# Appendix F: Cultural Resources

Wisconsin Power and Light Company
Docket No. IP7145/WS-24-349

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August 8, 2024

Benjamin Tanko
Alliant Energy Corporation
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Madison, WI 53718

**Re: Phase Ia Cultural Resources Literature Review for the Bent Tree North Wind Farm Project**
**Freeborn, Steele, and Waseca Counties, Minnesota**
File: R0035761.00

Alliant Energy Corporation (Alliant) contracted Westwood Professional Services, Inc. (Westwood), to conduct a Phase Ia Cultural Resources Literature Review for the Bent Tree North Wind Farm Project (Project) in Freeborn, Steele, and Waseca Counties, Minnesota (**Exhibit 1**). The cultural review will assist with Project design, as well as support anticipated permitting of the approximately 120-megawatt (MW) wind energy generation Project and related facilities.

The literature review examined documentary resources including historic maps, archaeological site files, historic structure inventories, and previous cultural resource survey reports. The Project Area is approximately 26,050 acres, nearly all of which stands in Freeborn, with the northern ½-mile of the Project Area set in Waseca and Steele Counties. This literature review's Study Area included a one-mile buffer around the Project Area and comprised a total of approximately 47,228 acres (**Table 1**; **Exhibit 1**).

**Table 1: Sections in Study Area**

| Township Name | Township | Range | Sections in Project Area | Sections in 1-Mile Buffer |
|---|---|---|---|---|
| Berlin | 105 | 21 W | 31-34 | 26-35 |
| New Richland | 105 | 22 W | 31-36 | 25-36 |
| Byron | 105 | 23 W | 36 | 25, 26, 35, 36 |
| Bath | 104 | 21 W | 3-9, 16-18 | 2, 10, 11, 15, 16, 19-22 |
| Hartland | 104 | 22 W | 1-23 | 19-30 |
| Freeborn | 104 | 23 W | 1, 12, 13, 24 | 2, 11, 14, 23-26 |

The background research and literature review consisted of an examination of files maintained by the Office of the State Archaeologist (OSA) and the Minnesota State Historic Preservation Office (SHPO). Review of information from these offices included an examination of site maps, archaeological site forms, burial files, historic structure inventories, and survey reports. The purpose of this review is to create an inventory of previously recorded cultural resources,

including archaeological sites and historic architecture resources that are in the Study Area. The background research and literature review would identify previous cultural resource investigations along with levels of disturbance and potential for sites within the Project area or buffer.

# Literature Review

On February 9, 2024, Westwood Cultural Resource Manager Ryan Grohnke requested a database search from the SHPO. Additionally, the Minnesota state archaeological site files available via the online Portal, maintained by the OSA, and the Minnesota Statewide Historic Inventory Portal, maintained by SHPO, were reviewed to obtain a list of previously recorded archaeological sites and historic structures located within the proposed study area. Mr. Grohnke was assisted by Westwood Architectural Historian Sara Nelson in review of historic and architectural resources. Due to changes in the Project area, the review was updated on August 8, 2024.

The Project area is located in Minnesota Archaeological Region 2e – Prairie Lake East. Sites of earlier prehistoric periods in this region are generally located on islands and peninsulas of lakes, with some villages near major rivers. Winter villages would be located in the wooded areas of large river valleys. Temporary campsites could be found on rivers and around lakes. Late prehistoric large village sites may be found on the terraces of the Minnesota and Blue Earth rivers, with some campsites on islands and peninsulas of lakes (Gibbon et al. 2002).

## Previously Conducted Cultural Resources Investigations

A Phase IA Archaeological Reconnaissance Survey was completed for the eastern 2/3 of the Project as part of an earlier project area by Rolling Hills Consulting Services, LLC in July 2008. This investigation consisted of a literature review and development of a predictive model to help identify areas of high potential. As part of this investigation, a pedestrian survey was conducted on a sample of parcels based on the model to evaluate the model performance. No archaeological sites were found in this review. Most of the Project was found to be of low potential for unrecorded archaeological resources. [**TRADE SECRET DATA BEGINS** [redacted]. **TRADE SECRET DATA ENDS**]

The 1985 *National Register Survey of Freeborn County* survey report identified the historic resources in the town of Hartland and the farmsteads and churches in unincorporated areas of the Study Area (Roberts). A Phase II survey and evaluation of Trunk Highway 13 was conducted in 2021. The historic bridges and culverts throughout the Study Area were last surveyed and evaluated in 2023 as a part of updates to the Minnesota Inventory of Historic Bridges (Mead & Hunt). The Minneapolis and St. Louis Railway corridor was re-evaluated during the 2023 updates to the Minnesota Historic Railroad historic context study (Streamline Associates). Due either to the length of time since they were last conducted, or because of limited coverage, these reports provide limited insights into the development and historic context(s) applicable to the Study Area. The historic/architectural resources inventoried during the surveys associated with these reports are provided below in **Table 3**.

## Previously Recorded Archaeological Sites

Six previously recorded archaeological sites are located within the Study Area (**Table 2**; **Exhibit 1**). They all have a Native American cultural association and have been unevaluated for listing in the NRHP. One of these sites is located within the Project Area (21FE0063). This site is a single prehistoric artifact.

**Table 2: Archaeological Resources in Study Area**

| SHPO ID | Site Type | Cultural Affiliation | NRHP Eligibility | Proximity to Project |
|---|---|---|---|---|
| 21FE0009 | Earthwork | Prehistoric | Unevaluated | Buffer |
| 21FE0059 | Lithic Scatter | Prehistoric | Unevaluated | Buffer |
| 21FE0061 | Artifact Scatter | Prehistoric | Unevaluated | Buffer |
| 21FE0062 | Lithic Scatter | Prehistoric | Unevaluated | Buffer |
| 21FE0063 | Single Artifact | Prehistoric | Unevaluated | Project Area |
| 21FEac | Lithic Scatter | Prehistoric | Unevaluated | Buffer |

## Previously Recorded Historic/Architectural Resources

Twenty-three historic/architectural resources have been previously inventoried within the Study Area (**Table 3**; **Exhibit 1**). Two of these are historic linear resources that cross the Project and Study Area; they have both been recommended Not Eligible for the NRHP since 2021. Five of the resources are located in the Study Area, including 4 bridges that were recommended Not Eligible for the NRHP in 2023, and one church has been "moved to [an] unknown location."

Sixteen resources are located in the Project Area, 8 of which are within Hartland city limits. They were inventoried in 1984 and are unevaluated for the NRHP. The 8 resources in unincorporated areas of the Project include 2 farmsteads, 2 culverts, 1 bridge, 1 creamery, 1 church, and 1 railroad-related structure. The culverts and bridge were recommended Not Eligible in 2023; the others were each inventoried over 20 years ago and are considered Unevaluated for the NRHP.

**Table 3: Historic/Architectural Resources in Study Area**

| SHPO ID | Name | Location | NRHP Eligibility | Proximity to Project |
|---|---|---|---|---|
| FE-HND-00001 | Knut Knutson Farmstead | off Mn. Hwy. 13 | Unevaluated | Project |
| FE-BAT-00001 | creamery | off Co. Hwy. 35 | Unevaluated | Project |
| FE-BAT-00003 | Seventh Day Adventist Church | off Twp. Rd. | Unevaluated | Project |
| FE-BAT-00005 | North Congregation of Norwegian Lutheran Church of America | off Co. Rd. 97 [moved to unknown location] | Unevaluated | Buffer |
| FE-FRT-00003 | Bridge 89193 | CSAH 10 over ditch | Recommended Not Eligible | Buffer |
| FE-FRT-00004 | Bridge 89288 | CSAH 33 over Cobb Creek | Recommended Not Eligible | Buffer |
| FE-FRT-00005 | Bridge 89308 | CR 70 over JD #8 | Recommended Not Eligible | Project |

| SHPO ID | Name | Location | NRHP Eligibility | Proximity to Project |
|---|---|---|---|---|
| FE-HAR-00001 | store | Main St. & Railroad St. | Unevaluated | Project |
| FE-HAR-00002 | train depot | Railroad St. & Main St. | Unevaluated | Project |
| FE-HAR-00003 | grain elevator | XXX Main St | Unevaluated | Project |
| FE-HAR-00004 | creamery | Main St and Creamery St | Unevaluated | Project |
| FE-HAR-00005 | Farmers State Bank | NW corner Broadway St. & Johnson St. | Unevaluated | Project |
| FE-HAR-00006 | commercial building | Broadway St. & Lincoln St. | Unevaluated | Project |
| FE-HAR-00007 | U.S. Post Office | xxx Broadway St. | Unevaluated | Project |
| FE-HAR-00008 | house | Main St. & Railroad St. | Unevaluated | Project |
| FE-HAR-00009 | farmstead | CR 70 | Unevaluated | Project |
| FE-HAR-00010 | Minneapolis and St. Louis Railway Co. structure | MSTL Railway | Unevaluated | Project |
| ST-BER-00009 | Culvert L9519 | TWP 2 over ditch | Recommended Not Eligible | Project |
| WE-BYW-00008 | Bridge 88498 | CSAH 1 over stream | Recommended Not Eligible | Buffer |
| WE-NRT-00006 | Culvert 91621 | TWP 10 over Boot Creek | Recommended Not Eligible | Project |
| WE-NRT-00008 | Bridge 7596 | CSAH 1 over Boot Creek | Recommended Not Eligible | Buffer |
| XX-ROD-0164 | Trunk Highway 13 | Trunk Highway 13 | Recommended Not Eligible | Project |
| XX-RRD-CNW004, XX-RRD-CNW010, XX-RRD-CNW012 | Minneapolis and St. Louis Railway Co./Chicago and North Western Railway Co. | Minneapolis and St. Louis Railway | Recommended Not Eligible | Project |

## Other Sources

Other archival resources investigated included historical plat maps, topographic maps, and aerial photography. Freeborn, Hartland, and Bath Townships in Freeborn County; New Richland Township in Waseca County; and Berlin Township in Steele County were reviewed in the following maps:

- 1855 General Land Office (GLO) original surveys (Bureau of Land Management)
- 1874 An Illustrated Historical Atlas of the State of Minnesota (A.T. Andreas)
- 1895 Plat Book of Freeborn County (Union Publishing)
- 1896 Standard Atlas of Waseca County (G.A. Ogle & Co.)
- 1913 The Farmers Atlas and Directory of Township Plats, Freeborn County (Webb Publishing)
- 1914a The Farmers Atlas and Directory of Township Plats, Steele County (Webb Publishing)
- 1914b The Farmers Atlas and Directory of Township Plats, Waseca County (Webb Publishing)
- 1916 Plat Book of the State of Minnesota (W.W. Hixson & Co)

- 1920 Official Auto Road Map of Minnesota (Mutual Automobile Association)
- 1925 Atlas of the State of Minnesota (W.W. Hixson & Co.)
- 1927 Official Map of the State of Minnesota Trunk Highway System (MN Highway Department)
- 1937a Standard Atlas of Steele County (Central Atlas Co.)
- 1937b Standard Atlas of Waseca County (Central Atlas Co.)
- 1955 Official County Plat Book and Farmers' Directory of Freeborn County (Farm Plat Book Co.)
- 1956 Atlas of the State of Minnesota (T.O. Nelson)
- 1954, 1957, 1958, 1978 60' Mason City, Iowa topographic map quadrants (USGS)
- 1967, 2010 Freeborn, Hartland, Ellendale 7.5' topographic map quadrants (USGS)
- 1985 Albert Lea 30' topographic map quadrant (USGS)

The 1855 GLO survey depicts small bodies of water and creeks throughout the Study Area, none of which were labeled with names. A small lake is depicted in the south-central portion of the Project, with a tributary stream to its north. Prairie boundaries are depicted meandering around the north side of the lakebed and along the eastern edge of the Project. There are no signs of settlement or development in the Study Area. In current maps, this lakebed has been drained and is called the Mule Lakebed. The stream to its north is depicted as an intermittent continuation of the Le Sueur River.

