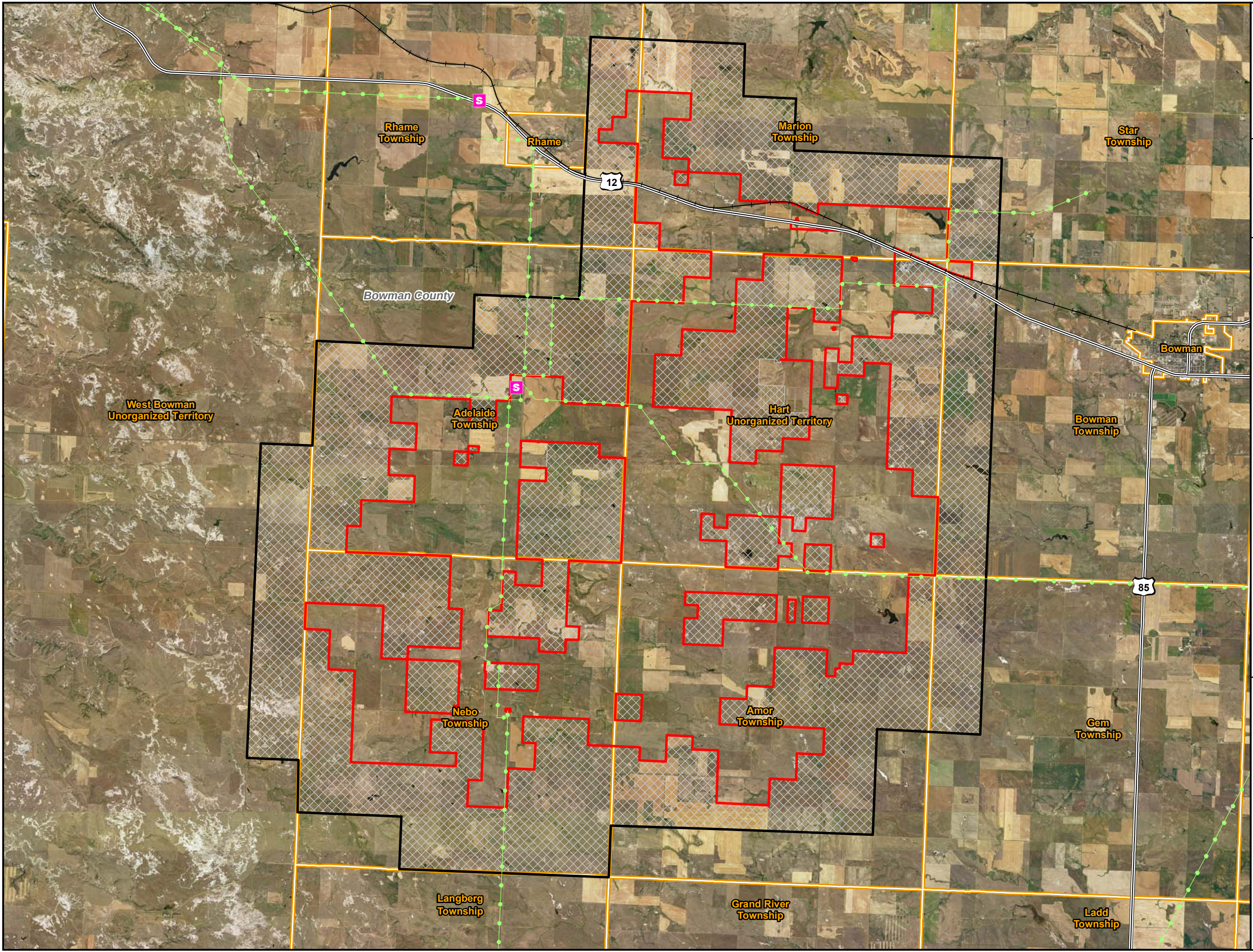


Data Source: Apex, US Census, ND GIS Hub, ESRI  
Imagery: NAIP 2018

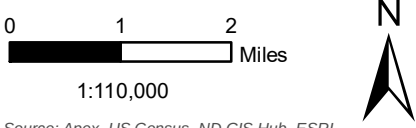
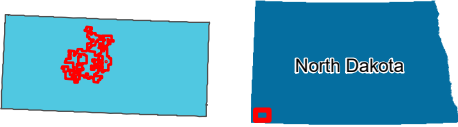
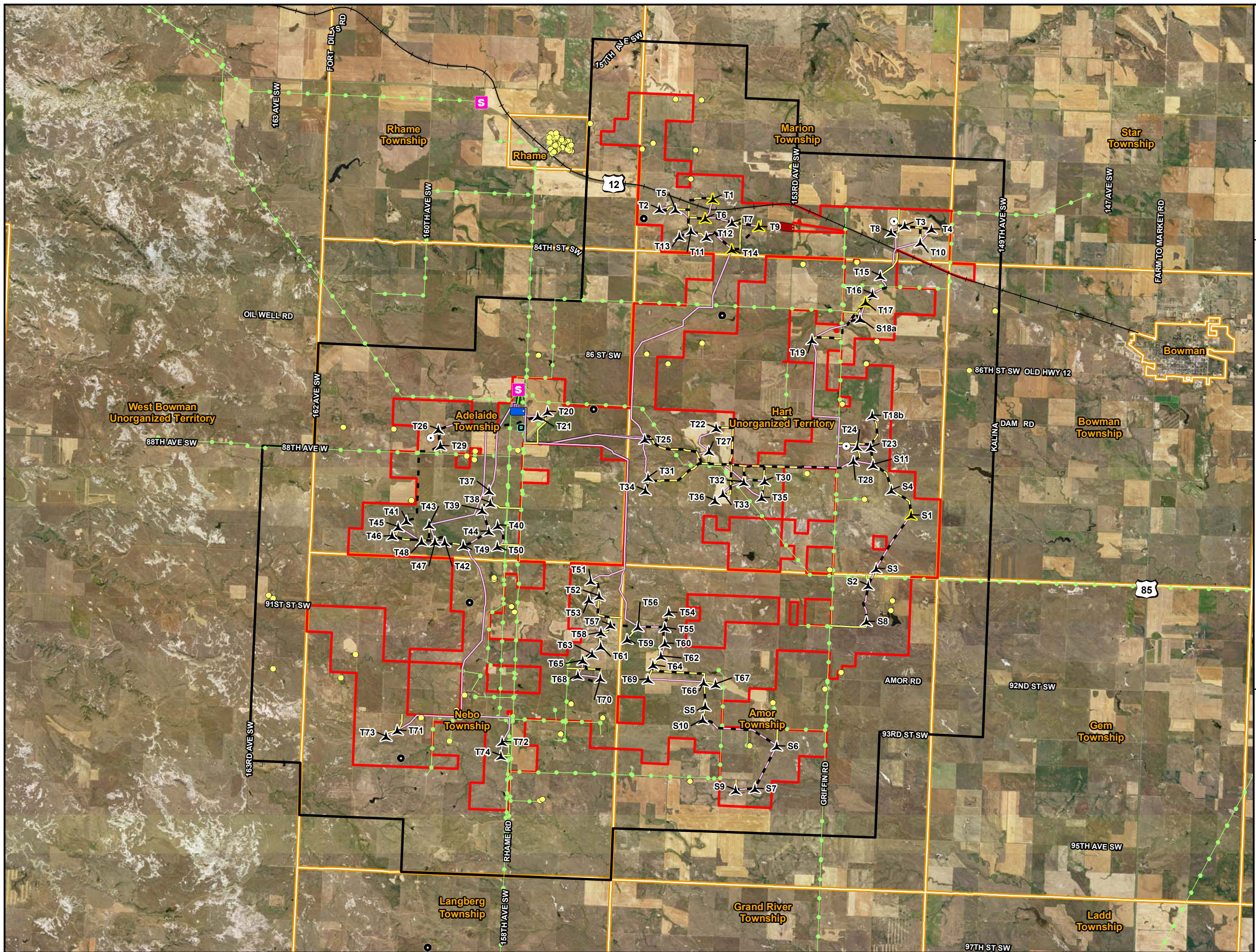
- Existing Substation
- Existing Transmission Line
- Project Boundary
- City/Township
- Study Area
- Non-Participating Landowner Parcel

