ general shoreline
__ other: _____	__ floodplain	__ bog/slough/lake bottom
	__ other: _____	__ other: _____

Topographic Feature Name from USGS Map: **Blue Earth River, approx. 25 meters to the southeast**

OWNERSHIP INFORMATION

Source and Date of Ownership Information *(e.g., plat map, county recorder's office, personal communication, etc.):*
Faribault County Beacon Property Viewer GIS, 2021

Ownership Type *(list approximate % for all that apply; if unknown √here __):*

___ Federal ___ State ___ Local (public) ___ Tribal X Private

Land Owner *(name and address if known):*
George Bassett, 4929 Georgia Lane, White Bear Lake, MN 55110

CURRENT INVESTIGATION INFORMATION

Methods/Techniques Employed *(√all that apply):*

__ informant report __ small diameter soil coring (≈ 1" diameter) X surface survey
X shovel testing __ formal test units __ mechanical testing max. test depth _____
__ geomorphological survey *(specify)*: _____
__ geophysical survey *(specify)*: _____
__ other: _____

Informant Name and Address (if known): **No informant.**

Known Collectors/Collections: **None known.**

Artifact Repository *(name and accession numbers or repository agreement number):* **Waiting for response from landowner. If landowner does not want artifact, it will be curated with MNHS (repository agreement #953)**

Most Recent Survey Report – Title, Author, Date: **Phase I Archaeological Survey of Proposed 150th Street Realignment and Bank Stabilization in Verona Township, Faribault County, Minnesota (Jeremy Nienow and Laura Koski 2021)**

Major Previous Bibliographic Reference(s) to Site: **None.**

Principal Investigator *(name and affiliation):* Dr. **Jeremy Nienow, PhD, RPA (Nienow Cultural Consultants LLC) and Laura Koski, MSc, RPA (Zooarchaeo Consulting, LLC)**

Form Completed By *(name and date):* **Laura Koski, May 2021**

Rev. 7/1/09 **MINNESOTA ARCHAEOLOGICAL SITE FORM - CONTINUATION SHEET** page 4

SITE #: 21-FA0164 Site Name: Agency/Field #: **VTFS1**

MAPS: *Attach/include original scale copy of 7.5' USGS map with site location clearly outlined or designated. Attach a sketch map if surface features present, if sub-surface testing done, or if complicated boundaries/setting. Sketch map must have re-locatable datum, scale, north arrow, and legend if symbols are used.*

Map 1: Topographic Map of Site Location (starred)
USGS Topographic Map, Huntley Quadrangle, 2019, 1:24,000

SITE #: 21-FA0164 Site Name: Agency/Field #: VTFS1

Proposed Road Realignment and Bank Stabilization

Verona Township, Faribault County, Minnesota

125 0 125 250 375 500 Feet

Project Plans

Proposed Riverbank Stabilization

Proposed Road Realignment

Surface Survey

April 22 Find Spot

April 22 Shovel Test Locations

N

NCC

Map 2: Map of Fieldwork Along Project Area. FS1 is where the single artifact for this site was recovered.

SITE #: 21-FA0164 Site Name: Agency/Field #: **VTFS1**

ADDITIONAL INFORMATION *(Reason for Update or Survey, Location, Site Characteristics, Materials Present, Setting, Archaeological Methods, etc.; attach extra sheets as needed.)*

At the time of this site form, the Federal Emergency Management Agency (FEMA) is requiring approximately 300 feet of bank stabilization along Blue Earth River in association with road realignment of adjacent 150th Street in Verona Township, Faribault County, Minnesota. Nienow Cultural Consultants LLC (NCC) was contracted to complete a Phase I Archaeological Survey in March of 2021.

Fieldwork was completed on April 22 and May 24, 2021. The April 22 fieldwork consisted of a surface survey on a 5-meter interval across the agricultural fields where the road realignment is proposed to take place. Surface visibility ranged between 30% and 60%. A single projectile point was noted during the surface survey in the agricultural field. This is a Prairie side-notched projectile point made of Prairie du Chien chert from the Willow River Member Shakopee Formation (Image 1). The Prairie side-notched point style dates to approximately 700 to 1300 CE (Morrow 2015:226). The base of the riverbank was also walked in an attempt to identify any cultural materials visible in the eroding bank. No cultural materials were noted in the riverbank.

Six shovel tests were completed in total. Four were completed at an approximately 15m interval along the top ridge of the proposed riverbank stabilization. A fifth shovel test was excavated at the single find spot identified during the surface survey, and a sixth shovel test was completed at a high point just southwest of and overlooking the find spot location. All shovel tests reflected a similar soil profile of 10YR 4/1 Brown Fine Sandy Silt Loam from 0 to an average of 25cmbs, followed by 10YR 4/3 Fine Sandy Clay from 25cmbs to shovel test termination. All shovel tests were terminated at at least 60cmbs, well into subsoils. All shovel tests were negative for cultural materials.

Considering surface visibility within the southern field where the find spot was located on April 22 was approximately 30%, a follow-up surface survey was completed May 24, a day after the field had been planted, increasing surface visibility to approximately 70%. Additional surface survey was completed on a seven to ten-meter interval surrounding the find spot and continuing southwest following the roadway. No additional cultural materials were identified.

Image 1: Of Prairie side-notched projectile point recovered during survey.

Hazard Mitigation Proposal

150th Street Road Improvement

Verona Township, Minnesota

July 7, 2020

BOLLIGinc
engineering & environmental

Hazard Mitigation Proposals

150th Street Road Improvement

July 7, 2020

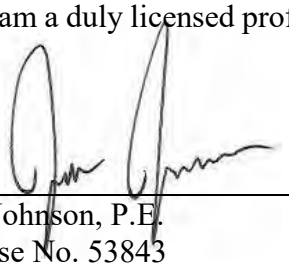
Prepared for:

Verona Township, MN

Prepared by:
Bollig Inc
Engineering & Environmental
1700 Technology Drive NE, Suite 124
Willmar, MN 56201
p: 320.235.2555
f: 320.222.3067
www.bollig-engineering.com

REPORT CERTIFICATION

I hereby certify that this report was prepared by me or under my direct supervision and that I am a duly licensed professional engineer under the laws of the state of Minnesota.



Josh Johnson, P.E.
License No. 53843

07/07/2020
Date

CONTENTS

A. INTRODUCTION

This report is being prepared as a result of the Presidential Disaster Declaration DR-4442-MN. Funding is being sought through the Federal Emergency Management Agency (FEMA) Section 404-Hazard Mitigation Grant Program (HMGP). The declaration on June 12, 2019 was the result of severe winter storms, straight-line winds and flooding from March 12 to April 28 for 51 counties and 4 four tribal nations as shown in Exhibit 1. HMGP is a cost share program with 75 percent federal and 25 percent local share.

Effects of the storm in Verona Township, located in Faribault County, included significant erosion to the bank of the Blue Earth River adjacent to 150th Street, jeopardizing the safety of the road. The River's outer bank has been washed out and has begun undermining the roadway owned by Verona Township. HMGP funds are being sought for damages to 150th Street due to flooding and abnormally high flows in the Blue Earth River during the spring of 2019.

Work elements in this report are **Permanent Work in Category D: Roads and Bridges.**

B. PROJECT

1. Location

The damaged township road is located on 150th Street between US Highway 169 and 375th Avenue in Verona Township, Faribault County. The damaged area is specifically located along 150th Street in Sections 23 and 24, Township 103 North, Range 28 West, Verona Township, Faribault County, Minnesota. Verona Township is located on the western edge of Faribault County. The township is approximately 35.5 square miles in size and has a population of approximately 391, based on the 2018 5-year American Community Survey (ACS) estimates (U.S. Census Bureau). 150th Street is a gravel road that runs east-west across the township. The damaged area is where 150th Avenue borders the Blue Earth River. A map of the project area can be found in Exhibit 2.

TABLE 1
Location and Coordinates

	Midpoint		Start		End	
Roadway	Latitude	Longitude	Latitude	Longitude	Latitude	Longitude
150th Avenue	43.705347	-94.146732	43.708463	-94.143120	43.702529	-94.152524

C. DAMAGE DESCRIPTION, SCOPE OF WORK, COST ESTIMATE

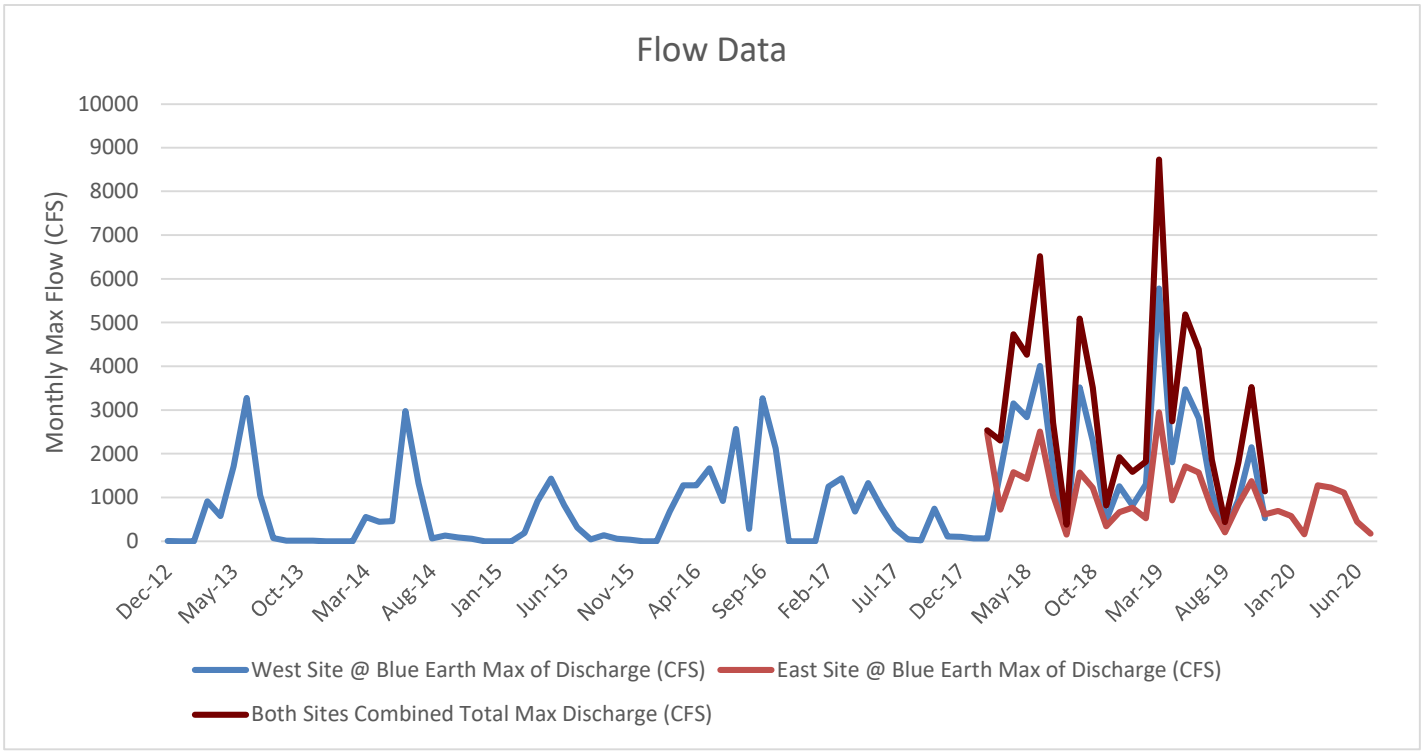
1. **Damage Description** – From March 12 through April 28, the Blue Earth River experienced high water levels and excessive flows resulting in significant damage to its banks. Where the Blue Earth River first runs near 150th Street is a particularly

aggressive bend in the river. Due to the aggressive bend in the river and exceptionally high river flows, the outer bank in this particular location received far greater erosion than many other locations along the river.

Figure 1 – Blue Earth River outer bank erosion and tree debris at damage site

The best available flow data for this spot along the river is determined by combining the two water level sensors located near Blue Earth, Minnesota. One is located on the Blue Earth River just west of Blue Earth (West Site) and the other is located on the East Branch of the Blue Earth River, just east of Blue Earth (East Site). Just north of Blue Earth, Minnesota, approximately 5 miles upstream from the damage site, the two rivers combine flows. All available flows from the two sites were taken from www.dnr.state.mn.us/waters/csg/index.html and used to create the Flow Data chart on the top of the following page. The East Site sensor has only been collecting data since February of 2018. The West Site sensor has been collecting data since December of 2012 but has been non-operational since November of 2019.

Looking at the Flow Data chart on the next page, most of the high river flows are during the spring months when the snow melt is occurring. Using just the West Site data as a historical reference, the Blue Earth River flows for 2019 at the damage site were significantly higher than anything recorded in the recent past.



In the spring of 2019, rapid snowmelt along with the particularly heavy storms in the area caused the Blue Earth River to rise over its banks and overtop 150th Street approximately 1,800 feet downstream of the damage site, just south of the 150th Street bridge crossing the Blue Earth River (Figure 2).

Figure 2 – Looking south from 150th Street bridge crossing Blue Earth River. Photo taken March 18, 2019

During this disaster, high water levels and excessive flows in the Blue Earth River resulted in significant damage to its outer banks in this particular location. The most significant damage to the outer bank occurs where 150th Street first borders the Blue Earth River, approximately a quarter mile south of the 150th Street bridge. At this bend, approximately 300 feet of the bank has experienced extensive erosion, resulting in undermining the roadway and top parts of the bank still falling off into the river. At this location the roadway is approximately 36 feet above the water line of the river. The extent of the current undermining cannot be measured due to

safety concerns but is estimated at 10 feet or more. Current measurements from the road edge to the riverbank are between 12 to 16 feet. Along with the bank erosion, many established trees have been undermined and have slid down the slope as partially shown in Figures 1 and 3.

Figure 3 – Blue Earth River outer bank with groundwater permeating through the bank.

The sheer magnitude of the outer bank cliff along with the undermining and proximity to the road pose significant safety concerns. Much of the bank stability that was provided by the established tree roots has been destroyed. Drone photos show the presence of groundwater seeping out of the bank in numerous locations adding to significant concerns of bank failure.

An angle of repose is the steepest angle formed from a horizontal plane to where a granular material can be piled without slumping. This angle of repose is a good indication of where the riverbank edge will naturally form without any additional erosion. Exhibit 3 was put together in an attempt to show where the road should safely be placed in relation to the water edge, based on an angle of repose for a sandy soil. A line indicating where the roadway edge would be placed based on the angle of repose and applying a safety factor of two is also shown in the exhibit. Paying close attention to the near vertical riverbank in many spots close to the road, indicate that the bank will eventually stabilize itself closer to this line. The entire roadway is located within this distance, indicating significant safety concerns due to the possibility of bank and road failure.

Verona Township has indicated that this is one of the more heavily traveled roads within the township due to the golf course being located at the north end of 150th Street. It was also stated that the road sees a large amount of agricultural use, with a majority of the traffic being tractor trailers carrying grain and large farm equipment. 150th Street is one of the few roads that provide a bridge crossing over

Blue Earth River. Locals would need to travel approximately 4 miles to the south or 4.5 miles to the north for the next closest bridge crossings.

Figure 4 – 150th Avenue bridge crossing Blue Earth River

2. Alternatives and Cost Estimates

The following alternatives were considered and reviewed with Verona Township. Also, Jon Lore, Todd Kolander and Daniel Girolamo with the Minnesota Department of Natural Resources (DNR) were contacted and corresponded via a Zoom meeting on June 9 to review alternatives and brainstorm other possible ideas. Below is a summary of each alternative and cost estimate.

a. Do Nothing – This proposed option would leave everything the way it currently is. 150th Street would remain open, with the public and residents continuing to travel unsafely near the Blue Earth River.

The Blue Earth River will continue to erode the outer bank, and safety issues will remain paramount. Eventually the existing roadway will likely be washed into the river.

Figure 5 – Blue Earth River outer bank as seen by motorists traveling on 150th Avenue

With the current condition of the riverbank and road, there is no telling when a failure could occur. When a failure eventually does occur, the height of the bank could cause severe injury or even death if a vehicle or person were to go over the bank. Without firsthand knowledge of the danger, the size of the riverbank and bank instability is not easily seen (Figure 5), and the general public could easily misinterpret the road as being safe to travel on.

Estimated Project Cost – There would be no project cost to leave the road as it is currently.

b. Close the Road – This proposed option would close 150th Street, with the public and residents needing to find alternate routes for crossing the Blue Earth River.

The existing 150th Street bridge constructed in 1987 would remain in place, however, it would not provide value to residents or the general public.

Signs would be posted at both ends of the road stating the road has been closed; however, this may not deter all local traffic from traveling down the road. With the current condition of the riverbank and road, there is no telling when a failure could take place. When a failure eventually does occur, the height of the bank could cause severe injury or even death if a vehicle or person were to go over the bank. Without firsthand knowledge of the danger, the size of the riverbank and bank instability is not easily seen (Figure 5) and the general public could easily misinterpret the road as being safe to travel on.

Estimated Project Cost – The estimated project cost for this option would be the initial cost to close the road and continued costs to maintain road barricades and road closure signage. Eventually, the township may need to remove the roadway and bridge to prevent unauthorized roadway usage.

c. **Repair to Pre-Existing Conditions and Stabilize Riverbank** – This proposed option would re-establish the Blue Earth Riverbank to pre-disaster conditions and use riprap to stabilize the bank as it is being reconstructed as shown in Exhibit 4. It is estimated that in the area of 150th Street, the bank has eroded 25 feet closer to the road when figuring in road undermining. The roadway sits approximately 36 feet above the waterline and the length of bank impacting the roadway is approximately 300 feet long.

We do not believe this is a practical alternative and would not recommend it. However, there is merit to discussing how it might occur to give the reader a sense of the magnitude of this option. First, a temporary haul road would need to be constructed from the existing roadway down to the water level. Shoring or a temporary retaining wall would need to be constructed to hold material out of the river while the bank is reconstructed vertically and compacted. Material would then need to be hauled down the temporary construction road, dumped, placed, and compacted one payloader load at a time. Because the stream bank was originally near vertical, riprap would need to be installed significantly higher up the slope to provide a stable bank for fill material.

Estimated Project Cost – Attempts to re-establish a near vertical slope 36 feet high are impractical if even possible. However, a relative cost opinion was prepared to give the reader a sense of magnitude for this alternative as shown in Table 2. This estimate would require significant additional investigation with a geotechnical engineering firm to determine if it was buildable and to establish a better opinion of cost.

TABLE 2
Relative Cost Opinion – unsure if this is even technically feasible

Item	Description	Unit	Estimated Quantity	Unit Price	Total Price
	Mobilization	LS	1	$83,000	$83,000
Temporary Construction Road					
	Clear and Grub	LS	1	$15,000	$15,000
	Excavate and Create New Haul Road	LF	600	$400	$240,000
	Erosion Control & Restoration	LS	1	$25,000	$25,000
Establish Pre-Existing Condition					
	Common Embankment & Bank Stabilization	CY	9,500	$50	$475,000
	Topsoil Borrow (LV)	CY	150	$45	$6,750
	Erosion Control & Restoration	LS	1	$50,000	$50,000
Riprap Stabilization					
	Class V Riprap Stabilization	LF	300	$2,800	$840,000
SUBTOTAL CONSTRUCTION COSTS					**$1,700,000**
SUBTOTAL CONTINGENCY (30%)					**$510,000**
SUBTOTAL NON-CONSTRUCTION COST (20%)					**$340,000**
TOTAL PROJECT COST					**$2,550,000**

d. New Road Alignment and Stabilize Riverbank

This proposed option would move the Township road away from the Blue Earth River water line approximately 170 feet (Exhibit 5) at the furthest point. This option would also stabilize the riverbank by applying hard armor riprap and also creating larger bench to reduce river velocities during high water events. By using as much of the existing roadway as possible and stabilizing the riverbank from current conditions should help to reduce construction costs. Balancing the cut and fill requirements needed for the project should also help in reducing project costs.

Estimated Project Cost – The estimated project costs are summarized in Table 3.

TABLE 3
Relative Cost Opinion

Item	Description	Unit	Estimated Quantity	Unit Price	Total Price
	Mobilization	LS	1	$47,000	$47,000
Remove Existing Road					
	Sign and Misc. Removals	LS	1	$1,000	$1,000
	Common Excavation	CY	800	$15	$12,000
	Topsoil Borrow (LV)	CY	800	$45	$36,000
	Turf Establishment, Trees and Restoration	ACRE	3.0	$12,000	$36,000
Riverbank Stabilization					
	Common Excavation	CY	21,600	$15	$324,000
	Rolled Erosion Control Product	SY	3,800	$6	$23,000
	Install Class V & Class III RipRap	CY	2,900	$110	$318,988
New Township Road					
	Clear and Grub Trees	LS	1	$5,000	$5,000
	Common Excavation (P)	CY	1,700	$15	$25,500
	Common Embankment (P)	CY	1,700	$15	$25,500
	Aggregate Base, Class 5	CY	850	$40	$34,000
	Select Granular	CY	850	$20	$17,000
	Shoulder Base, Class 1	CY	200	$45	$9,000
	Topsoil Borrow (LV)	CY	550	$45	$25,000
	Turf Establishment and Restoration	ACRE	3.0	$7,000	$21,000
	Install Signs	LS	1	$5,000	$5,000
	Traffic Control	LS	1	$2,000	$2,000
	Erosion Control	LS	1	$20,000	$20,000
SUBTOTAL CONSTRUCTION COSTS					**$987,000**
SUBTOTAL CONTINGENCY (10%)					**$99,000**

NON-CONSTRUCTION COST					
Basic Engineering Services					
	Study and Report Phase				$32,000
	Environmental Assessment				$12,000
	Preliminary Design Phase				$48,000
	Final Design Phase				$65,000
	Bidding & Negotiating Phase				$17,000
	Construction Phase				$24,000
	Post-Construction Phase				$7,000
RPR Services					$26,000
Additional Engineering Services					
	Detailed Construction Staking				$7,000
Owner Soft Costs					
	Administration				$20,000
	Land Purchase				$20,000
	ROW Boundary Survey & Attorney				$13,000
	Geotechnical Investigation & Testing				$6,000
	Archaeological Investigation				$2,000
SUBTOTAL NON-CONSTRUCTION COST					**$299,000**
TOTAL PROJECT COST					**$1,385,000**

D. RECOMMENDATION & IMPLEMENTATION SCHEDULE

1. Recommendation

The recommended option would be the New Road Alignment and Stabilize Riverbank option, relocating 150th Street approximately 170 feet northwest as shown in Exhibit 5. This option would best serve the public by mitigating safety concerns to those traveling along the roadway and reducing erosion of the riverbank during high water levels. The estimated total project cost is $1,385,000 as shown in Table 3.

