



# A CLASS III CULTURAL RESOURCES INVENTORY FOR THE BADGER WIND PROJECT

## BADGER WIND PROJECT LOGAN AND MCINTOSH COUNTIES, NORTH DAKOTA

*Prepared for*

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**Atwell Project No. 19000785**

*Submitted by Atwell, LLC*

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Study Units: Southern Missouri River

**Class III Inventory Legal Description**

County	Township Name	Township	Range	Section(s)
McIntosh	Unorganized Territory	132N	70W	5-7
McIntosh	Unorganized Territory	132N	71W	1, 4-8, 12, 17-21, 28-30
McIntosh	Unorganized Territory	132N	72W	1, 2, 12-14, 23
Logan	Unorganized Territory	133N	70W	6-8, 16-21, 28-33
Logan	Unorganized Territory	133N	71W	3-6, 8-10, 12, 14, 15, 18-23, 25-29, 31-36
Logan	Unorganized Territory	133N	72W	36
Logan	Red Lake	134N	71W	31, 32

**EXECUTIVE SUMMARY**

Badger Wind, LLC (Badger Wind), is a wholly owned subsidiary of Ørsted Onshore North America, LLC (Ørsted). Ørsted is an independent renewable energy company based in Chicago, Illinois. Badger Wind proposes to construct the Badger wind energy generation facility in Logan and McIntosh Counties, North Dakota. The Badger wind energy generation facility is sited on approximately 55,745 acres of privately owned agricultural fields and pastures (the Project Area). Development of the Badger Wind Project (the Project) will include construction of up to 74 wind turbines, gravel access roads, an underground electrical and collection line system, a collector substation, up to three permanent meteorological towers, aircraft detection lighting system components, and an operations and maintenance facility. Temporary crane paths and haul routes would be used for the construction phase of the proposed Project. Badger Wind is submitting an application for a Certificate of Site Compatibility to the North Dakota Public Service Commission for the proposed Badger Wind Project, pursuant to the North Dakota Energy Conversion and Transmission Facility Siting Act, North Dakota Century Code Chapter 49-22.

As a part of that application process, Badger Wind consulted with the State Historical Society of North Dakota (SHSND) and contracted with Atwell, LLC (Atwell), to conduct a Class III intensive cultural resources inventory for the Project to identify undocumented cultural resources. Badger Wind is voluntarily complying with North Dakota guidelines for archaeological reconnaissance and survey provided by the North Dakota State Historic Preservation Office (NDSHPO) as a due diligence effort. There is no federal nexus for this project; therefore, review under Section 106 of the National Historic Preservation Act is not required.

Prior to conducting the Class III survey, Atwell conducted a Class I literature review for the Badger Wind Project in accordance with the *North Dakota SHPO Guidelines Manual For Cultural Resource Inventory Projects* (SHSND 2020). Atwell's Class I literature review included the Project Area and a 1-mile buffer around the Project Area (the Study Area) to capture potential visual impacts to cultural resources. Atwell's records search of files kept by the SHSND, the North Dakota Cultural Resources Survey, and the National Register of Historic Places (NRHP) was completed on October 16, 2020. In total, 40 previously documented cultural resources were identified within Atwell's Study Area.

Atwell conducted a Class III intensive cultural resources inventory of all locations where project-related ground disturbance is proposed (the assessment area). The Class III inventory was conducted in accordance with the NDSHPO's guidelines. In total, approximately 5,233 acres were subjected to the Class III inventory over two field seasons (October and November 2020 and September and October 2021). The project layout changed during this period, and some surveyed areas are no longer in the project area.

The project's assessment area comprises the locations listed below:

- 250-foot-wide construction easements around each turbine location (for crane pads, equipment storage, soil stockpiling, etc.);
- 100-foot-wide construction easements for access roads (for equipment delivery and staging);
- 75-foot-wide construction easements for collection lines;
- 100-foot-wide construction easements for crane paths;
- Approximately 2 acres for the substation and 1.7 acres for the operations and maintenance building; and
- Up to 90.2 acres for the laydown yard.

One previously identified site, 32LO139, was revisited. The Class III inventory identified seven Historic-period archaeological sites (32LO161, 32LO163, 32LO164, 32LO165, 32LO166, 32LO167, and 32MT450), which include the remnants of seven ruined Historic-period farmsteads and one Historic-period refuse dump. One Site Lead (32LO162) was identified, which is a possible unrecorded Historic-period cemetery. Two prehistoric isolated finds (32LOX73 and 32MTX111) were identified; each is a single prehistoric lithic artifact. Two Historic-period architectural sites were identified (temporary site numbers ATBAD6 and ATBAD10). These are not otherwise discussed in this report; because of the architectural resources present at these two sites, they will be addressed in a forthcoming architectural survey report.

Badger Wind had initially planned to avoid all identified sites, regardless of their NRHP eligibility recommendations. However, the current project layout would directly impact sites 32LO163, 32LO166, and 32LO167. Anticipated impacts to the sites would consist of damage caused by construction of a collection line. Feature 4 at site 32LO163 would be the only affected portion of the site; this feature is composed of recently deposited rubber tires. Impacts to 32LO166 are expected to affect both the tornado shelter (Feature 1) and the outbuilding foundation (Feature 2). At site 32LO167, the construction right-of-way would overlap only the southwestern corner of the site. All three sites are of very poor site integrity and are recommended as ineligible for listing on the NRHP. If the NDSHPO concurs with Atwell's recommendations, the Project would not be required to avoid construction impacts to sites 32LO163, 32LO166, and 32LO167.

Atwell has drafted an unanticipated discoveries plan (Appendix D) to address any archaeological materials that may be discovered during project construction. This draft will be finalized as soon as all contact information for relevant project and construction personnel has been identified. If areas beyond the current Project Area are to be used during the Project, Atwell recommends that an additional Class III cultural resources survey be conducted prior to ground-disturbing activities.

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## **1.0 INTRODUCTION**

Badger Wind, LLC (Badger Wind), is a wholly owned subsidiary of Ørsted Onshore North America, LLC (Ørsted). Ørsted is an independent renewable energy company based in Chicago, Illinois. Badger Wind proposes to construct the Badger wind energy generation facility in Logan and McIntosh Counties, North Dakota. Badger Wind is submitting an application for a Certificate of Site Compatibility (Certificate) to the North Dakota Public Service Commission for the proposed Badger Wind Project, pursuant to the North Dakota Energy Conversion and Transmission Facility Siting Act, North Dakota Century Code (NDCC) Chapter 49-22.

### **1.1. Project Location**

The Badger wind energy generation facility is sited on approximately 55,745 acres of privately owned agricultural fields and pastures in Logan and McIntosh Counties (the Project Area) within south-central North Dakota, west of the town of Wishek, North Dakota (Figure 1 in Appendix A). The Project is sited within land dominated by cultivated cropland, pasture, fallow fields, homes, homesteads, wetland systems, drainage swales, grasslands, and road systems. Also present within the Project Area are existing transmission lines, distribution lines, railroads, and paved and unpaved roads.

### **1.2. Project Description**

Development of the Badger Wind Project (the Project) would include the construction of up to 74 wind turbines, gravel access roads, an underground electrical and collection line system, a collector substation, up to three permanent meteorological towers (MET towers), aircraft detection lighting system (ADLS) components, and an operations and maintenance (O&M) facility. Temporary crane paths and haul routes would be used for the construction phase of the proposed Project.

### **1.3. Agency Involvement and Regulatory Requirements**

The Energy Siting Conversion and Transmission Facility Siting Act requires that “the effect of the proposed site or route on existing scenic areas, historic sites and structures, and paleontological or archaeological sites” (NDCC 49-22-09) should be considered in evaluating applications for a Certificate.

The Project is located on private land and will not utilize federal funds or permits. Badger Wind is voluntarily complying with North Dakota guidelines for archaeological reconnaissance and survey provided by the North Dakota State Historic Preservation Office (NDSHPO) as a due diligence effort. Because there is no federal nexus for this project, Section 106 of the National Historic Preservation Act (NHPA) does not apply, and review under Section 106 of the NHPA is not required.

The Project must comply with North Dakota's Protection of Human Burial Sites, Human Remains, and Burial Goods law (NDCC 23-06-27) and accompanying administrative rules (North Dakota Administrative Code 40-02-03), which outline the procedures to be followed if human remains are identified. Unanticipated discoveries of human remains during project construction are protected under the law and administrative rules and require the cessation of ground-disturbing activities at the discovery location and notification of local law enforcement and the SHSND.

## **2.0 ENVIRONMENT**

The Project Area is located in Logan and McIntosh Counties, North Dakota, in a primarily rural agricultural area near the town of Wishek, North Dakota. The area is sparsely populated with small farmsteads situated off public roads laid out in a standard section-line grid. The project vicinity includes land that is dominated by cultivated croplands, pastures, fallow fields, homes, homesteads, wetland systems, drainage swales, grasslands, and road systems. Other infrastructure such as transmission lines, railroads, and distribution lines is also present. The Project is crossed by State Highways 3 and 13 and is accessed predominantly by section-line roads. Many small farmsteads are located within the Project Area, and small tracts of wetlands and natural stream corridors are also present; however, these natural features are small. Additionally, small, isolated woodlots, generally associated with wind breaks for farmsteads, are scattered throughout the Project Area.

The Project Area is located in both the Missouri Coteau Slope and the Missouri Coteau Level IV Ecoregions within the Northwestern Great Plains Level III Ecoregion of North Dakota (Bryce et al. 1996). The Missouri Coteau is characterized by rolling hummocks that contain numerous wetland potholes. Prior to human occupation of the area, mixed-grass prairie was the most common grassland in the Missouri Coteau ecoregion, and very little upland deciduous forest was present.

Currently, land use is a mixture of agriculture and cattle grazing, which has resulted in the conversion of much of the mixed-grass prairie. Agriculture in this ecoregion typically focuses on small grains, sunflowers, corn, and alfalfa (NDGF 2021). Cattle grazing is extensive across the Missouri Coteau ecoregion.

The Missouri Coteau Slope ecoregion declines in elevation beginning from the Missouri Coteau toward the Missouri River. The Missouri Coteau Slope ecoregion is characterized by rolling to hilly plains created by a mix of erosional and glacial landforms (Bluemle and Biek 1996). Drainage is better developed in the Missouri Coteau Slope, which has led to the creation of more watercourses and fewer prairie potholes compared to the Missouri Coteau ecoregion. As with the Missouri Coteau ecoregion, grasslands are considered mixed-grass prairie. Due to the somewhat level topography, there is more cropland on the Missouri Coteau Slope than on the Missouri Coteau, and cattle grazing is limited primarily to the steeper land and areas along drainages.

Geology within the Missouri Coteau consists of a thick glacial till over Tertiary sandstone and shale in the north and Cretaceous Pierre Shale in the south. Similarly, the Missouri Coteau Slope consists of Wisconsinan glacial till over Tertiary sandstone and shale and Cretaceous Pierre Shale (Bryce et al. 1996). Surface geology within the Study Area is predominately composed of two formations: Fox Hills and Pierre, which are characterized by thin glacial deposits and outwash

consisting of sand and gravel between 0 and 50 feet thick and underlying bedrock composed of shale (Clayton 1962; Bluemle 1983; Bluemle 1988).

The Natural Resources Conservation Service Soil Survey Geographic Database (SSURGO) is a dataset that provides information about soil map units at scales ranging from 1:12,000 to 1:63,360. Soil map units provide a description of the soils present and information about their unique properties and productivity (USDA 2022). In all, 116 soil map units are within the Study Area, and 101 soil map units are within the Project Area. The dominant soil map units found within the Study Area and the Project Area are classified as silt loams or silty clay loams and range from moderately well drained to poorly drained (USDA 2022).

### **3.0 BACKGROUND RESEARCH**

The methods employed for the Class I cultural resources inventory follow the *North Dakota SHPO Guidelines Manual for Cultural Resources Inventory Projects* (SHSND 2020). Atwell's Class I cultural resources inventory included an initial file search of the North Dakota Cultural Resources Survey (NDCRS) data files maintained by the SHSND in Bismarck, North Dakota. Principal Investigator Steven Katz, RPA, requested NDCRS data files from Amy Sakariassen in October 2020. This request included a review of archaeological, historical, and architectural site forms, cultural heritage forms, and cultural survey reports available at the SHSND in Bismarck, North Dakota.

Atwell's review of the NDCRS data files was completed for the Project on October 16, 2020. Records within the Project Area and within a 1-mile buffer of the Project Area were examined. The buffer area was used to capture sites that could potentially be visually impacted by the Project. Atwell also reviewed the National Register of Historic Places (NRHP) records maintained by the National Park Service to determine whether historic properties listed on the NRHP are located within the Project Area. Historic plat maps and U.S. Geological Survey (USGS) topographic maps were also reviewed for the Project Area and the 1-mile buffer area.

Atwell's file search indicated that no properties listed on the NRHP or the North Dakota State Historic Registry are present within the Project Area (NPS 2022).

The project layout and the boundary of the proposed Project have changed over time. Some previously identified cultural resources located within the Project Area and buffer area used for the file searches are not in the current Project Area or buffer area. Therefore, the Class I memo presents outdated lists of sites within the Project Area and buffer area. Table 1 presents a list of previously identified resources in the current Project Area and buffer area.