**Figure 1**  
**Project Area**  
**Bowman Wind Project**  
**Bowman County, North Dakota**



For Environmental Review Purposes Only





Data Source: Apex, US Census, ND GIS Hub, ESRI  
Imagery: ND GIS 2018

- ▲ Proposed Turbine
- ▲ Currently Limited to GE-127 2.82 MW Turbine
- Residence within 1-mile of Project
- Permanent Met Tower
- Temporary Met Tower
- Existing Substation
- Access Road
- - Crane Path
- Underground Collection Line
- Proposed Transmission Line
- Existing Transmission Line
- Project Substation
- O&M Facility
- Laydown Yard
- Battery Storage
- Project Boundary
- Study Area
- City/Township

\*Turbines Not to Scale

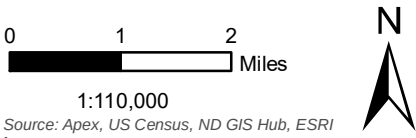
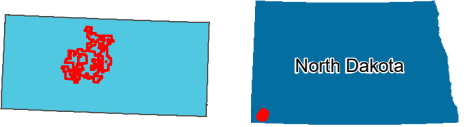
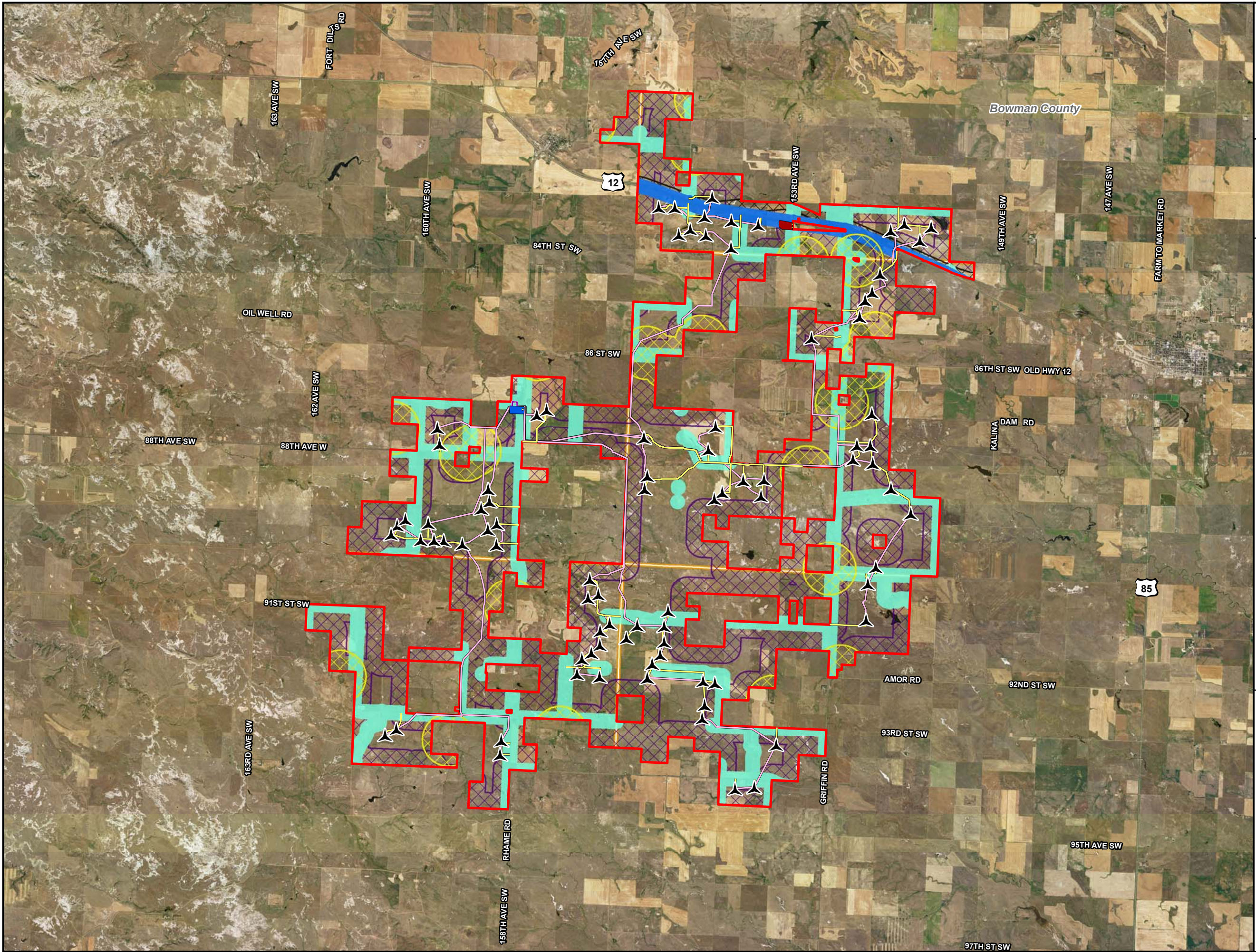
**Figure 2**  
**Facilities Layout**  
**Bowman Wind Project**  
**Bowman County, North Dakota**



For Environmental Review Purposes Only

Date: 7/21/2021 Source: Z:\Clients\VA\Apex\Bowman\Permitting\Site\_Permit\Mapping\Fig02\_Bowman\_Facilities\_Layout.mxd





