

APPENDIX G

Phase I Cultural Resource Survey Report

Lyon County Generating Station Project
Combined Application
MPUC Docket Nos. E002/CN-25-145, G002/GS-25-154,
E002/TL-25-161 & G002/GP-25-163
May 2025

XCEL ENERGY

A PHASE I CULTURAL RESOURCE SURVEY OF THE PROPOSED LYON COUNTY GENERATING STATION SITE

LYON COUNTY GENERATING STATION

PROJECT NO. 170541

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List of Abbreviations

Abbreviation	Term/Phrase/Name
ac	acre(s)
AD	Anno Domini
BC	Before Christ
BLM	Bureau of Land Management
Burns & McDonnell	Burns & McDonnell Engineering Company, Inc.
CT	combustion turbine generator
Construction Easement	Temporary or permanent ground disturbance related to the Project
F.	Feature
GLO	General Land Office
GPS	Global Positioning System
ha	hectare(s)
m	meter(s)
MNDOA	Minnesota Department of Agriculture
MHD	Minnesota Highway Department
MN OSA	Minnesota Office of the State Archaeologist
MN PUC	Minnesota Public Utilities Commission
MNSHIP	Minnesota State Historic Inventory Portal
MN SHPO	Minnesota State Historic Preservation Office
MW	megawatts
N	North
No.	Number(s)
NRHP	National Register of Historic Places
Project	Lyon County Generating Station
SITS	Smithsonian Institution Trinomial System
Survey Corridor	312.2 ac block area containing any temporary or permanent ground disturbance related to the Project
Study Area	One-mile buffer around the Survey Corridor
USDA	U.S. Department of Agriculture
USGS	U.S. Geographic Survey
UTM	Universal Transverse Mercator
W	West
Xcel	Xcel Energy

Management Summary

Burns & McDonnell Engineering Company, Inc. (Burns & McDonnell) was hired by Northern States Power Minnesota d/b/a Xcel Energy (Xcel) to complete a Phase I Cultural Resource Survey of the proposed Lyon County Generating Station site (Project). The proposed Project would provide 420 megawatts of combustion turbine generator capacity and include associated facilities, at an approximately 312.2-acre (ac) greenfield generating station located in Lyon County, Minnesota, approximately 1 mile north of the town of Garvin. At the request of Xcel, Burns & McDonnell conducted cultural resource investigation for siting and design purposes.

The Project is located on private property and will require a Certificate of Need and a Site Permit from the Minnesota Public Utilities Commission; therefore, the Project is subject to review by the Minnesota Office of the State Archaeologist (MN OSA) and State Historic Preservation Office (MN SHPO). The purpose of this investigation is to provide the necessary information to these agencies for review by confirming the presence or absence of cultural resources within the Project's Survey Corridor.

As the Project's Construction Easement has not been finalized at this time, a block Survey Corridor of 312.2 ac (126.34 hectares) was covered by Burns & McDonnell during Phase I cultural resource surveys. This Survey Corridor includes all areas within the potential Construction Easement that may be permanently or temporarily affected during Project work. The Survey Corridor is a rectangular area located in the west ½ of Section 23, Township 109 North, Range 41 West. The Survey Corridor is bounded to the north by U.S. Highway 14, to the west by U.S. Highway 59, and to the south by 120th St. The Project is in the Prairie Lakes South Archaeological Region.

A Literature Review was conducted for the Project in April 2024 by Christina Huling, a Burns & McDonnell archaeologist, using MN OSA and MN SHPO records, and using publicly available, assessor records, historic plats, aerials, maps, and U.S. Geological Survey topographical maps. Fieldwork for the Project was conducted between April 15 and April 18, 2024, and consisted of pedestrian survey led by Secretary of Interior-qualified Principal Investigator and Architectural Historian, Melinda McCarthy. Christina Huling assisted in the completion of fieldwork.

The investigations resulted in the identification of one historic-age historic resource within the northwestern corner of the Survey Corridor. The Garvin Corner Store (LY-CUS-00053) is a circa 1967 cinder block building which has been shuttered and currently serves as a trash dump. The resource features poor integrity and lacks historic significance. It is recommended not eligible for the National Register of Historic Places.

No eligible resources were identified during the course of survey. Therefore, Burns & McDonnell recommends a determination of *No Historic Sites Affected* as documented and mapped herein. If areas beyond the Survey Corridor are to be used during construction, Burns & McDonnell recommends completion of an addendum Phase I cultural resource surveys to determine the presence or absence of cultural resources within these areas.

1.0 Introduction

Burns & McDonnell Engineering Company, Inc. (Burns & McDonnell) was hired by Northern States Power Minnesota d/b/a Xcel Energy (Xcel) to complete a Phase I Cultural Resource Survey of the proposed Lyon County Generating Station (Project). The proposed Project would provide 420 megawatts (MW) of combustion turbine generator (CT) capacity and include associated facilities at an approximately 312.2-acre (ac) greenfield generating station located in Lyon County, Minnesota, approximately 1 mile north of the town of Garvin. At the request of Xcel, Burns & McDonnell conducted cultural resource investigation for siting and design purposes.

The Project is located on private property and will require a Certificate of Need and a Site Permit from the Minnesota Public Utilities Commission (MN PUC); therefore, the Project is subject to review by the Minnesota Office of the State Archaeologist (MN OSA) and State Historic Preservation Office (MN SHPO). The purpose of this investigation is to provide the necessary information to these agencies for review by confirming the presence or absence of cultural resources within the Project's Survey Corridor.

1.1 Project Details

The Project would provide firm dispatchable generation to provide capacity needed to ensure reliable service to customers. To meet a portion of the need for firm dispatchable electrical generation, Xcel proposes two natural gas-fired CTs, totaling approximately 420 MW. The Project also includes the following associated facilities:

- On-site operation facilities (control room, offices, warehouse, etc.).
- A twelve-inch natural gas supply from the Northern Border Pipeline, which routes through the southwestern corner of the Lyon County Station property. Northern Border will perform the tie-in to the main pipeline and construct a metering and pressure regulating station on the site. At that point, Xcel Energy will continue the piping to the CTs.
- Three 750-kilowatt emergency diesel generators to provide emergency power.

1.2 Survey Corridor

As the Project's Construction Easement has not been finalized at this time, a block Survey Corridor of 312.2 ac (126.34 hectares [ha]) was covered by Burns & McDonnell during Phase I cultural resource surveys. This Survey Corridor includes all areas within the potential Construction Easement that may be permanently or temporarily affected during Project work. The Survey Corridor is a rectangular area located in the west ½ of Section 23, Township 109 North (N), Range 41 West (W) (**Figure 1-1**). The Survey Corridor is bounded to the north by U.S. Highway 14, to the west by U.S. Highway 59, and to the south by 120th St (**Figure 1-2**). The Survey Corridor is located in the Balaton and Tracy West 7.5-minute U.S. Geological Survey (USGS) quadrangles. See **Table 1-1** for the Universal Transverse Mercator (UTM) description of the Survey Corridor.

Table 1-1: UTM Description of the Survey Corridor

UTM Zone	UTM Northing	UTM Easting	Point Description
15N	4902181	280019	Northwestern corner of Survey Corridor
	4902141	280812	Northeastern corner of Survey Corridor

	4900545	280751	Southeastern corner of Survey Corridor
	4900581	279966	Southwestern corner of Survey Corridor

1.3 Project Personnel

Fieldwork for the Project was conducted between April 15 and April 18, 2024, and consisted of pedestrian survey led by Secretary of Interior-qualified Principal Investigator and Architectural Historian, Melinda McCarthy. Christina Huling, a Burns & McDonnell archaeologist, assisted in the completion of fieldwork.