Class III Cultural Resources Inventory Badger Wind Project

Table 1. Previously Identified Cultural Resources from SHPO Data

Site Number	Type	Period	Location	Site Type	Eligibility
32LO23	Archeological	Historic	Buffer Area	Homestead with features	Recommended ineligible
32LO24	Archeological	Historic	Buffer Area	Two depressions and two wagon ruts (former homestead)	Recommended ineligible
32LO26	Architectural	Historic	Buffer Area	Farmstead	Recommended not eligible
32LO27	Architectural	Historic	Buffer Area	Bridge	Recommended ineligible
32LO33	Archeological	Historic	Assessment Area	Soo Line Railroad, Dakota, Missouri Valley & Western Railroad	Unevaluated
32LO37	Archeological	Historic	Buffer Area	Remnants of homestead	Recommended ineligible
32LO110	Archeological	Historic	Assessment Area	Very small artifact scatter	Recommended ineligible
32LO111	Archeological	Historic	Buffer Area	Windmill, water pump, stock tank	Recommended ineligible
32LO112	Archeological	Prehistoric	Buffer Area	Two stone circles	Unevaluated
32LO113	Archeological	Prehistoric	Project Area	Stone circle	Unevaluated
32LO137	Archeological	Historic	Buffer Area	Depressions and artifact scatter	Recommended ineligible
32LO138	Architectural	Historic	Buffer Area	Windmill	Recommended ineligible
32LO139	Archeological	Historic	Assessment Area	Farmstead with foundations and water features	Recommended ineligible
32LOX7	Architectural	Historic	Buffer Area	Burnstad Townsite / Post Office	Unevaluated
32LOX8	Architectural	Historic	Buffer Area	Beaver Lake / SOO Line	Unevaluated
32LOX9	Archeological	Historic	Buffer Area	Sully Writing Rock, Sully Camp	Unevaluated
32LOX55	Archeological	Historic	Buffer Area	Homestead foundations and depressions, artifact scatter	Unevaluated
32LOX61	Archeological	Historic	Buffer Area	Fragments of a single ceramic	Unevaluated

Class III Cultural Resources Inventory Badger Wind Project

Site Number	Type	Period	Location	Site Type	Eligibility
32MT27	Architectural	Historic	Buffer Area	Wishek City Cemetery	Eligible for the NRHP
32MT43	Architectural	Historic	Buffer Area	Residence	Unevaluated
32MT44	Architectural	Historic	Assessment Area	Farmstead	Recommended ineligible
32MT85	Architectural	Historic	Buffer Area	Bridge	Recommended ineligible

**3.1. Previously Identified Historic-Period Architectural and Archaeological Sites**

The records review identified 9 previously identified Historic-period architectural resources and 11 previously identified Historic-period archaeological resources within the Project Area and 1-mile buffer.

One Historic-period architectural resource is in the current Project Area and in the assessment area: site 32MT44, a farmstead. Because this site is an architectural resource, it will be included in the upcoming architectural survey report addendum and is not discussed further here. The other eight Historic-period architectural properties are located within the 1-mile buffer.

Three Historic-period archaeological resources are in the Project Area and the assessment area: 32LO33, 32LO110, and 32LO139. Site 32LO33 is the Soo Line Railroad, Dakota, Missouri Valley & Western Railroad. No project-related work will be done within the railroad right-of-way; therefore, this site was not revisited and is not discussed further in this report. Site 32LO110 is a small scatter of 15 artifact fragments (21 glass fragments, 1 ceramic fragment, and 1 insulator fragment). No further work was recommended for this site, it is not in the current project layout, and it was not revisited for this Project. Site 32LO139 was visited for the Project and is documented in this report. The other eight Historic-period archaeological resources are in the 1-mile buffer area.

**3.2. Previously Identified Prehistoric Archaeological Sites**

One previously identified prehistoric archaeological site was identified within the Project Area but is not in the assessment area (Appendix B). Site 32LO113 has been documented as a prehistoric stone circle and has not been evaluated for the NRHP.

**3.3. Previous Cultural Resources Surveys**

In total, 36 cultural resources surveys have been conducted within the Project Area and the 1-mile buffer. Please see Appendix B for more information on these surveys.

**3.4. Historic Atlas and Map Review**

Atwell reviewed the 1916 and 1911 atlases for Logan and McIntosh Counties, respectively, and determined that the Project Area was sparsely populated with farmsteads and smaller residential buildings. Schools, churches, and several cemeteries (Johannesthal Cemetery, Neudorf Cemetery, and Beaver Creek Baptist Cemetery) are in the Project Area. The Saint Luke Cemetery, Saint Patrick's Cemetery, Wishek City Cemetery, and Worms Cemetery are in the 1-mile buffer area. The maps depict the Minneapolis, St. Paul and Sault Ste. Marie Railroad running roughly north to south through the eastern portion of the project area.

The highest density of Historic-period structures depicted within the county atlases are located

at the towns of Wishek and Burnstad, North Dakota (Geo. A. Ogle & Co. 1911; Geo. A. Ogle & Co. 1916). The developed portions of both Wishek and Burnstad are located entirely outside of the Project Area. Review of more recent county atlases (1967 and 1980 for Logan County and 1960 for McIntosh County) indicate that the town of Wishek grew significantly during the early part of the twentieth century (Northwest Atlas Co. 1960; Directory Service Company 1967; Directory Service Company 1980). Additionally, more residential structures are located outside of town in areas that were previously farmland.

Atwell also reviewed USGS topographic maps ranging in date from 1953 to 1982 ADDIN ZOTERO\_ITEM CSL\_CITATION {"citationID":"FVb3mPpk","properties":{"formattedCitation":"(Historic Aerials 2022)","plainCitation":"(Historic Aerials 2022)","noteIndex":0},"citationItems":[{"id":7191,"uris":["http://zotero.org/groups/100600/items/W5XDL2B8"],"itemData":{"id":7191,"type":"webpage","title":"Historic aerial viewer","URL":"https://www.historicaerials.com/viewer","author":{"literal":"Historic Aerials"},"issued":{"date-parts":[["2022"]]},"schema":"https://github.com/citation-style-language/schema/raw/master/csl-citation.json"} (Historic Aerials 2022) (ESRI 2021). The Project Area was sparsely populated with a well-established section-line county road network. Residential construction is largely depicted on these maps within 250 feet of the roadside. Schools, churches, and cemeteries are interspersed sporadically throughout the Project Area and 1-mile buffer.

#### **4.0 RESEARCH GOALS AND METHODS**

The purpose of Atwell's Class III cultural resources inventory was to identify any potential cultural resources located within the Project's assessment area that may be impacted by the proposed Project. The methods employed by Atwell for the Class III cultural resources inventory comply with the standards outlined in *North Dakota SHPO Guidelines Manual for Cultural Resources Inventory Projects* (SHSND 2020).

While in the field, Atwell staff kept a record of daily activity and survey information in a journal and as notes on digital project maps. Photographs were taken at various locations within the assessment area to document field conditions and record cultural resources. Any cultural resources located within the assessment area were mapped using a Trimble R1 Global Positioning System unit.

As the majority of the Project is sited within active agricultural fields, field visits were timed to take advantage of times of greatest ground surface visibility. Pedestrian survey was used exclusively due to moderate to excellent ground surface visibility.

The definitions of archaeological sites, site leads, and isolated finds used during this investigation follow the SHSND definitions:

- Archaeological sites are defined as the "location of past human activity that took place over 50 years ago and which left physical traces of activity in the form of 1) an intact cultural feature, 2) six or more artifacts found within about 60 meters of one another, and/or 3) an intact subsurface cultural deposit regardless of the number of artifacts" (SHSND 2020: 19).
- The SHSND uses two separate definitions for site leads. "The first consists of a location reported by a landowner or other non-professional as containing cultural sites. These locations are identified as site leads until a qualified archaeologist or architectural historian can determine whether cultural sites exist in the area and, if so, whether the location is a site or an isolated find" (SHSND 2020: 19). "The second definition for a site lead is a location with five or fewer surface visible artifacts that may, in the professional judgment of the archaeologist(s), be only a limited surface expression of a former occupation area where most of the artifacts are not visible (i.e., still buried)" (SHSND 2020: 19).
- Isolated finds are locations where five or less artifacts were identified (SHSND 2020: 19). Isolated occurrences are not considered significant cultural resources and are not eligible for listing on the NRHP.

Atwell conducted a Class III cultural resources survey, in accordance with NDSHPO guidelines, for

all locations of proposed project-related ground disturbance (the assessment area). In total, approximately 5,233 acres were subjected to the Class III cultural resources survey during two field seasons (October and November 2020 and September and October 2021). The assessment area comprised the locations listed below:

- 250-foot-wide construction easements around each turbine location (for crane pads, equipment storage, soil stockpiling, etc.);
- 100-foot-wide construction easements for access roads (for equipment delivery and staging);
- 75-foot-wide construction easements for collection lines;
- 100-foot-wide construction easements for crane paths;
- Approximately 2 acres for the substation and 1.7 acres for the operations and maintenance building; and
- Up to 90.2 acres for the laydown yard.

Fieldwork for the Project began on October 26, 2020, and ended November 16, 2020. Ben Banks, RPA, served as the Principal Investigator, and James Freshwater and Andrea Kulevsky, both Environmental Consultants with Atwell, were archaeological technicians. Additional fieldwork was completed September 27, 2021, and ended October 22, 2021. Steven Katz, RPA, served as Principal Investigator, and Elizabeth Wilk, M.S., RPA, Senior Project Coordinator, and James Freshwater, Environmental Consultant, served as archaeological technicians.

**5.0 FIELDWORK RESULTS**

One previously identified site, 32LO139, was visited. The Class III inventory identified seven Historic-period archaeological sites (32LO161, 32LO163, 32LO164, 32LO165, 32LO166, 32LO167, and 32MT450), which include the remnants of seven ruined Historic-period farmsteads and one Historic-period refuse dump (Table 2). One Site Lead (32LO162) was identified, which is a possible unrecorded Historic-period cemetery. Two prehistoric isolated finds (32LOX73 and 32MTX111) were identified; each is a single prehistoric lithic artifact.

**Table 2. Cultural Resources Identified or Revisited during the Class III Inventory**

Temp # Site #	Type	Period	Site Type	Eligibility
32LO139	Architectural	Historic	Farmstead	Recommended ineligible
32LO161	Archeological	Historic	Farmstead	Recommended ineligible
32LO162	Archeological	Historic	Possible cemetery	Site lead; unevaluated
32LO163	Archeological	Historic	Dump	Recommended ineligible
32LO164	Archeological	Historic	Farmstead	Recommended ineligible
32LO165	Archeological	Historic	Farmstead	Recommended ineligible
32LO166	Archeological	Historic	Farmstead	Recommended ineligible
32LO167	Archeological	Historic	Farmstead	Recommended ineligible
32LOX73	Archeological	Prehistoric	1 chert flake	Recommended ineligible
32MT450	Archeological	Historic	Farmstead	Recommended ineligible
32MTX111	Archeological	Prehistoric	1 piece of debitage	Recommended ineligible
ATBAD6	Architectural	Historic	Farmstead	Unevaluated; not included in this report, will be addressed in forthcoming architectural survey report addendum
ATBAD10	Architectural	Historic	Farmstead	Unevaluated; not included in this report, will be addressed in forthcoming architectural survey report addendum

Two Historic-period architectural sites were identified during fieldwork (temporary site numbers ATBAD6 and ATBAD10). These are included in Table 2 but are not otherwise discussed in this report. The sites have Historic-period architectural resources and will be addressed in a forthcoming architectural survey report addendum. Similarly, previously identified site 32MT44 is in the assessment area. Because it is an architectural resource, it will be included in the upcoming architectural survey report addendum.

**5.1. 32LO139**

Temporary Site Number: 32LO139

Site Type: Farmstead

Cultural Affiliation and Age: Historical

Site Size: 22,885 m<sup>2</sup>

NRHP Recommendation: Not Eligible

Management Recommendation: Continued Avoidance (unless NDSHPO has already concurred with the not eligible recommendation)

Site Description: Site 32LO139 is a previously recorded historic structure associated with ranching activities. Atwell's site visit confirmed the data in the NDSHPO's records. No changes to site condition were observed at the time of Atwell's survey.

NRHP Recommendation: Atwell recommends that the existing recommendation of not eligible for listing on the NRHP be retained. SHPO concurred with the ineligible recommendation when the site was originally documented.

**5.2. 32LO161**

Temporary Site Number:	ATBAD2
Site Type:	Farmstead
Cultural Affiliation and Age:	Historical
Site Size:	5,345 m <sup>2</sup>
NRHP Recommendation:	Not Eligible
Management Recommendation:	Continued Avoidance (unless NDSHPO concurs)

Site Description: This archaeological site consists of the remnants of a twentieth-century farmstead. The farmhouse foundation is still extant and is filled in with rubble and more recently deposited Historic-period refuse. The foundation measures 20 feet by 25 feet; some portions are composed of poured concrete and others are mortared fieldstone. Refuse observed within the foundation includes plastic and metal herbicide containers, plastic food containers, residential appliances, ceramic and glass fragments, and children’s toys. Several diagnostic glass vessels display the 1970s Owens Illinois maker’s mark. A well is located approximately 20 meters southwest of the residence and is covered with a steel cap. The windmill is located northwest of the residence across a double fence. The windmill appears to have been used to pump water, but the pump parts are missing. Given the small amount of structural building materials on site, it appears that most of the structural members and cultural materials have been removed from the site. This disturbance and loss of cultural material diminishes the site integrity of 32LO161.

NRHP Recommendation: Site 32LO161 is recommended as ineligible for NRHP inclusion because the site has poor integrity of design, materials, workmanship, feeling, and association. The lack of integrity means that no association with any of the traditional farm building styles in North Dakota could be established (Andrzejewski 2017). Furthermore, the site is of an age that is already well represented in the historic record, there appears to be no association with any notable historical figure, and the site does not display any unique architecture or workmanship. Further investigation at this site would be unlikely to contribute substantial information to research questions about the Historic period in the area. Should NDSHPO concur, the Project will not be required to avoid construction impacts to 32LO161.

