



National Park Service
U.S. Department of the Interior

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Grand Portage National Monument
Grand Portage, Minnesota

Mile Creek Road Realignment and Bridge Construction

Environmental Assessment
February 2023



Executive Summary

Cook County, Minnesota and the Grand Portage Band (the Band) of Lake Superior Chippewa (Ojibwe), in partnership with Grand Portage National Monument (the park), propose to realign a segment of Mile Creek Road / County State Aid Highway 17 (CSAH 17) and construct a new bridge across Grand Portage Creek. The purpose of this project is to reduce the hazard caused by a blind curve, eliminate traffic and plowing impacts on an existing historic bridge, and increase pedestrian access.

This Environmental Assessment (EA) has been prepared in compliance with the National Environmental Policy Act (NEPA) to provide a decision-making framework as follows: 1) Assess a reasonable range of alternatives to meet the purpose of the proposed action; 2) Evaluate potential issues and impacts to the natural and cultural resources of the park; and 3) Identify required mitigation measures to lessen the degree or extent of any potential adverse environmental impacts.

The EA evaluates two alternatives, Alternative A: No Action, and Alternative B: County Road 17 Re-Route (Preferred Alternative). Under Alternative A, the road would not be realigned. Under Alternative B, an existing blind curve would be removed, a portion of the original asphalt would be left in place as a walking path, and the road would be re-routed across a new bridge. The alternatives are described in detail in Chapter 2.

This EA identifies the categories of resources, or Impact Topics, found within the project area that are most likely to be affected by the actions described in each alternative. These topics have undergone a detailed analysis by agency staff to determine the most likely effects on the resources, and the mitigations required to avoid resource damage. The Impact Topics are identified in section 1.5 of this document and in Table 1. The preferred alternative, Alternative B, would result in no significant impacts to resources of the park.

Public Comment

This EA will be available for public review for 30 days. The National Park Service (NPS) Planning, Environment and Public Comment (PEPC) site provides access to current plans and related documents that are available for public review. If you wish to comment on this EA, you may post comments online at <http://parkplanning.nps.gov/MileCreekRd> or mail comments by March 4, 2023 to:

Superintendent
Grand Portage National Monument
170 Mile Creek Road
PO Box 426
Grand Portage, MN 55605

Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

ON THE COVER

Historic stone bridge on Mile Creek Road at Grand Portage National Monument. NPS Photo.

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CHAPTER 1: INTRODUCTION

1.1 Background

Congress created Grand Portage National Monument (the park) on October 2, 1958 “for the purpose of preserving an area containing unique historical values” (72 Stat. 1751). The park’s primary resource is the Grand Portage Trail, an 8.5-mile canoe portage that was a critical link in a trade network established by indigenous peoples thousands of years prior to European contact. European explorers and fur traders reused the route from the early 1700s to mid-1800s to shuttle personnel, equipment, furs, and trade goods between Lake Superior and the vast interior of the North American continent.

Although the park has focused primarily on the fur trade since its inception, more attention has been paid in recent years to post-fur-trade occupancy and use of the site. Approximately 150 Ojibwe families lived near the trading post when the British arrived in the 1760s, and Ojibwe continued to live in the area following the decline of the fur trade in the early 1800s. In 1854, the local tribes ceded their lands in exchange for several reservations (including the Grand Portage Reservation), annuities for a 20-year term, and usufructuary rights, among other provisions (Kappler 1904).

The park’s enabling legislation emphasized ancestral ties to the area and pledged economic and partnership opportunities for the Band, but few such prospects arose in the following decades. The commitment to the Band was renewed in 1999 through establishment of a cooperative maintenance agreement and an Annual Funding Agreement, and the park is now cooperatively managed by the Band and the NPS. It encompasses 710 acres at the northeastern tip of Minnesota on the shore of Lake Superior, within the Grand Portage Indian Reservation (Figure 1).

The Band and park share a common interest in providing safe road access to community members and park visitors, while protecting resources. CSAH 17 is a main road through the Grand Portage Reservation, and provides connections to key locations throughout the community and park.

1.2 Purpose and Need for Action

The purpose of this project is to reduce the hazard caused by a blind curve on CSAH 17, eliminate safety, traffic and plowing impacts on an existing historic bridge, and increase pedestrian access. The project is needed to improve safety and protect park resources.