Figure 1-1: Project Survey Corridor (Topographical)

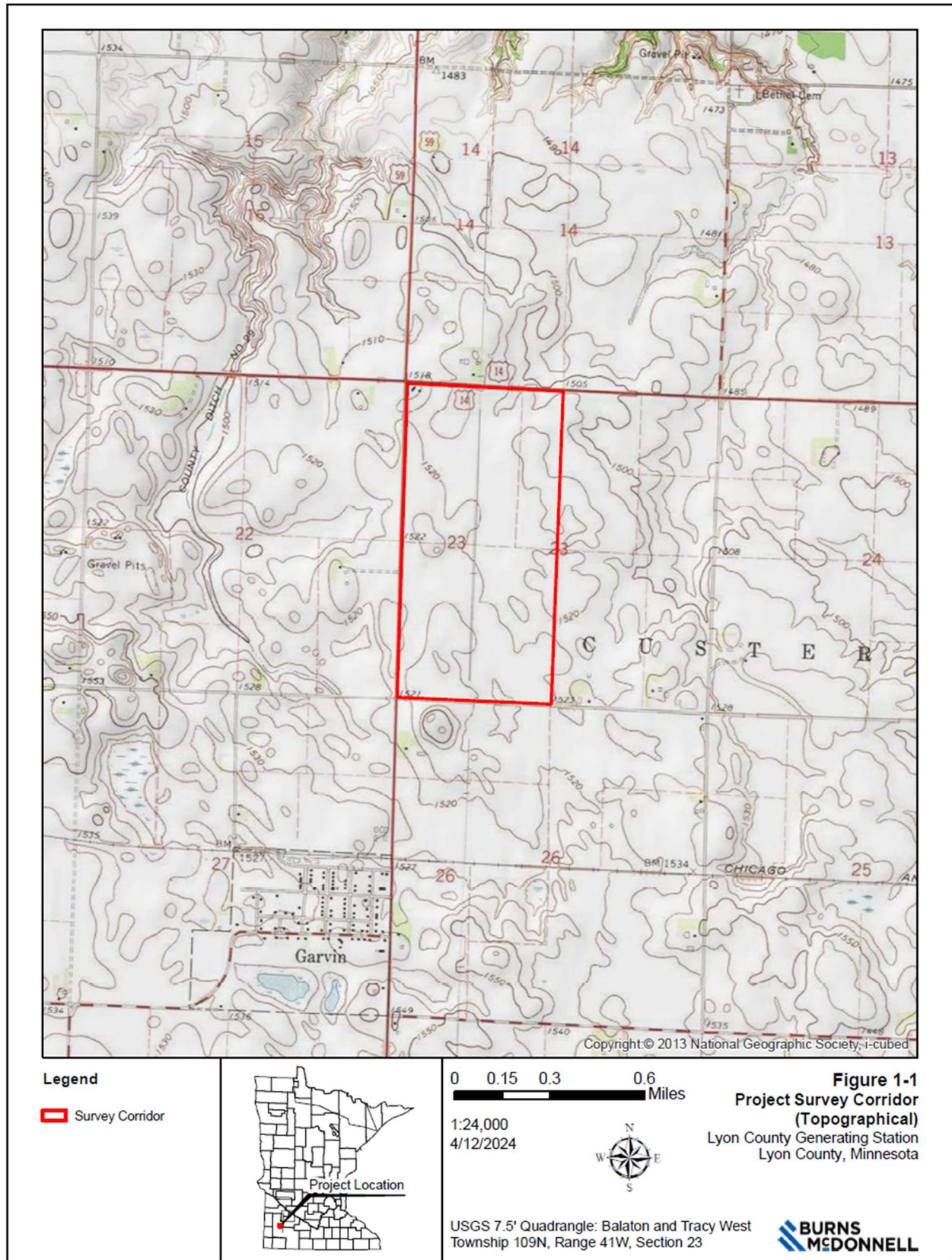


Figure 1-2: Project Survey Corridor (Aerial)



2.0 Literature Review

A Literature Review or file search was conducted for the Project and a one-mile Study Area in April 2024 by Christina Huling using MN OSA and MN SHPO records and publicly available archival materials.

2.1 Methods

The MN OSA online portal was used to identify any archaeological resources within the Study Area, as well as site probability modeling made available by MN OSA. The MN SHPO online portal was also consulted to identify any previously documented aboveground resources in the Survey Corridor and Study Area.

Historic plat maps, topographic maps, and historical aerial imagery for the Survey Corridor and a one-mile Study Area surrounding the Survey Corridor were reviewed to identify any historic farmsteads, roads, or trails in the vicinity of the Project. Archival sources consulted prior to fieldwork included the original Bureau of Land Management (BLM) General Land Office (GLO) survey map of Township 109 N, Range 41 W and NRHP listings for Lyon County. While the Find-A-Grave's cemetery search was consulted to determine the presence or absence of historic period cemeteries in the Study Area.

The United States Department of Agriculture (USDA) web soil survey was also consulted to assess the depositional environment and potential for precontact site preservation within the Survey Corridor.

2.2 MN OSA Records

Site records for archaeological resources within the Survey Corridor and a one-mile Study Area surrounding the Survey Corridor were examined using the MN OSA online portal.

No previously documented resources were identified within the Survey Corridor. A total of four archaeological resources were identified within the one-mile Study Area. Two of these resources are precontact lithic scatters, one is a historical archaeological artifact scatter, and one is a historical archaeological site associated with railroad development. Of these resources, one precontact archaeology site has been previously recommended not eligible for NRHP inclusion, while the remaining three resources are unevaluated for NRHP eligibility. See **Table 3-1** for a summary of these resources, their Smithsonian Institution Trinomial System (SITS) numbers (No.), and their previous National Register of Historic Places (NRHP) recommendations.

Table 2-1: Previously Documented Archaeological Resources in the Study Area

SITS No.	Resource Type	Cultural Affiliation	NRHP Recommendation
21LY44	Archaeological Site: Lithic Scatter	Unspecified	Unevaluated
21LY79	Archaeological Site: Lithic Scatter	Unspecified	Not Eligible
21LY123	Historical Archaeological Site: Garvin Whistle Stop	Euro-American	Unevaluated
21LY153	Historical Archaeological Site: Artifact Scatter	Euro-American	Unevaluated

2.3 MN SHPO Records

Records for aboveground resources within the Survey Corridor and Study Area were examined using the MN SHPO online portal.

No previously documented resources were identified within the Survey Corridor. A total of fourteen aboveground resources were identified in the one-mile Study Area, including 12 buildings and two linear resources. Two of these buildings, LY-GVC-00004 and LY-GVC-00006, are noted to be duplicate records for the same building, the Garvin First Congregational Church. Six resources have been previously recommended not eligible for NRHP inclusion, while the remaining seven are unevaluated for NRHP inclusion. See **Table 3-2** for a summary of these resources and their NRHP eligibility recommendations.

Table 2-2: Previously Documented Aboveground Resources in the Study Area

Resource Number	Resource Type	Resource Name	NRHP Recommendation
LY-CUS-00004	Building	Julien Farmstead	Not Eligible
LY-CUS-00005	Building	John S. Owens Farmstead	Not Eligible
LY-GVC-00001	Building	Grain Elevator	Unevaluated
LY-GVC-00002	Building	Post Office	Unevaluated
LY-GVC-00003	Building	District School No. 47	Unevaluated
LY-GVC-00004/ LY-GVC-00006	Building	First Congregational Church	Unevaluated
LY-GVC-00005	Building	Hoiland Lutheran Chapel	Unevaluated
LY-GVC-00008	Building	Bank	Unevaluated
LY-GVC-00009	Building	Commercial Building	Unevaluated
LY-GVC-00011	Building	Lake Sarah Lutheran Church	Not Eligible
LY-GVC-00012	Building	House	Not Eligible
XX-ROD-00016	Structure	Trunk Highway/U.S. Highway 14 (formerly Trunk Highway 7)	Not Eligible
XX-ROD-00168	Structure	Trunk Highway 59	Not Eligible

2.4 Previous Inventory Reports

Survey reports for archaeological resources were disconnected from Geographic Information System positioning, and subsequently previous cultural resource inventory reports were evaluated by proximity to Custer Township and the village of Garvin, in addition to association to the adjacent context of U.S. Highway 59 and U.S. Highway 14, the crossroads of which borders the northwest corner of the Survey Corridor.

