

# Wisconsin Department of Natural Resources

## Engineering Plan

Portage Solar, LLC  
Portage County, Wisconsin  
January 14, 2022



Portage Solar, LLC  
c/o National Grid Renewables  
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Bloomington, MN 55437

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## 1. Introduction

Portage Solar, LLC (Portage Solar),<sup>1</sup> an independent power producer, is proposing a 250-megawatt (MW) alternating-current (AC) photovoltaic (PV) solar project on approximately 2,584 acres (which includes both primary and alternate array locations) in the Towns of Grant and Plover in Portage County, Wisconsin (Project). The Project includes the construction of a new Project substation and a 115-kilovolt (kV) transmission line less than 500 feet in length. The Point of Interconnection (POI) will be the existing Plover Substation owned by American Transmission Company (ATC).

Consistent with Wisconsin Administrative Code section PSC 111.51(2), Portage Solar has notified staff of the Wisconsin Department of Natural Resources (WDNR) and the Public Service Commission of Wisconsin (PSCW) of its intent to file for a Certificate of Public Convenience and Necessity (CPCN) for the Project, and has consulted with the staff of these agencies on the scope of the proposed Project, the alternatives that must be considered in the application, and additional information that the agencies require as part of the CPCN application.

In accordance with Wisconsin Statute § 196.491(3)(a)3.a, Portage Solar is submitting this Engineering Plan (Plan). This Plan is being provided to the WDNR at least 60 days before Portage Solar will file the corresponding CPCN application with the PSCW. Consistent with that same statute, Portage Solar requests that within 30 days after receipt of this Plan, WDNR provide Portage Solar with a listing of all permits or approvals, which, based on the information contained in this Plan, appear to be required to construct the Project. In accordance with Wisconsin Statute § 30.025(1s), Portage Solar will promptly apply for all federal and state permits and approvals identified.

All distances, widths, and descriptions below are estimates and are subject to change based upon final facility siting and layout, electrical infrastructure routing, and access road availability.

### 1.1. Project Overview

The Project will be located on approximately 2,584 acres (which includes both primary and alternate array locations)(Project Study Area) in the Towns of Grant and Plover in Portage County, Wisconsin. The majority of the land required for the Project will be leased from participating landowners. A small portion of the land required for the Project substation will be acquired via a purchase option with ownership by Portage Solar. The Project is still actively marketing offtake options including power-purchase agreements and development-transfer arrangements.

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<sup>1</sup> Portage Solar is a wholly owned indirect subsidiary of National Grid Renewables (formerly Geronimo Energy). National Grid Renewables is a full-service renewable energy company headquartered in Minneapolis, Minnesota. National Grid Renewables has developed over 2,400 megawatts of wind and solar projects that are either operational or currently under construction throughout the United States. National Grid Renewables provides custom solutions for utilities and corporations looking to harness renewable energy for business growth. With deep roots in agriculture, National Grid Renewables prides itself on developing renewable energy projects that are farmer-friendly, community-driven, and beneficial for rural communities.

The Project will include the following key elements:

1. Solar array blocks consisting of PV modules mounted on a single-axis, horizontal tracker mounting system supported by steel posts;
2. Planned mono-crystalline solar modules totaling approximately 332 MW Direct Current (DC) for the primary array and 80 MWDC for the alternate array;
3. Electrical collector circuit system infrastructure consisting of DC cabling;
4. Power Conversion Units (PCUs);
5. Project substation located within the Project Boundary on approximately five acres with a main step-up transformer, control enclosure, circuit breakers, disconnect switches, relay panels, surge arrestors, grounding system, metering, and communications equipment;
6. Approximately 12- to 20-foot-wide gravel access roads that connect the Project to existing public roads and provide access to Project equipment;
7. 115 kV transmission line connecting the Project substation to the POI. The POI is the existing ATC Plover substation; and
8. Project Operation and Maintenance Building (O&M)
9. Battery Storage

## 1.2. Exhibits

In order to provide pertinent information about the Project, Portage Solar is including with this submission maps that identify the following features:

- Project Area
- Project topography
- Water resources: lakes, rivers, streams, wetlands
- Land cover types
- Existing Electric Transmission Facilities
- Conceptual Project layout