The township has already begun initial steps to get the project moving forward in pulling together this Hazard Mitigation Report and initial Cost Estimates. As soon as the project is approved work on an Environmental Assessment can begin, including a certified Archeologist to perform a Phase I Archaeological Survey of the proposed road route.

2. Cost Benefit Analysis

The estimated benefit of 150th Street is summarized in Table 4 below. The benefit to the public can be estimated by taking the investment of public funds to build one mile of township road and one County bridge. The estimated average replacement value for one mile of gravel township road is $300 per linear foot (LF). The estimated replacement value of a County bridge is $150 per square foot (SF) of bridge deck. With a bridge deck with approximate dimensions of 30 feet wide by 154 feet long, the replacement value is $693,000. The County-built bridge was constructed in 1987

and is still in good condition. With the road remaining closed, the investment Verona Township made in the road and Faribault County's investment on the bridge will not provide any value to the public.

The cost to benefit ratio for this particular project is a 1.7. Meaning, if funds were awarded for the proposed project, the benefit to the public would be 1.7 times the cost of the project.

TABLE 4
Benefit

Description	Unit	Unit Price	Estimated Quantity	Unit Cost
Replacement Cost of 1 mile of Township Road	LF	$300	5280	$1,584,000
Replacement Cost of New Bridge	SF	$150	4620	$693,000
			Total Benefit	$2,277,000

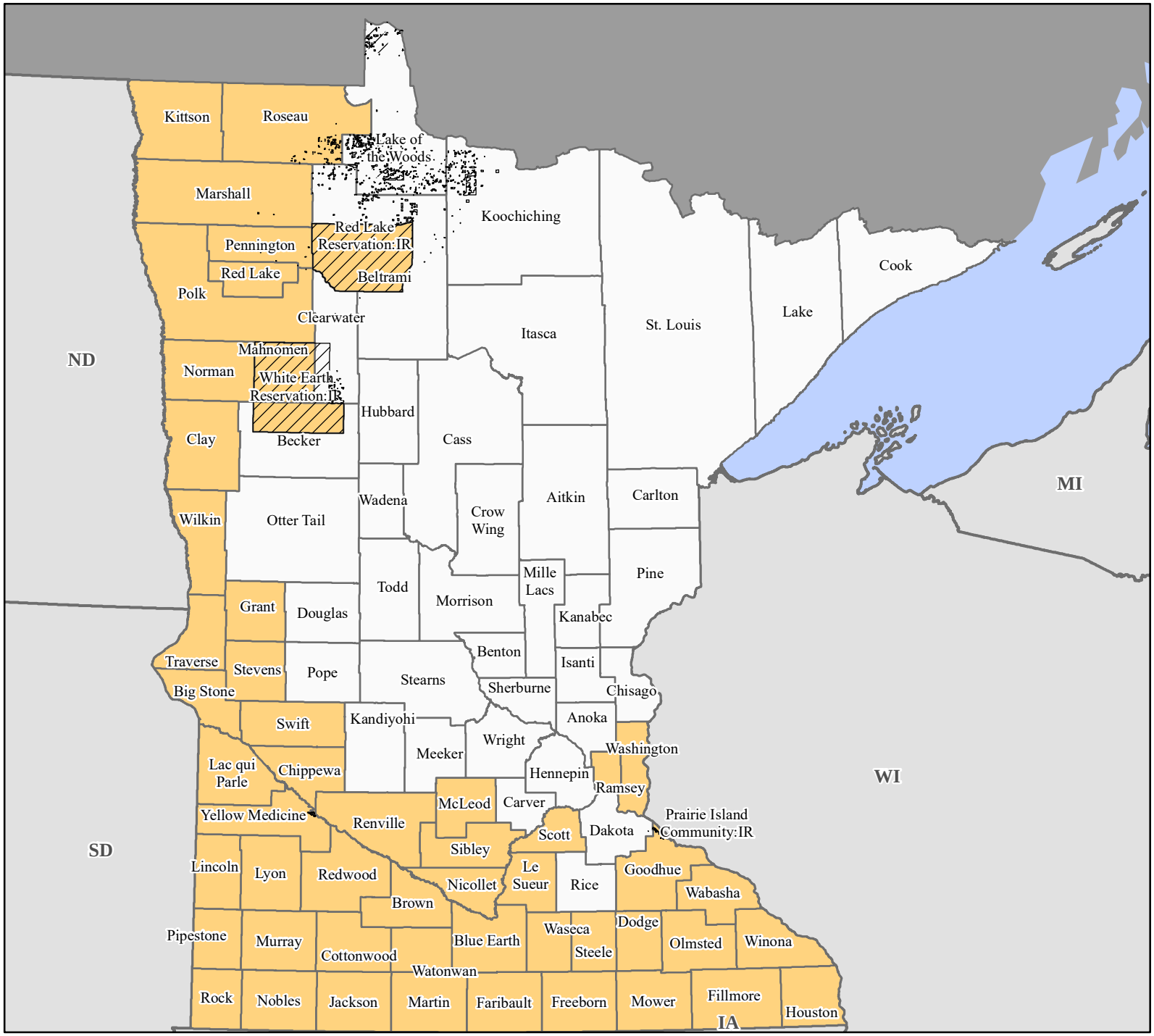
$$\frac{Benefit}{Cost} = \frac{\$2{,}277{,}000}{\$1{,}385{,}000} = 1.7$$

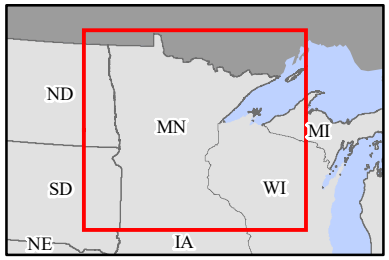
3. Implementation Schedule

TABLE 5 **Project Schedule**	
Submit Proposed Hazard Mitigation to FEMA	July 7, 2020
Begin Environmental Assessment with FEMA approval	July 27, 2020
Approval from FEMA to pay for recommended improvements	August 24, 2020
Prepare Plans & Specs	Aug-Oct 2020
Advertisement for Bids	November 2020
Construction Start	December 2020
Construction Complete	August 2021

EXHIBITS

FEMA-4442-DR, Minnesota Disaster Declaration as of 06/12/2019





Data Layer/Map Description:
The types of assistance that have been designated for selected areas in the State of Minnesota.

All designated areas in the State of Minnesota are eligible to apply for assistance under the Hazard Mitigation Grant Program.

Indian Reservations

Designated Counties

No Designation

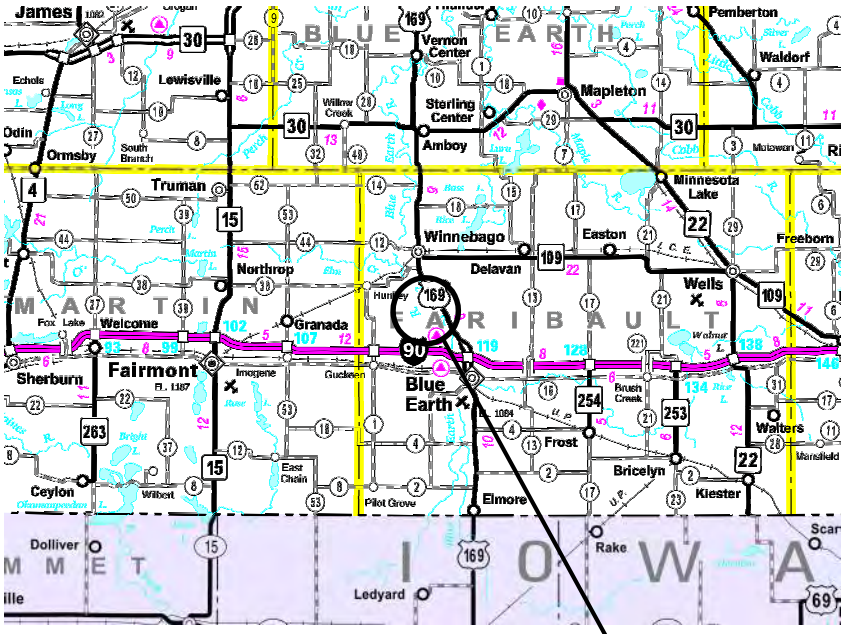
Public Assistance

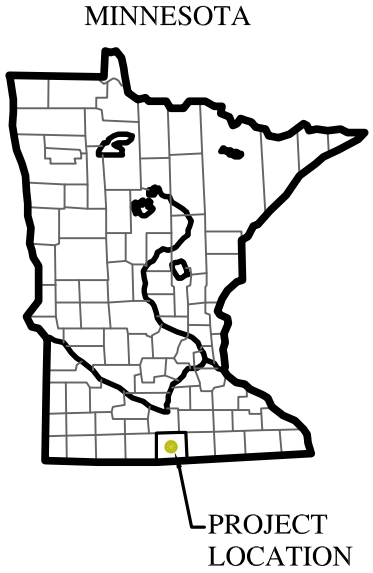
N
W
E
S

0 20 40 60 80 Miles

Data Sources:
FEMA, ESRI;
Initial Declaration: 06/12/2019
Disaster Federal Registry Notice: 06/12/2019
Datum: North American 1983
Projection: Lambert Conformal Conic

MapID 0bf9e5fadef0613190952hqprod





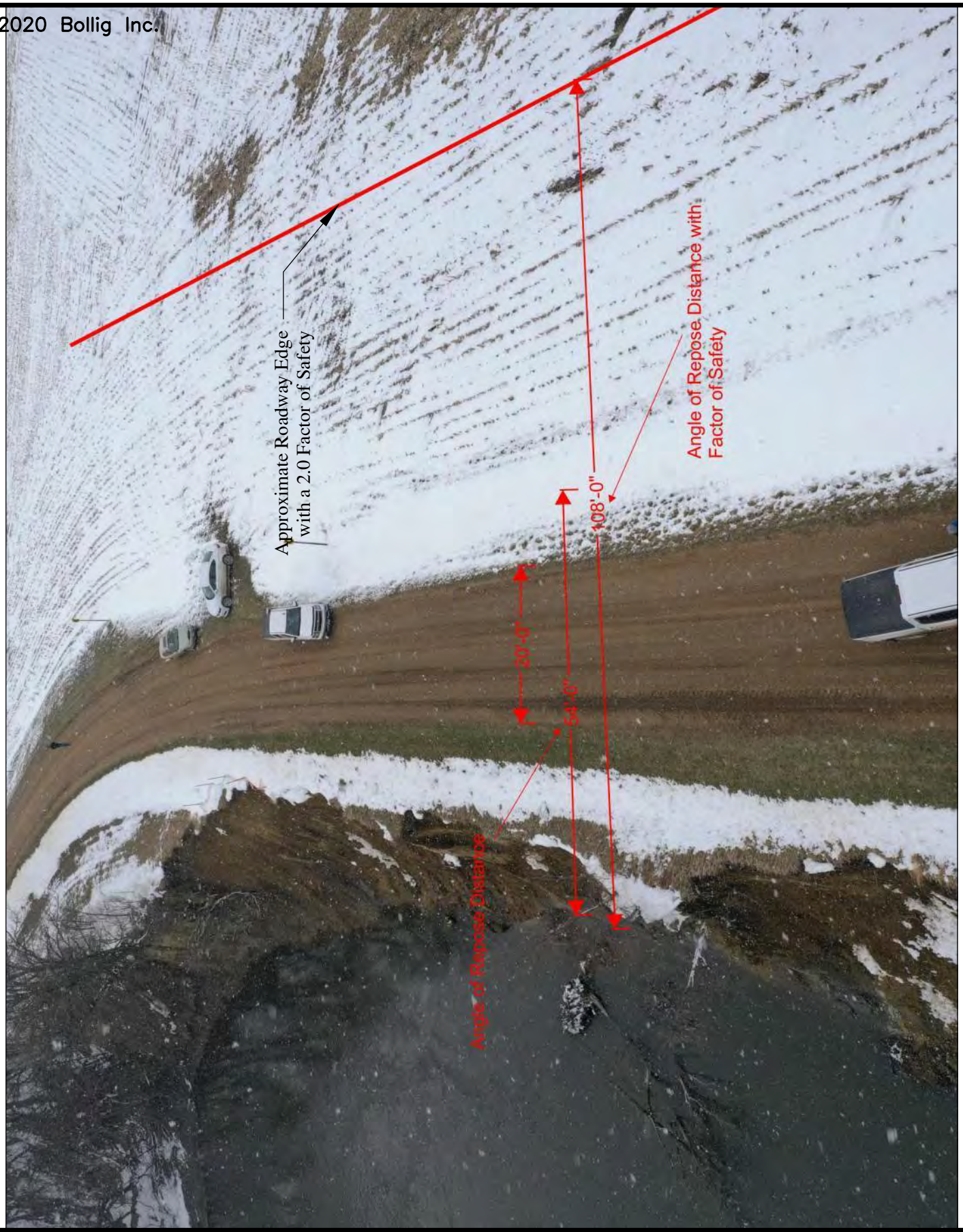
BOLLIGinc
engineering & environmental
Willmar, Minnesota
PH: 320.235.2555 FAX: 320.235.1986
www.bollig-engineering.com

Prepared for:

Faribault Township

Project Location

Exhibit 2



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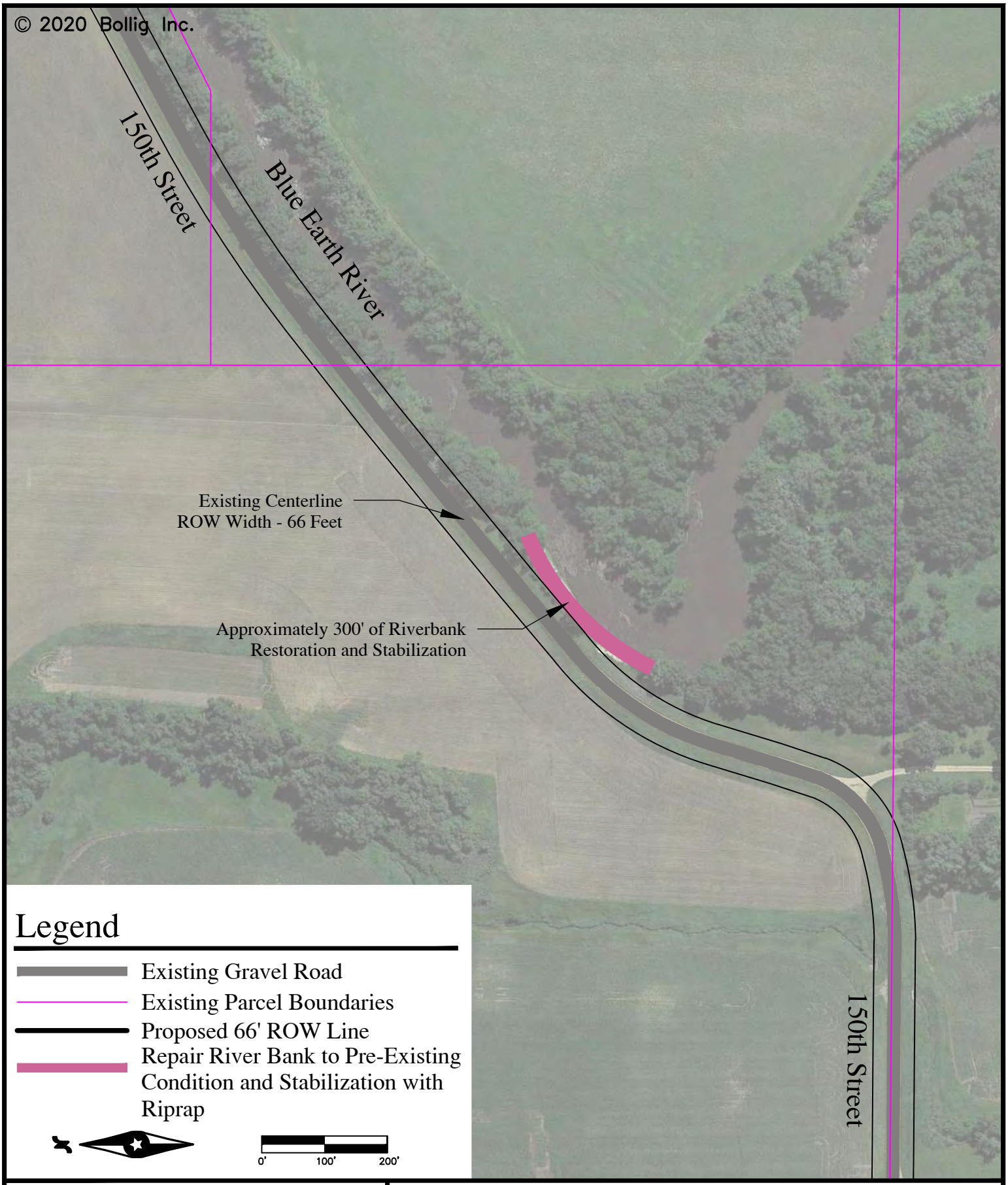
Verona Township

Exhibit 3 - Existing Roadway with Angle of Repose Shown



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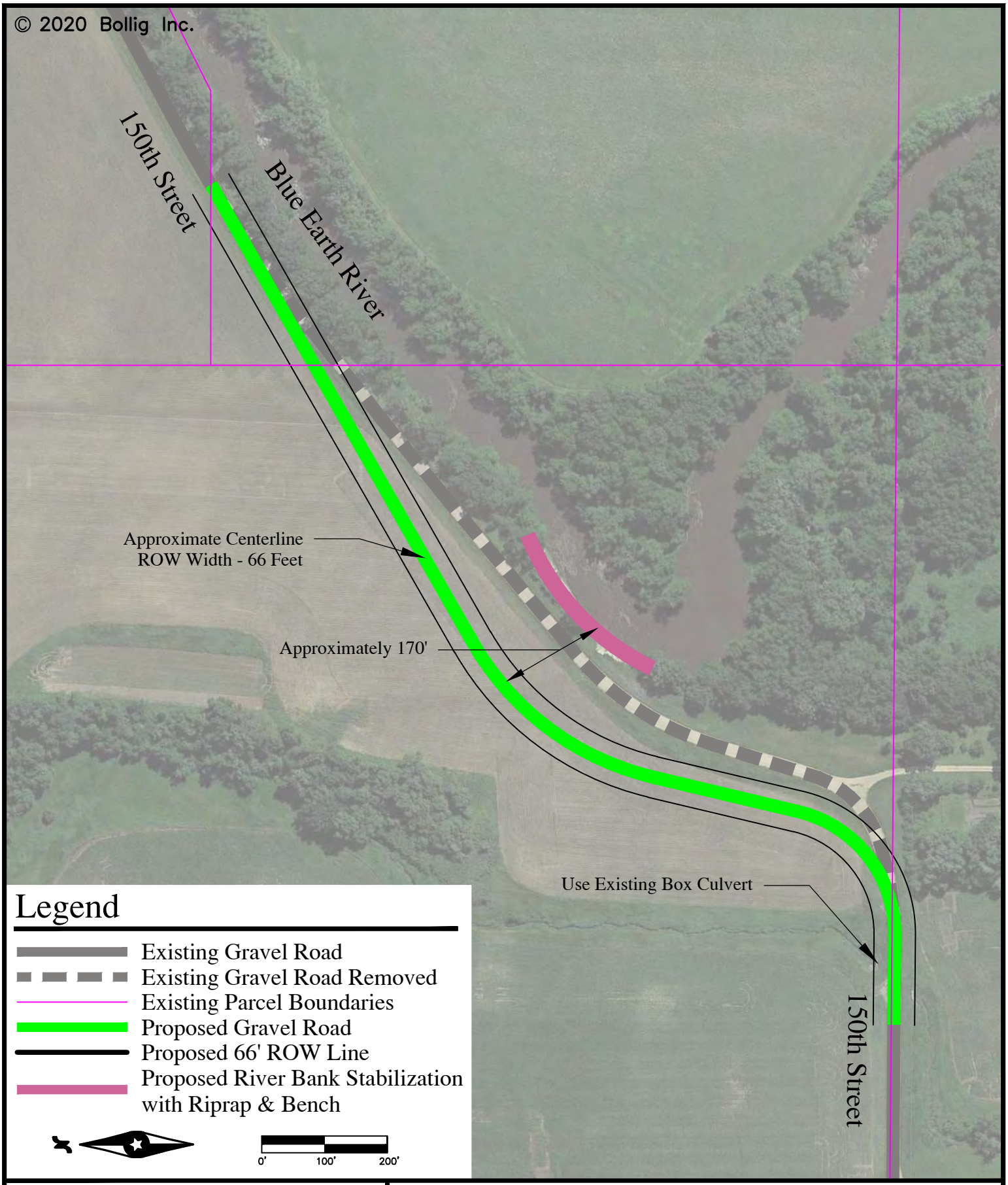
Verona Township

Exhibit 4 - Repair to Pre-Existing Conditions and Stabilize Bank



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Verona Township

Exhibit 5 - New Road Alignment and Riverbank Stabilization

SITE INSPECTION PHOTO PAGE	DISASTER: DR4390MN	APPLICANT (FIPS#): Verona Township (043-66946-00)

INSPECTION DATE:	WORK ORDER #:	CATEGORY:	COUNTY:	APPLICANT ADDRESS:
18 APRIL 2019	WO#37071	C	Faribault	14136 365th St. Blue Earth MN 56013

SITE INSPECTOR(S):	DAMAGE # / DAMAGE NAME:	GPS COORDINATES:
Forsyth, John/Nesfield, Derrick	DI #271010, Road Slope Damage	Various see below

Site 1 slope failure. Start 43.70392, -94.14913 End 43.70373, -94.14925 Photo taken looking southwest. The gravel road in the photo is 150th Street.