**5.3. 32LO162**

Temporary Site Number:	ATBAD3
Site Type:	Cemetery
Cultural Affiliation and Age:	Historical
Site Size:	8,830 m <sup>2</sup>
NRHP Recommendation:	Unevaluated
Management Recommendation:	Continued Avoidance

Site Description: This site is a potentially unrecorded historic cemetery. This site is marked with a 6-foot-tall cross made of angle iron and a plaque that reads “Pioneer Cemetery.” Although this site is within the area that encompasses known German-Russian wrought-iron cross sites in North Dakota and is adjacent to one of the primary settlement areas of this ethnic group, the marker does not have any of the characteristics of these traditional markers. This marker has straight, simple lines and is completely unadorned, except for the plaque. The nomination form for the German-Russian wrought-iron cross sites notes that “few German Russians were satisfied with two simple bars of forge-welded iron to mark the resting places of their loved ones” (Kloberdanz 1988: 10). Site 32LO162 is, in fact, two simple bars of angle iron. The NRHP nomination form notes that even the simplest single-bar cross in the German-Russian tradition usually has some decorative features; this cross has none. Therefore, this cross does not appear to have any connection to the German-Russian wrought-iron cross tradition.

The marker is located on the side of a gravel road, on one of the more prominent hilltops in the immediate area. Other than the cross, no features indicating the presence of graves were observed. This location will be recommended as a “Site Lead” due to a lack of identifiable features, artifacts, or boundaries. Further investigation is needed to confirm the presence of graves, to determine the boundaries of the site, and to evaluate eligibility for NRHP inclusion. Badger Wind has chosen to voluntarily redesign the Project to avoid any impacts to this location.

NRHP Recommendation: This Site Lead is unevaluated for NRHP eligibility.

**5.4. 32LO163**

Temporary Site Number:	ATBAD4
Site Type:	Dump
Cultural Affiliation and Age:	Historical
Site Size:	22,005 m <sup>2</sup>
NRHP Recommendation:	Not Eligible
Management Recommendation:	Continued Avoidance (unless NDSHPO concurs)

Site Description: This site is a Historic-period refuse dump located in an unplowed area dominated by large piles of stone pulled from neighboring fields. The site encompasses four dumps: one within an excavated pit and three that are opportunistically collocated atop preexisting piles of stone. The waste appears to have originated from one of the nearby farmsteads. The largest of the dumps is located in a 25-meter-square excavated hole and is topped with a hay trailer.

The excavated pit contains primarily modern rubber and plastic waste on top of a layer of Historic-period material. This bottom layer appears to consist of metal cans and glass. The feature is capped with an abandoned hay trailer. The other three dumps are thin surficial deposits that vary in size and composition. One of these dumps is composed primarily of home appliances that appear to be less than forty years old, and another is composed of rubber tires of a similar age. Only one of the features appears to be primarily contain material from the Historic period, but it contains little material. Furthermore, due to its placement on top of a pile of stone, the deposit is assumed to be strictly surficial. Diagnostic glass bases within this feature provide dates in the 1950s, but the bulk of the waste is plastic dating to the 1990s.

Although some of the material within the dump is from the Historic period, the bulk of the cultural material is modern in origin. It is not clear what proportion of the site or its features meet the 50-year threshold, and it is possible that the Historic-period materials were deposited recently.

It appears that this site may still be in use or was recently in use to some degree. Tires, home appliances, and plastics that are much less than 50 years in age were observed mixed in with Historic-period material at this dump. Ruts observed on site and the orientation of the abandoned hay trailer indicate the likely use of a tractor or other heavy machinery at this location. This continued use of the site, non-Historic-period dumping, and use of heavy machinery have likely disturbed the shallow depositional profile within the dump. Due to the

muddled and disturbed context of the material at the site, the site integrity of 32LO163 is very poor.

NRHP Recommendation: Atwell recommends this site as not eligible for listing on the NRHP. The site lacks integrity of design, feeling, workmanship, and association. It is not associated with events or individuals important to the history of the region. This is an informal dump site and has no association with a particular style of design or construction. It is unlikely that further investigation at this site will contribute substantial information to research questions about the Historic period in the area. Should NDSHPO concur, the Project will not be required to avoid construction impacts to 32LO163.

**5.5. 32LO164**

Temporary Site Number:	ATBAD8
Site Type:	Farmstead
Cultural Affiliation and Age:	Historical
Site Size:	20,229 m <sup>2</sup>
NRHP Recommendation:	Not Eligible
Management Recommendation:	Continued Avoidance (unless NDSHPO concurs)

Site Description: This archaeological site is the remnants of a twentieth-century farmstead complex. The site consists of a single outbuilding foundation, a windmill, and the remnants of a metal wagon. The concrete outbuilding foundation is located on the east side of the site and appears to have been a large barn. The windmill is in poor shape, and much of the rotor and tail is missing. The site appears to have recently been used as a livestock watering location for one of the local cattle operations. There is evidence that cultural material has been removed from the site, probably by the landowner, likely for the benefit of the current livestock operation. The site has very poor integrity due to the lack of cultural material and the recent disturbances.

NRHP Recommendation: Few artifacts were observed on site, and only the foundation remains of the outbuilding. The site has lost integrity of design, workmanship, materials, and feeling and overall has poor integrity. The site appears to be a typical example of a small farmstead, of which there are many extant and better-preserved examples in the region, and the poor integrity makes it difficult to ascertain whether the original structure was in the form of any of the traditional historical farmstead building styles typical of North Dakota. The site does not appear to be associated with any individuals or events that were significant in local or regional history. The construction style and methods used for the outbuilding and other site components appear to be typical of the place and time and do not contribute any significant information to the construction practices of the period. Given the poor site integrity, small artifact assemblage, and commonplace structures, the site has little or no potential to contribute substantially to research questions on the Historic period of the area. Atwell recommends this site as not eligible for listing on the NRHP. Should NDSHPO concur, the Project will not be required to avoid construction impacts to 32LO164.

**5.6. 32LO165**

Temporary Site Number:	ATBAD9
Site Type:	Farmstead
Cultural Affiliation and Age:	Historical
Site Size:	9,890 m <sup>2</sup>
NRHP Recommendation:	Not Eligible
Management Recommendation:	Continued Avoidance (unless NDSHPO concurs)

Site Description: This archaeological site is the remnants of a twentieth-century farmstead complex consisting of multiple concrete foundations and one standing outbuilding. The residence appears to have burned down, but the remaining poured-concrete foundation is in relatively good shape. A “Majestic” coal chute dates the house to the early 1900s, which is consistent with the introduction of poured-concrete foundations for various structures in the early decades of the twentieth century (State Historical Society of North Dakota 2014: 26–27). The house appears to have had a basement with an entrance via stairs from the outside. The only standing outbuilding is a small wooden shed; based on its location, it appears to have been used as supplemental storage for the farmhouse. The concrete foundations of two additional outbuildings of indeterminate function were also identified. Aerial images from the 1990s show an additional outbuilding that was not observed during Atwell’s 2021 survey (Historic Aerials 2022). This structure appears to have been destroyed and removed from the site prior to 2009.

NRHP Recommendation: The structures appear to have been intentionally dismantled or, at a minimum, much of the structural debris has been removed from the site, negatively impacting the site’s integrity. The outbuilding, building foundation, and other materials on site have poor integrity of materials, workmanship, feeling, and association. Few artifacts were observed on site. These factors, combined with the overall deterioration of the collapsing shed, give the site poor overall integrity. The site appears to be a typical example of a small farmstead, of which there are many extant and better-preserved examples in the region. Because the superstructure of the residence has been dismantled, it is very difficult to associate it with any of the traditional historical farmstead building styles typical of North Dakota (Andrzejewski 2017). The deteriorating outbuilding appears to be a typical example of a storage shed in the region and does not exhibit any particular stylistic traits.

The site does not appear to be associated with any individuals or events that were significant in

local or regional history. The construction style and methods used for the residence and outbuildings appear to be typical of the place and time and do not contribute any significant information to the construction practices of the period. Given the poor site integrity, small artifact assemblage, and commonplace structures, the site has little or no potential to contribute substantially to research questions on the Historic period of the area. Atwell recommends this site as not eligible for listing on the NRHP. Should NDSHPO concur, the Project will not be required to avoid construction impacts to 32LO165.

**5.7. 32LO166**

Temporary Site Number:	ATBAD11
Site Type:	Farmstead
Cultural Affiliation and Age:	Historical
Site Size:	68,833 m <sup>2</sup>
NRHP Recommendation:	Not Eligible
Management Recommendation:	Continued Avoidance (unless NDSHPO concurs)

Site Description: This archaeological site is the remnants of a twentieth-century farmstead complex. The only standing structure is a tornado shelter located near the center of the site. The tornado shelter has a small wood-framed entryway with a roof, two walls, and a set of stairs leading down. A concrete outbuilding foundation is located off the driveway on the west side of the site. A small Historic-period debris scatter was observed at the top of the hill in the east-central portion of the site. Given the layout of the site, it appears that the residence was located at the top of this hill. Although the tornado shelter is in good shape, the other buildings of the associated farmstead are in ruins. Field observations and desktop research indicate that the foundations of the residence at the site have likely been at least partially removed. This removal of most elements of the residence and the likely removal of the residence's contents contribute to a loss of integrity of materials, workmanship, feeling, and association.

NRHP Recommendation: The site does not appear to be associated with any individuals or events that were significant in local or regional history. The construction style and methods used for the residence and outbuildings appear to be typical of the place and time and do not contribute any significant information to the construction practices of the period. The only standing structure is the tornado shelter, and such structures have not been identified as significant to the history of the region (Andrzejewski 2017). Given the poor site integrity, small artifact assemblage, and commonplace structures, the site has little or no potential to contribute substantially to research questions on the Historic period of the area. Atwell recommends this site as not eligible for listing on the NRHP. Should NDSHPO concur, the Project will not be required to avoid construction impacts to 32LO166.

**5.8. 32LO167**

Temporary Site Number:	ATBAD12
Site Type:	Farmstead
Cultural Affiliation and Age:	Historical
Site Size:	4,833 m <sup>2</sup>
NRHP Recommendation:	Not Eligible
Management Recommendation:	Continued Avoidance (unless NDSHPO concurs)

Site Description: This archaeological site is the remnants of a twentieth-century farmstead complex and currently lacks standing structures. Remnants of a farmhouse foundation, the foundation of a single large outbuilding, and a well were identified. Fragments of glass and porcelain indicate an occupation dating to at least the mid-1900s.

Of the farmstead's structures, only a well and the foundations of two buildings remain. It is unclear how the residence was lost, but little cultural material was observed during Atwell's 2021 survey. It seems likely that cultural material and structural remnants of the residence and outbuilding were removed from the site by a recent landowner. The loss of this material and the modern disturbances contribute to a lack of integrity of materials, workmanship, feeling, and association.

NRHP Recommendation: The site does not appear to be associated with any individuals or events that were significant in local or regional history. The construction style and methods used for the foundations appear to be typical of the place and time and do not contribute any significant information to the construction practices of the period. The lack of standing structures means that the remnants cannot be tied to traditional building styles of the region (Andrzejewski 2017). Given the poor site integrity, small artifact assemblage, and commonplace structures, the site has little or no potential to contribute substantially to research questions on the Historic period of the area. Atwell recommends this site as not eligible for listing on the NRHP. Should NDSHPO concur, the Project will not be required to avoid construction impacts to 32LO167.

**5.9. 32LOX73**

Temporary Site Number:	ATBAD7
Site Type:	Isolated Find
Cultural Affiliation and Age:	Unknown Prehistoric
Site Size:	1 m <sup>2</sup>
NRHP Recommendation:	Not Eligible
Management Recommendation:	None—avoidance not needed

Site Description: 32LOX73 is a prehistoric isolated find. This isolate consists of a single bright-white chert flake of a non-local variety. The flake was found in a hay field with nearly 100% ground surface visibility. The integrity of 32LOX73 is very poor due to a lack of cultural material and heavy disturbance caused by ongoing agricultural operations.

NRHP Recommendation: By definition, an isolated find is considered not eligible for listing on the NRHP, and Atwell recommends this status for 32LOX73. Should NDSHPO concur, the Project will not be required to avoid construction impacts to 32LOX73.

**5.10. 32MT450**

Temporary Site Number:	ATBAD1
Site Type:	Farmstead
Cultural Affiliation and Age:	Historical
Site Size:	782 m <sup>2</sup>
NRHP Recommendation:	Not Eligible
Management Recommendation:	Continued Avoidance (unless NDSHPO concurs)

Site Description: This archaeological site consists of the remnants of a twentieth-century farmstead complex. The only remaining feature of this complex is the foundation of a small outbuilding. Remnants of a wooden structure and miscellaneous cultural material were observed on the surface near the remaining foundation. Observed materials include fence wire, window glass, and a 1958 North Dakota license plate. Aerial imagery dating between the late 1990s and 2016 indicate that multiple structures have been destroyed and removed from the site, presumably by the landowner. Aerial imagery also indicates the fleeting presence of a small junkyard. The junkyard first appears in the 2013 aerials, but it was removed before subsequent photos were taken in 2016. This site has poor integrity due to the intentional removal of cultural material and features. Additionally, the removal of the materials indicates that further investigation at this location would be unlikely to contribute substantial information to research questions about the Historic period in the area.

NRHP Recommendation: Site 32MT450 is recommended as ineligible for NRHP inclusion because the site has poor integrity of design, materials, workmanship, feeling, and association. The lack of integrity means that no association with any of the traditional farm building styles in North Dakota could be established (Andrzejewski 2017). Furthermore, the site is of an age that is already well represented in the historic record, there appears to be no association with any notable historical figure, and the site does not display any unique architecture or workmanship. Additional investigations at this site would be unlikely to contribute to the historic record. Should the NDSHPO concur with this recommendation, the Project will not be required to avoid construction impacts to the site.

**5.11. 32MTX111**

Temporary Site Number:	ATBAD5
Site Type:	Isolated Find
Cultural Affiliation and Age:	Unknown Prehistoric
Site Size:	10 m <sup>2</sup>
NRHP Recommendation:	Not Eligible
Management Recommendation:	None—avoidance not needed

Site Description: This is a prehistoric isolated find consisting of a single piece of chert debitage. The flake was found in a recently harvested cornfield that had ground surface visibility of 80%. The integrity of 32MTX111 is very poor due to a lack of cultural material and heavy disturbances caused by ongoing agricultural operations.