## 2. Description of the Proposed Project

### 2.1. General Facility Description

The Project is a 250-MW<sub>AC</sub> solar facility. The major components of the Project include the PV panels, tracking system, PCUs, collection system, Project substation, potential battery storage and gen-tie line. The PV panels will convert sunlight to electric current as the tracking system follows the sun from east to west during the day. The electric current is converted from DC to AC by the PCUs. The PCUs also increase the voltage to a medium voltage level to efficiently move the energy to the Project substation. The Project substation will further increase the voltage to the interconnection voltage of 115 kV. Finally, the gen-tie line will carry the electricity to the POI located at the existing ATC Plover substation.

### *2.1.1. Modules and Tracking System*

The market for PV panels is dynamic and evolving so the PV panel supplier and technology to be used is not known at this time. Closer to the start of detailed design, the Project will conduct a competitive solicitation to procure the equipment that provides the best technical and financial solution. The current preliminary designs include 250 MW<sub>AC</sub> of PV panels installed. This would require approximately 825,000 to 875,000 high efficiency PV panels, depending on the wattage rating selected.

The PV panels will be attached to a single-axis tracking system that tracks the sun during the day. The tracking system will be mounted to steel piles driven into the ground. The tracking system keeps the panels more directly oriented to the sun, which improves the amount of electricity that can be generated throughout the day.

### *2.1.2. PCU and Collection System*

The DC electricity from the PV panels is routed to the PCUs using DC collection wiring. This wiring runs underneath each row of PV panels and then comes together at DC combiner boxes. The DC cabling is then typically routed underground to eventually connect to the PCU.

The PCUs will be approximately 4,200 kVA each in capacity and the Project will require approximately 75 PCUs to meet the nameplate capacity. The PCUs will be located throughout the PV array area. Each PCU will be mounted on steel piles or a concrete foundation and will include an inverter, medium voltage transformer, and controls/communication equipment. The quantity of PCUs will depend on the size of the final module selected.

The AC electricity cabling from the PCUs will be routed to the collector substation primarily in underground trenches from 30 to 48 inches deep with some use of an aboveground system. The AC collection system is expected to be 34.5 kV.

### *2.1.3. Substation and Transmission Interconnection*

The Project substation will be located adjacent to the existing ATC Plover Substation and have a footprint of approximately four acres. The AC collection system will enter the substation where the voltage will be increased to the interconnection voltage of 115 kV. Substation equipment will include a main step-up transformer, control enclosure, circuit breakers, disconnect switches, relay panels, surge arrestors, grounding system, metering, and communications equipment. The main step-up transformer will be mounted on a concrete foundation.

The Project gen-tie line at this time is expected to be less than 500 feet long and will connect the Project substation to the ATC Plover substation at the POI. The gen-tie line will be a single-circuit 115-kV line located on monopole structures. The number and height of each structure will be determined during the detailed design phase of the Project. However, the number of poles is likely to be between two and four, and the height of the poles is likely to be between 75 and 95 feet.

*2.1.4. Site Security and Fencing*

Each PV array area will be fenced to provide security for plant equipment and public safety. Each fenced area will have gated access at the road entrances. The fence material used will comply with applicable codes and meet National Electric Code (NEC) and North American Electric Reliability Corporation (NERC) Critical Infrastructure Protection (CIP) requirements.

*2.1.5. Project Access Roads*

Gravel roads will be constructed throughout the site to provide access to public roads and solar equipment. Roads within the Project Boundary will be used for construction and O&M activities. These roads will be 12 to 15 feet wide and will be constructed at grade to maintain existing stormwater flow patterns on the surface.

*2.1.6. Stormwater Drainage and Erosion Control*

The Project will apply for coverage under the WDNR Construction Site General Permit for stormwater discharges from construction activities and will prepare a conceptual Stormwater Pollution Prevention Plan (SWPPP) for inclusion in the CPCN application. A final SWPPP will be developed once the PSCW final order is issued and final design has been completed. The current topography of the Project Study Area is relatively flat. Thus, a minimum level of grading is expected. Current sheet flow drainage patterns will generally be maintained in the final facility configuration.