The 1874 atlas depicts several roads, homesteads, and claimed parcels throughout the Study Area. The route of the "proposed Minneapolis & St. Louis RR" is shown running between Waseca and Albert Lea. Mule Lake and areas of wetlands are also noted. The town of Hartland had not yet been platted, but a Hartland post office is depicted about four miles to its east. The town of Bath was not depicted, but a church and cemetery were located near its eventual location.

In 1895, land throughout the Study Area is claimed; most sections are divided and occupied with between one and four homesteads. The MSTL railway line had been constructed and Hartland platted along it. There are several occupied blocks, but no businesses or other landmarks are called out. A cemetery is depicted one mile south of Hartland, but there is not an associated church. The previously-noted Catholic church and cemetery, a school, a creamery, a post office, and a store are depicted in the town of Bath. There are at least six schoolhouses depicted throughout the Project Area: in Section 1 of Freeborn; in Sections 9, 11, and 14 in Hartland, and in Sections 4 and 8 of Bath.

The next two decades of map coverage shows minimal changes to the Study Area through at least 1916. The 1920 road map of the state shows the roadway running through Hartland between Albert Lea and Waseca was called No. 18. Schools and churches are not depicted in the 1925 state map, but the cemetery one mile south of Hartland is noted. The 1927 state highway map depicts the graveled roadway, now Trunk Highway 13, running parallel to the MSTL railway. The town of Hartland, Mule Lake, and the southern tail of the Le Sueur River are noted within the Project Area.

The 1937 Steele and Waseca County atlases show no significant changes along the northern boundary of the Project. The 1937 state highway map is the first that does not depict Mule Lake in the Project Area. The 1955 county atlas shows that Mule Lake has been drained and several tile ditches and open ditches installed throughout the Study Area. The 1956 state atlas depicts the cemeteries in Bath and Hartland townships, but no significant buildings.

The small-scale 1957 map shows an underground pipeline running south through the western Project Area in Sections 6, 7, and 18 of Hartland Township. The 1967 topographic map depicts the Mule Lakebed, through which County Ditch No. 28 runs and carries the LeSueur River. The cemetery one mile south of Hartland is called South Hartland Cemetery. St. Aidens Cemetery in Bath is noted, but not a church. There are no schoolhouses depicted in the Study Area, which indicates that by this time modern schools had been consolidated in towns. Because of changes in USGS publication standards, few details are depicted in the 2010 topographic map.

Topographic maps suggest there are approximately 130 building sites/homesteads in the unincorporated areas of the Project. Historic aerial photography since 1951 confirms much of the information depicted in maps. Since it was settled, the Study Area has remained a rural area sparsely populated by farmsteads interspersed with agricultural crop fields. Irrigation ditches cross the Project Area, and there are several small stands of trees and windbreaks around farmsteads (Historic Aerials 2024).

# Recommendation

A review of the existing cultural resource data indicates that there is one previously documented archaeological site, two linear historic resource, and 16 inventoried historic/architectural resources within the proposed Project Area. Additionally, five archaeological sites and five historic/architectural resources have been inventoried in the one-mile Study Area buffer. No previously inventoried historic resources within one mile of the Project Area are Listed or Eligible for listing in the NRHP.

The Project is of varying potential for unrecorded archaeological resources. The highest potential for prehistoric resources will be near significant historic water sources including **[TRADE SECRET DATA BEGINS** [redacted] **. TRADE SECRET DATA ENDS]** There are approximately 135 building sites in the unincorporated portions of the Project Area, most of which are set along section roads. Nonextant and historic farmsteads may yield potential historic archaeological resources. Westwood recommends a Phase I Archaeological Reconnaissance Survey of areas of proposed ground disturbance associated with the Project.

It is assumed the Project will be permitted by the Minnesota Public Utilities Commission (PUC) under a Site Permit for a Large Wind Energy System, Minnesota Administrative Rules, Chapter 7854. The PUC may require consideration of the Project's effects upon cultural resources including the completion of cultural field surveys, and/or consultation with the SHPO.

If the Project is federalized, the scope of required cultural resource investigations would be determined by the functioning Federal lead agency in cooperation with the SHPO and pertinent Tribal Historic Preservation Offices (THPO) as defined in both Section 101 of the National

Environmental Policy Act of 1969 (NEPA) and Section 106 of the National Historic Preservation Act of 1966 (as amended; NHPA).

If human remains are encountered during construction activities, all ground disturbing activity must cease, and local law enforcement must be notified per Minnesota Statutes section 307.08. Should you have any questions, please do not hesitate to contact me at 612-209-3352 or ryan.grohnke@westwoodps.com.

Sincerely,

WESTWOOD PROFESSIONAL SERVICES

Ryan P. Grohnke
Cultural Resources Manager

Sara J. Nelson
Architectural Historian

# References

Andreas, AT.
1874 An Illustrated Historical Atlas of the State of Minnesota. Chicago: AT Andreas. Available online, http://www.davidrumsey.com/maps750068-22555.html, accessed July 2024.

Bureau of Land Management
1855 Freeborn County General Land Office Survey. Dubuque, IA: GLO Survey Office. Available online, https://glorecords.blm.gov/details/survey/default.aspx?dm_id=231525&sid=zevzm0r3.zhk, accessed July 2024.

Central Atlas Co.
1937a Standard Atlas of Steele County. Chicago: Central Atlas Co. Available online, https://historic mapworks.com/Atlas/US/9825/Steele+County+1937/, accessed July 2024.

1937b Standard Atlas of Waseca County. Chicago: Central Atlas Co. Available online, https://historicmapworks.com/Atlas/US/10855/, accessed July 2024.

Farm Plat Book Co.
1955 Atlas of Freeborn County. Mankato, MN: Farm Plat Book Co. Available online, https://www.historicmapworks.com/Atlas/US/7903/, accessed July 2024.

Historic Aerials
2024 Historic Aerials. Historical aerial photography and maps interactive mapping application. Available online, https://www.historicaerials.com/viewer, accessed July 2024.

Hixson, W.W. & Co
1916 Plat Book of the State of Minnesota. Rockford, IL: W.W. Hixson & Co. Available online, https://geo.lib.umn.edu/plat_books/stateofmn1916/, accessed July 2024.

1925 Atlas of the State of Minnesota. Rockford, IL: W.W. Hixson & Co. Available online, https://historicmapworks.com/Atlas/US/32714/Minnesota+State+Atlas+1925c/, accessed July 2024

MN Department of Highways
1927 Official Map of the State of Minnesota Trunk Highway System. St. Paul: MN Department of Highways. University of Minnesota Libraries, John R. Borchert Map Library. Available online, https://umedia.lib.umn.edu/item/p16022coll206:157, accessed July 2024.

Mutual Automobile Association
1920 Official Auto Road Map of Minnesota. University of Minnesota Libraries, John R. Borchert Map Library. Available online, https://umedia.lib.umn.edu/item/p16022coll206:132, accessed July 2024.

Nelson, Thomas O. & Co.
1956 Atlas of the State of Minnesota. Fergus Falls, MN: Thomas O. Nelson Co. Available online, https://historicmapworks.com/Atlas/US/10583/Minnesota+State+Atlas+1956/, accessed July 2024.

Ogle, G.A.
1896 Standard Atlas of Waseca County. Chicago: George A. Ogle & Co. Available online, https://historicmapworks.com/Atlas/US/16543/, accessed July 2024.

Union Publishing
1895 Plat Book of Freeborn County. Philadelphia, PA: Union Publishing Co. Available online, https://www.historicmapworks.com/Atlas/US/16604/, accessed July 2024.

US Geological Society (USGS)
2023 Topoview. Topographic Maps interactive mapping application. Available online, https://ngmdb.usgs.gov/topoview/viewer/, accessed July 2024.

Webb Publishing
1913 The Farmers Atlas and Directory of Township Plats, Freeborn County, Minnesota. St. Paul: Webb Publishing. Available online, https://www.historicmapworks.com/Map/US/41699/Title+Page/Freeborn+County+1913/Minnesota/, accessed July 2024.

1914a The Farmers Atlas and Directory of Township Plats, Steele County. St. Paul: Webb Publishing. Available online, https://historicmapworks.com/Atlas/US/7838/, accessed July 2024.

1914b The Farmers Atlas and Directory of Township Plats, Waseca County. St. Paul: Webb Publishing. Available online, https://historicmapworks.com/Atlas/US/16544/, accessed July 2024.

[TRADE SECRET DATA BEGINS

Appendix F-1: Phase Ia Cultural Resources Literature Review
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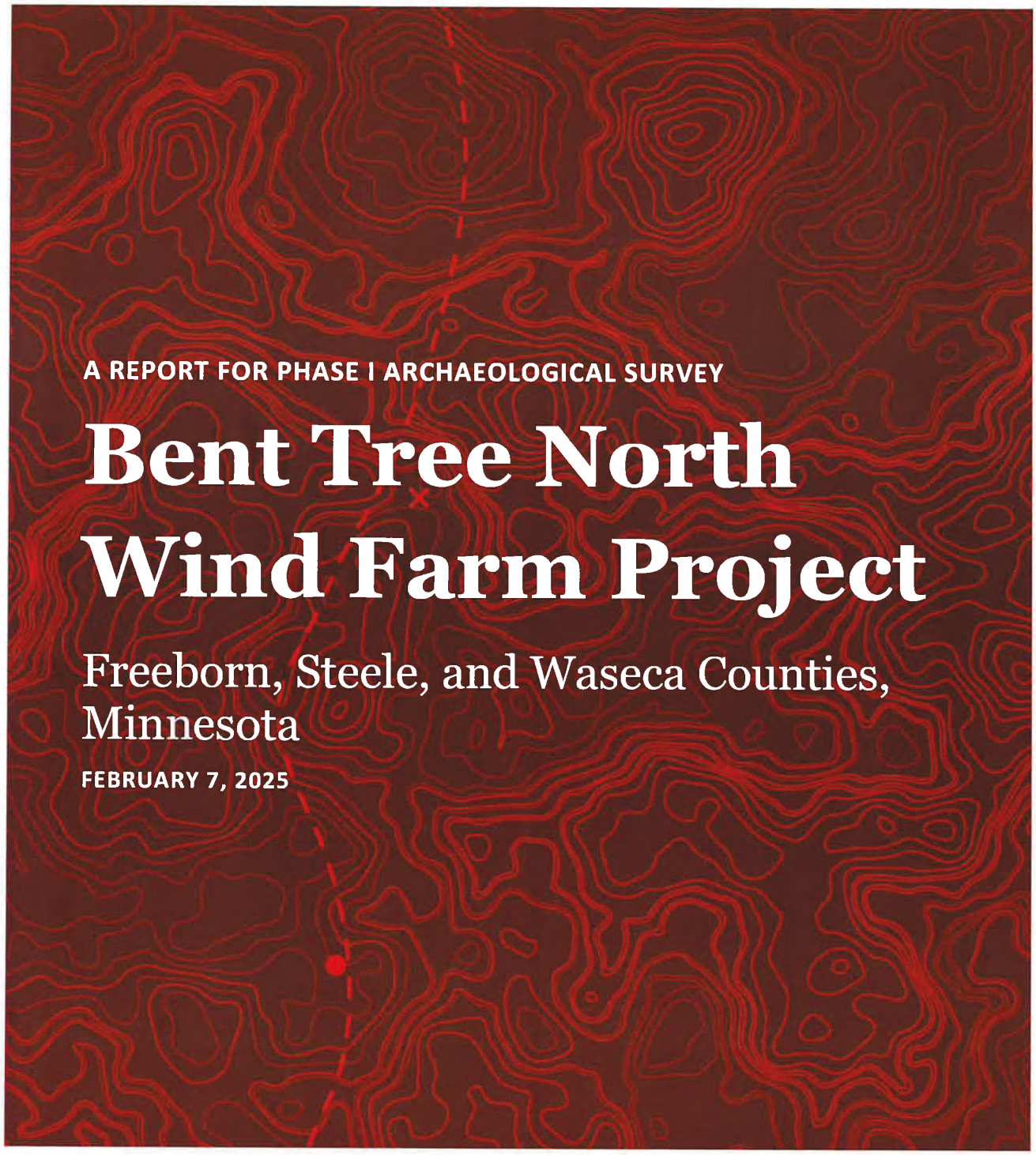
TRADE SECRET DATA ENDS]