NRHP Recommendation: By definition, an isolated find is considered not eligible for listing on the NRHP, and Atwell recommends this status for 32MTX111. Should NDSHPO concur, the Project will not be required to avoid construction impacts to 32MTX111.

## 6.0 CONCLUSIONS AND RECOMMENDATIONS

Atwell conducted a Class III cultural resources pedestrian inventory of the assessment area. Based on the results of this inventory, Atwell makes the following recommendations and conclusions:

- Archaeological isolated finds 32LOX73 and 32MTX111 are located in the Assessment Area and are recommended as not eligible for listing on the NRHP. Isolated finds are typically not significant sites and are typically not eligible for listing on the NRHP. Therefore, avoidance of isolated finds would not be necessary. Neither of these isolated finds are located within the assessment area, and there is currently no anticipated impact to either.
- The newly identified Lead site 32LO162 is a purported “Pioneer Cemetery.” This site has the potential for undocumented human remains. Badger Wind has voluntarily redesigned proposed project infrastructure to avoid impacts to this site.
- The current project layout would directly impact sites 32LO163, 32LO166, and 32LO167. Anticipated impacts to the sites would consist of damage caused by construction of a collection line. Feature 4 at site 32LO163 would be the only affected portion of the site; this feature is composed of recently deposited rubber tires. Impacts to 32LO166 are expected to affect both the tornado shelter (Feature 1) and the outbuilding foundation (Feature 2). At site 32LO167, the construction right-of-way would overlap only the southwestern corner of the site. All three sites are of very poor site integrity and are recommended as ineligible for listing on the NRHP. If the NDSHPO concurs with Atwell’s recommendations, the Project would not be required to avoid construction impacts to sites 32LO163, 32LO166, and 32LO167.

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Class III Cultural Resources Inventory Badger Wind Project

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**APPENDIX A: MAPS**

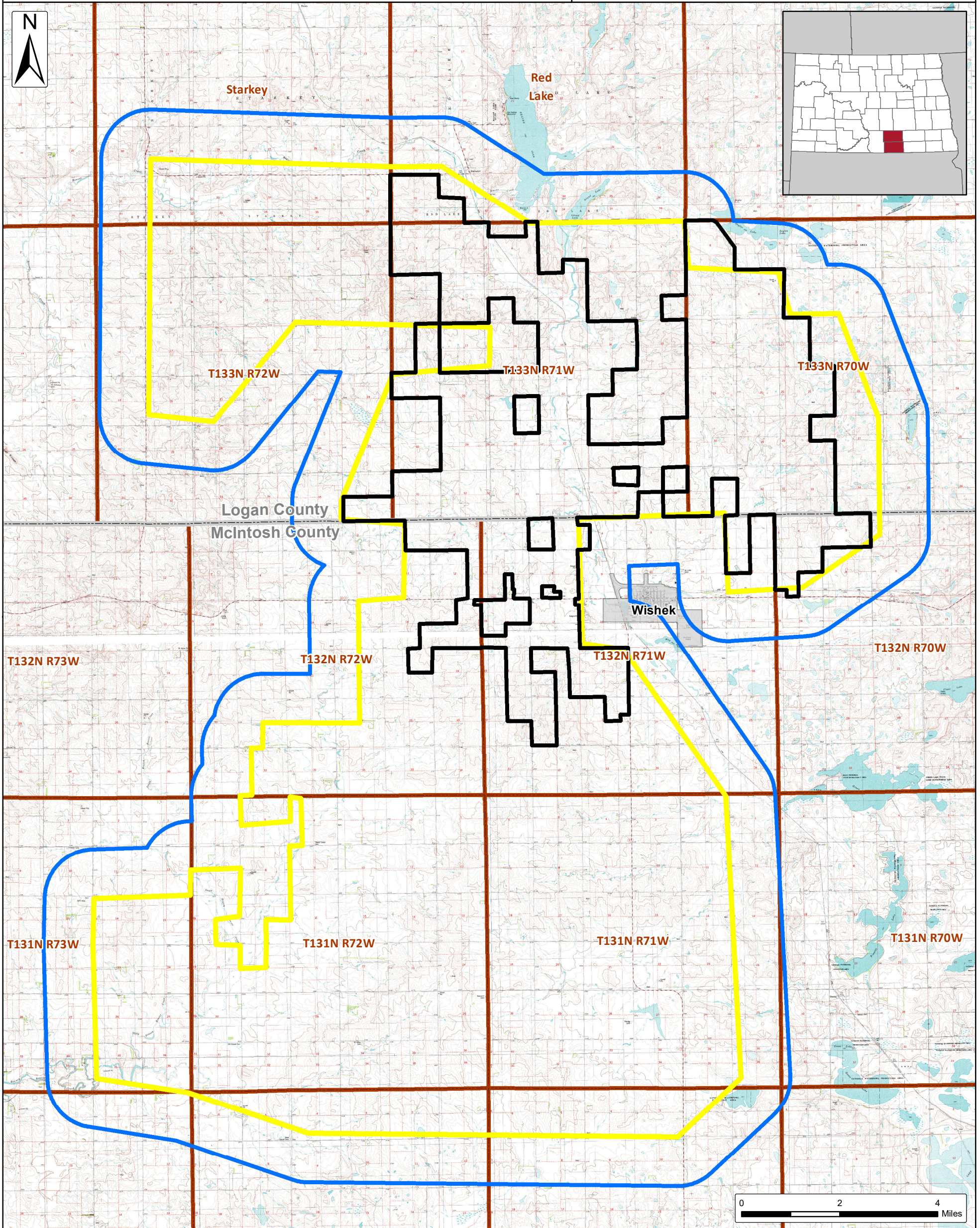
# Badger Wind

## Figure 1. Site Location

Logan and McIntosh Counties, North Dakota

Client:  
**Badger Wind,  
LLC**

Issue Date:  
4/8/2022  
Atwell, LLC Project:  
19000785



- Project Area (~57,413 acres)
- Project Area 04/15/2019 (~121,695 acres)
- 1-mile Buffer
- Township
- City/Village
- Counties



*The information contained on this map is proprietary and confidential. The use or disclosure of this information by you to third parties is prohibited by law and may give rise to civil or criminal liability.*

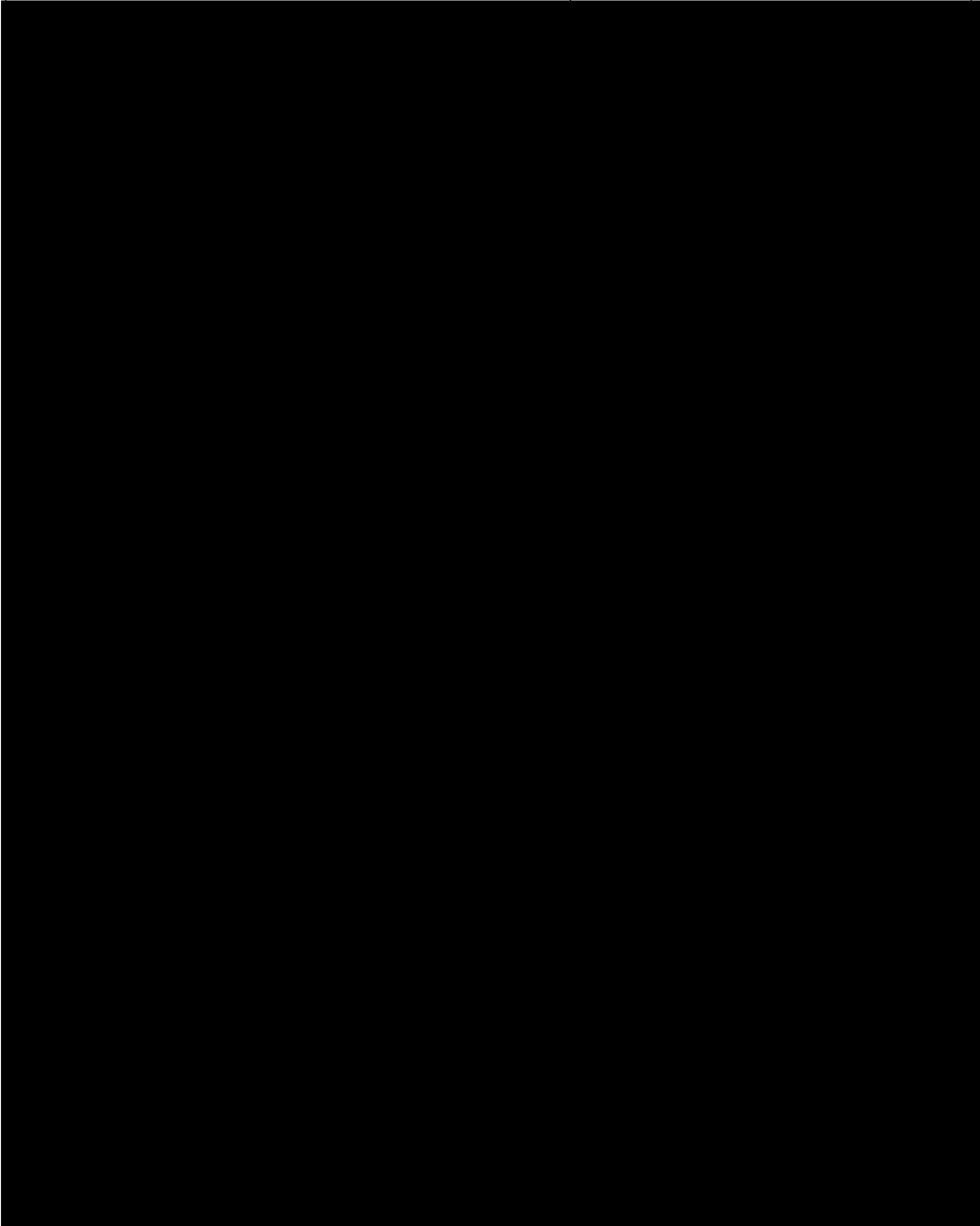
# Badger Wind

## Figure 2: Class I and III Survey Results


Logan County & McIntosh County, North Dakota

Client:  
**Badger Wind,  
LLC**

Issue Date:  
4/20/2022  
Atwell, LLC Project:  
19000785



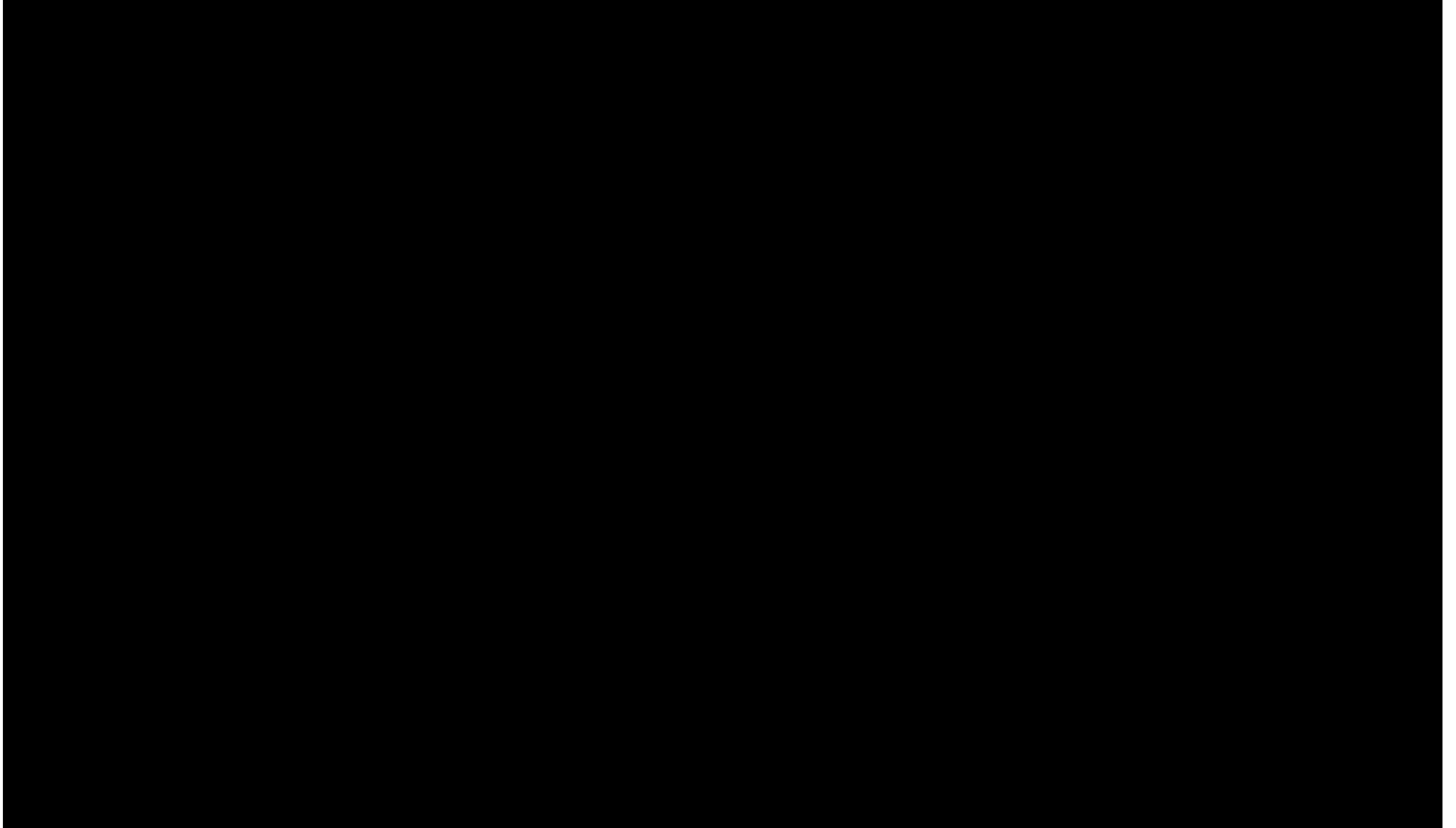
Previously Identified Architectural Site	Atwell Class III Survey Areas	Project Area
Previously Identified Archaeological Site or Isolate	Proposed Turbine (symbols not to scale)	1-mile Buffer
Previously Identified Archaeological Site or Isolate	Proposed MET Tower	County
Field Identified Architectural Site	Proposed ADLS Tower	Township
Field Identified Archaeological Site or Isolate	Proposed O&M Building	City/Village
Field Identified Archaeological Site or Isolate	Proposed Substation	
Cemeteries (USGS)	Proposed Laydown Yard	

















