



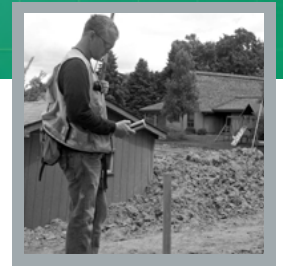
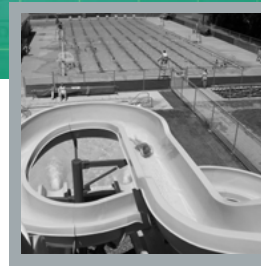
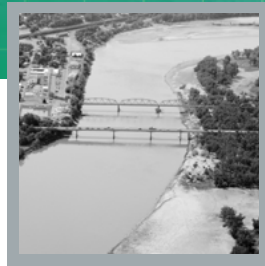
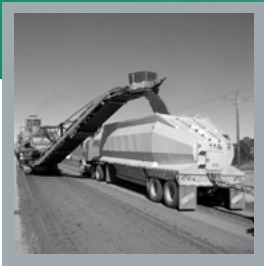
# As-Built Construction Inspection Report of Xcel Energy Minot Load Serving Project

Section 2, T154N R82W, 5th P.M.  
Ward County, North Dakota  
and  
Section 2, T152N R80W, 5th P.M.  
McHenry County, North Dakota

Prepared By:



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# 1. EXECUTIVE SUMMARY

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The North Dakota Energy Conversion and Transmission Facility Act (North Dakota Century Code Chapter 49-22) authorizes the Public Service Commission (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 the citizens of North Dakota. Commission construction inspections ensure that energy projects are constructed in compliance with the siting laws (North Dakota Century Code Chapter 49-22), rules (North Dakota Administrative Code Article 69-06) and applicable Commission Orders.

The Commission retained Interstate Engineering, Inc. (Interstate) to complete construction inspections of the Northern States Power Company, doing business as Xcel Energy, Minot Load Serving Project, Case No. PU-17-102, which has completed construction in McHenry and Ward Counties in North Dakota. The Project involved the construction of a new substation, called the Magic City Substation, and an approximately 20.5 mile-long 230 kilovolt (kV) transmission line connecting the new substation to an existing substation, the McHenry Substation, near the City of Velva.

Construction of the Project commenced on October 9, 2017. Interstate conducted a Construction Inspection on July 9, 2018 and August 24, 2018 of the McHenry Substation site and on August 24, 2018 of the Magic City Substation site. Interstate then conducted the As-Built Construction Inspection on November 2, 2018 at the Magic City Substation site and November 16, 2018 at the McHenry Substation site. Interstate prepared this report to document the as-built construction inspection and to provide a summary of compliance with the Commission Orders.

The purpose of the As-Built Construction Inspection was to observe the completion of the topsoil replacement phase as well as grading, fertilization and seeding of the entire project area to verify that the topsoil had been properly replaced and to ensure the project is restored appropriately. Photographs taken during the site inspection are included in Appendix B. The inspector took photos during construction and upon construction completion of the site to ensure the site was restored properly.

# 2. BACKGROUND & SCOPE

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On March 10, 2017, Xcel Energy filed a Consolidated Application for a Waiver or Reduction of Procedures and Time Schedules and Certificate of Corridor Compatibility and Transmission Facility Route Permit in Case No. PU-17-102 for the Minot Load Serving Project. The Project consists of a new substation, called the Magic City Substation, and an approximately 20.5-mile-long 230 kilovolt (kV) transmission line connecting the new substation to an existing substation, the McHenry Substation, near the City of Velva. The project is proposed to be designed and constructed to meet or exceed the standards of the National Electrical Safety Code (NESC) and the North Dakota Energy Conversion and Transmission Facility Siting Act (Siting Act). The Commission issued a decision approving a corridor and a route on October 4, 2017, in accordance with the Commission's Findings of Fact, Conclusions of Law and Order.

The Commission retained Interstate to complete construction inspections for the Project, which is currently under construction in McHenry and Ward Counties, North Dakota. The purpose of this inspection (Construction Inspection) was to observe the construction phase to verify that construction procedures were properly conducted during the construction phase. The inspection continued until the inspector determined that the equipment operators had demonstrated proficiency concerning the construction activities, in accordance with the Certification Relating to Order Provisions for Case PU-17-102. Photographs taken during the site inspection are included in Appendix B. The inspector took photos of the construction activities including grading and surveying to document the process.