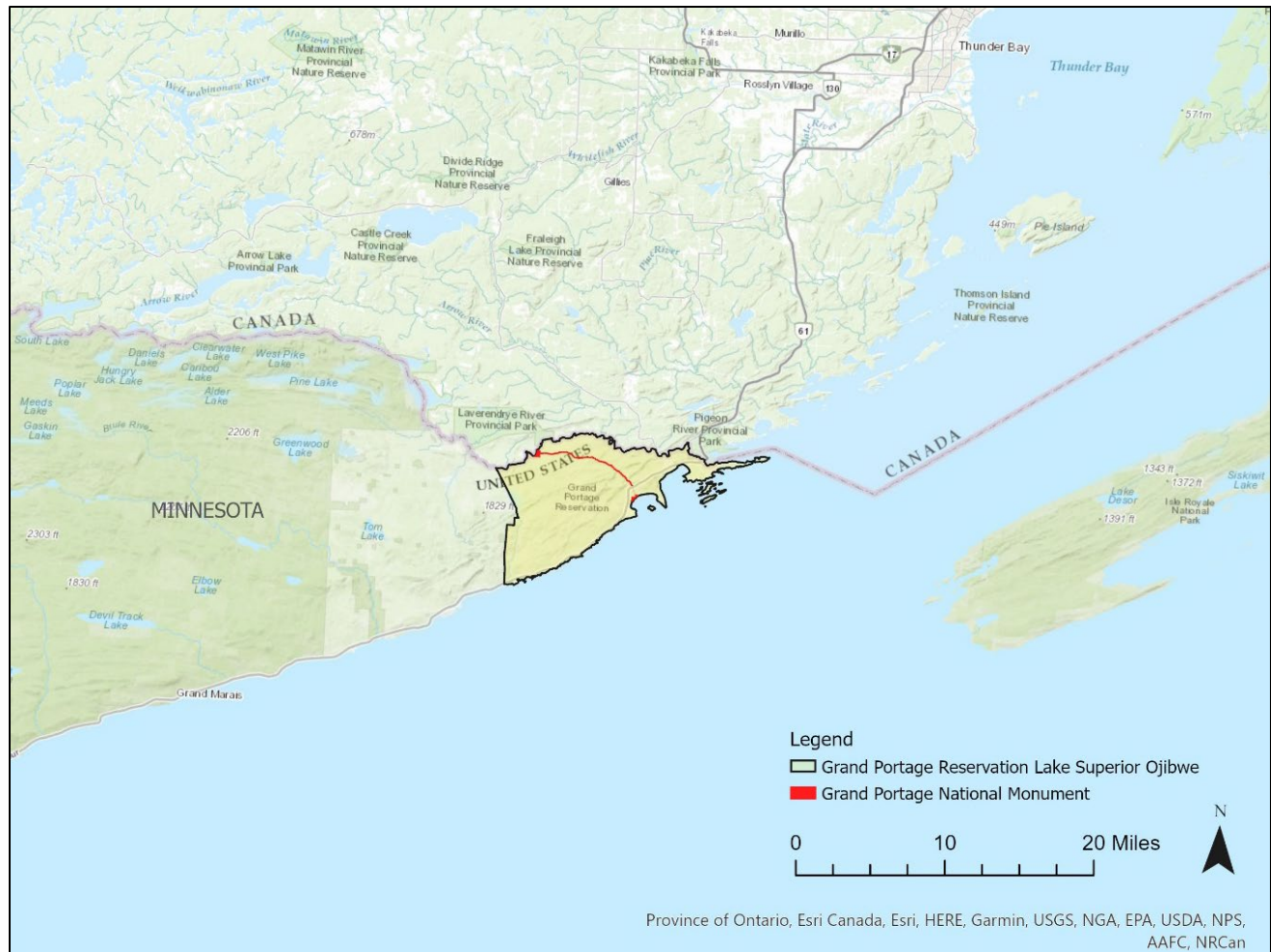


Figure 1. Grand Portage National Monument and Grand Portage Indian Reservation.

1.3 Relationship to Existing Plans and Programs

Current plans and policies related to management of park resources are consistent with the activities outlined in this document, including:

1.3.1 General Management Plan (2003)

This document specifies resource conditions and visitor experiences to be achieved in the park and provides the basic foundation for management decisions. The GMP guides the management, development, and interpretation of the park over a 20+ year period.

1.3.2 Foundation Document (2016)

This document describes the park's purpose, significance, fundamental resources and values, other important resources and values, and interpretive themes. It also includes special mandates and administrative commitments, an assessment of planning and data needs that identifies planning issues,

planning products to be developed, and the associated studies and data required for park planning.

1.3.3 Cultural Landscape Report (2009)

This document assesses and seeks to enhance the integrity of the park's historic landscape. It documents the degree to which vegetation communities have changed since the eighteenth century and devises treatment and management recommendations that would support restoration of conditions present during the fur trade period. In addition to documenting general site conditions and plant communities, the Cultural Landscape Report (CLR) considers the role that vegetation has played in the cultural history of the Grand Portage landscape and the ways that different management strategies may affect its character in the future.

1.4 Impact Topics

Impact topics are the resources or issues of concern that could be impacted by the range of alternatives. NPS specialists used federal laws, regulations, and management policies to identify the impact topics retained for further analysis. Identification of impact topics facilitates the analysis of environmental consequences and allows for a standard comparison between alternatives based on the most relevant information.

Issues related to cultural resources, human health and safety, and water resources are analyzed in detail in this EA. This analysis is found in Chapter 3, Affected Environment and Environmental Consequences.

Issues related to air quality, environmental justice, Indian trust resources, land use, socioeconomics, soils, soundscapes, special status species, vegetation, visitor use and experience, and wildlife have been dismissed from detailed analysis because they are not central to the proposal or do not assist with making a reasoned choice between alternatives.

Table 1 below summarizes which topics were retained or dismissed and includes the rationale for dismissal.

Table 1. Impact Topics Retained or Dismissed

Impact Topic	Retain	Dismiss	Rationale for Dismissal
Air Quality		X	Diesel equipment would be used during construction. Air quality in the immediate vicinity may be slightly affected by dust generated from disturbing soils as well as the exhaust from diesel engines. These impacts would be limited to the duration of construction activities and would be unlikely to affect local or regional air quality. Air quality was therefore dismissed from further analysis in this EA.

Impact Topic	Retain	Dismiss	Rationale for Dismissal
Cultural Resources	X		
Environmental Justice		X	Federal agencies are required to identify and address any disproportionately high and adverse human health and environmental effects their actions may have on minority and low-income populations. Neither alternative would have disproportionate effects on minority or low-income populations.
Human Health and Safety	X		
Indian Trust Resources		X	The park is located within the Grand Portage Reservation, and establishment of the park was predicated on the relinquishment of title to trust lands held by the U.S. for the Minnesota Chippewa Tribe and Grand Portage Band of Chippewa Indians (72 Stat. 1751). The NPS and the Band co-manage the park. The project to re-route CSAH 17 is a proposal by the Band to work in partnerships with Cook County and the NPS. Connections between various parts of the Grand Portage community via CSAH 17 would be maintained throughout project implementation under Alternative B, and Indian Trust Resources would not be impacted by either alternative.
Land Use		X	Alternative B would require a Highway Easement Deed (HED), which would be issued upon completion of the EA process. The existing easement (which includes the current road and bridge) would be rescinded, and management of the land would revert back to the park and Band. The project would also require a Clean Water Act Section 404 permit issued by the U.S. Army Corp of Engineers (USACE) and a land use permit from the Grand Portage Band for construction of the new bridge. These permits would be issued following completion of the EA. Issuance of the HED and permits are administrative actions, which are not central to the proposal and do not assist in making the choice between alternatives. Therefore, land use is dismissed from further analysis.
Socioeconomics		X	The proposed action would have minor beneficial impacts on local employment opportunities, and some beneficial impacts to the local economy. These effects would be temporary, during construction activities. Therefore, socioeconomics has been dismissed from further analysis.
Soils		X	The Grand Portage area consist primarily of clayey materials, deposited as glacial ice was subsiding, roughly 10,000 years ago. Soils are sandy to loamy, and shallow to bedrock. Construction would disturb approximately 3.60 acres of soils in the project area. Revegetation would include importation of top soil from local sources within the Grand Portage Reservation. Stipulations and mitigations outlined under Alternative B would be implemented to minimize impacts to soils (see Chapter 2 and Appendix A).
Soundscape		X	Diesel equipment would be used during construction. The soundscape in the immediate vicinity may be affected by noise generated during construction activities, however these impacts are anticipated to be site-specific and limited to the duration of construction activities. Therefore, soundscapes have been dismissed from further analysis.
Special Status Species		X	Four wildlife species listed under the Endangered Species Act could occur in the project area: Canada lynx (<i>Lynx canadensis</i> –threatened), gray wolf (<i>Canis lupus</i> - threatened), piping plover (<i>Charadus melodus</i> - endangered), and northern long-eared bat (<i>Myotis septentrionalis</i> – endangered listing to be effective 3/31/2023). The park consulted with U.S. Fish and Wildlife Service (USFWS) regarding the northern long eared bat in 2021. At the time, the species was listed as threatened, and the proposed road realignment project was determined to