Site 1 slope failure. Start 43.70392, -94.14913 End 43.70373, -94.14925 Photo taken looking northeast. The gravel road in the photo is 150th Street.

Site 1 slope failure. Red line indicates the point at which slope failure is closest to road, 13 ft. The gravel road in the photo is 150th Street. Photo taken looking southwest.

Site 2. Slope failure on 156th Street. 43.75472, -94.14647 Photo taken looking northwest.

SITE INSPECTION PHOTO PAGE	DISASTER: DR4390MN	APPLICANT (FIPS#): Verona Township (043-66946-00)

INSPECTION DATE:	WORK ORDER #:	CATEGORY:	COUNTY:	APPLICANT ADDRESS:
18 APRIL 2019	WO#37071	C	Faribault	14136 365th St. Blue Earth MN 56013

SITE INSPECTOR(S):	DAMAGE # / DAMAGE NAME:	GPS COORDINATES:
Forsyth, John/Nesfield, Derrick	DI #271010, Road Slope Damage	Various see below

Site 2. Slope failure on 156th Street. 43.75472, -94.14647 Photo taken looking northwest. Red line indicates the point at which slope failure is closest to road, 13 ft.

Site 2. Slope failure on 156th Street. 43.75472, -94.14647 Photo taken looking southeast. Red line indicates the point at which slope failure is closest to road, 13 ft

Site 3. Slope failure on 330th AVE. 43.75472, -94.20634. Photo taken looking southwest.

Site 3. Slope failure on 330th AVE. 43.75472, -94.20634. Photo taken looking northeast. Red line indicates the point at which slope failure is closest to road, 15 ft.

Thomas Buboltz

From: Josh Johnson
Sent: Monday, February 8, 2021 11:29 AM
To: Scott Kuhlman
Subject: FW: 4442DR-MN (4442DR) Verona Township (043-66946-00) [115472] Embankment Erosion on River
Attachments: 115472 - DR4442MN - Map - 4390 vs. 4442.jpg; 85595 - WO #37071 - DI #271010 - DR4390 - PHOTOS.pdf

---

From: Orth, Adam <adam.orth@fema.dhs.gov>
Sent: Monday, January 25, 2021 2:13 PM
To: Josh Johnson <jjohnson@bollig-engineering.com>
Subject: FW: 4442DR-MN (4442DR) Verona Township (043-66946-00) [115472] Embankment Erosion on River

Here you go, Josh, here is the current email thread on the damage narrative. Let me know if you have any questions.

Adam Orth
FEMA Public Assistance | DR4442MN
Program Delivery Manager | Recovery | Reservist
Mobile: (651) 343-0071
adam.orth@fema.dhs.gov

Federal Emergency Management Agency
fema.gov

From: Orth, Adam
Sent: Monday, January 25, 2021 9:28 AM
To: Neal Mensing (farmx5@bevcomm.net) <farmx5@bevcomm.net>
Cc: Walikainen, Jacob <jacob.walikainen@fema.dhs.gov>; McDaniel, James (CTR) <james.mcdaniel@associates.fema.dhs.gov>; Smith, Ryan Blake (DPS) <ryan.blake.smith@state.mn.us>
Subject: RE: 4442DR-MN (4442DR) Verona Township (043-66946-00) [115472] Embankment Erosion on River

Good morning, Neal,

This is a reminder that, you have two FEMA meetings today:

- 1 pm – the first of the weekly meetings we agreed to last week.
    - I have prepared a suggested narrative on past damage for the Environmental Assessment. Please review it for accuracy and completeness. My hope is that we will have it ready in time for your other meeting today, which is at 2 pm.
        - The first part addresses past damages for the Environmental Assessment. Unaddressed is if any 1996 damage was in the area affected by the road relocation.
        - The second part addresses eligibility questions that may arise given that the slope was also damaged during DR4390-MJN. While my conclusion is that it doesn't raise an eligibility issue

and, in fact, bolsters the argument for a road relocation, I don't make eligibility decisions. However, an eligibility question in inevitable and addressing it now is to everyone's benefit.
    - For this meeting, the conference number to call is 877-446-3914. The Guest Pin is 596134
    - My task force leaders and Ryan are only now learning the time of this meeting. My apologies, gentlemen. So, they may or may not be able to attend.

4442DR-MN (4442DR) Verona Township (043-66946-00) [115472] Embankment Erosion on River
Verona had three projects obligated for DR4390-MN. Two had damages in the area affected by the proposed road relocation.

- 74362 – Cat. C: surface gravel was washed away by flooding on several 150th Street sites. One site is on the western end of the affected area.
    - Start GPS: 43.7026, -94.1510 End GPS: 43.7027, -94.1521: Surface, 51.1111 CY of 150TH Street Site #1 Class 5 Surface Gravel, 230 FT long x 20 FT wide x 0.3 FT deep.
    - $19,372.35 was obligated.
    - Applicant reports this work was completed.

- 85595 – Cat. C: three slope failure sites. One is right in middle of the affected area.
    - Site 1 Start 43.70392, -94.14913 End 43.70373, -94.14925: slope, 7,048.8889 CY of native soil/natural feature road slope, 122 FT long x 26 FT wide x 60 FT high, eroded/eroding as a result of torrential rain and overland flooding.
    - The SOW calls for replacing the lost material.
    - Simply replacing the material is not a viable repair. See attached photo page.
    - Additionally, it's unlikely to DNR would approve such a repair, although this has yet to be confirmed.
    - Applicant reports none of the work for Site 1 has been completed, largely due to an inability to get the technical assistance needed.
    - Applicant reports work on the other two sites is complete.
    - The state recently granted an extension, giving the applicant until 12/01/21 to complete the work on Site 1.
    - $95,841 was obligated for 85595.
        - Site 1: $72,956.
        - Site 2: $10,488.
        - Site 3: $12,397.

Eligibility

- Site 1 for 85595 is only 110 feet distant from the damage site being claimed for DR4442-MN.
- Both sites appear to be part of the same slope. See attached map.
- Applicant reports part of the slope failed during DR4390-MN and that the rest failed during DR4442-MN.
- Pages 19-20 of the Public Assistance Program and Policy Guide (PAPPG) state that the applicant must demonstrate the damage is a result of the declared event and that FEMA does not provide funding for
    - Deterioration
    - Deferred maintenance
    - The Applicant's failure to take measures to protect the facility from further damage
    - Negligence.
- Factors to consider
    - The incident period for DR4442-MN is 03/12 to 04/28/2019.
    - Funds for DR4390-MN/85595 were not obligated until 11/01/2019
    - Verona reports it did not actually receive funds for 85595 until ???
    - So, the slope failed again before Verona had funds to do a repair.
    - Additionally, the fact that the slope also failed during DR4390-MN may support the premise of the applicant's DR4442-MN road relocation, which is that the only viable option is relocating the road.

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FEMA Public Assistance | DR4442MN
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FEMA

From: Orth, Adam
Sent: Tuesday, January 19, 2021 11:33 AM
To: McDaniel, James (CTR) <james.mcdaniel@associates.fema.dhs.gov>; Smith, Ryan Blake (DPS) <ryan.blake.smith@state.mn.us>
Cc: Neal Mensing (farmx5@bevcomm.net) <farmx5@bevcomm.net>; Walikainen, Jacob <jacob.walikainen@fema.dhs.gov>
Subject: RE: 4442DR-MN (4442DR) Verona Township (043-66946-00) [115472] Embankment Erosion on River

All, I just confirmed with Neal that he can still make our 1 pm meeting today.
The conference number to call is 877-446-3914
The Guest Pin is 596134

Adam Orth
FEMA Public Assistance | DR4442MN
Program Delivery Manager | Recovery | Reservist
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adam.orth@fema.dhs.gov

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FEMA

From: Orth, Adam
Sent: Thursday, January 14, 2021 7:45 PM
To: McDaniel, James (CTR) <james.mcdaniel@associates.fema.dhs.gov>; Smith, Ryan Blake (DPS) <ryan.blake.smith@state.mn.us>
Cc: Neal Mensing (farmx5@bevcomm.net) <farmx5@bevcomm.net>
Subject: RE: 4442DR-MN (4442DR) Verona Township (043-66946-00) [115472] Embankment Erosion on River

Great. Thanks everybody, I appreciate you setting aside the time to meet. Here are the main points I hope we can discuss Tuesday:

- Identify completed work for DR4390-MN
- Identify what obstacles prevented all the work from being completed
- Identify a path forward

Adam Orth

FEMA Public Assistance | DR4442MN
Program Delivery Manager | Recovery | Reservist
Mobile: (651) 343-0071
adam.orth@fema.dhs.gov

Federal Emergency Management Agency
fema.gov

FEMA

From: McDaniel, James (CTR) <james.mcdaniel@associates.fema.dhs.gov>
Sent: Thursday, January 14, 2021 5:20 PM
To: Smith, Ryan Blake (DPS) <ryan.blake.smith@state.mn.us>; Orth, Adam <adam.orth@fema.dhs.gov>
Cc: Neal Mensing (farmx5@bevcomm.net) <farmx5@bevcomm.net>
Subject: RE: 4442DR-MN (4442DR) Verona Township (043-66946-00) [115472] Embankment Erosion on River

Tuesday at 1:00 is good for me.

From: Smith, Ryan Blake (DPS) <ryan.blake.smith@state.mn.us>
Sent: Thursday, January 14, 2021 4:21 PM
To: Orth, Adam <adam.orth@fema.dhs.gov>; McDaniel, James (CTR) <james.mcdaniel@associates.fema.dhs.gov>
Cc: Neal Mensing (farmx5@bevcomm.net) <farmx5@bevcomm.net>
Subject: RE: 4442DR-MN (4442DR) Verona Township (043-66946-00) [115472] Embankment Erosion on River

Tuesday sounds fine to me.
Thx
Ryan

From: Orth, Adam <adam.orth@fema.dhs.gov>
Sent: Thursday, January 14, 2021 3:41 PM
To: McDaniel, James (CTR) <james.mcdaniel@associates.fema.dhs.gov>; Smith, Ryan Blake (DPS) <ryan.blake.smith@state.mn.us>
Cc: Neal Mensing (farmx5@bevcomm.net) <farmx5@bevcomm.net>
Subject: 4442DR-MN (4442DR) Verona Township (043-66946-00) [115472] Embankment Erosion on River

Jamie and Ryan, Neal is available to meet with all of us on Tuesday. I suggested 1 p.m. That time works for Neal, does it work for both of you? If not, it sounds like he has an open schedule that day so please suggest alternative times.

Also, he was in the process of requesting an extension on unfinished work for DR3490-MN when I reached him and that seemed to be going well.

Adam Orth
FEMA Public Assistance | DR4442MN
Program Delivery Manager | Recovery | Reservist


Verona Township
4390 vs 4442 damages
Note: RR = road realignment
Verona RR Start
Verona mid-point
Verona 4442
Verona 4390/85595/Site 1 End
Verona 4390/85595/Site 1 Start
Verona 4390/74362 End
Verona RR End
Verona 4390/74362 start
357th Ave
169
Google Earth
©2020 Google
N
1000 ft

Appendix E

Tribal Nation Consultation

Roach, Karie

From: Castaldi, Duane
Sent: Tuesday, March 2, 2021 11:30 AM
To: Roach, Karie
Subject: FW: New FEMA Project Notification - Faribault County

Duane Castaldi
Regional Environmental Officer | FEMA Region V | Department of Homeland Security
Office: 312.408.5549 | Mobile: 312.576.0067 duane.castaldi@fema.dhs.gov

Federal Emergency Management Agency
fema.gov

-----Original Message-----
From: Leonard Wabasha (TO) <leonard.wabasha@shakopeedakota.org>
Sent: Tuesday, March 2, 2021 11:27 AM
To: Castaldi, Duane <Duane.Castaldi@fema.dhs.gov>
Subject: RE: New FEMA Project Notification - Faribault County

Thanks Duane
Please keep me informed should any archaeological discoveries be made during ground disturbance(s).
Have a Great Day!!

Leonard Wabasha
SMSC Cultural Resiources

-----Original Message-----
From: Castaldi, Duane <Duane.Castaldi@fema.dhs.gov>
Sent: Tuesday, March 2, 2021 11:08 AM
To: Leonard Wabasha (TO) <leonard.wabasha@shakopeedakota.org>
Subject: New FEMA Project Notification - Faribault County

Good Afternoon.

Please see the attached PDF File.

Duane D. Castaldi
Regional Environmental Officer
U.S. Department of Homeland Security
FEMA Region V

536 South Clark Street, 6th Floor
Chicago, IL 60605
O: 312-408-5549
E: duane.castaldi@fema.dhs.gov
~~

FEMA-R5-Environmental

From: Leonard Wabasha (TO) <leonard.wabasha@shakopeedakota.org>
Sent: Tuesday, June 15, 2021 1:49 PM
To: FEMA-R5-Environmental
Subject: RE: New FEMA Project Notification - Faribault County

Dear Duane
Thank you for getting back to me regarding the find. Due to the type of discovery I have no concerns. Thank You and Have a Great Day!

LEONARD WABASHA
Director of Cultural Resources • Cultural Resources
Shakopee Mdewakanton Sioux Community
d: 952.496.6120
hokokatati.org
Leonard.Wabasha@shakopeedakota.org

The Shakopee Mdewakanton Sioux Community is a federally recognized, sovereign Indian tribe located southwest of Minneapolis/St. Paul. With a focus on being a good neighbor, good steward of the earth, and good employer, the SMSC is committed to charitable donations, community partnerships, a healthy environment, and a strong economy.

From: FEMA-R5-Environmental <fema-r5-environmental@fema.dhs.gov>
Sent: Tuesday, June 15, 2021 10:10 AM
To: Leonard Wabasha (TO) <leonard.wabasha@shakopeedakota.org>
Subject: RE: New FEMA Project Notification - Faribault County

Please find attached a response to your March 2, 2021 email. Thank you.

Environmental Planning and Historic Preservation | Mitigation Division | FEMA Region 5
Office: 312-408-5549 | Email: fema-r5-environmental@fema.dhs.gov

Federal Emergency Management Agency
fema.gov

U.S. Department of Homeland Security
536 South Clark Street, 6th Floor
Chicago, Illinois 60605-1521

FEMA

1.

March 2, 2021

Garrie Kills A Hundred, Tribal Historic Preservation Officer
Flandreau Santee Sioux Tribe of South Dakota
P.O. Box 283
Flandreau, South Dakota 57028

Re: 150th Street Realignment, Verona Township, Faribault County
GPS: 43.70411, -94.14882; T103N R28W S23 & 24
DR-4442-MN, PW 1439 [115472]

Dear Mr. Kills A Hundred:

The Federal Emergency Management Agency (FEMA) recognizes the special and unique legal relationship that exists between the federal government and federally recognized American Indian Tribes (Tribes). FEMA also recognizes that Tribes may attach religious and cultural significance to historic properties located on aboriginal, ancestral, or ceded lands that are not contiguous with reservation lands. For this reason, FEMA consults with Tribes regarding the possible effects of FEMA-funded undertakings on cultural properties of historic or traditional significance, sometimes referred to as Traditional Cultural Properties (TCPs). The purpose of this communication is to provide information regarding the captioned FEMA-funded project and to invite comment on whether the Flandreau Santee Sioux Tribe of South Dakota or other Tribes have interests in the areas potentially affected by this undertaking.

In response to severe storms, straight-line winds, and flooding between March 12, 2019 and April 28, 2019, the President declared disaster DR-4442-MN on June 12, 2019. Under this declaration, Faribault County, among others, was eligible for FEMA's Public Assistance (PA) Program funding. FEMA notified Tribes thought to have interests in the declared counties on June 26, 2019. FEMA invited comments on the potential impacts PA projects may have on lands traditionally used by or sacred to the Flandreau Santee Sioux Tribe of South Dakota and other Native American groups. The Leech Lake Band of Ojibwe responded on July 8, 2019; no other responses to this request for comment were received.

During the incident period, the Blue Earth River flooded with abnormally high velocities and depth, significantly eroding the outer curve of the riverbank and undermining 150th Street, in Verona Township, Faribault County (43.70411, -94.14882). The affected area lies within Section 23 and Section 24, Township 103N and Range 28 W, approximately one quarter mile south of the 150th Street bridge over the Blue Earth River. The applicant proposes to use federal funds authorized under the Stafford Act to realign the endangered portion of 150th Street approximately 170 feet northwest of the affected area to best serve public safety concerns and prevent the potential for reoccurring damage.

The Applicant will acquire approximately three additional acres of property northwest of the affected area and currently used as cropland to accommodate the new right-of-way. The new road section will tie into the existing roadway. Construction of the new 66-foot wide gravel-surfaced road section will include clearing and grubbing of trees, excavation, grading, and the stabilization of the river embankment with Class III and Class V rip-rap and a benched embankment. The new roadway and shoulder will consist of Class 5 aggregate base, granular material, Class 1 shoulder base, and topsoil. The undertaking will also involve approximately three acres of turf establishment and restoration, and the installation of new road signage and erosion control.

The old roadway will be excavated and removed. The original alignment will be restored to a natural condition by placing topsoil and planting grasses and trees. The eroded riverbank, outside the area stabilized by rip-rap and a benched embankment, will be allowed to naturally stabilize.

In accordance with the National Historic Preservation Act and other legislation, FEMA determined that this project constitutes a federally assisted undertaking requiring review under Section 106 of the National Historic Preservation Act of 1966, as amended. In accord with 36 CFR 800.2(c)(2)(ii), FEMA is providing this opportunity for the Flandreau Santee Sioux Tribe of South Dakota to identify concerns about historic properties that may be affected by this undertaking. The area of potential effect (Map 1) is limited to the areas within which all construction and ground disturbing activity would be confined and the viewshed of the proposed project. No potential for effects outside of the viewshed of the proposed project exists. Due to the presence of known archaeological sites near the APE, FEMA will require that an archaeological survey be conducted within the area of potential effect.

Prior to conducting the archaeology survey, we invite your comments on the potential impacts this undertaking may have on lands traditionally used by or sacred to the Flandreau Santee Sioux Tribe of South Dakota or other Native American groups. We understand the sensitive nature of much of the information regarding TCPs and assure you in advance that any information you provide will be considered privileged and confidential. In order to safeguard TCPs of interest to Native Americans, we are contacting the following Tribes to request information regarding their interest in this undertaking.

- Flandreau Santee Sioux Tribe of South Dakota
- Ho-Chunk Nation
- Lower Sioux Indian Community of Minnesota
- Prairie Island Indian Community
- Santee Sioux Tribe
- Shakopee Mdewakanton Sioux Community of Minnesota
- Spirit Lake Tribe of Fort Totten
- Upper Sioux Community of Minnesota

Receiving notice of your interest to join the consultation regarding this undertaking or notice of Tribes other than those listed above that may have an interest in this undertaking would improve FEMA's efforts to protect resources that may exist in the areas noted on the enclosures. A response form has been provided for your convenience.

We would appreciate a response by email from your office within thirty (30) days of your receipt of this documentation. If FEMA receives no response from your office within thirty (30) days, we will move forward with the project without comment from the Flandreau Santee Sioux Tribe of South Dakota. If you have any questions or comments, please do not hesitate to contact me at 312-408-5549 or at duane.castaldi@fema.dhs.gov.

Sincerely,

Duane Castaldi
Regional Environmental Officer
FEMA Region V

Enclosures

Sent by email to garrie.killsahundred@fsst.org

++++++++*You may email this page to duane.castaldi@fema.dhs.gov* ++++++++

Re: 150th Street Realignment, Verona Township, Faribault County
GPS: 43.70411, -94.14882; T103N R28W S23 & 24
DR-4442-MN, PW 1439 [115472]

☐ The Flandreau Santee Sioux Tribe of South Dakota has no interest in the area potentially affected by the captioned undertaking.

☐ The Flandreau Santee Sioux Tribe of South Dakota has an interest in the area potentially affected by the captioned undertaking. Contact information is provided below.

☐ The Tribal Nations noted below may have an interest in the area potentially affected by this undertaking.

Flandreau Santee Sioux Tribe of South Dakota

Date

Map 1: Area of Potential Effect location marked in red. (*USGS National Map, Huntley Quadrangle, graphic scale*).

U.S. Department of Homeland Security
536 South Clark Street, 6th Floor
Chicago, Illinois 60605-1521

FEMA

1.

March 2, 2021

William Quackenbush, Tribal Historic Preservation Officer
Ho–Chunk Nation
W 9814 Airport Rd P.O. Box 667
Black River Falls, Wisconsin 54615

Re: 150th Street Realignment, Verona Township, Faribault County
GPS: 43.70411, -94.14882; T103N R28W S23 & 24
DR-4442-MN, PW 1439 [115472]

Dear Mr. Quackenbush:

The Federal Emergency Management Agency (FEMA) recognizes the special and unique legal relationship that exists between the federal government and federally recognized American Indian Tribes (Tribes). FEMA also recognizes that Tribes may attach religious and cultural significance to historic properties located on aboriginal, ancestral, or ceded lands that are not contiguous with reservation lands. For this reason, FEMA consults with Tribes regarding the possible effects of FEMA-funded undertakings on cultural properties of historic or traditional significance, sometimes referred to as Traditional Cultural Properties (TCPs). The purpose of this communication is to provide information regarding the captioned FEMA-funded project and to invite comment on whether the Ho–Chunk Nation or other Tribes have interests in the areas potentially affected by this undertaking.