According to Xcel Energy, the purpose of the Project is to construct a new 230 kV transmission line from the existing McHenry Substation to a new 230/115 kV substation (Magic City) as well as reconfiguring and upgrading existing infrastructure at the McHenry Substation. This Project is needed to meet the growing demand for electricity in the Minot area and to reinforce the reliability of the region's transmission system.

Xcel Energy selected the project route after addressing the factors identified in NDCC § 49-22-09 and pursuant to the criteria in NDAC § 69-06-08-02. Xcel Energy proposes to construct a new 230 kV transmission line on double circuit structures. Most of the Project is parallel to Xcel Energy's existing 115 kV transmission line.

### 3. AS-BUILT CONSTRUCTION INSPECTION

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On November 2, 2018, Ms. Veronica Meyer, working under Mr. Damon DeVillers, Project Manager at Interstate, conducted the as-built construction inspection at the Magic City Substation site as well as a portion of the transmission line after receiving notification from Mr. Joseph Samuel that the restoration work (grading, seeding in non-cultivated areas, straw placement, etc.) had been completed with the exception of a few minor areas. Ms. Meyer verified that the restoration of the project area was in compliance with the Commission's Order with the exception of a few areas.

On November 16, 2018, Ms. Meyer conducted the as-built construction inspection at the McHenry Substation site as well as a portion of the transmission line which connects the two substations. Ms. Meyer verified that the restoration of the project area was in compliance with the Commission's Order with the exception of a few areas.

It was observed at both substation sites as well as along the transmission line route that the project area had been adequately graded and grass had already sprouted in some areas. Straw was placed as needed in various locations. As can be seen in photos 48, 56 and 64, there is some debris and stockpiles that need to be removed. The project area was otherwise determined to be in compliance with the Commission's Order.

### 4. CONCERNS AND CORRECTIVE ACTIONS

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During the as-built construction inspection as shown in photos 48, 56, and 64, a few minor areas need correction. Ms. Meyer will inspect the areas again to ensure compliance at the Reclamation and Revegetation Inspection.

### 5. CONCLUSION

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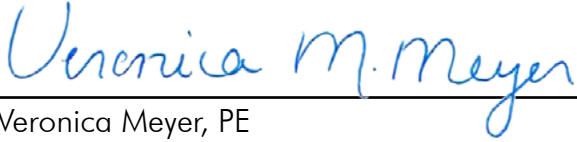
Overall, the grading, topsoil replacement, fertilizing and seeding within the sites and along the transmission line appeared to be satisfactory, and the inspector (Ms. Meyer) determined that the equipment operators have demonstrated proficiency concerning restoration in compliance with the Commission's Order with the exception of a few minor areas.

## 6. SIGNATURE

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Observations and findings contained in this report are based on available information, daily field reports and photographs in a generally accepted technically practice at the present time.

Project Manager Veronica M. Meyer, PE prepared this report.



Veronica Meyer, PE  
Interstate Engineering, Inc.

12/11/2018

Date



Damon K. DeVillers, PE, Chairman  
Interstate Engineering, Inc.

12/11/18

Date

## 6. REFERENCES

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Joseph Samuel, Senior Project Manager for Xcel Energy