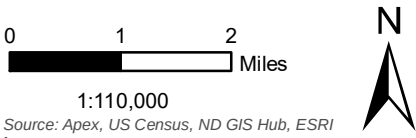
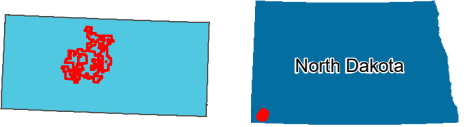
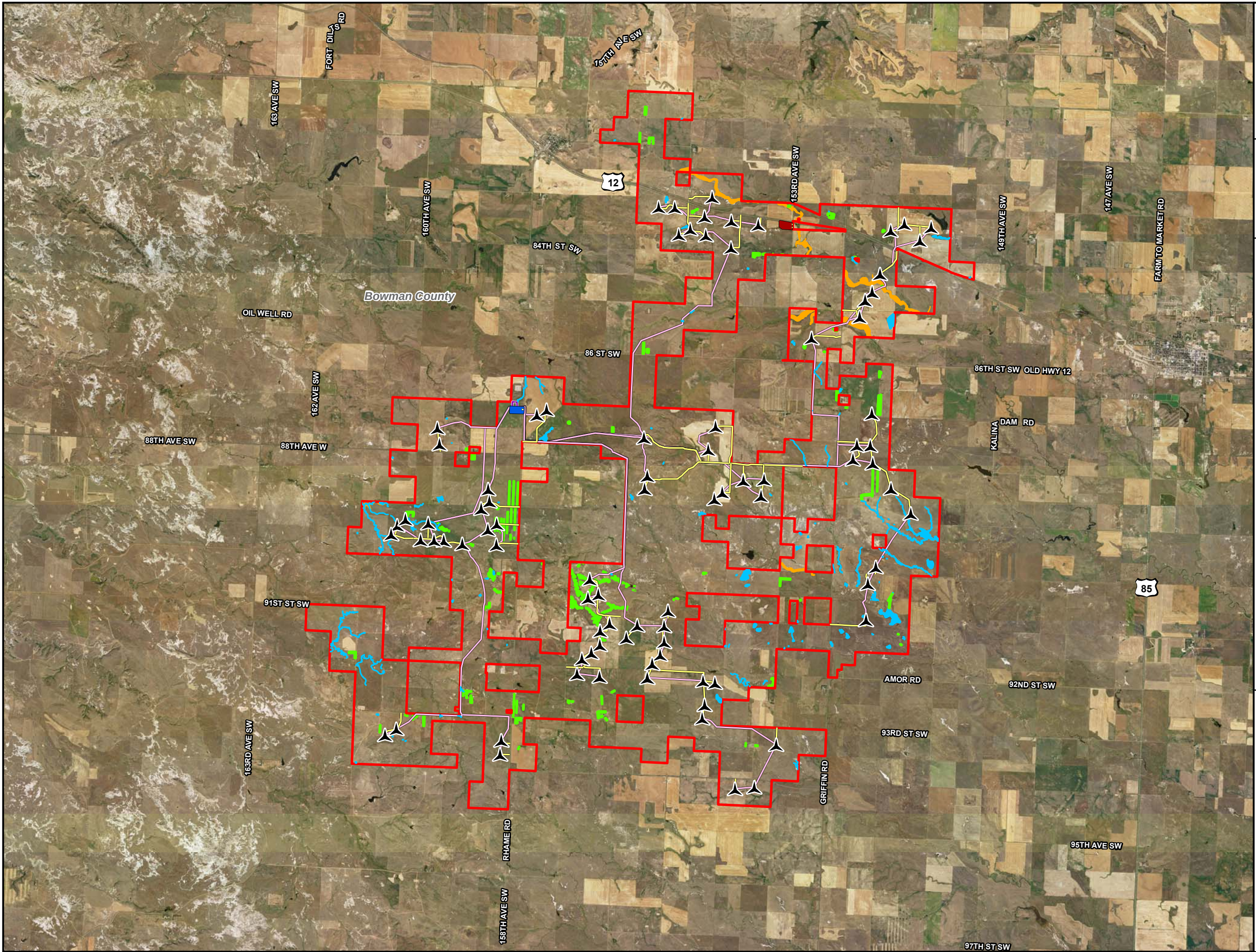
- ▲ Proposed Turbine
- Access Road
- Underground Collection Line
- Project Substation
- Battery Storage
- Laydown Yard
- Project Boundary
- City/Township
- Exclusion Area**
  - County and Maintained Road
  - Interstate and State Road
  - Non-participating Residence
  - Non-participating Landowner Parcel Line
  - Railroad

\*Turbines Not to Scale  
Non-public cultural resource information has been omitted.

**Figure 3**  
**Exclusion Areas**  
**Bowman Wind Project**  
**Bowman County, North Dakota**







1:110,000  
Data Source: Apex, US Census, ND GIS Hub, ESRI  
FEMA  
Imagery: ND GIS 2018

- ▲ Proposed Turbine
- Access Road
- Underground Collection Line
- Project Substation
- Battery Storage
- Laydown Yard
- Project Boundary
- Avoidance Areas**
  - Delineated Wetland
  - Woodland (Desktop Delineated)
  - 100-year Floodplain

\*Turbines Not to Scale

Non-public cultural resource  
information has been omitted.

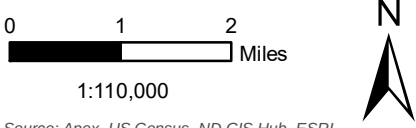
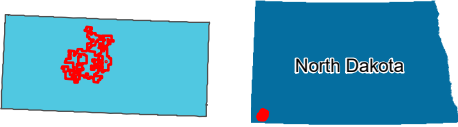
**Figure 4**  
**Avoidance Areas**  
  
**Bowman Wind Project**  
  
**Bowman County, North Dakota**



For Environmental Review Purposes Only

Date: (7/22/2021) Source: Z:\Clients\A\_D\Apex\Bowman\Permitting\Site\_Permit\Mapping\Fig04\_Bowman\_Avoidance\_Areas.mxd





Data Source: Apex, US Census, ND GIS Hub, ESRI

- ▲ Proposed Turbine
- Non-Participant (within one mile of Project Area)
- Participant (within one mile of Project Area)
- Pending-Participant (within one mile of Project Area)
- Access Road
- Underground Collection Line
- Existing Substation
- ✕ Cemetery
- Existing Transmission Line
- Sound Level Isoline - 45dBA
- Project Substation
- O&M Facility
- Laydown Yard
- Battery Storage
- Project Boundary
- Study Area
- Setback
- Shooting Range
- Microwave Beam Path
- Participant
- Pending Participant
- City/Township
- Section Boundary