In response to severe storms, straight-line winds, and flooding between March 12, 2019 and April 28, 2019, the President declared disaster DR-4442-MN on June 12, 2019. Under this declaration, Faribault County, among others, was eligible for FEMA's Public Assistance (PA) Program funding. FEMA notified Tribes thought to have interests in the declared counties on June 26, 2019. FEMA invited comments on the potential impacts PA projects may have on lands traditionally used by or sacred to the Ho–Chunk Nation and other Native American groups. The Leech Lake Band of Ojibwe responded on July 8, 2019; no other responses to this request for comment were received.

During the incident period, the Blue Earth River flooded with abnormally high velocities and depth, significantly eroding the outer curve of the riverbank and undermining 150th Street, in Verona Township, Faribault County (43.70411, -94.14882). The affected area lies within Section 23 and Section 24, Township 103N and Range 28 W, approximately one quarter mile south of the 150th Street bridge over the Blue Earth River. The applicant proposes to use federal funds authorized under the Stafford Act to realign the endangered portion of 150th Street approximately 170 feet northwest of the affected area to best serve public safety concerns and prevent the potential for reoccurring damage.

The Applicant will acquire approximately three additional acres of property northwest of the affected area and currently used as cropland to accommodate the new right-of-way. The new road section will tie into the existing roadway. Construction of the new 66-foot wide gravel-surfaced road section will include clearing and grubbing of trees, excavation, grading, and the stabilization of the river embankment with Class III and Class V rip-rap and a benched embankment. The new roadway and shoulder will consist of Class 5 aggregate base, granular material, Class 1 shoulder base, and topsoil. The undertaking will also involve approximately

three acres of turf establishment and restoration, and the installation of new road signage and erosion control.

The old roadway will be excavated and removed. The original alignment will be restored to a natural condition by placing topsoil and planting grasses and trees. The eroded riverbank, outside the area stabilized by rip-rap and a benched embankment, will be allowed to naturally stabilize.

In accordance with the National Historic Preservation Act and other legislation, FEMA determined that this project constitutes a federally assisted undertaking requiring review under Section 106 of the National Historic Preservation Act of 1966, as amended. In accord with 36 CFR 800.2(c)(2)(ii), FEMA is providing this opportunity for the Ho–Chunk Nation to identify concerns about historic properties that may be affected by this undertaking. The area of potential effect (Map 1) is limited to the areas within which all construction and ground disturbing activity would be confined and the viewshed of the proposed project. No potential for effects outside of the viewshed of the proposed project exists. Due to the presence of known archaeological sites near the APE, FEMA will require that an archaeological survey be conducted within the area of potential effect.

Prior to conducting the archaeology survey, we invite your comments on the potential impacts this undertaking may have on lands traditionally used by or sacred to the Ho–Chunk Nation or other Native American groups. We understand the sensitive nature of much of the information regarding TCPs and assure you in advance that any information you provide will be considered privileged and confidential. In order to safeguard TCPs of interest to Native Americans, we are contacting the following Tribes to request information regarding their interest in this undertaking.

- Flandreau Santee Sioux Tribe of South Dakota
- Ho-Chunk Nation
- Lower Sioux Indian Community of Minnesota
- Prairie Island Indian Community
- Santee Sioux Tribe
- Shakopee Mdewakanton Sioux Community of Minnesota
- Spirit Lake Tribe of Fort Totten
- Upper Sioux Community of Minnesota

Receiving notice of your interest to join the consultation regarding this undertaking or notice of Tribes other than those listed above that may have an interest in this undertaking would improve FEMA's efforts to protect resources that may exist in the areas noted on the enclosures. A response form has been provided for your convenience.

We would appreciate a response by email from your office within thirty (30) days of your receipt of this documentation. If FEMA receives no response from your office within thirty (30) days, we will move forward with the project without comment from the Ho–Chunk Nation. If you have any questions or comments, please do not hesitate to contact me at 312-408-5549 or at duane.castaldi@fema.dhs.gov.

Sincerely,

Duane Castaldi
Regional Environmental Officer
FEMA Region V

Enclosures

Sent by email to bill.quackenbush@ho-chunk.com

++++++++*You may email this page to duane.castaldi@fema.dhs.gov* ++++++++

Re: 150th Street Realignment, Verona Township, Faribault County
GPS: 43.70411, -94.14882; T103N R28W S23 & 24
DR-4442-MN, PW 1439 [115472]

☐ The Ho–Chunk Nation has no interest in the area potentially affected by the captioned undertaking.

☐ The Ho–Chunk Nation has an interest in the area potentially affected by the captioned undertaking. Contact information is provided below.

☐ The Tribal Nations noted below may have an interest in the area potentially affected by this undertaking.

Ho–Chunk Nation

Date

Map 1: Area of Potential Effect location marked in red. (*USGS National Map, Huntley Quadrangle, graphic scale*).

U.S. Department of Homeland Security
536 South Clark Street, 6th Floor
Chicago, Illinois 60605-1521

FEMA

1.

March 2, 2021

Cheyanne St. John, Tribal Historic Preservation Officer
Lower Sioux Indian Community of Minnesota
PO Box 308, 39527 Res. Hwy 1
Morton, Minnesota 56270

Re: 150th Street Realignment, Verona Township, Faribault County
GPS: 43.70411, -94.14882; T103N R28W S23 & 24
DR-4442-MN, PW 1439 [115472]

Dear Ms. St. John:

The Federal Emergency Management Agency (FEMA) recognizes the special and unique legal relationship that exists between the federal government and federally recognized American Indian Tribes (Tribes). FEMA also recognizes that Tribes may attach religious and cultural significance to historic properties located on aboriginal, ancestral, or ceded lands that are not contiguous with reservation lands. For this reason, FEMA consults with Tribes regarding the possible effects of FEMA-funded undertakings on cultural properties of historic or traditional significance, sometimes referred to as Traditional Cultural Properties (TCPs). The purpose of this communication is to provide information regarding the captioned FEMA-funded project and to invite comment on whether the Lower Sioux Indian Community of Minnesota or other Tribes have interests in the areas potentially affected by this undertaking.

In response to severe storms, straight-line winds, and flooding between March 12, 2019 and April 28, 2019, the President declared disaster DR-4442-MN on June 12, 2019. Under this declaration, Faribault County, among others, was eligible for FEMA's Public Assistance (PA) Program funding. FEMA notified Tribes thought to have interests in the declared counties on June 26, 2019. FEMA invited comments on the potential impacts PA projects may have on lands traditionally used by or sacred to the Lower Sioux Indian Community of Minnesota and other Native American groups. The Leech Lake Band of Ojibwe responded on July 8, 2019; no other responses to this request for comment were received.

During the incident period, the Blue Earth River flooded with abnormally high velocities and depth, significantly eroding the outer curve of the riverbank and undermining 150th Street, in Verona Township, Faribault County (43.70411, -94.14882). The affected area lies within Section 23 and Section 24, Township 103N and Range 28 W, approximately one quarter mile south of the 150th Street bridge over the Blue Earth River. The applicant proposes to use federal funds authorized under the Stafford Act to realign the endangered portion of 150th Street approximately 170 feet northwest of the affected area to best serve public safety concerns and prevent the potential for reoccurring damage.

The Applicant will acquire approximately three additional acres of property northwest of the affected area and currently used as cropland to accommodate the new right-of-way. The new road section will tie into the existing roadway. Construction of the new 66-foot wide gravel-surfaced road section will include clearing and grubbing of trees, excavation, grading, and the stabilization of the river embankment with Class III and Class V rip-rap and a benched embankment. The new roadway and shoulder will consist of Class 5 aggregate base, granular material, Class 1 shoulder base, and topsoil. The undertaking will also involve approximately

three acres of turf establishment and restoration, and the installation of new road signage and erosion control.

The old roadway will be excavated and removed. The original alignment will be restored to a natural condition by placing topsoil and planting grasses and trees. The eroded riverbank, outside the area stabilized by rip-rap and a benched embankment, will be allowed to naturally stabilize.

In accordance with the National Historic Preservation Act and other legislation, FEMA determined that this project constitutes a federally assisted undertaking requiring review under Section 106 of the National Historic Preservation Act of 1966, as amended. In accord with 36 CFR 800.2(c)(2)(ii), FEMA is providing this opportunity for the Lower Sioux Indian Community of Minnesota to identify concerns about historic properties that may be affected by this undertaking. The area of potential effect (Map 1) is limited to the areas within which all construction and ground disturbing activity would be confined and the viewshed of the proposed project. No potential for effects outside of the viewshed of the proposed project exists. Due to the presence of known archaeological sites near the APE, FEMA will require that an archaeological survey be conducted within the area of potential effect.

Prior to conducting the archaeology survey, we invite your comments on the potential impacts this undertaking may have on lands traditionally used by or sacred to the Lower Sioux Indian Community of Minnesota or other Native American groups. We understand the sensitive nature of much of the information regarding TCPs and assure you in advance that any information you provide will be considered privileged and confidential. In order to safeguard TCPs of interest to Native Americans, we are contacting the following Tribes to request information regarding their interest in this undertaking.

- Flandreau Santee Sioux Tribe of South Dakota
- Ho-Chunk Nation
- Lower Sioux Indian Community of Minnesota
- Prairie Island Indian Community
- Santee Sioux Tribe
- Shakopee Mdewakanton Sioux Community of Minnesota
- Spirit Lake Tribe of Fort Totten
- Upper Sioux Community of Minnesota

Receiving notice of your interest to join the consultation regarding this undertaking or notice of Tribes other than those listed above that may have an interest in this undertaking would improve FEMA's efforts to protect resources that may exist in the areas noted on the enclosures. A response form has been provided for your convenience.

We would appreciate a response by email from your office within thirty (30) days of your receipt of this documentation. If FEMA receives no response from your office within thirty (30) days, we will move forward with the project without comment from the Lower Sioux Indian Community of Minnesota. If you have any questions or comments, please do not hesitate to contact me at 312-408-5549 or at duane.castaldi@fema.dhs.gov.

Sincerely,

Duane Castaldi
Regional Environmental Officer
FEMA Region V

Enclosures

Sent by email to cheyanne.stjohn@lowersioux.com

++++++++*You may email this page to duane.castaldi@fema.dhs.gov* ++++++++

Re: 150th Street Realignment, Verona Township, Faribault County
GPS: 43.70411, -94.14882; T103N R28W S23 & 24
DR-4442-MN, PW 1439 [115472]

☐ The Lower Sioux Indian Community of Minnesota has no interest in the area potentially affected by the captioned undertaking.

☐ The Lower Sioux Indian Community of Minnesota has an interest in the area potentially affected by the captioned undertaking. Contact information is provided below.

☐ The Tribal Nations noted below may have an interest in the area potentially affected by this undertaking.

Lower Sioux Indian Community of Minnesota

Date

Map 1: Area of Potential Effect location marked in red. (*USGS National Map, Huntley Quadrangle, graphic scale*).

U.S. Department of Homeland Security
536 South Clark Street, 6th Floor
Chicago, Illinois 60605-1521

FEMA

1.

March 2, 2021

Noah White, Tribal Historic Preservation Officer
Prairie Island Indian Community
5636 Sturgeon Lake Road
Welch, Minnesota 55089

Re: 150th Street Realignment, Verona Township, Faribault County
GPS: 43.70411, -94.14882; T103N R28W S23 & 24
DR-4442-MN, PW 1439 [115472]

Dear Mr. White:

The Federal Emergency Management Agency (FEMA) recognizes the special and unique legal relationship that exists between the federal government and federally recognized American Indian Tribes (Tribes). FEMA also recognizes that Tribes may attach religious and cultural significance to historic properties located on aboriginal, ancestral, or ceded lands that are not contiguous with reservation lands. For this reason, FEMA consults with Tribes regarding the possible effects of FEMA-funded undertakings on cultural properties of historic or traditional significance, sometimes referred to as Traditional Cultural Properties (TCPs). The purpose of this communication is to provide information regarding the captioned FEMA-funded project and to invite comment on whether the Prairie Island Indian Community or other Tribes have interests in the areas potentially affected by this undertaking.

In response to severe storms, straight-line winds, and flooding between March 12, 2019 and April 28, 2019, the President declared disaster DR-4442-MN on June 12, 2019. Under this declaration, Faribault County, among others, was eligible for FEMA's Public Assistance (PA) Program funding. FEMA notified Tribes thought to have interests in the declared counties on June 26, 2019. FEMA invited comments on the potential impacts PA projects may have on lands traditionally used by or sacred to the Prairie Island Indian Community and other Native American groups. The Leech Lake Band of Ojibwe responded on July 8, 2019; no other responses to this request for comment were received.

During the incident period, the Blue Earth River flooded with abnormally high velocities and depth, significantly eroding the outer curve of the riverbank and undermining 150th Street, in Verona Township, Faribault County (43.70411, -94.14882). The affected area lies within Section 23 and Section 24, Township 103N and Range 28 W, approximately one quarter mile south of the 150th Street bridge over the Blue Earth River. The applicant proposes to use federal funds authorized under the Stafford Act to realign the endangered portion of 150th Street approximately 170 feet northwest of the affected area to best serve public safety concerns and prevent the potential for reoccurring damage.

The Applicant will acquire approximately three additional acres of property northwest of the affected area and currently used as cropland to accommodate the new right-of-way. The new road section will tie into the existing roadway. Construction of the new 66-foot wide gravel-surfaced road section will include clearing and grubbing of trees, excavation, grading, and the stabilization of the river embankment with Class III and Class V rip-rap and a benched embankment. The new roadway and shoulder will consist of Class 5 aggregate base, granular material, Class 1 shoulder base, and topsoil. The undertaking will also involve approximately

three acres of turf establishment and restoration, and the installation of new road signage and erosion control.

The old roadway will be excavated and removed. The original alignment will be restored to a natural condition by placing topsoil and planting grasses and trees. The eroded riverbank, outside the area stabilized by rip-rap and a benched embankment, will be allowed to naturally stabilize.

In accordance with the National Historic Preservation Act and other legislation, FEMA determined that this project constitutes a federally assisted undertaking requiring review under Section 106 of the National Historic Preservation Act of 1966, as amended. In accord with 36 CFR 800.2(c)(2)(ii), FEMA is providing this opportunity for the Prairie Island Indian Community to identify concerns about historic properties that may be affected by this undertaking. The area of potential effect (Map 1) is limited to the areas within which all construction and ground disturbing activity would be confined and the viewshed of the proposed project. No potential for effects outside of the viewshed of the proposed project exists. Due to the presence of known archaeological sites near the APE, FEMA will require that an archaeological survey be conducted within the area of potential effect.

Prior to conducting the archaeology survey, we invite your comments on the potential impacts this undertaking may have on lands traditionally used by or sacred to the Prairie Island Indian Community or other Native American groups. We understand the sensitive nature of much of the information regarding TCPs and assure you in advance that any information you provide will be considered privileged and confidential. In order to safeguard TCPs of interest to Native Americans, we are contacting the following Tribes to request information regarding their interest in this undertaking.

- Flandreau Santee Sioux Tribe of South Dakota
- Ho-Chunk Nation
- Lower Sioux Indian Community of Minnesota
- Prairie Island Indian Community
- Santee Sioux Tribe
- Shakopee Mdewakanton Sioux Community of Minnesota
- Spirit Lake Tribe of Fort Totten
- Upper Sioux Community of Minnesota

Receiving notice of your interest to join the consultation regarding this undertaking or notice of Tribes other than those listed above that may have an interest in this undertaking would improve FEMA's efforts to protect resources that may exist in the areas noted on the enclosures. A response form has been provided for your convenience.

We would appreciate a response by email from your office within thirty (30) days of your receipt of this documentation. If FEMA receives no response from your office within thirty (30) days, we will move forward with the project without comment from the Prairie Island Indian Community. If you have any questions or comments, please do not hesitate to contact me at 312-408-5549 or at duane.castaldi@fema.dhs.gov.

Sincerely,

Duane Castaldi
Regional Environmental Officer
FEMA Region V

Enclosures

Sent by email to Noah.White@piic.org

++++++++*You may email this page to duane.castaldi@fema.dhs.gov* ++++++++

Re: 150th Street Realignment, Verona Township, Faribault County
GPS: 43.70411, -94.14882; T103N R28W S23 & 24
DR-4442-MN, PW 1439 [115472]

☐ The Prairie Island Indian Community has no interest in the area potentially affected by the captioned undertaking.

☐ The Prairie Island Indian Community has an interest in the area potentially affected by the captioned undertaking. Contact information is provided below.

☐ The Tribal Nations noted below may have an interest in the area potentially affected by this undertaking.

Prairie Island Indian Community _____ Date _____

Map 1: Area of Potential Effect location marked in red. (*USGS National Map, Huntley Quadrangle, graphic scale*).

U.S. Department of Homeland Security
536 South Clark Street, 6th Floor
Chicago, Illinois 60605-1521

FEMA

1.

March 2, 2021

Misty Frazier, Interim Director
Santee Sioux Tribe
52946 Highway 12, Suite 2
Niobara, Nebraska 68760

Re: 150th Street Realignment, Verona Township, Faribault County
GPS: 43.70411, -94.14882; T103N R28W S23 & 24
DR-4442-MN, PW 1439 [115472]

Dear Ms. Frazier:

The Federal Emergency Management Agency (FEMA) recognizes the special and unique legal relationship that exists between the federal government and federally recognized American Indian Tribes (Tribes). FEMA also recognizes that Tribes may attach religious and cultural significance to historic properties located on aboriginal, ancestral, or ceded lands that are not contiguous with reservation lands. For this reason, FEMA consults with Tribes regarding the possible effects of FEMA-funded undertakings on cultural properties of historic or traditional significance, sometimes referred to as Traditional Cultural Properties (TCPs). The purpose of this communication is to provide information regarding the captioned FEMA-funded project and to invite comment on whether the Santee Sioux Tribe or other Tribes have interests in the areas potentially affected by this undertaking.

In response to severe storms, straight-line winds, and flooding between March 12, 2019 and April 28, 2019, the President declared disaster DR-4442-MN on June 12, 2019. Under this declaration, Faribault County, among others, was eligible for FEMA's Public Assistance (PA) Program funding. FEMA notified Tribes thought to have interests in the declared counties on June 26, 2019. FEMA invited comments on the potential impacts PA projects may have on lands traditionally used by or sacred to the Santee Sioux Tribe and other Native American groups. The Leech Lake Band of Ojibwe responded on July 8, 2019; no other responses to this request for comment were received.

During the incident period, the Blue Earth River flooded with abnormally high velocities and depth, significantly eroding the outer curve of the riverbank and undermining 150th Street, in Verona Township, Faribault County (43.70411, -94.14882). The affected area lies within Section 23 and Section 24, Township 103N and Range 28 W, approximately one quarter mile south of the 150th Street bridge over the Blue Earth River. The applicant proposes to use federal funds authorized under the Stafford Act to realign the endangered portion of 150th Street approximately 170 feet northwest of the affected area to best serve public safety concerns and prevent the potential for reoccurring damage.

The Applicant will acquire approximately three additional acres of property northwest of the affected area and currently used as cropland to accommodate the new right-of-way. The new road section will tie into the existing roadway. Construction of the new 66-foot wide gravel-surfaced road section will include clearing and grubbing of trees, excavation, grading, and the stabilization of the river embankment with Class III and Class V rip-rap and a benched embankment. The new roadway and shoulder will consist of Class 5 aggregate base, granular material, Class 1 shoulder base, and topsoil. The undertaking will also involve approximately

three acres of turf establishment and restoration, and the installation of new road signage and erosion control.

The old roadway will be excavated and removed. The original alignment will be restored to a natural condition by placing topsoil and planting grasses and trees. The eroded riverbank, outside the area stabilized by rip-rap and a benched embankment, will be allowed to naturally stabilize.

In accordance with the National Historic Preservation Act and other legislation, FEMA determined that this project constitutes a federally assisted undertaking requiring review under Section 106 of the National Historic Preservation Act of 1966, as amended. In accord with 36 CFR 800.2(c)(2)(ii), FEMA is providing this opportunity for the Santee Sioux Tribe to identify concerns about historic properties that may be affected by this undertaking. The area of potential effect (Map 1) is limited to the areas within which all construction and ground disturbing activity would be confined and the viewshed of the proposed project. No potential for effects outside of the viewshed of the proposed project exists. Due to the presence of known archaeological sites near the APE, FEMA will require that an archaeological survey be conducted within the area of potential effect.

Prior to conducting the archaeology survey, we invite your comments on the potential impacts this undertaking may have on lands traditionally used by or sacred to the Santee Sioux Tribe or other Native American groups. We understand the sensitive nature of much of the information regarding TCPs and assure you in advance that any information you provide will be considered privileged and confidential. In order to safeguard TCPs of interest to Native Americans, we are contacting the following Tribes to request information regarding their interest in this undertaking.

- Flandreau Santee Sioux Tribe of South Dakota
- Ho-Chunk Nation
- Lower Sioux Indian Community of Minnesota
- Prairie Island Indian Community
- Santee Sioux Tribe
- Shakopee Mdewakanton Sioux Community of Minnesota
- Spirit Lake Tribe of Fort Totten
- Upper Sioux Community of Minnesota

Receiving notice of your interest to join the consultation regarding this undertaking or notice of Tribes other than those listed above that may have an interest in this undertaking would improve FEMA's efforts to protect resources that may exist in the areas noted on the enclosures. A response form has been provided for your convenience.

We would appreciate a response by email from your office within thirty (30) days of your receipt of this documentation. If FEMA receives no response from your office within thirty (30) days, we will move forward with the project without comment from the Santee Sioux Tribe. If you have any questions or comments, please do not hesitate to contact me at 312-408-5549 or at duane.castaldi@fema.dhs.gov.