A REPORT FOR PHASE I ARCHAEOLOGICAL SURVEY

# Bent Tree North Wind Farm Project

## Freeborn, Steele, and Waseca Counties, Minnesota

FEBRUARY 7, 2025

PREPARED FOR:

Alliant Energy

Powering Beyond

PREPARED BY:

Westwood

Westwood

# Phase I Archaeological Survey

Bent Tree North Wind Farm Project

Freeborn, Steele, Waseca Counties, Minnesota

**Prepared For:**
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**Prepared By:**
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Project Number: R0035761.00
Date: February 7, 2025

# Abstract

Alliant Energy Corporation retained Westwood Professional Services, Inc., to conduct a Phase I Archaeological Survey of the proposed Bent Tree North Wind Farm Project (Project/Project Area) in Freeborn, Steele, and Waseca counties, Minnesota. Archaeological field investigations were conducted in the Project Area to identify the potential effects of the Project on archaeological resources to comply with anticipated requirements of the Public Utilities Commission as part of a Site Permit. Ryan Steeves, MA, RPA, served as Principal Investigator for the Project leading field investigations along with Westwood Archaeologists Rigden Glaab, Sara Nelson, Emory Worrell, Lindsay Schwartzkopf, and William Christensen. Field investigations were conducted over the course of three field sessions: June 10 through 14, and 17; November 8 through 10, 18 through 19, 2024. Field methods consisted of pedestrian survey, conducted in agricultural fields exhibiting 80 through 95 percent ground surface visibility (GSV).

The Project is located in Minnesota Archaeological Region 2e – Prairie Lakes. The Area of Potential Effects (APE) is comprised of locations of proposed ground disturbance from Project infrastructure. The APE consists of 1,330 acres. No previously recorded cultural resources are present in the Project APE based on a review of Portal maintained through the Minnesota Office of the State Archaeologist (OSA). One newly documented resource, Site BT-PRE-01, is a precontact lithic scatter (n=3 flakes) that was identified eroding from a landform in the southwest extent of the APE. The GSV was excellent across the site surface averaging 90 percent and no shovel tests were excavated. Mr. Steeves (Westwood Principal Investigator) first recorded the site suggesting the associated landform has up to 20–40 centimeters of depth potential. *It is recommended the landform be avoided, or additional testing performed to assess the possibility of intact buried deposits.*

Westwood recommends that Site BT-PRE-01 be regarded as *Unevaluated* for the National Register of Historic Places (NRHP). This site boundary should be avoided by the Project or subsurface testing conducted to assess for potential buried deposits. Westwood recommends *no further work* in the remaining areas of the APE. The Project may proceed as planned at these locations. If additions or changes to the proposed construction plans, Westwood should be contacted to complete additional survey prior to any development.

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# Tables



# Exhibits



# Appendix

# 1.0 Introduction

Alliant Energy Corporation (Alliant) contracted Westwood Professional Services, Inc. (Westwood), to perform a Phase I Archaeological Survey of the proposed Bent Tree North Wind Farm Project (Project/Project Area) in Freeborn, Steele, and Waseca counties, Minnesota. The Project Area for the wind development is located on agricultural land north and partially surrounding the town of Hartland, Minnesota (**Exhibit 1**; **Tables 1** and **2**; **Appendix A**).

The Minnesota State Historic Preservation Office (SHPO) requires that Phase I surveys be conducted by qualified archaeologists who meet the Secretary of the Interior's (SOI) qualifications as outlined in 36 C.F.R. 61. Project work was completed to Minnesota SHPO standards. Archaeological field investigations were conducted in the Project Area to identify the potential effects of the Project on archaeological resources to comply with anticipated requirements of the Public Utilities Commission as part of a Site Permit. but the inventory was conducted out of due diligence with no direct state/federal regulation. The cultural group at Westwood has credentialed professionals who meet these standards for the Project. The qualifications of these individuals involved are described below.

Mr. Ryan Steeves served as the Principal Investigator for the Project. He has an MA in anthropology from the Florida Atlantic University and 15 years of archaeological experience. Mr. Steeves is included in the Register of Professional Archaeologists (RPA) and meets the SOI professional standards for prehistoric archaeology and historical archaeology. In addition to his role at Westwood, Mr. Steeves serves as an adjunct professor at Youngstown State University in the Department of Anthropology.

Mr. Rigden Glaab served as a supporting Staff Archaeologist for the Phase I work. His is also a Senior Archaeological Principal Investigator at Westwood. He has an MA in anthropology from the University of Texas-Austin and more than 27 years of archaeological experience. Mr. Glaab is a RPA and meets the SOI professional standards for prehistoric archaeology and historical archaeology.

The following report discusses the results of the archaeological inventory performed by Westwood for the Project. The Area of Potential Effects (APE) investigated by Westwood is 1,330 acres. Results are discussed with recommendations pertaining to the National Historic Preservation Act (NHPA) of 1966, as amended. Westwood will also provide management recommendations pertaining to the development of the current layout used for the Project.

***Table 1: Legal Location of Project Area and Surrounding One-Mile Buffer***

| County | Township (T) | Range (R) | Sections in Project Area | Sections in 1-mile Buffer |
|---|---|---|---|---|
| Waseca | 105N | 23W | - | 25–26 |
| Waseca | 105N | 23W | 35–36 | 34–36 |
| Waseca | 105N | 22W | - | 25–31 |
| Waseca | 105N | 22W | 31–36 | 31–36 |
| Steele | 105N | 21W | - | 26–30 |
| Steele | 105N | 21W | 31–34 | 31–35 |
| Freeborn | 104N | 23W | 1 | 1–3 |
| Freeborn | 104N | 23W | 11–12 | 10–12 |

| | | | | |
|---|---|---|---|---|
| **Freeborn** | 104N | 23W | 13–14 | 13–15 |
| **Freeborn** | 104N | 23W | 23–24 | 23–27 |
| **Freeborn** | 104N | 22W | 1–23 | 1–30 |
| **Freeborn** | 104N | 21W | 2–10 | 2–11 |
| **Freeborn** | 104N | 21W | 15–19 | 15–22 |

***Table 2: Legal Location of Specific Project Corridors Surveyed by Westwood that Form the APE (1,330 Acres)***

| County | Township (T) | Range (R) | Section |
|---|---|---|---|
| **Waseca** | 105N | 22W | 36 |
| **Steele** | 105N | 21W | 31–33 |
| **Freeborn** | 104N | 21W | 5–8 |
| **Freeborn** | 104N | 21W | 17–18 |
| **Freeborn** | 104N | 22W | 1–2 |
| **Freeborn** | 104N | 22W | 5–19 |
| **Freeborn** | 104N | 23W | 12–13 |
| **Freeborn** | 104N | 23W | 23–24 |

# 2.0 Scope of Work

A Phase I Archaeological Survey was conducted to determine whether any undocumented, significant archaeological resources are present within the proposed Project's APE and to define vertical and horizontal boundaries of any such identified sites. If new sites are identified, investigators assess proposed construction impacts and provide recommendations on avoidance or additional work. The APE for this Project's archaeological investigations consists of associated corridors and areas containing locations where ground disturbance may potentially occur. Specifically, the Project APE consists of 69.83 miles of linear corridors (150 feet [ft] cultural survey buffer) and 38 turbine locations (34 primary, 4 alternate [500 ft cultural survey buffer). There are 39.45 miles of collection lines, 12.73 miles of crane paths, and 17.65 miles of access roads. There is also an additional 39 acres of staging areas. A Project APE of 1,330 acres is currently proposed for the 153 MW development (**Exhibits 1** and **2**).

# 3.0 Survey Methods

Project survey methods included background research, a literature review, and field investigations in the form of pedestrian survey. Environmental background and historic contexts were used to assess site probability and determine site types most likely to be encountered in the area. This research was conducted to help in determining the type of cultural resources that may be present in the boundaries of the Project.

The background research and literature review involved detailed file review in the online Portal maintained by the Minnesota OSA and a request for data and files from the Minnesota State Historic Preservation Office (SHPO), specifically examining site maps, archaeological site forms, burial files, and cultural resource survey reports. Other sources investigated included the original General Land Office (GLO) survey maps, the 1874 Andreas State Atlas, and county histories and plat books. The background research and literature review identified previous cultural resource

investigations and previously recorded archaeological sites, along with levels of disturbance and potential for sites within the APE.

Fieldwork consisted of pedestrian visual ground surface survey, completed in 15-meter (m) interval transects throughout the entire proposed Project Area. Most effective visual inspection is conducted on ground surfaces, such as cultivated fields exhibiting exposed soils. Generally, pedestrian survey is utilized in areas where surface visibility is greater than 25 percent.

# 4.0 Results of Background Investigations

## 4.1 Environmental Background

The Project is located in a lightly populated agricultural region in southern Minnesota in Freeborn, Steele, and Waseca counties, and is currently comprised almost entirely of agricultural land. Ground surface visibility (GSV) ranges from 80 to 95 percent. The entire inventoried APE of the Project was conducive to pedestrian survey.

### 4.1.1 Landscape

The Project Area is located in the Eastern Iowa and Minnesota Drift Plains of the Western Corn Belt Plains. The Western Corn Belt Plains is noted to possess high agricultural productivity due to its fertile mesic soils, temperate climate, and adequate precipitation during the growing season. The Eastern Iowa and Minnesota Drift Plains is geologically complex and is a transition between the bedrock-dominated landforms of the Rochester/Paleozoic Plateau Upland (52b) and the relatively recent glacial drift landforms of the Des Moines Lobe (47b). The region extends from Cedar Rapids, Iowa, to the area north of Owatonna, Minnesota. The eastern half of the ecoregion is covered with pre-Wisconsin glacial till while the western half is till plain and till-covered moraines with outwash from the Des Moines Lobe (CEC 2011; WRCMSU 1991; White 2020). The major drainage crossing the Project north-south is the Le Sueur River.

### 4.1.2 Flora

Prior to European settlement in the region, grasses would have dominated a Prairie Grassland Biome. Frequent fires would have kept woody vegetation in check, with fire-tolerant trees, such as cottonwoods (*Populus spp)*, elms (*Ulmus spp*), ashes (*Fraxinus spp*), and willows (*Salix spp*). The modern landscape does not reflect that of pre-European peoples, as less than one percent of this prairie landscape remains, making it functionally extinct. Modern trees are planted as windbreaks around farmsteads and along fencerows to prevent soil erosion, with a mixture of native and non-native plants. Modern native plants may include, big bluestem (*Andropogon gerardii*), blazing star (*Liatris spicata*), purple prairie clover (*Dalea purpurea*), prairie dropseed (*Sporobolus heterolepis*), leadplant (*Amorpha canescens*; Wiken et al. 2011).

### 4.1.3 Fauna

The agricultural landscape of the Western Corn Belt limits the wildlife that may reside within the region. Modern native mammals may include white-tailed deer (*Odocoileus virginianus*), pocket gopher (family Geomyidae), American badger (*Taxidea taxus)*, raccoon (*Procyon lotor*), coyote (*Canis latrans*), and Virginia opossum *(Didelphis virginiana*). Birds may include Canada goose (*Branta canadensis*), red-tailed hawk (*Buteo jamaicensis*), barn owl (*Tyto alba*), wild turkey (*Meleagris gallopavo*), greater prairie chicken (*Tympanuchus cupido)*, and upland sandpiper *(Bartramia longicauda*). Reptiles and amphibians may include great plains toad (*Anaxyrus*

*cognatus)*, American toad (*Anaxyrus americanus*), and snapping turtle (*Chelydra serpentina*). Waterways are predominantly channelized intermittent and perennial streams. Streams and some natural lakes provide habitat for a variety of species like walleye (*Sander vitreus*), bluegill (*Lepomis macrochirus*), northern pike (*Esox lucius*), sunfish (family *Centrachidae*), and others (MnDNR 2021; Wiken et al. 2011).