Table 2-3: Previous Cultural Resource Inventory Reports in the Study Area

SHPO File No.	Report Name	Sites Recorded	Author(s)	Date
LY-1977-01	An Archaeological Survey at Garvin Park, Lyon County, Minnesota	Sites Numbers Absent from Report	Strachan, R. A.	1977
LY-1978-01	Archaeological Reconnaissance Survey within Garvin Park, Lyon County, Minnesota	Negative Survey Report	Hudak, G.J.	1978
LY-1980-01	An Archaeological Reconnaissance Survey of 80 Acres within Garvin Park, Lyon County, Minnesota	Sites Numbers Absent from Report	Hudak, G.J.	1980

SHPO File No.	Report Name	Sites Recorded	Author(s)	Date
LY-1982-01	An Archaeological Reconnaissance Survey of the 588 Remaining Acres in Garvin Park, Lyon County, Minnesota	Sites Numbers Absent from Report	Hudak, G.J. & H.C. Pedersen	1982
LY-1984-02	Further Construction within Garvin Park, Lyon County, Minnesota (Addendum)	Sites Numbers Absent from Report	G.J. Hudak	1983
LY-1984-03	Archaeological Monitoring of Further Construction within Garvin Park, Lyon County, Minnesota (Letter Only)	Sites Numbers Absent from Report	Hudak, G.J.	1984
MULT-1989-01	A Phase One Archaeological Survey of the Cottonwood, Redwood, and Yellow Medicine Drainages in Southwestern Minnesota	BW61,BW62,BW63,BW64,BW65,BW66,BW67,BW88; LN16; RW51; YM1,YM3,YM38,YM39,YM40 ,YM41,YM42,YM43,YM44	Dobbs, C.A.	1989
LY-1992-01	A Phase I Archaeological Survey of the Darrell Wendorff Farm, Custer Township, Lyon County, Minnesota	21LY0001, 21LY0002	Johnson, C.M.	1992
LY-1993-01	Final Cultural Resource Survey and Site Evaluation Report: Proposed MNDOT SP4208-29 & SP4208-31 for the Reconstruction of TH 59, Lyon County	Sites Numbers Absent from Report	Gonsior, L., M. Justin, & P. Nunally	1993
MULT-1994-18	Cultural Resource Survey and Property Evaluation Final Report, MNDOT SP4208-31/36 & 5105-12/15 for Reconstruction of TH 59 from TH 30 North of Slayton to TH 14, Murray and Lyon Counties	MU39	Sluss, J. & L. Gonsior	1994
MCH-1984-01	Minnesota Municipal-County Highway Archaeological Reconnaissance Study, 1983 Annual Report	21DL0068; 21FA0072; 21FE0028, 21HB0006, 21HB0019, 21NL0047, 21WB0050, 21CA0154, 21CA0155, 21CA0156, 21HE0261, 21MO0054	Anfinson, S.	1984
MCH-1989-01	Minnesota Municipal-County Highway Archaeological	21BK0032, 21BK0033, 21BK0035, 21BK0036, 21BL0051, 21BL0052,	Anfinson, S. & R.J. Peterson	1989

SHPO File No.	Report Name	Sites Recorded	Author(s)	Date
	Reconnaissance Study, 1988 Annual Report	21BL0053, 21BL0090, 21BL0091, 21BL0092, 21BL0093, BL94, BL95, BL96, BL97, BL98; BW54; CY48; IA19, IA44, IA45; KH98; MA26, MA45; MR29, MR31; NO3, NO40, NO41; SB6; WD6; WE8, WE15, WE16, WE17, WE18, WE19, WE20, WE27; WL3; HE74, HE82, HE191		
MCH-1991-01	Minnesota Municipal-County Highway Archaeological Reconnaissance Study, 1990 Annual Report	AN129; BE125, BE126, BE127, BE128, BE129; BK35, BK36; BL54, BL55, BL58, BL59, BL60, BL62, BL105; CH23; CY10, CY12, CY60; DK46; DL1, DL68, DL83, DL98, DL99, DL101, DL102; HB12, HB22, HB23, HB24; KH106; KT4; LE44, LE46, LE47, LE48, LE50, LE51, LE52, LE58; MC5, MC6; ME16; MH8; NL62, NL63; WD11, WD12; WR5	Peterson, R.J., M.A. Magner, & B.A. Koenen	1991
MCH-1992-01	Minnesota Municipal-County Highway Archaeological Reconnaissance Study, 1991 Annual Report	BL52, BL61, BL63; BN10, BN11; BW75, BW76; CY19, CY20, CY26, CY31; DL68, DL83; HU26, HU39, HU150, HU151; HB12, HB23, HB24; LE44, LE46, LE48; ME11, ME12; MH8; NL62, NL63; NR51, NR52; SB16, SB17; TO2, TO12, TO13, TO14, TO15; WL6, HE143 ;MO57-64; CE36	Peterson, R.J., M.A. Magner, & B.A. Koenen	1992
MCH-1993-01	Minnesota County and Municipal Highway Archaeological Reconnaissance Study, 1992 Annual Report	BL67, BL74; BN10, BN11; BW81; CW86, CW97; CY4, CY18, CY21, CY26, CY31; DL68, DL103, DL104; FL59; HB12, HB23, HB24; KT13; LE46, LE48; ME11, ME12; MR26; PL16, PL19; PN4, PN5, PN8, PN9, PN10, PN12, PN13, PN14, PN15, PN20, PN21, PN25, PN38, PN46; SH26; TO2, TO12, TO13, TO14, TO15; WA73; WL20; WR54, WR55, WR5	Peterson, R.J., M.A. Magner, & B.A. Koenen	1993

2.5 Archival Research

BLM GLO patent records, USGS topographical maps, plat maps, and aerials of the Survey Corridor were examined to identify areas of potential undocumented historic sites, including roads, trails, farmsteads, cabins, mines, and townsites.

No roads, trails, or other cultural features are indicated on the original 1867 BLM GLO survey map of Township 109 N, Range 41 W (BLM 1867). A small area of swampland is indicated along the southern edge of the Survey Corridor on the 1867 survey map; however, the area is otherwise devoid of mapped features.

A land patent search for Section 23, Township 109 N, Range 41 W returned no results, and the original platted owner(s) of the Survey Corridor are unknown. Plat maps from 1902 and 1914 indicate a farmstead to the east of the southern end of the Survey Corridor, a farmstead to the north of the Survey Corridor, and two farmsteads to the west of the Survey Corridor (Northwest 1902; Webb 1914). No farmsteads are depicted within the Survey Corridor on the 1902 or 1914 maps. Further, no farmsteads are depicted near the Survey Corridor on a 1929 plat map; however, farmsteads appear to be excluded from the entirety of the 1929 map (FSH 1929).