Sincerely,

Duane Castaldi
Regional Environmental Officer
FEMA Region V

Enclosures

Sent by email to ssn.thpo@gmail.com

++++++++*You may email this page to duane.castaldi@fema.dhs.gov* ++++++++

Re: 150th Street Realignment, Verona Township, Faribault County
GPS: 43.70411, -94.14882; T103N R28W S23 & 24
DR-4442-MN, PW 1439 [115472]

☐ The Santee Sioux Tribe has no interest in the area potentially affected by the captioned undertaking.

☐ The Santee Sioux Tribe has an interest in the area potentially affected by the captioned undertaking. Contact information is provided below.

☐ The Tribal Nations noted below may have an interest in the area potentially affected by this undertaking.

Santee Sioux Tribe

Date

Map 1: Area of Potential Effect location marked in red. (*USGS National Map, Huntley Quadrangle, graphic scale*).

U.S. Department of Homeland Security
536 South Clark Street, 6th Floor
Chicago, Illinois 60605-1521

FEMA

1.

March 2, 2021

Leonard Wabasha, Director of Cultural Resources
Shakopee Mdewakanton Sioux Community of Minnesota
2330 Sioux Trail NW
Prior Lake, Minnesota 55372-9077

Re: 150th Street Realignment, Verona Township, Faribault County
GPS: 43.70411, -94.14882; T103N R28W S23 & 24
DR-4442-MN, PW 1439 [115472]

Dear Mr. Wabasha:

The Federal Emergency Management Agency (FEMA) recognizes the special and unique legal relationship that exists between the federal government and federally recognized American Indian Tribes (Tribes). FEMA also recognizes that Tribes may attach religious and cultural significance to historic properties located on aboriginal, ancestral, or ceded lands that are not contiguous with reservation lands. For this reason, FEMA consults with Tribes regarding the possible effects of FEMA-funded undertakings on cultural properties of historic or traditional significance, sometimes referred to as Traditional Cultural Properties (TCPs). The purpose of this communication is to provide information regarding the captioned FEMA-funded project and to invite comment on whether the Shakopee Mdewakanton Sioux Community of Minnesota or other Tribes have interests in the areas potentially affected by this undertaking.

In response to severe storms, straight-line winds, and flooding between March 12, 2019 and April 28, 2019, the President declared disaster DR-4442-MN on June 12, 2019. Under this declaration, Faribault County, among others, was eligible for FEMA's Public Assistance (PA) Program funding. FEMA notified Tribes thought to have interests in the declared counties on June 26, 2019. FEMA invited comments on the potential impacts PA projects may have on lands traditionally used by or sacred to the Shakopee Mdewakanton Sioux Community of Minnesota and other Native American groups. The Leech Lake Band of Ojibwe responded on July 8, 2019; no other responses to this request for comment were received.

During the incident period, the Blue Earth River flooded with abnormally high velocities and depth, significantly eroding the outer curve of the riverbank and undermining 150th Street, in Verona Township, Faribault County (43.70411, -94.14882). The affected area lies within Section 23 and Section 24, Township 103N and Range 28 W, approximately one quarter mile south of the 150th Street bridge over the Blue Earth River. The applicant proposes to use federal funds authorized under the Stafford Act to realign the endangered portion of 150th Street approximately 170 feet northwest of the affected area to best serve public safety concerns and prevent the potential for reoccurring damage.

The Applicant will acquire approximately three additional acres of property northwest of the affected area and currently used as cropland to accommodate the new right-of-way. The new road section will tie into the existing roadway. Construction of the new 66-foot wide gravel-surfaced road section will include clearing and grubbing of trees, excavation, grading, and the stabilization of the river embankment with Class III and Class V rip-rap and a benched embankment. The new roadway and shoulder will consist of Class 5 aggregate base, granular material, Class 1 shoulder base, and topsoil. The undertaking will also involve approximately

three acres of turf establishment and restoration, and the installation of new road signage and erosion control.

The old roadway will be excavated and removed. The original alignment will be restored to a natural condition by placing topsoil and planting grasses and trees. The eroded riverbank, outside the area stabilized by rip-rap and a benched embankment, will be allowed to naturally stabilize.

In accordance with the National Historic Preservation Act and other legislation, FEMA determined that this project constitutes a federally assisted undertaking requiring review under Section 106 of the National Historic Preservation Act of 1966, as amended. In accord with 36 CFR 800.2(c)(2)(ii), FEMA is providing this opportunity for the Shakopee Mdewakanton Sioux Community of Minnesota to identify concerns about historic properties that may be affected by this undertaking. The area of potential effect (Map 1) is limited to the areas within which all construction and ground disturbing activity would be confined and the viewshed of the proposed project. No potential for effects outside of the viewshed of the proposed project exists. Due to the presence of known archaeological sites near the APE, FEMA will require that an archaeological survey be conducted within the area of potential effect.

Prior to conducting the archaeology survey, we invite your comments on the potential impacts this undertaking may have on lands traditionally used by or sacred to the Shakopee Mdewakanton Sioux Community of Minnesota or other Native American groups. We understand the sensitive nature of much of the information regarding TCPs and assure you in advance that any information you provide will be considered privileged and confidential. In order to safeguard TCPs of interest to Native Americans, we are contacting the following Tribes to request information regarding their interest in this undertaking.

- Flandreau Santee Sioux Tribe of South Dakota
- Ho-Chunk Nation
- Lower Sioux Indian Community of Minnesota
- Prairie Island Indian Community
- Santee Sioux Tribe
- Shakopee Mdewakanton Sioux Community of Minnesota
- Spirit Lake Tribe of Fort Totten
- Upper Sioux Community of Minnesota

Receiving notice of your interest to join the consultation regarding this undertaking or notice of Tribes other than those listed above that may have an interest in this undertaking would improve FEMA's efforts to protect resources that may exist in the areas noted on the enclosures. A response form has been provided for your convenience.

We would appreciate a response by email from your office within thirty (30) days of your receipt of this documentation. If FEMA receives no response from your office within thirty (30) days, we will move forward with the project without comment from the Shakopee Mdewakanton Sioux Community of Minnesota. If you have any questions or comments, please do not hesitate to contact me at 312-408-5549 or at duane.castaldi@fema.dhs.gov.

Sincerely,

Duane Castaldi
Regional Environmental Officer
FEMA Region V

Enclosures

Sent by email to leonard.wabasha@shakopeedakota.org

++++++++*You may email this page to duane.castaldi@fema.dhs.gov* ++++++++

Re: 150th Street Realignment, Verona Township, Faribault County
GPS: 43.70411, -94.14882; T103N R28W S23 & 24
DR-4442-MN, PW 1439 [115472]

☐ The Shakopee Mdewakanton Sioux Community of Minnesota has no interest in the area potentially affected by the captioned undertaking.

☐ The Shakopee Mdewakanton Sioux Community of Minnesota has an interest in the area potentially affected by the captioned undertaking. Contact information is provided below.

☐ The Tribal Nations noted below may have an interest in the area potentially affected by this undertaking.

Shakopee Mdewakanton Sioux Community of Minnesota

Date

Map 1: Area of Potential Effect location marked in red. (*USGS National Map, Huntley Quadrangle, graphic scale*).

U.S. Department of Homeland Security
536 South Clark Street, 6th Floor
Chicago, Illinois 60605-1521

FEMA

1.

March 2, 2021

Dr. Erich Longie, Tribal Historic Preservation Officer
Spirit Lake Tribe of Fort Totten
P.O. Box 76
Fort Totten, North Dakota 58335

Re: 150th Street Realignment, Verona Township, Faribault County
GPS: 43.70411, -94.14882; T103N R28W S23 & 24
DR-4442-MN, PW 1439 [115472]

Dear Dr. Longie:

The Federal Emergency Management Agency (FEMA) recognizes the special and unique legal relationship that exists between the federal government and federally recognized American Indian Tribes (Tribes). FEMA also recognizes that Tribes may attach religious and cultural significance to historic properties located on aboriginal, ancestral, or ceded lands that are not contiguous with reservation lands. For this reason, FEMA consults with Tribes regarding the possible effects of FEMA-funded undertakings on cultural properties of historic or traditional significance, sometimes referred to as Traditional Cultural Properties (TCPs). The purpose of this communication is to provide information regarding the captioned FEMA-funded project and to invite comment on whether the Spirit Lake Tribe of Fort Totten or other Tribes have interests in the areas potentially affected by this undertaking.

In response to severe storms, straight-line winds, and flooding between March 12, 2019 and April 28, 2019, the President declared disaster DR-4442-MN on June 12, 2019. Under this declaration, Faribault County, among others, was eligible for FEMA's Public Assistance (PA) Program funding. FEMA notified Tribes thought to have interests in the declared counties on June 26, 2019. FEMA invited comments on the potential impacts PA projects may have on lands traditionally used by or sacred to the Spirit Lake Tribe of Fort Totten and other Native American groups. The Leech Lake Band of Ojibwe responded on July 8, 2019; no other responses to this request for comment were received.

During the incident period, the Blue Earth River flooded with abnormally high velocities and depth, significantly eroding the outer curve of the riverbank and undermining 150th Street, in Verona Township, Faribault County (43.70411, -94.14882). The affected area lies within Section 23 and Section 24, Township 103N and Range 28 W, approximately one quarter mile south of the 150th Street bridge over the Blue Earth River. The applicant proposes to use federal funds authorized under the Stafford Act to realign the endangered portion of 150th Street approximately 170 feet northwest of the affected area to best serve public safety concerns and prevent the potential for reoccurring damage.

The Applicant will acquire approximately three additional acres of property northwest of the affected area and currently used as cropland to accommodate the new right-of-way. The new road section will tie into the existing roadway. Construction of the new 66-foot wide gravel-surfaced road section will include clearing and grubbing of trees, excavation, grading, and the stabilization of the river embankment with Class III and Class V rip-rap and a benched embankment. The new roadway and shoulder will consist of Class 5 aggregate base, granular material, Class 1 shoulder base, and topsoil. The undertaking will also involve approximately

three acres of turf establishment and restoration, and the installation of new road signage and erosion control.

The old roadway will be excavated and removed. The original alignment will be restored to a natural condition by placing topsoil and planting grasses and trees. The eroded riverbank, outside the area stabilized by rip-rap and a benched embankment, will be allowed to naturally stabilize.

In accordance with the National Historic Preservation Act and other legislation, FEMA determined that this project constitutes a federally assisted undertaking requiring review under Section 106 of the National Historic Preservation Act of 1966, as amended. In accord with 36 CFR 800.2(c)(2)(ii), FEMA is providing this opportunity for the Spirit Lake Tribe of Fort Totten to identify concerns about historic properties that may be affected by this undertaking. The area of potential effect (Map 1) is limited to the areas within which all construction and ground disturbing activity would be confined and the viewshed of the proposed project. No potential for effects outside of the viewshed of the proposed project exists. Due to the presence of known archaeological sites near the APE, FEMA will require that an archaeological survey be conducted within the area of potential effect.

Prior to conducting the archaeology survey, we invite your comments on the potential impacts this undertaking may have on lands traditionally used by or sacred to the Spirit Lake Tribe of Fort Totten or other Native American groups. We understand the sensitive nature of much of the information regarding TCPs and assure you in advance that any information you provide will be considered privileged and confidential. In order to safeguard TCPs of interest to Native Americans, we are contacting the following Tribes to request information regarding their interest in this undertaking.

- Flandreau Santee Sioux Tribe of South Dakota
- Ho-Chunk Nation
- Lower Sioux Indian Community of Minnesota
- Prairie Island Indian Community
- Santee Sioux Tribe
- Shakopee Mdewakanton Sioux Community of Minnesota
- Spirit Lake Tribe of Fort Totten
- Upper Sioux Community of Minnesota

Receiving notice of your interest to join the consultation regarding this undertaking or notice of Tribes other than those listed above that may have an interest in this undertaking would improve FEMA's efforts to protect resources that may exist in the areas noted on the enclosures. A response form has been provided for your convenience.

We would appreciate a response by email from your office within thirty (30) days of your receipt of this documentation. If FEMA receives no response from your office within thirty (30) days, we will move forward with the project without comment from the Spirit Lake Tribe of Fort Totten. If you have any questions or comments, please do not hesitate to contact me at 312-408-5549 or at duane.castaldi@fema.dhs.gov.

Sincerely,

Duane Castaldi
Regional Environmental Officer
FEMA Region V

Enclosures

Sent by email to thpo@gondtc.com

++++++++*You may email this page to duane.castaldi@fema.dhs.gov* ++++++++

Re: 150th Street Realignment, Verona Township, Faribault County
GPS: 43.70411, -94.14882; T103N R28W S23 & 24
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Spirit Lake Tribe of Fort Totten

Date

Map 1: Area of Potential Effect location marked in red. (*USGS National Map, Huntley Quadrangle, graphic scale*).

U.S. Department of Homeland Security
536 South Clark Street, 6th Floor
Chicago, Illinois 60605-1521

FEMA

1.

March 2, 2021

Samantha Odegard, Tribal Historic Preservation Officer
Upper Sioux Community of Minnesota
5722 Travers Lane
P.O.Box 147
Granite Falls, Minnesota 56241-0147

Re: 150th Street Realignment, Verona Township, Faribault County
GPS: 43.70411, -94.14882; T103N R28W S23 & 24
DR-4442-MN, PW 1439 [115472]

Dear Ms. Odegard:

The Federal Emergency Management Agency (FEMA) recognizes the special and unique legal relationship that exists between the federal government and federally recognized American Indian Tribes (Tribes). FEMA also recognizes that Tribes may attach religious and cultural significance to historic properties located on aboriginal, ancestral, or ceded lands that are not contiguous with reservation lands. For this reason, FEMA consults with Tribes regarding the possible effects of FEMA-funded undertakings on cultural properties of historic or traditional significance, sometimes referred to as Traditional Cultural Properties (TCPs). The purpose of this communication is to provide information regarding the captioned FEMA-funded project and to invite comment on whether the Upper Sioux Community of Minnesota or other Tribes have interests in the areas potentially affected by this undertaking.

In response to severe storms, straight-line winds, and flooding between March 12, 2019 and April 28, 2019, the President declared disaster DR-4442-MN on June 12, 2019. Under this declaration, Faribault County, among others, was eligible for FEMA's Public Assistance (PA) Program funding. FEMA notified Tribes thought to have interests in the declared counties on June 26, 2019. FEMA invited comments on the potential impacts PA projects may have on lands traditionally used by or sacred to the Upper Sioux Community of Minnesota and other Native American groups. The Leech Lake Band of Ojibwe responded on July 8, 2019; no other responses to this request for comment were received.

During the incident period, the Blue Earth River flooded with abnormally high velocities and depth, significantly eroding the outer curve of the riverbank and undermining 150th Street, in Verona Township, Faribault County (43.70411, -94.14882). The affected area lies within Section 23 and Section 24, Township 103N and Range 28 W, approximately one quarter mile south of the 150th Street bridge over the Blue Earth River. The applicant proposes to use federal funds authorized under the Stafford Act to realign the endangered portion of 150th Street approximately 170 feet northwest of the affected area to best serve public safety concerns and prevent the potential for reoccurring damage.

The Applicant will acquire approximately three additional acres of property northwest of the affected area and currently used as cropland to accommodate the new right-of-way. The new road section will tie into the existing roadway. Construction of the new 66-foot wide gravel-surfaced road section will include clearing and grubbing of trees, excavation, grading, and the stabilization of the river embankment with Class III and Class V rip-rap and a benched embankment. The new roadway and shoulder will consist of Class 5 aggregate base, granular material, Class 1 shoulder base, and topsoil. The undertaking will also involve approximately

three acres of turf establishment and restoration, and the installation of new road signage and erosion control.

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Prior to conducting the archaeology survey, we invite your comments on the potential impacts this undertaking may have on lands traditionally used by or sacred to the Upper Sioux Community of Minnesota or other Native American groups. We understand the sensitive nature of much of the information regarding TCPs and assure you in advance that any information you provide will be considered privileged and confidential. In order to safeguard TCPs of interest to Native Americans, we are contacting the following Tribes to request information regarding their interest in this undertaking.

- Flandreau Santee Sioux Tribe of South Dakota
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- Spirit Lake Tribe of Fort Totten
- Upper Sioux Community of Minnesota

Receiving notice of your interest to join the consultation regarding this undertaking or notice of Tribes other than those listed above that may have an interest in this undertaking would improve FEMA's efforts to protect resources that may exist in the areas noted on the enclosures. A response form has been provided for your convenience.

We would appreciate a response by email from your office within thirty (30) days of your receipt of this documentation. If FEMA receives no response from your office within thirty (30) days, we will move forward with the project without comment from the Upper Sioux Community of Minnesota. If you have any questions or comments, please do not hesitate to contact me at 312-408-5549 or at duane.castaldi@fema.dhs.gov.

Sincerely,

Duane Castaldi
Regional Environmental Officer
FEMA Region V

Enclosures

Sent by email to thpo@uppersiouxcommunity-nsn.gov

++++++++*You may email this page to duane.castaldi@fema.dhs.gov* ++++++++

Re: 150th Street Realignment, Verona Township, Faribault County
GPS: 43.70411, -94.14882; T103N R28W S23 & 24
DR-4442-MN, PW 1439 [115472]

☐ The Upper Sioux Community of Minnesota has no interest in the area potentially affected by the captioned undertaking.

☐ The Upper Sioux Community of Minnesota has an interest in the area potentially affected by the captioned undertaking. Contact information is provided below.

☐ The Tribal Nations noted below may have an interest in the area potentially affected by this undertaking.

Upper Sioux Community of Minnesota

Date

Map 1: Area of Potential Effect location marked in red. (*USGS National Map, Huntley Quadrangle, graphic scale*).

Appendix F

Permits

MINNESOTA POLLUTION CONTROL AGENCY

AUTHORIZATION TO DISCHARGE

STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY

UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)/

STATE DISPOSAL SYSTEM (SDS) PROGRAM

MNR100001

Permittee :	Multiple
General Permit Name:	Construction Stormwater General Permit
Issuance date:	August 1, 2018
Expiration date:	July 31, 2023

The state of Minnesota, on behalf of its citizens through the Minnesota Pollution Control Agency (MPCA), authorizes Permittees seeking coverage under this general permit to discharge stormwater associated with construction activity to waters of the state of Minnesota.

The goal of this permit is to reduce pollutant levels in point source discharges and protect water quality in accordance with the U.S. Clean Water Act, Minnesota statutes and rules, and federal laws and regulations.

This permit is effective on the issuance date identified above. This permit expires at midnight on the expiration date identified above.

Signature: Mark Schmitt

This document has been electronically signed.

for the Minnesota Pollution Control Agency

Mark Schmitt
Division Director
Municipal Division

Permit application:
Submit via the MPCA Online eServices Portal at
https://rsp.pca.state.mn.us/

Questions on this permit?
Contact eServices at
651-757-2728 or 1-844-828-0942

Table of Contents

1.1	**Permit Coverage**. [Minn. R. 7090]
1.2	This permit is required for construction activity that results in land disturbance of equal to or greater than one (1) acre or if a project is part of a common plan of development or sale that ultimately will disturb greater than one (1) acre, and authorizes, subject to the terms and conditions of this permit, the discharge of stormwater associated with construction activity. [Minn. R. 7090]
1.3	Construction activity covered by this permit cannot commence until coverage under this permit is effective as described in item 3.3 through 3.4 or, if applicable, until the Minnesota Pollution Control Agency (MPCA) has issued an individual National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) construction stormwater permit for the project. [Minn. R. 7090]
1.4	This permit covers all areas of the State of Minnesota except land wholly within the boundaries of a federally recognized Indian Reservation owned by a tribe or a tribal member or land held in trust by the federal government for a tribe or tribal member. [Minn. R. 7090]
1.5	Coverage under this permit is not required when all stormwater from construction activity is routed directly to and treated by a "treatment works," as defined in Minn. Stat. Sect. 115.01, subd. 21, operated under an individual NPDES/SDS permit with a Total Suspended Solids (TSS) effluent limit. [Minn. R. 7090]
1.6	This permit covers ongoing projects covered under any previous construction stormwater permit that are not complete on the issuance date of this permit. Permittees must either remain in compliance with the previous permit and terminate coverage within 18 months of the issuance date of this permit or comply with this permit, including updating the Stormwater Pollution Prevention Plan (SWPPP), within the 18-month period. Permittees of previously permitted projects are not required to incorporate any additional requirements regarding the permanent stormwater treatment system included in this reissued permit. [Minn. R. 7090]
1.7	Coverage for projects that extend beyond the expiration date of this permit remains effective for a grace period covering project completion and Notice of Termination (NOT) submittal. If Permittees cannot complete projects during the grace period, the MPCA will extend coverage under the next permit and permittees must comply with the requirements of the new permit including updating the SWPPP. Permittees are not required to follow changes to the permanent stormwater treatment section of the next permit. [Minn. R. 7090]
2.1	**Prohibitions and Limitations of Coverage**. [Minn. R. 7090]
2.2	The owner must develop a complete and accurate SWPPP that complies with item 5.2 prior to submitting the application for coverage and starting construction activity. Failure to prepare a SWPPP prior to submitting the application may result in permit revocation. [Minn. R. 7090]
2.3	This permit prohibits discharges of any material other than stormwater treated in compliance with this permit and discharges from dewatering or basin draining activities in accordance with Section 10. Prohibited discharges include, but are not limited to, wastewater from washout of concrete, stucco, paint, form release oils, curing compounds and other construction materials, fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance, soaps or solvents used in vehicle and equipment washing and maintenance, and other hazardous substances or wastes. [Minn. R. 7090]
2.4	This permit does not authorize stormwater discharges related to the placement of fill into waters of the state requiring local, state or federal authorizations (such as U.S. Army Corps of Engineers Section 404 permits, Minnesota Department of Natural Resources (DNR) Public Waters Work permits or local governmental unit (LGU) Wetland Conservation Act replacement plans or determinations). [Minn. R. 7090]
2.5	This permit does not authorize stormwater discharges associated with industrial activity except for construction activity. Permittees must obtain coverage for discharges associated with industrial activity under a separate NPDES/SDS permit once day-to-day operational activities commence even if construction is ongoing. [Minn. R. 7090]
2.6	This permit does not authorize discharges from non-point source agricultural and silvicultural activities excluded from NPDES permit requirements under 40 CFR pt. 122.3(e). [Minn. R. 7090]
2.7	This permit does not authorize stormwater discharges to Prohibited, Restricted, Special or Impaired waters unless permittees follow the additional stormwater requirements in Section 23. [Minn. R. 7090]
2.8	This permit does not replace or satisfy any environmental review requirements including those under the

