



PU-08-932/PU-19-144

**Merricourt Wind Power Project
As-Built Inspection Report**

File No. 227701305

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Prepared for:

**North Dakota Public Service
Commission**

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As-Built Inspection Report
Wenck Associates, Inc. (Stantec)

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Figure 1-11 As-Built Observation Locations Map

APPENDICES

Appendix A Field Observation Coordinates
Appendix B Observation Point Photolog



Table 1 Cross Reference Matrix

Source of Project Specification	Description of Project Specification	Written Verification	3 rd Party Verification
SIZE, TYPE & LOCATION			
FINDINGS OF FACT 6.	The proposed project boundary and layout revisions were created following coordination with USFWS to implement avoidance and minimization measures that, if implemented, would cause the likelihood of take for these species to be avoided and minimized such that take for the whooping crane and piping plover would be considered discountable.	PU-08-932 Docket 225: Exhibit 28 – Application for Amendment	<i>Section 3.1</i>
FINDINGS OF FACT 8.	Consistent with First Amended Certificate No. 23, the new project layout includes 75 primary and 6 alternate turbine locations and the proposed facility would be capable of producing up to 150 MW of power.	PU-08-932 Docket 225: Exhibit 28 – Application for Amendment	<i>Section 3.2</i>
STUDY OF PREFERRED LOCATION			
SITING CRITERIA			
FINDINGS OF FACT 9.	EDF performed an updated noise analysis on all residences within one mile of the project boundary. EDF's updated acoustic modeling for the revised layout predicted that sound levels would continue to be less than 50 decibels within 100 feet of all occupied residences. (Finding of Fact 9).	PU-08-932 Docket 262, Attachment 3 – Noise and Shadow Flicker	<i>Section 3.3</i>
FINDINGS OF FACT 10.	EDF performed an updated shadow flicker analysis on all residences within one mile of the project boundary. EDF's updated the shadow flicker analysis for the new layout predicted that shadow flicker would not exceed 14 hours per year at any occupied residence.	PU-08-932 Docket 262: Attachment 3 – Noise and Shadow Flicker modeling results	<i>Section 3.3</i>



Source of Project Specification	Description of Project Specification	Written Verification	3 rd Party Verification
FINDINGS OF FACT 11.	Class III Cultural Resource inventories were conducted progressively during layout analysis to identify cultural resources. A view shed analysis was conducted to identify potential impacts to the Whitestone Hill State Historic Site and other standing structures. (Findings of Fact 11).	PU-08-932 Docket 225: 2 nd Amendment to Application for Certificate of Site Compatibility Appendix A: SHSND Coordination	Section 3.3
FINDINGS OF FACT 12.	Numerous wetlands of various hydrology and vegetation exist within the revised project area. Field wetland delineations were completed progressively during layout analysis to determine wetland impacts.	PU-08-932 Docket 151: Wetland Delineation Report, Docket 267, 52, and Docket 225: Exhibit 28 – 2 nd Amendment to Application	Section 3.3
FINDINGS OF FACT 13.	EDF commissioned an avian use survey in May 2016 that continued for one year based on the general guidance in the USFWS Eagle Conservation Plan Guidance (ECPG) and Wind Energy Guidelines (WEG). Results of the avian use survey indicated low eagle use in the project area.	PU-08-932 Docket 228: Exhibit 31 – Final Avian Use Report	Section 3.3
Exclusion Areas			
FINDINGS OF FACT 14.	While the amendment would increase the project area by approximately 2,200 acres, there is no increase in the number of turbines and the permanent impact to prime farmland and farmland of statewide importance collectively remains well under 1% of the total land in the project area. The project is proposed to permanently impact approximately 64 acres of prime farmland or farmland of statewide importance, an amount that would be approximately 0.4% of the total project area. The Commission finds that the prime farmland and farmland of statewide importance expected to be removed from use by the Project is of such a small acreage as to have a negligible impact on agricultural production.	PU-08-932 Docket 225: Exhibit 28 – 2 nd Amendment to Application	Section 3.4.1



Source of Project Specification	Description of Project Specification	Written Verification	3 rd Party Verification
FINDINGS OF FACT 15.	Wind turbines, access roads, and associated facilities were sited to avoid significant cultural resource sites and traditional cultural properties (TCP). The North Dakota State Historic Preservation Office (SHPO) concurred with EDF's "No Significant Sites Affected" determination for the current turbine, access road, and collector line layout.	PU-08-932 Docket 225: Exhibit 28 – 2 nd Amendment to Application	Section 3.4.1
Avoidance Areas			
FINDINGS OF FACT 17.	EDF will avoid all wetlands under easement to the USFWS and impacts to other wetlands will be avoided or minimized to the extent practicable.	PU-08-932 Docket 225: 2 nd Amendment to Application; Docket 272: Letter enclosing As-Built Maps	Section 3.4.2
FINDINGS OF FACT 18.	Trees and shrubs are located within the project footprint. EDF will construct the project to minimize impacts to trees and shrubs to the extent practicable. All trees and shrubs removed during construction will be replaced in accordance with the Commission's tree and shrub mitigation specifications.	PU-08-932 Docket 275: Response to 22 June letter re Tree and Shrub Mitigation Specifications	Section 3.4.2
FINDINGS OF FACT 21.	The amendment will enhance the compatibility of the Project with environmental preservation by adjusting the turbine layout so that each turbine is at least three miles distance from critical piping plover habitat.	PU-08-932 Docket 225 2 nd Amendment to Application for a Certificate of Site Compatibility	Section 3.4.2
Measures to Minimize Impact			
FINDINGS OF FACT 22.	The distance from the closest residence to a turbine under the revised layout is 1531 feet.	PU-08-932 Docket 225: 2 nd Amendment for Application	Section 3.5



Source of Project Specification	Description of Project Specification	Written Verification	3 rd Party Verification
FINDINGS OF FACT 23.	In coordination with USFWS, EDF agreed to commit to biological avoidance and minimization measures approved in the Western Area Power Association Programmatic EIS for piping plovers and whooping cranes. EDF coordinated with the USFWS and there was agreement that if EDF committed to the avoidance and minimization measures outlined in the Programmatic EIS that the threat of any take of piping plover and whooping crane would be reduced to a discountable level. On September 11, 2015, EDF submitted a letter to the USFWS confirming its commitment to implement these measures. Accordingly, EDF is no longer pursuing incidental take authorization under Section 10 of the Endangered Species Act for the whooping crane or the piping plover. Avoidance and minimization measures for the whooping crane include: monitoring for whooping cranes with curtailment if sighted and worker instruction on identification and reporting. Avoidance and minimization measures for the piping plover include: setbacks of 3 miles from alkali lakes where piping plovers have nested or are designated as critical habitat and not siting project facilities between any such lakes where the out limit of the buffer zones are less than 3 miles.	PU-08-932 Docket 81: Addendum to biological conditions and effect summary	<i>Section 3.5</i>
FINDINGS OF FACT 24.	EDF will install lights that are compatible with light mitigation technology. Subject to Federal Aviation Administration approval, EDF plans to install light mitigation technology suitable to the Commission as soon as practicable after commercial operation and in no event later than December 31, 2021.	PU-08-932 Docket 225: 2 nd Amendment for Application	<i>Section 3.5</i>
FINDINGS OF FACT 27.	EDF has voluntarily agreed to construct the project such that it complies with the recent change to North Dakota Century Code 49-44-05.1(3) which identifies areas less than one and one-tenth times the height of the turbine from a property line of a nonparticipating landowner and less than three times the height of the turbine from an inhabited rural residence of a nonparticipating landowner as wind specific exclusion areas.	PU-08-932 Docket 225: 2 nd Amendment for Application	<i>Section 3.5</i>
COMMISSION ORDERS			
Commission Order 3.	EDF is authorized to construct up to 75 wind turbines producing a total nameplate capacity of 150 MW within the project area as revised, along with associated access roads, underground electrical collection systems and communication cables, substation and operations and maintenance building.	PU-08-932 Docket 225: 2 nd Amendment for Application	<i>Section 4.1</i>



Source of Project Specification	Description of Project Specification	Written Verification	3 rd Party Verification
Commission Order 4.	In the event the layout is modified, EDF shall complete a Class III cultural resource survey for any previously un-surveyed areas in accordance with SHPO guidance, and shall submit cultural resource findings to the SHPO for review and obtain and file a copy of the SHPO's response with the Commission prior to beginning construction in affected areas.	PU-08-932 Docket 265: Attachment 5 – Part A: Cultural Resource Monitoring and Cultural Resources Inventory and PU-19-144 Docket 55 – Attachment 4 – Part A 2019 Cultural Resources Monitoring and Reroutes	Section 4.2
Commission Order 5.	In the event the layout is modified, EDF shall complete a wetland determination of any previously un-surveyed areas affected by project activities, and file a report with the Commission.	PU-08-932 Dockets 52, 267, PU-08-932 Docket 225 2nd Amendment to Application Appendix B	Section 4.2
Commission Order 6.	In the event that project modifications occur that are not covered by its existing acoustic analysis, EDF shall conduct a revised acoustic analysis and file the results of that analysis with the Commission.	PU-08-932 Docket 225 2nd Amendment to Application Section 7.6	Section 4.2
Commission Order 7.	In the event that the project modifications occur that are not covered by its existing shadow flicker analysis, EDF shall conduct a revised shadow flicker analysis and file the results with the commission.	PU-08-932 Docket 225 2nd Amendment to Application Section 7.7	Section 4.2



Source of Project Specification	Description of Project Specification	Written Verification	3 rd Party Verification
Commission Order 8.	EDF shall locate turbines such that shadow flicker at any currently inhabited residence is less than 30 hours per year, unless otherwise agreed to by the landowner in writing.	PU-08-932 Docket 225 2nd Amendment to Application Section 7.7	Section 4.3
CERTIFICATION RELATING TO ORDER PROVISIONS			
Transmission Facility Siting			
CERTIFICATION RELATING TO ORDER PROVISIONS 2.	Company agrees to comply with the rules and regulations of all other agencies having jurisdiction over any phase of the transmission facility including all city, township, and county zoning regulations.	PU-08-932 Docket 225 Section 11.11 and Appendix E	Section 5.1
CERTIFICATION RELATING TO ORDER PROVISIONS 3.	Company understands and agrees that it shall obtain all other necessary licenses and permits, and shall provide copies of all licenses and permits to the Commission prior to construction activity associated with the energy conversion facility that requires said license or permit.	PU-19-144 Docket 25, 36, 41, 47, and 65; Permits	Section 5.1
Construction			
CERTIFICATION RELATING TO ORDER PROVISIONS 8.	Company agrees to hold a preconstruction conference prior to commencement of any construction, which must include a Company representative, its construction supervisor, and a representative of Commission Staff, to ensure that Company fully understands the conditions set forth in the Commission's order.	PU-19-144 Docket 21: Minutes of 24 June 2019 preconstruction conference and Notice of Intent to start construction	Section 5.2.1
CERTIFICATION RELATING TO ORDER PROVISIONS 9.	Company understands and agrees that all cultural resource mitigation plans must be submitted to the North Dakota State Historic Preservation Office and approved prior to the start of any fieldwork and construction activity in the affected area.	PU-08-932 Docket 94: SHPO Concurrence Letter	Section 5.2.2



Source of Project Specification	Description of Project Specification	Written Verification	3 rd Party Verification
CERTIFICATION RELATING TO ORDER PROVISIONS 10.	Company understands and agrees that topsoil removal will begin when the Commission's third party construction inspector is present at the Project site to observe that topsoil is properly removed and kept segregated from subsoil until replacement occurs. Company shall establish the date and time for the Commission's third-party construction inspector's topsoil removal oversight in the preconstruction conference.	PU-19-144 Docket 30 Topsoil Inspection Report	Section 5.2.3
CERTIFICATION RELATING TO ORDER PROVISIONS 11.	Company agrees to inform the Commission and the Commission's third-party construction inspector of its intent to start construction on the energy conversion facility prior to the commencement of construction. Once construction has started, Company shall keep the Commission and the Commission's third-party construction inspector updated of construction activities on a monthly basis.	PU-19-144 Dockets 21, 25, 32, 30, 33, 34, 35, 37, et al.; PU-19-144 Docket 69 Construction Inspection Report	Section 5.2.4
CERTIFICATION RELATING TO ORDER PROVISIONS 14.	Company understands and agrees that it shall bury all underground collection and feeder lines to a depth of at least 48 inches to the top of the lines.	PU-19-144 Docket 69 Construction Inspection Report	Section 5.2.5
CERTIFICATION RELATING TO ORDER PROVISIONS 15.	Company understands and agrees that topsoil, up to 12 inches, or topsoil to the depth of cultivation, whichever is greater, over and along trench areas, roadways, tower locations, and locations of associated facilities must be carefully stripped and segregated from the subsoil. Any area on which excavated subsoil will be placed must first be stripped of topsoil. The stripped topsoil must not be stockpiled in natural drainages, and must be protected from water erosion. Care must be taken to protect topsoil from unnecessary compaction by heavy machinery. Unless otherwise approved by the Commission, topsoil must be removed before topsoil freezes in the late fall/early winter to the point that frost inhibits proper soil segregation. After backfilling with subsoil is completed, any excess subsoil must be placed over the excavation area, blending the grade into existing topography. Topsoil must be replaced over areas from which it was stripped only after the subsoil is replaced.	PU-19-144 Docket 30 Topsoil Inspection Report, and Docket 69 Construction Inspection	Section 5.2.6



Source of Project Specification	Description of Project Specification	Written Verification	3 rd Party Verification
CERTIFICATION RELATING TO ORDER PROVISIONS 16.	Company understands and agrees that all buried facility crossings of graded roads shall be bored unless the responsible governing agency specifically permits Company to open cut the road.	NA	Section 5.2.7
CERTIFICATION RELATING TO ORDER PROVISIONS 17.	Company understands and agrees that staging areas or equipment shall not be located on land owned by a person other than Company unless otherwise negotiated with landowners.	PU-19-144 Docket 36 Permits	Section 5.2.8
CERTIFICATION RELATING TO ORDER PROVISIONS 18.	Company understands and agrees that if any cultural resource, paleontological site, archeological site, historical site, or grave site is discovered during construction, it must be marked, preserved and protected from further disturbances until a professional examination can be made and a report of such examination is filed with the Commission and the State Historical Society.	PU-19-144 Docket 31 Notice of New Cultural Sites Identified	Section 5.2.9
CERTIFICATION RELATING TO ORDER PROVISIONS 19.	Company understands and agrees that construction must be suspended when weather conditions are such that construction activities will cause irreparable damage to roads or land, unless adequate protection measures are taken by Company.	PU-19-144 Docket 37 and 39 November and December Construction Update	Section 5.2.10
CERTIFICATION RELATING TO ORDER PROVISIONS 20.	The Commission has authority to stop Project construction activities in the event of a probable violation of the siting laws, siting rules, or applicable Commission Orders if, in the opinion of the Commission, construction activities are likely to result in irreparable or significant harm.	PU-08-932 Docket 240 Second Amended Findings of Fact, Conclusions of Law and Order	Section 5.2.11
Restoration And Maintenance			
CERTIFICATION RELATING TO ORDER PROVISIONS 21.	Company understands and agrees that it shall, as soon as practicable upon the completion of the construction of the transmission facility, restore the area affected by the activities to as near as is practicable to the condition as it existed prior to the beginning of construction.	PU-08-932 Docket 10 Section 7.3.1 Application for a Certificate of Site Compatibility	Section 5.3.1



Source of Project Specification	Description of Project Specification	Written Verification	3 rd Party Verification
CERTIFICATION RELATING TO ORDER PROVISIONS 22.	Company understands and agrees that all pre-existing township and county roads and lanes used during construction must be repaired or restored to a condition that is equal to or better than the condition prior to the construction of the energy conversion facility and that will accommodate their previous use, and that areas used as temporary roads or working areas during construction must be restored to their original condition.	PU-19-144 Docket 36 Permits	Section 5.3.2
CERTIFICATION RELATING TO ORDER PROVISIONS 23.	Company understands and agrees that reclamation, fertilization, and reseeded is to be done according to the Natural Resources Conservation Service recommendations, unless otherwise specified by the landowner and approved by the Commission.	PU-08-932 Docket 10 Application for a Certificate of Site Compatibility Section 7.3.1	Section 5.3.3
CERTIFICATION RELATING TO ORDER PROVISIONS 24.	Company will fulfil its obligation for reclamation and maintenance of the approved site continuing throughout the life of the energy conversion facility.	PU-08-932 Docket 10 Application for a Certificate of Site Compatibility; Various Sections	Section 5.3.4
CERTIFICATION RELATING TO ORDER PROVISIONS 25.	Company will repair all fences and gates removed or damaged during all phases of construction and operation of the proposed energy conversion facility.	PU-08-932 Docket 10 Application for a Certificate of Site Compatibility	Section 5.3.5
CERTIFICATION RELATING TO ORDER PROVISIONS 26.	Company will repair or replace all drainage tile broken or damaged as a result of construction and operation of the proposed energy conversion facility.	No Verification found by Stantec	Section 5.3.6
CERTIFICATION RELATING TO ORDER PROVISIONS 27.	Company agrees to comply with the Tree and Shrub Mitigation Specifications, attached.	PU-08-932 Docket 275	Section 5.3.7



Source of Project Specification	Description of Project Specification	Written Verification	3 rd Party Verification
CERTIFICATION RELATING TO ORDER PROVISIONS 28	Company understands and agrees that it shall work with landowners and residents to mitigate any increase in television and residential radio interference that results from the construction of the energy conversion facility.	PU-08-932 Docket 10 Application for a Certificate of Ste Compatibility	Section 5.3.8
CERTIFICATION RELATING TO ORDER PROVISIONS 29.	Company understands and agrees that it shall remove all waste that is a product of construction and operation, restoration, and maintenance of the site, and properly dispose of it on a regular basis.	PU-19-144 Docket 36 Permits; SWPPP	Section 5.3.9
CERTIFICATION RELATING TO ORDER PROVISIONS 30.	Company understands and agrees that it shall provide any necessary safety measures for traffic control or to restrict public access to the energy conversion facility.	PU-08-932 Docket 10 Application for a Certificate of Ste Compatibility	Section 5.3.10
Communication with Landowners and PSC			
CERTIFICATION RELATING TO ORDER PROVISIONS 31.	Company agrees to provide the Commission with engineering design drawings showing surveyed structure and collection substation locations prior to construction.	PU-19-144 Docket 26 Merricourt Civil Engineering Design	Section 5.4.1
CERTIFICATION RELATING TO ORDER PROVISIONS 32.	Company understands and agrees that it shall advise the Commission as soon as reasonably possible of any extraordinary events which take place at the site of the energy conversion facility, including injuries to any person, a tower collapse, or a catastrophic turbine failure.	PU-08-932 Docket 10 Application for a Certificate of Site Compatibility	Section 5.4.2
CERTIFICATION RELATING TO ORDER PROVISIONS 33.	Company agrees to report to the Commission, as soon as reasonably possible, the presence in or near the approved site of any critical habitat of threatened or endangered species that Company becomes aware of and which were not previously reported to the Commission.	PU-08-932 Docket 270 Notice of Extraordinary Event	Section 5.4.3



Source of Project Specification	Description of Project Specification	Written Verification	3 rd Party Verification
<p>CERTIFICATION RELATING TO ORDER PROVISIONS 34.</p>	<p>Company agrees to, provide the Commission with both an electronic and a paper copy of the site approved by the Commission and the facility design specifications for the construction of the energy conversion facility showing the location of the energy conversion facility as built, and will provide this information within 3 months of the completion of the construction. Company also agrees to provide an electronic version of the site approved by the Commission and the facility design specifications for the construction of the energy conversion facility showing the location of the energy conversion facility as built that can be imported into ESRI GIS mapping software within 3 months of the completion of the construction. This electronic map data must be referenced to the North Dakota coordinate system of 1983, North and/or South zones US Survey feet (NAD 83) UTM Zone 13N or 14N feet (NAD 83), or geographic coordinate system (WGS 84) feet. The vertical data must be in the appropriate vertical datum for the coordinate system used. All submissions must specify the datum in which the data was developed.</p>	<p>PU-08-932 Docket 272</p>	<p>Section 5.4.4</p>



Source of Project Specification	Description of Project Specification	Written Verification	3 rd Party Verification
NDAC 69-06-08	<p>Additional exclusion areas for wind energy conversion facilities. The following geographical areas must be excluded in the consideration of a site for a wind energy conversion facility:</p> <p>a. Areas within:</p> <ol style="list-style-type: none"> (1) One and one-tenth times the height of the turbine from the nearest edge of an interstate or state roadway right of way; (2) One and one-tenth times the height of the turbine plus seventy-five feet from the centerline of any county or maintained township roadway; (3) One and one-tenth times the height of the turbine from the nearest edge of railroad right of way; (4) One and one-tenth times the height of the turbine from the nearest edge of a one hundred fifteen kilovolt or higher transmission line right of way; and (5) One and one-tenth times the height of the turbine from the property line of a nonparticipating landowner and three times the height of the turbine from an inhabited rural residence of a nonparticipating landowner, unless a variance is granted. A variance may be granted if an authorized representative or agent of the permittee, the nonparticipating landowner, and affected parties with associated wind rights file a written agreement expressing all parties' support for a variance to reduce the setback requirement in this subsection. A nonparticipating landowner is a landowner that has not signed a wind option or an easement agreement with the permittee of the wind energy conversion facility as defined in North Dakota Century Code chapter 17-04. 	<p>PU-08-932 Docket 225: 2nd Amendment for Application Section 3.1 Table 2</p>	<p>Section 3.5 & 5.5</p>

***Note: Black shaded boxes represent potential non-compliance issues.**



1.0 EXECUTIVE SUMMARY

The North Dakota Public Service Commission (PSC) retained Stantec (formerly Wenck) to complete site inspections for the construction of the Merricourt Wind Power Project and energy conversion facility (the Project), constructed by EDF Renewable Development Corporation, Inc. (EDF) and Otter Tail Power Company. The Project construction was comprised of 13,156 acres in Dickey and McIntosh counties, ND. Construction was conducted through Wanzek Construction (Wanzek). There was a total of 75 primary and 6 alternate turbine locations proposed with a production capacity of 150 MW, which interconnect into the Merricourt 231kV switch station owned by Montana Dakota Utilities. The purpose of the inspection was to ensure the project was constructed in compliance with the siting laws and rules and the applicable PSC Orders for the Project.

A pre-construction conference call was held for the Project 24 June 2019. Stantec was not contracted by the PSC for inspection until August 6, 2019, thus was unable to attend the call. Stantec reviewed Project documents and plans to become familiar with applicable PSC Orders. Construction involving topsoil disturbance commenced 8 August 2019 and the final monthly construction report (PU-19-144 Docket Item 67) was filed 28 September 2021 that stated the Project was 100% operational. Stantec conducted the as-built inspection on October 14th, 2021. The night prior to the as-built inspection (October 13th), the project area received 1.2" of rainfall which may have altered the findings of the inspection compared to if a precipitation event had not occurred. For example, there was access roads which contained standing water and erosion, which may not have occurred without the precipitation. Regardless, Stantec is of the opinion the rainfall allowed for reasonable observations of the Project's as-built conditions, which included some areas of concern as presented in the report.