A 1938 aerial photograph shows at least three buildings in the northwestern corner of the Survey Corridor, near the intersection of U.S. Highways 14 and 59 (University of Minnesota 2024). Aerial imagery shows that the previously extant buildings were removed between 1966 and 1984, and a one-story, side-gabled building had been constructed in their place (NETR 2024). A building with a similar plan shape and orientation is depicted on a 1967 topographic map (USGS 1967a, 1967b). A second building is also depicted immediately southwest larger structure on the topographic map. The larger building remains on site and was documented by the current inventory.

A 1961 plat map indicates that at that time, a 1 ac parcel in the northwestern corner of the section was owned by Earl and Gladys Kompelien (Nelson 1961). Earl and Gladys Kompelien's obituaries note that they lived near Garvin beginning in the 1950s and owned and operated the Garvin Corner Store for "several years" (Houseman 2007, 2011). Based on archival research it is assumed the building currently on site previously served as this corner store. By 1985, the entire northern half of the Survey Corridor was owned by Dennis Peterson, and the building in the northwest corner is indicated as unoccupied (DSC 1985).

No historic or modern cemeteries or NRHP listed properties were identified in the Survey Corridor or Study Area (Find-A-Grave 2024; NPS 2024a).

3.0 Environmental Setting

This section discusses the physiography, geology, vegetation, fauna, and previous ground disturbances in the Survey Corridor and the surrounding region.

3.1 Geology and Physiography

The Survey Corridor is located in the Prairie Coteau subregion of the Northern Glaciated Plains, which consists of a gently rolling landscape (White 2020). The Survey Corridor also lies within the Prairie Pothole region of the Great Plains, characterized by the presence of wetlands formed by Pleistocene glacier scraping (Natureserve 2014).

During the Pleistocene, the Survey Corridor was overrun by the Des Moines Lobe of the continental ice sheet, which reached its maximum southward extent about 14,000 years ago (Anfinson 1997). The Des Moines Lobe melted relatively rapidly, so that the area was ice-free by 12,500 years ago. As the ice mass melted back in a series of recessional stages, it deposited several large moraines in the process. While the glacier retreated, it left stagnant ice buried in the drift for up to several thousands of years.

During this time, slowly melting ice affected the climate and topographical stability of the Prairie Lake Region (Anfinson 1997). Prior to Euro-American settlement of the region, the Prairie Coteau was characterized by tallgrass prairie vegetation, with numerous seasonal wetlands (White 2020).

3.2 Hydrology

The Survey Corridor lies within the Redwood River Watershed of the Minnesota River Basin, and the closest water source is the Cottonwood River which runs 1.5 miles to the north. The Redwood River Watershed drainage patterns are the aftereffect of glacial meltwater, and the watershed is characterized in part by the presence of end moraines (MNDNR 2024a). Streams and groundwater within the Redwood River Watershed typically possess substrates of silt and sand, with low clay content (MNDNR 2017).

3.3 Soils

Within the Survey Corridor, the USDA has mapped 11 soil map units (NRCS 2024). These include Fulda silty clay, 0 to 2 percent slopes (30.0 percent); Highpoint Lake silty clay, 0 to 2 percent slopes (16.6 percent); Hokans-Svea complex, 1 to 4 percent slopes (14.2 percent); Parnell silty clay loam, depressionnal, 0 to 1 percent slopes (9.8 percent); Poinsett-Waubay silty clay loams, 1 to 6 percent slopes (9.1 percent); Svea loam, 1 to 3 percent slopes (8.2 percent); Lakepark-Roliss-Parnell, depressionnal, complex, 0 to 3 percent slopes (6.3 percent); Barnes, occasional saturation-Buse-Svea complex, 1 to 6 percent slopes (4.2 percent); Vallers clay loam, 0 to 2 percent slopes (0.9 percent); Renshaw-Fordville loams, coteau, 2 to 6 percent slopes (0.7 percent); and Barnes-Buse complex, 6 to 12 percent slopes, moderately eroded (0.1 percent).

Four of these soil map units, encompassing 146.8 ac (59.41 ha) of the Survey Corridor, are indicated to be hydric soils, indicating that these areas were likely previously inundated/saturated (NRCS 2024).

3.4 Flora

In the millennia following the retreat of the continental ice sheet, a series of vegetation changes swept across southwestern Minnesota. These changes have been deduced through the study of pollen cores collected from lakes and bogs in the larger region (Anfinson 1997). Closed boreal forest comprised of

spruce, larch, black ash, birch, and alder colonized the formerly glaciated landscape. Over time, as the climate warmed, the coniferous component of this forest dwindled, and the deciduous component, with the addition of willow, oak, elm, ironwood, and hazel, expanded. Eventually, oak and elm came to dominate, and prairie openings began to develop. This sort of prairie-forest mosaic persisted in the region until about 7,000 years ago.

After that time, warmer and drier climatic conditions peaked, forcing major vegetation changes (Anfinson 1997). By 6,000 years ago, many shallower lakes had dried up completely. Wildfires increased in frequency, and forest was almost completely replaced by prairie. Fringes of forest persisted near streams and lake shores, but otherwise the uplands were dominated by prairie.

These conditions persisted through the early years of historic settlement. The Survey Corridor is situated within what has been identified as the Southern Wet Prairie delineation of the Prairie Zone of Minnesota. Historically, big bluestem and Indian grasses existed in the moist uplands, while prairie cordgrasses and bluejoint dominated the wet lowlands. Through time, the tallgrass prairie, which once covered the southern one-third of the state, has been diminished and replaced by cropland and scattered islands of forest and forested riparian strip.

Current vegetation cover across much of the Survey Corridor has been substantially altered from its historical condition. What was formerly prairie land is now tilled and cultivated for the production of row crops, and especially corn and soybeans. Some farm fields are maintained as pastureland. Fallow fields, fence rows, and rural roadsides contain remnants of native prairie plants along with Eurasian invasive grasses.

Prior to cultivation, common flora to the Southern Wet Prairie included the wildflowers Canada goldenrod (*Solidago canadensis*), Sawtooth sunflower (*Helianthus giganteus*), tall meadow-rue (*Thalictrum dasycarpum*), and grasses including prairie cordgrass (*Spartina pectinata*), big bluestem (*Andropogon gerardii*), and Indian grass (*Sorghastrum nutans*) (MNDNR 2024a).

3.5 Fauna

As vegetation changed over time following the last glaciation, so did the fauna dependent upon the flora (Anfinson 1997). Late Pleistocene megafauna, such as woolly mammoth and musk ox, roamed the deglaciated landscape subsequent to glacial retreat. As boreal forest developed, giant beaver and mastodon may have entered the region.

As megafauna died out, they were replaced by more familiar woodland species, such as white-tailed deer (*Odocoileus virginianus*), elk (*Cervus canadensis*), cottontail rabbit (genus *Sylvilagus*), woodchuck (*Marmota monax*), beaver (*Castor canadensis*), muskrat (*Ondatra zibethicus*), raccoon (*Procyon lotor*), and grizzly bear (*Ursus arctos horribilis*). With the growth of prairie, species such as white-tailed jackrabbit (*Lepus townsendii*), sharp-tailed grouse (*Tympanuchus phasianellus*), and bison (*Bison bison*) became important (Anfinson 1997). Bison herds in southern Minnesota were not as large as those found further west, but their numbers may have varied due to seasonal migration. The last bison was hunted out of the region in 1879. In the region, aquatic animals are present, including various species of fish, turtles, crayfish, and mussels.