### 4.1.4 Soils

Soils in the Project Area are comprised primarily of Webster clay loams, Canisteo clay loams, and Nicollet clay loams. A-horizons within these soil types typically extends to around 20 to 40 centimeters below the surface (cmbs), and primarily consist of silty clay loams. These are typically followed by B-horizons extending to depths of 80 to 100 cmbs that transition from clay loam to loam soil textures. These soil types form in deep, poorly drained soils in glacial till or local alluvium derived from upland till on slopes ranging from 0 to 3 percent (USDA 2025).

### 4.1.5 Geology

According macrostrat.org (2025), the bedrock geology of the Project Area is comprised of limestone and dolostone associated with the Maquoketa, Stewartville, Prosser, and Cummingsville formations, which are Late Ordovician (458.4–443.8 million years ago). A key to the geological origin of the central Minnesota surface is glacial advances dating back as early as 1.2 million years ago (MGS 2020). The Project Area's geologic deposits are composed of glacial till, lacustrine sand, outwash deposits, terrace deposits, peat deposits, and floodplain alluvium from the Des Moines Lobe, some 14,000 years ago (MGS 2020).

## 4.2 Cultural History

In general, there are five major archaeological traditions in Minnesota that consist of the Paleoindian, Archaic, Woodland, Plains Village, and the later Mississippian, Oneota, and Psinomani periods (Anfinson 1997; Arzigian 2008; Dobbs 1990; Gibbon 2012). These traditions represent varying degrees of cultural adaptations to changing environmental conditions, endemic population growth, and the movement of Native American groups in the past. The following cultural context presents an interpretation of this history based on current archaeological research and broadly accepted models for pre-contact social lifeways. A brief narrative of historic period developments within the state is presented in the following sections.

### 4.2.1 Paleoindian Period (13,000 to 9000 Before Present [B.P.])

The Paleoindian Period represents the earliest evidence of human occupation in Minnesota, typically separated into the Early Paleoindian (13,000–12,500 B.P.) and Late Paleoindian (12,500–9000 B.P.) periods (Frison 1998). Spear technology is important during this timeframe, as opposed to an emphasis on atlatl and bow and arrow lithic technology seen during later periods. This reflects a subsistence strategy focused on large game hunting and high mobility. However, Gibbon (2012:37) suggests foraging behavior may have been broader spectrum, as evidenced by the long temporal overlap of eastern Archaic and Paleoindian traditions in Minnesota. Paleoindian settlement and mobility patterns constitute a major discussion point in archaeological research.

Clovis culture is commonly regarded as the first evidence of human occupation in Minnesota during the Early Paleoindian period. Its signature implement, the Clovis projectile point, is made from high quality lithic materials and has a central channel flake that extends part way up the

proximal shaft of the tool (Frison 1998). Folsom is another Early Paleoindian technology that temporally follows Clovis during the Early Paleoindian Period. Its projectile point is typically made from high quality materials as well, with the central channel flake extending the entire length of the implement to the distal tip (Hofman 1995). Clovis and Folsom projectile points were used to hunt now-extinct forms of game, including *Bison antiquus* and mammoths. Evidence for Early Paleoindian occupation in Minnesota is limited to isolated finds of projectile points. Clovis isolated finds (N=30) have been found in central and southeastern Minnesota, while Folsom isolated finds (N=20) are documented in the western and southern parts of the state (OSA 2024).

The Late Paleoindian Period in Minnesota is characterized by an unfluted variety of projectile points similar to earlier lanceolate forms that are associated with the Plano Complex (Dobbs 1990). Agate Basin, Eden, Hell Gap, and Scottsbluff are varieties of projectile points found during this time, which are often associated with bison kill sites. Late Paleoindian sites are significantly more common in Minnesota, with over 200 recorded. The Browns Valley Site in western Minnesota and the Bradbury Brook Site are important Late Paleoindian localities in the region (OSA 2024).

Paleoindian archaeology in Minnesota mirrors the initial expansion of *Homo sapiens sapiens* during the height of the Eurasian Upper Paleolithic periods into North America (Gilligan 2010:16). The focal point of this migration is hypothesized to have occurred in a region termed Beringia, which extends from the Verkhoyansk Mountains in Siberian Russia to the edge of the now extinct Laurentide glacial ice sheet in western Canada (Hoffecker and Elias 2007). Traditionally, the shallow waters of the Bering Sea are argued to have served as the principal access point into the Americas when sea levels were reduced due to extensive glaciation that occurred during the Pleistocene Epoch (2.588 million to 12,000 B.P.).

The proposition that the Bering land bridge may have served as passageway for early human migrations was first suggested by the Spanish missionary, Fray Jose de Acosta, in A.D. 1590 (Hoffecker and Elias 2007:2). Although Spain had not yet explored these waters, de Acosta thought it was the only logical explanation for how indigenous populations would have come to the Americas. Eric Hultén (1937) later coined the term "Beringia" to describe the Quaternary ecology of this unique region. The designation Beringia is named for the famous Danish explorer Vitus Bering, who, by way of Russian contract, was the first European to sail the strait in 1728.

The area associated with the bridge is termed the Bering-Chukchi Platform, which extends 1600 km from the Arctic Ocean to the eastern Aleutians (Hoffecker and Elias 2007:5). Although the majority of this region is flat, the topography is punctuated by a few small islands, such as St. Lawrence Island and Wrangle Island. The majority of the shelf lies beneath less than 100 m of water and drops to 30 m near the Chukotka Peninsula, Russia. Over the 2.6-million-year course of the Quaternary Period, 100 Marine Isotope Stages (MIS [Oxygen 16/18 ratios]) have been documented, which show the repeated exposure and inundation of the land bridge constituting 50 glacial/interglacial oscillations (Hoffecker and Elias 2007:7–8). Initial human migrations into North America appear to be associated with the cold snap brought on by the Younger Dryas (12,900–11,700 B.P.), which effectively lowered sea levels by 50 m, exposing the platform.

The archaeological record for humans expanding into North America is manifested at both interior and coastal sites. Early interior sites include that of Swan Point, Broken Mammoth, and Healy Lake, Alaska, which suggest population movements between the Laurentide and Cordilleran ice sheets between 13,000 and 11,000 B.P. (Holmes 2001; Cook 1996; Yesner 2001).

Concurrently, a rapid coastal migration is also indicated at several South American localities, such as Monte Verde, which demonstrate potential evidence for groups moving by boat down the Pacific shoreline at approximately 15,000 B.P. (Dillehay 1989; Dixon 1999; Fladmark 1979). Recent genetic work with mtDNA haplogroups in the Americas and Asia appear to confirm the archaeological evidence, showing simultaneous coastal/interior population movement occurring between 18,700 and 14,200 B.P. (O'Rourke 2009; Perego *et al.* 2009). Alternatively, although followed by much criticism, Bradley and Stanford (2004) suggest that the progenitors of Clovis, and perhaps other groups, were the product of Atlantic migrations associated with peoples of the Solutrean cultures in France. Current genetic evidence refutes this claim; however, the issue does highlight an important debate in Alaskan archaeology (O'Rourke 2009; Perego *et al.* 2009).

The Pleistocene history of Minnesota is long and complex, with most of the state and surrounding regions being covered in glaciers between 18,000 and 11,000 B.P. (Manz 2019:23). Glaciers did not fully recede until approximately 10,000 years ago, where only the southwestern and southeastern parts of the state remained unglaciated. A dominant feature following deglaciation was Glacial Lake Agassiz. This overlapped the northwest portion of the state and formed during the retreat of the Des Moines Lobe, which principally drained to the south via Glacial River Warren (Gibbon 2012:38). As Lake Agassiz further retreated north, the modern Red River of the North began to form flowing towards the Hudson Bay. In terms of human occupation potential, the southern part of the state is likely the highest probability area to encounter archaeological sites, as it was unglaciated (Gibbon 2012: Map 2.1). Elk, mammoth, and extinct forms of bison (e.g., *Bison antiquus*) may have been hunted by Pleistocene Native Americans of this time frame in Minnesota; however, other resources were probably equally important.

Waguespack (2007:69–70) highlights current evidence for early migrations into North America that indicate hunter and gatherers may have been generalized foragers, as opposed to explicitly large game predators. Historically, the first evidence for the Paleoindian Period comes from New Mexico where archaeologists uncovered fluted projectile points in association with extinct megafauna at sites, such as Blackwater Draw (Cook 1927; Figgins 1927). These important early finds quickly placed the antiquity of humans on the mid-continent of North America at the end of the Late Pleistocene (Howard 1936). Much of the debate generated by these discoveries overly focused on the role megafauna placed in the subsistence economy of Paleoindian hunter and gatherers. This pattern is different from many of the interior localities dating prior to 11,000 B.P. (e.g., the Village Lake Site at Healy Lake in Alaska [Cook 1969]), which exhibit a broad-spectrum diet. Bison and wapiti appear to be the predominant large game that were hunted during this early period; however, birds and other small mammals were also exploited (Yesner 2001).

Analogous patterns have been observed outside of Minnesota, including eastern Great Basin sites, such as Bonneville Estates Rock Shelter, which demonstrate a broad-spectrum diet occurring between 13,100 and 12,000 B.P. (Goebel 2007). The archaeological record from this site suggests the prehistoric inhabitants were participating in a mixed foraging and hunting strategy. The identification of this trend in the Great Basin has led to the suggestion that this early phase be called the "Paleoarchaic" instead of "Paleoindian" in recognition of the markedly different subsistence strategies that were similar to later archaic groups (Graf and Schmitt 2007; Willig 1988; Willig and Aikens 1988). Realistically, the debate about whether early Paleoindians were generalized foragers or large game specialists likely rests "on the relationship between what could have been hunted and what was actually taken" (Waguespack 2007:70; Waguespack and Surovell 2003).

In contrast to these views, Kelly and Todd (1988) take the position that early populations of hunter and gatherers entering into the North American continent were heavily dependent on terrestrial fauna, as opposed to plant resources, since this was a more reliable food source. They argue that the strategies employed by these foragers were starkly different from that of modern hunter and gatherers, in that groups were not operating in seasonally restricted spaces. An optimal foraging analysis for procuring large game has recently been conducted by Byers and Ugan (2005). Specifically, they identified variables that may have deterred Paleoindians from focusing exclusively on megafauna, including the large number of individuals needed for processing, difficulty in procuring game, and distribution of game within different environmental patches. The authors conclude that the phenomena of exclusive large mammal hunting likely only occurred in a "narrow range" of places where game was abundant and processing time was low, such as in the Great Plains (Byers and Ugan 2005:1625). Minnesota and surrounding areas were likely encompassed by this narrower range, as suggested by Kelly and Todd (1988).

Continuing with the issue of broad spectrum versus predominant large game hunting has been problematic to the debate of humans entering into the North American continent. Guthrie (1990) has supported the notion that humans could have easily followed the wide trails of proboscideans across the land bridge. Haynes (2001) reasons that modern African elephants can serve as an analogy for understanding how Pleistocene hunters may have interpreted herd characteristics. Such behavioral patterns include the speed, direction, and health of an elephant herd based on the distribution/content of dung, and the relative size of the animals based on the track width. Elephants create a series of fixed and habitually used trails that would have allowed initial colonizers into interior Alaska as a means to systematically explore the landscape. Conversely, Yesner (2001:317) sees the process of colonization into interior Alaska as involving a "push-pull" factor, presenting evidence for the existence of proboscideans in Siberia as late as 9000 B.P. This suggests that hunters would have been encouraged to remain in western Beringia for a longer period of time to procure this higher value resource. Foragers may have only episodically crossed the land bridge as eastward movement began to develop as the principal subsistence cycle.