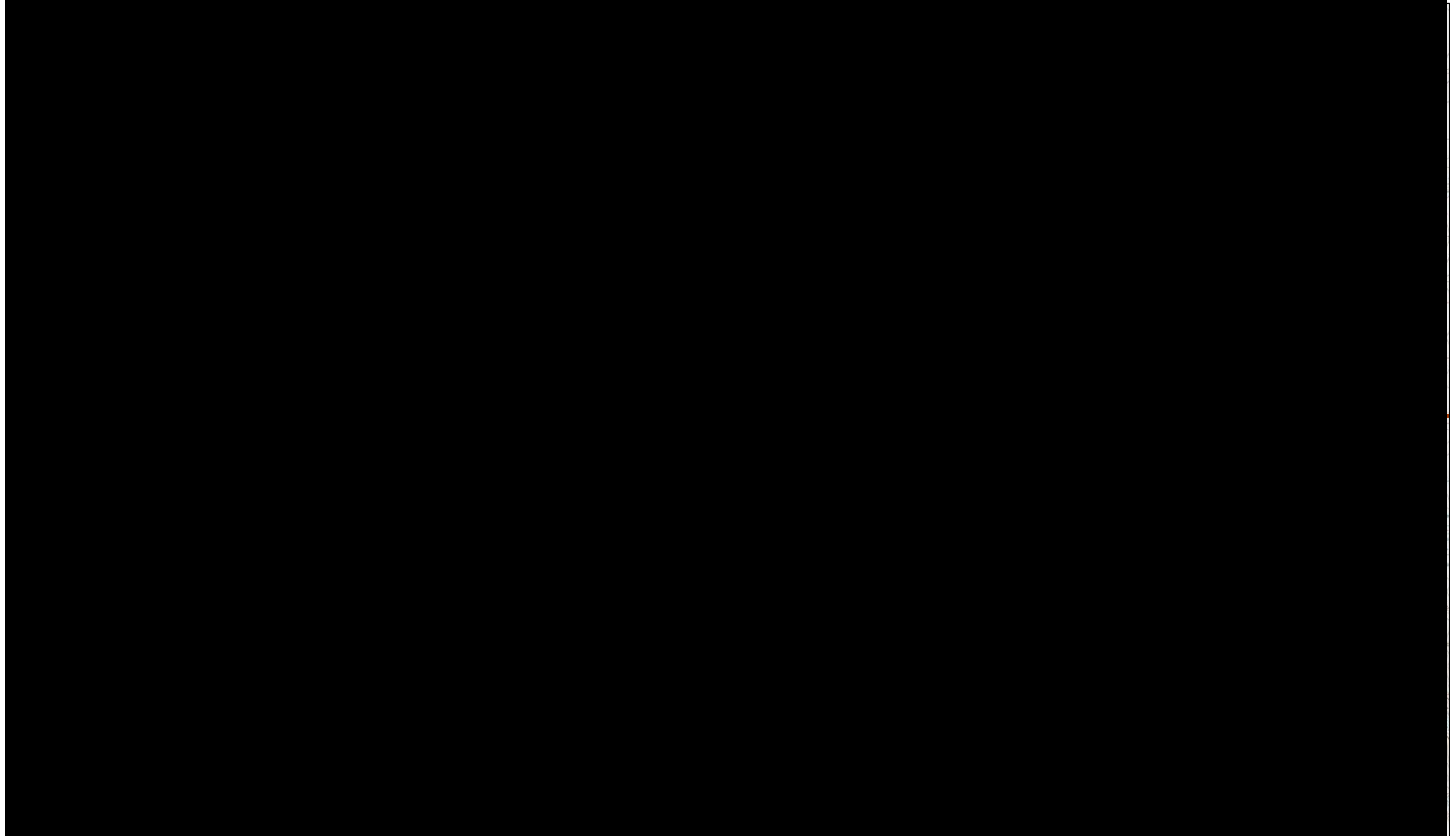
**ATWELL**












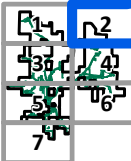
Confidential -  
Not for Public Disclosure  
(54 U.S.C. 307103)

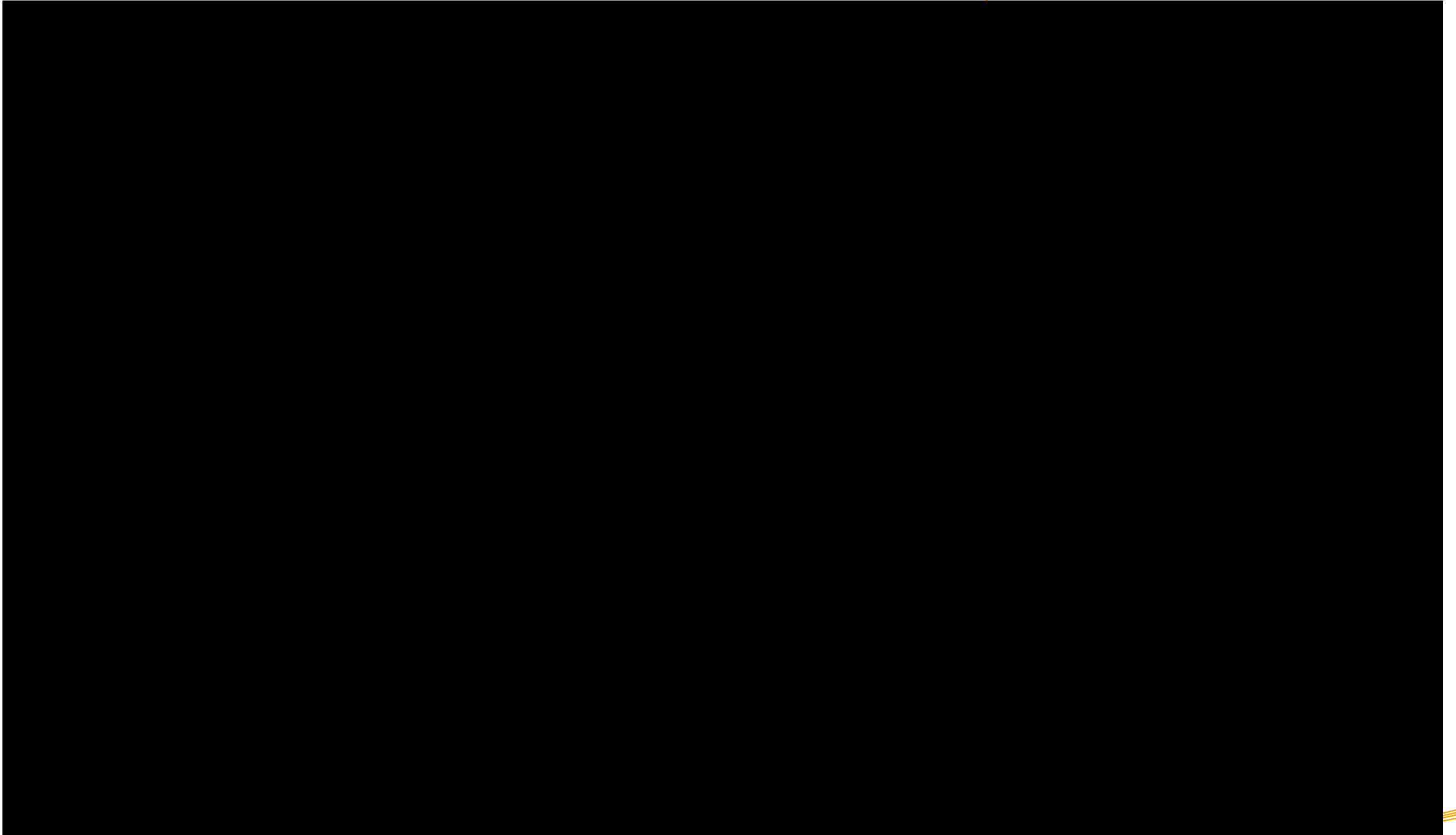
Source: USGS Topographic Quadrangles  
Burnstad, Lehr SW, May Lake  
May Lake NW, Wishek, Wishek SW (1982)



 <p>Source: USGS Topographic Quadrangles Burnstad, Lehr SW, May Lake May Lake NW, Wishek, Wishek SW (1982)</p>	<p>Cultural Class I and III Report Badger Wind, LLC 19000785 April 20, 2022</p> <p><b>Confidential - Not for Public Disclosure (54 U.S.C. 307103)</b></p>  	<p> Previously Identified Archaeological Site or Isolate</p> <p> Field Identified Archaeological Site or Isolate</p>	<p> Atwell Class III Survey Areas</p> <p> Project Area</p> <p> 1-mile Buffer</p>	<p> Proposed Turbine (symbols not to scale)</p> <p> Proposed Underground Collection Line</p> <p> Proposed Access Road</p>	<p> County</p> <p> Township</p>		<p>Figure 2.1 <b>Class I and III Survey Results</b> Logan and McIntosh Counties, North Dakota</p>
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 <p>Source: USGS Topographic Quadrangles Burnstad, Lehr SW, May Lake May Lake NW, Wishek, Wishek SW (1982)</p>	<p>Cultural Class I and III Report Badger Wind, LLC 19000785 April 20, 2022</p> <p><b>Confidential - Not for Public Disclosure (54 U.S.C. 307103)</b></p> <p>0 2,000 Feet</p> 	<p> Previously Identified Archaeological Site or Isolate</p>	<p> Atwell Class III Survey Areas</p> <p> Project Area</p> <p> 1-mile Buffer</p>	<p> Proposed Turbine (symbols not to scale)</p> <p> Proposed Underground Collection Line</p> <p> Proposed Access Road</p>	<p> County</p> <p> Township</p>		<p>Figure 2.2 <b>Class I and III Survey Results</b> Logan and McIntosh Counties, North Dakota</p>
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Source: USGS Topographic Quadrangles  
Burnstad, Lehr SW, May Lake  
May Lake NW, Wishek, Wishek SW (1982)

Cultural Class I and III Report  
Badger Wind, LLC  
19000785  
April 20, 2022

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- Previously Identified Architectural Site
- Previously Identified Archaeological Site or Isolate
- Previously Identified Archaeological Site or Isolate
- Field Identified Archaeological Site or Isolate
- Cemeteries (USGS)
- Atwell Class III Survey Areas
- Project Area
- 1-mile Buffer
- Proposed Turbine (symbols not to scale)
- Proposed MET Tower
- Proposed Underground Collection Line
- Proposed Crane Path
- Proposed Access Road
- County
- Township

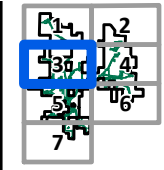
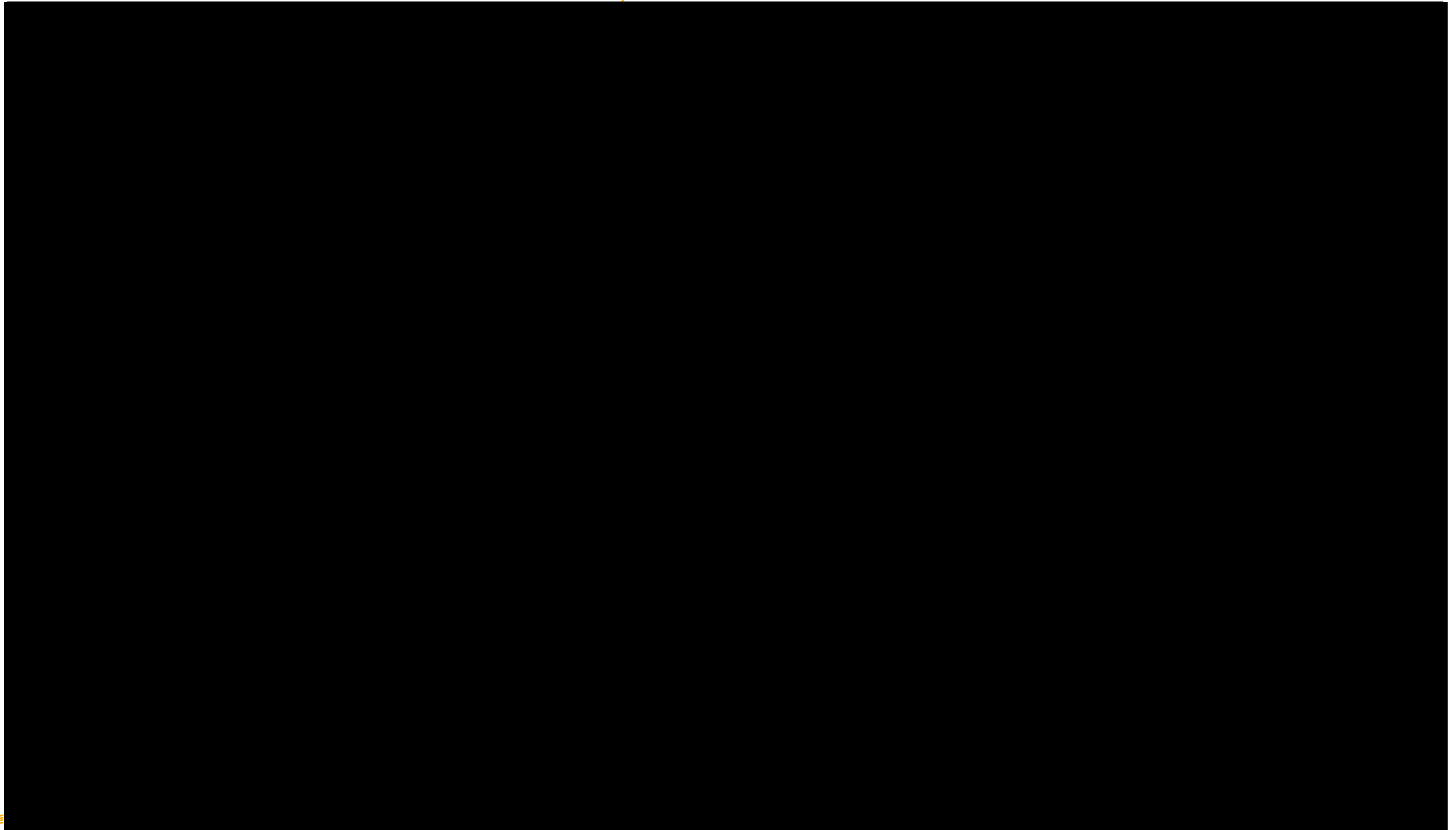