414 Nicollet Mall – 5th Floor, Minneapolis, MN 55401, October 2018

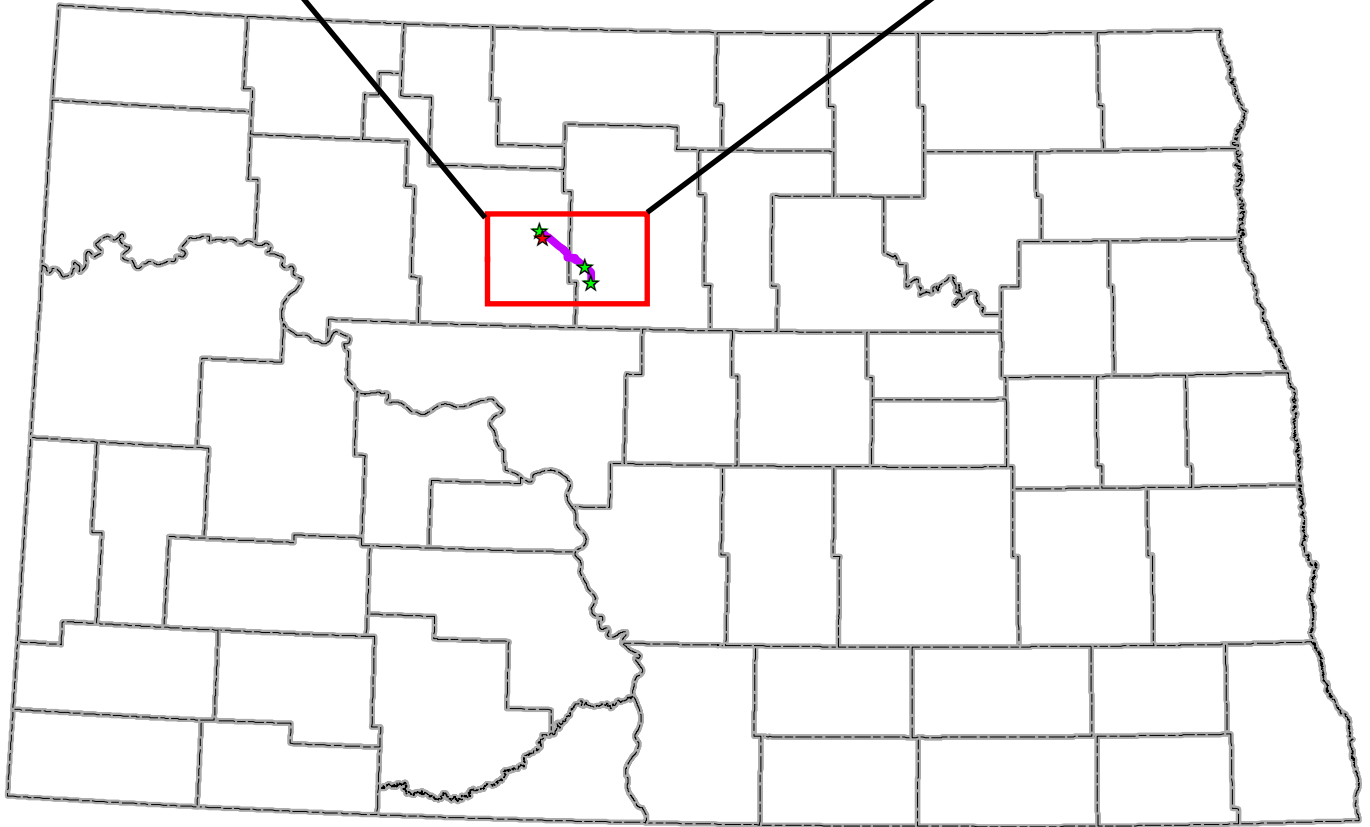
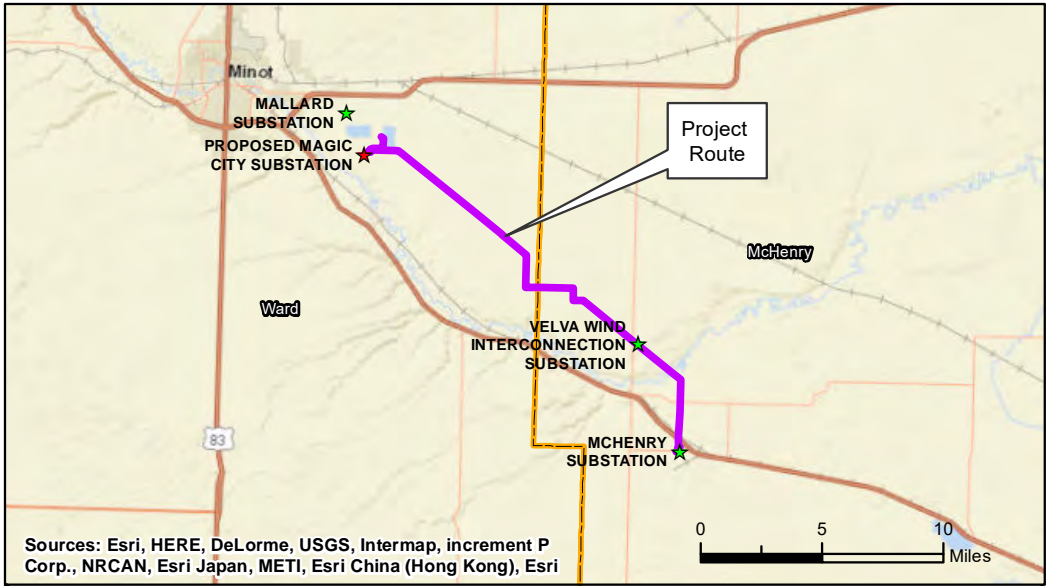
North Dakota Public Service Commission (NDPSC) Online Case Search. Available from [http://www.psc.nd.gov/database/docket\\_file\\_list.php](http://www.psc.nd.gov/database/docket_file_list.php) (Accessed May 2017)