A theoretical trajectory of incipient occupation into novel landscapes has been proposed by Beaton (1993) to describe the initial colonization of Australia (also see Yesner 2001). His model breaks down human entry into two categories: transient explorers and estate settlers. Beaton suggests that the settlement pattern associated with transient explorers would be lineal, conforming principally to significant geographic features, such as mountains and rivers. This type of occupation may be associated with the earliest sites in Minnesota, which could be situated along the margins of major river corridors (e.g., Glacial River Warren). High mobility and small populations are necessary with the transient model, since groups are entering into an unfamiliar landscape leading to potentially high extinction rates. In contrast, estate settlers inhabit new lands in a more radial fashion since there is a greater degree of familiarity with the resources present. Kelly and Todd (1988) argue that immigrant Paleoindians would have needed to switch territories frequently due to unfamiliar landscapes. This would have been an adaptive method to adjust to resource stress by either switching territories or adjusting the types of foods being consumed. In reality, the Early and Late Paleoindian Periods in Minnesota likely represented a combination of these alternating mobility strategies.

### 4.2.2 Archaic Period (9000 to 2500 B.P.)

Approximately 9000 B.P., a new mode of subsistence strategy began to emerge in the archaeological record across North America (Emerson *et al.* 2011). The general pattern of this change is the replacement of lanceolate spear-points used during the Paleoindian period, and the

adoption of atlatl technology with the presence of groundstone implements. This represents a fundamental difference from earlier forager behavior with a diversification of economy that incorporated more plants into the diets of Native Americans. The Archaic Period in Minnesota began substantially later than other regions starting around 9000 B.P., principally in the southeastern part of the state (Anfinson 1997; Gibbon 2012). Important Archaic innovations include the use of grooved mauls and axes, canine domestication, copper tools, and incipient horticulture. The Archaic Period in Minnesota is poorly known; however, it comprises its longest temporal frame of human occupation.

Xeric environmental conditions began around 9000 B.P. with the spread of prairie grassland across most of southern and western Minnesota (Anfinson 1997). Many of the lakes created as a product of Pleistocene glaciation started to dry during this time, leading to a reduction in game (e.g., bison, fish, birds, etc.) dependent on these resources. These environmental transformations promoted a diversification in hunting strategies, which differed dramatically from the Paleoindian period.

Minnesota experienced a wide variety of changing environmental conditions based on its different ecotones across the state during this time. Consequently, the traditional models of Early, Middle, and Late Archaic found elsewhere in North American do not directly apply. These different environmental regimes necessitated a variety of adaptive strategies to successfully subsist. Archaeologists have defined these internal periods within the state as follows: Prairie Archaic, Lake Forest Archaic, Shield Archaic, and Riverine Archaic (OSA 2024).

The Prairie Archaic Period is found across the western parts of Minnesota, representing an adaption to grassland environments. Key game hunted during this period were bison, which remained a focus throughout the entirety of the Archaic Period. Itasca State Park Site contains one of the best examples of the Prairie Archaic pattern. This site dates approximately to between 9550 and 7950 B.P. and yielded the remains of an extinct species of bison and the presence of a side-notched dart point. Other important localities from the Prairie Archaic Period include the Granite Falls Site and the Canning Site. A regional variation of the Prairie Archaic during the later periods is the presence of copper tools in the northwestern part of the state, with few examples in the southwestern areas as well (Anfinson 1997).

The temporal period, known as the Lake Forest Archaic, characterizes archaeological sites from about 7950 B.P. in much of central and northern Minnesota (Anfinson 1997; Gibbon 2012). Prior to this period, most sites in this region would have mirrored those found in grasslands, whose economy focused on bison hunting. As a result, the Prairie Archaic pattern would have been prevalent during the earliest periods based on the similar environment. The expansion of woodlands during the mesic environments of the post-glacial thermal maximum led to a greater diversification of both plant and animal species. The Mississippi River corridor also served as a conduit for archaic groups from other regions, which ultimately influenced the potential spread of technologies and new lifeways into Minnesota. The site of Petaga Point in Kathio State Park is one of the best examples of the Lake Forest Archaic Period and contains evidence of Old Copper culture.

The Shield Archaic Period characterizes sites from far northeastern Minnesota, whose assemblages are the product of Native American adaptations found farther north in Canada (i.e., Canadian Shield). An important characteristic of Shield Archaic sites is the lack of groundstone tools and copper artifacts found often associated with archaic groups elsewhere in Minnesota

(Anfinson 1997; Gibbon 2012). Shield Archaic sites in Canada are typically found near lakes and rivers where caribou and other migratory game may have crossed. Similar to other northern adapted populations, these groups may have utilized specialized technologies, such canoes, snowshoes, toboggans, bark and skin-covered shelters, bark containers, and efficient winter clothing. The Fowl Lake Site is an important Minnesota site near the Canadian border that exemplifies the archaeological record of this period.

The Riverine Archaic period is found at sites located along the lower Mississippi River and other drainages in southeastern Minnesota (Anfinson 1997; Gibbon 2012). The river valley bottomlands provided a rich and varied source of animals and plants that were exploited by Native American populations. Common riverine resources included aquatic tubers, fish, waterfowl, mussels, deer, elk, and bison may have been taken in the uplands. The fertile floodplains also provided suitable locations for horticulture where plants, such as squash and various early cultigens, were grown. The King Coulee Site in Wabasha County is one of the most complete archaic sites from this region and dates to between 3450 and 2450 B.P. A slate gorget, mussel shells, squash seeds, and stemmed projectile points were recovered during the excavations (OSA 2014).

### 4.2.3 Woodland Tradition (3000 B.P. to 950 B.P.)

Substantial cultural changes began to occur in Minnesota approximately 2500 years ago, with Native American adaptations mirroring broader trends across the southern and eastern United States (Arzigian 2008). This timeframe, known as the Woodland Period, is marked by the presence of burial mounds, pottery, bow and arrow technology (ca. 1450 B.P.), and intensive plant cultivation. Archaeological settlement patterns show Native American groups beginning to aggregate into larger populations along lakes, rivers, and associated drainages. Woodland archaeological sites are often broken into one of a classic tripartite temporal division of Early (3000–2150 B.P.), Middle (2150–1450 B.P.), and Late Woodland (1450–950 B.P.) Periods (Emerson *et al.* 2008).

Traditionally, variations in the Woodland Period across time and space are argued to derive from broader influences that shaped significant trends in cultural practices. These interaction spheres include the Adena (Early Woodland Period), Hopewell (Middle Woodland Period), and Mississippian (Late Woodland Period) Cultures (Anfinson 1997; Gibbon 2012). While these divisions work well for other regions of North America, they do not neatly apply to archaeological sites in Minnesota (Arzigian 2008).

Major Woodland complexes in the various regions of the state include Laurel, Brainerd, and Blackduck (northern Minnesota); Malmo, St. Croix, Onamia, and Kathio (central Minnesota); Fox Lake and Lake Benton (southwestern Minnesota); and La Moille, Howard Lake, Sorg, and Effigy Mound (southeastern Minnesota; Arzigian 2008). Pottery is an important distinguishing characteristic of these complexes, which are commonly named for the associated type of site where they were first discovered. Ceramic vessels range in form from globular to conoidal with shell or sand grit as temper, and designs across the body (e.g., net impressions, patterned incisions). Lithic technology during this timeframe shows a preference for smaller projectile points utilized principally in bow and arrow technology.

A hallmark characteristic of the Woodland Period in Minnesota is presence of burial mounds, of which 12,000 have been recorded in the state (OSA 2024). The areas surrounding Red Wing, Lake

Minnetonka, and Mille Lacs Lake have the highest concentrations of burial mounds. Many of these structures have been destroyed due to historic and modern development.

The subsistence strategies of Woodland groups in Minnesota varied widely based on the type of resources available. Wild rice was central to groups living in the northeast quarter of the state, which was husked in excavated pits and parched in ceramic vessels (Arzigian 2008). Other resources hunted or gathered included deer, fish, and various plants, such as maple sap for sugar. Farther west, around the Red River Valley and southern Minnesota, bison continued to be important as they were in the Archaic Period (OSA 2024). The "Three Sisters" of squash, beans, and corn were grown in small garden plots, which were further supplemented with other resources (e.g., fish and aquatic mammals).

### 4.2.4 Mississippian, Oneota, Plains Village, and Psinomani Traditions (950 B.P. to European Contact)

The Woodland Period ends throughout most of Minnesota around 950 B.P., with the exception of the northern portions of the state (Arzigian 2008; Gibbon 2012). The dominant regional influence was the site of Cahokia in the American Bottom near the modern city of St. Louis, Missouri on the Mississippi River (Pauketat 2009). This influence is most clearly seen in archaeological sites near Red Wing, Minnesota, that contain Cahokian-style ceramics, large, palisaded villages, and evidence of corn horticulture. The presence of square earthen mounds may reflect Cahokian socio-religious belief systems. In Minnesota, the manifestation of this interaction is called the Silvernale Phase (Gibbon 2012).

A widespread cultural complex called Oneota in Minnesota is concurrent with the regional influences of Cahokia, lasting from approximately 950 B.P. until the time of French contact (Gibbon 2012). These mobile groups shared Middle Mississippian traits that included corn horticulture and shell-tempered ceramics (e.g., globular vessels with high rims), but lacked permanent structures, such as burial mounds. Oneota is manifested in different types called Orr (southeastern Minnesota), Blue Earth (south-central Minnesota), and Ogechie (central Minnesota). Siouan languages were spoken at the time of French contact (OSA 2024).

Plains Village groups from the region of the Missouri River in the Dakotas began to interact with the Oneota in western Minnesota after 950 B.P. (Ahler and Kay 2007; Anfinson 1997). These groups hunted bison, practiced corn horticulture, and lived within earth-lodges protected within palisaded forts (e.g., Double Ditch Site in North Dakota). Globular shaped ceramic jars with crushed rock temper are a hallmark technology of this period. Important Plains Village ceramic complexes in western Minnesota include Cambria, Great Oasis, and Big Stone (OSA 2024).

Psinomani groups are believed to be the ancestors of the modern Dakota people, who lived in east central Minnesota (Gibbon 2012). The principal ceramic type associated with this group is Sandy Lake, whose form is more similar to a bowl rather than the globular jars of Oneota varieties. There is evidence of blended ceramic styles with Oneota Native Americans.

### 4.2.5 Contact Period and Post-Contact (A.D. 1650 to Present)

#### *Euroamerican Exploration and Establishment of Minnesota Territory*

Explorers and fur traders from French Canada began traversing the upper Mississippi River in the 1600s and were among the first Europeans to contact the Dakota and Ojibwe peoples in this region (Kellogg 1917). In 1673, French fur trader Louis Joliet and his party were "the first

Europeans to reach the upper Mississippi River," having traveled from Canada on the Wisconsin River to meet the Mississippi near the present southeast corner of Minnesota (MDoASA 2024). The French quickly established a "claim to the interior of the North American continent." In 1675 King Louis XIV "requested that four missionaries be sent to New France" to accompany the expeditions led by explorer René-Robert Cavelier, Sieur de la Salle. Catholic priest Louis Hennepin accompanied la Salle through the Great Lakes and in 1680 established "a Catholic settlement near the upper falls of the Mississippi River" at present St. Anthony Falls in Minneapolis (MDoASA 2024). The falls and much of the land near the junction of the Mississippi and Minnesota Rivers "had held significance for [generations of] Dakota and Anishinaabe (Ojibwe) people" (MHS 2024a).

Throughout much of the eighteenth century, the fur trade remained the biggest motivator for exploration and settlement in Minnesota. Trade posts and settlements were established along rivers, the primary transportation corridors. Global conflicts prevented European investment and expansion in North America during the second half of the eighteenth century. This period found Britain, France, Spain, and other European powers fighting to retain power, which inhibited expansion of settlement in newer territories. Several theaters of the Seven Years' War from 1756 to 1763 were fought on the North American continent. Upon France's defeat in the French and Indian War, control of Louisiana Territory was ceded to the British. Thirteen years later, "the American colonies declared independence, and in 1783 Britain ultimately ceded its empire south of the Great Lakes and east of the Mississippi River to the United States." France regained control of the land west of the Mississippi but agreed to allow Americans joint navigation of the major river (Sage 2017), which aided in establishing American settlement along the western front of the country.