The Prairie Pothole region is a significant destination for over half of North American migratory waterfowl, including the redhead duck (*Aythya americana*), the pintail (*Anas acuta*), and the shoveler (*Spatula clypeata*). In addition, the Prairie Pothole provides habitats for birds such as the piping plover (*Charadrius melodus*), the white-rumped sandpiper (*Calidris fuscicollis*), herons (*Ardea herodias*), and American white pelicans (*Pelecanus erythrorhynchos*) (NWF 2024). Other avian fauna present in the region include red-tailed hawks (*Buteo jamaicensis*), mourning doves (*Zenaidura macroura*), a variety of owls including great

horned owls (*Bubo virginianus*) and barn owls (*Tyto alba*), ring-necked pheasants (*Phasianus colchicus*), and bald eagles (*Haliaeetus leucocephalus*).

In addition to the significance of the Prairie Pothole region to avian fauna, it currently serves as a habitat for opossums (*Didelphis virginiana*), white-tailed deer (*Odocoileus virginianus*), gray squirrels (*Sciurus carolinensis*), thirteen-lined ground squirrels (*Ictidomys tridecemlineatus*), muskrats (*Ondatra zibethicus*), coyotes (*Canis latrans*) (MNDNR 2024b). Reptiles and amphibians common to the region include bullfrogs (*Lithobates catesbeianus*), painted turtles (*Chrysemus picta*), and Great Plains toads (*Anaxyrus cognatus*). Piscine fauna native to the region includes several species of catfish (order *Siluriformes*), smallmouth bass (*Micropterus dolomieu*), and yellow perch (*Perca flavescens*).

3.6 Previous Disturbance

Aerial photographs and imagery indicate that the area has been extensively cultivated since at least 1955 (NETR 2024), with little native vegetation remaining. Virtually the entire Survey Corridor was cleared when the area was initially put under cultivation. Historic aerials reveal that the east-central section of the Survey Corridor was drained between 1958 and 1965, possibly as a form of improving agricultural output of the acreage. Additionally, the northwestern corner of the Survey Corridor was the location of a 1930s building before being completely razed and a newer building constructed in 1966.

4.0 Cultural Context

The Survey Corridor is situated in the Prairie Lakes South Region (2S), a region extending from eastern South Dakota through southwestern Minnesota and into north-central Iowa and is defined by the presence of a significant tallgrass prairie vegetation and a large number of shallow lakes (Anfinson 1986). The Prairie Lakes South Archaeological Region consists of the southeastern extent of the Prairie Pothole region and is differentiated from its larger expanse by its characteristic large freshwater lakes and lack of mixed-grass prairie.

4.1 Cultural History

This section discusses our understanding of the history of human populations that have lived in the Prairie Lake Region of southern Minnesota. The section is divided into:

- Early Prehistoric (10,000 to 3000 Before Christ [BC])
- Middle Prehistoric (3000 BC to Anno Domini [AD] 900)
- Late Prehistoric (AD 900 to 1650)
- Contact (AD 1650 to 1837)
- Post-Contact (AD 1837 to 1940)

4.1.1 Early Prehistoric (10,000 to 3000 BC)

The Early Prehistoric period began with the retreat of the glaciers about 12,000 years ago and encompasses the Paleoindian and Early Archaic periods as defined elsewhere in central and eastern North American archaeological contexts (Anfinson 1997). The large glaciers to the north made the boreal forest environment during that time colder, wetter, and less seasonal. Melting ice under layers of glacially deposited till created dynamic river and lake systems that were resource hotspots for Early Prehistoric people. By 8000 BC, resource-poor boreal forests gave way to deciduous forests of birch and alder, succeeded by elm and oak, and temperatures became more seasonal. By 6000 BC, there were large expanses of prairie.

This period is the least understood in the prehistory of the region due to the weak Paleoindian and Early Archaic archaeological record consisting only of isolated projectile points and associated debitage. A few early fluted lanceolate projectile points have been found at surface sites, suggesting that the earliest known inhabitants of the region were nomadic megafauna hunters who did not inhabit any one place for long and left little behind (Anfinson 1986). The earliest Paleoindian sites have been found in upland locations, suggesting that the lowlands were too wet to occupy (Anfinson 1997; Gibbon et al. 2002).

More diverse, unfluted Late Paleoindian and Early Archaic stemmed, side-notched, and corner-notched points have also been found in the region (Anfinson 1986). Two Scottsbluff points and several lanceolate point bases were identified at the Goodrich site (21FA0036) on the bottom of a now-drained lake basin in Faribault County (Anfinson 1997). This suggests that the region had dry spells when receding lakes became important resource locations (Gibbon et al. 2002).

Sites from the Prairie Archaic period (5500 to 3000 BC) in the Prairie Lake Region are characterized by side-notched projectile points and ground stone tools suited to an increasingly diversified hunter-gatherer lifestyle (Gibbon et al. 2002). While bison appears to have been the main staple, varying projectile technologies and hafting techniques suggest that a variety of animals, such as rabbit and skunk, were being

hunted. The presence of ground stone tools suggests plant processing activities, such as seed grinding. Prairie Archaic sites are often associated with lakes.

4.1.2 Middle Prehistoric (3000 BC to AD 900)

By 3000 BC, a moister, cooler climate returned to the Prairie Lake Region, and the lakes dotting the landscape were generally full. The Mountain Lake Phase (3000 to 200 BC) is a terminal Archaic manifestation and is the first cultural period defined for the Middle Prehistoric in the region (Anfinson 1986). Mountain Lake Phase people appear to have been the first in the region to consistently practice lacustrine-based settlement. Most of the sites are found on what would have been islands, peninsulas, and isthmuses (Anfinson 1986, 1997). These sites would have been close to aquatic resources and protected from fires. However, they may have been difficult to access during freeze and thaw periods and may have been too exposed during the winter months.

Short lanceolate projectile points are the most common types associated with the Mountain Lake Phase, but a wide variety of stemmed and side-notched points also appear. Bison, muskrat, and fish were the dominant food sources (Anfinson 1997). Mountain Lake Phase people started utilizing aquatic resources more than the people before them. Unlike other Midwest Archaic cultures from this time period, it does not appear that these people procured and processed great quantities of seeds and nuts, nor did they practice horticulture (Anfinson 1986, 1997).

Fox Lake Phase (200 BC to AD 700) sites contain the earliest evidence of pottery in the region. While Fox Lake Phase sites are classified as Woodland, they do not always resemble other Midwest Woodland sites, which were influenced by contact with Hopewellian cultures of Illinois and Ohio (Anfinson 1997; Gibbon 2012). Fox Lake Phase sites have different styles of ceramics and lithics and are lacking evidence of horticulture. Ceramic vessels from this time period are generally sand-tempered, thick-walled, and conoidal-shaped with cord-marked and/or fingernail-impressed exteriors and smooth interiors (Gibbon 2012). The Fox Lake ceramic tradition maintained a consistent style for about 1,000 years. Projectile point manufacturing went through an experimentation phase during this time period, leading to a variety of sizes and forms as people adopted bow and arrow technology.

Other chipped stone tools include common Plains forms of scrapers, knives, drills, choppers, and flake tools. The types and quantity of chipped stone tools suggest an emphasis on animal capture and processing. The percentage of specialized tools used for drilling, punching, and engraving is low (Anfinson 1997; Gibbon 2012). Ground stone tools used for seed and nut processing suggest that people were introducing more plant materials into their diet. Bison, deer, dog/wolf, muskrat, and a number of other small mammals, reptiles, fish, and bird remains have been found at Fox Lake Phase sites. Most Fox Lake village sites are on lakes, but some have been recorded on the margins of rivers or streams (Anfinson 1997). While early Midwest Woodland groups are known for burial mound construction throughout the temporal period, Fox Lake people were late to build mounds, with the earliest known mound dating to AD 875.