Impact Topic	Retain	Dismiss	Rationale for Dismissal
			be consistent with the Northern Long Eared Bat Programmatic Biological Opinion (USFWS 2016). The species will be reclassified as endangered effective March 31, 2023. Consultation will be reinitiated once USFWS's new consultation tools are made available (see Chapter 4). The project would occur in a developed area near several residences, where no Canada lynx or gray wolf are present. The project would have no effect on the Canada lynx or gray wolf, or on designated gray wolf critical habitat. The project would also have no effect on the piping plover, which does not occur in the project area but are occasionally seen on the Lake Superior shoreline. The coaster brook trout (<i>Salvelinus fontinalis</i>) is a special-status species protected by the Band. The proposed bridge design would not impact water flow in Grand Portage Creek and would have no effect on the coaster brook trout. The bald eagle (<i>Haliaeetus leucocephalus</i>) and golden eagle (<i>Aquila chrysaetos</i>) are protected under the Bald and Golden Eagle Protection Act, and several migratory bird species are protected under the Migratory Bird Treaty Act. Although eagles and migratory birds could occasionally occur in the project area, there are no known nests or potential nesting trees in the vicinity of the proposed road realignment or new bridge. The stipulations and mitigations outlined in Chapter 2 would ensure protection of these species. No federally listed plant species occur in the project area. The stipulations and mitigations outlined in Chapter 2 and Appendix A would ensure protection of rare plant species such as black fruited hawthorn (<i>Crataegus douglasii</i>).
Vegetation (Non-Special Status Species)		X	Under Alternative B, native vegetation in the project area would be disturbed or removed during construction. A revegetation plan has been developed (Appendix A), and native seed or nursery grown plants would be used to re-establish native vegetation. Impacts to vegetation are expected to be site-specific and mitigated, and vegetation has been dismissed from further analysis in the EA. Impacts to vegetation communities identified as integral to the cultural landscape are described under the Cultural Resources impact topic. Potential impacts to Cultural Resources are discussed in Chapter 3.
Visitor Use and Experience		X	During construction there may be short term impacts to visitor experience. The re-route project would have beneficial impacts on visitor use and experience by increasing safety and providing improved pedestrian access. These effects are analyzed in Chapter 3, under Human Health and Safety.
Water Resources	X		
Wildlife (Non-Special Status Species)		X	Negligible impacts to wildlife species are anticipated during construction, due to noise and increased human activity. These impacts are anticipated to be of limited duration and intensity. The bridge design would not result in impacts to Grand Portage Creek (flow or geomorphology), and impacts to aquatic species are not anticipated. Therefore, wildlife has been dismissed from further analysis in the EA.

CHAPTER 2: ALTERNATIVES

Two alternatives were considered and are carried forward for analysis in this EA: the no action alternative and an action alternative. A no action alternative is required by the National Environmental Policy Act (NEPA) as a baseline to compare proposed action alternatives. The action alternative presents a reasonable and feasible approach that meets the purpose and need for action. This section also identifies the NPS preferred alternative.

2.1 Alternative A: No Action

The no action alternative would retain the existing alignment of Mile Creek Road / CSAH 17, including the portion that crosses Grand Portage Creek via the historic stone bridge and a 90-degree blind curve. Snow plows would continue to remove snow from the historic bridge in the winter months. Repairs would continue to be made by the NPS as needed to preserve the stone bridge.

2.2 Alternative B: Road Realignment (Preferred Alternative)

Under Alternative B, Mile Creek Road / CSAH 17 would be realigned to remove a blind, 90-degree turn and eliminate vehicular traffic across the historic stone bridge. The proposed realignment would require construction of a straight segment running from the T-intersection of Mile Creek Road and Store Road, roughly north-northeast, which would connect with Mile Creek Road at the park's decommissioned maintenance shop (Figure 2).

The realignment would consist of an approximately 70-foot-wide raised roadbed that would cross Grand Portage Creek at a point approximately 200 feet north, or upstream, of the existing stone bridge. Where the new alignment crosses the creek, a new 32-foot-wide by 56-foot-long wooden bridge would be constructed (Figure 3). The bridge would be built with three spans; two 18-foot spans on the north and south sides of the creek, and one 20-foot span in the center. Two piers would be placed in the floodplain above the ordinary high water mark, to a depth of 3 feet below the channel bottom. All construction would occur above the ordinary high-water mark.

A corridor would be cleared and brushed prior to construction. Clearing would include approximately 48 individual black fruited hawthorn shrubs and other shrub species (such as willow). Approximately 40 mature jack pine and approximately 0.2 acres of young balsam would be removed in the area where the realignment would connect with Mile Creek Road at the far eastern end. Approximately 10 red pine would be cleared from the upland area where the proposed realignment meets the junction of Store Road and Mile Creek Road.

The existing road between the Mile Creek Road / Store Road intersection and picnic area parking would be closed to all vehicular traffic and would be converted to a 10-foot-wide trail that would provide pedestrian access across the historic bridge.

2.2.1 Stipulations and Mitigations

Archeology

- In 2022, a systematic archeological survey of the project area was completed by the park archeologist, who meets the Secretary of Interior's Standards for Archeology and Historic Preservation (Clayton 2022). One area was documented during this survey that could contain archeological deposits, and it would not be disturbed during construction. In consultation with the Band, it was determined that this location would instead be covered over (encapsulated) by the new road prism.
- Archeological monitoring would occur during any ground-disturbing construction activities. Monitoring would be completed by qualified archeologists meeting the Secretary of Interior's Standards, including the park archeologist, the Band's archeological technician, and the Band's Tribal Historic Preservation Officer (THPO).
- Any cultural resources discovered during monitoring would be evaluated for their eligibility for listing in the National Register of Historic Places (NRHP). Procedures would follow those outlined in 36 CFR 800, Protection of Historic Properties. If significant finds are uncovered, the project design would be modified (if feasible), to avoid sensitive resources.
- If significant archeological resources are discovered that cannot feasibly be avoided, systematic data recovery would occur, in collaboration with the Band.
- The construction contract and on-site crew orientation would include the need to protect any cultural resources encountered and the prohibition of artifact collection on federal lands.
- It is not anticipated that human remains would be encountered; however, in advance of ground-disturbing activities, instructions would be given to construction personnel regarding respectful treatment of human remains and notification of the appropriate personnel in the event such remains are discovered. In the case of any inadvertent discoveries, proper notification and reporting processes would be followed in compliance with the Native American Graves Protection and Repatriation Act (NAGPRA, 43 CFR 10.4).
- To minimize ground disturbance, all staging areas, materials stockpiling, parking, and vehicle storage would be limited to previously disturbed areas or located on hardened surfaces to the extent possible. Impacts to undisturbed areas would be minimized with ground protection matting.

Natural Resources

- To protect the northern long eared bat, USFWS conservation measures would be followed for all tree clearing activities (see Chapter 4).
- To protect migratory birds, all tree removal will occur prior to the migratory bird breeding season (mid-May to mid-August).
- Stumps would preferably be flush cut; however, if construction specifications require removal of root wads, a stump grinder would be used to minimize ground

disturbance.