The present central third of the continental United States became part of the country in 1803 following the Louisiana Purchase between the U.S. government and French First Republic in 1803. The American government proceeded to claim lands from Native American, forcing tribes farther west onto smaller areas of land. In the first half of the nineteenth century, Ojibwe and Dakota Indian tribes in what would become Minnesota were coerced into signing several treaties that ceded vast swaths of their lands to the U.S. government, including 100,000 acres of land at the confluence of the Mississippi and Minnesota rivers in 1805. Fort Snelling was constructed at the confluence in 1824 while the first mills were built at St. Anthony Falls (MHS 2024b). Minnesota became a formal territory in 1849 and gained statehood in 1858.

The majority of the Project Area is located in Freeborn County, which will be discussed in the context of historic developments over the past 150 years. Freeborn County was created in 1855, separating Blue Earth and Rice Counties in the Minnesota Territory. Freeborn County was created along with an additional twelve counties in an act from the Minnesota Territorial Legislature. Freeborn county is named for Wiliam Freeborn, a merchant, and territorial legislature (Freeborn County History 2024).

The earliest European settlement within the county is linked to Ole Gulbrandson and his family, taking up residence in the township of Shell Rock, where he constructed a cabin in the spring of 1853. Two years later, William Rice and his family would follow, settling in Shell Rock City. Additional relatives of Mr. Rice would continue to settle in Shell Rock City in the following months. A townsite would be founded in the township of Albert Lea, where upon businesses began to emerge. A store, hotel, blacksmith, and sawmill would all be opened throughout 1855. Milton

Morley would arrive in Spring of 1855, followed by George S. Ruble and Lorenzo Merry, who would settle in what is now Albert Lea (Freeborn County History 2024).

By January of 1857, the first judicial proceedings in the county took place, with Henry Boulton as plaintiff and C.T. Knapp as defendant, before the first Justice of the Peace, William Andrews. Both parties were represented by the same council, and both ordered to be beaten by the court. By August of the same year, the first schoolhouse would be constructed, as well as several places of worship. The first store would be opened in the Town of St. Nicholas, which is now defunct.

Following Minnesota's establishment as a territory and the treaties that removed indigenous peoples from their lands, the first wave of settlement to southern Minnesota began in 1856 and consisted mostly of "New England Yankees," American-born White people moving from eastern states, but nearly ceased within a year due to the financial Panic of 1857 (LOC 2021). In March 1857 a Wahpekute band of Santee Sioux carried out the Spirit Lake Massacre in Iowa at Spirit Lake, Lake Okoboji, and along the Des Moines River. The massacre resulted in the deaths of more than 30 White people. The threat proved to be a short-lived deterrent for White people from settling in the region. As more areas were ceded from Native American control, tribes were forcibly removed from the lands. A month after Minnesota gained statehood in 1858, "a group of Dakota traveled to Washington, D.C. to discuss their reservation," but were ultimately "pressured to cede the lands on the north side of the Minnesota River." Following the U.S.-Dakota War of 1862, "the Dakota were forced to give up all their remaining land in Minnesota, and the U.S. government canceled all treaties made with them" and they were eventually forcefully exiled from the land onto reservations (MNHS 2024).

Norwegian migration into southern Minnesota would steadily increase through the mid-late 1800s (Qualey 1931). In the early settlement period from 1850 to 1865, two large areas were marked out for Norwegian settlement. The southern area received the bulk of Norwegian pioneers, this includes Freeborn County, as well as Houston, Mower, Dodge, Fillmore, and Olmsted counties. After the U.S.-Dakota War of 1862, Norwegians extensively began to occupy the region. Within Freeborn County, Norwegians occupied a settlement area extending from Worth County, Iowa, northward to the Le Suer River Valle. The First Norwegians went to Shell Rock Township in 1853 and were followed by large numbers in 1855. At this time, nearly 40 percent of Freeborn County was Norwegian. Freeman, Nunda, Albert Lea, Riceland, Bancroft, Manchester, Hartland, and Bath would all see an influx of Norwegians during this time. Norwegian migrants would increase from 10,811 to 83,867 in fifteen short years (1860–1875).

The majority of these migrants were born in Norway, but a portion migrated from surrounding states, New York, and Canada. The majority of Norwegians migrating to the United States were from rural areas in Norway, comprising roughly 78 percent of migrants to the United States. Much of the desirable farming land in the region was occupied by Norwegian settlement. The arrival of the railroad in 1862, the Minnesota and Pacific, further increased the influx of Norwegians into the area. Railroad owners would promote and campaign the settlement of Minnesota and Dakota in Scandinavian countries, land that was unappealing to much of the rest of Europe. By 1855, the Minnesota Territorial Legislature would pass an act that provided for an immigration commissioner to be stationed in New York to meet with immigrants and provide literature and information on Minnesota. Among the earliest prominent settlers was Danish born Claus Clausen who took up residence in nearby Austin, Minnesota. Clausen was head of the Norwegian-Lutheran congregation. Clausen briefly took up residence in Albert Lea prior to finding residence permanently in Austin (Qualey 1931).

In the 1940s, the onset of World War II increased the number of manufacturing jobs and other employment opportunities in larger cities, and many people began abandoning their farmsteads and small towns for opportunities in urban areas. Suburban developments in the second half of the twentieth century increased affordable, modern housing opportunities near urban centers. Agriculture is a common practice in the Project Area today.

# 5.0 Literature Review

On February 9, 2024, Westwood Cultural Resource Manager Ryan Grohnke requested a database search from the SHPO. Additionally, the Minnesota state archaeological site files available via the online Portal, maintained by the OSA, and the Minnesota Statewide Historic Inventory Portal, maintained by SHPO, were reviewed to obtain a list of previously recorded archaeological sites and historic structures located within the proposed study area. Mr. Grohnke was assisted by Westwood Architectural Historian Sara Nelson in review of historic and architectural resources. Due to changes in the Project area, the review was updated on August 8, 2024. They also consulted the National Register of Historic Places (NRHP) database managed by the National Park Service.

## 5.1 Previous Cultural Resources Surveys

A Phase IA Archaeological Reconnaissance Survey was completed for the eastern 2/3 of the Project as part of an earlier project area by Rolling Hills Consulting Services, LLC in July 2008. This investigation consisted of a literature review and development of a predictive model to help identify areas of high potential. As part of this investigation, a pedestrian survey was conducted on a sample of parcels based on the model to evaluate the model performance. No archaeological sites were found in this review. Most of the Project was found to be of low potential for unrecorded archaeological resources. [TRADE SECRET DATA BEGINS [redacted] . TRADE SECRET DATA ENDS]

The 1985 *National Register Survey of Freeborn County* survey report identified the historic resources in the town of Hartland and the farmsteads and churches in unincorporated areas of the Study Area (Roberts). A Phase II survey and evaluation of Trunk Highway 13 was conducted in 2021. The historic bridges and culverts throughout the Study Area were last surveyed and evaluated in 2023 as a part of updates to the Minnesota Inventory of Historic Bridges (Mead & Hunt). The Minneapolis and St. Louis Railway (MSTL) corridor was re-evaluated during the 2023 updates to the Minnesota Historic Railroad historic context study (Streamline Associates). Due either to the length of time since they were last conducted, or because of limited coverage, these reports provide limited insights into the development and historic context(s) applicable to the Study Area. The historic/ architectural resources inventoried during the surveys associated with these reports are provided below (see **Table 4**).

## 5.2 Previously Recorded Cultural Resources

### 5.2.1 Previously Recorded Archaeological Resources

Six previously recorded archaeological sites are located within the Study Area (**Table 3**; **Exhibits 1** and **2**). They all have a Native American cultural association and have been *Unevaluated* for listing in the NRHP. One of these sites (21FE0063) is located within the initial Project Area. This site is a single prehistoric artifact. This site does not fall within the specific APE surveyed by

Westwood and is avoided by the Project (**Exhibit 2** [Map Book Page 7; southwestern extent of frame]).

***Table 3: Previously Recorded Archaeological Resources in the Project Area and One-Mile Buffer***

| SHPO ID | Site Type | Cultural Affiliation | NRHP Eligibility | Proximity to Project |
|---|---|---|---|---|
| 21FE0009 | Earthwork | Prehistoric | Unevaluated | Buffer |
| 21FE0059 | Lithic Scatter | Prehistoric | Unevaluated | Buffer |
| 21FE0061 | Artifact Scatter | Prehistoric | Unevaluated | Buffer |
| 21FE0062 | Lithic Scatter | Prehistoric | Unevaluated | Buffer |
| 21FE0063 | Single Artifact | Prehistoric | Unevaluated | Project Area |
| 21FEac | Lithic Scatter | Prehistoric | Unevaluated | Buffer |

### 5.2.2 Previously Documented Historic/Architectural Resources

Twenty-three historic/architectural resources have been previously inventoried within the Study Area (**Table 4**; **Exhibit 1**). Two of these are historic linear resources that cross the Project and Study Area; they have both been recommended *Not Eligible* for the NRHP since 2021. Five of the resources are located in the Study Area, including four bridges that were recommended *Not Eligible* for the NRHP in 2023, and one church has been "moved to [an] unknown location."

Sixteen resources are located in the Project Area, eight of which are within Hartland city limits. They were inventoried in 1984 and are *Unevaluated* for the NRHP. The eight resources in unincorporated areas of the Project include two farmsteads, two culverts, one bridge, one creamery, one church, and one railroad-related structure. The culverts and bridge were recommended *Not Eligible* for the NRHP in 2023; the others were each inventoried over 20 years ago and are considered *Unevaluated* for the NRHP.

***Table 4: Previously Recorded Historic/Architectural Resources in the Project Area and One-Mile Buffer***

| SHPO ID | Name | Location | NRHP Eligibility | Proximity to Project |
|---|---|---|---|---|
| FE-HND-00001 | Knut Knutson Farmstead | off MN Hwy. 13 | Unevaluated | Project |
| FE-BAT-00001 | creamery | off Co. Hwy. 35 | Unevaluated | Project |
| FE-BAT-00003 | Seventh Day Adventist Church | off Twp. Rd. | Unevaluated | Project |
| FE-BAT-00005 | North Congregation of Norwegian Lutheran Church of America | off Co. Rd. 97 [moved to unknown location] | Unevaluated | Buffer |
| FE-FRT-00003 | Bridge 89193 | CSAH 10 over ditch | Recommended Not Eligible | Buffer |
| FE-FRT-00004 | Bridge 89288 | CSAH 33 over Cobb Creek | Recommended Not Eligible | Buffer |
| FE-FRT-00005 | Bridge 89308 | CR 70 over JD #8 | Recommended Not Eligible | Project |
| FE-HAR-00001 | store | Main St. & Railroad St. | Unevaluated | Project |
| FE-HAR-00002 | train depot | Railroad St. & Main St. | Unevaluated | Project |
| FE-HAR-00003 | grain elevator | XXX Main St | Unevaluated | Project |
| FE-HAR-00004 | creamery | Main St and Creamery St | Unevaluated | Project |

| SHPO ID | Name | Location | NRHP Eligibility | Proximity to Project |
|---|---|---|---|---|
| FE-HAR-00005 | Farmers State Bank | NW corner Broadway St. & Johnson St. | Unevaluated | Project |
| FE-HAR-00006 | commercial building | Broadway St. & Lincoln St. | Unevaluated | Project |
| FE-HAR-00007 | U.S. Post Office | xxx Broadway St. | Unevaluated | Project |
| FE-HAR-00008 | house | Main St. & Railroad St. | Unevaluated | Project |
| FE-HAR-00009 | farmstead | CR 70 | Unevaluated | Project |
| FE-HAR-00010 | Minneapolis and St. Louis Railway Co. structure | MSTL Railway | Unevaluated | Project |
| ST-BER-00009 | Culvert L9519 | TWP 2 over ditch | Recommended Not Eligible | Project |
| WE-BYW-00008 | Bridge 88498 | CSAH 1 over stream | Recommended Not Eligible | Buffer |
| WE-NRT-00006 | Culvert 91621 | TWP 10 over Boot Creek | Recommended Not Eligible | Project |
| WE-NRT-00008 | Bridge 7596 | CSAH 1 over Boot Creek | Recommended Not Eligible | Buffer |
| XX-ROD-0164 | Trunk Highway 13 | Trunk Highway 13 | Recommended Not Eligible | Project |
| XX-RRD-CNW004, XX-RRD-CNW010, XX-RRD-CNW012 | Minneapolis and St. Louis Railway Co./Chicago and North Western Railway Co. | Minneapolis and St. Louis Railway | Recommended Not Eligible | Project |