\*Turbines Not to Scale

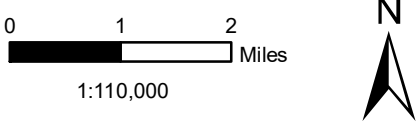
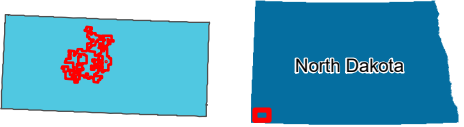
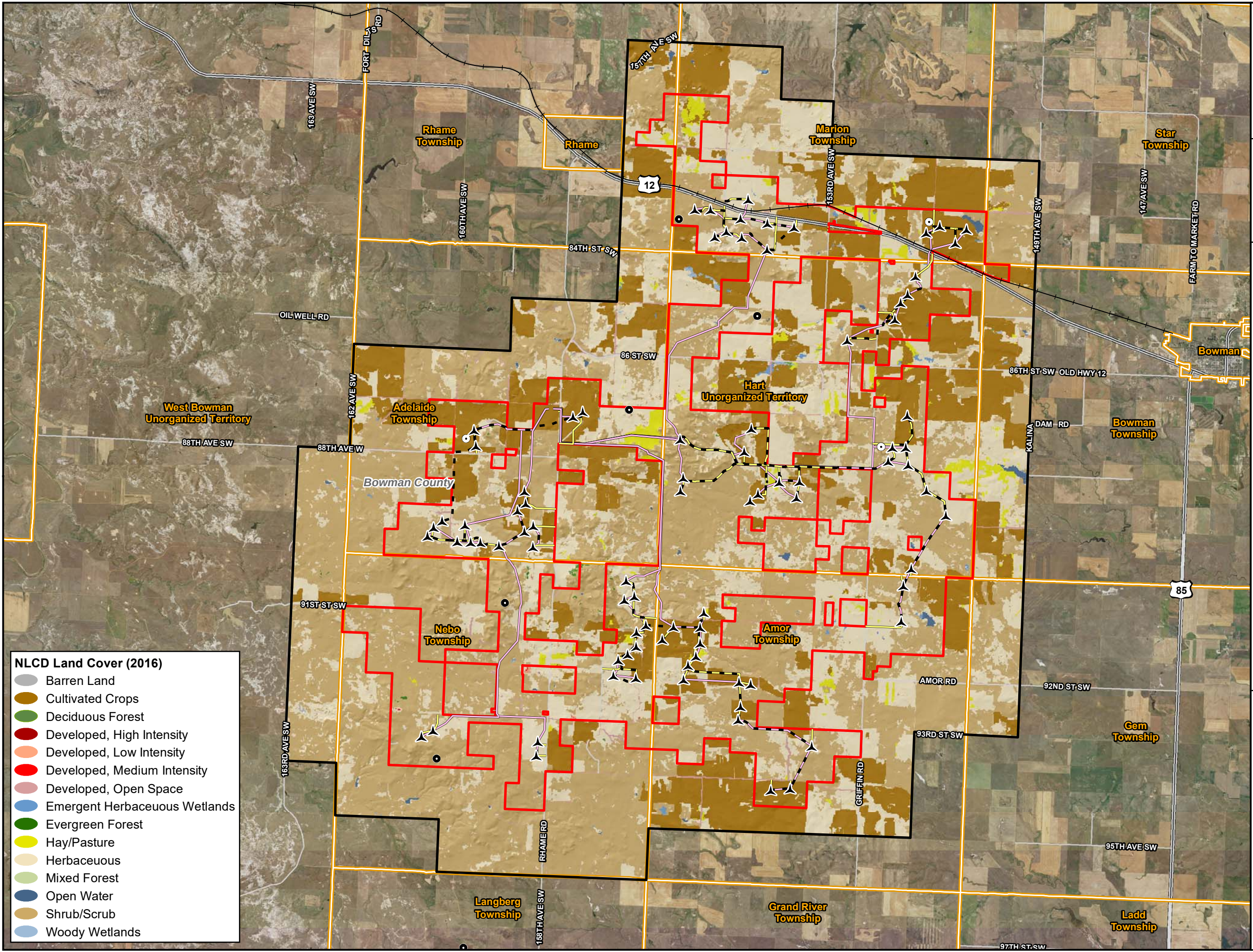
**Figure 5**  
**Constraints Map**  
**Bowman Wind Project**  
**Bowman County, North Dakota**



For Environmental Review Purposes Only

Date: 7/22/2021 Source: Z:\Clients\A\_VA\Bowman\Permitting\Site\_Permit\Mapping\Fig05\_Bowman\_Constraints.mxd





Data Source: Apex, US Census, ESRI, NLCD  
Imagery: USGS NED 10M

- Proposed Turbine
- Permanent Met Tower
- Temporary Met Tower
- Access Road
- Underground Collection Line
- Crane Path
- City/Township
- Project Boundary
- Study Area

\*Turbines Not to Scale

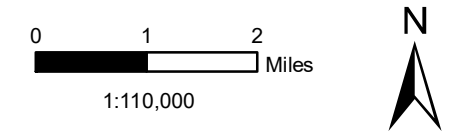
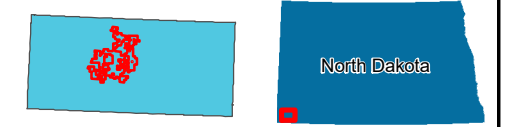
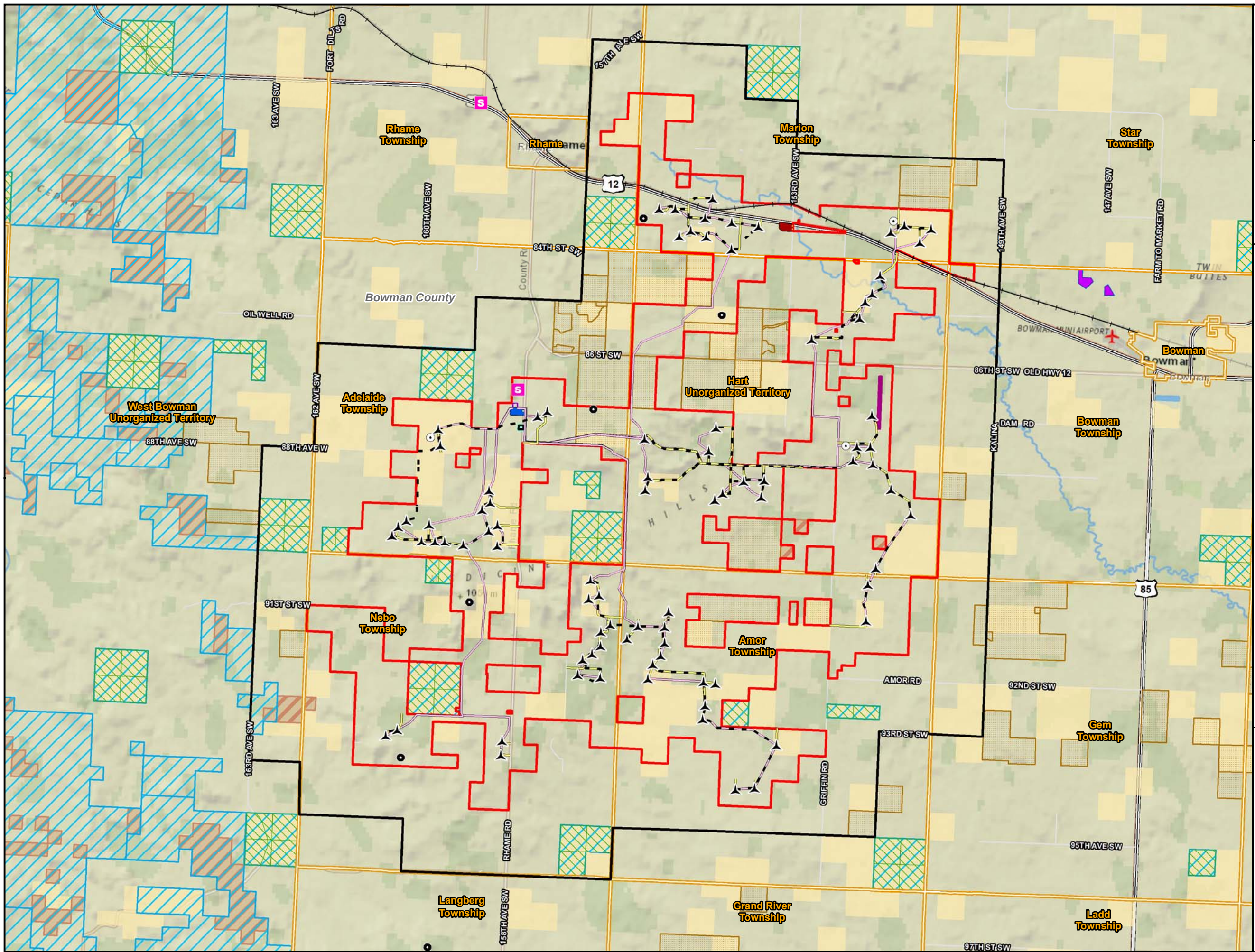
**Figure 6**  
**Land Use**