Generally, in the Midwest and northern Plains, the start of the Late Woodland period is marked by the decline of Hopewell and the rise of more localized complexes and communities. These changes are muted in the Prairie Lake Region. More dramatic changes happened around AD 700, marking a shift from the Fox Lake Phase to the Lake Benton Phase (AD 700 to 1200). The main differences between the two periods are in ceramic technology and the more widespread construction of burial mounds during the Lake Benton Phase time period (Anfinson 1997).

The most common burial arrangement was that of multiple secondary burials in shallow pits (Anfinson 1997). One to a dozen individuals would be interred together, and there does not appear to have been discrimination regarding age or sex in terms of accompanying grave goods and the position of the interred.

Ceramic changes included thinner vessel walls, crushed rock temper, and more surface smoothing. Lake Benton projectile points are small, side-notched, and have slightly concave bases – commonly called Plains Side-Notched. Lake Benton sites show similar settlement and subsistence patterns as Fox Lake sites and, likewise, exhibit no evidence for widespread horticulture.

4.1.3 Late Prehistoric (AD 900 to 1650)

The Late Prehistoric period starts with dramatic changes in ceramic technologies and a reliance on horticulture for subsistence. The shift was gradual, and it is still unclear if existing inhabitants had adopted a new way of life, if new groups of people moved into the area, or if both occurred. Sites from this period are categorized as Plains Village and/or Oneota; however, Woodland sites persisted at least until AD 1200 in the Prairie Lake Region (Anfinson 1997). Great Oasis (AD 900 to 1200) sites are the earliest Plains Village sites in the region (Anfinson 1997; Holley and Michlovic 2013). These sites are concentrated along the western edge of the region.

Cambria Phase (AD 1000 to 1200) sites are more widespread throughout the region, but are less studied (Anfinson 1997; Holley and Michlovic 2013). The Prairie Lake Region may be a marginal zone for Cambria sites, especially in the west. Cambria ceramics are almost all grit-tempered, globular jars with constricted necks, pronounced shoulders, and smooth surfaces. Some grit-tempered sherds at Cambria sites, such as those found at the Fox Lake site, have Oneota-like geometric motifs, but they are not considered Oneota ceramics. This may indicate that people at Cambria sites were borrowing Oneota motifs but continuing to use grit temper instead of shell. Worked bone tools and decorative items are common. Subsistence relied on a wide variety of terrestrial and aquatic animals, maize, squash, sunflower, and wild plants. Cambria sites have bison processing areas and rock-lined hearth features. Cambria sites are divided into four different types: large villages on river terraces (usually the Minnesota River), small villages on river terraces, small habitations on lakes or interior rivers, and burial sites.

Initially, Oneota peoples occupied the region at the same time as Cambria Phase peoples (Anfinson 1986). Most Blue Earth Phase ceramic vessels are shell-tempered, round-bottomed, globular jars with rounded lips and straight to slightly outcurving rims that are slightly everted (Gibbon 1980). Vessel interiors and exteriors are typically smooth and not cord-marked. Vessel shoulders are usually decorated with lines, tool impressions, and sometimes punctates. Many vessels also have decorated strap handles. Common lithics include very small unnotched projectile points and end scrapers. Ground stone tools are abundant and varied. Catlinite pipes are occasionally found at Blue Earth sites. Bone tools, especially those associated with horticulture, are common (e.g., bison scapula hoes and antler picks). Bone decorative items are rare. A variety of terrestrial and aquatic animal bones have been found at Blue Earth sites as food remains. There is very little evidence of bison except in the form of bone tools. Maize, beans, and sunflower appear to be the cultivated plants of choice. Blue Earth habitation sites and cemeteries are generally on elevated outwash terraces on the Blue Earth River floodplain. Smaller habitation sites involved animal processing just outside the floodplain. Sites in the uplands were used for animal processing and lithic reduction. Commonly, large cemeteries were located across streams from large village sites (Anfinson 1986, 1997; Gibbon 2012).

The first Euro-Americans in the region were probably the French, but no French items have been found at sites in the Prairie Lake Region (Anfinson 1997). The end of the Late Prehistoric was a time of flux in the region. Tribes from the east were pressured to move west, territories were redefined, and intertribal warfare increased. By the time that the first Euro-American settlers came to the region, the Dakota or Sioux dominated the Prairie Lake Region (Anfinson 1986).

4.1.4 Contact (AD 1650 to 1837)

Early maps provide some indication of the Native American tribes that inhabited southwestern Minnesota prior to Euro-American settlement. Many of these maps were based on garbled accounts received from neighboring tribes and *coureurs de bois*, rather than first-hand accounts, which themselves were not always reliable (Holley and Michlovic 2013). The Mascoutin may have been living on the upper Des Moines River in the late 1600s. The Oto/loway and the Dakota Sioux were reported in southwest Minnesota in the 1700s. The loway, displaced by their enemies the Mascoutin, are known to have settled briefly at a trading post on the Blue Earth River in the early years of the sixteenth century (Forsberg 2003).

Both the loway and the Eastern Dakota resided in villages where they raised corn, but also engaged in seasonal bison hunts (Forsberg 2003). Accounts suggest that the Eastern Dakota were settled mostly along the Minnesota River, while the loway were settled to the south. To some extent, the prairie lands of southwest Minnesota appear to have been a contested hunting ground for both peoples through the 1700s.

By the 1800s, southern Minnesota was known as territory of the Eastern Dakota, including bands of the Santee and the Yankton (Holley and Michlovic 2013:161-179). These people differed from their relations who lived to the west on the Missouri River. In their villages, the Eastern Dakota built a variety of house types including earth lodges, pole-framed gabled houses, tipis, and wigwams. They practiced very little farming and engaged in a hunting and gathering lifestyle even while being semi-sedentary.

4.1.5 Post-Contact (AD 1837 to Present)

The area that would become Lyon County was largely unpopulated by Euro-American settlers prior to 1867, with only a few trappers operating in the region and a few sparse trading posts within its borders (Rose 1912). What few attempts at settlement in the region were met with resistance by the Sioux inhabitants of the region.

Immigration to Minnesota was initially spurred by passage of the Preemption Act of 1841. The act facilitated “the division of public lands into small farms of up to 160 acres,” which were then sold “at not less than \$1.25 per acre” (BLM n.d.) Twenty years later, in 1862, Congress passed the Homestead Act, which contained provisions allowing settlers who had filed for homestead claims to retain preemption rights. As a result, they could opt to purchase their land rather than receive it for free after living there for the requisite amount of time and could thus “obtain it sooner” (BLM n.d.). These two acts prompted rapid settlement of the Midwest as a whole, though Lyon County would remain largely untouched by Euro-American settlement until after the conclusion of the Dakota War of 1862.

Permanent settlement only occurred after the conclusion of the Dakota War of 1862, wherein the Santee Sioux rebelled against the federal government after a long period of territorial reduction and secessions of land to state and federal governments and the failure of these institutions to provide the annuities promised to the Santee tribes for their lands (Clodfelter 1998). After the conclusion of the Dakota War the Santee were stripped of their remaining holdings in Minnesota, imprisoned in internment camps for a time, and forced onto the Crow Creek Reservation in South Dakota.

The settlement of Lyon County began in earnest after the conclusion of the Civil War, with the first settlers taking claims in Lynd township (Rose 1912). These homesteaders were followed by a steady stream of immigrants from the eastern and northern states who were followed by immigrants from Northern Europe and the British Isles, most of whom initially engaged in subsistence agriculture.

Lyon County itself was established formally in 1869 and began the process of township division between 1872 and 1883. The county was named after Union General Nathaniel Lyon, who performed tours in the Dakota Territories prior to the beginning of the Civil War (Rose 1912). Custer Township, the section of Lyon

County in which the Survey Corridor lies, was formed in 1876 and was named after General Custer, who died at the Battle of Little Big Horn.