*2.1.7. Waste and Hazardous Materials Management*

The primary wastes generated during construction will be cardboard and wooden pallets. Waste will be disposed of at approved disposal or recycling facilities. The use of hazardous materials will be limited. Expected hazardous chemicals to be used during Project construction include diesel fuel, gasoline, oil, grease, spray paint, and galvanization paint.

*2.1.8. Meteorological Stations*

As part of the plant monitoring system, a number of meteorological stations will be installed across the Project. The stations are expected to consist of a monopole structure up to 20 feet tall, topped with a cross-arm on which instruments to measure wind speed/direction, pressure, precipitation, temperature, and irradiance will be mounted. Depending on the technology chosen for the site, an additional pyranometer may be required on the rack closest to the meteorological station to measure the irradiance on the back of the modules, which would be connected to the main meteorological station with an underground cable.

### 3. Construction of the Proposed Project

#### 3.1. Overview

Construction of the Project is anticipated to begin as early as Q4 2023 and finish in late 2024. The primary construction activities will consist of site mobilization, site preparation and grading, and installation of steel piles, tracker system, PV panels, and PCUs. The Project collector substation and gen-tie line will be constructed in parallel with the PV array.

#### 3.2. Temporary Construction Workspace, Laydown, and Mobilization Areas

The Project estimates up to four temporary laydown yards, each measuring from 5-10 acres, for construction trailers, equipment storage, and employee parking. The laydown area will be restored to pre-construction condition once construction is completed.

#### 3.3. Clearing and Grading

Following site mobilization, the construction contractor will begin site preparation, clearing, and grading. The existing topography is relatively flat. As such, minimal levels of grading are expected. The majority of the Project site is agricultural and free of trees. Tree clearing will be avoided to the extent possible; however, some tree removal and trimming is anticipated to be required. Tree removal will consist of minimally wooded fence lines and field corners. Clearing of approximately four acres of red pine plantation and scrub oak will be required in the vicinity of the Project substation.

#### 3.4. Site Road Construction

Twelve- to fifteen-foot-wide (12-15') array roads will be constructed to provide access to public roadways and on-site equipment for construction and operation. The roads will be constructed primarily at grade to maintain the site drainage characteristics. Culverts may be installed in areas of confined/preferential flow to maintain surface water flow under the constructed access roads. Construction of the internal site roads will begin by removing the topsoil and organic material. The subgrade will be compacted and constructed per civil design requirements. A layer of road base will then be added and compacted.

#### 3.5. PV Solar Array and PCU Assembly and Construction

Construction of the PV array areas will begin by driving the steel piles in the ground. Shortly after the start of pile installation, the tracker system installation will begin followed by the PV panel installation. These three activities will occur simultaneously throughout the Project site. The DC cable will be connected once the PV panels are installed. Separately, the PCUs will be delivered and installed to their respective locations.

#### 3.6. Electrical Collection

The AC collection cable will primarily be installed underground using cable trenches. The sequence is as follows: (1) the trench is typically dug with a backhoe; (2) topsoil removed for trenching purposes will be segregated from the trench spoil; (3) the trench will be dug to a depth of

approximately 30 to 48 inches with width dependent upon the number of feeder circuits per trench; (4) the cables will be direct buried and the bottom of each trench will be lined with clean fill to surround the collection lines and the remainder of the trench will be back-filled with native soil and appropriately compacted; and (5) during backfilling, subsoil material will be replaced first, followed by topsoil. Some collection-system cable may need to be installed above ground.

### **3.7. Substation and Gen-Tie Line**

Construction of the Project substation and gen-tie line will occur concurrently with the PV array. Construction of the substation will take approximately 4-6 months and gen-tie line construction will take approximately one month.

For the substation, civil grading will be required to bring the pad to the engineered elevation. After the pad is complete, foundation work will commence. The foundations will consist of both poured piers and poured-in-place slabs. Grounding and underground conduit trenching will be constructed at the same time as the foundations. Once foundations, grounding, and conduits are completed the installation of steel structures will commence. Once steel is erected, specialty equipment will be set and wired.

Construction of the gen-tie line will take place following the completion of the substation. Structures for the gen-tie line will consist of wood or steel monopoles directly embedded or on concrete foundations, depending on the final designed span lengths and line loads.