	Minnesota Environmental Policy Act or the National Environmental Policy Act. The owner must verify completion of any environmental review required by law, including any required Environmental Assessment Work Sheets or Environmental Impact Statements, Federal environmental review, or other required review prior to applying for coverage under this permit. If any part of your common plan of development or sale requires environmental review, coverage under this permit cannot be obtained until such environmental review is complete. [Minn. R. 7090]
2.9	This permit does not replace or satisfy any review requirements for discharges adversely impacting State or Federally designated endangered or threatened species or a designated critical habitat. The owner must comply with the National Historic Preservation Act and conduct all required review and coordination related to historic preservation, including significant anthropological sites and any burial sites, with the Minnesota Historic Preservation Officer. [Minn. R. 7090]
2.10	This permit does not authorize discharges to wetlands unless the permittee complies with the requirements in Section 22. [Minn. R. 7090]
3.1	**Application and Coverage Effective Date**. [Minn. R. 7090]
3.2	The owner and operator must submit a complete and accurate on-line application with the appropriate fee to the MPCA for each project that disturbs one (1) or more acres of land or for a common plan of development or sale that will ultimately disturb one (1) or more acres. [Minn. R. 7090]
3.3	For projects or common plans of development or sale that disturb less than 50 acres or do not discharge stormwater within 1 mile (aerial radius measurement) of a special or impaired water, permittees do not need to submit the SWPPP with the application. Permit coverage for these projects is effective upon application and completing the payment process. [Minn. R. 7090]
3.4	For certain projects or common plans of development or sale disturbing 50 acres or more, the complete SWPPP must be included with the application and submitted at least 30 days before the start of construction activity. This applies if there is a discharge point on the project within one mile (aerial radius measurement) of, and flows to, a special water listed in item 23.3 through 23.6 or an impaired water as described in item 23.7. Permit coverage for these projects is effective upon submitting the application and complete SWPPP, completing the payment process and receiving a determination from the MPCA that the review of the SWPPP is complete. The determination may take longer than 30 days if the SWPPP is incomplete. If the MPCA fails to contact the permittees within 30 days of application receipt, coverage is effective 30 days after completing the payment process. [Minn. R. 7090]
3.5	The application requires listing all persons meeting the definition of owner and operator as permittees. The owner is responsible for compliance with all terms and conditions of this permit. The operator is responsible for compliance with Sections 3, 4, 6-22, 24 and applicable requirements for construction activity in Section 23. [Minn. R. 7090]
3.6	Permittees will receive coverage notification in a manner determined by the MPCA. [Minn. R. 7090]
3.7	For construction projects where the owner or operator changes (e.g., an original developer sells portions of the property to various homebuilders or sells the entire site to a new owner), the current owner and the new owner or operator must submit a complete permit modification form provided by the MPCA. The current owner and the new owner or operator must submit the form prior to the new owner or operator commencing construction activity or no later than 30 days after taking ownership of the property. [Minn. R. 7090]
3.8	For construction projects where the owner or operator changes, the current owner must provide a SWPPP to the new owner and operator that specifically addresses the remaining construction activity. The new owner or operator can implement the original SWPPP, modify the SWPPP, or develop a new SWPPP. Permittees must ensure their activities do not render another party's erosion prevention and sediment control BMPs ineffective. [Minn. R. 7090]
4.1	**Termination of Coverage**. [Minn. R. 7090]
4.2	Permittees must submit a NOT within 30 days after all termination conditions listed in Section 13 are complete. [Minn. R. 7090]
4.3	Permittees must submit a NOT within 30 days after selling or otherwise legally transferring the entire site, including permit responsibility for roads (e.g., street sweeping) and stormwater infrastructure final clean out, or transferring portions of a site to another party. The permittees' coverage under this permit

	terminates at midnight on the submission date of the NOT. [Minn. R. 7090]
4.4	Permittees may terminate permit coverage prior to completion of all construction activity if they meet all of the following conditions: a. construction activity has ceased for at least 90 days; and b. at least 90 percent (by area) of all originally proposed construction activity has been completed and permanent cover has been established on those areas; and c. on areas where construction activity is not complete, permanent cover has been established; and d. the site complies with item 13.3 through 13.7. After permit coverage is terminated under this item, any subsequent development on the remaining portions of the site will require permit coverage if the subsequent development itself or as part of the remaining common plan of development or sale will result in land disturbing activities of one (1) or more acres in size. [Minn. R. 7090]
4.5	Permittees may terminate coverage upon MPCA approval after submitting information documenting the owner cancelled the project. [Minn. R. 7090]
5.1	**Stormwater Pollution Prevention Plan (SWPPP) Content**. [Minn. R. 7090]
5.2	The owner must develop a SWPPP. The SWPPP must include items 5.3 through 5.26. [Minn. R. 7090]
5.3	The SWPPP must incorporate specific Best Management Practices (BMP) used to comply with the requirements of this permit. [Minn. R. 7090]
5.4	The SWPPP must include a narrative describing the timing for installation of all erosion prevention and sediment control BMPs and a description of the permanent stormwater treatment systems. [Minn. R. 7090]
5.5	The SWPPP must include the location and type of all temporary and permanent erosion prevention and sediment control BMPs along with procedures used to establish additional temporary BMPs as necessary for the site conditions during construction. Standard details and/or specifications for BMPs must be included in the final plans and specifications for the project. [Minn. R. 7090]
5.6	The SWPPP must include the calculations and other information used for the design of temporary sediment basins and any of the permanent stormwater treatment systems required in Section 15. [Minn. R. 7090]
5.7	The SWPPP must include estimated quantities anticipated at the start of the project for the life of the project for all erosion prevention and sediment control BMPs (e.g., linear feet of silt fence or square feet of erosion control blanket). [Minn. R. 7090]
5.8	The SWPPP must include the number of acres of impervious surface for both pre- and post-construction. [Minn. R. 7090]
5.9	The SWPPP must include a site map with existing and final grades, including drainage area boundaries, directions of flow and all discharge points where stormwater is leaving the site or entering a surface water. The site map must indicate the areas of steep slopes. The site map must also include impervious surfaces, soil types and locations of potential pollutant-generating activities as identified in Section 12. [Minn. R. 7090]
5.10	The SWPPP must include a map of all surface waters, existing wetlands, and stormwater ponds or basins that can be identified on maps such as United States Geological Survey 7.5 minute quadrangle maps, the National Wetland Inventory map or equivalent maps and are within one mile (aerial radius measurement) from the project boundaries that will receive stormwater from the construction site, during or after construction. The SWPPP must identify if the surface waters are special or impaired waters. [Minn. R. 7090]
5.11	The SWPPP must include a site map showing construction activity areas that are adjacent to and drain to Public Waters for which the DNR has promulgated "work in water restrictions" during specified fish spawning time frames. [Minn. R. 7090]
5.12	Permittees must identify locations of 50' buffer zones as required in item 9.17 and 100' permanent buffer zones as required in item 23.11, on plan sheets in the SWPPP. [Minn. R. 7090]
5.13	If permittees determine compliance with the following requirements is infeasible, they must document the

	determination in the SWPPP: a. temporary sediment basins as described in Section 14; and b. for linear projects, if the permanent stormwater treatment system cannot be constructed within the right-of-way, a reasonable attempt must be made to obtain additional right-of-way (item 15.9); and c. buffer zones as described in item 9.17 and item 23.11. [Minn. R. 7090]
5.14	If permittees determine that a temporary sediment basin is infeasible as described in item 14.10, the SWPPP must describe the alternative BMPs used. [Minn. R. 7090]
5.15	Where systems cannot meet the full volume reduction requirement on site, (e.g., the site has infiltration prohibitions, see item 16.14 through item 16.21) the permittee must document the reasons in the SWPPP. [Minn. R. 7090]
5.16	The SWPPP must include any stormwater mitigation measures proposed to be part of the final project in any environmental review document, endangered species review, archeological or other required local, state or federal review conducted for the project. For purposes of this permit, mitigation measures means actions necessary to avoid, minimize, or mitigate for impacts related to erosion prevention, sediment control, the permanent stormwater treatment system, pollution prevention management measures and discharges associated with the project's construction activity. [Minn. R. 7090]
5.17	The SWPPP must describe the methods used for permanent cover of all exposed soil areas. [Minn. R. 7090]
5.18	Permittees must identify the locations of areas where construction will be phased to minimize the duration of exposed soil areas in the SWPPP. [Minn. R. 7090]
5.19	For projects with a discharge point on the project within one (1) mile (aerial radius measurement) of and which flows to an impaired water, permittees must identify the impaired water(s), and any United States Environmental Protection Agency (USEPA)-approved Total Maximum Daily Load (TMDL) for the pollutant(s) or stressor(s) described in item 23.7. Permittees' identification must include those TMDLs approved at any time prior to permit application submittal and are still in effect. [Minn. R. 7090]
5.20	Permittees must document in the SWPPP, all trained individuals identified in item 21.2. Documentation must include: a. names of personnel required to be trained; and b. dates of training and name of instructor(s) and entity providing training; and c. content of training course. If permittees do not know the names of the individuals at the time of application, the permittees must ensure they document training before construction activity commences. [Minn. R. 7090]
5.21	The SWPPP must identify a person knowledgeable and experienced in the application of erosion prevention and sediment control BMPs who will coordinate with all contractors, subcontractors, and operators on-site to oversee the implementation of the SWPPP. [Minn. R. 7090]
5.22	The SWPPP must describe any specific chemicals and chemical treatment systems used for enhancing the sedimentation process and how it achieves compliance with item 9.18. [Minn. R. 7090]
5.23	The SWPPP must identify the person(s), organizations, or entities responsible for long-term operation and maintenance of permanent stormwater treatment systems. [Minn. R. 7090]
5.24	The SWPPP must describe methods to minimize soil compaction and preserve topsoil. Minimizing soil compaction is not required where the function of a specific area dictates compaction. [Minn. R. 7090]
5.25	The SWPPP must include any site assessments for groundwater or soil contamination required in item 16.15. [Minn. R. 7090]
5.26	The SWPPP must account for the following factors in designing temporary erosion prevention and sediment control BMPs: a. the expected amount, frequency, intensity, and duration of precipitation; and b. the nature of stormwater runoff and run-on at the site, including factors such as expected flow from impervious surfaces, slopes, and site drainage features; and c. the stormwater volume, velocity, and peak flowrates to minimize discharge of pollutants in stormwater

	and to minimize channel and streambank erosion and scour in the immediate vicinity of discharge points; and d. the range of soil particle sizes expected to be present. [Minn. R. 7090]
6.1	**SWPPP Amendments**. [Minn. R. 7090]
6.2	One of the individuals described in item 21.2.a or item 21.2.b or another qualified individual must complete all SWPPP changes. Changes involving the use of a less stringent BMP must include a justification describing how the replacement BMP is effective for the site characteristics. [Minn. R. 7090]
6.3	Permittees must amend the SWPPP to include additional or modified BMPs as necessary to correct problems identified or address situations whenever there is a change in design, construction, operation, maintenance, weather or seasonal conditions having a significant effect on the discharge of pollutants to surface waters or groundwater. [Minn. R. 7090]
6.4	Permittees must amend the SWPPP to include additional or modified BMPs as necessary to correct problems identified or address situations whenever inspections or investigations by the site owner or operator, USEPA or MPCA officials indicate the SWPPP is not effective in eliminating or significantly minimizing the discharge of pollutants to surface waters or groundwater or the discharges are causing water quality standard exceedances (e.g., nuisance conditions as defined in Minn. R. 7050.0210, subp. 2) or the SWPPP is not consistent with the objectives of a USEPA approved TMDL. [Minn. R. 7050.0210]
7.1	**BMP Selection and Installation**. [Minn. R. 7090]
7.2	Permittees must select, install, and maintain the BMPs identified in the SWPPP and in this permit in an appropriate and functional manner and in accordance with relevant manufacturer specifications and accepted engineering practices. [Minn. R. 7090]
8.1	**Erosion Prevention Practices**. [Minn. R. 7090]
8.2	Before work begins, permittees must delineate the location of areas not to be disturbed. [Minn. R. 7090]
8.3	Permittees must minimize the need for disturbance of portions of the project with steep slopes. When steep slopes must be disturbed, permittees must use techniques such as phasing and stabilization practices designed for steep slopes (e.g., slope draining and terracing). [Minn. R. 7090]
8.4	Permittees must stabilize all exposed soil areas, including stockpiles. Stabilization must be initiated immediately to limit soil erosion when construction activity has permanently or temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days. Stabilization must be completed no later than 14 calendar days after the construction activity has ceased. Stabilization is not required on constructed base components of roads, parking lots and similar surfaces. Stabilization is not required on temporary stockpiles without significant silt, clay or organic components (e.g., clean aggregate stockpiles, demolition concrete stockpiles, sand stockpiles) but permittees must provide sediment controls at the base of the stockpile. [Minn. R. 7090]
8.5	For Public Waters that the Minnesota DNR has promulgated "work in water restrictions" during specified fish spawning time frames, permittees must complete stabilization of all exposed soil areas within 200 feet of the water's edge, and that drain to these waters, within 24 hours during the restriction period. [Minn. R. 7090]
8.6	Permittees must stabilize the normal wetted perimeter of the last 200 linear feet of temporary or permanent drainage ditches or swales that drain water from the site within 24 hours after connecting to a surface water or property edge. Permittees must complete stabilization of remaining portions of temporary or permanent ditches or swales within 14 calendar days after connecting to a surface water or property edge and construction in that portion of the ditch temporarily or permanently ceases. [Minn. R. 7090]
8.7	Temporary or permanent ditches or swales being used as a sediment containment system during construction (with properly designed rock-ditch checks, bio rolls, silt dikes, etc.) do not need to be stabilized. Permittees must stabilize these areas within 24 hours after their use as a sediment containment system ceases. [Minn. R. 7090]
8.8	Permittees must not use mulch, hydromulch, tackifier, polyacrylamide or similar erosion prevention practices within any portion of the normal wetted perimeter of a temporary or permanent drainage ditch or swale section with a continuous slope of greater than 2 percent. [Minn. R. 7090]
8.9	Permittees must provide temporary or permanent energy dissipation at all pipe outlets within 24 hours

	after connection to a surface water or permanent stormwater treatment system. [Minn. R. 7090]
8.10	Permittees must not disturb more land (i.e., phasing) than can be effectively inspected and maintained in accordance with Section 11. [Minn. R. 7090]
9.1	**Sediment Control Practices**. [Minn. R. 7090]
9.2	Permittees must establish sediment control BMPs on all downgradient perimeters of the site and downgradient areas of the site that drain to any surface water, including curb and gutter systems. Permittees must locate sediment control practices upgradient of any buffer zones. Permittees must install sediment control practices before any upgradient land-disturbing activities begin and must keep the sediment control practices in place until they establish permanent cover. [Minn. R. 7090]
9.3	If downgradient sediment controls are overloaded, based on frequent failure or excessive maintenance requirements, permittees must install additional upgradient sediment control practices or redundant BMPs to eliminate the overloading and amend the SWPPP to identify these additional practices as required in item 6.3. [Minn. R. 7090]
9.4	Temporary or permanent drainage ditches and sediment basins designed as part of a sediment containment system (e.g., ditches with rock-check dams) require sediment control practices only as appropriate for site conditions. [Minn. R. 7090]
9.5	A floating silt curtain placed in the water is not a sediment control BMP to satisfy item 9.2 except when working on a shoreline or below the waterline. Immediately after the short term construction activity (e.g., installation of rip rap along the shoreline) in that area is complete, permittees must install an upland perimeter control practice if exposed soils still drain to a surface water. [Minn. R. 7090]
9.6	Permittees must re-install all sediment control practices adjusted or removed to accommodate short-term activities such as clearing or grubbing, or passage of vehicles, immediately after the short-term activity is completed. Permittees must re-install sediment control practices before the next precipitation event even if the short-term activity is not complete. [Minn. R. 7090]
9.7	Permittees must protect all storm drain inlets using appropriate BMPs during construction until they establish permanent cover on all areas with potential for discharging to the inlet. [Minn. R. 7090]
9.8	Permittees may remove inlet protection for a particular inlet if a specific safety concern (e.g. street flooding/freezing) is identified by the permittees or the jurisdictional authority (e.g., city/county/township/Minnesota Department of Transportation engineer). Permittees must document the need for removal in the SWPPP. [Minn. R. 7090]
9.9	Permittees must provide silt fence or other effective sediment controls at the base of stockpiles on the downgradient perimeter. [Minn. R. 7090]
9.10	Permittees must locate stockpiles outside of natural buffers or surface waters, including stormwater conveyances such as curb and gutter systems unless there is a bypass in place for the stormwater. [Minn. R. 7090]
9.11	Permittees must install a vehicle tracking BMP to minimize the track out of sediment from the construction site or onto paved roads within the site. [Minn. R. 7090]
9.12	Permittees must use street sweeping if vehicle tracking BMPs are not adequate to prevent sediment tracking onto the street. [Minn. R. 7090]
9.13	Permittees must install temporary sediment basins as required in Section 14. [Minn. R. 7090]
9.14	In any areas of the site where final vegetative stabilization will occur, permittees must restrict vehicle and equipment use to minimize soil compaction. [Minn. R. 7090]
9.15	Permittees must preserve topsoil on the site, unless infeasible. [Minn. R. 7090]
9.16	Permittees must direct discharges from BMPs to vegetated areas unless infeasible. [Minn. R. 7090]
9.17	Permittees must preserve a 50 foot natural buffer or, if a buffer is infeasible on the site, provide redundant (double) perimeter sediment controls when a surface water is located within 50 feet of the project's earth disturbances and stormwater flows to the surface water. Permittees must install perimeter sediment controls at least 5 feet apart unless limited by lack of available space. Natural buffers are not required adjacent to road ditches, judicial ditches, county ditches, stormwater conveyance channels, storm drain inlets, and sediment basins. If preserving the buffer is infeasible, permittees must document the reasons in the SWPPP. Sheet piling is a redundant perimeter control if installed in a manner that retains all

	stormwater. [Minn. R. 7090]
9.18	Permittees must use polymers, flocculants, or other sedimentation treatment chemicals in accordance with accepted engineering practices, dosing specifications and sediment removal design specifications provided by the manufacturer or supplier. The permittees must use conventional erosion and sediment controls prior to chemical addition and must direct treated stormwater to a sediment control system for filtration or settlement of the floc prior to discharge. [Minn. R. 7090]
10.1	**Dewatering and Basin Draining**. [Minn. R. 7090]
10.2	Permittees must discharge turbid or sediment-laden waters related to dewatering or basin draining (e.g., pumped discharges, trench/ditch cuts for drainage) to a temporary or permanent sediment basin on the project site unless infeasible. Permittees may dewater to surface waters if they visually check to ensure adequate treatment has been obtained and nuisance conditions (see Minn. R. 7050.0210, subp. 2) will not result from the discharge. If permittees cannot discharge the water to a sedimentation basin prior to entering a surface water, permittees must treat it with appropriate BMPs such that the discharge does not adversely affect the surface water or downstream properties. [Minn. R. 7050.0210]
10.3	If permittees must discharge water containing oil or grease, they must use an oil-water separator or suitable filtration device (e.g., cartridge filters, absorbents pads) prior to discharge. [Minn. R. 7090]
10.4	Permittees must discharge all water from dewatering or basin-draining activities in a manner that does not cause erosion or scour in the immediate vicinity of discharge points or inundation of wetlands in the immediate vicinity of discharge points that causes significant adverse impact to the wetland. [Minn. R. 7090]
10.5	If permittees use filters with backwash water, they must haul the backwash water away for disposal, return the backwash water to the beginning of the treatment process, or incorporate the backwash water into the site in a manner that does not cause erosion. [Minn. R. 7090]
11.1	**Inspections and Maintenance**. [Minn. R. 7090]
11.2	Permittees must ensure a trained person, as identified in item 21.2.b, will inspect the entire construction site at least once every seven (7) days during active construction and within 24 hours after a rainfall event greater than 1/2 inch in 24 hours. [Minn. R. 7090]
11.3	Permittees must inspect and maintain all permanent stormwater treatment BMPs. [Minn. R. 7090]
11.4	Permittees must inspect all erosion prevention and sediment control BMPs and Pollution Prevention Management Measures to ensure integrity and effectiveness. Permittees must repair, replace or supplement all nonfunctional BMPs with functional BMPs by the end of the next business day after discovery unless another time frame is specified in item 11.5 or 11.6. Permittees may take additional time if field conditions prevent access to the area. [Minn. R. 7090]
11.5	During each inspection, permittees must inspect surface waters, including drainage ditches and conveyance systems but not curb and gutter systems, for evidence of erosion and sediment deposition. Permittees must remove all deltas and sediment deposited in surface waters, including drainage ways, catch basins, and other drainage systems and restabilize the areas where sediment removal results in exposed soil. Permittees must complete removal and stabilization within seven (7) calendar days of discovery unless precluded by legal, regulatory, or physical access constraints. Permittees must use all reasonable efforts to obtain access. If precluded, removal and stabilization must take place within seven (7) days of obtaining access. Permittees are responsible for contacting all local, regional, state and federal authorities and receiving any applicable permits, prior to conducting any work in surface waters. [Minn. R. 7090]
11.6	Permittees must inspect construction site vehicle exit locations, streets and curb and gutter systems within and adjacent to the project for sedimentation from erosion or tracked sediment from vehicles. Permittees must remove sediment from all paved surfaces within one (1) calendar day of discovery or, if applicable, within a shorter time to avoid a safety hazard to users of public streets. [Minn. R. 7090]
11.7	Permittees must repair, replace or supplement all perimeter control devices when they become nonfunctional or the sediment reaches 1/2 of the height of the device. [Minn. R. 7090]
11.8	Permittees must drain temporary and permanent sedimentation basins and remove the sediment when the depth of sediment collected in the basin reaches 1/2 the storage volume. [Minn. R. 7090]
11.9	Permittees must ensure that at least one individual present on the site (or available to the project site in