The first railroad in Lyon County was constructed in 1872 and ran across the county from southeast to northwest and passed through Marshall (Rose 1912). The development of the Great Northern and Chicago and Northwestern railroads contributed to an increase in immigration across Lyon County as aspiring settlers took up residence in the county, built sod houses, and began planting crops to sell at market, not just what was needed to live on. These railroads dramatically shaped development in Lyon County, both by promoting community and municipal development and by facilitating the growth of some settlements and the decline of others (Rose 1912). While the region was consistently wracked by winter storms, grasshopper swarms, and wildfires following the establishment of the railroad, Lyon County continued to grow and attract settlers.

The period between 1872 and 1912 was one of concentrated growth marked by the transition from subsistence farming to commercial agriculture and by the arrival and expansion of the railroad, which provided an efficient means to get crops and livestock to market and to import other goods no longer produced on commercial farms. Wheat became the most important crop in Minnesota as large, modernized bonanza farms covered thousands of acres and shipped tons of wheat to flour mills in Minneapolis and on to markets on either coast. Eventually, bonanza farms proved to be economically and environmentally unfeasible with surplus wheat crops contributing to falling wheat prices and soil depletion in advance of the Great Depression and the Dust Bowl (MNDOA 2024).

Infrastructure and railroad development continued into the twentieth century, with the last railroad constructed in the county in 1901 (Rose 1912). As in many agricultural communities across the U.S., railroad construction provided local farmers with a broader demand pool for their goods and enabled communities along its length to benefit from the increased economic opportunities offered by the accessibility of the national market (Roth 1980). Additional historically important infrastructure included the conversion of Minnesota wagon trails to “car trails,” and later the development of county roads, a state-owned trunk highway system and the U.S. Highway System. The town of Marshall is the hub of several of these important regional highways which, in addition to the railroad contributed to settlement and commercial development (MHD 2024).

Today, the economy in Lyon County comprises the healthcare, manufacturing, utilities, and public administration industries in addition to education, construction, and sales. Farming is the leading industry with 93 percent of the county’s 462,000 acres in cropland or dedicated to livestock raising (USDA 2017).

5.0 Research Design and Methods

5.1 Objectives

At the request of Xcel, the primary goal of this investigation is to provide the necessary information to the MN OSA, MN SHPO, and MN PUC for review by confirming the presence or absence of cultural resources within the Project's Survey Corridor. The investigation was also designed to assess any documented resource's NRHP eligibility, or recommend additional work necessary to evaluate same, and evaluate any potentially adverse effects the proposed Project could have on those resources that are considered historic properties (i.e., eligible for listing in the NRHP).

The Phase I Cultural Resource Survey was completed to determine the number and extent of cultural resources present and their relationships to proposed Project features. The study was designed this way to provide the information required to make recommendations for additional testing and/or archival research of those resources that could provide important cultural and scientific data.

In general, cultural resources investigations are useful for identifying loci of human occupation across the landscape and through time. These data can be applied to investigate changes in habitation locations through time, delineating patterns of human habitation relative to other factors, such as population density, availability of local resources (e.g., food, water, and raw materials); the presence and exchange of non-local resources, such as lithic tool raw materials; precontact and historic site formation processes in the Project; and the nature and extent of natural and cultural impacts to sites in the Project.

5.2 Methods

Cultural resources can be defined as any resource that has cultural character (King 2012). Expanding upon this simple definition, "cultural resources" include all landscapes, buildings, sites, districts, structures, or objects that have been created by or associated with humans and are considered to have historical or cultural value. The term "historic property" includes only those cultural resources that are listed in or eligible for listing in the NRHP, which was established by the National Historic Preservation Act in 1966 (54 U.S. Code 300101 et seq., as amended through 2016). MN OSA defines archaeological sites as "any location containing evidence of past human activity that holds significance for most archaeologists" (Anfinson 2005).

5.2.1 NRHP Evaluation Criteria

The criteria for NRHP eligibility are set forth at 36 Code of Federal Regulations Part 60.4 as follows:

- a) *The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:*
- b) *That are associated with events that have made a significant contribution to the broad patterns of our history; or*
- c) *That are associated with the lives of persons significant in our past; or*
- d) *That embody the distinctive characteristics of a type, period, or method of construction, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or*

e) *That has yielded, or may be likely to yield, information important in prehistory or history.*

All resources may be eligible under any one or more of these criteria. In many cases, however, historic resources within a given data set are typically eligible under criteria A, B, or C, while the majority of precontact resources are eligible under Criterion D. Guidelines for how to apply the criteria are provided in *How to Apply the National Register Criteria for Evaluation* (NPS 1997) and *Guidelines for Evaluating and Registering Archeological Properties* (NPS 2024b). These guidelines were used for evaluating the historic properties within the Project's Survey Corridor and are briefly summarized in the following paragraph.

For a resource to be eligible under Criterion A, it must be associated with a particular event or pattern of events that can be demonstrated through historic contexts, either regional or local, that document its significance within history (NPS 2024b).

For a resource to be eligible under Criterion B, it must be demonstrated that the associated person is "individually significant within a historic context" and "has made an important contribution to history" The association can be on a local, state, or national level and can usually be demonstrated through historic documents, accounts, or other resources (NPS 2024b).

For a resource to be eligible under Criterion C, the distinctive architectural characteristics of the resource must have importance within historic contexts that are relevant to its particular theme in history. In addition to contextual resources, a comparison of other related properties is usually necessary to evaluate how well it illustrates its distinctive characteristics (NPS 2024b).

Finally, for a resource to be eligible under Criterion D, it must contain or have the potential to contain important information that contributes to the understanding of human history (NPS 2024b).

5.2.2 Field Methods

The field methodology for this study was planned and conducted in consideration of and adherence to methods and techniques described in the MN SHPO's Manual for Archaeological Projects in Minnesota (MN SHPO 2017) and MN OSA's Manual for Archaeological Projects in Minnesota (Anfinson 2005). In cases when circumstances required departure from these general methods, such variation is explained.

A systematic pedestrian surface survey was conducted in the Survey Corridor to determine the presence or absence of artifacts or features on the surface. Where ground visibility was greater than 50 percent, 15-meter (m) interval transects were utilized, and where ground visibility was less than 50 percent, 10 m interval transects were utilized, as required. If the location was in an area of medium to high potential for an archaeological site, the transect interval was decreased to 5 m.

MN OSA requires shovel testing in areas of less than 25 percent ground surface visibility with good to moderate potential for archaeological sites (Anfinson 2005). Ground surface visibility within the Survey Corridor ranged from 40 to 80 percent. Further, soils mapped within the Survey Corridor are generally shallow and hydric, and there was judged to be little to no potential for intact A horizons below the plow zone (NRCS 2024). Therefore, no shovel testing was completed.

5.2.3 Data Collection

Historic-age non-archaeological resources (historic resources), such as buildings, structures, or objects within the Survey Corridor were assessed in the field by a Secretary of the Interior qualified Architectural Historian, photographed, and their locations recorded using a Trimble® Geo7X™ Global Positioning System (GPS) unit with sub-meter accuracy.

Once the extent of a site was determined, the boundary of the site was recorded using a Trimble® Geo7X™ GPS unit running TerraSync® software. Site mapping procedures followed standard archaeological techniques.

High-resolution digital photographs were taken of each feature and of facets of diagnostic or especially unique artifacts. Site overview photos were taken with the intention of representing pertinent elements of the natural and culturally modified landscape, as well as a given area's location relevant to the Survey Corridor.