## **4. Site Stabilization and Protection**

Best Management Practices (BMPs), such as temporary seeding and silt fences, will be implemented prior to commencement of civil work. Erosion-control measures will be installed per the SWPPP and Erosion Control Plan. Temporary seeding and erosion control BMPs will be installed following initial grading and upon completion of array construction activities. Seeding of disturbed areas with native grass and herb species will be done using hydro-seeding, seed drill or broadcasting.

During construction, dust will be controlled by applying water to exposed areas using water trucks.

## **5. Environmental Attributes of the Proposed Study Area**

Approximately 2,584 acres of land being considered for the Project were surveyed to identify existing natural resources during the fall of 2020 and 2021 (Project Study Area). Land cover, wetlands, waterways and existing habitat were identified within the Project Study Area.

### **5.1. Land Cover Types**

Land cover within the Project Study Area was mapped in the field during the wetland and waterway surveys conducted in October, November, and December 2020 and October and November 2021. Dominant land cover types associated with the Project Study Area include



cropland, grassland, upland woodland, and developed/urban. Land cover was digitized within the Project Study Area using Geographic Information System (GIS) applications. The following table summarizes the land cover types and approximate acreage within the Project Study Area.

<b>Acres of Land Cover Categories in Project Study Area</b>			
<b>Land Category</b>		<b>Acres</b>	<b>Percent of Total</b>
<b>Agriculture</b>	Cropland	2,214.74	85.73%
	Upland Woodland	74.58	2.89%
<b>Non-Agricultural Upland</b>	Grassland	235.68	9.12%
	Old Field/Fallow Field	0.00	0.00%
	Non-Forested Wetland	18.87	0.73%
<b>Wetlands/Waterbodies</b>	Forested Wetland	2.72	0.11%
	Open Water	4.79	0.19%
	Developed/Urban	29.62	1.14%
<b>Developed Land</b>	Residential	2.35	0.09%
	<b>Total</b>	<b>2,583.37</b>	<b>100.0%</b>

## 5.2. Wetlands and Riparian Areas

Preliminary wetland determinations involved a desktop review of the Project Study Area that included the use of available resources such as U.S. Geological Survey (USGS) topographic maps, U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil survey, WDNR Wisconsin Wetland Inventory (WWII) mapping, WDNR 1:24,000 Hydrography data (24k Hydrolayer), USDA National Agricultural Imagery Program (NAIP), and other publicly available aerial imagery. Data was acquired and imported into a GIS application for review.

Figures based on the desktop wetland review were utilized during wetland and waterway field surveys completed in October, November, and December 2020 and October and November 2021. Field wetland determinations were based on the criteria and methods outlined in the U.S. Army Corps of Engineers (USACE) Wetlands Delineation Manual, Technical Report Y-87-1 (USACE 1987) and subsequent guidance documents, and applicable Regional Supplements to the USACE Wetlands Delineation Manual.

A total of 132 data points were used to delineate the 36 separate wetlands within the Project Study Area. The total aerial coverage of wetlands within the Project Study Area is 21.59 acres. Four wetland types were surveyed within the Project Study Area: wet meadow, seasonally flooded basin, shrub-carr, and forested wetland.

Preliminary waterway determinations were made utilizing the WDNR 24k Hydro layer and data imported into the GIS application. Desktop analysis revealed a total of two waterways located within the Project Study Area (one perennial and one intermittent). Field surveys for waterbodies were conducted during the wetland investigations and documented waterways, waterbodies, culverts, and/or other connections to off-site wetland or aquatic features.

Four waterway areas were field identified within the Project Study Area (Unnamed Tributary WBIC 1391600, Unnamed Tributary WBIC 5019782, and two unmapped waterways). Unnamed Tributary WBIC 1391600 is identified on the WDNR 24K hydrography layer as a perennial stream and Unnamed Tributary WBIC 5019782 is identified on the WDNR 24K hydrography layer as an intermittent stream. No open water features were delineated within the Project Study Area.

### 5.3. Federal and State Listed Species

The Project Study Area and associated one-mile (wetland and terrestrial species) and two-mile (aquatic species) buffers were evaluated for the presence of federally and state-listed species and their habitat. These species were evaluated to determine if the Project may adversely affect them or their habitat.