- Stormwater mitigation measures would be implemented to prevent sedimentation and minimize disturbance to special status flora habitat.
- Revegetation of all disturbed areas will occur in accordance with the revegetation plan in Appendix A, using native seed or mature transplants.
- A black fruited hawthorn inventory was conducted to document the number and location of these plants in the project area and determine their suitability for transplanting. No individuals young enough to be transplanted were found (B. Seitz, personal communication, December 12, 2022). Live, nursery grown plants will be installed post-construction in suitable habitat. Care will be taken to ensure the population is stable and the plants can continue to regenerate (see Revegetation Plan, Appendix A).
- All imported material including topsoil, gabions, rivet mattresses, or rip rap will be weed free.
- Erosion control blankets will be installed on all slopes greater than 3:1 after hydroseeding drill seeding, and installation of live plants.
- Impacts to the cultural landscape would be evaluated and mitigated following completion of a Visual Resource Inventory (VRI) of the Lake Superior unit of the park. The VRI is in progress and is anticipated to be completed in 2023, prior to construction.



Figure 2. Project Map: Alternative B - Road Realignment.

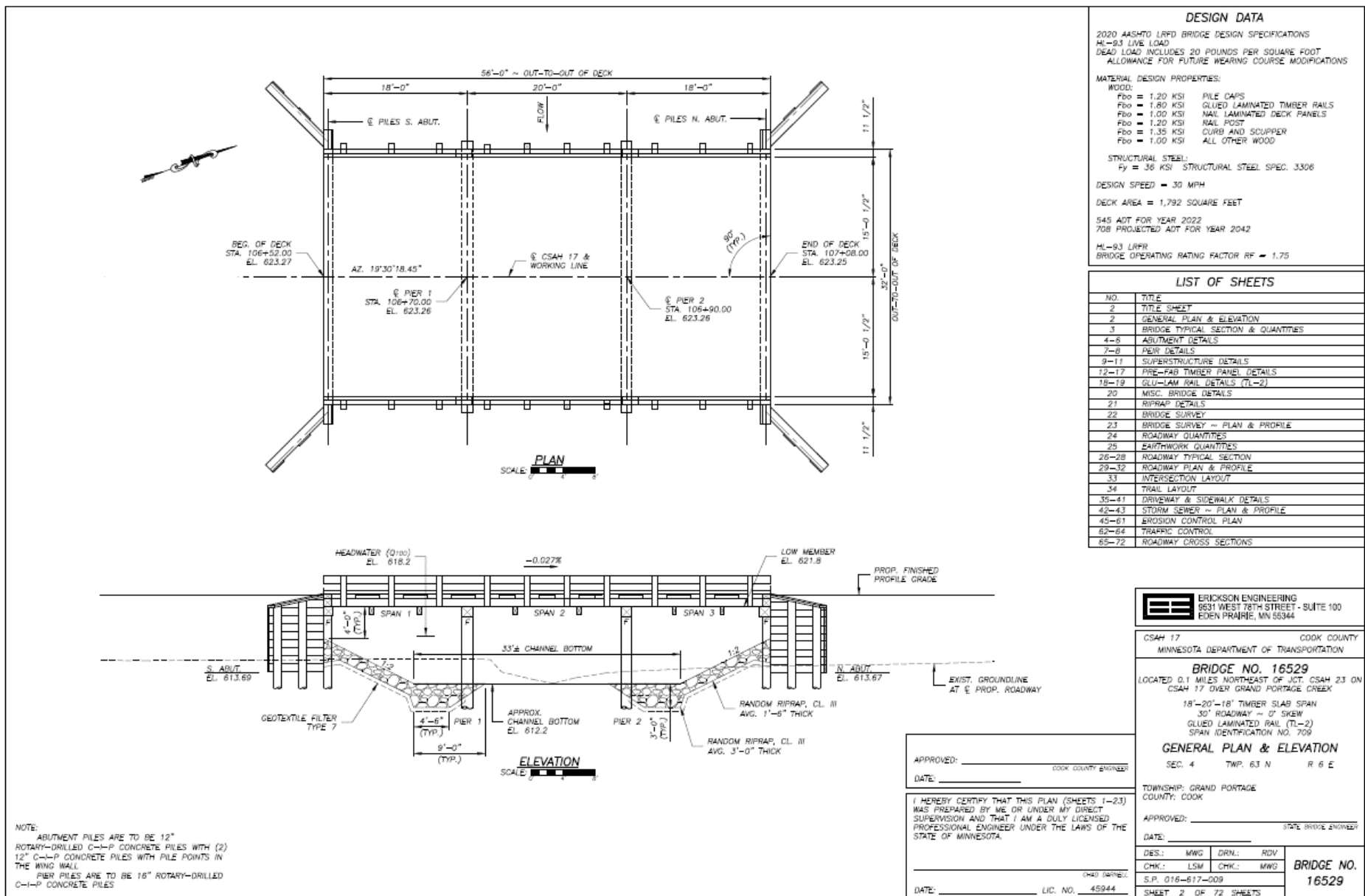


Figure 3. Proposed Bridge Design.

2.3 Alternatives Considered but Dismissed

The following alternate road realignment and bridge designs were considered but dismissed (Figure 4):

2.2.1 Cemetery Alternative

This alternative would include a raised road corridor and bridge located approximately 650 feet upstream from the stone bridge. The route would connect Store Road on the west side to Mile Creek Road on the east side, just below the historic Holy Rosary Catholic Church and associated cemetery. A small portion of the cemetery is inside the park boundary. The alternative would take advantage of a topographic narrowing of the stream valley on the west side, but would exit onto Mile Creek Road at the foot of the cemetery hill. In addition to the cemetery's known graves, historic photographs indicate there are likely many unmarked graves in the area. Ethnographic evidence also suggests some internments dating to the 1700-1800s may exist in the slopes below the current cemetery boundary. Historic records and pedestrian surveys also suggest the presence of archeological features in the slopes below Holy Rosary Cemetery that may date to the 18th century fur trade and 19th century Grand Portage Village periods. These features have not been evaluated for NRHP eligibility. This alternative would also add a traffic crossing on the Grand Portage Trail, which would break up the hiking experience for park visitors. Ground disturbance adjacent to the cemetery, the potential for inadvertent discoveries and impacts to human remains or archeological resources, visual impacts, traffic noise, and impacts to visitor experience make this alternative unacceptable.

2.2.2 Powerline Corridor Alternative

This alternative would require a raised roadbed and bridge constructed within an existing powerline corridor, approximately 1,450 feet upstream and north of the historic stone bridge on Mile Creek Road. This option would intersect Store Road across the street from the Grand Portage community pow-wow grounds and cut across the edge of an allotment. This alternative would be constructed close to the home of a Band member and create a traffic hazard during the Grand Portage community's annual pow-wow celebration. Increased traffic in this area would also increase traffic noise and exhaust near the home and during the celebration. This alternative would also alter or relocate the community ball field, which is an area suspected to contain archeological deposits and possible burial sites. This alternative could have significant adverse impacts on unrecorded graves and archeological remains from the 18th and 19th centuries.