**Bowman Wind Project**  
**Bowman County, North Dakota**



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Data Source: Apex, US Census, ESRI, NCED, NDHUB  
Imagery: National Geographic

- ▲ Proposed Turbine
- Permanent Met Tower
- Temporary Met Tower
- Existing Substation
- Access Road
- - Crane Path
- Underground Collection Line
- Project Substation
- Battery Storage
- O&M Facility
- Laydown Yard
- Project Boundary
- Study Area
- PLOTS Land
- Shooting Range
- NCED Conservation Easement
- North Dakota Trust Lands - Surface
- North Dakota Trust Lands - Mineral
- BLM Grazing Allotments
- BLM Owned Lands
- City/Township

\*Turbines Not to Scale

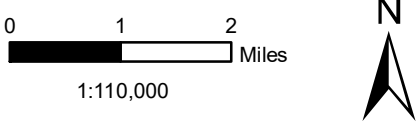
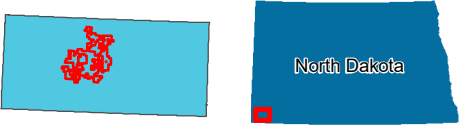
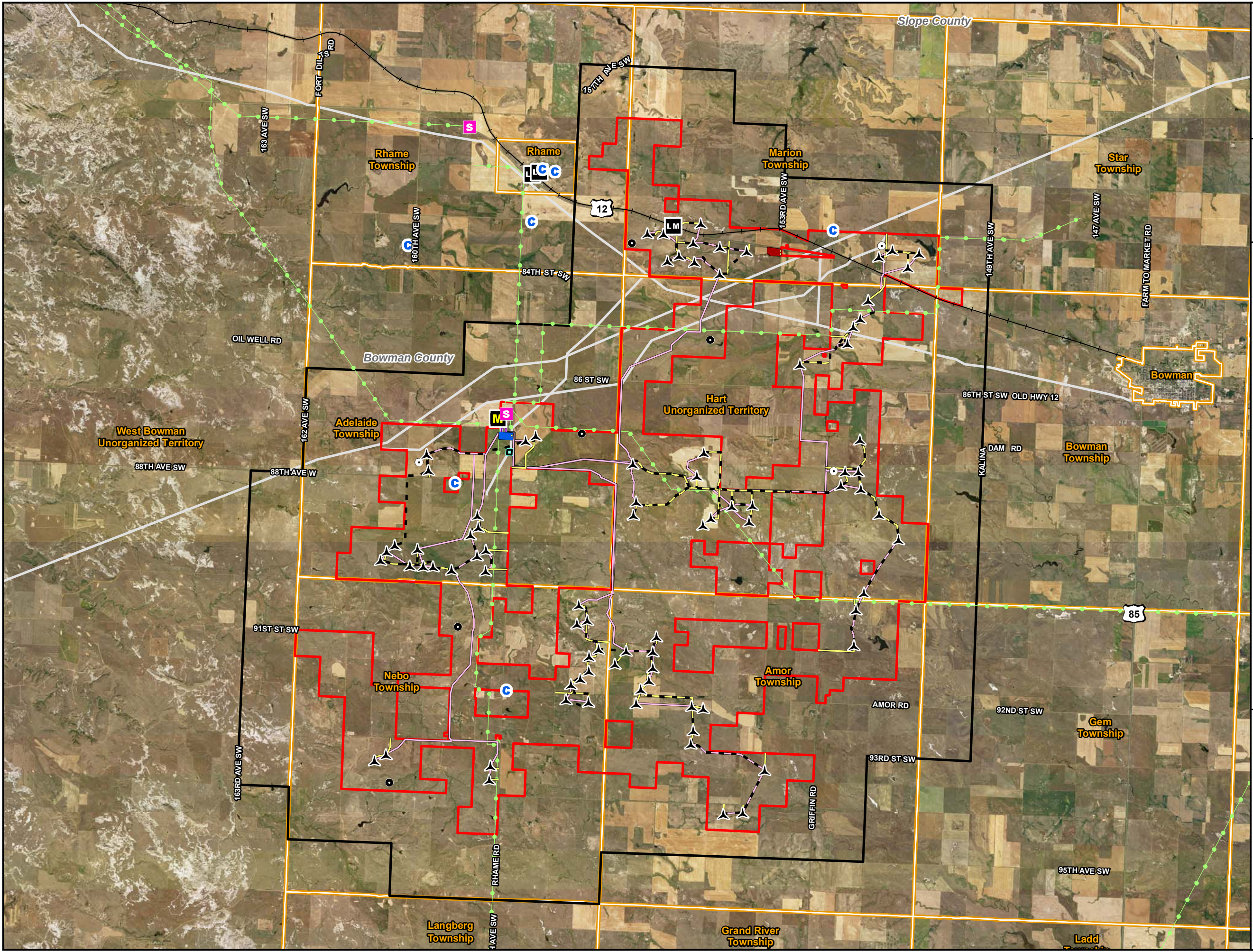
**Figure 7**  
**Public Lands and Easements**  
**Bowman Wind Project**  
**Bowman County, North Dakota**



For Environmental Review Purposes Only

Date: (7/22/2021) Source: Z:\Clients\VA\_D\Apex\Bowman\Permitting\Site\_Permit\Mapping\Fig07\_Bowman\_Public\_Lands\_Easements.mxd





Data Source: Apex, US Census, ESRI, NCED  
Imagery: NAIP 2018

- ▲ Proposed Turbine
- C Communication Tower
- LM Land Mobile
- M Microwave Tower
- Permanent Met Tower
- Temporary Met Tower
- S Existing Substation
- Access Road
- - Crane Path
- Underground Collection Line
- Existing Pipeline
- Existing Transmission Line
- ▭ Project Boundary
- ▭ Study Area
- ▭ Project Substation
- ▭ O&M Facility
- ▭ Laydown Yard
- ▭ Battery Storage
- ▭ City/Township