#### 5.3.1. Federally Listed Species

On January 7, 2022, Portage Solar’s consultant requested an Official Species List report for the Project from the U.S. Fish and Wildlife Service (USFWS). At the time of this engineering plan submittal, an approved iPAC review has not been received due to website issues at USFWS. A summary of the preliminary species list is included below. The final approved iPAC report and any letters of correspondence will be included in the CPCN application.

The preliminary Official Species List included the following federally listed species that may occur in the vicinity of or may be affected by the Project:

- Northern long-eared bat – Suitable habitat for the northern long eared bat (NLEB, *Myotis septentrionalis*) may exist within the Project Study Area. Specific tree clearing restrictions may be applied to this Project once the final iPac review and consultation letter is received.
- Karner Blue Butterfly – The Karner blue butterfly (*Lycaeides melissa samuelis*) occurs in pine barrens and oak savannas on sandy soils containing wild lupine (*Lupinus perennis*), the only known host plant of Karner blue butterfly larvae. The Project Study Area is located within the known range of the Karner blue butterfly in Wisconsin. According to the USFWS official species list, the Project Study Area is located within proposed critical habitat for the Karner blue butterfly.
- Monarch Butterfly – The monarch butterfly (*Danaus plexippus*) is a “candidate” species within the iPac species database. For this Project, specific mitigation measures are not likely to be required.
- Fassett’s Locoweed - The Fassett’s locoweed (*Oxytropis campestris var. chartacea*) occurs on sandy shorelines of land-locked seepage lakes and appears to be dependent upon periodic fluctuations in lake levels and maintenance of the shoreline habitat. The Project Study Area is located within the known range of the Fassett’s locoweed in Wisconsin. However, according to the USFWS official species list, the Project Study Area is not located within designated critical habitat for the Fassett’s locoweed. Based on the lack of suitable habitat within the Project Study Area, the Project is not expected to affect the Fassett’s locoweed.

**NOTE:** The species list provided above is preliminary in nature and is “not for consultation” due to iPac website issues. A final iPac review will be submitted and all resulting information provided by the USFWS will be included in the CPCN application.

5.3.2. *State-Listed Species*

An initial Endangered Resource (ER) Review was submitted to the WDNR on November 17, 2020. The WDNR ER Review response (ERR Log# 20-834) was received on November 19, 2020. A revised ER review was submitted January 4, 2022, to include the updated Project Study Area. The WDNR ER Review response (ERR Log# 22-009) was received on January 11, 2022.

Five species were listed for “Actions that need to be taken to comply with state and/or Federal endangered species laws,” including three birds, one terrestrial invertebrate, and one herptile. Also listed was the Karner Blue Butterfly Federal High Potential Range. The WDNR response indicated that that suitable habitat may be present for these species within the Project Study Area and required implementing avoidance and minimization measures to avoid take of the species. One bird and one terrestrial invertebrate were listed for “Actions recommended to help conserve Wisconsin’s Endangered Resources.” The WDNR response indicated that that suitable habitat may be present for these species within the Project Study Area and recommended implementing avoidance and minimization measures to avoid take of the species.

5.3.3. *Special Management Areas*

An evaluation of GIS databases was used to document special management areas within the Project Study Area and an associated two-mile buffer. This review produced the following results:

Special Management Areas within Two Miles of Project Study Area		
Name	Property Size (Acres)	Description
Buena Vista Wildlife Area	8,209.76	WDNR-owned state conservation area park managed for wildlife
Central Wisconsin Grassland Conservation Area	2,275.76	WDNR-owned state conservation area park managed for wildlife
National Public Lands	2,649	Public lands managed for multiple use
WDNR Managed Land Parcels (37 Properties)	1,339.64	Public or private lands managed by WDNR
Grasslands Reserve Program (GRP), Wisconsin (4 Properties)	2,303	Private properties managed by NRCS for grassland habitat

## 6. Required Permits

Necessary permits and agency coordination at the Federal and State level will be completed prior to the construction of the Project. A summary of expected permits and coordination for the Project is summarized below:

Expected Permits and Agency Coordination for the Portage Solar Project		
Permit/Coordination	Agency	Comments
CPCN	PSCW	Filed for new electric generating facilities of 100 MW or more.
Federal ESA Coordination	USFWS	Online IPaC completed 1/7/22.
Section 404 Wetland Permit	USACE	If required, will be filed with WDNR Wetland Water Quality Certification Application.  Expecting to avoid resources and have no need for a permit or to minimize impacts (less than 0.1 acres) to fall under a Nationwide Permit (NWP).  Surveys completed October, November, and December 2020 and October and November 2021.
Wetland Water Quality Certification – Section 401	WDNR	To be filed concurrently with PSCW CPCN Application (Joint Application process).
Utility Wetland and Structure/Bridge General Permit	WDNR	Concurrent with above - all filed under the WDNR's Water Resources Application for Project Permits (WRAPP).
Wisconsin Pollutant Discharge Elimination System (WPDES) Construction Site Storm Water Runoff General Permit No. WI-S067831	WDNR	Final application filed following receipt of CPCN order from PSCW and final design is completed.
State Endangered Resource (ER) Review	WDNR	ER Review sent to agency on 1/3/2022
Archaeological and Cultural Resource Coordination	PSCW/Wisconsin State Historical Society (WHS)	Database review completed 7/1/2020.  Field surveys completed December 2020 and November 2021.

## 7. Proposed Project Schedule

Portage Solar expects to file its CPCN application mid to late March of 2022. Portage Solar then anticipates receiving the required regulatory approvals by late-2022. Construction is anticipated to begin as early as Q4 2023 and be completed by late 2024.



Figure No.

1

Title

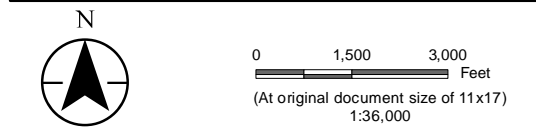
**Project Location and Aerial Overview**

Client/Project  
Portage Solar, LLC  
Portage Solar

193708026

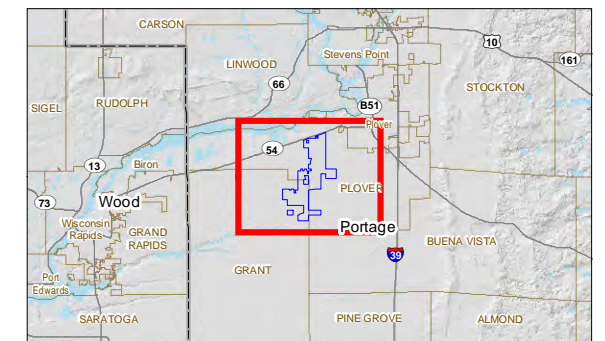
Project Location  
T. of Grant and Plover,  
Portage Co., WI

Prepared by JM on 2022-01-06  
TR by DG on 2022-01-06  
IR by XX on 2022-XX-XX



Legend

- Project Area
- Existing Substation
- DNR 24k Hydrography
  - Perennial Stream
  - Intermittent Stream
  - Waterbody



- Notes**
1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet
  2. Data Sources: Stantec, WisDOT, WDNR
  3. Background: NAIP 2020