2.2.3. Alternate Bridge Designs

Alternative bridge designs were considered, including single-span and two-span options. These designs were dismissed due to engineering limitations on the length of each span and the overall length of the proposed stream crossing.

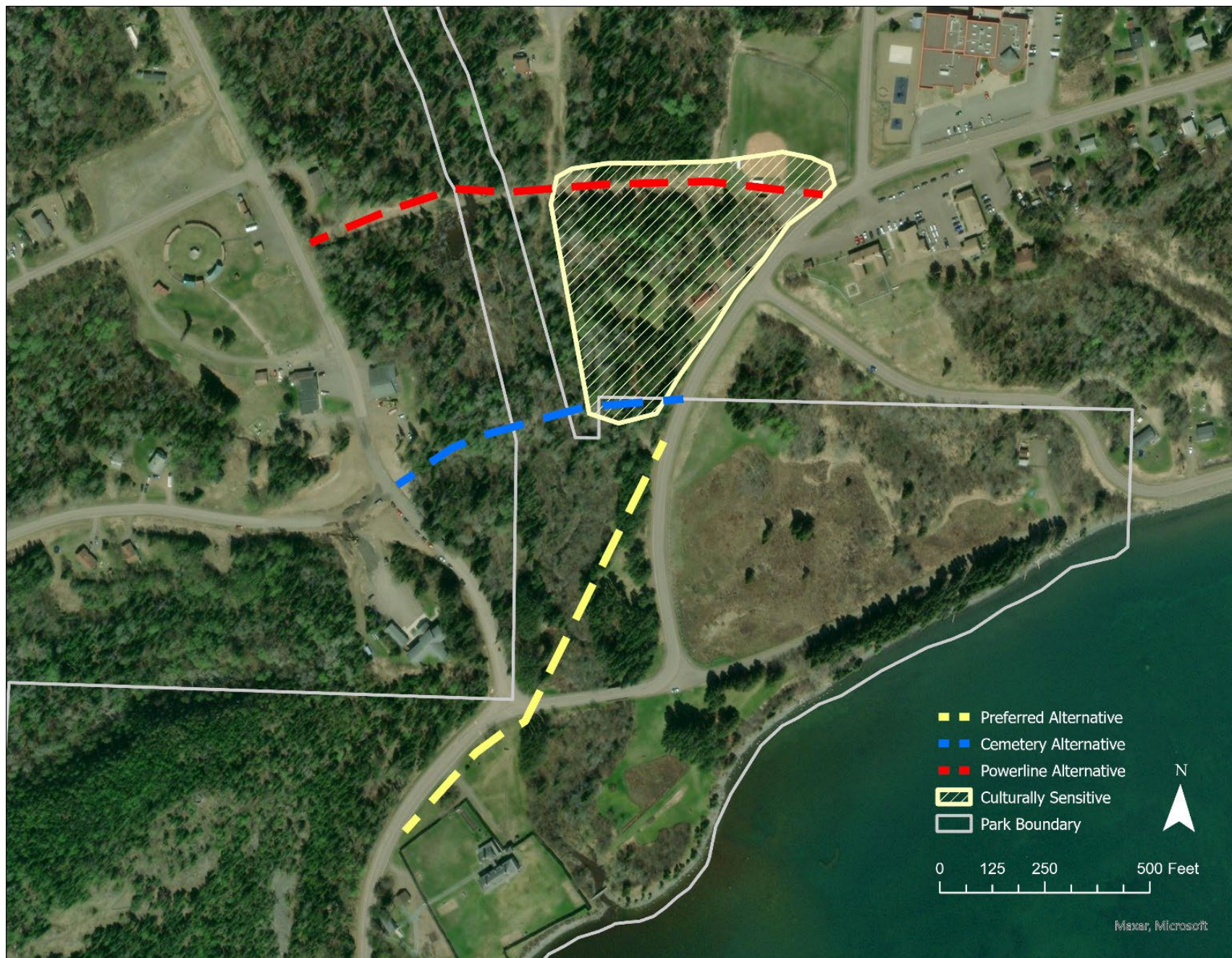


Figure 4. Preferred Alternative Alignment and Alternative Routes Considered but Dismissed.

CHAPTER 3: AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 Introduction and Definitions

This chapter summarizes the natural and cultural resources which could be affected by the alternatives and analyzes the impacts (or “environmental consequences”) of each alternative. The affected environment description is followed by the environmental consequences analysis for each impact topic. The impact topics analyzed in this chapter correspond to the impact topics retained for analysis in Chapter 1.

Affected Environment: The affected environment describes existing conditions for those elements of the natural and cultural environment (including human health and safety and the visitor experience) which could be affected by the actions proposed in the alternatives. These descriptions serve as a baseline for understanding the resources that could be impacted by implementation of the proposed action.

Impacts: According to the 2022 Council on Environmental Quality (CEQ) revised regulations, “effects or impacts” are changes to the human environment that include reasonably foreseeable (1) direct effects, (2) indirect effects and (3) cumulative effects [40 CFR §1508.1(g)].

Agencies consider the potentially affected environment and degree of effects in order to determine the significance of an action’s impacts. The degree of effects are assessed in the context of the park’s purpose and significance and any resource-specific context that may be applicable. When assessing the degree of effects, agencies consider:

- o Both short- and long-term effects.
- o Both beneficial and adverse effects.
- o Effects on public health and safety.
- o Effects that would violate Federal, State, Tribal, or local law protecting the environment. [40 CFR § 1501.3(b)]

None of the alternatives analyzed in this EA would violate any federal, state, tribal, or local laws that protect the environment.

The methods used to assess impacts vary depending on the resource considered, but generally are based on a review of pertinent literature and park studies, the information provided by on-site experts and other agencies, professional judgment, and park staff knowledge and insight.

3.1.1 Cumulative Impacts Methodology

In accordance with the CEQ revised regulations, this EA also considers cumulative impacts, “which are effects on the environment that result from the incremental

effects of the action when added to the effects of other past, present, and reasonably foreseeable actions regardless of what agency (federal or non-federal) or person undertakes such other actions.” (§1508.1(g)(3) Cumulative impacts have been addressed in this EA by resource and are considered for each alternative.

3.1.2 Trends and Reasonably Foreseeable Planned Actions

In assessing potential impacts of each alternative, the following trends and reasonably foreseeable actions have also been considered:

- The informal parking at the picnic area will be expanded and formalized as part of a future project to improve visitor services. This is anticipated to occur in 2025.
- To mitigate backflow effects from the historic stone bridge during flood events, a culvert is anticipated to be added near the historic bridge in 2025. Culvert design is pending hydrologic evaluation.
- Climate change could result in increased flood events.

3.2 Cultural Resources

3.2.1 Affected Environment

Cultural resources that could be affected by the proposed action include archeological resources, the cultural landscape, and historic structures. Section 106 of the National Historic Preservation Act (NHPA) requires that effects to historic properties be considered when evaluating federal undertakings. Federal agencies are directed to coordinate Section 106 and NEPA compliance efforts (36 CFR 800.8).