\*Turbines Not to Scale

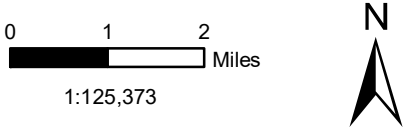
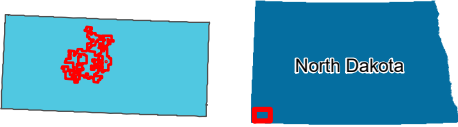
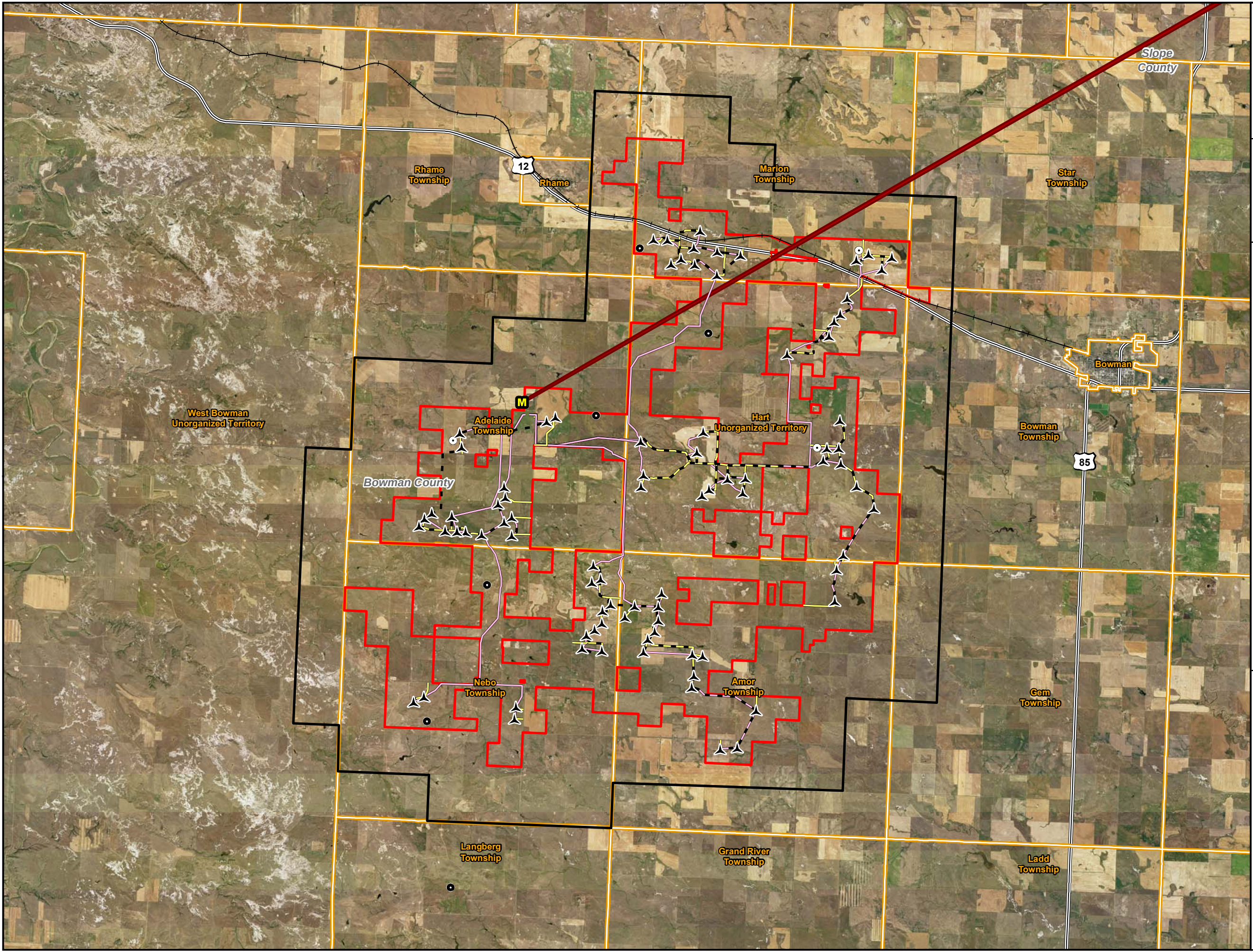
**Figure 8**  
**Infrastructure**  
**Bowman Wind Project**  
**Bowman County, North Dakota**



For Environmental Review Purposes Only

Date: 7/27/2021 Source: Z:\Clients\A\_D\Apex\Bowman\Permitting\Site\_Permit\Mapping\Fig08\_Bowman\_Infrastructure.mxd





Data Source: Apex, US Census, ND GIS Hub, ESRI  
Imagery: NAIP 2018

- Proposed Turbine
- Permanent Met Tower
- Temporary Met Tower
- Microwave Tower
- Access Road
- Crane Path
- Underground Collection Line
- Microwave Beam Path
- City/Township
- Project Boundary
- Study Area