As-built locations of access roads, drain crossings, fence gates, collection lines, and turbines were all consistent with the as-built drawings. Specifically, Stantec did not observe construction in unpermitted areas at locations inspected on October 14th, 2021. Stantec also observed minimal topsoil and subsoil mixing in most areas that contained reclaimed and reseeded topsoil. Other related cleanup activities were observed to have been completed, except for one utility pole in a landowner's field along a permitted road. In areas with adequate topsoil reclamation and stabilization, vegetation emergence was acceptable.

However, frequent areas of non-stabilized topsoil along access roads and approaches along section roads appeared to be hindering vegetation establishment. These areas were often visibly eroding and washing into down-gradient areas. Frequently, this erosion led to road fill washing into surrounding cropland and ditches, potentially reducing productivity. In general, BMP placement, choice, and maintenance was an issue at drain crossing and regraded locations. The most concerning observation was the ongoing repair of a section road surrounded by aquatic resources with no BMP's or protection of water from sedimentation. Most of the other observations also noted a need for either installation or repairment of BMP's to reduce erosion. A revegetation and reclamation inspection is to follow in 2022.

Overall, the Project appeared to have been constructed as planned with efforts to minimize impacts. Some issues need to be resolved for the Project to be considered complete and in full compliance,



including 1) obtaining written documentation of the items (listed below), 2) several areas needing erosion control, repair or stabilization, 3) obtain information on road repair and construction work impacting aquatic resources at 62nd Ave SE and 88th St SE intersection and 4) verification of final reclamation activities (to be determined during the subsequent Reclamation and Revegetation inspection). Stantec recommends the PSC take the following steps to resolve these issues.

Recommended Action Steps

→ Request Now

Permitted Area Conditions

- Status of reclamation activities, re-grading of poorly graded areas, maintenance of BMPs, and potential need for additional BMPs until sufficient perennial vegetation in permanently established
- Status of recent plowing and/or seeding evidenced by soil disturbance, erosion, and lack of vegetation at T-40
- Status of SWPPP related deficiencies
- Repair of damaged drain crossings inlets and outlets
- Additional road stabilization to prevent fill washing into croplands

Approvals and Correspondence

- McIntosh Co. comments on road construction and repairs along waterbodies
- Potential Spring Valley Township permits
- Status of light mitigation technology and compliance

→ Future Verification

- Successful re-seeding and revegetation inspection in 2022



2.0 BACKGROUND AND SCOPE

2.1 INTRODUCTION

The Project, located in Dickey and McIntosh Counties, ND, is under the jurisdiction of the North Dakota Public Service Commission (PSC), which issued its first Findings of Fact, Conclusions of Law, and Order in Case No. PU-08-932 on June 8 2011, granting a Certificate of Energy Facility Site Compatibility No. 23 for the Project to EDF. In 2016, EDF and Otter Tail Power Company executed an Asset Purchase Agreement, and the certificate was transferred to Otter Tail Power Company on May 3, 2019. Prior to then, a second, and final, amended Findings of Fact, Conclusions of Law, and Order was filed by the PSC on November 16, 2017 under PU-08-932. Construction of the Project comprised of the 75 turbines, access roads, and 230kV substation, and was conducted by Constructed by Wanzek. The total Project area is 13,156 acres, and encompasses United States Fish and Wildlife Service easements, wetlands, and occupied and unoccupied residences. The Project is in both:

- Dickey County
 - German Township, Sections 29-31
- McIntosh County:
 - Antelope Township, Range 67, Sections 21, 23, 25-30, 32-36
 - Beresina Township, Range 67, Sections 1-6, 8-15, 23
 - Iowa Township, Range 68, Sections 1

2.2 PURPOSE

The North Dakota Energy Conversion and Transmission Facility Act (North Dakota Century Code Chapter 49-22) authorizes the Public Service Commission to determine that the location, construction, and operation of jurisdictional energy conversion and transmission facilities will produce minimal adverse effects on the environment and the welfare of citizens of North Dakota. Post-construction inspections ensure that such projects are constructed in compliance with the siting laws (North Dakota Century Code Chapter 49-22) and rules (North Dakota Administrative Code Article 69-06) and the applicable PSC Findings of Fact, Conclusions of Law, and Order (Order). The PSC retained Wenck Associates, Inc. (now Stantec) to complete an as-built, post-construction inspection of the Project.



2.3 METHODS AND SCOPE OF INSPECTION

2.3.1 Project Compliance Identification

Stantec's intent was to ensure the Projects obligations of compliance with specifications found in the Findings of Fact, Conclusions of Law and Order, Certifications Relating to Order Provisions. These "Project Specifications" are listed in Table 1, column 1 (Source of Project Specification). Project Specifications originate from 1) siting laws and rules, 2) Project activities or specifications proposed in the Consolidated Application for a Certificate of Corridor Compatibility and Route Permit (Application), 3) Project plans described in the Findings of Fact, Conclusions of Law, and Order 4) Certification Relating to Order Provisions, and 5) regulations or recommendations from other agencies. A description of the Project Specification as it was written in the submitted docket is provided in Table 1, column 2 (Description of Project Specification).

2.3.2 Document Review

Stantec staff reviewed publicly available Project documents in the PSC Online Case Search (ND PSC August-October 2021) to find written verification of compliance for the Project Specifications listed in Table 1. If written verification was filed, the source and name of the documentation is listed in Table 1, column 3 (Written Verification). The findings of written verification are further elaborated upon in the section of this document as stated in Table 1, column 4 (3rd Party Verification). Project Specifications that require on-site inspection verification are also elaborated upon in the associated sections of this document identified in Table 1, column 4 (3rd Party Verification). Black shaded boxes in the table represent Project specifications that are potentially non-compliant because they have no written verification, or there is an issue with the findings in 3rd Party Verification.

2.3.3 On-Site Inspection

Zachary Bartsch, Stantec natural resource and soil scientist, inspected the Project area on October 14th, 2021. The site was inspected by systematically driving through access roads and visually inspecting the various components of the Project. Geographic coordinates were recorded at observation points and potential problem areas using ESRI ArcGIS Collector and Survey123 software applications on a tablet utilizing internal satellite triangulation software or paired with a Trimble Global Positioning System (GPS) (**Appendix A**). Digital photographs were taken with the tablet utilizing the Survey123 application to geotag photo locations and associate all collected data from each Observation Point (Figures 1-11). Photographs were taken showing representative portions of the route, aboveground Project infrastructure, and problem areas (**Appendix B**).

If on-site inspection of a Project Specification was completed, the findings are described in the referenced section in Table 1, column 4 (3rd Party Verification). Black shaded boxes in the table represent Project specifications that are potentially non-compliant or may require additional documentation to be filed with the Commission.



3.0 FINDINGS OF FACT

The following subsections outline compliance with only the Findings of Fact relevant to the scope of the as-built field inspection task.

3.1 SIZE, TYPE, AND PREFERRED LOCATION OF FACILITY

The proposed project boundary and layout revisions were created following coordination with USFWS to implement avoidance and minimization measures that, if implemented, would cause the likelihood of take for these species to be avoided and minimized such that take for the whooping crane and piping plover would be considered discountable. (Findings of Fact 6).

The Project was observed to minimize impacts to USFWS protected basins, critical Piping Plover habitat, and to some extent Whooping Crane habitat through avian monitoring and siting, and through commitments outlined in PU-08-932 Docket 81. Turbines and other infrastructure were observed to be constructed upon access roads and turbine pads at the permitted locations according to the As-Built drawings (PU-08-932 Docket 272). Overall, Stantec is of the opinion the Project complies with PSC Finding of Fact 6 if commitments to habitat replacement are met.

3.2 PROJECT DESIGN

Consistent with First Amended Certificate No. 23, the new project layout includes 75 primary and 6 alternate turbine locations and the proposed facility would be capable of producing up to 150 MW of power. (Findings of Fact 8).

Multiple turbines, collection lines, drain crossings, and access roads were inspected by Stantec, and the observation points were consistent with the as-built shapefiles (**Observation Points 3, 5, 10, 25, 49, 71, and 75**). Stantec also observed a total of 75 constructed turbines and 6 unconstructed alternate turbines according to the As-Built drawings submitted to the PSC (PU-08-932 Docket 272). Additionally, unconstructed alternate turbine locations were inspected, and observed to be in compliance with the As-Built plans (**Observation Point 54**).

3.3 STUDY OF PREFERRED LOCATION

EDF performed an updated noise analysis on all residences within one mile of the project boundary. EDF's updated acoustic modeling for the revised layout predicted that sound levels would continue to be less than 50 decibels within 100 feet of all occupied residences. (Finding of Fact 9).

EDF submitted PU-08-932 Docket 262, Attachment 3 – Noise and Shadow Flicker modeling results which reports the results of acoustic modeling and shadow flicker hours per year. All receptors were reported to reach <50 decibels for Layout v100, which was the Layout version constructed and inspected.



EDF performed an updated shadow flicker analysis on all residences within one mile of the project boundary. EDF's updated the shadow flicker analysis for the new layout predicted that shadow flicker would not exceed 14 hours per year at any occupied residence. (Findings of Fact 10).

EDF submitted PU-08-932 Docket 262, Attachment 3 – Noise and Shadow Flicker modeling results which reports the results of acoustic modeling and shadow flicker hours per year. Results from the Flicker modeling show three receptors (i.e. residences) receiving greater than 14 hours per year but less than 30 hours per year. Stantec recommends PSC request information about additionally testing now that the Project is operational for these three locations as warranted.

Class III Cultural Resource inventories were conducted progressively during layout analysis to identify cultural resources. A view shed analysis was conducted to identify potential impacts to the Whitestone Hill State Historic Site and other standing structures. (Findings of Fact 11).

Stantec found continuous surveys were conducted from 2009 until 2019 according to the online case search to account for corridor reroutes and site layout changes. Records of these surveys are PU-08-932 Docket 116, 263 and 265. Additionally, a viewshed analysis was done and concluded most wind turbines would be visible above the horizon line (PU-08-932 Docket 178).

Numerous wetlands of various hydrology and vegetation exist within the revised project area. Field wetland delineations were completed progressively during layout analysis to determine wetland impacts. (Findings of Fact 12).

EDF submitted/completed several wetland delineations across the project area by either field or off-site delineation methods (PU-08-932 Docket 10, 151, 267, and 225 Appendix B). Stantec is unable to review all wetland reports in detail, but considering the seven listed delineation efforts provided in Docket 225 Appendix B, 2nd Amendment to Application for a Certificate of Site Compatibility Stantec is of the opinion the continuous nature of the aquatic resource delineations meets compliance with PCS Finding of Fact 12.

EDF commissioned an avian use survey in May 2016 that continued for one year based on the general guidance in the USFWS Eagle Conservation Plan Guidance (ECPG) and Wind Energy Guidelines (WEG). Results of the avian use survey indicated low eagle use in the project area. (Findings of Fact 13).

Docket 228 Exhibit 31 – Final Avian Use Report was submitted to the PSC on behalf of EDF on September 13, 2017. This study lasted approximately one year and followed methods consistent with USFWS ECPG and WEG. The report concluded low eagle use at the Project.

3.4 SITING CRITERIA

3.4.1 Exclusion Areas

The project is proposed to permanently impact approximately 64 acres of prime farmland or farmland of statewide importance, an amount that would be approximately 0.4% of the total project area. The Commission finds that the prime farmland and farmland of statewide importance expected to be removed from use by the Project is of such a small acreage as to have a negligible impact on agricultural production. (Findings of Fact 14).



Docket 225, 2nd Amendment to Application for a Certificate of Site Compatibility was submitted in 2017 by KLJ reporting the locations of the Project impacts to prime farmland. Stantec observed access roads occurring through prime farmland. However, Stantec is of the opinion that it is beyond the scope of the as-built inspection to calculate final lost acreage of prime farmland. Therefore, Stantec could not verify the amount of prime farmland impacted beyond the calculations listed in the PSC Findings.

Wind turbines, access roads, and associated facilities were sited to avoid significant cultural resource sites and traditional cultural properties (TCP). The North Dakota State Historic Preservation Office (SHPO) concurred with EDF's "No Significant Sites Affected" determination for the current turbine, access road, and collector line layout. (Findings of Fact 15).

Following the document review of the publicly available PSC filings, Stantec observed several written verifications from the SHPO of "No Significant Sites Affected", with the verifications spanning over 10 years. Additionally, the SHPO concurred with EDF there had been good faith efforts to avoid impacts to significant sites in its most recent Access Road and Corridor Expansions in 2019 (PU-08-932 Docket 266). Stantec is of the opinion EDF is in compliance due to the multiple concurrences by the SHPO.

3.4.2 Avoidance Areas

EDF will avoid all wetlands under easement to the USFWS and impacts to other wetlands will be avoided or minimized to the extent practicable. (Finding of Fact 17).

Stantec observed several areas of construction within the USFWS easement tracts (**Observation Points 45, 46, and 47**). These points were observed to be an area of erosion from Drain Crossing #81, as identified in the As-Built drawings, into a farm field and could potentially be filling into a wetland within the easement area.

According to Section 7.14 of Docket 225 2nd Amendment to Application for a Certificate of Site Compatibility and Docket 272 Letter enclosing As-Built maps and Drawings, Stantec is of the opinion it appears EDF avoided wetlands under USFWS easements to the extent possible by rerouting collection lines and utilizing alternate turbine locations. However, to avoid impacts to these easement, Stantec recommends PSC inquire about repairing drain crossings and installing BMP's (See **Section 5.2.6.1**).

Trees and shrubs are located within the project footprint. EDF will construct the project to minimize impacts to trees and shrubs to the extent practicable. All trees and shrubs removed during construction will be replaced in accordance with the Commission's tree and shrub mitigation specifications. (Finding of Fact 18).

Otter Tail Power Company submitted Docket 275 Response to 22 June letter re Tree and Shrub Mitigation Specifications, filed on June 30, 2021. Docket 275 states EDF did not clear any trees or shrubs during construction, therefore no inventory or mitigation plan was made. Stantec did not observe any construction through tree rows at the time of the As-Built inspection. Stantec suggests to follow up with EDF on any landowner communications regarding trees or shrubs as an assurance measure.



The amendment will enhance the compatibility of the Project with environmental preservation by adjusting the turbine layout so that each turbine is at least three miles distance from critical piping plover habitat. (Findings of Fact 21).

According to Docket 225 2nd Amendment to Application for a Certificate of Site Compatibility, the final setback distance from critical piping plover habitat had increased to 3-miles since the original Application. Also, EDF submitted Docket 246 Exclusion Area Map, where Turbines were adjusted to be greater than 3 miles from critical piping plover habitat. Additionally, two permitted turbines near the 3-mile buffer were unconstructed alternate turbines 12 and 13.

3.5 ADDITIONAL MITIGATIVE MEASURES

The distance from the closest residence to a turbine under the revised layout is 1531 feet. (Findings of Fact 22).

Stantec analyzed received as-built GIS shapefiles to observed distances of turbines and residences. Stantec found consistent distances of T-47 and occupied home 11 in GIS. The constructed location of T-47 was also observed to be consistent with the as-built drawings in Docket 272 (**Observation Point 42**). Stantec is of the opinion EDF is in compliance with turbine setbacks from residences.

In coordination with USFWS, EDF agreed to commit to biological avoidance and minimization measures approved in the Western Area Power Association Programmatic EIS for piping plovers and whooping cranes. EDF coordinated with the USFWS and there was agreement that if EDF committed to the avoidance and minimization measures outlined in the Programmatic EIS that the threat of any take of piping plover and whooping crane would be reduced to a discountable level. On September 11, 2015, EDF submitted a letter to the USFWS confirming its commitment to implement these measures. Accordingly, EDF is no longer pursuing incidental take authorization under Section 10 of the Endangered Species Act for the whooping crane or the piping plover. Avoidance and minimization measures for the whooping crane include: monitoring for whooping cranes with curtailment if sighted and worker instruction on identification and reporting. Avoidance and minimization measures for the piping plover include: setbacks of 3 miles from alkali lakes where piping plovers have nested or are designated as critical habitat and not siting project facilities between any such lakes where the out limit of the buffer zones are less than 3 miles. (Findings of Fact 23).

EDF submitted Docket 246 Exclusion Area Map, where Turbines were adjusted to be greater than 3 miles from critical piping plover habitat. Additionally, two permitted turbines near the 3-mile buffer were alternate turbines 12 and 13 which were not constructed. In Docket 81 Addendum to biological conditions and effect summary, USFWS confirmed EDF does not need to pursue an incidental take permit due to measures taken by EDF to avoid critical piping plover habitat.

Stantec visually confirmed the turbine locations were consistent with the as-built drawings. Therefore, Stantec is of the opinion EDF is compliant with Findings of Fact 23.

EDF will install lights that are compatible with light mitigation technology. Subject to Federal Aviation Administration approval, EDF plans to install light mitigation technology suitable to the Commission as



soon as practicable after commercial operation and in no event later than December 31, 2021. (Finding of Fact 24).

Stantec was able to verify a Federal Aviation Administration determination “No Hazard to Air Navigation” in Docket 251, for each turbine location so long as the structure is marked with white paint, and has synchronized red lights, and FAA Form 7460-2, Notice of Actual Construction or Alteration, is filed. However, it is not clear if FAA Form 7460-2 form(s) have been filed. This form is required for every wind turbine, and the FAA determination expires without it. Stantec is of the opinion, if there is no record of Form 7460-2 submission, EDF may be in noncompliance. Also, Stantec was not able to confirm light mitigation has been implemented nor compliance with NDAC 69-06-11. Per PSC Finding of Facts EDF has until December 31, 2021 to report the installation of light mitigative technologies to meet compliance. Stantec recommends the PSC follow up with EDF on light mitigation and form 7460-2 status.

EDF has voluntarily agreed to construct the project such that it complies with the recent change to North Dakota Century Code 49-44-05.1(3) which identifies areas less than one and one-tenth times the height of the turbine from a property line of a nonparticipating landowner and less than three times the height of the turbine from an inhabited rural residence of a nonparticipating landowner as wind specific exclusion areas. (Finding of Fact 27).

KLJ submitted Docket 225 2nd Amendment to Application for a Certificate of Site Compatibility wherein Table 2, Section 3.1, this type of exclusion area is defined. EDF testifies no turbines are within the exclusion areas. Of the turbines Stantec inspected during the as-built inspection, none appeared to be constructed inconsistent with the as-built drawings.



4.0 COMMISSION ORDERS

The following subsections outline compliance with only the Commission Orders relevant to the scope of the as-built field inspection task.

4.1 CONSTRUCTION AUTHORIZATION

EDF is authorized to construct up to 75 wind turbines producing a total nameplate capacity of 150 mw within the project area as revised, along with associated access roads, underground electrical collection systems and communication cables, substation and operations and maintenance building. (Commission Order 3).

Stantec observed this to be accurate with a total of 75 constructed turbines.

4.2 LAYOUT MODIFICATION MATERIALS

In the event the layout is modified, EDF shall complete a Class III cultural resource survey for any previously un-surveyed areas in accordance with SHPO guidance, and shall submit cultural resource findings to the SHPO for review and obtain and file a copy of the SHPO's response with the Commission prior to beginning construction in affected areas (Commission Order 4).

EDF submitted PU-08-932 Docket 265: Attachment 5 – Part A: Cultural Resource Monitoring and Cultural Resources Inventory and PU-19-144 Docket 55 – Attachment 4 – Part A 2019 Cultural Resources Monitoring and Reroutes. These are non-public documents submitted in September 2019 documenting an additional Class III cultural resource inventory survey for reroutes of access roads, collection lines, and other expansions for the Projects. On March 4, 2020, the SHPO response of “No Significant Sites Affected” was received (Docket 264). Therefore, Stantec observed EDF to be compliant with this order.

In the event the layout is modified, EDF shall complete a wetland determination of any previously un-surveyed areas affected by project activities, and file a report with the Commission. (Commission Order 5).

The most recent delineation report was included in PU-08-932 Docket 225 2nd Amendment to Application for a Certificate of Site Compatibility Appendix B outlining delineations conducted across the proposed changes in Project area over time. Stantec is unable to observe all wetland reports but considering the seven listed delineation efforts provided, Stantec is of the opinion the continuous nature of the aquatic resource delineations appears in compliance.

In the event that project modifications occur that are not covered by ties existing acoustic analysis, EDF shall conduct a revised acoustic analysis and file the results of that analysis with the Commission. (Commission Order 6).



EDF has submitted at least two previous acoustic analyses in response to site layout changes and were observed to be Docket 143 and 232. According to the Docket, this order appears to be in compliance.

In the event that the project modifications occur that are not covered by its existing shadow flicker analysis, EDF shall conduct a revised shadow flicker analysis and file the results with the commission (Commission Order 7).

EDF has submitted at least two previous shadow flicker analyses in response to site layout changes and were observed to be Docket 143 and 232. Stantec is of the opinion EDF appears compliant with regards to this order.

4.3 INHABITED RESIDENCES

EDF shall locate turbines such that shadow flicker at any currently inhabited residence is less than 30 hours per year, unless otherwise agreed to by the landowner in writing (Commission Order 8).

Stantec observed results from Docket 232 Attachment 3 – Noise and Shadow Flicker modeling results that all inhabited residences were less than 30 hours per year.



5.0 CERTIFICATION RELATING TO ORDER PROVISIONS

The following subsection addresses compliance with Certification relating to Order Provisions 2 and 3.

5.1 INTERAGENCY COMPLIANCE

Comply with the rules and regulations of all other agencies having jurisdiction over any phase of the transmission facility including all city, township, and county zoning regulations (Certification Statement 2).

Obtain all other necessary licenses and permits, and shall provide copies of all licenses and permits to the Commission prior to construction activity associated with the transmission facility that requires said license or permit (Certification Statement 3).

A summary of required permits as presented in the application by KLJ is presented in Table 2 below, as referenced from Docket 225: 2nd Amendment to Application, Table 16. A summary of agency correspondence, approvals, and permits as it relates to as-built conditions is presented in Table 3 below. The Table 3 summary includes the known responses received at the time of application submittal and those that occurred after the PSC issuance of the Finding of Fact, Conclusion of Law and Order and the Corridor Compatibility Certificate and Route Permit, as well as follow up compliance with permit requirements and resolution of issues raised. The table also includes information as to whether the response exists within the case files, which includes the Application. Stantec is of the opinion, if official correspondence after the PSC issuance of the Finding of Fact, Conclusion of Law and Order is not required to be submitted to the case files, specific permit requirement compliance cannot be known.

Table 2 Summary of Required Permits (per Application)

Agency	Applicable Resource/Program	Proof Permit Obtained Y/N
Public Service Commission	Corridor Certificate and Route Permit	Y
North Dakota Department of Health (NDDH)	North Dakota Pollutant Discharge Elimination System	Y
North Dakota Department of Environmental Quality	General Construction Permit	Y
FAA (Federal Aviation Administration)	Form 7640-1, Notice of Proposed Construction or Alteration	Y



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Agency	Applicable Resource/Program	Proof Permit Obtained Y/N
FAA (Federal Aviation Administration)	Form 7640-2, Notice of Actual Construction or Alteration	Unknown
North Dakota Highway Patrol	Overweight-Overheight Permit	N
North Dakota Department of Transportation	Utility Permit and Risk Management Document	Y
North Dakota Electrical Board	Electrical Permit	N
Spring Valley Township	Building and Haul Road Permits	N

Table 2 states permits from the North Dakota Highway Patrol are required for movement of overweight or overheight materials, but Stantec could find no documentation of permits received or applied for from the highway patrol.