Figure 2.3  
**Class I and III Survey Results**  
Logan and McIntosh Counties,  
North Dakota

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Source: USGS Topographic Quadrangles  
 Burnstad, Lehr SW, May Lake  
 May Lake NW, Wishek, Wishek SW (1982)

Cultural Class I and III Report  
 Badger Wind, LLC  
 19000785  
 April 20, 2022

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 (54 U.S.C. 307103)**



- Previously Identified Archaeological Site or Isolate
- Field Identified Architectural Site
- Field Identified Archaeological Site or Isolate

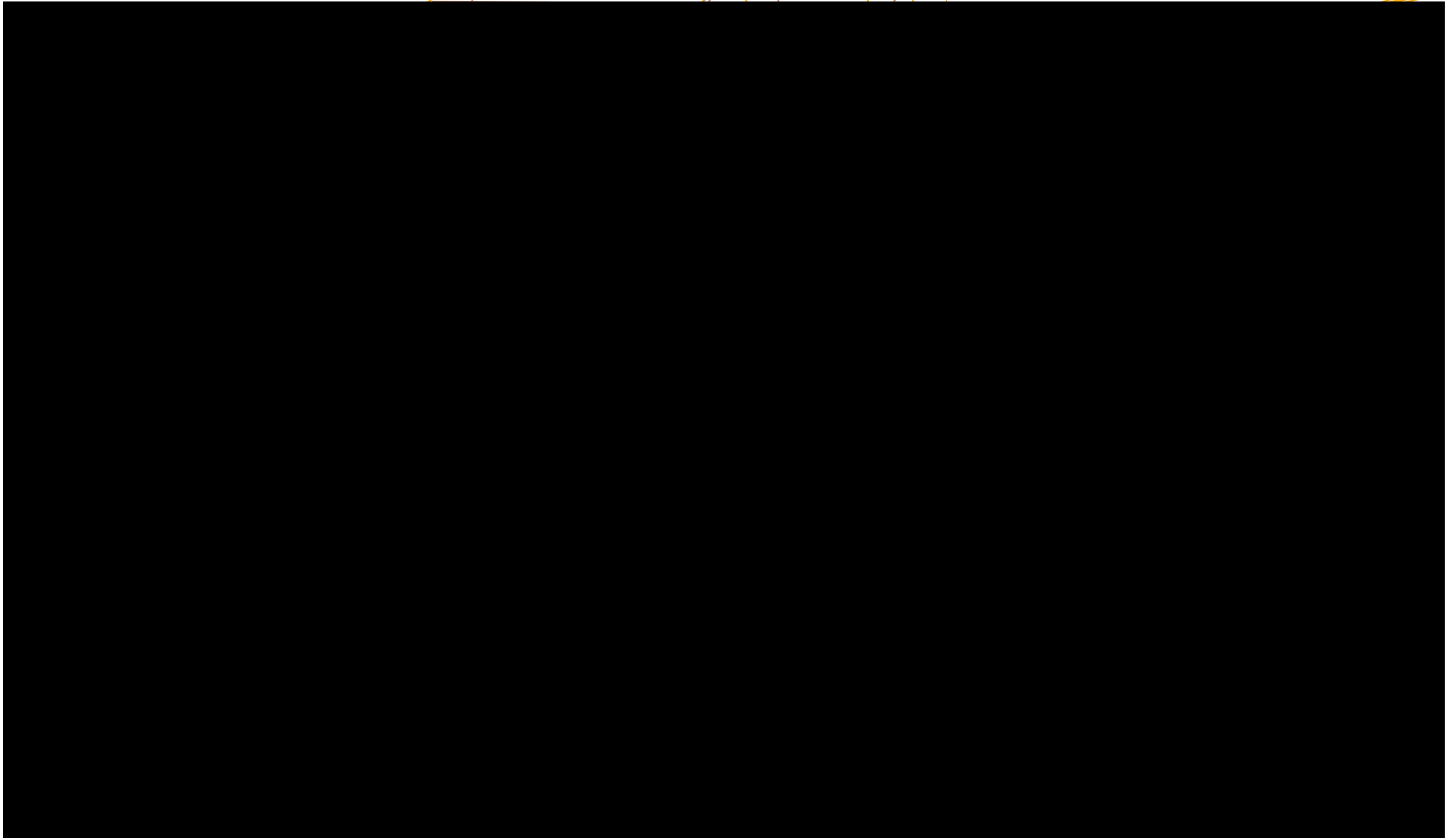
- Atwell Class III Survey Areas
- Project Area
- 1-mile Buffer

- Proposed Turbine (symbols not to scale)
- Proposed MET Tower
- Proposed Underground Collection Line
- Proposed Crane Path
- Proposed Access Road

- County
- Township



Figure 2.4  
**Class I and III Survey Results**  
 Logan and McIntosh Counties,  
 North Dakota



Source: USGS Topographic Quadrangles  
Burnstad, Lehr SW, May Lake  
May Lake NW, Wishek, Wishek SW (1982)

Cultural Class I and III Report  
Badger Wind, LLC  
19000785  
April 20, 2022

**Confidential -  
Not for Public Disclosure  
(54 U.S.C. 307103)**



- Previously Identified Archaeological Site or Isolate
- Field Identified Archaeological Site or Isolate
- Field Identified Archaeological Site or Isolate
- Cemeteries (USGS)
- Atwell Class III Survey Areas
- Project Area
- 1-mile Buffer
- Proposed O&M Building
- Proposed Substation
- Proposed Laydown Yard
- Proposed Turbine (symbols not to scale)
- Proposed MET Tower
- Proposed Underground Collection Line
- Proposed Crane Path
- Proposed Access Road
- County
- Township
- City/Village

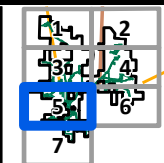
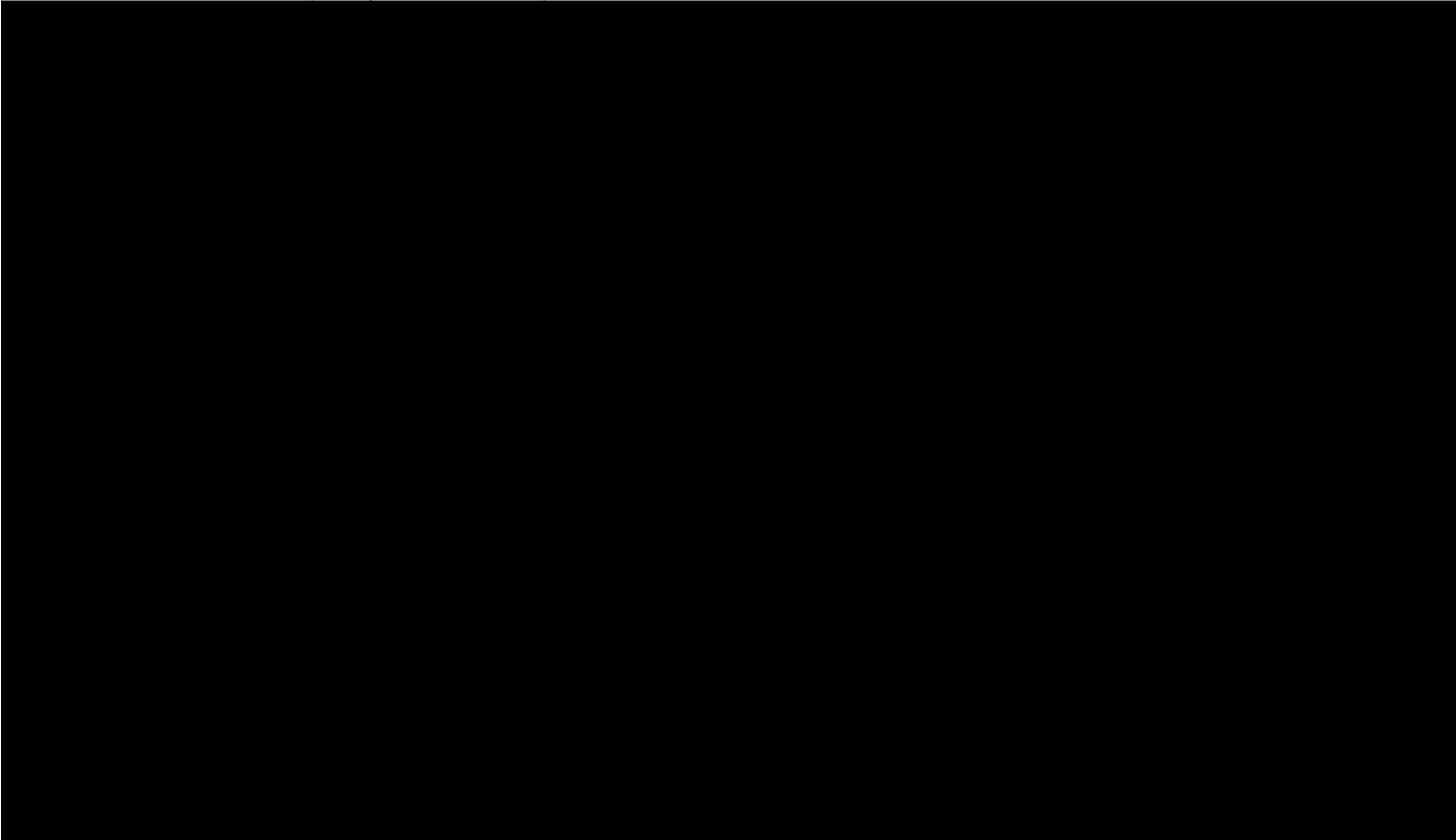


Figure 2.5  
**Class I and III Survey Results**  
Logan and McIntosh Counties,  
North Dakota



Source: USGS Topographic Quadrangles  
Burnstad, Lehr SW, May Lake  
May Lake NW, Wishek, Wishek SW (1982)

Cultural Class I and III Report  
Badger Wind, LLC  
19000785  
April 20, 2022

**Confidential -  
Not for Public Disclosure  
(54 U.S.C. 307103)**



- Previously Identified Architectural Site
- Previously Identified Archaeological Site or Isolate
- Cemeteries (USGS)

- Atwell Class III Survey Areas
- Project Area
- 1-mile Buffer

- Proposed Turbine (symbols not to scale)
- Proposed MET Tower
- Proposed Underground Collection Line
- Proposed Crane Path
- Proposed Access Road

- County
- Township
- City/Village

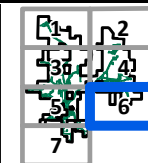
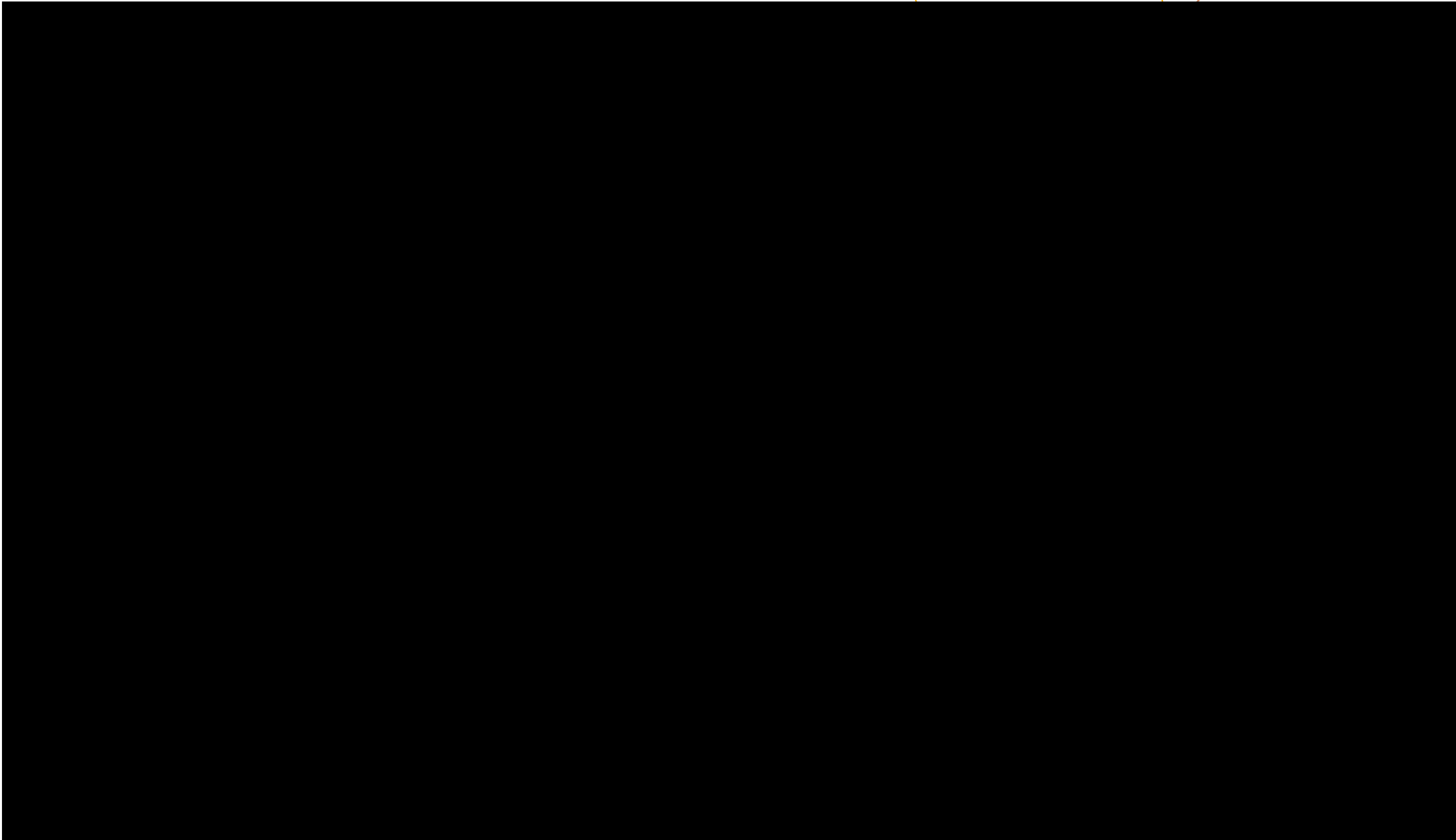