## 5.3 Other Sources

Other archival resources investigated included historical plat maps, topographic maps, and aerial photography. Freeborn, Hartland, and Bath Townships in Freeborn County; New Richland Township in Waseca County; and Berlin Township in Steele County were reviewed in the following maps:

- 1855 General Land Office (GLO) original surveys (Bureau of Land Management)
- 1874 An Illustrated Historical Atlas of the State of Minnesota (A.T. Andreas)
- 1895 Plat Book of Freeborn County (Union Publishing)
- 1896 Standard Atlas of Waseca County (G.A. Ogle & Co.)
- 1913 The Farmers Atlas and Directory of Township Plats, Freeborn County (Webb Publishing)
- 1914a The Farmers Atlas and Directory of Township Plats, Steele County (Webb Publishing)
- 1914b The Farmers Atlas and Directory of Township Plats, Waseca County (Webb Publishing)
- 1916 Plat Book of the State of Minnesota (W.W. Hixson & Co)
- 1920 Official Auto Road Map of Minnesota (Mutual Automobile Association)
- 1925 Atlas of the State of Minnesota (W.W. Hixson & Co.)
- 1927 Official Map of the State of Minnesota Trunk Highway System (MN Highway Department)
- 1937a Standard Atlas of Steele County (Central Atlas Co.)
- 1937b Standard Atlas of Waseca County (Central Atlas Co.)

- 1955 Official County Plat Book and Farmers' Directory of Freeborn County (Farm Plat Book Co.)
- 1956 Atlas of the State of Minnesota (T.O. Nelson)
- 1954, 1957, 1958, 1978 60' Mason City, Iowa topographic map quadrants (USGS)
- 1967, 2010 Freeborn, Hartland, Ellendale 7.5' topographic map quadrants (USGS)
- 1985 Albert Lea 30' topographic map quadrant (USGS)

The 1855 GLO survey depicts small bodies of water and creeks throughout the Study Area, none of which were labeled with names. A small lake is depicted in the south-central portion of the Project, with a tributary stream to its north. Prairie boundaries are depicted meandering around the north side of the lakebed and along the eastern edge of the Project. There are no signs of settlement or development in the Study Area. In current maps, this lakebed has been drained and is called the Mule Lakebed. The stream to its north is depicted as an intermittent continuation of the Le Sueur River.

The 1874 atlas depicts several roads, homesteads, and claimed parcels throughout the Study Area. The route of the "proposed Minneapolis & St. Louis RR" is shown running between Waseca and Albert Lea. Mule Lake and areas of wetlands are also noted. The town of Hartland had not yet been platted, but a Hartland post office is depicted about four miles to its east. The town of Bath was not depicted, but a church and cemetery were located near its eventual location.

In 1895, land throughout the Study Area is claimed; most sections are divided and occupied with between one and four homesteads. The MSTL railway line had been constructed and Hartland platted along it. There are several occupied blocks, but no businesses or other landmarks are called out. A cemetery is depicted one mile south of Hartland, but there is not an associated church. The previously noted Catholic church and cemetery, a school, a creamery, a post office, and a store are depicted in the town of Bath. There are at least six schoolhouses depicted throughout the Project Area: in Section 1 of Freeborn; in Sections 9, 11, and 14 in Hartland, and in Sections 4 and 8 of Bath.

The next two decades of map coverage shows minimal changes to the Study Area through at least 1916. The 1920 road map of the state shows the roadway running through Hartland between Albert Lea and Waseca was called No. 18. Schools and churches are not depicted in the 1925 state map, but the cemetery one mile south of Hartland is noted. The 1927 state highway map depicts the graveled roadway, now Trunk Highway 13, running parallel to the MSTL railway. The town of Hartland, Mule Lake, and the southern tail of the Le Sueur River are noted within the Project Area.

The 1937 Steele and Waseca County atlases show no significant changes along the northern boundary of the Project. The 1937 state highway map is the first that does not depict Mule Lake in the Project Area. The 1955 county atlas shows that Mule Lake has been drained and several tile ditches and open ditches installed throughout the Study Area. The 1956 state atlas depicts the cemeteries in Bath and Hartland townships, but no significant buildings.

The small-scale 1957 map shows an underground pipeline running south through the western Project Area in Sections 6, 7, and 18 of Hartland Township. The 1967 topographic map depicts the Mule Lakebed, through which County Ditch No. 28 runs and carries the LeSueur River. The cemetery one mile south of Hartland is called South Hartland Cemetery. St. Aidens Cemetery in

Bath is noted, but not a church. There are no schoolhouses depicted in the Study Area, which indicates that by this time modern schools had been consolidated in towns. Because of changes in USGS publication standards, few details are depicted in the 2010 topographic map.

Topographic maps suggest there are approximately 130 building sites/homesteads in the unincorporated areas of the Project. Historic aerial photography since 1951 confirms much of the information depicted in maps. Since it was settled, the Study Area has remained a rural area sparsely populated by farmsteads interspersed with agricultural crop fields. Irrigation ditches cross the Project Area, and there are several small stands of trees and windbreaks around farmsteads (Historic Aerials 2024).

# 6.0 Field Investigations

Ryan Steeves, MA, RPA, served as Principal Investigator for the Project and directly oversaw field investigations. He was assisted by Westwood Archaeologists Rigden Glaab, Sara Nelson, Emory Worrell, Lindsay Schwartzkopf, and William Christensen. Fieldwork was completed over the course of three field sessions: June 10 through 14, and 17; November 8 through 10, and 18 through 19, 2025. The GSV averaged 80 to 95 percent in all areas of Project APE providing excellent surface visibility. Representative photographs of the APE can be viewed in **Appendix A**.

Weather was cool and clear to overcast for the duration of the Project. Topography throughout the APE is generally level with small topographic rises. The land is entirely agricultural interspersed with farmsteads. Field conditions generally comprised recently harvested and plowed fields, which facilitated pedestrian survey. One new cultural resource, a precontact lithic scatter (Site BT-PRE-01), was identified during the course of survey and is discussed below.

### 6.1.1 Site BT-PRE-01 (Precontact Lithic Scatter)

Site BT-PRE-01 is a small lithic scatter of debitage (**Exhibits 1** and **2** [Map Book Page 9]; **Appendix A**). [TRADE SECRET DATA BEGINS [redacted] TRADE SECRET DATA ENDS] The site boundary encompasses a 20 m diameter area and is distributed across a northeast projecting 12° slope. The GSV of the landform, turbine location area, and identified distribution of artifacts was 95 percent at the time of documentation. Soils at the site have a loam to clay loam texture that may match anticipated depth predictions for A horizons in the Project Area (20–40 cmbs; USDA 2025). Additional artifact deposits could be found in other areas of the associated landform.

There were three chert flakes identified at Site BT-PRE-01. Flake 1 measures 2.2 x 1.9 x 0.15 cm and is made from a semi-translucent white gray chert with a variegated surface showing cortex. Flake 2 (2.0 x 1.3 x 0.5 cm) and Flake 3 (1. 9 x 1.0 x 0.1 cm) are made from the same chert material. Light oxidation may be present. The large size of the flakes and presence of cortex may suggest early bifacial reduction. Reduction for cutting tools could also be a site function. Because of the

relatively deep soils and the presence of a small ridge, Principal Investigator Ryan Steeves recommended that the entirety of the intact landform be avoided by ground disturbing activities. The site may have depth potential but was not investigated further by shovel testing due to the excellent surface visibility.

Site BT-PRE-01 is *Unevaluated* for NRHP and Westwood recommends the Project avoid this site. If the site will be impacted, Westwood recommends that additional shovel testing be performed within the current boundary and connected landform to determine if buried deposits are present, and if so, fully delineate the extent of the lithic scatter. Should buried deposits be present, a formal NRHP evaluation may be necessary.

# 7.0 Summary and Recommendations

Alliant contracted Westwood to perform a Phase I Archaeological Survey of the proposed Bent Tree North Wind Farm Project in Freeborn, Steele, and Waseca counties, Minnesota. Archaeological investigations were conducted to comply with anticipated requirements of the Public Utilities Commission as part of a Site Permit. Ryan Steeves, MA, RPA, served as Principal Investigator for the Project directly overseeing field investigations along Westwood Archaeologists Rigden Glaab, Sara Nelson, Emory Worrell, Lindsay Schwartzkopf, and William Christensen. Field investigations were completed during three field sessions (June 10–14, and 17; November 8–10, and 18–19, 2024). The entire surveyed APE was conducive to pedestrian survey with the average Project GSV ranging from 80 to 95 percent.

The total APE consisting of Project turbines, corridors and associated buffers surveyed by Westwood encompass approximately 1,330 acres. No previously recorded cultural resources are present in the Project APE based on a review of Minnesota OSA Portal. Site BT-PRE-01 is a newly documented precontact lithic scatter (n=3 flakes) identified in the southwestern extent of the Project APE (**Exhibit 2** [Map Book Page 9]). This site is *Unevaluated* for the NRHP. If it cannot be avoided, Westwood recommends that Site BT-PRE-01 be further assessed.

[TRADE SECRET DATA BEGINS [redacted] TRADE SECRET DATA ENDS] Site BT-PRE-01 can also be avoided by shifting the proposed access road/utility line farther north which currently intersects with the western turbine location buffer at the site boundary. Westwood recommends an archaeological inventory of any new locations not previously subject to a Phase I Archaeological Survey.

Westwood stresses that if construction plans are altered to include areas not previously surveyed, those locations must be examined for cultural resources. Although an archaeological survey was completed, the possibility of unidentified resources remains. If unrecorded archaeological sites are discovered during construction, all ground-disturbing activities in the area should stop and archaeologists at Westwood should be contacted. Further, if human remains are encountered during construction activities, all ground disturbing activity must cease, and local law enforcement must be notified. *Minnesota Statute section 307.08, the Private Cemeteries Act, prohibits the intentional disturbance of human burials.*

# 8.0 References Cited

Ahler, S. A., and M. Kay
2007 Plains Village Archaeology: Bison-hunting Farmers in the Central and Northern Plains. The University of Utah Press, Salt Lake City.

Anfinson, Scott. F.
1997 Southwestern Minnesota Archaeology: 12,000 Years in the Prairie Lake Region. Minnesota Historical Society, St. Paul.

Arzigian, C.
2008 *Minnesota State Multiple Property Documentation Form for the Woodland Tradition*. Submitted to the Minnesota Department of Transportation (MnDOT). Mississippi Valley Archaeology Center, University of Wisconsin-La Crosse (Report No. 735).

Beaton, J. M.
1993 Colonizing continents: some problems from Australia and the Americas. In *The First Americans: Search and Research*, edited by T.D. Dillehay and D.J. Meltzer, pp. 209–230. CRC Press, Boca Raton, Florida.

Bradley, B., and D. Stanford
2004 The North Atlantic Ice-Edge Corridor: A Possible Palaeolithic Route to the New World. *World Archaeology* 36(4):459–478.

Byers, D. A. and A. Ugan
2005 Should We Expect Large Game Specialization in the Late Pleistocene? An Optimal Foraging Perspective on Early Paleoindian Prey Choice. *Journal of Archaeological Science* 32:1624–1640.