Archeology

Much of the park has high potential to contain archeological resources, including resources that have not been previously identified or excavated (Birk 2005). The entire park is listed in the NRHP and is considered significant under Criterion A for contributing to the broad patterns of North American history in the area of archeology (among other areas), including historic aboriginal and non-aboriginal archaeology. The park is also significant under NRHP Criterion D for having provided important archeological and cultural information about Indian and non-Indian peoples and their activities at Grand Portage during the period of significance (1731-1951), and for its potential to yield additional information through further studies (Birk 2005).

Much of the eastern portion of the proposed road corridor, and some of the western portion, have been heavily disturbed in the past from the construction of park maintenance buildings and work areas, as well as the installation and maintenance of utilities and roads. In 2022, an archeological survey was conducted by the park to determine which portions of the project area still contain intact artifact deposits and what portions are disturbed. Approximately 0.1 acres within the proposed project area were determined to be undisturbed.

In accordance with Section 304 of the Archeological Resource and Protection Act of 1979, and the NHPA, location information of archeological resources on federal lands is restricted from public access. Therefore, the specific context and exact location of archeological sites within the project area are not disclosed. Since much of the park has not been extensively surveyed, there is potential for additional sites to be identified.

Known archeological resources located in the project area include artifacts and features from both 18th century fur trade operations and 19th and 20th century Grand Portage Village settlement and subsistence activities. Possible pre-contact period deposits may be extant as well. Investigations to date have yielded a variety of artifacts, including glass beads and other objects of adornment, ceramic and glass fragments, building materials, fragments or whole metal tools, and firearm parts.

Cultural Landscape

A landscape's vegetation can reflect past patterns of land use. The CLR identifies plant species of historic, cultural, and/or ecological significance as contributing features to the park's cultural landscape within the project area. These include meadow-subarea grasses and forbs, red pine, and ethnobotanical plants (paper birch, hawthorn, wild strawberry, yarrow, raspberry, wild rose, sweet grass, caraway, and Jerusalem artichoke). These species are significant because they likely were present during the period of significance, and they have documented historical and cultural uses or values.

Dating of two black fruited hawthorn plants from the floodplain of Grand Portage Creek upstream of the historic bridge revealed that the specimens dated to 1973 and 1962 and are more recent than the park's period of significance. The report also indicated that the growth patterns and establishment of hawthorn are likely influenced by flooding (Williams 2022).

Circulation networks, which also contribute to a cultural landscape, vary widely in scale, items transported (people or goods), and users (a rural community or the surrounding region). The Grand Portage cultural landscape is still part of, and situated in the original living community. Not only are circulation networks still being utilized, but new routes are constantly being developed and connected to old networks as the community continues to thrive.

Historic Structures

The entire park was listed in the NRHP in 1976, and the NRHP registration form was updated in 2005 (Birk 2005). The revision identifies as contributing resources three archeological sites, four replica fur trade era buildings, one replica fur trade era structure, and one early twentieth century stone highway bridge. Among the noncontributing resources are four buildings, ten structures, and one object.

The CCC stone highway bridge carries Mile Creek Road / CSAH 17 over Grand Portage Creek and was designed and built by the CCC Indian Division-Cass Lake

for the village of Grand Portage in 1938. The revised NRHP registration form identifies this bridge, and its associated hand-laid stone wing-wall, as a contributing feature of the park, and as an individually eligible property for listing in the NRHP. The CCC stone highway bridge is significant for its association with government relief programs in the 1930s, the initial development of Grand Portage as a national monument, and as an example of rustic CCC-era design that uses indigenous materials reflecting its surroundings. The bridge also has substantial cultural significance to the Band (Birk 2005), and the CLR identifies it as a contributing feature to the cultural landscape.

The CLR also identifies Grand Portage Creek as a contributing natural feature to the park's cultural landscape that survives from the period of significance (Bahr Vermeer Haecker Architects 2009).

3.2.2 Environmental Consequences

3.2.2.1 Alternative A: No Action

Archeology: There would be no impacts to archeology as a result of this alternative.

Cultural Landscape: Under this alternative there would be no impacts to the cultural landscape. In addition, there would be no impacts to the historic circulation pattern as a result of this alternative.

Historic Structures: Superficial and structural damage to the historic bridge would continue under the no action alternative. The no action alternative would cause continued degradation of the inside surfaces of the bridge's stone parapet walls from the high impact scraping action of seasonal snow plowing. Modern traffic flow, which exceeds the original design load for the roadbed and bridge foundation, would also cause structural degradation. The stone parapet would continue to be damaged from occasional vehicular impacts. This alternative would result in long-term, adverse, direct impacts to historic structures, and no indirect effects.

Cumulative Impacts:

Impacts to cultural resources under the no action alternative, when combined with past, present, and reasonably foreseeable future actions and trends, would remain adverse, direct, and long term.

3.2.2.2 Alternative B - Road Realignment

Archeology: This alternative could have negligible, direct, long term (permanent) adverse impacts on archeology if previously undiscovered archeological resources are uncovered and affected during construction. The stipulations and mitigations outlined in Chapter 2, including archeological monitoring, would reduce the potential for adverse impacts. 2022 pre-construction archeological inventory and

testing documented one area that could contain archeological deposits. This location would not be disturbed during construction, and would instead be covered over (encapsulated) by the new road prism. Any potential resources in this area would be made inaccessible, but would not otherwise be adversely impacted.

Approximately 90% of the project would occur in areas disturbed by previous construction and utility line installation. The realignment route proposed under this alternative was selected to avoid impacting areas with dense intact archeological deposits; therefore, the proposed realignment would impact only heavily disturbed areas or areas with minimal artifact density.

Cultural Landscape: Under this alternative, there would be minor, short-term impacts to the cultural landscape and culturally important views during construction and until new plantings become established (approximately 1-2 years). The new road alignment and bridge would be shielded by vegetation over the long term and would not impact the cultural landscape or culturally important views of or from the historic stone bridge (which would be maintained as a pedestrian route). As described in Chapter 2, impacts to the cultural landscape would be evaluated and mitigated following completion of a VRI of the Lake Superior unit of the park.

This alternative would have negligible, long term (permanent) impacts on the historic circulation pattern from the road realignment and repurposing of the old road to a pedestrian trail. The circulation networks identified in the CLR are recognized to continually be evolving, since this is a living community. This alternative would provide a new connecting pathway to the community network and provide safe pedestrian passage between the center of the park and Bay Road.

Historic Structures: This alternative would result in direct, long term (permanent) beneficial impacts to the historic stone bridge, as well as indirect long term (permanent) adverse impacts from the change in use. Structural degradation to the stone parapet walls from traffic and accidental vehicular impacts would be eliminated. Frequent seasonal snow plowing would not occur under this alternative, which would protect the bridge from damage. The bridge was originally designed for vehicle access, and the change in use to a pedestrian trail would adversely impact the cultural use of the structure.