Table 2 also states permits from Spring Valley Township is required per township board comments. However, Stantec was unable to verify permits were obtained and submitted to PSC.

Table 3 Additional Permits and Approvals not stated in Application

Agency	Applicable Resource/Program	Approval Y/N	Proof Permit Obtained Y/N
United States Environmental Protection Agency (USEPA)	Wanzek Stormwater Pollution Prevention Plan (SWPPP)	NA	Y
	Wanzek Spill Prevention Plan (PSCC)	NA	Y
	EPCS Spill Prevention Plan (PSCC)	NA	Y
North Dakota Department of Environmental Quality	Concrete Air Quality Exemption Letter	Y	NA
Dickey County	Approach Permit: Roads 54, 71, 74, 75; Utility Permit: 67 th Ave SE; Road Maintenance Agreement	Y	Y
McIntosh County	Utility Permit: 62 nd Ave SE (various locations), 65 th Ave SE (various locations), 66 th Ave SE North of 90 th and South of 88 th , 88 th St TE West of 63 rd and 65 th , 89 th St SE West of 65 th , and 91 th St SE East of 63 rd ; Road Maintenance Agreement	NA	Y
German Township	Road Maintenance Agreement	NA	Y



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Agency	Applicable Resource/Program	Approval Y/N	Proof Permit Obtained Y/N
United States Fish and Wildlife Service - North Dakota Field Office	Federally listed threatened and endangered species	Y	NA
	USFWS-managed lands	Y	NA
	MBTA and BGEPA consultation	Y	NA
United States Department of Defense – Army Corps. Of Engineers, North Dakota Regulatory Office	Section 10 (Navigable Waters) and Section 404 (WOTUS)	Y	NA
North Dakota Game and Fish Department (NDGFD)	Bald and Golden Eagle Nest Data	Y	NA
North Dakota Highway Patrol	Handling overweight, over-width material	Unknown	Unknown
North Dakota SHPO	Natural Register of Historic Places, Cultural Resources Consultation	Y	NA
North Dakota State Water Commission (NDSWC)	Application for a Temporary Water Permit	Y	Y

Stantec recommends additional information from those agencies for which correspondence or follow up communications have not been recorded, and those files be submitted to the PSC for verification of compliance.

Those agencies for which EDF potentially required permits and contained correspondence within the case files, but no formal approval exist:

- Spring Valley Township – Zoning/Road work Permits
- ND Electric Board – Electrical Permits

Pertinent agencies for which EDF notified and no formal approval within in the case files:

- Rosenthal, Antelope, Iowa, and Beresina Township
 - No formal approvals or acknowledgment of project specific permits

Stantec is of the opinion, it has identified potentially required permits or formal approvals for which EDF has not provided copies to the case file. Those agencies and permits include:

- Spring Valley Township Permits
- North Dakota Electrical Board
- ND Highway Patrol Overweight-Overheight Permit

Stantec recommends the PSC request verification of these permits to enter into the case file.



5.1.1 Additional Agency Conditional Rules and/or Guidance/Recommendations

Those agencies which indicated additional conditional rules and/or guidance and recommendations are outlined below. Stantec is of the opinion, conditional rules must be followed, while guidelines and recommendations do not hold the power of law; however, are not independent of approvals and are in fact conditional of approval. Therefore, deviances from guidelines or recommendations is grounds for revocation of approval.

United States Fish and Wildlife Service

Stantec cannot locate within the case file, project specific concurrence from the USFWS. Provided below are the general guidelines provided by USFWS, but note, Stantec cannot confirm project specific guidelines.

- Threatened and Endangered Species, Migratory Birds, and USFWS property interests (Easements)
 - Post-Construction Whooping Crane Monitoring (spring and fall)
 - Piping Plover Habitat Surveys (Continued Piping Plover surveys and turbine curtailment)
 - Bat mortality post-construction monitoring
 - Collision monitoring for at least three years
- Bald and Golden Eagle Breeding Territory and Nest Surveys (March 1 to May 15)
 - Avoid construction near Bald Eagle breeding & nesting (February 1 to July 15)
 - Avoid construction near Golden Eagles at all times

Initial avian use surveys (2010) noted raptor nests in the project area, while a survey in 2016-2017 noted no raptor nests. Without evidence of on-going surveys, Stantec cannot confirm total compliance. Stantec is unaware of potential Bald or Golden Eagle sightings, nests, or breeding territories reports made to the USFWS. During as built inspections Stantec did not observe raptor nests near or within the Project area, but that should not be considered evidence there are no raptor nests.

EDF has been in communication with USFWS with regard to potential impacts upon USFWS property interests. EDF committed to implement appropriate minimization and mitigation measures at these features, which may include avoidance or best management practices (BMPs) to minimize impacts when working in or around wetlands. Additionally, Stantec observed from the document review, 6.14 acres of temporarily disturbed wetland, and 0.07 acres of permanently impacted wetland.

Stantec observed erosion between two wetlands (**Observation Point 45, 46, 47**), which may cause diversion of water flows, and potentially transport road fill and topsoil into these wetlands potentially under USFWS easement.

North Dakota Game and Fish Department

General:

- Native prairie be avoided to the greatest extent practicable
- Siting of facilities be done on previously disturbed lands
- Unavoidable destruction or degradation of wetland acres should be mitigated in kind.



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- Wetlands should be avoided, but if they cannot be, no alterations should be made to existing drainage patterns.
- Aquatic Nuisance Species are a major concern, State law requires the contractor to take appropriate precautions to prevent introduction or movement of ANS within the State. The contractor should provide the department reasonable opportunity to inspect equipment prior to launch or placement into waters of the State.
- Aerial surveys should be conducted for raptor nests before construction begins. One-half mile construction buffer be implemented around active eagle nest sites (Known occupied within the past 11 years).
- Avian and bat mortality surveys take place for the life of the project.
- Bald and Golden Eagle Breeding Territory and Nest Surveys (March 1 to May 15)
 - Avoid construction near Bald Eagle breeding & nesting (February 1 to July 15)
 - Avoid construction near Golden Eagles at all times

Project Specific:

- NDGF would like GPS coordinates of final turbine locations.

Stantec observed severe erosion and sediment potential transporting into wetlands (**Observation Point 32, 36, 37, 38, 98**) which may cause diversion of surface flows, reduce wetland function, and may further contributing to erosion during reclamation phase.

Initial avian use surveys (2010) noted raptor nests in the project area, while a survey in 2016-2017 noted no raptor nests. Without evidence of on-going surveys, Stantec cannot confirm total compliance. Stantec is unaware of potential Bald or Golden Eagle sightings, nests, or breeding territories reports made to the ND Game and Fish. During as built inspections Stantec did not observe raptor nests near or within the Project area, but that should not be considered evidence there are no raptor nests.

North Dakota Department of Health

General

- Obtain a North Dakota Discharge Elimination System Permit
- Keep noise to a minimum
- Minimize dust emissions and water body impacts.

5.2 CONSTRUCTION

The following subsections address compliance with Certification relating to Order Provisions 8 through 20.

5.2.1 Preconstruction Conference

Company agrees to hold a preconstruction conference prior to commencement of any construction, which must include a Company representative, its construction supervisor, and a representative of Commission Staff, to ensure that Company fully understands the conditions set forth in the Commission's order. (Certification Statement 8).



EDF submitted PU-19-144 Docket 21 Minutes of 24 June 2019 preconstruction conference and Notice of Intent to start construction which was before construction initiation. EDF is compliant with this PSC certification.

5.2.2 Cultural Resources

All cultural resource mitigation plans must be submitted to the North Dakota State Historic Preservation Office and approved prior to the start of any fieldwork and construction activity in the affected area (Certification Statement 9).

The State Historical Society of North Dakota PU-08-932 Dockets 9, 14, 40, 107, and 116: SHPO Concurrence Letters on EDF's Cultural Resources Report; on 9/27/2010, 11/9/2010, 1/10/2011, 7/12/2011, and 8/29/2020 prior to construction. Additionally, Docket 225 shows a 2017 SHPO concurrence of "No Significant Sites Affected", prior to construction in 2019. There was one occurrence of unintended disturbances to previously unidentified cultural resources and was reported to the PSC (PU-19-144 Docket 29). The Docket provides approval for EDF's cultural resources avoidance and monitoring plan.

5.2.3 Topsoil Management

Company understands and agrees that topsoil removal will begin when the Commission's third party construction Inspector is present at the Project site to observe that topsoil is properly removed and kept segregated from subsoil until replacement occurs. Company shall establish the date and time for the Commission's third-party construction inspector's topsoil removal oversight in the preconstruction conference (Certification Statement 10).

Construction involving soil disturbance for the Project began 8 August 2019. Stantec was noticed and present during initial construction commencement, and Stantec submitted PU-19-144 Docket 30 – Topsoil Inspection Report on. Stantec visually inspected other areas of construction on August 10 and 19, 2019. Stantec also visually inspected construction progress and topsoil on 21 July 2020, where soil segregation and BMP issues were noted. This is discussed in Section 5.2.5.

5.2.4 Progress Reporting

Inform the Commission and the Commission's third-party construction inspector of its intent to start construction on the transmission facility prior to the commencement of construction. Once construction has started, Company shall keep the Commission and the Commission's third-party construction inspector updated on construction activities on a monthly basis (Certification Statement 11).

EDF submitted approximately 19 monthly construction reports, corresponding to the monthly intervals from August 2019 to September 2020. The Dockets cover most months of construction; however, the final docket covers a span of 3 months and was submitted one month after cessation of construction activities. In general, progress reporting was not entirely compliant with the monthly requirements, due to the



missing months over the entirety of the project. Stantec also visually inspected construction progress on 21 July 2020, where soil segregation and BMP issues were noted.

5.2.5 Collection Lines

Company understands and agrees that it shall bury all underground collection and feeder lines to a depth of at least 48 inches to the top of the lines. (Certification Statement 14).

Stantec submitted PU-19-144 Docket 69 Construction Inspection in August 2020. Collection line installation contractors verbally informed Stantec that the collection lines were being carried 52 to 53-inches below the ground surface. Stantec is of the opinion compliance was met from verbal verification in 2020.

5.2.6 Soil Management

Company understands and agrees that topsoil, up to 12 inches, or topsoil to the depth of cultivation, whichever is greater, over and along trench areas, roadways, tower locations, and location of associated facilities must be carefully stripped and segregated from the subsoil. Any area on which excavated subsoil will be placed must first be stripped of topsoil. The stripped topsoil must not be stockpiled in natural drainages, and must be protected from water erosion. Care must be taken to protect topsoil from unnecessary compaction by heavy machinery. Unless otherwise approved by the commission, topsoil must be removed before topsoil freezes in the late fall/early winter to the point that frost inhibits proper soil segregation. After backfilling with subsoil is completed, any excess subsoil must be placed over the excavation area, blending the grade into existing topography. Topsoil must be replaced over areas from which it was stripped only after the subsoil is replaced (Certification Statement 15).

Initial topsoil stripping activities were previously documented by Stantec in Docket 30 Topsoil Inspection Report over several site inspections. Strata and Wanzek were observed to strip and stockpile topsoil correctly, however, there were minor issues of topsoil and subsoil mixing in the stockpile, and some instances of not stripping all in-situ topsoil, risking additional mixing or subsoil placement over the topsoil.

During subsequent Construction Inspection (PU-19-144 Docket 69). Stantec observed collection line installation was generally compliant with the Certification Statement. However, there were common issues of little-to-no topsoil stripped along temporary access roads, MET roads, and there was significant subsoil mixing with topsoil in stockpiles and subsoil piled on bare topsoil. Additionally, Stantec observed contractors backfilling mixed subsoil and topsoil over a turbine foundation, and bare topsoil stockpiles. Otter Tail Power Company submitted a response to the Construction Inspection acknowledging the issues, and outlined steps to remediate the problem areas (PU-19-144 Docket 70).

During the As-Built Inspection, Stantec visually confirmed overall appropriate subsoil and topsoil replacement. Topographical grading during as-built inspections was overall okay, with some exceptions where topographical grading resulted in access road slopes slumping and/or eroding (**Observation Points: 70, 82**), and concentrated water flows directly over gravel access road surfaces (**Observation Points 6, 7, 23, 32, 36, 50, 51, 61**). Notably, the site received an estimated 1.2 inches of rain the day



prior to the inspection in a year of significant drought, which may have revealed potentially more issues during inspection. The most pressing observation during the As-Built inspection was **Observation Point 74** where Stantec observed improperly graded replaced and/or stockpiled soil, which was eroding downslope into the surrounding lands.

Overall, and in respect to the issues noted above, Stantec confirms topsoil was removed, stored, and replaced consistently for the majority of the Project at multiple locations. Soil management conditions appeared to be properly conducted with few minor discrepancies regarding topsoil and subsoil mixing in the topsoil and as-built inspection. Potential soil compaction or mixing issues will be assessed further during final revegetation inspections of the Project in 2022.

5.2.6.1 Erosion and Sedimentation

The Project Application states throughout many sections, BMPs would be used to minimize soil erosion and protect surface water (Docket 225: 2nd Amendment to Application), as well as the NPDES Permit and SWPPP's throughout the Project's phases. Additionally, multiple Federal, State, and local regulatory agencies provided statements in correspondences to protect against erosion and sedimentation, specifically to wetland areas.

As-built inspections noted deficiencies in erosion and sediment BMPs. Many BMPs were found to be in disrepair after a 1.2 inch rainfall received the day prior on October 12, 2021. Many drain crossings had visible straw wattles, but some were either absent or completely covered in sediment. This sediment was commonly depositing on top of replaced topsoil under crop production. Straw wattles in other places, erosion control blankets, and silt fences were also found to be completely absent or in disrepair. Other areas were lacking BMPs where they should have been implemented, such as slopes or road ditches. As such, conditions have allowed erosion at some locations. Observation Points which elaborate upon specific locations of BMPs and/or erosion include: **2, 4, 6, 13, 15, 32, 40, 44, 45, 51, 56, 68, 69, 74, 77, 86, 89, 90**. Lastly, Observation Points **61, 62, 63, and 64** contained recently replaced and graded topsoil that was experiencing severe erosion and contained minimal vegetation cover. BMP conditions were generally adequate in areas with natural low surface water activity. Stantec recommends PSC follow up with EDF to address the observed erosion issues and BMP maintenance.

5.2.7 Road Crossings

Company understands and agrees that all buried facility crossings of graded roads shall be bored unless the responsible governing agency specifically permits Company to open cut the road (Certification Statement 16).

All permits relating to road work (PU-19-144 Docket 36 and 47) detail specifications to be followed which may or may not include no disturbance and restoration clauses. Stantec did not visually observe open cut road crossings. However, Stantec observed a few discrepancies with access road and ditch repair quality (**Observation Points 12, 13, 51, 48, 93, 94, 95, 97, 98**).



5.2.8 Staging Areas

Company understands and agrees that staging areas or equipment shall not be located on land owned by a person other than Company unless otherwise negotiated with landowners (Certification Statement 17).

EDF submitted Docket 36 Permits, which details that EDF owns the Operation and Maintenance area and Laydown yard. Staging areas and equipment were located adjacent to the Operations and Management location and Laydown yard. Stantec observed the lay-down area to be adequately reclaimed and reseeded during the As-Built Inspection (**Observation Point: 108**).

5.2.9 Unanticipated Discoveries

Company understands and agrees that if any cultural resource, paleontological site, archeological site, historical site, or grave site is discovered during construction, it must be marked, preserved and protected from further disturbances until a professional examination can be made by the State Historical Society, a report of such examination is filed with the Commission (Certification Statement 18).

EDF submitted PU-19-144 Docket 29 Notice of unintended disturbance of two identified cultural sites, after a contractor scrapped two previously identified sites that were yet to be marked. While not an unanticipated discovery, subsequent additional surveys identified 18 new cultural resources. Construction activity was halted until all remained, identified cultural resources were marked and/or fenced. Due to SHPO's acknowledgement and subsequent concurrence on additional cultural resource reports (PU-19-144 Docket 31), Stantec is of the opinion EDF remains compliant to the PSC rulings.

5.2.10 Weather Conditions

Company understands and agrees that construction must be suspended when weather conditions are such that construction activities will cause irreparable damage to roads or land, unless adequate protection measures are taken by Company (Certification Statement 19).

EDF monthly construction updates PU-19-144 Docket 37, 39, 43, 45 (November 2019, December 2019, January 2020, and February 2020, respectively) noted construction activities were halted until 2020 and until correct weather conditions are met. Stantec did not find a March construction update, but the April update (Docket 62) noted construction was occurring only when weather was acceptable. These filings appear to demonstrate compliance regarding PSC Certification Statement 19.

5.2.11 Stop Work Authority

The Commission has authority to stop Project construction activities in the event of a probable violation of the siting laws, siting rules, or applicable Commission Orders if, in the opinion of the Commission, construction activities are likely to result in irreparable or significant harm (Certification Statement 20).

Stantec is unaware of a PSC-initiated Stop Work Authority being implemented.



5.3 RESTORATION AND MAINTENANCE

The following subsections address compliance with pertinent Certification relating to Order Provisions 21 through 30.

5.3.1 Restoration

Company agrees that it shall, as soon as practicable upon the completion of the construction of the energy conversion facility, restore the area affected by the activities to as near as is practicable to the condition as it existed prior to the beginning of construction (Certification Statement 21).

Stantec could not locate a Docket detailing restoration and mitigation practices except for PU-008-932 Docket 10 Section 7.3.1, which stated EDF will coordinate reclamation of temporarily disturbed land with the Farm Service Agency. Similarly, county and township restoration processes are outlined in their respective permits. At the time of the site inspection, turbine foundations had been backfilled, access road soils had been recontoured, and topsoil replaced. Restored cropland appeared consistent with adjacent field conditions. Additionally, most of the restored pasture land surrounding the Project area was observed to be recently seeded, with grass vegetation visible. Some areas adjacent to permanent Project features (i.e., access roads and turbine pads), generally lacked vegetation where erosion and washout has diminished plant stands (**Photo Observation Point: 62, 63, 89, 90, 91**). This condition was allowing the un-stabilized materials at the edge of access roads and pads to mix with surrounding replaced soils, resulting in reduced vegetative success

Quality of topsoil replacement and grading was least satisfactory at **Observation Points 73, 74, 76, 77**, with severe topsoil erosion along the access road between T-10 and T-11. Stantec recommends PSC inquire about restoration and remediation actions in these areas.

A revegetation inspection contracted by the PSC is planned one year from the last date of seeding to document establishment of vegetation and ultimate compliance with this Certification Statement. Stantec is currently unsure the established date for reseeded of the entire Project to appropriately time final revegetation inspections, but is anticipating conducting the final inspection in 2022.

5.3.2 Roads

Company understands and agrees that all pre-existing township and county roads and lanes used during construction must be repaired or restored to a condition that is equal to or better than the condition prior to the construction of the energy conversion facility and that will accommodate their previous use, and that areas used as temporary roads or working areas during construction must be restored to their original condition (Certification Statement 22).

EDF submitted Docket 36: Permits; Docket 41 ROW permit from NDDOT; Docket 47 Permits; and Docket 65 Approach Permits for Offload Laydown Yard, which all cover specifics of road maintenance and restoration. EDF has stated all roads damaged will be restored to pre-construction conditions or as agreed between the landowner or regulatory agency. At the time of the as-built inspection, the majority of



county, township, and access roads appeared to be in good condition (**Observation Points 28, 29, 33, 55, 56, 57, 59, 60, 106**) but there were a few discrepancies regrading ditch grading (**Observation Points 12, 13, 51**). Observation Point 12 appears to be a temporary approach left intact by EDF, while Observation Point 13 appears to be an unreclaimed access or an approach for large farm equipment. EDF may benefit from clarifying landowner agreements or actions taken at those locations. Restored temporary access roads appeared appropriately reclaimed, for example a temporary road in **Observation Point: 87** contained consistent crop stands compared to the surrounding undisturbed field. Appropriately restored/repared section roads were also observed.

Active repair and/or restoration of 88th St SE near 62nd Ave SE was observed during the As-Built inspection, which the utility permit for this intersection was obtained from McIntosh County. No Docket record indicated improvement of this section road, and Stantec could not confirm it was or was not action related to EDF and the Project. According to the ND SWC temporary water permit, the adjacent unnamed pond was used for water for the Project. Due to the lack of BMP's protecting the unnamed pond from sedimentation, and filling in of hydrophytic vegetation, Stantec suggests PSC inquire about the unprotected road improvement as observed at points: **93, 94, 95, 97, 98**.

5.3.3 NRCS Recommendations

Company understands and agrees that reclamation, fertilization, and reseeding is to be done according to the Natural Resources Conservation Service recommendations. unless otherwise specified by the landowner and approved by the Commission (Certification Statement 23).

Stantec could not locate a Docket detailing restoration or seeding practices. An excerpt found by Stantec in PU-008-932 Docket 10 Section 7.3.1 stated EDF will coordinate reclamation of temporarily disturbed land with the Farm Service Agency. It does not appear that EDF has filed any deviation from recommendations as negotiated with landowners, and no PSC approvals for such deviations exist within the case files. PSC may EDF about landowner negotiations if warranted.

5.3.4 Continuing Commitment

Company will fulfil its obligation for reclamation and maintenance, of the approved site continuing throughout the life of the energy conversion facility (Certification Statement 24).

Commitment to ongoing maintenance and reclamation is stated by EDF is PU-08-932 Docket 10 Application for a Certificate of Site Compatibility. At the time of as-built inspections, reclamation was complete and areas requiring additional maintenance have been addressed throughout this document and summarized in Section 6.0. It is also understood that EDF's Site Certificate was transferred to Otter Tail Power, under separate case file PU-19-144. A reclamation and revegetation inspection of the Project will be conducted one year from date of final seeding.



5.3.5 Fences and Gates

Company will repair all fences and gates removed or damaged during all phases of construction and operation of the proposed energy conversion facility (Certification Statement 25).

EDF committed to repairing and improving all fences and gates (PU-08-932 Docket 10 Application for a Certificate of Site Compatibility). During the as-built inspection, fencing and gates were replaced at all of the inspected locations (**Observation Points: 14, 66, 81**), except **Observation Points 13**. However, this fence may be missing to allow farm equipment access to the field. PSC could inquire with EDF about this section of fence if necessary.

5.3.6 Drain Tile

Repair or replace all drainage tile broken or damaged as a result of construction and operation of the transmission facility (Certification Statement 26).

Stantec could not verify EDF commitment to repair or replace all damaged drainage tile on the Dockets. Stantec did not observe any broken or damaged drainage tile during inspections. Stantec is unaware of any landowner complaints regarding damaged drainage tiles.

5.3.7 Tree and Shrub Mitigation

Company agrees to comply with the Tree and Shrub Mitigation Specifications, attached (Certification Statement 27).