## APPENDIX A




Field Inspection Map

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North Dakota

**Legend**

-  Project Route
-  Proposed Substation
-  Substation



**Minot Load Serving Project**  
McHenry and Ward Counties, North Dakota

**Figure 1**  
**Project Location Map**  
March 2017

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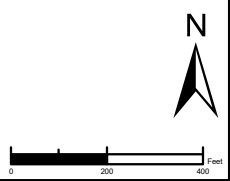
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 North Dakota state agencies and the ND GIS Hub  
 USDA NAIP Aerial Dated: June 2016



- Project Feature**
- Preliminary Structure Location
  - Potential Laydown Area
  - Preliminary 115 kV Centerline
  - Preliminary 230 kV Centerline
  - Preliminary 230/115 kV Centerline
  - Preliminary Right-of-Way (125 Feet)
  - Project Corridor

- Property Ownership**
- Parcel Boundary
- Desktop Wetland Review**
- Wetland

- Access Route**
- Primary Access



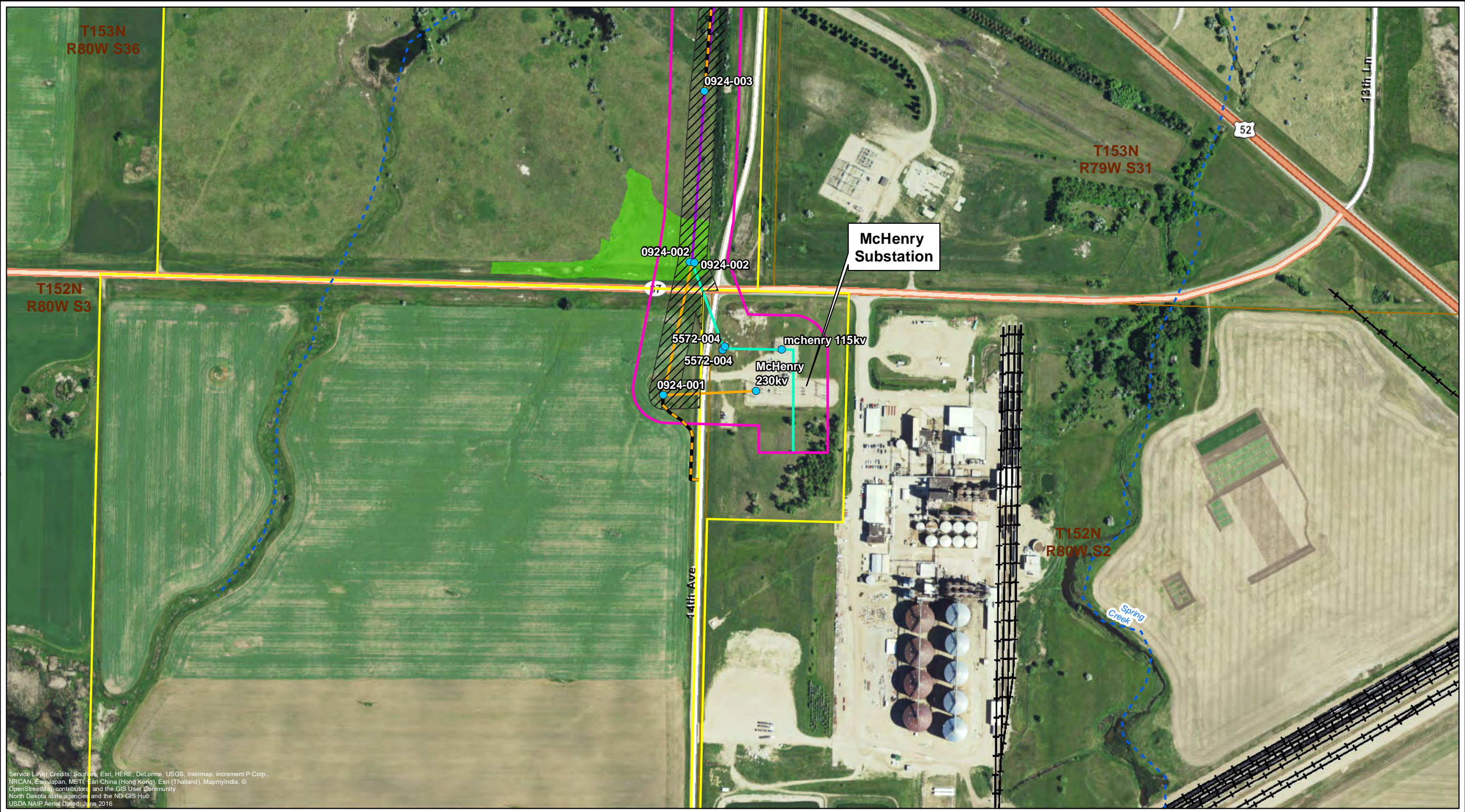
## Minot Load Serving Project Appendix B - Project Sheet Map McHenry and Ward Counties, North Dakota