	three (3) calendar days) is trained in the job duties described in item 21.2.b. [Minn. R. 7090]
11.10	Permittees may adjust the inspection schedule described in item 11.2 as follows: a. inspections of areas with permanent cover can be reduced to once per month, even if construction activity continues on other portions of the site; or b. where sites have permanent cover on all exposed soil and no construction activity is occurring anywhere on the site, inspections can be reduced to once per month and, after 12 months, may be suspended completely until construction activity resumes. The MPCA may require inspections to resume if conditions warrant; or c. where construction activity has been suspended due to frozen ground conditions, inspections may be suspended. Inspections must resume within 24 hours of runoff occurring, or upon resuming construction, whichever comes first. [Minn. R. 7090]
11.11	Permittees must record all inspections and maintenance activities within 24 hours of being conducted and these records must be retained with the SWPPP. These records must include: a. date and time of inspections; and b. name of persons conducting inspections; and c. accurate findings of inspections, including the specific location where corrective actions are needed; and d. corrective actions taken (including dates, times, and party completing maintenance activities); and e. date of all rainfall events greater than 1/2 inches in 24 hours, and the amount of rainfall for each event. Permittees must obtain rainfall amounts by either a properly maintained rain gauge installed onsite, a weather station that is within one (1) mile of your location, or a weather reporting system that provides site specific rainfall data from radar summaries; and f. if permittees observe a discharge during the inspection, they must record and should photograph and describe the location of the discharge (i.e., color, odor, settled or suspended solids, oil sheen, and other obvious indicators of pollutants); and g. any amendments to the SWPPP proposed as a result of the inspection must be documented as required in Section 6 within seven (7) calendar days. [Minn. R. 7090]
12.1	**Pollution Prevention Management Measures**. [Minn. R. 7090]
12.2	Permittees must place building products and landscape materials under cover (e.g., plastic sheeting or temporary roofs) or protect them by similarly effective means designed to minimize contact with stormwater. Permittees are not required to cover or protect products which are either not a source of contamination to stormwater or are designed to be exposed to stormwater. [Minn. R. 7090]
12.3	Permittees must place pesticides, fertilizers and treatment chemicals under cover (e.g., plastic sheeting or temporary roofs) or protect them by similarly effective means designed to minimize contact with stormwater. [Minn. R. 7090]
12.4	Permittees must store hazardous materials and toxic waste, (including oil, diesel fuel, gasoline, hydraulic fluids, paint solvents, petroleum-based products, wood preservatives, additives, curing compounds, and acids) in sealed containers to prevent spills, leaks or other discharge. Storage and disposal of hazardous waste materials must be in compliance with Minn. R. ch. 7045 including secondary containment as applicable. [Minn. R. 7090]
12.5	Permittees must properly store, collect and dispose solid waste in compliance with Minn. R. ch. 7035. [Minn. R. 7035]
12.6	Permittees must position portable toilets so they are secure and will not tip or be knocked over. Permittees must properly dispose sanitary waste in accordance with Minn. R. ch. 7041. [Minn. R. 7041]
12.7	Permittees must take reasonable steps to prevent the discharge of spilled or leaked chemicals, including fuel, from any area where chemicals or fuel will be loaded or unloaded including the use of drip pans or absorbents unless infeasible. Permittees must ensure adequate supplies are available at all times to clean up discharged materials and that an appropriate disposal method is available for recovered spilled materials. Permittees must report and clean up spills immediately as required by Minn. Stat. 115.061, using dry clean up measures where possible. [Minn. Stat. 115.061]
12.8	Permittees must limit vehicle exterior washing and equipment to a defined area of the site. Permittees must contain runoff from the washing area in a sediment basin or other similarly effective controls and

	must dispose waste from the washing activity properly. Permittees must properly use and store soaps, detergents, or solvents. [Minn. R. 7090]
12.9	Permittees must provide effective containment for all liquid and solid wastes generated by washout operations (e.g., concrete, stucco, paint, form release oils, curing compounds and other construction materials) related to the construction activity. Permittees must prevent liquid and solid washout wastes from contacting the ground and must design the containment so it does not result in runoff from the washout operations or areas. Permittees must properly dispose liquid and solid wastes in compliance with MPCA rules. Permittees must install a sign indicating the location of the washout facility. [Minn. R. 7035, Minn. R. 7090]
13.1	**Permit Termination Conditions**. [Minn. R. 7090]
13.2	Permittees must complete all construction activity and must install permanent cover over all areas prior to submitting the NOT. Vegetative cover must consist of a uniform perennial vegetation with a density of 70 percent of its expected final growth. Vegetation is not required where the function of a specific area dictates no vegetation, such as impervious surfaces or the base of a sand filter. [Minn. R. 7090]
13.3	Permittees must clean the permanent stormwater treatment system of any accumulated sediment and must ensure the system meets all applicable requirements in Section 15 through 19 and is operating as designed. [Minn. R. 7090]
13.4	Permittees must remove all sediment from conveyance systems prior to submitting the NOT. [Minn. R. 7090]
13.5	Permittees must remove all temporary synthetic erosion prevention and sediment control BMPs prior to submitting the NOT. Permittees may leave BMPs designed to decompose on-site in place. [Minn. R. 7090]
13.6	For residential construction only, permit coverage terminates on individual lots if the structures are finished and temporary erosion prevention and downgradient perimeter control is complete, the residence sells to the homeowner, and the permittee distributes the MPCA's "Homeowner Fact Sheet" to the homeowner. [Minn. R. 7090]
13.7	For construction projects on agricultural land (e.g., pipelines across cropland), permittees must return the disturbed land to its preconstruction agricultural use prior to submitting the NOT. [Minn. R. 7090]
14.1	**Temporary Sediment Basins**. [Minn. R. 7090]
14.2	Where ten (10) or more acres of disturbed soil drain to a common location, permittees must provide a temporary sediment basin to provide treatment of the runoff before it leaves the construction site or enters surface waters. Permittees may convert a temporary sediment basin to a permanent basin after construction is complete. The temporary basin is no longer required when permanent cover has reduced the acreage of disturbed soil to less than ten (10) acres draining to a common location. [Minn. R. 7090]
14.3	The temporary basin must provide live storage for a calculated volume of runoff from a two (2)-year, 24-hour storm from each acre drained to the basin or 1,800 cubic feet of live storage per acre drained, whichever is greater. [Minn. R. 7090]
14.4	Where permittees have not calculated the two (2)-year, 24-hour storm runoff amount, the temporary basin must provide 3,600 cubic feet of live storage per acre of the basins' drainage area. [Minn. R. 7090]
14.5	Permittees must design basin outlets to prevent short-circuiting and the discharge of floating debris. [Minn. R. 7090]
14.6	Permittees must design the outlet structure to withdraw water from the surface to minimize the discharge of pollutants. Permittees may temporarily suspend the use of a surface withdrawal mechanism during frozen conditions. The basin must include a stabilized emergency overflow to prevent failure of pond integrity. [Minn. R. 7090]
14.7	Permittees must provide energy dissipation for the basin outlet within 24 hours after connection to a surface water. [Minn. R. 7090]
14.8	Permittees must locate temporary basins outside of surface waters and any buffer zone required in item 23.11. [Minn. R. 7090]
14.9	Permittees must construct the temporary basins prior to disturbing 10 or more acres of soil draining to a common location. [Minn. R. 7090]
14.10	Where a temporary sediment basin meeting the requirements of item 14.3 through 14.9 is infeasible,

	permittees must install effective sediment controls such as smaller sediment basins and/or sediment traps, silt fences, vegetative buffer strips or any appropriate combination of measures as dictated by individual site conditions. In determining whether installing a sediment basin is infeasible, permittees must consider public safety and may consider factors such as site soils, slope, and available area on-site. Permittees must document this determination of infeasibility in the SWPPP. [Minn. R. 7090]
15.1	**Permanent Stormwater Treatment System**. [Minn. R. 7090]
15.2	Permittees must design the project so all stormwater discharged from the project during and after construction activities does not cause a violation of state water quality standards, including nuisance conditions, erosion in receiving channels or on downslope properties, or a significant adverse impact to wetlands caused by inundation or decrease of flow. [Minn. R. 7090]
15.3	Permittees must design and construct a permanent stormwater treatment system to treat the water quality volume if the project's ultimate development replaces vegetation and/or other pervious surfaces creating a net increase of one (1) or more acres of cumulative impervious surface. [Minn. R. 7090]
15.4	Permittees must calculate the water quality volume as one (1) inch times the net increase of impervious surfaces created by the project. [Minn. R. 7090]
15.5	Permittees must first consider volume reduction practices on-site (e.g., infiltration or other) when designing the permanent stormwater treatment system. If this permit prohibits infiltration as described in item 16.14 through item 16.21, permittees may consider a wet sedimentation basin, filtration basin or regional pond. This permit does not consider wet sedimentation basins and filtration systems to be volume reduction practices. [Minn. R. 7090]
15.6	For projects where the full volume reduction requirement cannot be met on-site, (e.g., the site has infiltration prohibitions), permittees must document the reasons in the SWPPP. [Minn. R. 7090]
15.7	Permittees must discharge the water quality volume to a permanent stormwater treatment system prior to discharge to a surface water. For purposes of this item, surface waters do not include man-made drainage systems that convey stormwater to a permanent stormwater treatment system. [Minn. R. 7090]
15.8	Where the proximity to bedrock precludes the installation of any of the permanent stormwater treatment practices required by Sections 15 through 19, permittees must install other treatment such as grassed swales, smaller ponds, or grit chambers, prior to the discharge of stormwater to surface waters. [Minn. R. 7090]
15.9	For linear projects where permittees cannot treat the entire water quality volume within the existing right-of-way, permittees must make a reasonable attempt to obtain additional right-of-way, easement or other permission for stormwater treatment during the project planning process. Documentation of these attempts must be in the SWPPP. Permittees must still consider volume reduction practices first as described in item 15.5. If permittees cannot obtain additional right-of-way, easement or other permission, they must maximize the treatment of the water quality volume prior to discharge to surface waters. [Minn. R. 7090]
16.1	**Infiltration Systems**. [Minn. R. 7090]
16.2	Infiltration options include, but are not limited to: infiltration basins, infiltration trenches, rainwater gardens, bioretention areas without underdrains, swales with impermeable check dams, and natural depressions. If permittees utilize an infiltration system to meet the requirements of this permit, they must incorporate the design parameters in item 16.3 through item 16.21. Permittees must follow the infiltration prohibition in item 16.14 anytime an infiltration system is designed, including those not required by this permit. [Minn. R. 7090]
16.3	Permittees must design infiltration systems such that pre-existing hydrologic conditions of wetlands in the vicinity are not impacted (e.g., inundation or breaching a perched water table supporting a wetland). [Minn. R. 7090]
16.4	Permittees must not excavate infiltration systems to final grade, or within three (3) feet of final grade, until the contributing drainage area has been constructed and fully stabilized unless they provide rigorous erosion prevention and sediment controls (e.g., diversion berms) to keep sediment and runoff completely away from the infiltration area. [Minn. R. 7090]
16.5	When excavating an infiltration system to within three (3) feet of final grade, permittees must stake off and mark the area so heavy construction vehicles or equipment do not compact the soil in the infiltration

	area. [Minn. R. 7090]
16.6	Permittees must use a pretreatment device such as a vegetated filter strip, forebay, or water quality inlet (e.g., grit chamber) to remove solids, floating materials, and oil and grease from the runoff, to the maximum extent practicable, before the system routes stormwater to the infiltration system. [Minn. R. 7090]
16.7	Permittees must design infiltration systems to provide a water quality volume (calculated as an instantaneous volume) of one (1) inch of runoff, or one (1) inch minus the volume of stormwater treated by another system on the site, from the net increase of impervious surfaces created by the project. [Minn. R. 7090]
16.8	Permittees must design the infiltration system to discharge all stormwater (including stormwater in excess of the water quality volume) routed to the system through the uppermost soil surface or engineered media surface within 48 hours. Permittees must route additional flows that cannot infiltrate within 48 hours to bypass the system through a stabilized discharge point. [Minn. R. 7090]
16.9	Permittees must provide a means to visually verify the infiltration system is discharging through the soil surface or filter media surface within 48 hours or less. [Minn. R. 7090]
16.10	Permittees must provide at least one soil boring, test pit or infiltrometer test in the location of the infiltration practice for determining infiltration rates. [Minn. R. 7090]
16.11	For design purposes, permittees must divide field measured infiltration rates by 2 as a safety factor or permittees can use soil-boring results with the infiltration rate chart in the Minnesota Stormwater Manual to determine design infiltration rates. When soil borings indicate type A soils, permittees should perform field measurements to verify the rate is not above 8.3 inches per hour. This permit prohibits infiltration if the field measured infiltration rate is above 8.3 inches per hour. [Minn. R. 7090]
16.12	Permittees must employ appropriate on-site testing ensure a minimum of three (3) feet of separation from the seasonally saturated soils (or from bedrock) and the bottom of the proposed infiltration system. [Minn. R. 7090]
16.13	Permittees must design a maintenance access, typically eight (8) feet wide, for the infiltration system. [Minn. R. 7090]
16.14	This permit prohibits permittees from constructing infiltration systems that receive runoff from vehicle fueling and maintenance areas including construction of infiltration systems not required by this permit. [Minn. R. 7090]
16.15	This permit prohibits permittees from constructing infiltration systems where infiltrating stormwater may mobilize high levels of contaminants in soil or groundwater. Permittees must either complete the MPCA's contamination screening checklist or conduct their own assessment to determine the suitability for infiltration. Permittees must retain the checklist or assessment with the SWPPP. For more information and to access the MPCA's "contamination screening checklist" see the Minnesota Stormwater Manual. [Minn. R. 7090]
16.16	This permit prohibits permittees from constructing infiltration systems in areas where soil infiltration rates are field measured at more than 8.3 inches per hour unless they amend soils to slow the infiltration rate below 8.3 inches per hour. [Minn. R. 7090]
16.17	This permit prohibits permittees from constructing infiltration systems in areas with less than three (3) feet of separation distance from the bottom of the infiltration system to the elevation of the seasonally saturated soils or the top of bedrock. [Minn. R. 7090]
16.18	This permit prohibits permittees from constructing infiltration systems in areas of predominately Hydrologic Soil Group type D soils (clay). [Minn. R. 7090]
16.19	This permit prohibits permittees from constructing infiltration systems within a Drinking Water Supply Management Area (DWSMA) as defined in Minn. R. 4720.5100, subp. 13, if the system will be located: a. in an Emergency Response Area (ERA) within a DWSMA classified as having high or very high vulnerability as defined by the Minnesota Department of Health; or b. in an ERA within a DWSMA classified as moderate vulnerability unless a regulated MS4 Permittee performed or approved a higher level of engineering review sufficient to provide a functioning treatment

	system and to prevent adverse impacts to groundwater; or c. outside of an ERA within a DWSMA classified as having high or very high vulnerability, unless a regulated MS4 Permittee performed or approved a higher level of engineering review sufficient to provide a functioning treatment system and to prevent adverse impacts to groundwater. See "higher level of engineering review" in the Minnesota Stormwater Manual for more information. [Minn. R. 7090]
16.20	This permit prohibits permittees from constructing infiltration systems in areas within 1,000 feet upgradient or 100 feet downgradient of active karst features. [Minn. R. 7090]
16.21	This permit prohibits permittees from constructing infiltration systems in areas that receive runoff from the following industrial facilities not authorized to infiltrate stormwater under the NPDES stormwater permit for industrial activities: automobile salvage yards; scrap recycling and waste recycling facilities; hazardous waste treatment, storage, or disposal facilities; or air transportation facilities that conduct deicing activities. [Minn. R. 7090]
17.1	**Filtration Systems**. [Minn. R. 7090]
17.2	Filtration options include, but are not limited to: sand filters with underdrains, biofiltration areas, swales using underdrains with impermeable check dams and underground sand filters. If permittees utilize a filtration system to meet the permanent stormwater treatment requirements of this permit, they must comply with items 17.3 through 17.11. [Minn. R. 7090]
17.3	Permittees must not install filter media until they construct and fully stabilize the contributing drainage area unless they provide rigorous erosion prevention and sediment controls (e.g., diversion berms) to keep sediment and runoff completely away from the filtration area. [Minn. R. 7090]
17.4	Permittees must design filtration systems to remove at least 80 percent of TSS. [Minn. R. 7090]
17.5	Permittees must use a pretreatment device such as a vegetated filter strip, small sedimentation basin, water quality inlet, forebay or hydrodynamic separator to remove settleable solids, floating materials, and oils and grease from the runoff, to the maximum extent practicable, before runoff enters the filtration system. [Minn. R. 7090]
17.6	Permittees must design filtration systems to treat a water quality volume (calculated as an instantaneous volume) of one (1) inch of runoff, or one (1) inch minus the volume of stormwater treated by another system on the site, from the net increase of impervious surfaces created by the project. [Minn. R. 7090]
17.7	Permittees must design the filtration system to discharge all stormwater (including stormwater in excess of the water quality volume) routed to the system through the uppermost soil surface or engineered media surface within 48 hours. Additional flows that the system cannot filter within 48 hours must bypass the system or discharge through an emergency overflow. [Minn. R. 7090]
17.8	Permittees must design the filtration system to provide a means to visually verify the system is discharging through the soil surface or filter media within 48 hours. [Minn. R. 7090]
17.9	Permittees must employ appropriate on-site testing to ensure a minimum of three (3) feet of separation between the seasonally saturated soils (or from bedrock) and the bottom of the proposed filtration system. [Minn. R. 7090]
17.10	Permittees must ensure that filtration systems with less than three (3) feet of separation between seasonally saturated soils or from bedrock are constructed with an impermeable liner. [Minn. R. 7090]
17.11	The permittees must design a maintenance access, typically eight (8) feet wide, for the filtration system. [Minn. R. 7090]
18.1	**Wet Sedimentation Basin**. [Minn. R. 7090]
18.2	Permittees using a wet sedimentation basin to meet the permanent stormwater treatment requirements of this permit must incorporate the design parameters in item 18.3 through 18.10. [Minn. R. 7090]
18.3	Permittees must design the basin to have a permanent volume of 1,800 cubic feet of storage below the outlet pipe for each acre that drains to the basin. The basin's permanent volume must reach a minimum depth of at least three (3) feet and must have no depth greater than 10 feet. Permittees must configure the basin to minimize scour or resuspension of solids. [Minn. R. 7090]
18.4	Permittees must design the basin to provide live storage for a water quality volume (calculated as an

	instantaneous volume) of one (1) inch of runoff, or one (1) inch minus the volume of stormwater treated by another system on the site, from the net increase in impervious surfaces created by the project. [Minn. R. 7090]
18.5	Permittees must design basin outlets so the water quality volume discharges at no more than 5.66 cubic feet per second (cfs) per acre of surface area of the basin. [Minn. R. 7090]
18.6	Permittees must design basin outlets to prevent short-circuiting and the discharge of floating debris. Basin outlets must have energy dissipation. [Minn. R. 7090]
18.7	Permittees must design the basin to include a stabilized emergency overflow to accommodate storm events in excess of the basin's hydraulic design. [Minn. R. 7090]
18.8	Permittees must design a maintenance access, typically eight (8) feet wide, for the basin. [Minn. R. 7090]
18.9	Permittees must locate basins outside of surface waters and any buffer zone required in item 23.11. Permittees must design basins to avoid draining water from wetlands unless the impact to the wetland complies with the requirements of Section 22. [Minn. R. 7090]
18.10	Permittees must design basins using an impermeable liner if located within active karst terrain. [Minn. R. 7090]
19.1	**Regional Wet Sedimentation Basins**. [Minn. R. 7090]
19.2	When the entire water quality volume cannot be retained onsite, permittees can use or create regional wet sedimentation basins provided they are constructed basins, not a natural wetland or water body, (wetlands used as regional basins must be mitigated for, see Section 22). The owner must ensure the regional basin conforms to all requirements for a wet sedimentation basin as described in items 18.3 through 18.10 and must be large enough to account for the entire area that drains to the regional basin. Permittees must verify that the regional basin will discharge at no more than 5.66 cfs per acre of surface area of the basin and must provide a live storage volume of one inch times all the impervious area draining to the basin. Permittees cannot significantly degrade waterways between the project and the regional basin. The owner must obtain written authorization from the applicable LGU or private entity that owns and maintains the regional basin. [Minn. R. 7090]
20.1	**SWPPP Availability**. [Minn. R. 7090]
20.2	Permittees must keep the SWPPP, including all changes to it, and inspections and maintenance records at the site during normal working hours by permittees who have operational control of that portion of the site. [Minn. R. 7090]
21.1	**Training Requirements**. [Minn. R. 7090]
21.2	Permittees must ensure all of the following individuals receive training and the content and extent of the training is commensurate with the individual's job duties and responsibilities with regard to activities covered under this permit: a. Individuals preparing the SWPPP for the project. b. Individuals overseeing implementation of, revising and/or amending the SWPPP and individuals performing inspections for the project. One of these individuals must be available for an onsite inspection within 72 hours upon request by the MPCA. c. Individuals performing or supervising the installation, maintenance and repair of BMPs. [Minn. R. 7090]
21.3	Permittees must ensure individuals identified in Section 21 receive training from local, state, federal agencies, professional organizations, or other entities with expertise in erosion prevention, sediment control, permanent stormwater treatment and the Minnesota NPDES/SDS Construction Stormwater permit. Permittees must ensure these individuals attend a refresher-training course every three (3) years. [Minn. R. 7090]
22.1	**Requirements for Discharges to Wetlands**. [Minn. R. 7050.0186]
22.2	If the project has any discharges with the potential for significant adverse impacts to a wetland, (e.g., conversion of a natural wetland to a stormwater pond) permittees must demonstrate that the wetland mitigative sequence has been followed in accordance with items 22.3 or 22.4. [Minn. R. 7050.0186]
22.3	If the potential adverse impacts to a wetland on a specific project site are addressed by permits or other approvals from an official statewide program (U.S. Army Corps of Engineers 404 program, Minnesota