Otter Tail Power Company provided information, as filed under PU-08-932 Docket 275, relating to Tree Shrub Mitigation Planning. The Docket states construction did not involve any clearing of trees or shrubs, therefore no inventory or mitigation plan was developed. However, without sufficient data detailing when and where surveys were conducted, Stantec cannot verify if all locations including re-routes were surveyed. The Docket does not detail pre-clearing tree and shrub inventory (not required to be filed with the PSC).

5.3.8 Radio Interference

Company understands and agrees that it shall work with landowners and residents to mitigate any Increase in television and residential radio interference that results from the construction of the energy conversion facility (Certification Statement 28).

EDF submitted PU-08-932 Docket 10 Application for a certificate of Site Compatibility which included a section detailing potential electromagnetic field interference with landowners. EDF stated it will mitigate any issues on a case-by-case bases. Stantec is not aware of any such interference cases nor found any related items on the Docket.



5.3.9 Waste Disposal

Remove all waste that is a product of construction and operation, restoration, and maintenance of the site, and properly dispose of it on a regular basis (Certification Statement 29).

EDF submitted Docket 36: Permits which contains the project SWPPP's, and those plans outline specific protocols of waste management. At the time of the as-built inspection, there was no waste, debris, or abandoned equipment observed, except for a disc from seeding equipment (**Observation Point 103**), and a utility pole (**Observation Point 12**). The pole may or may not be due to Project activity. Stantec is of the opinion it may be important to bring to inquire with EDF about it as the Dickey County Utility Permit for 67th Ave SE may have included with replacement of utility poles, or related. Equipment and material staging areas in the vicinity of the as-built inspection points had been appropriately cleaned up post-construction.

5.3.10 Traffic Control

Provide any necessary safety measures for traffic control or to restrict public access to the transmission facility (Certification Statement 30).

EDF did not anticipate significantly increased traffic, and did not anticipate mitigation for volume or public increases in traffic (PU-08-932 Docket 10: Application for a Certificate of Site Compatibility). Stantec observed traffic control measures during all inspections, such as signs, and utility markings near appropriate points.

5.4 COMMUNICATION WITH LANDOWNERS AND PSC

The following subsections address compliance with pertinent Certification relating to Order Provisions 31 through 34.

5.4.1 Engineering Design Drawings

Company agrees to provide the Commission with engineering design drawings showing surveyed structure and collection substation locations prior to construction (Certification Statement 31).

PU-19-144 Docket 26 Merricourt Civil Engineering Design details the engineering designs and drawings of the planned construction. The date of submission was 2 August 2019, and ground-breaking construction commenced August 8, 2019. Stantec has observed EDF in compliance with Certification Statement 31.



5.4.2 Significant Biological Discoveries

Company agrees to report to the Commission, as soon as reasonably possible, the presence in or near the approved site of any critical habitat of threatened or endangered species that Company becomes aware of and which were not previously reported to the Commission. (Certification Statement 32).

Stantec cannot locate within the case file, any additional finding of critical habitat of threatened or endangered species that EDF or Otter Tail Power Company was not already unaware of.

5.4.3 Extraordinary Event Notification

Advise the Commission as soon as reasonably possible of any extraordinary events which take place at the site of the transmission facility, including injuries to any person (Certification Statement 33).

Otter Tail Power Company submitted PU-08-932 Docket 270: Notice of Extraordinary Event regarding the failure and breaking of a blade for Turbine 55. There were no injuries reported. Stantec is unaware of any other communications to the PSC and it appears EDF complied with the requirement regarding extraordinary events.

5.4.4 As-Built Documentation

Company agrees to, provide the Commission with both an electronic and a paper copy of the site approved by the Commission and the facility design specifications for the construction of the energy conversion facility showing the location of the energy conversion facility as built, and will provide this information within 3 months of the completion of the construction. Company also agrees to provide an electronic version of the site approved by the Commission and the facility design specifications for the construction of the energy conversion facility showing the location of the energy conversion facility as built that can be imported into ESRI GIS mapping software within 3 months of the completion of the construction. This electronic map data must be referenced to the North Dakota coordinate system of 1983, North and/or South zones US Survey feet (NAD 83) UTM Zone 13N or 14N feet (NAD 83), or geographic coordinate system (WGS 84) feet. The vertical data must be in the appropriate vertical datum for the coordinate system used. All submissions must specify the datum in which the data was developed (Certification Statement 34).

EDF submitted PU-08-932 Docket 272 containing the As-Built engineering drawings and a reference to a thumb drive with GIS files containing as-built conditions on 12 March 2021. However, there is no clear date which construction was complete because of intermittent monthly construction updates submitted to the Docket. Stantec cannot verify compliance with the 3-month deadline as outlined by PSS.

5.5 NDAC 69-06_08

All documents stating compliance to this State Ruling is in PU-08-932 Docket 225 2nd Amendment to Application Section 3.1, Table 2.



- 1.) EDF states there are no turbines within this exclusion area, Stantec agrees with that finding after searching nearby State highways.
- 2.) Stantec observed turbines to greater than one and one-tenth times the height of the turbine plus 75 feet from any county or maintained township road, according to the As-Built shapefiles.
- 3.) Stantec did not observe any rail roads or rail road ROW within the Project Area.
- 4.) EDF stated there are no turbines within this exclusion area. Stantec could not verify location of any one hundred fifteen kilovolt or higher transmission line.

Additional information on turbine locations is provided in Section 3.5.



6.0 ISSUES TO RESOLVE AND RECOMMENDATIONS

6.1 DOCUMENTATION

Stantec recommends that EDF submits the following documentation to the PSC:

Permits

- Potential North Dakota Electrical Board Permit
- Potential North Dakota Highway Patrol Permit

Approvals and Correspondence

- Spring Valley Township concurrence of all potential required permits
- North Dakota Highway patrol Overweight-Overheight Permit
- Status of light mitigation technology and compliance
- Verification of FAA Form 7640-2 Notice of Actual Construction or Alteration

Suggested

- Tree and Shrub Mitigation Plan proof of no impact
- USDA NRCS approval for following USDA FSA seeding recommendations

6.2 PERMIT AREA CONDITIONS

Stantec recommends the PSC follow up with EDF on the following potential reclamation issues:

- Status of reclamation activities, notably, maintenance of BMPs, and potential need for additional BMPs until sufficient perennial vegetation is permanently established
- Status of repair for the Drain Crossings and Culverts identified in the report
- Status of bare soil with gully erosion at Points 76 and 77
- Status of filled wetland drainageway and other poorly graded drainageways
- Status of slumping access road side slopes
- Status of recent plowing and/or seeding evidenced by bare eroding soil at Points 61, 62, and 64
- Status of SWPPP related deficiencies on construction work along intersection of 62nd Ave SE and 88th St SE
- Status of temporary approach and telephone pole remaining as observed at Point 12



7.0 REFERENCES


North Dakota Public Service Commission (ND PSC). 2020. Online Case Search. Available from:
http://www.psc.nd.gov/database/company_case_list.php. Accessed May 2021.



8.0 SIGNATURES


This document was prepared by Stantec Consulting Services Inc. ("Stantec") for the account of North Dakota Public Service Commission (the "Client"). The material in it reflects Stantec's professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The findings in the document are based on conditions and information existing at the time the document was compiled and do not take into account any subsequent changes. Recommendations and opinions contained in this report represent our professional judgment and are based upon available information and technically accepted practices at the present time and location. Other than this, no warranty is implied or expressed.

Lead Project Manager, Matt Retka, and Soil Scientist, Zachary Bartsch, prepared the report.



Matt Retka
Project Manager
Environmental Scientist

November 4, 2021
Date



Zachary Bartsch
Soil Scientist

November 4, 2021
Date



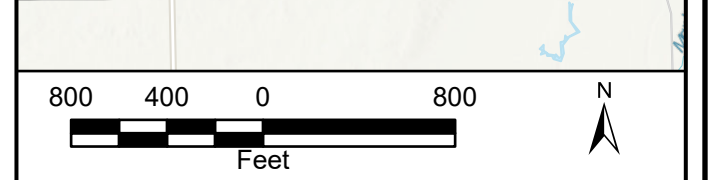
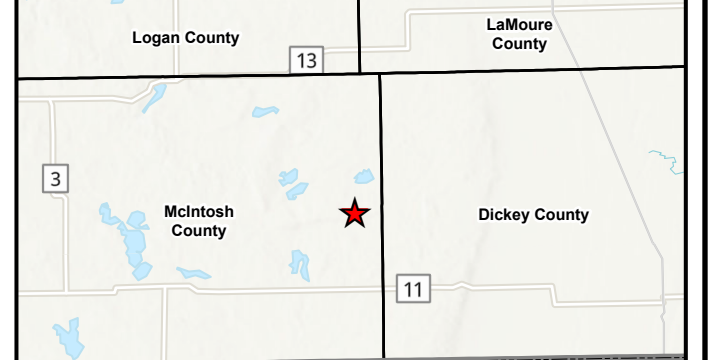
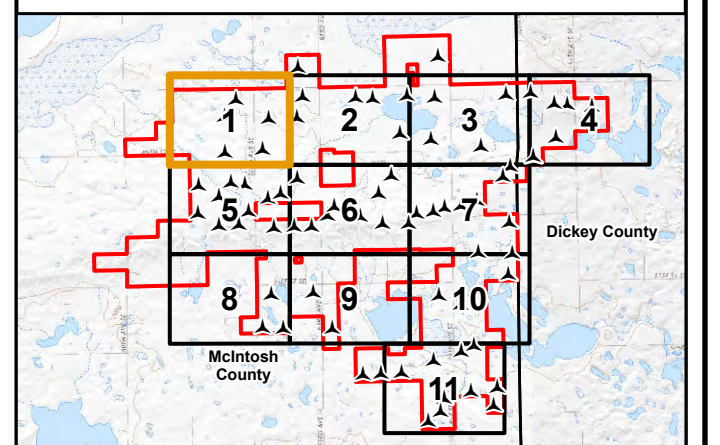
FIGURES

Figure 1-11: As-Built Observation Locations Map

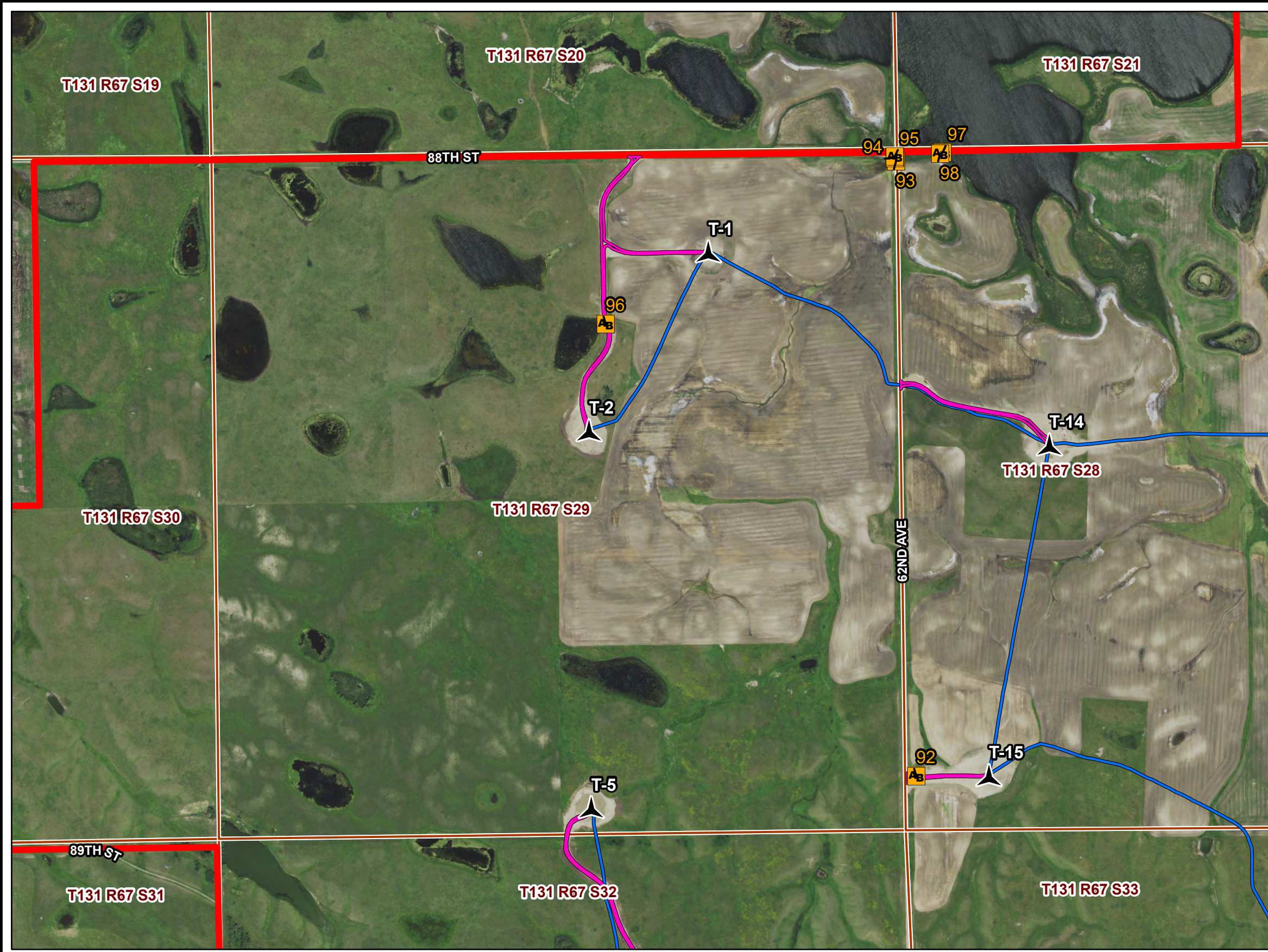
**North Dakota
Public Service Commission**

**Merricourt Wind Farm
Figure 1**

- As-Built Observation Point Location
- As-Built Turbine Location
- Met Tower Location
- As-Built Collection Line
- As-Built Access Road
- Substation
- O&M Area
- Project Boundary



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PU-08-932 MERRICOURT WIND FARM CONSTRUCTION INSPECTION

As-Built Observation Locations



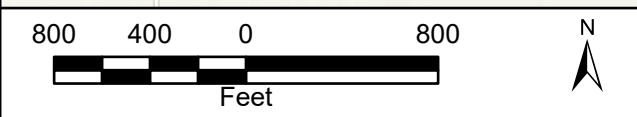
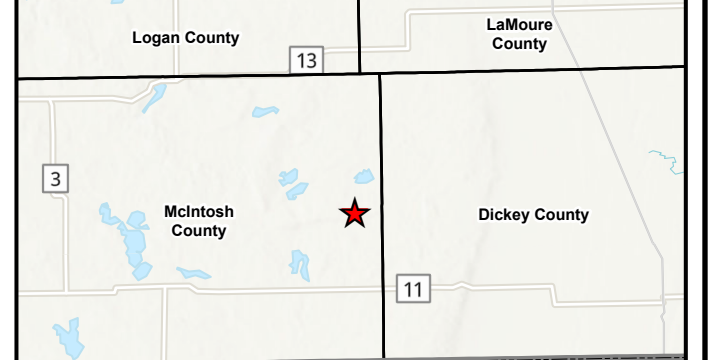
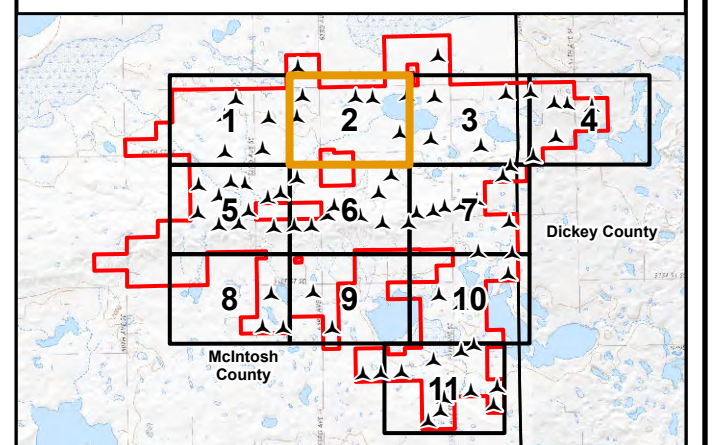
NOV 2021

Map 1 of 11

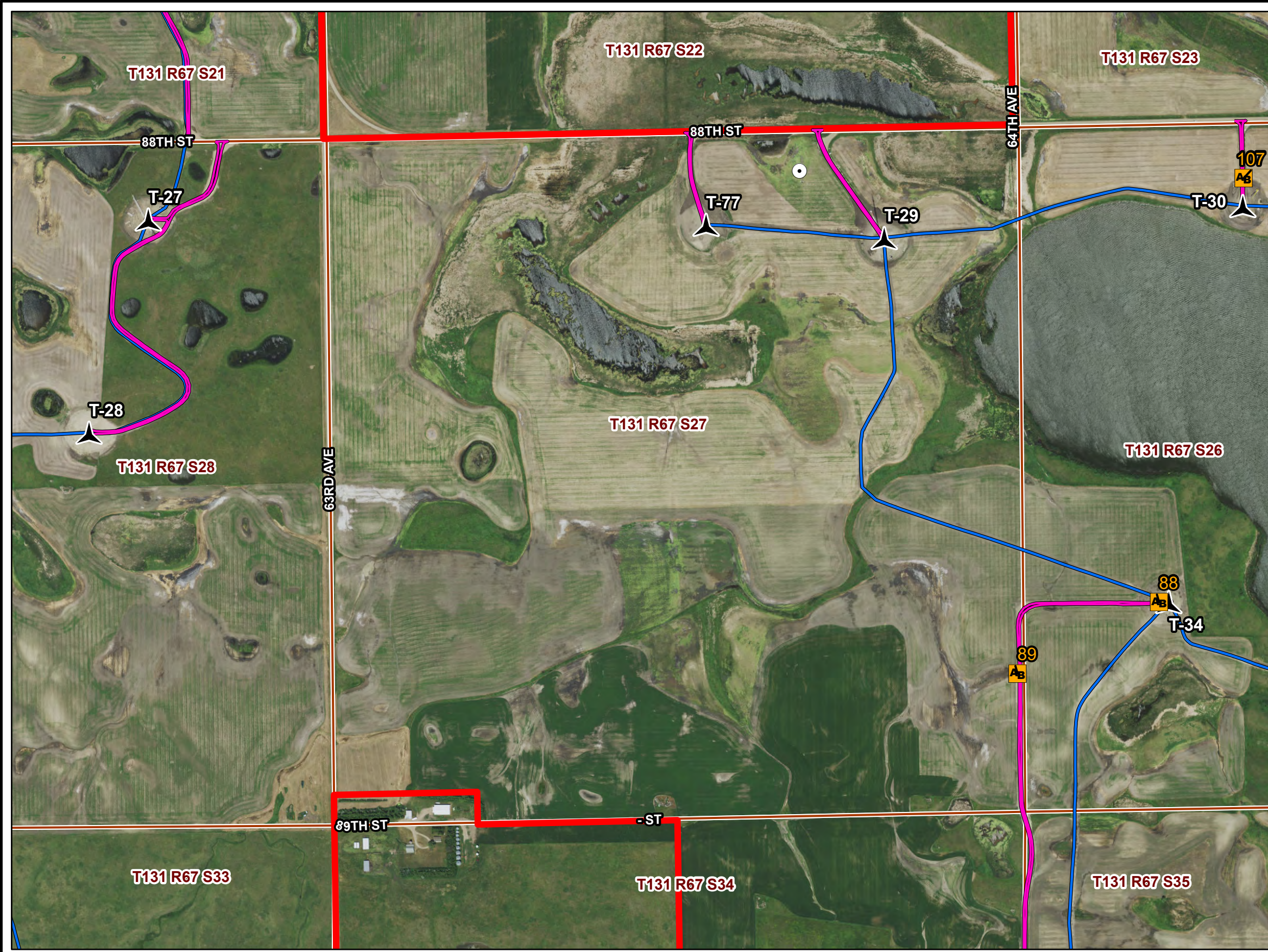
**North Dakota
Public Service Commission**

**Merricourt Wind Farm
Figure 2**

- As-Built Observation Point Location
- As-Built Turbine Location
- Met Tower Location
- As-Built Collection Line
- As-Built Access Road
- Substation
- O&M Area
- Project Boundary



2020 Aerial Photograph (Source: NAIP)
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PU-08-932 MERRICOURT WIND FARM CONSTRUCTION INSPECTION

As-Built Observation Locations



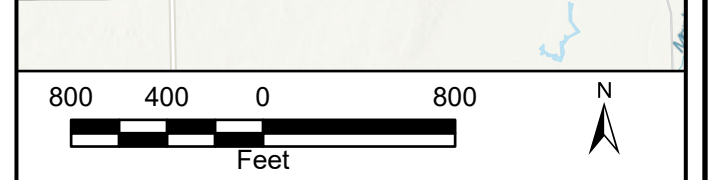
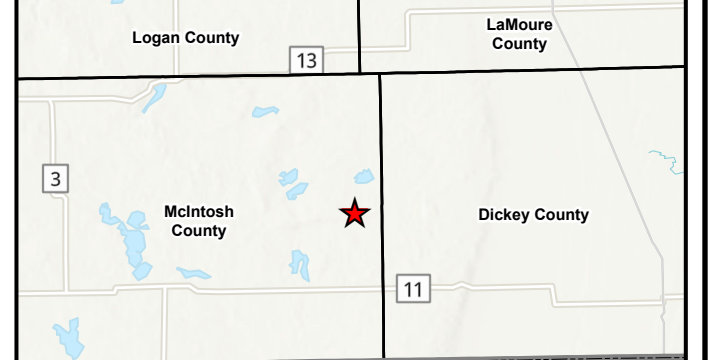
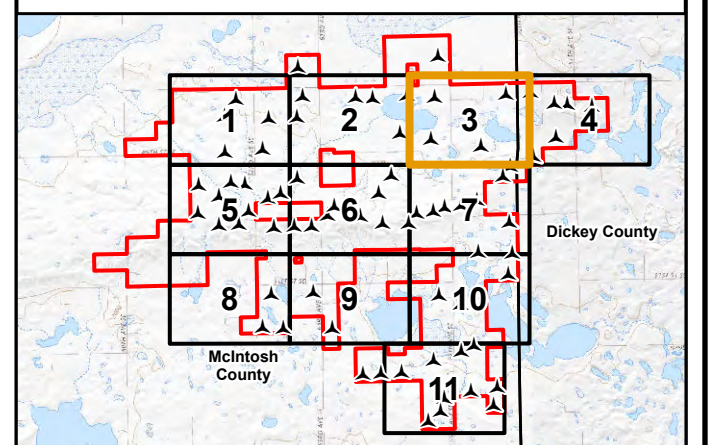
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Map 2 of 11