Figure 2.6  
**Class I and III Survey Results**  
Logan and McIntosh Counties,  
North Dakota



Source: USGS Topographic Quadrangles  
Burnstad, Lehr SW, May Lake  
May Lake NW, Wishek, Wishek SW (1982)

Cultural Class I and III Report  
Badger Wind, LLC  
19000785  
April 20, 2022

**Confidential -  
Not for Public Disclosure  
(54 U.S.C. 307103)**



- Previously Identified Archaeological Site or Isolate
- Field Identified Architectural Site
- Cemeteries (USGS)

- Atwell Class III Survey Areas
- Project Area
- 1-mile Buffer

- Proposed Turbine (symbols not to scale)
- Proposed ADLS Tower
- Proposed Underground Collection Line
- Proposed Crane Path
- Proposed Access Road

- County
- Township

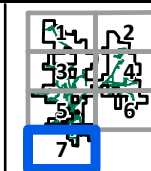


Figure 2.7  
**Class I and III Survey Results**  
Logan and McIntosh Counties,  
North Dakota

**APPENDIX B: BADGER WIND PROJECT CLASS I ARCHAEOLOGICAL LITERATURE SEARCH MEMO**



## MEMORANDUM

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**To:** Sarah Aftergood, Ørsted, Director of Environmental Permitting

**From:** Jennifer Bring, Senior Project Coordinator  
James Freshwater, Environmental Consultant

**Date:** October 8, 2021

**Re:** **Badger Wind Project Class I Archaeological Literature Search**

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### Introduction

Badger Wind, LLC (Badger Wind), proposes to construct the Badger wind energy generation facility in Logan and McIntosh counties, North Dakota. Development of the Badger Wind Project (the project) would include construction of wind turbines, access roads, an underground electric collection line system, a substation, and a transmission line. Temporary crane walk routes and a haul route would be used for the construction of the proposed facility.

The project is voluntarily complying with North Dakota guidelines for archaeological reconnaissance and survey provided by the State Historic Preservation Office (SHPO) as a due diligence effort. As there is no federal nexus for this project, review under Section 106 of the National Historic Preservation Act is not required.

Atwell conducted the Class I Archaeological Literature Search in 2020 through an initial file search of the North Dakota Cultural Resources Survey (NDCRS) data files maintained by the State Historical Society of North Dakota (SHSND). The methods employed for the Class I Archaeological Literature Search follow the SHPO Guidelines Manual for Cultural Resources Inventory Projects (SHSND 2020).

### Results

The results of the Class I Archaeological Literature Search indicate that 15 archaeological sites have been previously identified within the Project Boundary from 2020, including two cemeteries. An additional eight archaeological sites have been previously identified within one mile of the 2020 Project Boundary, including one cemetery. There is one additional cemetery within the 2020 Project Boundary and three additional cemeteries within one mile of the Project Boundary.

A historic railroad crosses the Project Area (32LO33). A single National Register of Historic Places (NRHP)-eligible associated site (32MT74), an abandoned railroad segment, is located within the 2020 Project Boundary.

Previously identified archaeological sites in the 2020 Project Boundary and within one mile of the Project Boundary are summarized in Tables 1 and 2 below and depicted on the attached figure.

**Table 1. Archaeological Sites and Leads Within the 2020 Project Boundary**

Site Number, Name	Site Period, Type	NRHP Eligibility
32LO33	Historic, Railroad	Unevaluated
32LO37	Historic, Foundation/Features	Not Eligible
32LO110	Historic, Artifact Scatter	Not Eligible
32LO111	Historic, Windmill Ruins	Not Eligible
32LO112	Prehistoric, Stone Circles	Not Eligible
32LO113	Prehistoric, Stone Circle	Unevaluated
32LO139	Historic, Farmstead	Not Eligible
32LOX8	Historic, Railroad-related	Unevaluated
32LOX55	Historic, Homestead	Lead only
32LOX61	Historic, Isolated Find	Unevaluated
32MT8	Historic, Farmstead	Not Eligible
32MT74	Historic, Railroad Segment	Eligible
32MT99	Prehistoric, Stone Circles	Unevaluated
32MT281	Historic, Beaver Creek Baptist Cemetery	Unevaluated
32MT282	Historic, Neudorf Cemetery	Unevaluated

**Table 2. Archaeological Sites and Leads Within the One Mile of the 2020 Project Boundary**

Site Number, Name	Site Period, Type	NRHP Eligibility
32LO23	Historic, Homestead	Not Eligible
32LO24	Historic, Depressions	Not Eligible
32LO137	Historic, Depressions	Not Eligible
32LOX7	Historic, Townsite/Post Office	Unevaluated
32LOX9	Historic, Petroglyph	Unevaluated
32MT27	Historic, Wishek City Cemetery	Unevaluated
32MT100	Historic, Farmstead	Not Eligible
32MTX16	Historic, Post Office	Unevaluated

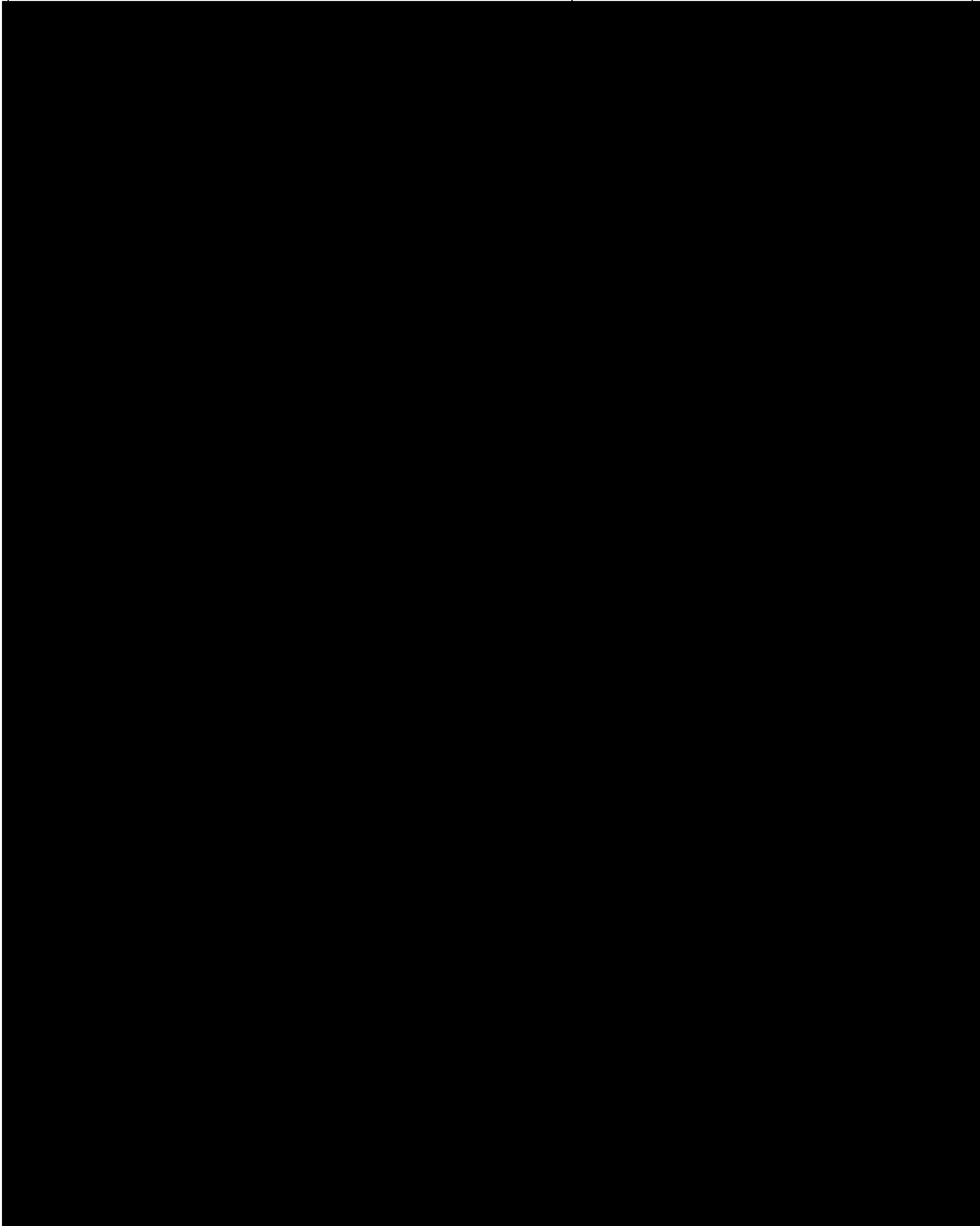
# Badger Wind









## Known Cultural Resources

Logan County & McIntosh County, North Dakota

Client:  
**Badger Wind,  
LLC**

Issue Date:  
9/20/2021  
Atwell, LLC Project:  
19000785



-  Archaeological Sites and Leads (NDCRS)
-  Railroad (32LO33)
-  Isolates (NDCRS)
-  Cemeteries (USGS)
-  Project Area (12/04/2020)
-  1-mile Buffer
-  City/Village
-  Counties



**Confidential -  
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(54 U.S.C. 307103)**

Source: USGS Topographic Quadrangles  
Burnstad, Lehr SW, May Lake  
May Lake NW, Wishek, Wishek SW (1982)

**APPENDIX C: CLASS III ARCHAEOLOGICAL SITE FORMS**

*Class III Archaeological Site Forms Omitted*

**APPENDIX D: UNANTICIPATED DISCOVERIES PLAN**

**UNANTICIPATED DISCOVERIES PLAN FOR  
CULTURAL RESOURCES AND HUMAN REMAINS**

**BADGER WIND PROJECT**

**LOGAN AND MCINTOSH COUNTIES, NORTH DAKOTA**



**Prepared for:**

Badger Wind, LLC  
Orsted Onshore North America, LLC  
812 San Antonio Street  
Austin, Texas, 78701

**April 2022**

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**List of Appendices**

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Appendix A: North Dakota Contact Lists

Appendix B: Unanticipated Discovery Flow Chart

## 1. INTRODUCTION

Badger Wind, LLC (Badger Wind), is proposing to construct a wind energy project with a nameplate capacity of up to 251.6 megawatts. The Badger Wind facility (the Project) is bisected by the Logan and McIntosh county line, in south-central North Dakota, and encircles the western side of the City of Wishek.

This document outlines the procedure Badger Wind, a wholly owned subsidiary of Orsted Onshore North America, LLC (Orsted), will follow to prepare for and address any unanticipated discoveries of cultural resources, including archaeological sites (precontact archaeological, historic archaeological, and architectural), Tribal resources, and possible human skeletal remains. It provides direction to Badger Wind personnel and their consultants as to the proper procedure to follow in the event that unanticipated discoveries are made during construction of the Project. This plan, henceforth called the Unanticipated Discovery Plan (UDP), complies with North Dakota Century Code (NDCC) chapter 23-06-27 and North Dakota Administrative Code chapter 40-02-03, which apply to the Project if human remains are inadvertently discovered during the course of construction.

Badger Wind is committed to avoidance of cultural resource sites to the maximum extent feasible during construction, which is scheduled to begin in August 2022. However, the current project layout would directly impact sites 32LO163, 32LO166, and 32LO167. Anticipated impacts to the sites would consist of damage caused by construction of a collection line. Feature 4 at site 32LO163 would be the only affected portion of the site; this feature is composed of recently deposited rubber tires. Impacts to 32LO166 are expected to affect both the tornado shelter (Feature 1) and the outbuilding foundation (Feature 2). At site 32LO167, the construction right-of-way would overlap only the southwestern corner of the site. All three sites are of very poor site integrity and are recommended as ineligible for listing on the NRHP. If the NDSHPO concurs with Atwell's recommendations, the Project would not be required to avoid construction impacts to sites 32LO163, 32LO166, and 32LO167.

During Phase III surveys for the Project, no Sites of Religious and Cultural Significance to Tribes (SRCSTT) were identified.

**2. TRAINING AND ORIENTATION**

The Badger Wind Project Manager (PM) will provide training as part of the pre-construction on-site training program for foremen, company inspectors, and construction supervisors. The Badger Wind Construction Manager (CM) will be responsible for advising construction and contractor personnel on the procedures to follow in the event that an unanticipated discovery is made. The CM will advise all operators of equipment involved in grading, stripping, or trenching activities to take the following steps:

- Stop work immediately if they observe any indications of the presence of cultural materials (artifacts or other human-made features), animal bone, or possible human bone or remains.
- Contact the CM, Orsted On-site personnel as soon as possible.
- Comply with the UDP.
- Treat human remains and artifacts with the utmost dignity and respect.