Cumulative Impacts:

Impacts to cultural resources under this alternative, when combined with past, present, and reasonably foreseeable future actions and trends, would be minor, and both adverse and beneficial. Over the long term, cumulative impacts to cultural resources would be beneficial. The NPS has determined that this alternative would have ‘no adverse effect’ on historic properties under NHPA Section 106. Consultation with the Band has been ongoing throughout this project, and the THPO concurred with the NPS determination on 9/20/2021 (see Chapter 4).

3.3 Human Health and Safety

3.3.1 Affected Environment

CSAH 17 serves as a major corridor between two population centers for both Band members and park visitors, with approximately 1,450 commuters per day. Along this corridor, children travel to schools and community members travel to the local health center. Park staff and community members have reported multiple accidents and injuries in the vicinity of the bridge and the 90-degree bend in the road. This sharp bend has an approximately 95-foot curve radius and does not meet the current MnDOT guidelines, which specify a minimum curve radius of 250 feet for a 30-mph design speed (MnDOT 2022). Additionally, since the bridge is so narrow, it is a safety hazard for pedestrians and vehicles to share this crossing. Vehicles are forced to the side to allow other vehicles to pass or to avoid pedestrians, and park staff have reported multiple instances of the historic stone bridge being hit by vehicles as a result.

3.3.2 Environmental Consequences

3.3.2.1 Alternative A: No Action

The no action alternative would result in long term indirect adverse effects to human health and safety, which would persist as long as the 90-degree bend in CSAH 17 is in use by vehicular traffic. If the road is not realigned, the safety issues posed by the sharp bend in the road and the narrow bridge would remain.

Cumulative Impacts:

Impacts to human health and safety under the no action alternative, when combined with past, present, and reasonably foreseeable future actions and trends, would remain adverse.

3.2.2.2 Alternative B: Road Realignment

Alternative B would result in indirect, long term (permanent) beneficial impacts to human health and safety, by eliminating the hazard posed by the existing 90-degree bend in CSAH 17 and creating a safer crossing for pedestrians. The existing road alignment does not conform to MnDOT guidelines for the minimum bend radius. This alternative would correct this deficiency and bring the road into compliance with MnDOT guidelines. The new bridge would also be wider than the currently used historic bridge, which would increase safety for vehicular traffic. Under this alternative, the safety issues posed by pedestrians and vehicles utilizing the same narrow bridge would be removed. This alternative would therefore have long-term, beneficial impacts to human health and safety.

Cumulative Impacts:

Impacts to human health and safety under Alternative B, when combined with past, present, and reasonably foreseeable future actions and trends, would remain beneficial.

3.4 Water Resources

3.4.1 Affected Environment

Lakes and streams are important natural features in northeastern Minnesota, and their protection is of management interest for both the Band and the park (Lafrancois et al. 2009). The water quality of Reservation waters is in good condition, in part due to the relatively undisturbed second growth northern hardwood and boreal forests (Winterstein 2002). Overall, Reservation lakes and streams tend to be dilute, with intermediate nutrient levels, low transparency, high dissolved organic carbon concentrations, and water chemistry and groundwater inputs that are influenced by local geologic features. Streams show more seasonal variation than lakes, being strongly influenced by hydrologic patterns (Winterstein 2002, Lafrancois et al. 2009).

The Band has U.S. EPA-approved water quality standards that define each waterbody's designated uses and serve as the foundation for water quality assessments. Water quality assessments use physical, chemical, and biological criteria defined in these standards to protect each designated use. Water quality criteria are intended to serve as early warning benchmarks of the aquatic resources of the Reservation and help prevent water quality impacts. The Grand Portage Band has been monitoring water quality in the area since 1994, and water quality assessments of Grand Portage Creek confirm it is a high-quality aquatic resource. Through the park, the creek flows unimpeded, and few man-made structures exist in the stream channel.

Hardened impervious surfaces, including existing roads, cause minor runoff during storm events. Most flooding has been mitigated through the addition of culverts or other stormwater management systems.

A wetland delineation was completed in 2021 (Figure 5), which identified 0.76 acres of Type 6 (riverine and palustrine scrub/shrub and forested) wetland in the vicinity of the project area. Wetlands that could be impacted by the proposed road realignment project (0.33 acres) are shown in Figure 6 of the Wetland Statement of Findings (Appendix B).

The project area is located within the Grand Portage Creek Watershed (Kraft et al 2014). The Federal Emergency Management Agency (FEMA) online Flood Map Service was used to identify any mapped floodplains in the area. FEMA has not completed studies to determine flood hazards in Grand Portage National Monument, and detailed floodplain maps in the project area are not available.

The project is located in the Grand Portage Creek riverine floodplain and is subject to potential flooding along the creek. Lake Superior has a long-term mean surface water elevation, recorded from 1860 to 2015, of approximately 601 feet above sea level, with very little fluctuation in average monthly water levels over that same period. The highest monthly water elevation that Lake Superior has reached is 604 feet above sea level, in 1860 (NOAA 2022). This elevation is below the elevation of the project area. The project area is therefore unlikely to be affected by flooding from rises in Lake Superior.



Figure 5. Wetland Delineation

3.4.2 Environmental Consequences

Alternative A: No Action

The no action alternative would result in no new adverse impacts to water resources, including water quality, wetlands, and floodplains. The existing road alignment and hardened surfaces would remain in place, and runoff would continue to cause minor flooding during storm events. Existing adverse impacts to water resources under the no action alternative would be negligible.

Cumulative Impacts:

Impacts to water resources under the no action alternative, when combined with past, present, and reasonably foreseeable future actions and trends, would continue to be negligible, adverse, and long term (for the life of the current alignment).

Alternative B: Road Realignment

Under Alternative B, short term adverse impacts to water quality are anticipated for the duration of construction activities, including sedimentation of the streambed that could cause a slight increase in water temperature with a corresponding decrease in dissolved oxygen concentrations. The project is not expected to degrade water quality through introduction of hazardous materials or long term alteration of temperature, pH, dissolved oxygen or salinity. Implementation of the stipulations and best management practices outlined in this document, in coordination with federal and state regulatory authorities and as required by federal permits, will reduce potential adverse impacts to minor. This alternative is not anticipated to have any long term adverse impacts on water resources.

Executive Order 11990 “Protection of Wetlands” directs all federal agencies to avoid, to the maximum extent possible, long and short-term adverse impacts associated with the occupancy, destruction, or modification of wetlands, and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative. Based on NPS Director’s Order #77-1: Wetland Protection (2002) and NPS Procedural Manual #77-1: Wetland Protection (2016), a Statement of Findings (SOF) must be prepared if a preferred alternative would have adverse impacts on wetlands.