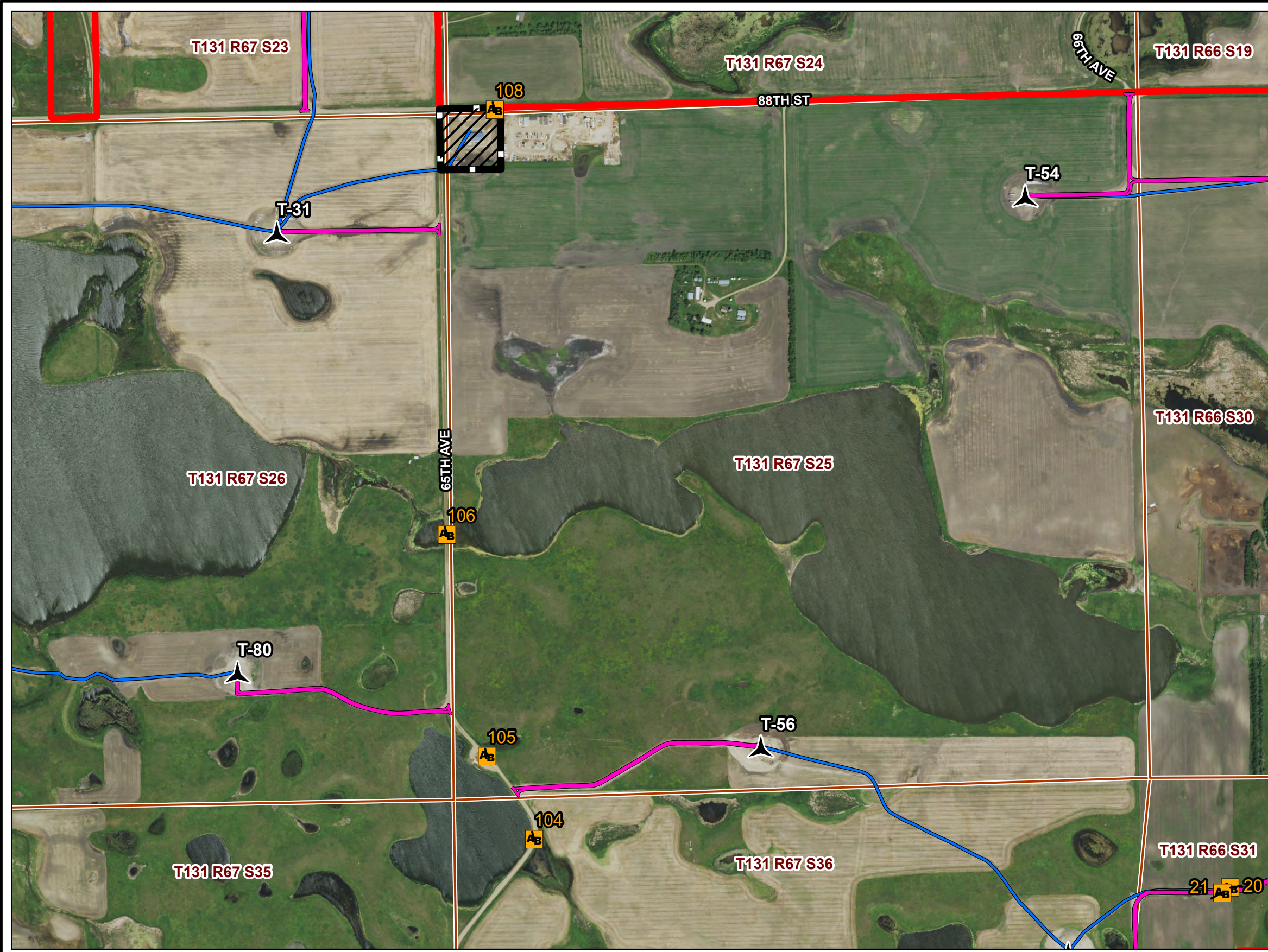
**North Dakota
Public Service Commission**

**Merricourt Wind Farm
Figure 3**

- As-Built Observation Point Location
- As-Built Turbine Location
- Met Tower Location
- As-Built Collection Line
- As-Built Access Road
- Substation
- O&M Area
- Project Boundary



2020 Aerial Photograph (Source: NAIP)
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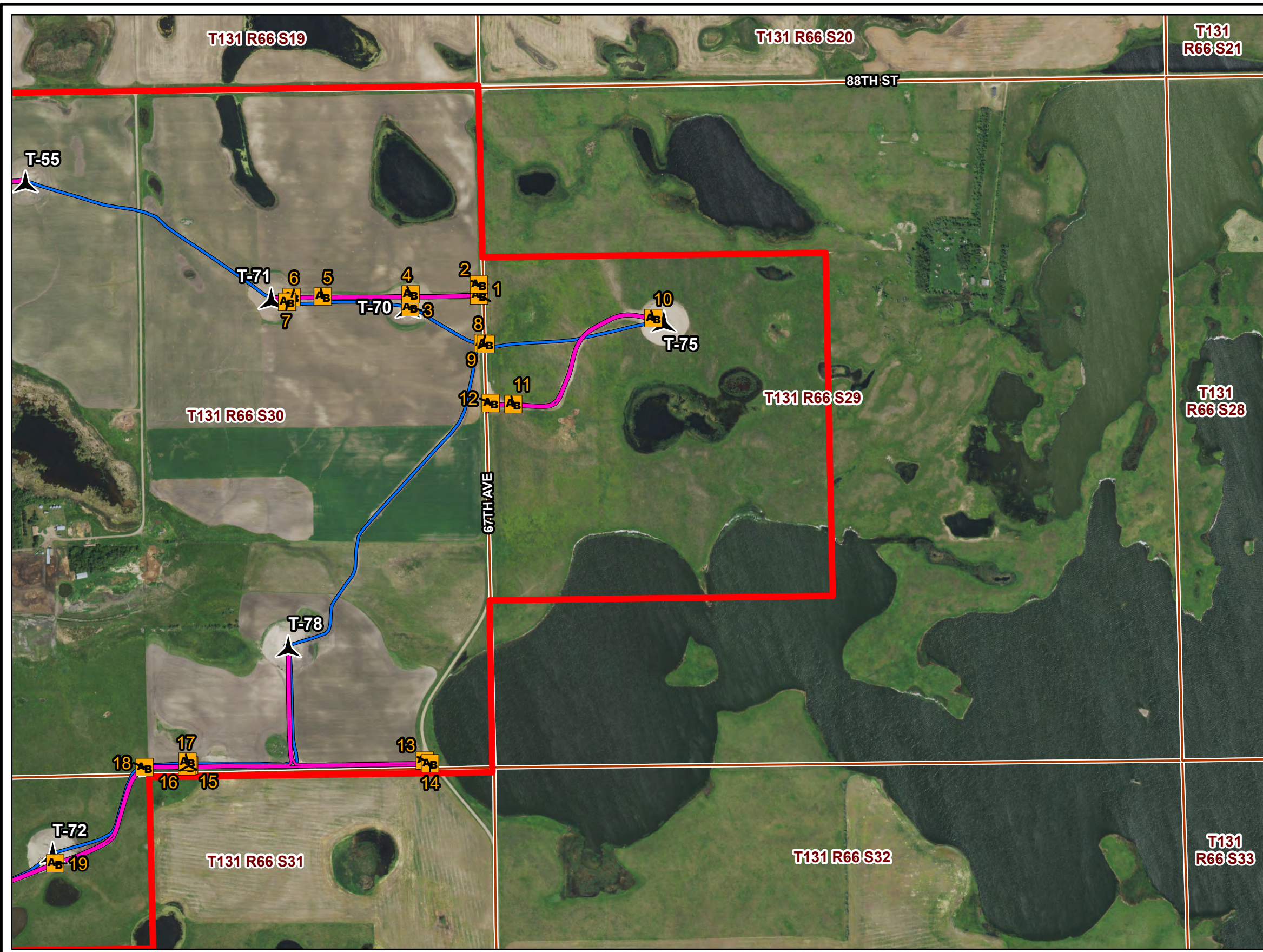
PU-08-932 MERRICOURT WIND FARM CONSTRUCTION INSPECTION

As-Built Observation Locations



NOV 2021

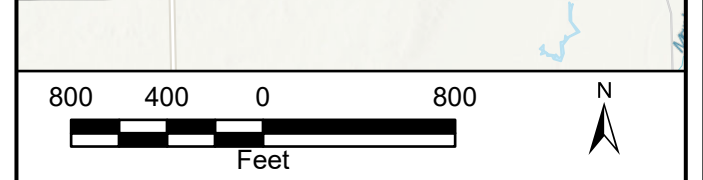
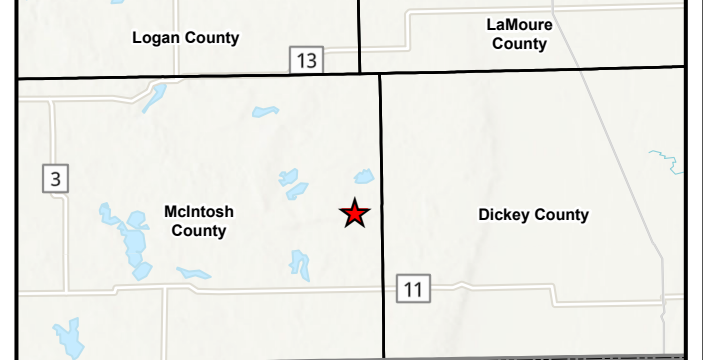
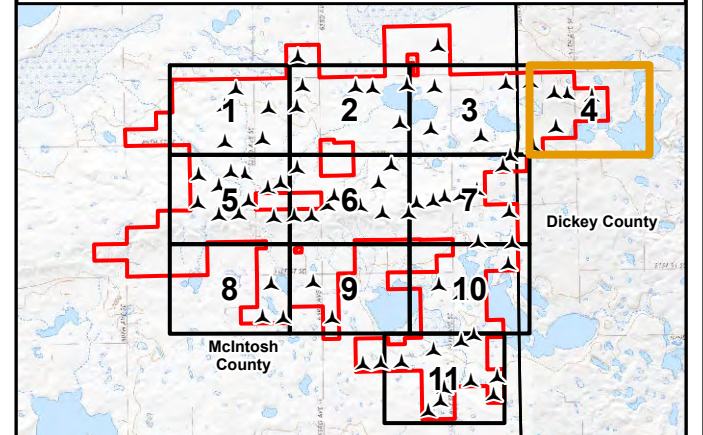
Map 3 of 11



**North Dakota
Public Service Commission**

**Merricourt Wind Farm
Figure 4**

- As-Built Observation Point Location
- As-Built Turbine Location
- Met Tower Location
- As-Built Collection Line
- As-Built Access Road
- Substation
- O&M Area
- Project Boundary



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PU-08-932 MERRICOURT WIND FARM CONSTRUCTION INSPECTION
 As-Built Observation Locations

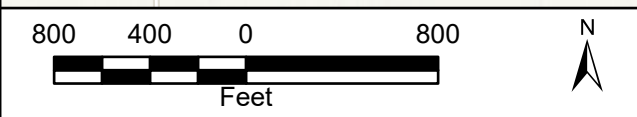
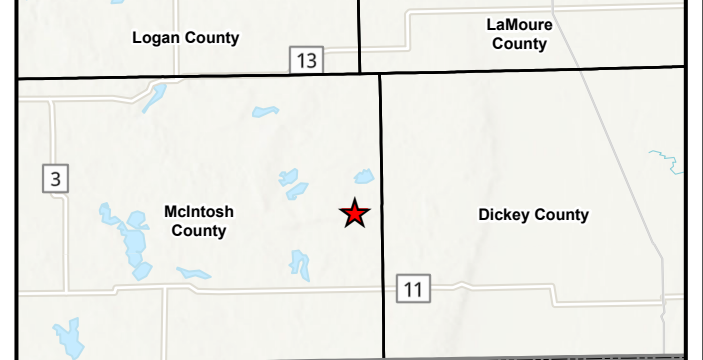
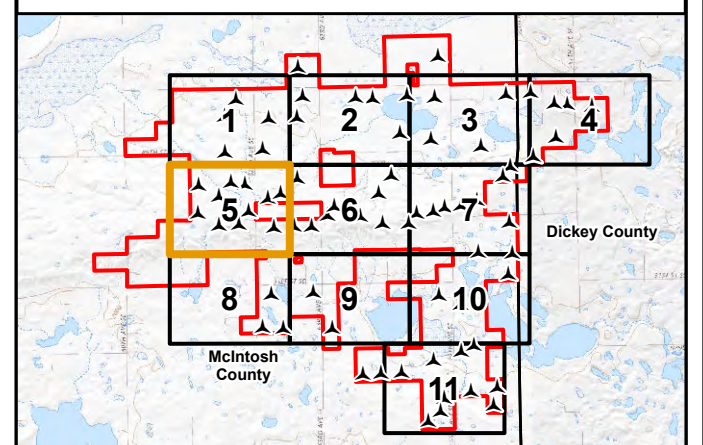


NOV 2021
 Map 4 of 11

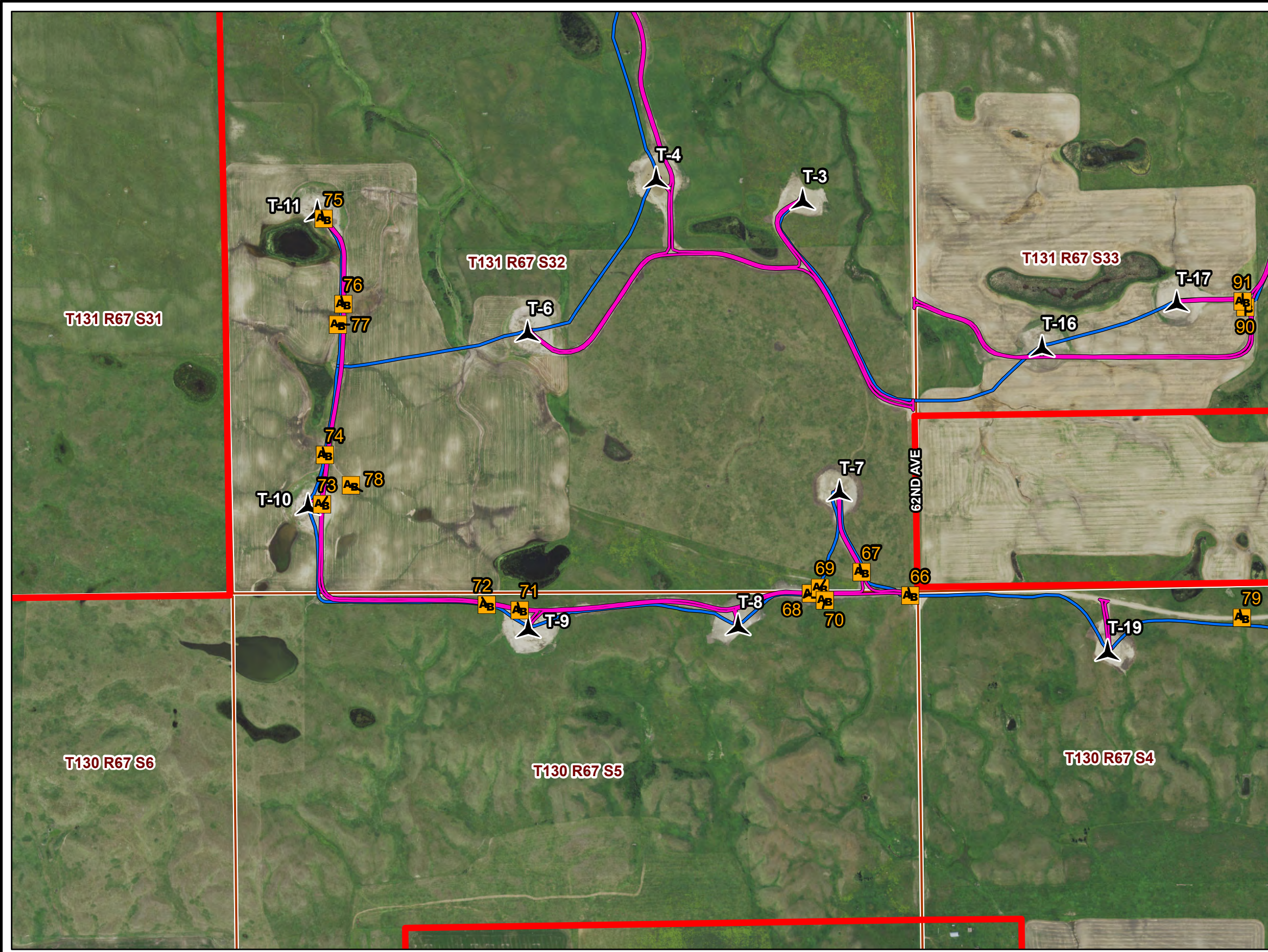
**North Dakota
Public Service Commission**

**Merricourt Wind Farm
Figure 5**

- As-Built Observation Point Location
- As-Built Turbine Location
- Met Tower Location
- As-Built Collection Line
- As-Built Access Road
- Substation
- O&M Area
- Project Boundary



2020 Aerial Photograph (Source: NAIP)
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PU-08-932 MERRICOURT WIND FARM CONSTRUCTION INSPECTION

As-Built Observation Locations



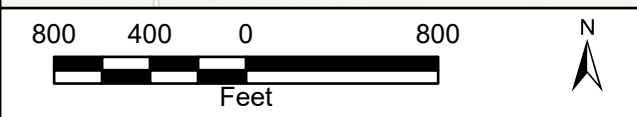
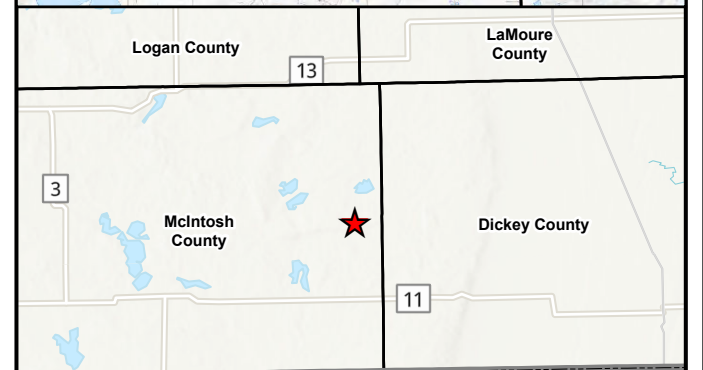
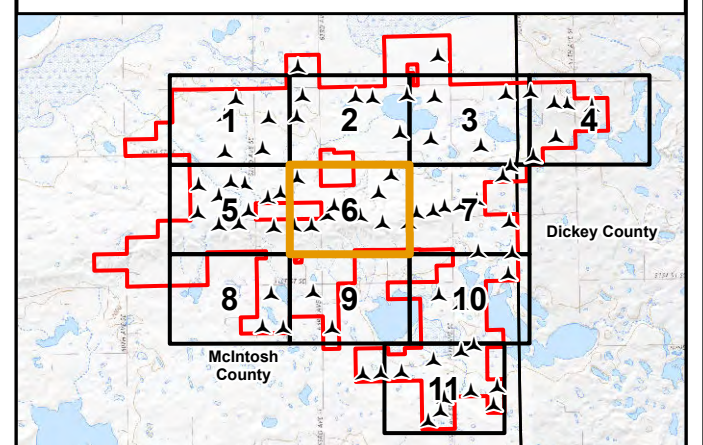
NOV 2021

Map 5 of 11

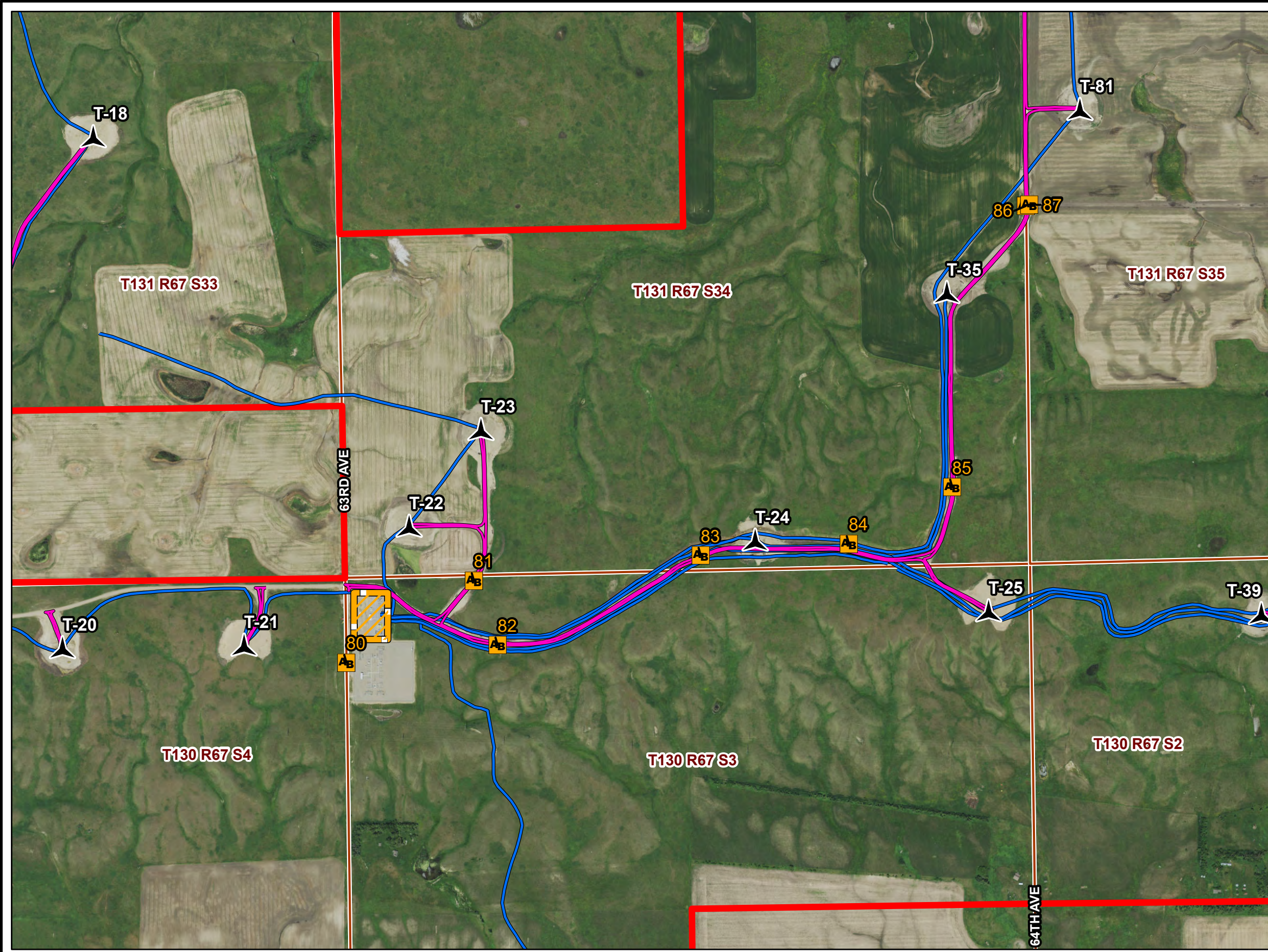
**North Dakota
Public Service Commission**

**Merricourt Wind Farm
Figure 6**

- As-Built Observation Point Location
- As-Built Turbine Location
- Met Tower Location
- As-Built Collection Line
- As-Built Access Road
- Substation
- O&M Area
- Project Boundary



2020 Aerial Photograph (Source: NAIP)
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 Date: 2021-11-01 Time: 4:47 PM User: kjmueller