### 3. CULTURAL RESOURCES

Cultural resources include physical evidence of or places of past human activity dating to the Prehistoric or Historic periods (defined as 50 years old or older). Cultural resources in the area may include archaeological sites (precontact archaeological, historic archaeological, and architectural) and SRCSTT for Tribes who historically inhabited the area. Specifically, cultural resources may include Prehistoric- and Historic-period items such as the following:

- Human remains/bones or graves of antiquity
- Prehistoric stone features (e.g., clustered cobbles or alignments of cobbles and stones)
- Prehistoric projectile points (e.g., arrowheads or spearheads)
- Prehistoric hearths (e.g., circular soot or charcoal stains uncovered in the soil)
- Building remnants or ruins (e.g., farm foundations, brick, or other building materials)
- Densely concentrated and substantial buried Historic-period debris (e.g., bottle/can dumps, farm implements)
- Structures (e.g., barns, bridges)

If a presumed cultural resource is found during construction, personnel shall be instructed to stop work immediately around the find and report any cultural materials to the CM per the notification procedures below. Work will halt in the area surrounding the find until a historic property determination has been made by a qualified archaeologist.

#### **4. PROCEDURE WHEN CULTURAL MATERIALS ARE OBSERVED**

This section describes the discovery procedures and steps to be taken whenever construction personnel encounter or suspect the presence of archaeological and/or SRCSTT remains vulnerable to project-related construction damage.

A discovery occurs when previously unidentified cultural resource materials are encountered. Discoveries could arise during any phase of project construction. When such discoveries occur, all project personnel are obligated to cease all project activities in the vicinity of the discovery, notify appropriate personnel of the event and circumstances (as outlined below), and await further instruction prior to proceeding with activities that may affect the discovered remains.

Standard avoidance measures that should be established immediately upon encountering suspected cultural resources are described in Section 4.1. The full procedures for addressing discovery situations are described in Section 4.2. Procedures for suspected human remains are described in Section 5. Contact information for relevant parties is provided in Appendix A, and a flowchart of procedure steps is provided in Appendix B.

##### **4.1. Immediate Avoidance Measures to Take When Potential Cultural Materials Are Observed**

This section explains the steps construction personnel should follow as soon as anything that could be considered cultural materials (artifacts, features, human remains, etc.) is identified.

- A. Stop work in the immediate vicinity of the potentially cultural materials
  1. Construction personnel will notify the CM of the discovery.
  2. The CM will immediately notify the Orsted On-site personnel
  3. If the Orsted On-site personnel believes that an unanticipated discovery has been made:
    - a. The Orsted On-site personnel will direct all ground-disturbing activities to stop within a minimum of 100 feet of the discovery.
    - b. The Orsted On-site personnel will protect and secure the materials in place by delineating the find with protective flagging, staking, or fencing. Additional protection from the elements may be required and will be determined in consultation with the Consultant Principal Investigator.
    - c. Project activities can continue outside of the delineated unanticipated find area, if possible or applicable.

- B. The CM will minimize movement of vehicles and equipment in the area immediately surrounding the discovery.
- C. The Orsted On-site personnel will notify the Environmental Compliance Lead of the initial assessment of the discovery.
- D. The Orsted On-site personnel will immediately notify the Consultant Project Manager and Principal Investigator (see Appendix A for contact information).
- E. If the discovery is suspected to be Tribal/Indigenous, the Consultant Project Manager and Badger Wind Project Manager will coordinate to contact the Tribal Historic Preservation Officer(s) (THPOs). THPOs shall be contacted in all cases of verified human remains.

#### **4.2. Procedure for Assessment of Unanticipated Discoveries**

Within 24 hours of being notified of the discovery, the Principal Investigator will mobilize to the Project Area to assess the discovery. The Principal Investigator will follow the steps below:

- A. If the Principal Investigator, or an on-site archaeologist under the direction of the Principal Investigator, determines that the discovery is not a cultural resource, the following steps will be taken:
  - 1. The Principal Investigator or on-site archaeologist will immediately advise the CM, the Orsted On-site personnel, and the Badger Wind PM, all of whom will have the authority to remove the stop-work order.
  - 2. The Principal Investigator will submit a letter report (a summary of the evaluation) that will include photographs of the discovery site to Badger Wind within 10 business days.
- B. If the Principal Investigator or on-site archaeologist determines that the discovery is a cultural resource, the Principal Investigator or on-site archaeologist will immediately advise the Badger Wind PM, the CM, and the Orsted On-site personnel. The protocols for the level of survey and documentation necessary for each unanticipated discovery will vary slightly based on the type of site discovered. Unanticipated discoveries will generally fall into one of four categories, which are listed here in ascending order of significance and potential impact to construction activities: isolated finds, Cultural Heritage Sites, archaeological sites, and human remains or suspected human remains. Specific definitions and protocols for the first three categories are described below. A thorough discussion of the protocol for human remains or suspected human remains is presented in Section 5 of this document.
  - 1. Isolated Finds: An isolated find is a collection of five or fewer artifacts representing an area of very limited past human activity.
    - a. It is not necessary to establish a 100-foot avoidance area around isolated finds, but a temporary avoidance buffer should be defined around the discovery until

the resource can be confirmed as an isolated find. Once established the Environmental Compliance Lead will mark the avoidance buffer.

- b. Construction personnel will notify the Orsted On-site personnel to initially assess the find.
  - c. The Orsted On-site personnel will notify the Consultant Principal Investigator to confirm that the resource is an isolated find.
  - d. If confirmed, the Consultant Principal Investigator, or an on-site archaeologist under the direction of the Principal Investigator, will carry out the following tasks:
    - i. Record the location of the find with a GPS unit, photograph the find with a scale, prepare thorough notes describing the find, create a 1:24,000 U.S. Geological Survey topographic map depicting the spatial data collected during recordation, and complete the appropriate North Dakota Site Record form.
    - ii. Rebury the artifacts at a location out of the area of disturbance but as near to the original resource location as possible. This reburial area will be marked and described in the isolated find's site form.
    - iii. Notify the CM once the find's documentation is complete. Construction may then be allowed to resume in the area of the isolate.
2. Cultural Heritage Sites: A Cultural Heritage Site is a traditional cultural site, sacred site, and/or SRCSTT.
- a. The Orsted On-site personnel will establish a 100-foot avoidance area around the site.
  - b. Within 24 hours of being notified of the unanticipated discovery, the Consultant Principal Investigator, or an on-site archaeologist under their direction, will examine the location of the discovery, accompanied by the CM.
  - c. The Consultant Principal Investigator, or an on-site archaeologist under their direction, will carry out the following documentation tasks: record the location of the find with a GPS unit, take overview and detailed photographs (with scales, when appropriate), prepare thorough notes describing the find, and complete the appropriate North Dakota Site Record form.
  - d. If the area is avoidable, a satisfactory avoidance buffer within the construction easement will be determined. If the area cannot be avoided, the Badger Wind PM and CM, and the Consultant Principal Investigator.
  - e. A narrative of the Cultural Heritage Site will be included in the unanticipated discoveries report at the end of the Project.

- f. If the Principal Investigator or on-site archaeologist determines that a Cultural Heritage Site is eligible for listing in the NRHP, the Principal Investigator or on-site archaeologist will immediately advise the Badger Wind CM, who will inform the PM and Orsted personnel. The Principal Investigator or on-site archaeologist will also notify the Consultant Project Manager. The Principal Investigator will, in turn, notify the North Dakota State Archaeologist by telephone and will provide written confirmation by email (see contact information in Appendix A).
    - i. If the North Dakota State Archaeologist is unavailable, the Associate Director of the Office of the State Archaeologist will be notified (see contact information in Appendix A).
    - ii. The site will be documented following the protocols for Archaeological Sites (see Section B.3 below)
3. Archaeological Sites: An archaeological site is a location containing five or more artifacts or at least one feature.
  - a. Orsted personnel will establish a 100-foot avoidance area around the site.
  - b. Within 24 hours of being notified of the unanticipated discovery, the Consultant Principal Investigator, or an on-site archaeologist under their direction, will examine the location of the discovery, accompanied by the CM.
  - c. The Principal Investigator or on-site archaeologist should survey and document the site in accordance with the standards laid out in the 2012 North Dakota State Historic Preservation Office Guidelines Manual for Cultural Resource Inventory Projects. This includes documenting the boundary with a GPS unit; photographing the site, artifact(s), and feature(s); completing the appropriate North Dakota Archaeological Site Record form, etc.
  - d. The Principal Investigator or on-site archaeologist will notify the North Dakota State Archaeologist within 24 hours of the discovery and will provide their observations of the cultural material. Notification will include one of the following actions:
    - i. Informing the North Dakota State Archaeologist by telephone why the resource is not significant and requesting concurrence by the North Dakota State Archaeologist that construction can resume, or
    - ii. Informing the North Dakota State Archaeologist about the recommended scope of work for evaluating the significance of the resource and evaluating potential project effects on the resource.
  - e. If additional work is required to evaluate the significance of the resource, a scope of work will be written and submitted to the Badger Wind PM and the North Dakota State Archaeologist within 3 business days of the discovery.

- f. If approved by the North Dakota State Archaeologist during telephone consultations, cultural resource investigations may begin.
  - i. The Principal Investigator will invite the North Dakota State Archaeologist to observe the implementation of any proposed work.
  - ii. The Principal Investigator will oversee completion of the evaluation per the agreed-upon scope of work.
  - iii. When the evaluation of the cultural resources is complete, the Principal Investigator will notify the North Dakota State Archaeologist by telephone and discuss the potential significance of the resource.
  - iv. As soon as possible following the field investigation, the Principal Investigator will provide the Badger Wind PM with a written report describing the results of the fieldwork.
  - v. If the resource is believed to be significant and cannot be avoided by construction activities, the Consultant Project Manager and Principal Investigator will prepare a scope of work and proposal for data recovery for submission to the Badger Wind PM and the North Dakota State Archaeologist.
  - vi. If the proposed mitigation measures may be implemented without being affected by construction, the submittal to the North Dakota State Archaeologist will be accompanied by a request for concurrence that construction in the area of the discovery be permitted to resume.
  - vii. If the proposed mitigation measures result in a finding of not significant, and the North Dakota State Archaeologist concurs with these findings, construction in the area of the discovery may be permitted to resume.
4. Treatment of Artifacts
  - a. Archaeological artifacts will be treated with the utmost dignity and respect. In the case of Tribal/Indigenous artifacts, the most appropriate course of action for such artifacts will be determined in the course of discussions with the North Dakota State Archaeologist.
  - b. Artifacts recovered during data recovery or mitigation will be handled in accordance with the scope of work approved by the PM and the North Dakota State Archaeologist.
- C. THPO Communication

The THPO will be notified immediately in the event of verified human remains (as described below in Section 5).

**5. PROCEDURE WHEN HUMAN REMAINS AND/OR POTENTIAL HUMAN SKELETAL MATERIALS ARE OBSERVED**

Human remains are the physical remains of a human body or bodies including, but not limited to, bones, teeth, hair, and preserved soft tissues (mummified or otherwise preserved) of an individual. Remains may be articulated or disarticulated bones or teeth. The NDCC Chapter 23-06-27 cites it is a Class C felony to intentionally disturb any human remains. Standard avoidance measures that should be established first are described below

- A. Workers will treat all human remains with dignity and respect.
- B. Construction personnel will immediately stop work in the vicinity of an unanticipated discovery involving potential human remains.
- C. Construction personnel will immediately notify the CM about the find.
- D. The CM will stop all ground-disturbing activities within a minimum of 200 feet of the discovery. They will also take the following steps:
  1. Protect and secure the discovery.
  2. Delineate the area with flagging materials, stakes, or safety fencing
  3. Minimize movement by vehicles and equipment in the immediate vicinity of the discovery.
  4. Immediately notify the Badger Wind PM who will, in turn, immediately notify the designated contacts (see Appendix A for contact information).
- E. Within a minimum of 1 day of the discovery, the Consultant Principal Investigator will mobilize to the Project Area to examine the discovery to determine whether the remains are likely human, whether they have an archaeological association, and whether any archaeological association is aboriginal or non-aboriginal.
  1. If the skeletal remains are determined to be nonhuman and to have no archaeological association or paleontological significance, the archaeological Principal Investigator making the determination will immediately advise the CM, the Consultant Project Manager, and the Badger Wind PM, and construction will be allowed to resume.
    - a. The Project archaeologist will submit a letter report including photographs of the discovery site to Badger Wind within 10 business days.
  2. If the skeletal remains are nonhuman but are associated with an archaeological site, the steps in Section 4.1.B.3 above will be followed.
  3. If the skeletal remains may be human, the Principal Investigator will notify the Badger Wind PM and the Logan or McIntosh County Sheriff's office, depending on which county the discovery is in.

- a. The appropriate sheriff will call the North Dakota State Medical Examiner to determine whether the remains are associated with a crime scene.
  - b. If the remains are precontact or historic, the Principal Investigator will contact the North Dakota State Archaeologist and the proper THPO (see Appendix A for contact information).
- F. Following stakeholder consultation, if the human remains are removed by the Logan or McIntosh County Sheriff's office, State Medical Examiner, or North Dakota State Archaeologist, construction work will not resume until permission is granted in writing by the North Dakota State Archaeologist and/or appropriate law enforcement agencies.

**APPENDIX A**

**NORTH DAKOTA CONTACT LISTS**

Contact Organization	Address	Telephone Number
<b>Project Contacts</b>		
<b>Subheading Level 2</b>		
NAME- Role	Address, Email	Office and Cell
Table cell left aligned	Centered	Right
Table cell left aligned	Centered	Right
Table cell left aligned	Centered	Right
Table cell left aligned	Centered	Right
<b>State and County Contacts</b>		
<b>Subheading Level 2</b>		
Table cell left aligned	Centered	Right
Table cell left aligned	Centered	Right
Table cell left aligned	Centered	Right
Table cell left aligned	Centered	Right
Table cell left aligned	Centered	Right
Table cell left aligned	Centered	Right
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**APPENDIX B**

**UNANTICIPATED DISCOVERY FLOW CHART**