A wetland delineation and impact map was completed in 2021 (Figure 5), which defined approximately 0.76 acres of Type 6 (riverine and palustrine scrub/shrub and forested) wetland in the vicinity of the project area. 0.33 acres of these wetlands would be impacted by the proposed road realignment project. These impacts would be long term (permanent) and minor. The Wetland Statement of Findings (Appendix B) defines the area of wetland impacts and compensatory actions that would be taken to offset these impacts if Alternative B is implemented. As

compensation for the wetland impacts, invasive species would be removed from 5.4 acres of wetlands in the park.

Executive Order 11988 “Floodplain Management” directs all federal agencies to “reduce the risk of flood loss, to minimize the impact of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values served by floodplains.” Based on NPS Director’s Order #77-2: Floodplain Management (2003) and NPS Procedural Manual #77-2: Floodplain Management (2002), a Statement of Findings (SOF) must be prepared if a preferred alternative would have adverse impacts to human health and life or to NPS capital investment.

Under Alternative B, there would be negligible (not measurable) adverse long-term impacts to stream flow and geomorphology, which would persist for the life of the new bridge. Hydraulic analysis (Anderson 2022, Appendix C) indicates that the bridge design would result in <0.1 feet of rise in Grand Portage Creek during 100-year or 500-year flood events. Under this alternative, there would be no downstream impacts to aquatic habitat, fish passage, or infrastructure, no adverse impact to human health and life, and no adverse risk to NPS capital investment and therefore, a Floodplain Statement of Findings is not required.

This alternative would result in a net increase of 0.30 acres of impervious surfaces, which is anticipated to cause a negligible increase in runoff.

Cumulative Impacts:

Impacts to water resources under Alternative B, when combined with past, present, and reasonably foreseeable future actions and trends, would be minor, adverse, and long term (for the life of the proposed new alignment and bridge). As a cumulative impact, the addition of a culvert near the historic stone bridge (anticipated in a future project; see Section 3.1.2) would improve natural flow in Grand Portage Creek over the long term.

CHAPTER 4: CONSULTATION AND COORDINATION

The following entities were consulted or provided technical expertise on this project:

- Grand Portage Band of Lake Superior Chippewa
- Federal Highway Administration
- U.S. Fish and Wildlife Service
- U.S. Army Corps of Engineers

The Band partnered with the NPS on this project, and has been consulted throughout the planning process under NHPA Section 106. Several meetings and site visits with the THPO and Reservation Tribal Council have occurred, beginning in 2020. The NPS determined that the project would have ‘no adverse effect’ on historic properties under Section 106.

The NPS worked with the Federal Highway Administration (FHWA) on the Highway Easement Deed (HED) process. The HED will provide for road maintenance within the new highway corridor, and will be signed following completion of the compliance process. FHWA is also a cooperating agency in the NEPA process, and will review the NPS environmental assessment to ensure it can be adopted by FHWA.

Consultation with U.S. Fish and Wildlife Service (USFWS) regarding the northern long eared bat was originally initiated on April 15, 2021 through the Information for Planning and Consultation (iPaC) tool (<https://ipac.ecosphere.fws.gov/>), using the Endangered Species Act (ESA) 4(d) rule. At the time, the northern long eared bat was listed as threatened, and the proposed road realignment project was determined to be consistent with the Northern Long Eared Bat Programmatic Biological Opinion (USFWS 2016).

The northern long eared bat is being reclassified as endangered, effective March 31, 2023. ESA Section 7 consultation will need to be reinitiated for federal projects not expected to be completed by the effective date if: 1) the consultation was completed while the northern long-eared bat was listed as threatened, and 2) the project may affect the species (whether or not adverse effects are anticipated).

Although the park previously consulted with USFWS using the 4(d) rule, consultation will be reinitiated once the new consultation tools are made available by USFWS. The project will not proceed until ESA Section 7 consultation is complete.

The Band, NPS, and Cook County coordinated with U.S. Army Corps of Engineers (USACE) to determine the ordinary high water level mark in Grand Portage Creek to guide design specifications. Under the Clean Water Act, a Section 404 permit will be issued by USACE for construction of the new bridge following completion of the NEPA process.

CHAPTER 5: LIST OF PREPARERS AND CONTRIBUTORS

The persons responsible for the review of the proposed action, the supporting information and analyses, and the preparation of this EA are listed below:

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CHAPTER 6: REFERENCES

Bahr Vermeer Haecker Architects. 2009. Grand Portage National Monument Cultural Landscape Report.

Birk, D. 2005. Grand Portage National Monument National Register of Historic Places Inventory Nomination Form.

Clayton, William. 2022. Archeological Inventory and Testing for County State Aid Highway 17 Relignment Project, Grand Portage National Monument, Minnesota. (unpublished)

Kappler, Charles J., ed. 1904. Treaty with the Chippewa, 1854. Washington DC: U.S. Government Publishing Office (GPO).

Kraft, G. J., D. J. Mechenich, C. Mechenich, M. D. Waterhouse, J. McNelly, J. Dimick, and J. Cook. 2014. Natural resource condition assessment: Grand Portage National Monument (revised July 2014). Natural Resource Report NPS/GRPO/NRR—2014/842. National Park Service, Fort Collins, Colorado.

Lafrancois, B., Watkins, M., & Maki, R. 2009. Water quality conditions and patterns on the Grand Portage Reservation and Grand Portage National Monument, Minnesota: Implications for nutrient criteria development and future monitoring. Natural Resource Technical Report NPS/GLKN/NRTR – 2009/223. National Park Service, Fort Collins, Colorado.

MnDOT 2022. Minnesota Department of Transportation Facility Design Guide. Chapter 5. Retrieved from <https://roaddesign.dot.state.mn.us/facilitydesign.aspx>

MSA 2021. Wetland Delineation Report: County Road 17 Realignment Over Grand Portage Creek Wetland Delineation. MSA Professional Services.

National Park Service (NPS). 2003. Grand Portage National Monument General Management Plan/ Environmental Impact Statement.

National Park Service (NPS). 2006. National Park Service Management Policies. Retrieved from https://www.nps.gov/policy/MP_2006.pdf

National Park Service (NPS). 2009. Grand Portage National Monument Preliminary Soil Survey.

National Park Service (NPS). 2015. Recommended Biocriteria and Nutrient Criteria for Water of the Grand Portage Reservation. Midwest Biodiversity Institute.

National Park Service (NPS). 2016. Grand Portage National Monument Foundation Document

Thornberry-Ehrlich 2019. Grand Portage National Monument Geologic Resources Inventory Report. Natural Resource Report NPS/NRSS/GRD/NRR—2019/2025

U.S. Fish and Wildlife Service (USFWS). 2016. Programmatic biological Opinion on Final 4(d) Rule for the northern long-eared bat and Activities Excepted from Take Prohibitions.

Williams, Quincy. 2022. Grand Portage National Monument Cultural Landscape Inventory Establishment Dating Report. (unpublished)

Winterstein, T. 2002. Water quality data from lakes and streams in the Grand Portage Reservation, Minnesota, 1997-98. Mounds View, Minnesota: Open-File Report 00-364, U.S. Geological Survey.