Prepared By: TETRA TECH

Drawn:	MAR 3/9/2017
Approved:	LHK 3/9/2017
Scale:	1:4,800
PROJECT NUMBER	60342328
SHEET MAP	1

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Service Layer Credits: Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), MapmyIndia, © OpenStreetMap contributors, and the GIS User Community  
 North Dakota state agencies and the ND GIS Hub  
 USDA NAIP Aerial, Dated: June 2016



Project Feature	Property Ownership	Access Route
<span style="color: blue;">●</span> Preliminary Structure Location	<span style="border: 1px solid yellow; display: inline-block; width: 10px; height: 10px;"></span> Parcel Boundary	<span style="border-bottom: 2px dashed black; width: 10px; display: inline-block;"></span> Primary Access
<span style="border: 1px solid blue; width: 10px; height: 10px; display: inline-block;"></span> Potential Laydown Area	<b>Stream/River</b>	
<span style="border-bottom: 1px solid cyan; width: 10px; display: inline-block;"></span> Preliminary 115 kV Centerline	<span style="border-bottom: 1px dashed blue; width: 10px; display: inline-block;"></span> Stream (Intermittent)	
<span style="border-bottom: 1px solid orange; width: 10px; display: inline-block;"></span> Preliminary 230 kV Centerline	<b>Desktop Wetland Review</b>	
<span style="border-bottom: 1px solid magenta; width: 10px; display: inline-block;"></span> Preliminary 230/115 kV Centerline	<span style="background-color: lightgreen; width: 10px; height: 10px; display: inline-block;"></span> Wetland	
<span style="border: 1px dashed black; width: 10px; height: 10px; display: inline-block;"></span> Preliminary Right-of-Way (125 Feet)		
<span style="border: 1px solid pink; width: 10px; height: 10px; display: inline-block;"></span> Project Corridor		

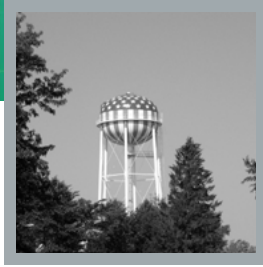
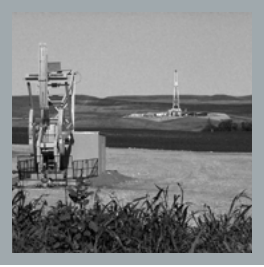
## Minot Load Serving Project Appendix B - Project Sheet Map McHenry and Ward Counties, North Dakota

Prepared For:



Prepared By: 

Drawn:	MAR 3/9/2017
Approved:	LHK 3/9/2017
Scale:	1:4,800
PROJECT NUMBER	60342328
SHEET MAP	27