PU-08-932 MERRICOURT WIND FARM CONSTRUCTION INSPECTION

As-Built Observation Locations



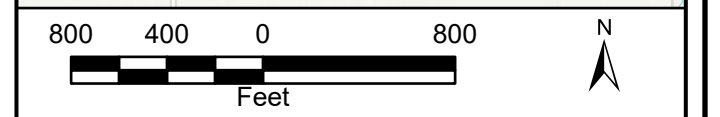
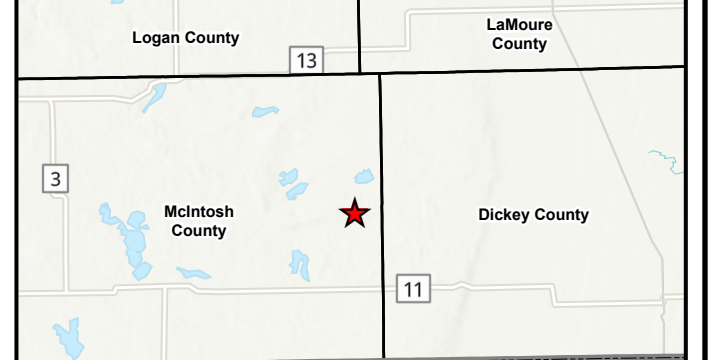
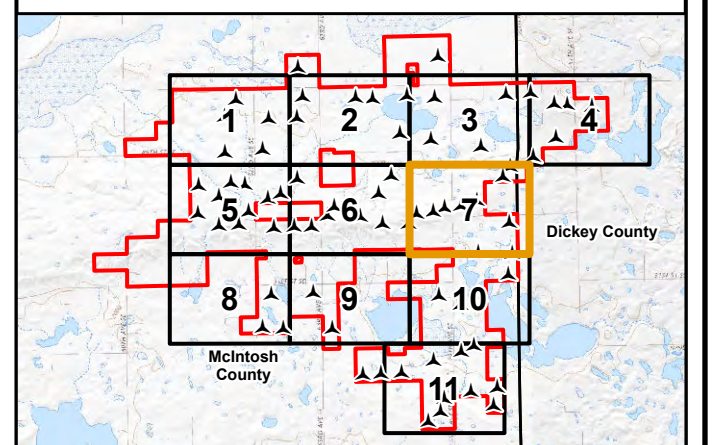
NOV 2021

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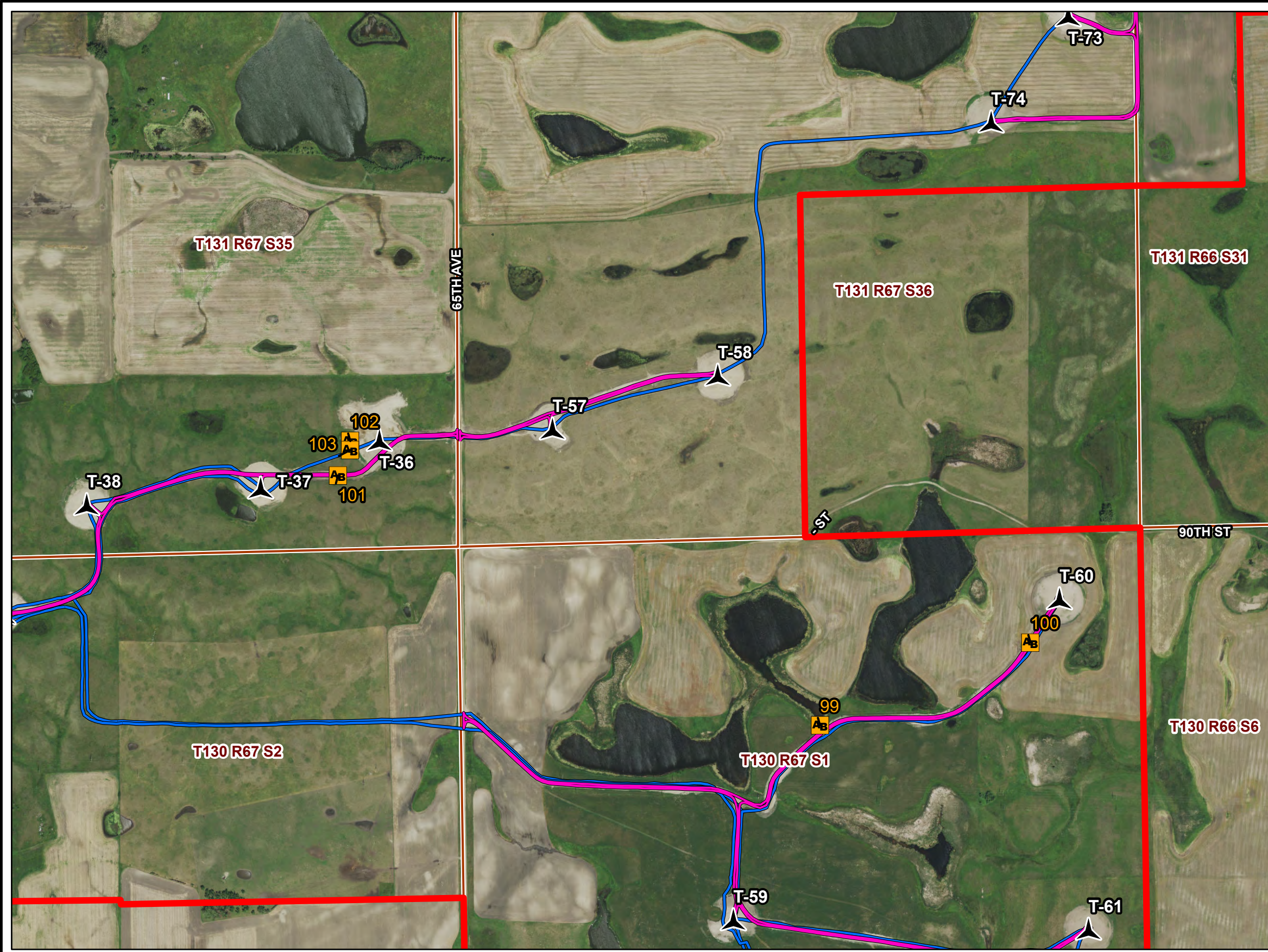
**North Dakota
Public Service Commission**

**Merricourt Wind Farm
Figure 7**

- As-Built Observation Point Location
- As-Built Turbine Location
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2020 Aerial Photograph (Source: NAIP)
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 Date: 2021-11-01 Time: 4:48 PM User: kjmueller



PU-08-932 MERRICOURT WIND FARM CONSTRUCTION INSPECTION

As-Built Observation Locations



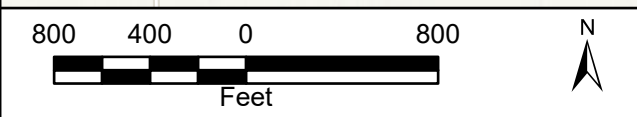
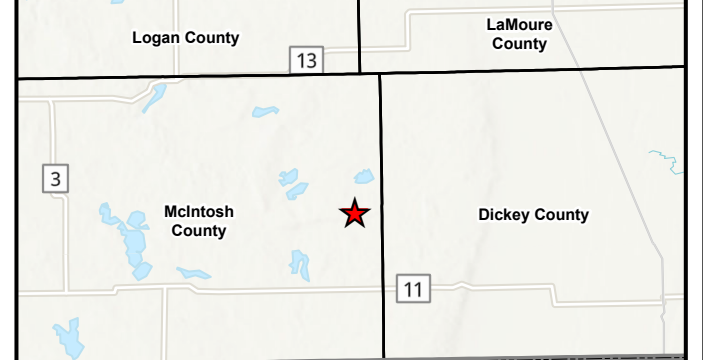
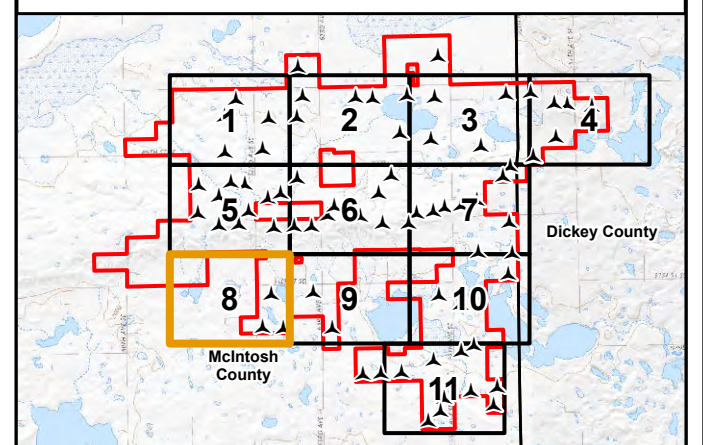
NOV 2021

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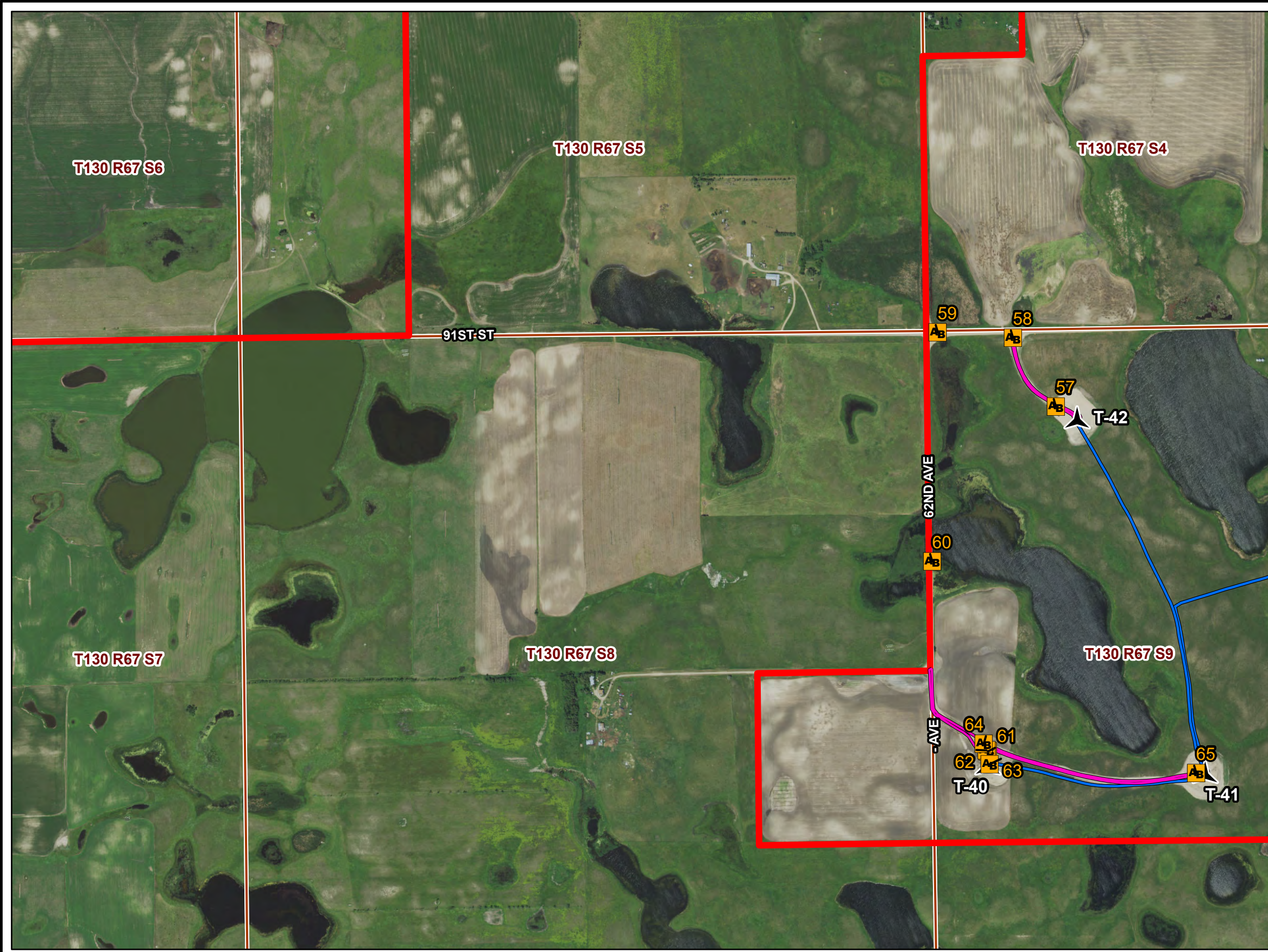
**North Dakota
Public Service Commission**

**Merricourt Wind Farm
Figure 8**

- As-Built Observation Point Location
- As-Built Turbine Location
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- As-Built Access Road
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PU-08-932 MERRICOURT WIND FARM CONSTRUCTION INSPECTION

As-Built Observation Locations



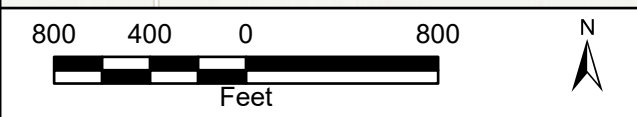
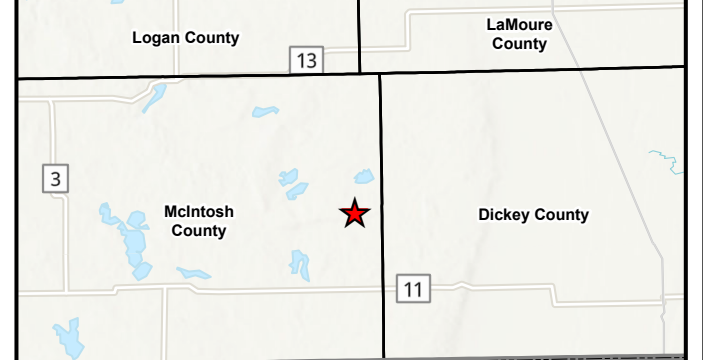
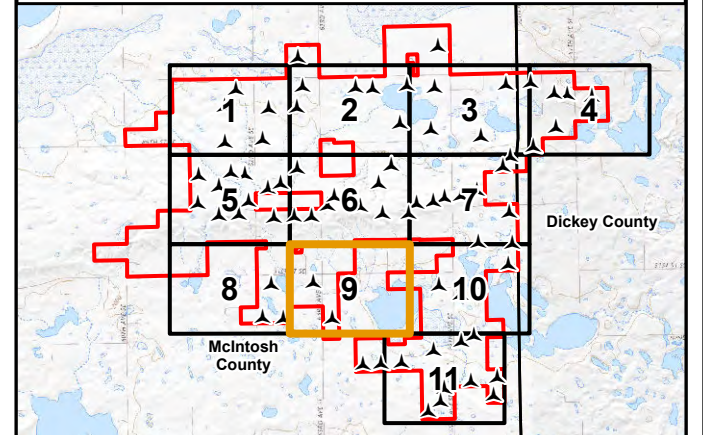
NOV 2021

Map 8 of 11

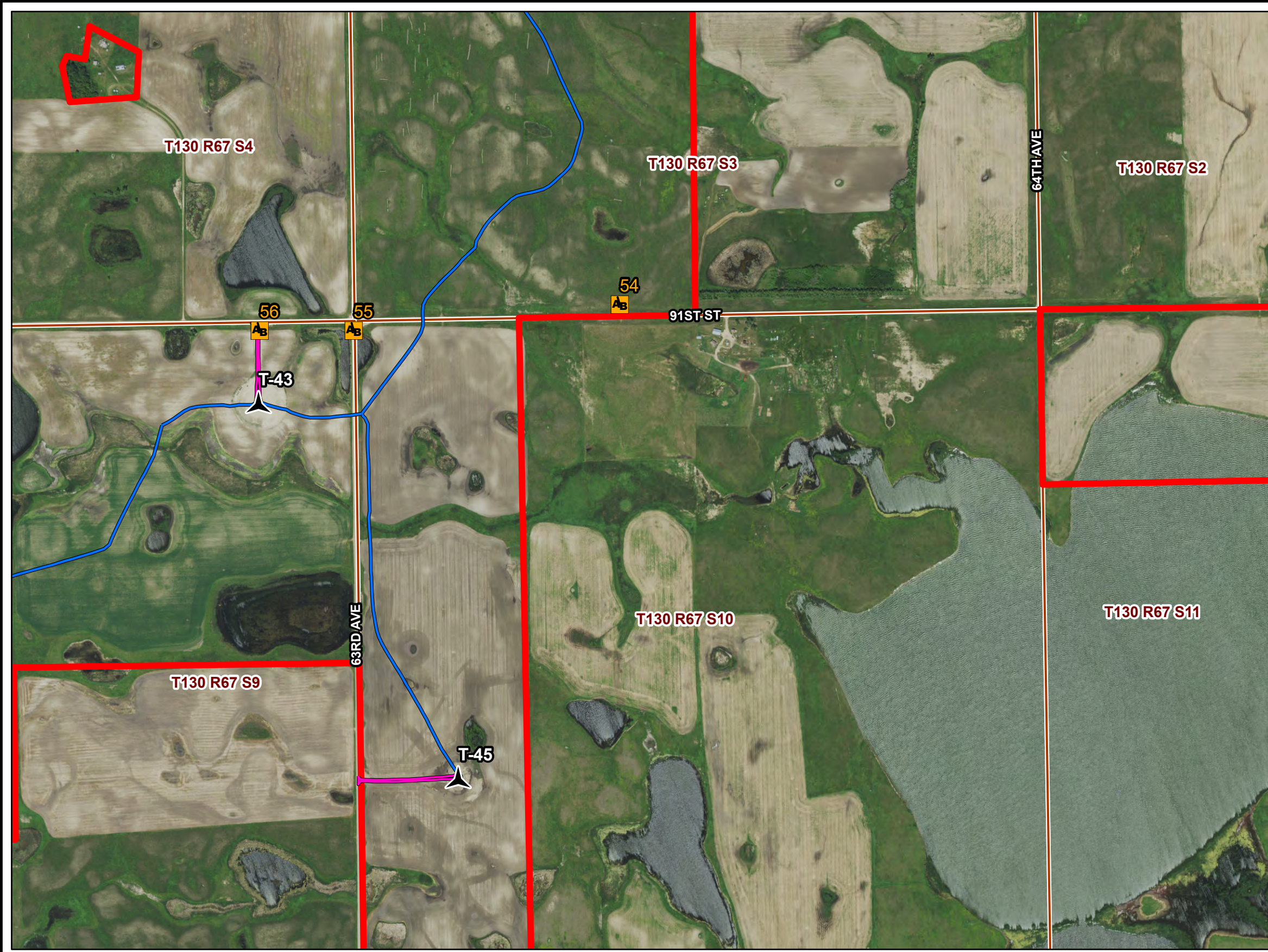
**North Dakota
Public Service Commission**

**Merricourt Wind Farm
Figure 9**

- As-Built Observation Point Location
- As-Built Turbine Location
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2020 Aerial Photograph (Source: NAIP)
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PU-08-932 MERRICOURT WIND FARM CONSTRUCTION INSPECTION

As-Built Observation Locations



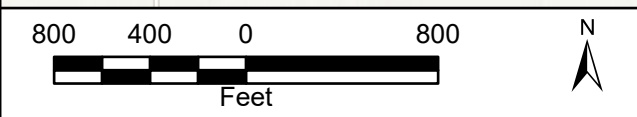
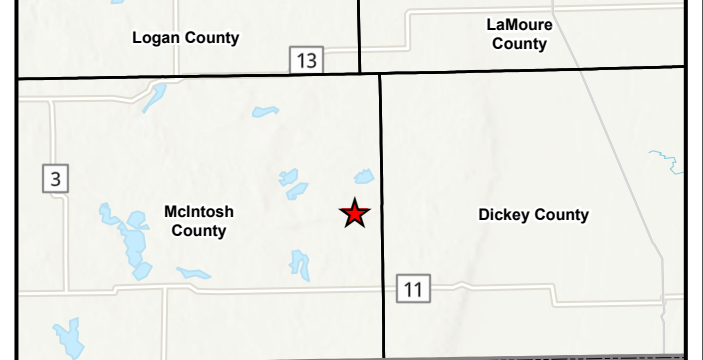
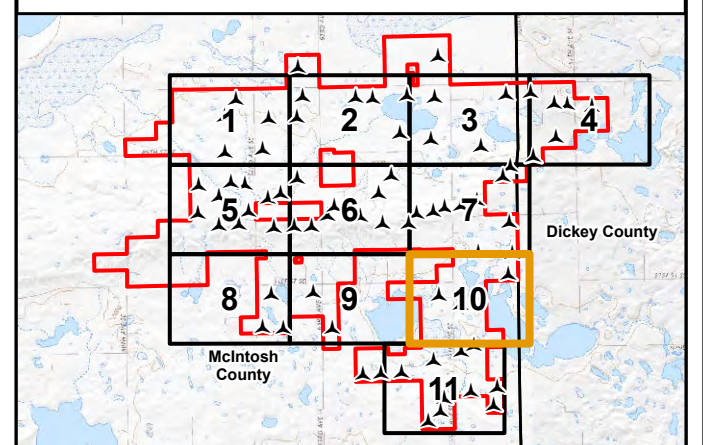
NOV 2021

Map 9 of 11

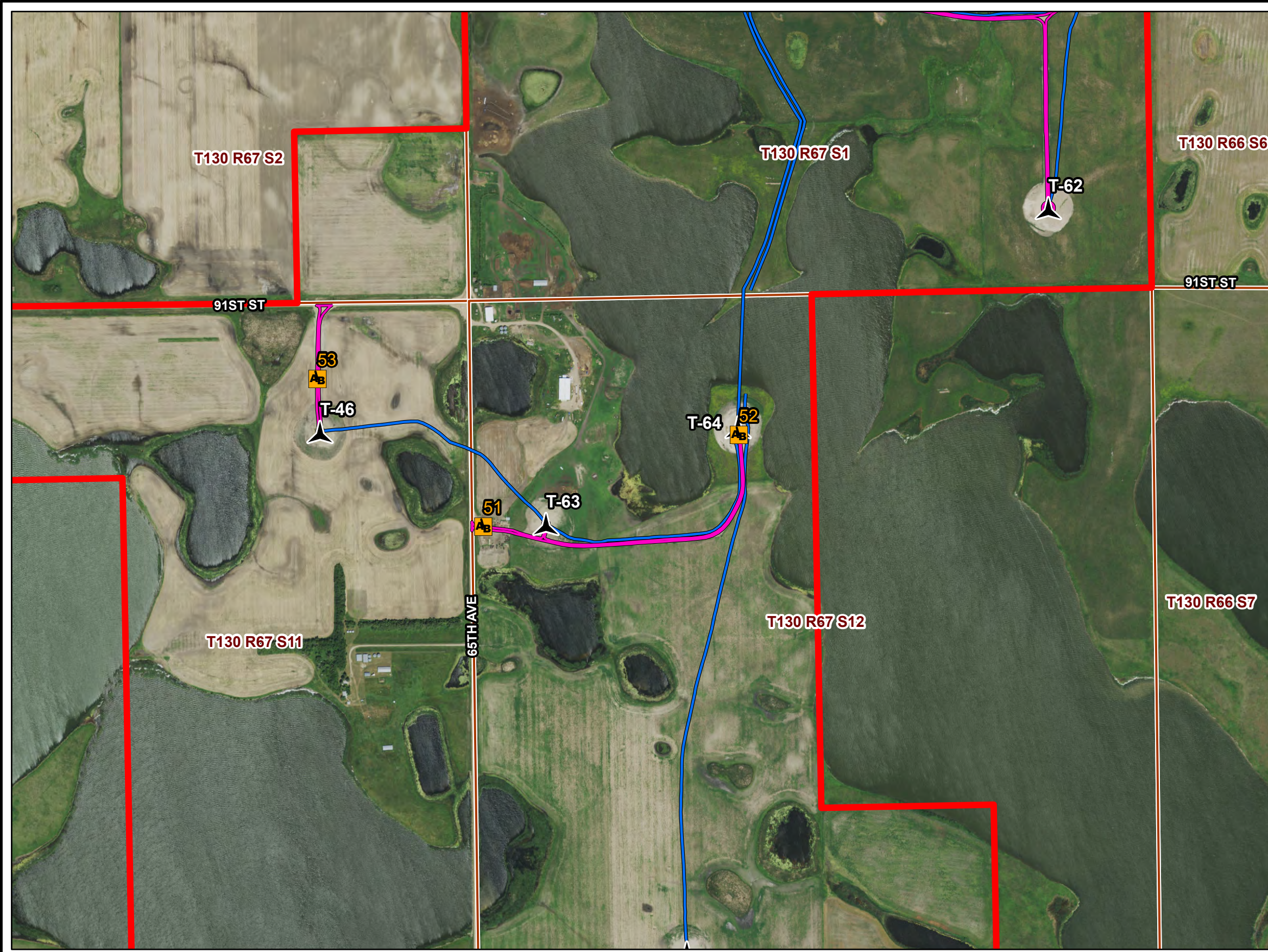
**North Dakota
Public Service Commission**