\*Turbines Not to Scale

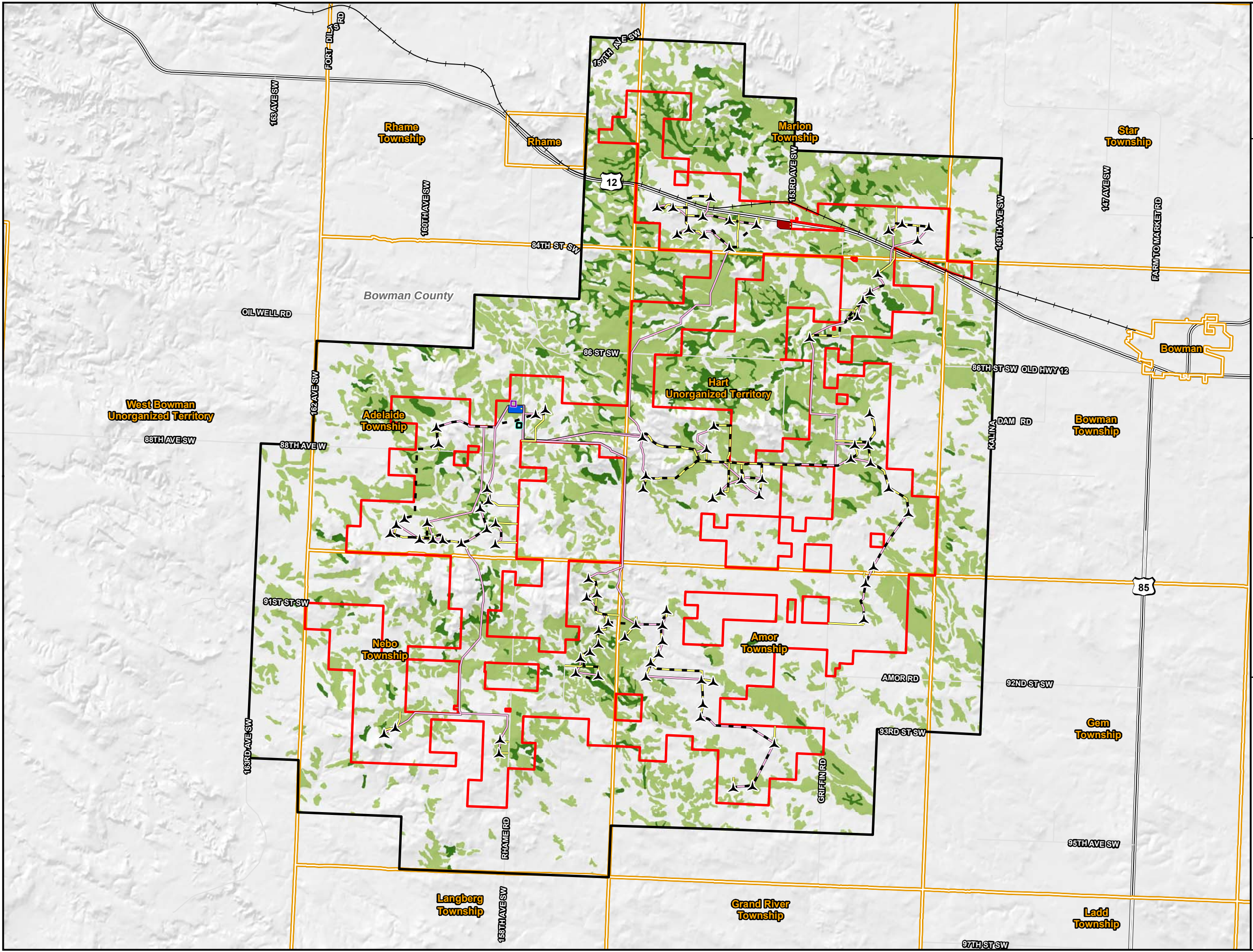
**Figure 9**  
**Microwave Beam Path**  
**Fresnel Zones**  
  
**Bowman Wind Project**  
**Bowman County, North Dakota**



For Environmental Review Purposes Only

Source: Z:\Clients\A\_D\Apex\Bowman\Permitting\Site\_Permit\Mapping\Fig09\_Bowman\_Microwave\_Beam\_Path.mxd  
Date: (7/22/2021)







0 1 2 Miles

1:110,000

Data Source: Apex, US Census, ND GIS Hub, SSURGO, ESRI  
Imagery: USGS NED 10meter

- ▲ Proposed Turbine
- Access Road
- - Crane Path
- Underground Collection Line
- Project Substation
- O&M Facility
- Laydown Yard
- Battery Storage
- ▭ Project Boundary
- ▭ Study Area
- ▭ City/Township
- Prime Farmland
- Farmland of Statewide Importance

\*Turbines Not to Scale

### Figure 10

## Prime and Unique Farmland

### Bowman Wind Project

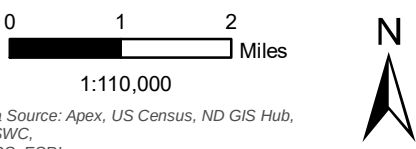
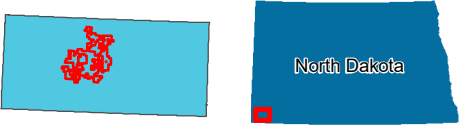
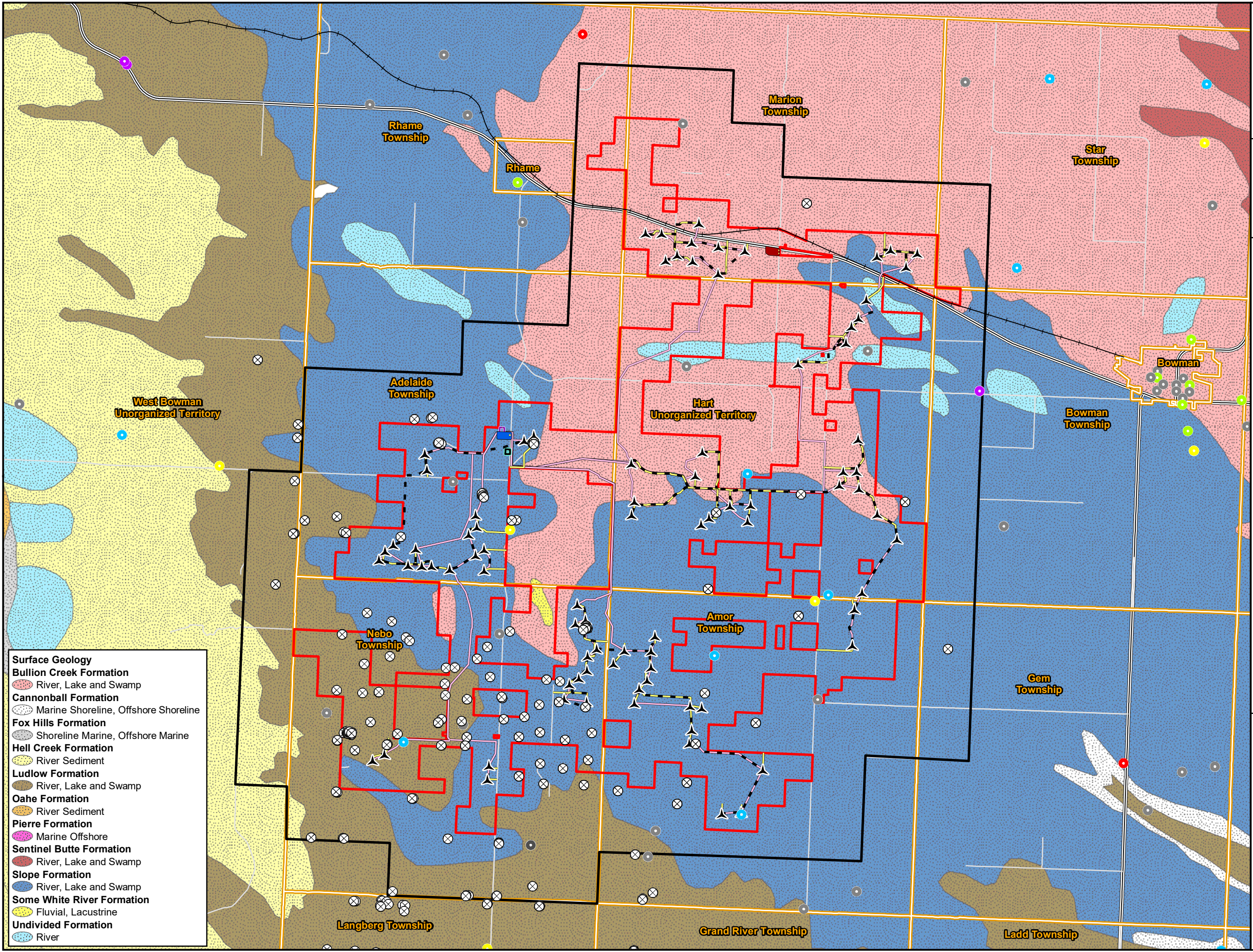
### Bowman County, North Dakota