Commission For Environmental Cooperation (CEC)
2011 North American Terrestrial Ecoregions – Level III. Online resource, http://www.cec.org/publications/north-american-terrestrial-ecoregions-level-iii/, accessed July 2024.

Cook, H. J.
1927 New Geological and Paleontological Evidence Bearing on the Antiquity of Mankind in America. *Natural History* 27:240–247.

Cook, J. P.
1996 Healy Lake. In *American Beginnings: The Prehistory and Paleoecology of Beringia*, edited by F.H. West, pp. 323–327. University of Chicago Press, Chicago.

1969 The Early Prehistory of Healy Lake, Alaska. Ph.D. dissertation, Department of Anthropology, University of Wisconsin, Madison.

Dillehay, T.
1989 Monte Verde, A Late Pleistocene Settlement in Chile, Volumes 1 and 2. Smithsonian Institution Press, Washington, D.C.

Dixon, E. J.
1999 Bones, Boats, and Bison: Archaeology and the First Colonization of Western North America. University of New Mexico Press, Albuquerque.

Dobbs, Clark.
1990 Outline of Historic Contexts for the Prehistoric Period (CA. 12,00B.P.–A.D. 1700): A Document in the Series Minnesota History in Sites and Structures: A Comprehensive Planning Series. Institute for Minnesota Archaeology Reports of Investigations Number 37, Minneapolis.

Emerson, T. E., D. L. McElrath, and A. C. Fortier (editors)
2011 Archaic Societies: Diversity and Complexity across the Midcontinent. State University of New York Press, Albany.

2008 Late Woodland Societies: Tradition and Transformation across the Midcontinent. University of Nebraska Press, Lincoln.

Figgins, J. D.
1927 The Antiquity of Man in America. *Natural History* 27(3):229–239.

Fladmark, K. R.
1979 Routes: Alternative Migration corridors for Early Man in North America. *American Antiquity* 44:55–69.

Freeborn County History
2024 About Freeborn County. Webpage, https://www.freeborncountyhistory.org/, accessed August 8, 2024.

Frison, George C.
1998 Paleoindian Large Mammal Hunters on the Plains of North America. Proceedings of the National Academy of Sciences of the United States of America, Vol. 95, No. 24. (Nov. 24, 1998), pp. 14576–14583.

Gibbon, Guy E.
2012 Archaeology of Minnesota: The Prehistory of the Upper Mississippi River Region. University of Minnesota Press, Minneapolis.

Gilligan, I.
2010 The Prehistoric Development of Clothing: Archaeological Implications of a Thermal Model. Journal of Archaeological Method and Theory 17:15–80.

Goebel, T.
2007 Pre-Archaic and Early Archaic Technological Activities at the Bonneville Estates: A First Look at the Lithic Artifact Record. In *Paleoindian or Paleoarchaic? Great Basin Human Ecology at the Pleistocene-Holocene Transition*, edited by K.E. Graf and D.N. Schmitt, pp. 156–184. University of Utah Press, Salt Lake City.

Graf, K. E., and D. N. Schmitt (editors)
2007 Paleoindian or Paleoarchaic? Great Basin Human Ecology at the Pleistocene-Holocene Transition. University of Utah Press, Salt Lake City.

Guthrie, R. D.
1990 Frozen Fauna of the Mammoth Steppe: The Story of Blue Babe. University of Chicago Press, Chicago.

Haynes, G.
2001 Elephant Landscapes: Human Foragers in the World of Mammoths, Mastodonts, and Elephants. In *The World of Elephants-International Congress, Rome 2001*, edited by Consiglio Nazionale delle Ricerche, pp. 571–576. Consiglio Nazionale delle Ricerche, Rome, Italy.

Historicaerials.com
2024 Historic Aerials Viewer. Online resource, https://www.historicaerials.com/viewer, accessed July 2024.

Hoffecker, J., and S. A. Elias
2007 *Human Ecology of Beringia*. Colombia University Press, New York.

Hofman, Jack L.
1995 Dating Folsom Occupations on the Southern Plains: The Lipscomb and Waugh Sites. Journal of Field Archaeology, 22(4), pp. 421–437.

Holmes, C.
2001 Tanana River Valley Archaeology Circa 14,000 to 9000 B.P. *Arctic Anthropology* 38 (2):154–170.

Howard, E. B.
1936 An Outline of the Problem of Man's Antiquity in North America. *American Anthropologist* 38(3):394–413.

Hultén, E.
1937 Outline of the History of Arctic and Boreal Biota During the Quaternary Period: Their Evolution During and After the Glacial Period as Indicated by the Equiformal Progressive Areas of Present Plant Species. Unpublished Ph.D. dissertation, Lund University, Sweden.

Kellogg, L. (editor)
1917 Early Narratives of the Northwest, 1634–1699. Charles Scribner's Sons, New York.

Kelly, R. L., and L. C. Todd
1988 Coming into the Country: Early Paleoindian Hunting and Mobility. *American Antiquity* 53:231–244.

Library of Congress (LOC)
2021 "Pioneering the Upper Midwest: Books from Michigan, Minnesota, and Wisconsin, ca. 1820 to 1910" Overview. Library of Congress collection. Online resource, https://www.loc.gov/collections/pioneering-the-upper-midwest/articles-and-essays/history-of-the-upper-midwest-overview/yankee-empire/, accessed July 2024.

Macrostrat.org
2025 Geology of the Bent Tree Project Area. Online application, https://macrostrat.org/map/loc/-93.4729/43.8075#z=11.5, accessed January 28, 2025.

Manz, L.
2019 *Economic Value of Glacial Stratigraphy*. Paper published by the North Dakota Department of Mineral Resources. Electronic document, https://www.dmr.nd.gov/ndgs/documents/newsletter/2019Winter/Economic_Value_of_Glacial_Stratigraphy.pdf, accessed December 2024.

Minnesota Department of Natural Resources (MnDNR)
2021 Ecological Classification System, Mammals in Minnesota, a Partial List, Subsection. Online resource, https://www.dnr.state.mn.us/mammals/index.html, accessed July 2024.

Minnesota Historical Society (MNHS)
2024 "Minnesota Treaties" The US-Dakota War of 1862. Minnesota Historical Society. Online resource, https://www.usdakotawar.org/history/treaties/minnesota-treaties#, accessed July 2024.

Minnesota Geological Survey (MGS)
2020 Glacial Geology, College of Science and Engineering. Electronic document, https://cse.umn.edu/mgs/glacial-geology, accessed December 2024.

Minnesota Department of Administration: State Archaeologist (MDoASA)
2024 Contact Period. Electronic document, https://mn.gov/admin/archaeologist/the-public/mn-archaeology/contact-period/#:~:text=An%20Overview%20of%20Contact%20Period,the%20British%2C%20and%20finally%20Americans., accessed December 2024.

Minnesota Historical Society (MHS)
2024a "Father Louis Hennepin." History, The US-Dakota War of 1862. Minnesota Historical Society interactive website. Online resource, https://www.usdakotawar.org/history/father-louis-hennepin, accessed December 2024.

2024b "Timeline of Minneapolis." History, Mill City Museum. Online resource, https://www.mnhs.org/millcity/learn/history/timeline, accessed December 2024.

O'Rourke, D. H.
2009 Human Migrations: The Two Roads Taken. *Current Biology*. 19(5):R203–R205.

Office of the State Archaeologist (OSA)
2024 Cultural History of Minnesota. Electronic document, https://mn.gov/admin/archaeologist/educators/mn-archaeology/, accessed December 2024.

Pauketat, T. R.
2009 Cahokia: Ancient America's Great City on the Mississippi. Penguin Books, London, England.

Perego, U. A., A. Achilli, N. Angerhofer, M. Accetturo, M. Pala, A. Olivieri, B. Hooshiar Kashani, K.H. Ritchie, R. Scozzari, Q. P. Kong, N. M. Myres, A. Salas, O. Semino, H. Bandelt, S. R. Woodward, and A. Torroni
2009 Distinctive Paleo-Indian Migration Routes from Beringia Marked by Two Rare mtDNA Haplogroups. *Current Biology* 19(1):1–8.

Qualey, Carlton C.
1931 Pioneer Norwegian Settlement in Minnesota. Minnesota History, 12(3):247–280.

Sage, H.J.
2017 "The Paris Peace Treaty 1783," American Revolution. Sage American History website. Online resource, http://sageamericanhistory.net/revolution/topics/paristreaty.htm, accessed December 2024.

U.S. Department of Agriculture (USDA)
2025 Websoil Survey Map. Electronic document, https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm, accessed January 2025.

Waguespack, N. M.
2007 Why We're Still Arguing About the Pleistocene Occupation of the Americas. *Evolutionary Anthropology* 16:63–74.

Waguespack, N. M. and T. A. Surovell
2003 Clovis Hunting Strategies, or How to Make out on Plentiful Resources. *American Antiquity* 68(2):333–352.

White, Dennis
2020 Ecological Regions of Minnesota: Level III and IV maps and descriptions. U.S. Environmental Protection Agency. Electronic document, https://gaftp.epa.gov/EPADataCommons/ORD/Ecoregions/mn/mn_eco_desc.pdf.

Wilken, Ed, Francisco Jiménez Nava, and Glen Griffith.
2011 North American Terrestrial Ecoregions—Level III. Commission for Environmental Cooperation, Montreal, Canada. Electronic document, http://www3.cec.org/islandora/en/item/10415-north-american-terrestrial-ecoregionslevel-iii.

Willig, J. A.
1988 Paleo-Archaic Adaptations and Lakeside Settlement Patterns in the Northern Alkali Basin. In *Early Human Occupation in Far Western North America: The Clovis-Archaic Interface*, edited by J. A. Willig, C. M. Aikens, and J. L. Fagan, pp. 417–482. Nevada State Museum Anthropological Papers No. 21. Carson City, Nevada.

Willig, J. A. and C. M. Aikens
1988 The Clovis-Archaic Interface in Far Western North America. In *Early Human Occupation in Far Western North America: The Clovis-Archaic Interface*, edited by Judith A. Willig, C. Melvin Aikens and John L. Fagan, pp. 1–40. Nevada State Museum Anthropological Papers No. 21. Carson City, Nevada.

Water Resources Center Mankato State University (WRCMSU)
1991 Freeborn County Geologic Alas. Legislative Commission on Minnesota Resources. Online Resource, https://mrbdc.mnsu.edu/sites/mrbdc.mnsu.edu/files/public/gis/minnesota_geologic_atlas/freeborn_county_geologic_atlas.pdf, accessed July 2024.

Yesner, D. R.
2001 Human Dispersal into Interior Alaska: Antecedent Conditions, Mode of Colonization, and Adaptations. *Quarternary Science Reviews* 20:315.

PUBLIC DOCUMENT
TRADE SECRET DATA HAS BEEN EXCISED
Appendix F-2: Phase I Archaeological Survey

[TRADE SECRET DATA BEGINS

Appendix F-2: Phase I Archaeological Survey
(Pages 29 - 41)

TRADE SECRET DATA ENDS]

# APPENDIX A

## Representative Photos of the Project Area

**Bent Tree Wind Project**
Freeborn, Steele, and Waseca Counties, Minnesota

Figure 1: Overview of the northeast Project Area, facing west.

Figure 2: Overview of the northwest Project Area, facing east.

Figure 3: Overview of the southwest Project Area, facing east.

Figure 4: Overview of the southwest Project Area, facing east.

Figure 5: Overview of the southeast Project Area, facing east.

Figure 6: Overview of the north Project Area, facing north.

Figure 7: Overview of western substation on 325th Street, facing southeast.

Figure 8: Overview of central substation on 325th Street, facing southeast.

Figure 9: Overview of the south-central Project Area, facing west.

Figure 10: Overview of the east Project Area, facing north.

Figure 11: Overview of the west-central Project Area, facing west.

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Figure 14: Flakes, Site BT-PRE-01.