**Merricourt Wind Farm
Figure 10**

- As-Built Observation Point Location
- As-Built Turbine Location
- Met Tower Location
- As-Built Collection Line
- As-Built Access Road
- Substation
- O&M Area
- Project Boundary



2020 Aerial Photograph (Source: NAIP)
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PU-08-932 MERRICOURT WIND FARM CONSTRUCTION INSPECTION

As-Built Observation Locations



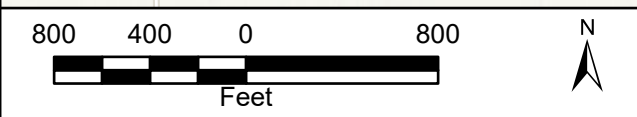
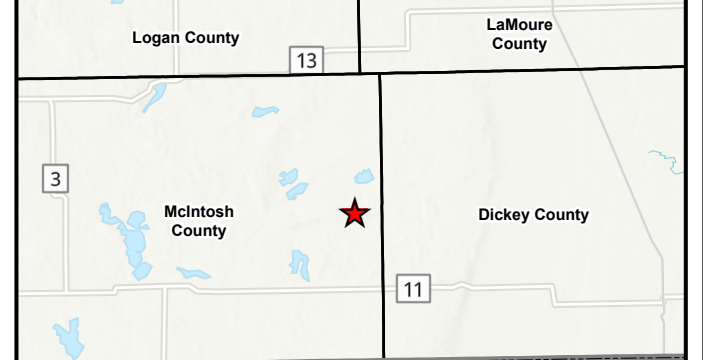
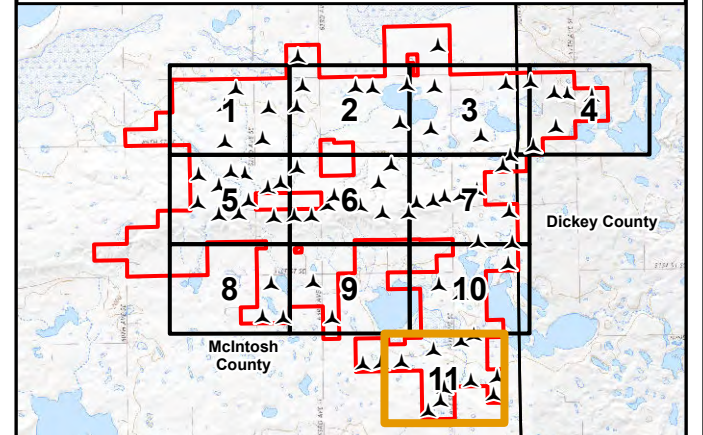
NOV 2021

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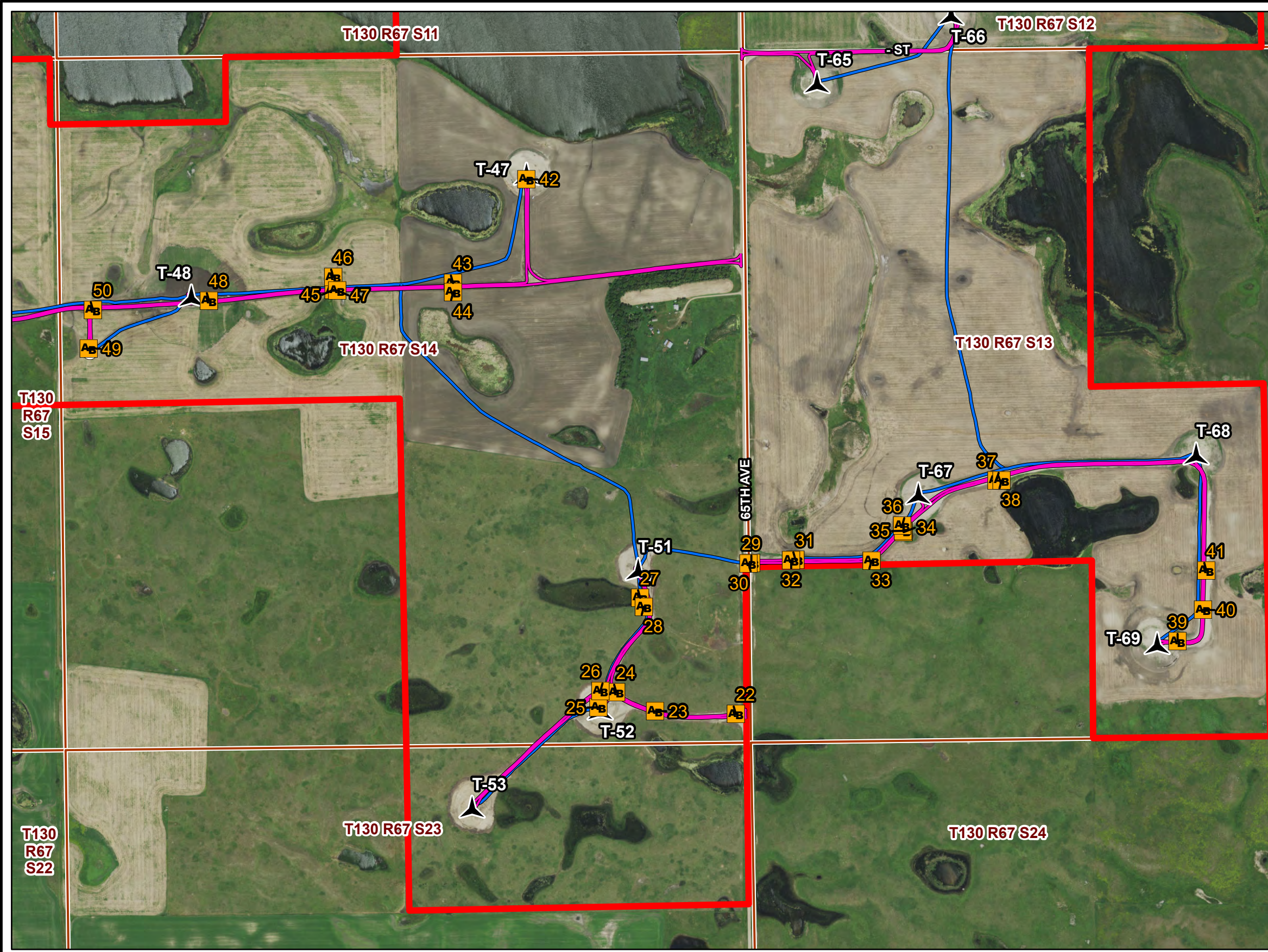
**North Dakota
Public Service Commission**

**Merricourt Wind Farm
Figure 11**

- As-Built Observation Point Location
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 Date: 2021-11-01 Time: 4:48 PM User: kjmueller



PU-08-932 MERRICOURT WIND FARM CONSTRUCTION INSPECTION

As-Built Observation Locations



NOV 2021

Map 11 of 11

APPENDIX A

Field Observation Coordinates

**PU-08-932 / 19-144 EDF RENEWABLE DEVELOPMENT, INC.
MERRICOURT WIND POWER AS-BUILT INSPECTION REPORT**

Appendix A
November 2021

Field Observation Points

Observation Point #	Latitude	Longitude
1	46.13827069	-98.98534353
2	46.13849982	-98.98534262
3	46.13805121	-98.98744606
4	46.13832196	-98.98742758
5	46.13830954	-98.9900913
6	46.13831127	-98.9910425
7	46.13821012	-98.99117956
8	46.13726243	-98.98525294
9	46.13724016	-98.98517146
10	46.13771555	-98.980064
11	46.13596312	-98.98436511
12	46.13599375	-98.98504923
13	46.12846921	-98.98726674
14	46.12840506	-98.98710955
15	46.1284552	-98.99442524
16	46.12844	-98.99448763
17	46.1284386	-98.9957798
18	46.12853655	-98.99447524
19	46.12644798	-98.99855142
20	46.1259614	-99.00109588
21	46.12586032	-99.00133908
22	46.07068994	-99.02554777
23	46.07078215	-99.02798794
24	46.07119288	-99.02915021
25	46.07088285	-99.02969545
26	46.07122898	-99.02962962
27	46.07317387	-99.02837514
28	46.07298294	-99.02826996
29	46.0738612	-99.0249961
30	46.0738518	-99.0250782
31	46.073909	-99.0236611
32	46.07390376	-99.02379179
33	46.0738622	-99.0213608
34	46.07445012	-99.02037363
35	46.0744797	-99.0203872
36	46.07458954	-99.02041573
37	46.07550311	-99.01753967
38	46.07550035	-99.01738526
39	46.0720417	-99.01215922
40	46.07269747	-99.01136627
41	46.07352301	-99.01124825
42	46.08202592	-99.03157707
43	46.07987035	-99.03385466
44	46.07968011	-99.03385455
45	46.07977543	-99.03746861
46	46.08004359	-99.03746932
47	46.07976191	-99.0373596



**PU-08-932 / 19-144 EDF RENEWABLE DEVELOPMENT, INC.
MERRICOURT WIND POWER AS-BUILT INSPECTION REPORT**

Appendix A
November 2021

Observation Point #	Latitude	Longitude
48	46.0795954	-99.0412412
49	46.0786347	-99.0449016
50	46.07944816	-99.04475338
51	46.0943757	-99.0245541
52	46.09620759	-99.01677565
53	46.0975526	-99.0294872
54	46.09948957	-99.05835804
55	46.09904683	-99.0664166
56	46.09908374	-99.06925954
57	46.0976616	-99.0832805
58	46.09912077	-99.08454227
59	46.0992628	-99.0868137
60	46.09444713	-99.08710523
61	46.0904299	-99.0855263
62	46.09045219	-99.08556607
63	46.09016003	-99.08547715
64	46.0905918	-99.0856464
65	46.08989211	-99.07923724
66	46.1134766	-99.0872734
67	46.11398825	-99.08873235
68	46.11355733	-99.09028129
69	46.11367706	-99.08999623
70	46.11341017	-99.08986216
71	46.11331428	-99.09909908
72	46.1134382	-99.1000906
73	46.11562008	-99.1050182
74	46.11665264	-99.1049059
75	46.1216288	-99.1048176
76	46.1198245	-99.1042664
77	46.11939938	-99.10444406
78	46.11600845	-99.1041361
79	46.1128872	-99.07725778
80	46.1118025	-99.0663056
81	46.1134778	-99.062402
82	46.11211146	-99.06172142
83	46.1139227	-99.0555269
84	46.11410934	-99.0510426
85	46.1152617	-99.0478825
86	46.12115315	-99.04550001
87	46.12117572	-99.04539281
88	46.13250109	-99.04116515
89	46.1310544	-99.04548706
90	46.11942	-99.0769806
91	46.1195393	-99.0770628
92	46.1294136	-99.0866809
93	46.1423683	-99.0869609
94	46.1424344	-99.0869972
95	46.1424654	-99.0869947
96	46.1390463	-99.0958367



**PU-08-932 / 19-144 EDF RENEWABLE DEVELOPMENT, INC.
MERRICOURT WIND POWER AS-BUILT INSPECTION REPORT**

Appendix A
November 2021

Observation Point #	Latitude	Longitude
97	46.1425316	-99.08554732
98	46.14251157	-99.08561779
99	46.10980202	-99.01395162
100	46.1114633	-99.0075407
101	46.1152564	-99.02838846
102	46.11597696	-99.02800045
103	46.11578585	-99.02800708
104	46.12725855	-99.0221252
105	46.1290276	-99.0235022
106	46.13370628	-99.02459565
107	46.1413924	-99.0383652
108	46.14262459	-99.0229027



APPENDIX B

Observation Point Photolog

PU-08-932/PU-19-144 (Merricourt Wind): Observation Point Photolog



Observation Point: 1

Date Taken: October 14, 2021 11:10 AM
Direction Photo is Taken: South

Photo Description: Old BMP's present. Vegetation on access road is sparser than surrounding areas, but overall, satisfactory.

Latitude: 46.1382706879556
Longitude: -98.9853435345497



Observation Point: 2

Date Taken: October 14, 2021 11:12 AM
Direction Photo is Taken: South

Photo Description: Road and repaired approach for access road is eroding into ditch with evident rills forming. No BMP's are present except seeded plants. Grading match's section road and field.

Latitude: 46.1384998190092
Longitude: -98.985342619622



Observation Point: 3

Date Taken: October 14, 2021 11:17 AM
Direction Photo is Taken: Southeast

Photo Description: T-70 access, and pad area is in good condition, and matches surrounding area. Collection line corridor appears to be consistent with the as built drawings.

Latitude: 46.1380512116761
Longitude: -98.987446059095

PU-08-932 (EDF Merricourt Wind): Observation Point Photolog



Observation Point: 4

Date Taken: October 14, 2021 11:19 AM
Direction Photo is Taken: West

Photo Description: Access road is graded appropriately, but runoff easily erodes road fill and sediment into soybean field with no BMP.

Latitude: 46.1383219647521
Longitude: -98.9874275785016



Observation Point: 5

Date Taken: October 14, 2021 11:22 AM
Direction Photo is Taken: Northwest

Photo Description: Flat/summit portion of the access road to T-71 is well graded and constructed. Topsoil is replaced in the surround areas and the seeded vegetation is emerging.

Latitude: 46.1383095425664
Longitude: -98.9900912960478



Observation Point: 6

Date Taken: October 14, 2021 11:24 AM
Direction Photo is Taken: East

Photo Description: Severe erosion on access road to T-71. The road has lost enough fill to show road matting. Needs addressing to reduce impacts to surrounding farmland and comply with SWPPP.

Latitude: 46.1383112679514
Longitude: -98.9910424956989

PU-08-932 (EDF Merricourt Wind): Observation Point Photolog



Observation Point: 7

Date Taken: October 14, 2021 11:26 AM
Direction Photo is Taken: Northeast

Photo Description: Road fill washing into and covering topsoil in neighboring hay field. Seeded vegetation is emerging slower where road fill is covering topsoil. Appropriate grading.

Latitude: 46.1382101233479
Longitude: -98.9911795594976



Observation Point: 8

Date Taken: October 14, 2021 11:32 AM
Direction Photo is Taken: Northeast

Photo Description: Collection lines is consistent with as built drawings.

Latitude: 46.137262428838
Longitude: -98.985252942383



Observation Point: 9

Date Taken: October 14, 2021 11:34 AM
Direction Photo is Taken: East

Photo Description: As built drawing aligns with collection line.

Latitude: 46.1372401612486
Longitude: -98.9851714563633

PU-08-932 (EDF Merricourt Wind): Observation Point Photolog



Observation Point: 10

Date Taken: October 14, 2021 11:38 AM
Direction Photo is Taken: Southeast

Photo Description: T-75 pad is well reclaimed and adequately constructed. No signs of erosion and is graded well.

Latitude: 46.1377155485199
Longitude: -98.9800639985086



Observation Point: 11

Date Taken: October 14, 2021 11:43 AM
Direction Photo is Taken: West

Photo Description: Ponding water from rain on constructed access road. Regrading to allow water flow may be necessary to ensure the road stays in good condition and to reduce further erosion. Topsoil replacement is satisfactory.

Latitude: 46.1359631207895
Longitude: -98.9843651085865



Observation Point: 12

Date Taken: October 14, 2021 11:47 AM
Direction Photo is Taken: North

Photo Description: Telephone pole remains in the pasture, but it is uncertain if it was from Project construction activity. Road ditch is improperly graded and does not match the existing grade of the section road. Old access area or temporary approach in photo is seeded but not matching surrounding area.

Latitude: 46.1359937509884
Longitude: -98.9850492333767

PU-08-932 (EDF Merricourt Wind): Observation Point Photolog



Observation Point: 13

Date Taken: October 14, 2021 11:52 AM

Direction Photo is Taken: North

Photo Description: Section of fence is missing at access road and there may be an unrepaired access road. Uncertain if this is at landowners request. Access approach is eroding into ditch. Grading does not match.

Latitude: 46.128469209847

Longitude: -98.9872667389412



Observation Point: 14

Date Taken: October 14, 2021 11:55 AM

Direction Photo is Taken: West

Photo Description: Large rain event the previous day resulted in water ponding along access road for T-78, and other turbines, with no culvert or natural outlet. There was minimal erosion.

Latitude: 46.1284050562126

Longitude: -98.9871095516608



Observation Point: 15

Date Taken: October 14, 2021 12:01 PM

Direction Photo is Taken: West

Photo Description: Drain Crossing #102 (culvert) under access road with riprap to reduce erosion. Severe erosion is occurring upslope, and may washout culvert. Revisit may be needed.

Latitude: 46.1284552003067

Longitude: -98.994425237379

PU-08-932 (EDF Merricourt Wind): Observation Point Photolog



Observation Point: 16

Date Taken: October 14, 2021 12:03 PM

Direction Photo is Taken: South

Photo Description: Drain Crossing #102 via culvert is filled with sediment and may causing drain failure in the future.

Latitude: 46.1284399997603

Longitude: -98.9944876289086



Observation Point: 17

Date Taken: October 14, 2021 12:04 PM

Direction Photo is Taken: Southwest

Photo Description: South side of Drain Crossing #102 appears to be in better condition, with riprap present to mitigate erosion.

Latitude: 46.1285365516942

Longitude: -98.9944752427394



Observation Point: 18

Date Taken: October 14, 2021 12:14 PM

Direction Photo is Taken: Southeast

Photo Description: Fencing is repaired and in good condition.

Latitude: 46.1284386

Longitude: -98.9957798

PU-08-932 (EDF Merricourt Wind): Observation Point Photolog



Observation Point: 19

Date Taken: October 14, 2021 12:17 PM
Direction Photo is Taken: Southeast

Photo Description: Replaced topsoil is washing onto permitted access road near T-72.

Latitude: 46.1264479827623
Longitude: -98.9985514160057



Observation Point: 20

Date Taken: October 14, 2021 12:21 PM
Direction Photo is Taken: South

Photo Description: Culvert crossing access is well graded and no sign of erosion.

Latitude: 46.1259614037992
Longitude: -99.0010958780811



Observation Point: 21

Date Taken: October 14, 2021 12:23 PM
Direction Photo is Taken: North

Photo Description: Water ponding from rainfall, but is not flowing to Drain Crossing #55. It instead drains over road and washes gravel into field. Road is otherwise appropriately constructed.

Latitude: 46.1258603193608
Longitude: -99.0013390766732

PU-08-932 (EDF Merricourt Wind): Observation Point Photolog



Observation Point: 22

Date Taken: October 14, 2021 12:53 PM

Direction Photo is Taken: Northeast

Photo Description: Grading appears to match section road, but no BMP. Rain has eroded/moved sediment and vegetation.

Latitude: 46.0706899444586

Longitude: -99.0255477693897



Observation Point: 23

Date Taken: October 14, 2021 12:58 PM

Direction Photo is Taken: East

Photo Description: Water washing the replaced and graded topsoil onto access road. South side is well graded.

Latitude: 46.0707821494116

Longitude: -99.0279879372753



Observation Point: 24

Date Taken: October 14, 2021 1:00 PM

Direction Photo is Taken: Southeast

Photo Description: Road material washing into revegetated area on both sides of road.

Latitude: 46.0711928780956

Longitude: -99.0291502096565

PU-08-932 (EDF Merricourt Wind): Observation Point Photolog



Observation Point: 25

Date Taken: October 14, 2021 1:03 PM
Direction Photo is Taken: East

Photo Description: T-52 was subject to last-minute layout changes, and was observed in agreeance with final As-Built files. Water is ponding on pad in some spots.

Latitude: 46.0708828534326
Longitude: -99.0296954514277



Observation Point: 26

Date Taken: October 14, 2021 1:05 PM
Direction Photo is Taken: Southwest

Photo Description: Impassable and could not inspect T-53 due to ponded water.

Latitude: 46.0712289813295
Longitude: -99.029629624675



Observation Point: 27

Date Taken: October 14, 2021 1:09 PM
Direction Photo is Taken: East

Photo Description: Grading appears to have been well done but erosion has removed soil and vegetation. Other seeded areas are emerging well.

Latitude: 46.0731738660883
Longitude: -99.0283751364062

PU-08-932 (EDF Merricourt Wind): Observation Point Photolog



Observation Point: 28

Date Taken: October 14, 2021 1:11 PM
Direction Photo is Taken: South

Photo Description: Appropriate grading and revegetation of road and collection line area.

Latitude: 46.0729829436857
Longitude: -99.0282699610277



Observation Point: 29

Date Taken: October 14, 2021 1:23 PM
Direction Photo is Taken: Northeast

Photo Description: North side of repaired approach has adequate grading and construction of Culvert #20.

Latitude: 46.0738612
Longitude: -99.0249961



Observation Point: 30

Date Taken: October 14, 2021 1:25 PM
Direction Photo is Taken: Northeast

Photo Description: On south side of approach, Culvert #20 is filling with sediment and poorly regraded.

Latitude: 46.0738518
Longitude: -99.0250782

PU-08-932 (EDF Merricourt Wind): Observation Point Photolog



Observation Point: 31

Date Taken: October 14, 2021 1:29 PM
Direction Photo is Taken: West

Photo Description: Grading appears appropriate, but road wash is depositing on topsoil on soybean field. Drain 84 is full of topsoil. Straw roll BMP needs replacing and/or maintenance.

Latitude: 46.073909001346
Longitude: -99.0236611017878



Observation Point: 32

Date Taken: October 14, 2021 1:31 PM
Direction Photo is Taken: North

Photo Description: Drain #84 is washed out and eroding into field towards wetland.