Data pertaining to the necessary fields of the appropriate standardized Minnesota Archaeological Site Forms or Architectural Resource Form were collected during fieldwork. Preliminary assessments of NRHP eligibility were made based on the combined data presented on the site forms. Site forms were subsequently completed and submitted to MN SHPO for review. Original field forms, field notes, and associated digital files are housed at the Burns & McDonnell office in Bismarck, North Dakota.

5.2.4 Collection Policies

In accordance with Burns & McDonnell's policies for cultural resource investigations, artifacts were not collected from private land without permission from the landowner.

5.2.5 Laboratory Methods

Permission to collect artifacts was not obtained from the landowners within the Survey Corridor. No artifacts were collected in the course of fieldwork described herein, and preliminary artifact analysis (mapping, photography, measurement, and description) was performed in the field. Further research was completed based on the photographs and data recorded during fieldwork.

6.0 Results

Burns & McDonnell archaeologists completed the field survey of the Project over five days: April 15 to April 19, 2024. The effort was directed in the field by Principal Investigator Melinda McCarthy. The Phase I Cultural Resource Survey covered a 312.2 ac (126.34 ha) block Survey Corridor.

The methods employed for archaeological survey were planned and conducted in consideration of the requirements described in the Minnesota Manual for Archaeological Projects in Minnesota (Anfinson 2005). Photographs were taken of the landscape and any noteworthy features or subjects throughout the Survey Corridor. At the time of survey, the Survey Corridor had been tilled and the ground-surface visibility ranged from 40 to 80 percent.

6.1 Results Summary

The Phase I Cultural Resource Survey resulted in the documentation of one new historic resource, the Garvin Corner Store (field name LC1-001-Block). See **Table 6-1** for a summary of this site, Minnesota Statewide Historic Inventory Portal (MNSHIP) number (No.), and its NRHP recommendation.

Table 6-1: Previously Documented Aboveground Resources in the Study Area

MNSHIP No.	Landowner	Site Type	NRHP Recommendation
LY-CUS-00053	Private	Architectural Site: Garvin Corner Store	Not Eligible

6.2 Newly Recorded Site

6.2.1 LY-CUS-00053 (Garvin Corner Store)

Site LY-CUS-00053 is a historic-age building and a historic/modern dump on a 1-ac section of cleared land at the intersection of U.S. Highway 59 and U.S. Highway 14 in the northwest corner of the Survey Corridor.

Feature (F.)1. is a one-story, Utilitarian building featuring a shallow pitched side-gabled roof (**Photograph 5-1**). The building features a rectangular plan shape and is constructed of concrete blocks. The roof is clad in modern metal panels placed directly over older asphalt shingles. Sections of the modern panels are damaged or missing, exposing the former shingles. The roof features moderate closed eaves. The building features exposed cinderblock walls, painted white, with asbestos siding covering the gable peaks. Most windows on the building are wood-framed and boarded over; however, a single replacement modern aluminum sash window was noted on the northeastern elevation. The building has replacement modern doors, including an overhead aluminum garage door set in an altered opening. The building rests on a concrete slab foundation.

An exact date of construction was not determined for the building; however, the structure is not present on an aerial photograph from 1966 but is visible in aerial photographs from 1984 (NETR 2024); however, a building with a similar plan shape and orientation is depicted on a 1967 topographic map (USGS 1967a, 1967b). Based on these archival resources, as well as the feature's design and construction materials, the site has been assigned a construction date of ca. 1967.

F.2. is composed of a collection of modern and historic trash items piled on the perimeter behind and east of F.1 (**Photograph 5-2**).

Figure 6-1: Survey Results (Aerial)



Photograph 6-1. Overview of the front (northwest) façade and southwestern elevation of F.1, facing east.



Photograph 6-2. Overview of F.2, the trash pile and the rear (southeast) elevation of F.1, facing northeast.



F.2, the trash collection, is composed of a scatter of large, discarded bee boxes, sections of kitchen counter materials, metal wall-mounted shelves, numerous wooden chairs, an oven, two sofas, two 50-gallon drums, six five-gallon buckets, contact paper, and a large pile of mixed lumber. Although nothing in the trash scatter appears older than the ca. 1970 and a majority of the material in the trash pile is modern in nature, the scatter was recorded as a precaution due to its association with the standing structure.

Archival research into the site's background suggests the location was previously home to several ca. 1930 structures; however, these buildings appear to have been completely razed by 1966 (NETR 2024). At least

three buildings are visible in the northwestern corner of the Survey Corridor, near the intersection of U.S. Highways 14 and 59 on a 1938 aerial image (University of Minnesota 2024). The buildings visible on the 1938 imagery are no longer present on imagery by 1966 (NETR 2024).

While no early ownership records could be located for the site area, a 1961 plat map indicates the site was located on a 1 ac parcel owned by Earl and Gladys Kompelien (Nelson 1961). Earl and Gladys Kompelien's obituaries note that they lived near Garvin beginning in the 1950s and owned and operated the Garvin Corner Store for "several years" (Houseman 2007, 2011). Due to this research, the design and location of the building, and the presence of metal shelving resembling that noted in older grocery stores within F.2, the site is tentatively identified as the location of the former Garvin Corner Store.

By 1985, the entire northern half of the Survey Corridor was owned by Dennis Peterson, and the building in the northwest corner is indicated as unoccupied (DSC 1985). This indicates the store was likely in operation for less than 20 years.

The ca. 1967 building on site retains fair integrity. The façade of the building has been altered to expand and infill several original openings. One original single-person entrance doorway currently contains a modern metal garage door, and a new single-person entrance was created just east of the garage door. All but one of the building's windows are boarded over and the sole exposed window opening contains a replacement metal sash window. The roof of the building has been damaged by the wind and the entire building is slowly deteriorating due to neglect. However, the building remains structurally solid, and the interior is shielded from the elements by the window coverings.

The ground surface within the areas containing the previous ca. 1930 structures is currently covered by a modern concrete parking lot and the existing building on site. Further numerous small piles of dirt reveal the ground surface in the area has been extensively disturbed. No early historic artifacts were noted in the agricultural field surrounding the site and these areas had upwards of 75 percent visibility and had been freshly tilled and rained on at the time of survey allowing for excellent ground visibility conditions. Due to this, the earlier site is considered to have been destroyed by the construction of the current site features.

The site features fair to poor integrity of association, materials, workmanship, design, and feeling. Its integrity of setting and location remain intact. The site does not represent an outstanding example of architectural design or serve as an important example of commercial infrastructure. Preliminary research was unable to document an association with significant persons or events. Further, the ground surrounding the site is heavily disturbed and does not retain the potential to yield information important to the history of the area. Therefore, Burns & McDonnell recommends the site is not eligible for the NRHP under criteria A, B, C, and D.

7.0 Conclusions and Recommendations

This document provides a summary of archival background research and field investigations within the Survey Corridor for the Lyon County Generating Station in Lyon County, Minnesota.

The Phase I Cultural Resource Survey of the Survey Corridor included a 312.2 ac (126.34 ha) block area. Burns & McDonnell completed the inventory between April 15 to April 19, 2024, and Principal Investigator and Architectural Historian, Melinda McCarthy, and archaeologist, Christina Huling, completed fieldwork for the Project.

No previously recorded sites were located within the Survey Corridor and a single new historic resource was identified within the Survey Corridor, LY-CUS-00053.

7.1 Newly Recorded Site

Site, LY-CUS-00053, is a historic grocery store and associated trash scatter, which has been recommended not eligible for the NRHP.

Burns & McDonnell therefore recommends a determination of *No Historic Properties Affected*, as documented herein and mapped. If areas beyond the current Survey Corridor are to be used during construction, Burns & McDonnell recommends completion of addendum Phase I Cultural Resource Survey to determine the presence or absence of any cultural resources within these areas.

8.0 References Cited

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