	Department of Natural Resources, or the State of Minnesota Wetland Conservation Act) that are issued specifically for the project and project site, permittees may use the permit or other determination issued by these agencies to show the potential adverse impacts are addressed. For purposes of this permit, deminimus actions are determinations by the permitting agency that address the project impacts, whereas a non-jurisdictional determination does not address project impacts. [Minn. R. 7090]
22.4	If there are impacts from the project not addressed in one of the permits or other determinations discussed in item 22.3 (e.g., permanent inundation or flooding of the wetland, significant degradation of water quality, excavation, filling, draining), permittees must minimize all adverse impacts to wetlands by utilizing appropriate measures. Permittees must use measures based on the nature of the wetland, its vegetative community types and the established hydrology. These measures include in order of preference: a. avoid all significant adverse impacts to wetlands from the project and post-project discharge; b. minimize any unavoidable impacts from the project and post-project discharge; c. provide compensatory mitigation when the permittees determine(s) that there is no reasonable and practicable alternative to having a significant adverse impact on a wetland. For compensatory mitigation, wetland restoration or creation must be of the same type, size and whenever reasonable and practicable in the same watershed as the impacted wetland. [Minn. R. 7050.0186]
23.1	**Additional Requirements for Discharges to Special (Prohibited, Restricted, Other) and Impaired Waters**. [Minn. R. 7090]
23.2	The BMPs identified for each special or impaired water are required for those areas of the project draining to a discharge point on the project that is within one mile (aerial radius measurement) of special or impaired water and flows to that special or impaired water. [Minn. R. 7090]
23.3	Discharges to the following special waters identified as Prohibited in Minn. R. 7050.0035 Subp. 3 must incorporate the BMPs outlined in items 23.9, 23.10, 23.11, 23.13 and 23.14: a. Boundary Waters Canoe Area Wilderness; Voyageurs National Park; Kettle River from the site of the former dam at Sandstone to its confluence with the Saint Croix River; Rum River from Ogechie Lake spillway to the northernmost confluence with Lake Onamia. b. Those portions of Lake Superior North of latitude 47 degrees, 57 minutes, 13 seconds, East of Hat Point, South of the Minnesota-Ontario boundary, and West of the Minnesota-Michigan boundary; c. Scientific and Natural Areas identified as in Minn. R. 7050.0335 Subp. 3: Boot Lake, Anoka County; Kettle River in sections 15, 22, 23, T 41 N, R 20, Pine County; Pennington Bog, Beltrami County; Purvis Lake-Ober Foundation, Saint Louis County; waters within the borders of Itasca Wilderness Sanctuary, Clearwater County; Wolsfeld Woods, Hennepin County; Green Water Lake, Becker County; Blackdog Preserve, Dakota County; Prairie Bush Clover, Jackson County; Black Lake Bog, Pine County; Pembina Trail Preserve, Polk County; and Falls Creek, Washington County. [Minn. R. 7050.0335, Subp. 3]
23.4	Discharges to the following special waters identified as Restricted must incorporate the BMPs outlined in items 23.9, 23.10 and 23.11: a. Lake Superior, except those portions identified as prohibited in item 23.3.b; b. Mississippi River in those portions from Lake Itasca to the southerly boundary of Morrison County that are included in the Mississippi Headwaters Board comprehensive plan dated February 12, 1981; c. Scenic or Recreational River Segments: Saint Croix River, entire length; Cannon River from northern city limits of Faribault to its confluence with the Mississippi River; North Fork of the Crow River from Lake Koronis outlet to the Meeker-Wright county line; Kettle River from north Pine County line to the site of the former dam at Sandstone; Minnesota River from Lac que Parle dam to Redwood County State Aid Highway 11; Mississippi River from County State Aid Highway 7 bridge in Saint Cloud to northwestern city limits of Anoka; and Rum River from State Highway 27 bridge in Onamia to Madison and Rice streets in Anoka; d. Lake Trout Lakes identified in Minn. R. 7050.0335 including lake trout lakes inside the boundaries of the Boundary Waters Canoe Area Wilderness and Voyageurs National Park; e. Calcareous Fens listed in Minn. R. 7050.0335, Subp. 1. [Minn. R. 7050.0335, Subp. 1]
23.5	Discharges to the Trout Lakes (other special water) identified in Minn. R. 6264.0050, subp. 2 must incorporate the BMPs outlined in items 23.9, 23.10 and 23.11. [Minn. R. 6264.0050, Subp. 2]

23.6	Discharges to the Trout Streams (other special water) listed in Minn. R. 6264.0050, subp. 4 must incorporate the BMPs outlined in items 23.9, 23.10, 23.11 and 23.12. [Minn. R. 6264.0050, Subp. 4]
23.7	Discharges to impaired waters or a water with an USEPA approved TMDL for any of the impairments listed in this item must incorporate the BMPs outlined in items 23.9 and 23.10. Impaired waters are waters identified as impaired under section 303 (d) of the federal Clean Water Act for phosphorus (nutrient eutrophication biological indicators), turbidity, TSS, dissolved oxygen or aquatic biota (fish bioassessment, aquatic plant bioassessment and aquatic macroinvertebrate bioassessment). Terms used for the pollutants or stressors in this item are subject to change. The MPCA will list terminology changes on its construction stormwater website. [Minn. R. 7090]
23.8	Where the additional BMPs in this Section conflict with requirements elsewhere in this permit, items 23.9 through 23.14 take precedence. [Minn. R. 7090]
23.9	Permittees must immediately initiate stabilization of exposed soil areas, as described in item 8.4, and complete the stabilization within seven (7) calendar days after the construction activity in that portion of the site temporarily or permanently ceases. [Minn. R. 7090]
23.10	Permittees must provide a temporary sediment basin as described in Section 14 for common drainage locations that serve an area with five (5) or more acres disturbed at one time. [Minn. R. 7090]
23.11	Permittees must include an undisturbed buffer zone of not less than 100 linear feet from a special water (not including tributaries) and must maintain this buffer zone at all times, both during construction and as a permanent feature post construction, except where a water crossing or other encroachment is necessary to complete the project. Permittees must fully document the circumstance and reasons the buffer encroachment is necessary in the SWPPP and include restoration activities. This permit allows replacement of existing impervious surface within the buffer. Permittees must minimize all potential water quality, scenic and other environmental impacts of these exceptions by the use of additional or redundant (double) BMPs and must document this in the SWPPP for the project. [Minn. R. 7090]
23.12	Permittees must design the permanent stormwater treatment system so the discharge from the project minimizes any increase in the temperature of trout streams resulting from the one (1) and two (2) year 24-hour precipitation events. This includes all tributaries of designated trout streams located within the same Public Land Survey System (PLSS) Section. Permittees must incorporate one or more of the following measures, in order of preference: a. Provide stormwater infiltration or other volume reduction practices as described in item 15.4 and 15.5, to reduce runoff. Infiltration systems must discharge all stormwater routed to the system within 24 hours. b. Provide stormwater filtration as described in Section 17. Filtration systems must discharge all stormwater routed to the system within 24 hours. c. Minimize the discharge from connected impervious surfaces by discharging to vegetated areas, or grass swales, and through the use of other non-structural controls. d. If ponding is used, the design must include an appropriate combination of measures such as shading, vegetated swale discharges or constructed wetland treatment cells that limit temperature increases. The pond must be designed as a dry pond and should draw down in 24 hours or less. e. Other methods that minimize any increase in the temperature of the trout stream. [Minn. R. 7090]
23.13	Permittees must conduct routine site inspections once every three (3) days as described in item 11.2 for projects that discharge to prohibited waters. [Minn. R. 7090]
23.14	If discharges to prohibited waters cannot provide volume reduction equal to one (1) inch times the net increase of impervious surfaces as required in item 15.4 and 15.5, permittees must develop a permanent stormwater treatment system design that will result in no net increase of TSS or phosphorus to the prohibited water. Permittees must keep the plan in the SWPPP for the project. [Minn. R. 7090]
24.1	**General Provisions**. [Minn. R. 7090]
24.2	If the MPCA determines that an individual permit would more appropriately regulate the construction activity, the MPCA may require an individual permit to continue the construction activity. Coverage under this general permit will remain in effect until the MPCA issues an individual permit. [Minn. R. 7001.0210, Subp. 6]
24.3	If the permittee cannot meet the terms and conditions of this general permit, an owner may request an individual permit, in accordance with Minn. R. 7001.0210 subp. 6. [Minn. R. 7001.0210, Subp. 6]

24.4	Any interested person may petition the MPCA to require an individual NPDES/SDS permit in accordance with 40 CFR 122.28(b)(3). [40 CFR 122.29(b)(3)]
24.5	Permittees must make the SWPPP, including all inspection reports, maintenance records, training records and other information required by this permit, available to federal, state, and local officials within three (3) days upon request for the duration of the permit and for three (3) years following the NOT. [Minn. R. 7090]
24.6	Permittees may not assign or transfer this permit except when the transfer occurs in accordance with the applicable requirements of item 3.7 and 3.8. [Minn. R. 7090]
24.7	Nothing in this permit must be construed to relieve the permittees from civil or criminal penalties for noncompliance with the terms and conditions provided herein. Nothing in this permit must be construed to preclude the initiation of any legal action or relieve the permittees from any responsibilities, liabilities, or penalties to which the permittees is/are or may be subject to under Section 311 of the Clean Water Act and Minn. Stat. Sect. 115 and 116, as amended. Permittees are not liable for permit requirements for activities occurring on those portions of a site where the permit has been transferred to another party as required in item 3.7 or the permittees have submitted the NOT as required in Section 4. [Minn. R. 7090]
24.8	The provisions of this permit are severable. If any provision of this permit or the application of any provision of this permit to any circumstances is held invalid, the application of such provision to other circumstances, and the remainder of this permit must not be affected thereby. [Minn. R. 7090]
24.9	The permittees must comply with the provisions of Minn. R. 7001.0150, subp. 3 and Minn. R. 7001.1090, subp. 1(A), 1(B), 1(C), 1(H), 1(I), 1(J), 1(K), and 1(L). [Minn. R. 7090]
24.10	The permittees must allow access as provided in 40 CFR 122.41(i) and Minn. Stat. Sect. 115.04. The permittees must allow representatives of the MPCA or any member, employee or agent thereof, when authorized by it, upon presentation of credentials, to enter upon any property, public or private, for the purpose of obtaining information or examination of records or conducting surveys or investigations. [40 CFR 122.41(i)]
24.11	For the purposes of Minn. R. 7090 and other documents that reference specific sections of this permit, "Stormwater Discharge Design Requirements" corresponds to Sections 5, 6 and 14 through 21; "Construction Activity Requirements" corresponds to Sections 7 through 13; and "Appendix A" corresponds to Sections 22 and 23. [Minn. R. 7090]
25.1	**Definitions**. [Minn. R. 7090]
25.2	"Active karst" means a terrain having distinctive landforms and hydrology created primarily from the dissolution of soluble rocks within 50 feet of the land surface. [Minn. R. 7090]
25.3	"Aerial radius measurement" means the shortest straight line distance measurement between the point of stormwater discharge from a project construction site to the nearest edge of the water body receiving the stormwater. This measurement does not follow the meander flow path. [Minn. R. 7090]
25.4	"Best Management Practices (BMPs)" means the most effective and practicable means of erosion prevention and sediment control, and water quality management practices that are the most effective and practicable means of to control, prevent, and minimize degradation of surface water, including avoidance of impacts, construction-phasing, minimizing the length of time soil areas are exposed, prohibitions, pollution prevention through good housekeeping, and other management practices published by state or designated area-wide planning agencies. [Minn. R. 7090]
25.5	"Common Plan of Development or Sale" means one proposed plan for a contiguous area where multiple separate and distinct land-disturbing activities may be taking place at different times, on different schedules, but under one proposed plan. One plan is broadly defined to include design, permit application, advertisement or physical demarcation indicating that land-disturbing activities may occur. [Minn. R. 7090]
25.6	"Construction Activity" means activities including clearing, grading, and excavating, that result in land disturbance of equal to or greater than one acre, including the disturbance of less than one acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than one acre. This includes a disturbance to the land that results in a change in the topography, existing soil cover, both vegetative and nonvegetative, or the existing soil topography that may result in accelerated stormwater runoff that may lead to soil erosion and movement of sediment. Construction activity does not include a disturbance to the land of less than five acres for the

	purpose of routine maintenance performed to maintain the original line and grade, hydraulic capacity, and original purpose of the facility. Routine maintenance does not include activities such as repairs, replacement and other types of non-routine maintenance. Pavement rehabilitation that does not disturb the underlying soils (e.g., mill and overlay projects) is not construction activity. [Minn. R. 7090]
25.7	"Dewatering" means the removal of surface or ground water to dry and/or solidify a construction site to enable construction activity. Dewatering may require a Minnesota Department of Natural Resources water appropriation permit and, if dewatering water is contaminated, discharge of such water may require an individual MPCA NPDES/SDS permit. [Minn. R. 7090]
25.8	"Energy Dissipation" means methods employed at pipe outlets to prevent erosion caused by the rapid discharge of water scouring soils. [Minn. R. 7090]
25.9	"Erosion Prevention" means measures employed to prevent erosion such as soil stabilization practices, permanent cover or construction phasing. [Minn. R. 7090]
25.10	"General Contractor" means the party who signs the construction contract with the owner to construct the entire project described in the final plans and specifications. Where the construction project involves more than one contractor, the general contractor is the party responsible for managing the entire project on behalf of the owner. In some cases, the owner is the general contractor. In these cases, the owner signs the permit application as the operator and becomes the sole permittee. [Minn. R. 7090]
25.11	"Groundwater" means the water contained below the surface of the earth in the saturated zone including, without limitation, all waters whether under confined, unconfined, or perched conditions, in near surface unconsolidated sediment or regolith, or in rock formations deeper underground. [Minn. R. 7060]
25.12	"Homeowner Fact Sheet" means an MPCA fact sheet available on the MPCA Construction Stormwater website for permittees to give to homeowners at the time of sale. [Minn. R. 7090]
25.13	"Infeasible" means not technologically possible or not economically practicable and achievable in light of the best industry practices. [Minn. R. 7090]
25.14	"Initiated immediately" means taking an action to commence soil stabilization as soon as practicable, but no later than the end of the work day, following the day when the land-disturbing activities temporarily or permanently cease, if the permittees know that construction work on that portion of the site will be temporarily ceased for 14 or more additional calendar days or 7 calendar days where item 23.9 applies. Permittees can initiate stabilization by: a. prepping the soil for vegetative or non-vegetative stabilization; or b. applying mulch or other non-vegetative product to the exposed soil area; or c. seeding or planting the exposed area; or d. starting any of the activities in a - c on a portion of the area to be stabilized, but not on the entire area; or e. finalizing arrangements to have stabilization product fully installed in compliance with the applicable deadline for completing stabilization. [Minn. R. 7090]
25.15	"Impervious Surface" means a constructed hard surface that either prevents or retards the entry of water into the soil and causes water to run off the surface in greater quantities and at an increased rate of flow than prior to development. Examples include rooftops, sidewalks, driveways, parking lots, and concrete, asphalt, or gravel roads. Bridges over surface waters are considered impervious surfaces. [Minn. R. 7090]
25.16	"National Pollutant Discharge Elimination System (NPDES)" means the program for issuing, modifying, revoking, reissuing, terminating, monitoring, and enforcing permits under the Clean Water Act, as amended (33 U.S.C. 1251 et seq. Section 1342 and 40 CFR parts 122, 123, 124 and 450). [Minn. R. 7090]
25.17	"Natural Buffer" means an area of undisturbed cover surrounding surface waters within which construction activities are restricted. Natural buffer includes the vegetation, exposed rock, or barren ground that exists prior to commencement of earth-disturbing activities. [Minn. R. 7090]
25.18	"Normal Wetted Perimeter" means the area of a conveyance, such as a ditch or channel, that is in contact with water during flow events that are expected to occur from a two-year, 24-hour storm event. [Minn. R. 7090]
25.19	"Notice of Termination (NOT)" means the form (electronic or paper) required for terminating coverage under the Construction General permit. [Minn. R. 7090]

25.20	"Operator" means the person (usually the general contractor), firm, governmental agency, or other entity designated by the owner who has day to day operational control and/or the ability to modify project plans and specifications related to the SWPPP. The permit application must list the operator as a permittee. Subcontractors hired by and under supervision of the general contractor are not operators. [Minn. R. 7090]
25.21	"Owner" means the person, firm, governmental agency, or other entity possessing the title of the land on which the construction activities will occur or, if the construction activity is for a lease, easement, or mineral rights license holder, the party or individual identified as the lease, easement or mineral rights license holder; or the contracting government agency responsible for the construction activity. [Minn. R. 7090]
25.22	"Permanent Cover" means surface types that will prevent soil failure under erosive conditions. Examples include: gravel, concrete, perennial cover, or other landscaped material that will permanently arrest soil erosion. Permittees must establish a uniform perennial vegetative cover (i.e., evenly distributed, without large bare areas) with a density of 70 percent of the native background vegetative cover on all areas not covered by permanent structures, or equivalent permanent stabilization measures. Permanent cover does not include temporary BMPs such as wood fiber blanket, mulch, and rolled erosion control products. [Minn. R. 7090]
25.23	"Permittees" means the persons, firm, governmental agency, or other entity identified as the owner and operator on the application submitted to the MPCA and are responsible for compliance with the terms and conditions of this permit. [Minn. R. 7090]
25.24	"Project(s)" means all construction activity planned and/or conducted under a particular permit. The project occurs on the site or sites described in the permit application, the SWPPP and in the associated plans, specifications and contract documents. [Minn. R. 7090]
25.25	"Public Waters" means all water basins and watercourses described in Minn. Stat. Sect. 103G.005 subp. 15. [Minn. R. 7090]
25.26	"Redoximorphic Features" means a color pattern in soil, formed by oxidation and reduction process of iron and/or manganese in seasonally saturated soil. [Minn. R. 7090]
25.27	"Section" includes all item numbers of the same whole number. For example, "Section 3" of the permit refers to items 3.1 through 3.8. [Minn. R. 7090]
25.28	"Seasonally Saturated Soil" means the highest seasonal elevation in the soil in a reduced chemical state because of soil voids filled with water causing anaerobic conditions. Seasonally saturated soil is evidenced by the presence of redoximorphic features or other information determined by scientifically established methods or empirical field measurements. [Minn. R. 7090]
25.29	"Sediment Control" means methods employed to prevent suspended sediment in stormwater from leaving the site (e.g. silt fences, compost logs and storm drain inlet protection). [Minn. R. 7090]
25.30	"Stabilize", "Stabilized", "Stabilization" means the exposed ground surface has been covered by appropriate materials such as mulch, staked sod, riprap, erosion control blanket, mats or other material that prevents erosion from occurring. Grass seeding, agricultural crop seeding or other seeding alone is not stabilization. Mulch materials must achieve approximately 90 percent ground coverage (typically 2 ton/acre). [Minn. R. 7090]
25.31	"Stormwater" means precipitation runoff, stormwater runoff, snowmelt runoff, and any other surface runoff and drainage. [Minn. R. 7090]
25.32	"Steep Slopes" means slopes that are 1:3 (V:H) (33.3 percent) or steeper in grade. [Minn. R. 7090]
25.33	"Storm Water Pollution Prevention Plan (SWPPP)" means a plan for stormwater discharge that includes all required content under in Section 5 that describes the erosion prevention, sediment control and waste control BMPs and permanent stormwater treatment systems. [Minn. R. 7090]
25.34	"Surface Water or Waters" means all streams, lakes, ponds, marshes, wetlands, reservoirs, springs, rivers, drainage systems, waterways, watercourses, and irrigation systems whether natural or artificial, public or private, except that surface waters do not include stormwater treatment systems constructed from upland. This permit does not consider stormwater treatment systems constructed in wetlands and mitigated in accordance with Section 22 as surface waters. [Minn. R. 7090]
25.35	"Waters of the State" (as defined in Minn. Stat. Sect. 115.01, subp. 22) means all streams, lakes, ponds,

	marshes, watercourses, waterways, wells, springs, reservoirs, aquifers, irrigation systems, drainage systems and all other bodies or accumulations of water, surface or underground, natural or artificial, public or private, which are contained within, flow through, or border upon the state or any portion thereof. [Minn. Stat. 115.01, Subp. 22]
25.36	"Water Quality Volume" means one (1) inch of runoff from the net increase in impervious surfaces created by the project (calculated as an instantaneous volume). [Minn. R. 7090]
25.37	"Wetlands" (as defined in Minn. R. 7050.0186, subp. 1a.B.) means those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Constructed wetlands designed for wastewater treatment are not waters of the state. Wetlands must have the following attributes: a. a predominance of hydric soils; and b. inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support a prevalence of hydrophytic vegetation typically adapted for life in a saturated soil condition; and c. under normal circumstances support a prevalence of such vegetation. [Minn. R. 7050.0186, Subp. 1a.B]