Latitude: 46.0739037611042
Longitude: -99.023791788191



Observation Point: 33

Date Taken: October 14, 2021 1:33 PM
Direction Photo is Taken: Southeast

Photo Description: Appropriate grading around wetland. No observable fill entering wetland.

Latitude: 46.0738622
Longitude: -99.0213608

PU-08-932 (EDF Merricourt Wind): Observation Point Photolog



Observation Point: 34

Date Taken: October 14, 2021 1:35 PM
Direction Photo is Taken: North

Photo Description: Straw roll is working, and preventing sediment from entering wetland. Continued maintenance/monitoring might be needed to ensure protection of wetland.

Latitude: 46.0744501236094
Longitude: -99.0203736308707



Observation Point: 35

Date Taken: October 14, 2021 1:37 PM
Direction Photo is Taken: Northeast

Photo Description: Closeup of view of culvert and drain in Observation Point 34.

Latitude: 46.0744797
Longitude: -99.0203872



Observation Point: 36

Date Taken: October 14, 2021 1:38 PM
Direction Photo is Taken: Northwest

Photo Description: Drain crossing #85 grading is poor. Topsoil is mixed with subsoil, and culvert is washed out and appears to be impacting the wetland.

Latitude: 46.0745895386196
Longitude: -99.0204157288542

PU-08-932 (EDF Merricourt Wind): Observation Point Photolog



Observation Point: 37

Date Taken: October 14, 2021 1:44 PM
Direction Photo is Taken:

Photo Description: Evidence of subsoil and/or road material washing downslope into wetland.

Latitude: 46.0755031134668
Longitude: -99.0175396678051



Observation Point: 38

Date Taken: October 14, 2021 1:45 PM
Direction Photo is Taken: South

Photo Description: Evidence of subsoil and/or road material washing downslope appears to be entering a wetland.

Latitude: 46.0755003453387
Longitude: -99.0173852640009



Observation Point: 39

Date Taken: October 14, 2021 1:50 PM
Direction Photo is Taken: South

Photo Description: Soybean field has topsoil washing across road which is affecting vegetation growth. Less vegetated than surrounding reclaimed area, but appears to be a minor, isolated issue.

Latitude: 46.0720416950375
Longitude: -99.0121592226732

PU-08-932 (EDF Merricourt Wind): Observation Point Photolog



Observation Point: 40

Date Taken: October 14, 2021 1:52 PM
Direction Photo is Taken: North

Photo Description: Erosion down slope from access road is washing topsoil and subsoil into soybean field. Needs BMP such as straw rolls. Road matting is visible.

Latitude: 46.0726974668227
Longitude: -99.0113662692925



Observation Point: 41

Date Taken: October 14, 2021 1:54 PM
Direction Photo is Taken: East

Photo Description: Drain Crossing #88 is appropriate. May need continued maintenance or monitoring.

Latitude: 46.0735230079121
Longitude: -99.0112482466145



Observation Point: 42

Date Taken: October 14, 2021 2:06 PM
Direction Photo is Taken: South

Photo Description: Road agrees with as-built. Minimal erosion is present.

Latitude: 46.0820259209348
Longitude: -99.0315770689276

PU-08-932 (EDF Merricourt Wind): Observation Point Photolog



Observation Point: 43

Date Taken: October 14, 2021 2:09 PM
Direction Photo is Taken: North

Photo Description: Drain Crossing #79 has BMP's in better condition than others noted in this report. Future maintenance/monitoring is recommended.

Latitude: 46.0798703462166
Longitude: -99.0338546625136



Observation Point: 44

Date Taken: October 14, 2021 2:10 PM
Direction Photo is Taken: North

Photo Description: Inadequate grading around Drain Crossing #79 culvert inlet. Roadsides are flooded and not draining to it. Topsoil is eroding.

Latitude: 46.0796801129885
Longitude: -99.0338545523537



Observation Point: 45

Date Taken: October 14, 2021 2:13 PM
Direction Photo is Taken: North

Photo Description: Grading around Drain Crossing #81 culvert is not adequate. Sedimentation is filling up drain. Rip rap may be needed to reduce erosion around outlet.

Latitude: 46.0797754313984
Longitude: -99.0374686085926

PU-08-932 (EDF Merricourt Wind): Observation Point Photolog



Observation Point: 46

Date Taken: October 14, 2021 2:16 PM
Direction Photo is Taken: South

Photo Description: Road material washed into field. Topsoil washed out in areas as well.

Latitude: 46.0800435860187
Longitude: -99.037469323167



Observation Point: 47

Date Taken: October 14, 2021 2:17 PM
Direction Photo is Taken: West

Photo Description: Grading along the access road and Drain Crossing #81 appears to be preventing the wetland from naturally draining.

Latitude: 46.0797619107827
Longitude: -99.0373596015014



Observation Point: 48

Date Taken: October 14, 2021 2:21 PM
Direction Photo is Taken:

Photo Description: One side of access road is ponding water, and has road material washed in field. Grading is adequate.

Latitude: 46.0795954
Longitude: -99.0412412

PU-08-932 (EDF Merricourt Wind): Observation Point Photolog



Observation Point: 49

Date Taken: October 14, 2021 2:23 PM
Direction Photo is Taken: South

Photo Description: MET- 2 tower and pad adequately constructed but permanent access road is constructed over unstripped topsoil.

Latitude: 46.0786347
Longitude: -99.0449016



Observation Point: 50

Date Taken: October 14, 2021 2:26 PM
Direction Photo is Taken:

Photo Description: No BMP's present. Road fill and topsoil washing into corn field.

Latitude: 46.0794481570879
Longitude: -99.0447533796656



Observation Point: 51

Date Taken: October 14, 2021 2:31 PM
Direction Photo is Taken: Northwest

Photo Description: Poor stabilization of access road approach, as road material is eroding into the field and ditch.

Latitude: 46.0943757
Longitude: -99.0245541

PU-08-932 (EDF Merricourt Wind): Observation Point Photolog



Observation Point: 52

Date Taken: October 14, 2021 2:39 PM
Direction Photo is Taken: South

Photo Description: Road and T-64 is satisfactory. Final grading appears adequate, and there is minimal erosion.

Latitude: 46.0962075900499
Longitude: -99.0167756512689



Observation Point: 53

Date Taken: October 14, 2021 2:48 PM
Direction Photo is Taken: North

Photo Description: Overall, the access road is well graded, but soil upgradient may be eroding into the road from grading or stabilization issues.

Latitude: 46.0975526
Longitude: -99.0294872



Observation Point: 54

Date Taken: October 14, 2021 2:53 PM
Direction Photo is Taken: North

Photo Description: Alternate access road and T-44 is non-existent. No construction here agrees with As-Built drawings.

Latitude: 46.0994895658801
Longitude: -99.0583580447724

PU-08-932 (EDF Merricourt Wind): Observation Point Photolog



Observation Point: 55

Date Taken: October 14, 2021 2:56 PM
Direction Photo is Taken: Northeast

Photo Description: Section road is reclaimed appropriately, and matches surrounding grade. Ditch grading appears adequate, with minimal erosion from road. Vegetation near center of road/corner may be slightly washed out.

Latitude: 46.0990468329369
Longitude: -99.0664165950403



Observation Point: 56

Date Taken: October 14, 2021 2:59 PM
Direction Photo is Taken: Northwest

Photo Description: East side of access road is eroding into ditch. Ditch is graded well but the regraded area lack BMPs.

Latitude: 46.0990837369697
Longitude: -99.0692595385821



Observation Point: 57

Date Taken: October 14, 2021 3:05 PM
Direction Photo is Taken: Northwest

Photo Description: Access road appears in satisfactory condition. Ditch approach is well graded with minimal erosion. Vegetation emergence appears adequate.

Latitude: 46.0976616
Longitude: -99.0832805

PU-08-932 (EDF Merricourt Wind): Observation Point Photolog



Observation Point: 58

Date Taken: October 14, 2021 3:07 PM
Direction Photo is Taken: Northeast

Photo Description: Construction appears adequate, and there is minimal observable soil erosion.

Latitude: 46.0991207658819
Longitude: -99.084542273932



Observation Point: 59

Date Taken: October 14, 2021 3:10 PM
Direction Photo is Taken: Northwest

Photo Description: Road appears appropriately repaired with good grading. Straw roll needs maintenance soon but is actively mitigating sediment.

Latitude: 46.0992628
Longitude: -99.0868137



Observation Point: 60

Date Taken: October 14, 2021 3:14 PM
Direction Photo is Taken: North

Photo Description: Section road through wetland does not show signs of erosion or noncompliance.

Latitude: 46.0944471260614
Longitude: -99.0871052327198

PU-08-932 (EDF Merricourt Wind): Observation Point Photolog



Observation Point: 61

Date Taken: October 14, 2021 3:17 PM

Direction Photo is Taken: North

Photo Description: Sheet and rill erosion of road material and fill into ditch.

Latitude: 46.0904299

Longitude: -99.0855263



Observation Point: 62

Date Taken: October 14, 2021 3:19 PM

Direction Photo is Taken: Northwest

Photo Description: Unvegetated area around T-40 is eroding. No BMPs present, nor is the land use reclaimed similar to surrounding area.

Latitude: 46.0904521947775

Longitude: -99.0855660682117



Observation Point: 63

Date Taken: October 14, 2021 3:20 PM

Direction Photo is Taken: Southeast

Photo Description: Grading appears to match surrounding areas. However, soil is washing downslope and remains mostly unvegetated.

Latitude: 46.0901600295843

Longitude: -99.0854771505217

PU-08-932 (EDF Merricourt Wind): Observation Point Photolog



Observation Point: 64

Date Taken: October 14, 2021 3:22 PM
Direction Photo is Taken: East

Photo Description: Replaced topsoil is eroding and washing across access road to T-59.

Latitude: 46.0905918
Longitude: -99.0856464



Observation Point: 65

Date Taken: October 14, 2021 3:24 PM
Direction Photo is Taken: Southwest

Photo Description: T-41 appears to be constructed appropriately. Soil appears graded to surrounding area and seeded vegetation is emerging.

Latitude: 46.0898921064073
Longitude: -99.0792372371964



Observation Point: 66

Date Taken: October 14, 2021 3:32 PM
Direction Photo is Taken:

Photo Description: Access road appears adequately graded. Section line fence and gate replaced and in good condition.

Latitude: 46.1134766
Longitude: -99.0872734

PU-08-932 (EDF Merricourt Wind): Observation Point Photolog



Observation Point: 67

Date Taken: October 14, 2021 3:36 PM
Direction Photo is Taken: North

Photo Description: Adequate grading with seeded vegetation coming in. Frequent cattle traffic in the replaced soil.

Latitude: 46.1139882506809
Longitude: -99.0887323464805



Observation Point: 68

Date Taken: October 14, 2021 3:38 PM
Direction Photo is Taken: Southeast

Photo Description: Replaced topsoil is eroding. A large gully appears to be depositing topsoil into swale downslope.

Latitude: 46.1135573275981
Longitude: -99.0902812863027



Observation Point: 69

Date Taken: October 14, 2021 3:39 PM
Direction Photo is Taken: East

Photo Description: Grading around Drain Crossing #21 appears to be poor or damaged from rain. Only the riprap rock is visible. Repair should be considered due to the slumping of the slope and erosion.

Latitude: 46.1136770605402
Longitude: -99.0899962330468

PU-08-932 (EDF Merricourt Wind): Observation Point Photolog



Observation Point: 70

Date Taken: October 14, 2021 3:40 PM
Direction Photo is Taken: Northeast

Photo Description: Reclaimed slope and topsoil around access road is vegetated. However, the side slope is slumping around Drain #21. Culvert is filled with sediment. Stantec recommends repair to remain compliant with SWPPP and not affect landowners.

Latitude: 46.1134101726156
Longitude: -99.089862162158



Observation Point: 71

Date Taken: October 14, 2021 3:46 PM
Direction Photo is Taken: Southeast

Photo Description: Water ponding around T-09. Construction appears appropriate.

Latitude: 46.1133142766808
Longitude: -99.0990990794544



Observation Point: 72

Date Taken: October 14, 2021 3:48 PM
Direction Photo is Taken: South

Photo Description: Drain Crossing #23 and its BMP appear in good condition according to As-Built inspection.

Latitude: 46.1134382
Longitude: -99.1000906

PU-08-932 (EDF Merricourt Wind): Observation Point Photolog



Observation Point: 73

Date Taken: October 14, 2021 3:52 PM
Direction Photo is Taken: Southeast

Photo Description: T-10 access road appears to be graded. However, the adjacent area around access road is lacking topsoil replacement and vegetation.

Latitude: 46.1156200766981
Longitude: -99.1050181977234



Observation Point: 74

Date Taken: October 14, 2021 3:55 PM
Direction Photo is Taken: South

Photo Description: The replaced topsoil along access road is unvegetated and severely eroding.

Latitude: 46.1166526368324
Longitude: -99.1049059032794



Observation Point: 75

Date Taken: October 14, 2021 3:59 PM
Direction Photo is Taken: Southwest

Photo Description: Adequate grading and construction of T-11 and pad. But, there appears to be impacts from erosion into the nearby wetland.

Latitude: 46.1216288
Longitude: -99.1048176

PU-08-932 (EDF Merricourt Wind): Observation Point Photolog



Observation Point: 76
Date Taken: October 14, 2021 4:01 PM
Direction Photo is Taken: Northeast

Photo Description: Sediment deposited into field, but not as severe as nearby locations. The grading is appropriate.

Latitude: 46.1198245
Longitude: -99.1042664



Observation Point: 77
Date Taken: October 14, 2021 4:03 PM
Direction Photo is Taken: South

Photo Description: Appears to be possible soil stockpile that does not match existing topography. Pictured shows a deep gully coming from the farm field and possible topsoil pile, but it may have been present prior to construction.

Latitude: 46.1193993777631
Longitude: -99.1044440623868



Observation Point: 78
Date Taken: October 14, 2021 4:07 PM
Direction Photo is Taken: Northwest

Photo Description: This point is an offsite historic gully. This photo shows this offsite gully could be a source of some of the sediment deposited on the nearby access road.

Latitude: 46.1160084544756
Longitude: -99.1041360970853

PU-08-932 (EDF Merricourt Wind): Observation Point Photolog



Observation Point: 79

Date Taken: October 14, 2021 4:20 PM
Direction Photo is Taken: Southwest

Photo Description: Excellent grading and vegetation cover. This road appears to have been well established, and vegetation looks very healthy. Darker vegetation in the background of the photo background is from the collection line construction.

Latitude: 46.1128871998265
Longitude: -99.0772577766668



Observation Point: 80

Date Taken: October 14, 2021 4:25 PM
Direction Photo is Taken: Northeast

Photo Description: Substation construction and boundary is consistent with As-Built drawings.

Latitude: 46.1118025
Longitude: -99.0663056



Observation Point: 81

Date Taken: October 14, 2021 4:29 PM
Direction Photo is Taken: Northeast

Photo Description: Section line fence and gate repaired and replaced. Topsoil respreading and grading appears to match surrounding area

Latitude: 46.1134778
Longitude: -99.062402

PU-08-932 (EDF Merricourt Wind): Observation Point Photolog



Observation Point: 82

Date Taken: October 14, 2021 4:32 PM
Direction Photo is Taken: East

Photo Description: Use of BMP's is evident. Grade for road may be too steep as there is visible erosion and slumping. Drain Crossing #57 is filled with sediment.

Latitude: 46.1121114559706
Longitude: -99.0617214211103



Observation Point: 83

Date Taken: October 14, 2021 4:37 PM
Direction Photo is Taken: East

Photo Description: The grading of access road near T-24 appears appropriate.

Latitude: 46.1139227
Longitude: -99.0555269



Observation Point: 84

Date Taken: October 14, 2021 4:40 PM
Direction Photo is Taken: South

Photo Description: Drain Crossing #41 culvert and road constructed properly.

Latitude: 46.1141093358426
Longitude: -99.0510426003457

PU-08-932 (EDF Merricourt Wind): Observation Point Photolog



Observation Point: 85

Date Taken: October 14, 2021 4:42 PM
Direction Photo is Taken: West

Photo Description: Access road and replaced topsoil appear to match the grading of the surrounding landscape. No erosion visible near Drain Crossing #42.

Latitude: 46.1152617
Longitude: -99.0478825



Observation Point: 86

Date Taken: October 14, 2021 4:46 PM
Direction Photo is Taken: Southwest

Photo Description: Topsoil appears to be eroding down the access road from T-35. Regrading and seeding is recommended before the revegetation inspection.

Latitude: 46.1211531470368
Longitude: -99.0455000117041



Observation Point: 87

Date Taken: October 14, 2021 4:48 PM
Direction Photo is Taken: East

Photo Description: Temporary road A has been removed and standing crops appear similar to surrounding area.

Latitude: 46.1211757185719
Longitude: -99.045392805076

PU-08-932 (EDF Merricourt Wind): Observation Point Photolog



Observation Point: 88

Date Taken: October 14, 2021 4:52 PM

Direction Photo is Taken:

Photo Description: Overlooking T-34 access road (West). The road and reclaimed area matches existing grade. Some respread topsoil has washed onto across road.

Latitude: 46.1325010904531

Longitude: -99.0411651469431



Observation Point: 89

Date Taken: October 14, 2021 4:55 PM

Direction Photo is Taken: West

Photo Description: Road construction is consistent with as-built files. The culvert crossing is eroding, and heavy rain appears to have recently washed vegetation out.

Latitude: 46.1310544040245

Longitude: -99.0454870575499



Observation Point: 90

Date Taken: October 14, 2021 5:12 PM

Direction Photo is Taken: South

Photo Description: Road is adequately regraded but vegetation or seeds have been washed out. Attention may be warranted to preserve grading.

Latitude: 46.11942

Longitude: -99.0769806

PU-08-932 (EDF Merricourt Wind): Observation Point Photolog



Observation Point: 91

Date Taken: October 14, 2021 5:15 PM

Direction Photo is Taken: West

Photo Description: Access road itself appears adequately graded, but vegetation /planted seeds and topsoil have been washed out. Maintenance may be warranted to preserve grading. The rest of this access road for T-17 is appropriate.

Latitude: 46.1195393

Longitude: -99.0770628



Observation Point: 92

Date Taken: October 14, 2021 5:20 PM

Direction Photo is Taken: West

Photo Description: Access road and approach for T-15 is well graded and vegetated. No visible impacts to section road.

Latitude: 46.1294136

Longitude: -99.0866809



Observation Point: 93

Date Taken: October 14, 2021 5:25 PM

Direction Photo is Taken: Northeast

Photo Description: Overlooking intersection construction activity and regrading. Construction extends eastward through known potential whooping crane habitat. No BMP's along surface water. Cattails are being covered with fill.

Latitude: 46.1423683

Longitude: -99.0869609

PU-08-932 (EDF Merricourt Wind): Observation Point Photolog



Observation Point: 94

Date Taken: October 14, 2021 5:27 PM
Direction Photo is Taken: North

Photo Description: Overlooking intersection that is being improved or repaired. It is not clear if this is activity related to Merricourt Project. PSC may want to clarify if this is EDF/Otter Tail-related activity or not.

Latitude: 46.1424344
Longitude: -99.0869972



Observation Point: 95

Date Taken: October 14, 2021 5:28 PM
Direction Photo is Taken: East

Photo Description: More overview of recent road work.

Latitude: 46.1424654
Longitude: -99.0869947



Observation Point: 96

Date Taken: October 14, 2021 5:33 PM
Direction Photo is Taken: South

Photo Description: Looking south towards T-1 and T-2. Access road to the turbines appears well graded and reclaimed, and is consistent with the as built file. No visible wetland impacts.

Latitude: 46.1390463
Longitude: -99.0958367

PU-08-932 (EDF Merricourt Wind): Observation Point Photolog



Observation Point: 97

Date Taken: October 14, 2021 5:42 PM
Direction Photo is Taken: Southeast

Photo Description: No sediment control along open water. Overlooking section line road through open water.

Latitude: 46.1425316017406
Longitude: -99.0855473188738



Observation Point: 98

Date Taken: October 14, 2021 5:43 PM
Direction Photo is Taken: Southwest

Photo Description: Sedimentation into wetland. Unknown if associated with the Project.

Latitude: 46.1425115744186
Longitude: -99.0856177875518



Observation Point: 99

Date Taken: October 14, 2021 5:58 PM
Direction Photo is Taken: Southeast

Photo Description: Wetland does not appear impacted at time of visit. Drain Crossing #100 is working properly, but partially filled with sediment

Latitude: 46.1098020190603
Longitude: -99.0139516238735

PU-08-932 (EDF Merricourt Wind): Observation Point Photolog



Observation Point: 100

Date Taken: October 14, 2021 6:01 PM
Direction Photo is Taken: Southwest

Photo Description: Road approach for T-15 appears well graded and vegetated. Section road is in good condition.

Latitude: 46.1114633
Longitude: -99.0075407



Observation Point: 101

Date Taken: October 14, 2021 6:07 PM
Direction Photo is Taken: Northeast

Photo Description: Topsoil is overall adequately replaced and graded to surrounding area. Drain Crossing #45 culvert appears to be in good condition.

Latitude: 46.1152564040977
Longitude: -99.028388456025



Observation Point: 102

Date Taken: October 14, 2021 6:10 PM
Direction Photo is Taken: North

Photo Description: Final topsoil replaced close to a delineated wetland.

Latitude: 46.1159769562742
Longitude: -99.0280004500754

PU-08-932 (EDF Merricourt Wind): Observation Point Photolog



Observation Point: 103

Date Taken: October 14, 2021 6:11 PM
Direction Photo is Taken: Southwest

Photo Description: Collection line appears consistent with as built. Some seeding equipment parts remained.

Latitude: 46.1157858521604
Longitude: -99.0280070763963



Observation Point: 104

Date Taken: October 14, 2021 6:18 PM
Direction Photo is Taken: Southeast

Photo Description: Haybales are in a delineated wetland but is likely not EDF-related.

Latitude: 46.1272585518161
Longitude: -99.0221251972141



Observation Point: 105

Date Taken: October 14, 2021 6:19 PM
Direction Photo is Taken: Southwest

Photo Description: Water station. Most likely for land owner and cattle since EDF had a water use permit in at a different location.

Latitude: 46.1290276
Longitude: -99.0235022

PU-08-932 (EDF Merricourt Wind): Observation Point Photolog



Observation Point: 106

Date Taken: October 14, 2021 6:21 PM
Direction Photo is Taken: Southeast

Photo Description: This access road has been repaired. East side slope and water line is lacking vegetation. Minimal sign of road material washing in.

Latitude: 46.1337062774247
Longitude: -99.0245956457956



Observation Point: 107

Date Taken: October 14, 2021 6:25 PM
Direction Photo is Taken: South

Photo Description: T-30 appears appropriately reclaimed and located in agreement with the as-built files. Vegetation is well established.

Latitude: 46.1413924
Longitude: -99.0383652



Observation Point: 108

Date Taken: October 14, 2021 6:28 PM
Direction Photo is Taken: Southeast

Photo Description: Lay down area appears satisfactory reclaimed and O&M building in agreeance with the as-built location.

Latitude: 46.14262458687
Longitude: -99.0229027005593