## APPENDIX B

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Photographs



Photo 48  
(Structure 187)

Photo 49  
(Structure 178)

Photos 23-47  
(Magic City Substation)

Photo 50  
(Structure 163)

Photo 51  
(Structure 103)

Photo 69  
(Structure 62)

Photos 67 & 68  
(Structure 30)

Photo 66  
(Structure 4)

Photo 65  
(Structure 2)

Photo 64  
(Structure 1)

Photos 1-22, 52-63  
(McHenry Substation)

*Photographs taken July 9, 2018, at the McHenry Substation Site - Construction*



Photo 1 - south end of pond in northwest corner of site.

*Photographs taken July 9, 2018, at the McHenry Substation Site - Construction*



Photo 2 - pond in northwest corner of site and structure base

*Photographs taken July 9, 2018, at the McHenry Substation Site - Construction*



Photo 3 - middle of substation site looking south

*Photographs taken July 9, 2018, at the McHenry Substation Site - Construction*



Photo 4 - middle of substation site looking northeast

*Photographs taken July 9, 2018, at the McHenry Substation Site - Construction*



Photo 5 - middle of substation site looking northeast

Photographs taken July 9, 2018, at the McHenry Substation Site - Construction



Photo 6 - equipment on north edge of site

*Photographs taken July 9, 2018, at the McHenry Substation Site - Construction*



Photo 7 - ditch on north edge of site looking northwest

*Photographs taken August 24, 2018, at the McHenry Substation Site - Construction*



Photo 8 - looking east at site just within the gate



Photo 9 - looking east-southeast within the fence



Photo 10 - looking southeast from west side of middle of fenced in area

*Photographs taken August 24, 2018, at the McHenry Substation Site - Construction*



Photo 11 - looking northeast from west side of middle of fenced in area



Photo 12 - substation equipment



Photo 13 - looking southeast at equipment

Photographs taken August 24, 2018, at the McHenry Substation Site - Construction



Photo 14 - looking south from just inside fence on west side

*Photographs taken August 24, 2018, at the McHenry Substation Site - Construction*



Photo 15 - looking south just outside west side of fence

*Photographs taken August 24, 2018, at the McHenry Substation Site - Construction*



Photo 16 - looking southwest outside of west side of fence

Photographs taken August 24, 2018, at the McHenry Substation Site - Construction



Photo 17 - looking west across gravel road at line work

*Photographs taken August 24, 2018, at the McHenry Substation Site - Construction*



Photo 18 - looking east on south side of fence

Photographs taken August 24, 2018, at the McHenry Substation Site - Construction



Photo 19 - looking northeast at substation

*Photographs taken August 24, 2018, at the McHenry Substation Site - Construction*



Photo 20 - looking northwest at power pole by pond in northwest corner of site

*Photographs taken August 24, 2018, at the McHenry Substation Site - Construction*



Photo 21 - looking northwest at power pole by pond in northwest corner of site

Photographs taken August 24, 2018, at the McHenry Substation Site - Construction



Photo 22 - looking east on north side of building

*Photographs taken August 24, 2018, at the Magic City Substation Site - Construction*



Photo 23 - looking southwest from west side of building

*Photographs taken August 24, 2018, at the Magic City Substation Site - Construction*



Photo 24 - looking southwest from west side of building

Photographs taken August 24, 2018, at the Magic City Substation Site - Construction



Photo 25 - looking north on west side of building



Photo 26 - looking west from west side of building

*Photographs taken August 24, 2018, at the Magic City Substation Site - Construction*



Photo 27 - looking northeast from entrance gate

*Photographs taken August 24, 2018, at the Magic City Substation Site - Construction*



Photo 28 - looking north from just outside entrance gate

*Photographs taken August 24, 2018, at the Magic City Substation Site - Construction*



Photo 29 - looking northeast from just north of access road



Photo 30 - looking west on north side of fence



Photo 31 - looking east on south side of fence



Photo 32 - looking southeast from southwest corner of fence

*Photographs taken August 24, 2018, at the Magic City Substation Site - Construction*



Photo 33 - looking south from south side of fence

*Photographs taken August 24, 2018, at the Magic City Substation Site - Construction*