**BOWMAN**  
WIND

For Environmental Review Purposes Only





Data Source: Apex, US Census, ND GIS Hub, NDSWC, NDGS, ESRI  
Imagery: USGS NED 10M

- Proposed Turbine
- Access Road
- Crane Path
- Underground Collection Line
- Project Substation
- Battery Storage
- O&M Facility
- Laydown Yard
- Project Boundary
- Study Area
- City/Township
- Oil - Gas
- Storage Tank
- SWC Well**
  - Domestic Well
  - Observation Well
  - Observation Well - Destroyed
  - Observation Well - Plugged
  - Production Well
  - Stock Well
  - Unknown

- Surface Geology**
  - Bullion Creek Formation**
    - River, Lake and Swamp
  - Cannonball Formation**
    - Marine Shoreline, Offshore Shoreline
  - Fox Hills Formation**
    - Shoreline Marine, Offshore Marine
  - Hell Creek Formation**
    - River Sediment
  - Ludlow Formation**
    - River, Lake and Swamp
  - Oahe Formation**
    - River Sediment
  - Pierre Formation**
    - Marine Offshore
  - Sentinel Butte Formation**
    - River, Lake and Swamp
  - Slope Formation**
    - River, Lake and Swamp
  - Some White River Formation**
    - Fluvial, Lacustrine
  - Undivided Formation**
    - River

\*Turbines Not to Scale

**Figure 11**  
**Geologic and Groundwater Resources**

**Bowman Wind Project**

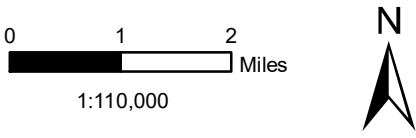
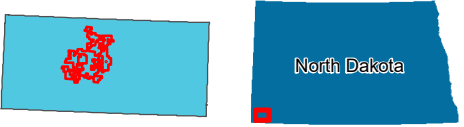
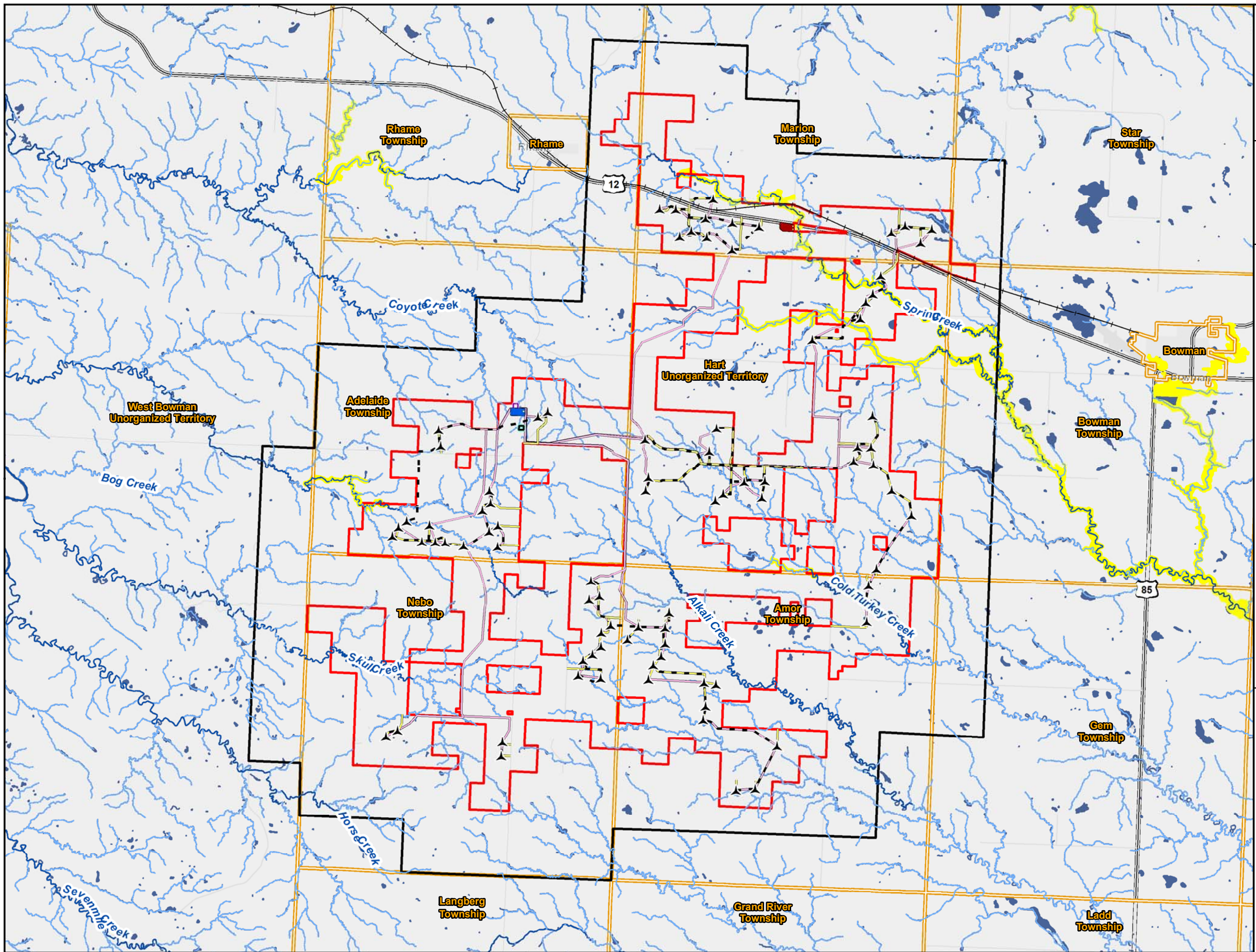
**Bowman County, North Dakota**



For Environmental Review Purposes Only

Date: 7/27/2021 Source: Z:\Clients\A\_D\Apex\Bowman\Permitting\Site\_PermitMapping\Fig11\_Bowman\_Geologic\_Groundwater\_Resources.mxd





Data Source: Apex, US Census, ESRI, USGS, USFWS  
Imagery: USGS The National Map 3DEP

- ▲ Proposed Turbine
- Access Road
- - Crane Path
- Underground Collection Line
- Project Substation
- O&M Facility
- Laydown Yard
- Project Boundary
- Study Area
- Battery Storage
- City/Township
- Stream/River - Perennial
- Stream/River - Intermittent/ Other
- NWI Wetland
- 100-year Floodplain

\*Turbines Not to Scale

### Figure 12 Surface Water and NWI Wetlands

Bowman Wind Project  
Bowman County, North Dakota



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Date: (7/27/2021) Source: Z:\Clients\A\_D\Apex\Bowman\Permitting\Site\_Permit\Mapping\Fig12\_Bowman\_Water\_Features.mxd