Photo 34 - looking north from southeast corner

*Photographs taken August 24, 2018, at the Magic City Substation Site - Construction*



Photo 35 - looking east from southeast corner



Photo 36 - looking west from entrance



Photo 37 - looking west from entrance



Photo 38 - looking north at power pole on northeast corner of site

*Photographs taken November 2, 2018, at the Magic City Substation Site - Construction*



Photo 39 - looking southwest from east side of substation

*Photographs taken November 2, 2018, at the Magic City Substation Site - Construction*



Photo 40 - looking south from east side of substation



Photo 41 - looking west at pond on south side of substation

*Photographs taken November 2, 2018, at the Magic City Substation Site - Construction*



Photo 42 - looking west on south side of substation



Photo 43 - looking east at pond on south side of substation

*Photographs taken November 2, 2018, at the Magic City Substation Site - Construction*



Photo 44 - looking north at biorolls on west side of substation

*Photographs taken November 2, 2018, at the Magic City Substation Site - Construction*



Photo 45 - looking east on the north side of the substation

*Photographs taken November 2, 2018, at the Magic City Substation Site - Construction*



Photo 46 - looking northeast from northeast corner of substation

*Photographs taken November 2, 2018, at the Magic City Substation Site - Construction*



Photo 47 - looking east from northeast corner of substation



Photo 48 - looking south at structure 187

*Photographs taken November 2, 2018, at the Magic City Substation Site - Construction*



Photo 49 - looking south at structure 178



Photo 50 - looking southeast at structure 163



Photo 51 - looking northeast at structure 103

*Photographs taken November 16, 2018, at the McHenry Substation Site - Construction*



Photo 52 - looking south on west side of substation



Photo 53 - looking south at southwest corner of substation

*Photographs taken November 16, 2018, at the McHenry Substation Site - Construction*



Photo 54 - looking east on south side of the substation

*Photographs taken November 16, 2018, at the McHenry Substation Site - Construction*



Photo 55 - looking east on south side of the substation

*Photographs taken November 16, 2018, at the McHenry Substation Site - Construction*



Photo 56 - looking south from southeast corner of substation

*Photographs taken November 16, 2018, at the McHenry Substation Site - Construction*



Photo 57 - looking north on east side of substation

*Photographs taken November 16, 2018, at the McHenry Substation Site - Construction*



Photo 58 - looking west on the north side of the substation

*Photographs taken November 16, 2018, at the McHenry Substation Site - Construction*



Photo 59 - looking west on the north side of the substation at ditch

*Photographs taken November 16, 2018, at the McHenry Substation Site - Construction*



Photo 60 - looking south at ditch on the west side of the substation

*Photographs taken November 16, 2018, at the McHenry Substation Site - Construction*



Photo 61 - looking west from northwest corner of substation at ditch

*Photographs taken November 16, 2018, at the McHenry Substation Site - Construction*



Photo 62 - looking south from northwest corner of substation at inlet

*Photographs taken November 16, 2018, at the McHenry Substation Site - Construction*



Photo 63 - looking north from entrance to the substation



Photo 64 - looking west at structure 1



Photo 65 - looking northwest at structure 2



Photo 66 - looking north at structure 4



Photo 67 - looking southwest at structure 30

*Photographs taken November 16, 2018, at the McHenry Substation Site - Construction*

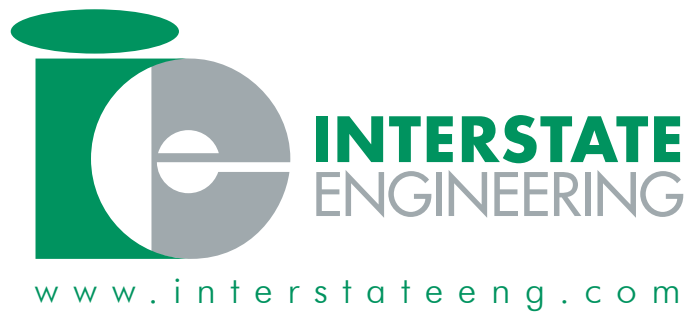


Photo 68 - looking northeast from structure 30

*Photographs taken November 16, 2018, at the McHenry Substation Site - Construction*



Photo 69 - looking northwest at structure 62



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