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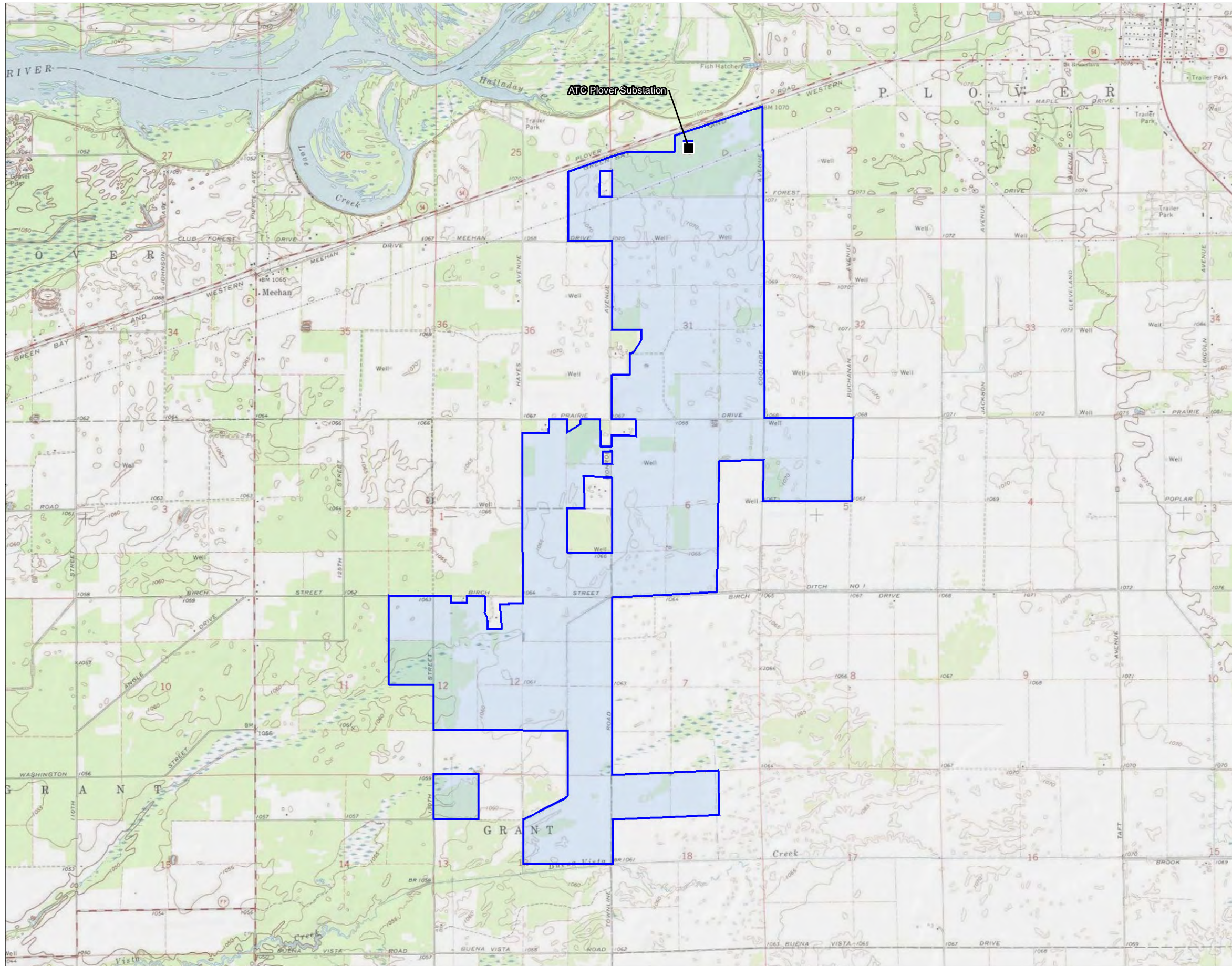
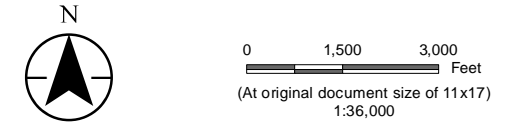


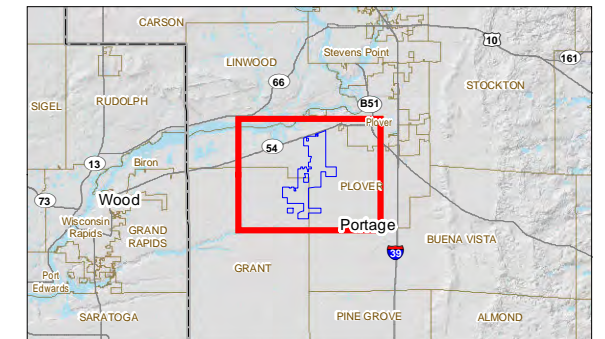
Figure No. **2**  
Title **Project Location and Topography**

Client/Project **Portage Solar, LLC** 193708026  
**Portage Solar**

Project Location **T. of Grant and Plover, Portage Co., WI** Prepared by JM on 2022-01-06  
TR by DG on 2022-01-06  
IR by XX on 2022-XX-XX



- Legend
- Project Area
  - Existing Substation



- Notes
1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet
  2. Data Sources: Stantec, WisDOT, WDNR
  3. Background: USGS 7.5' Topographic Quadrangles



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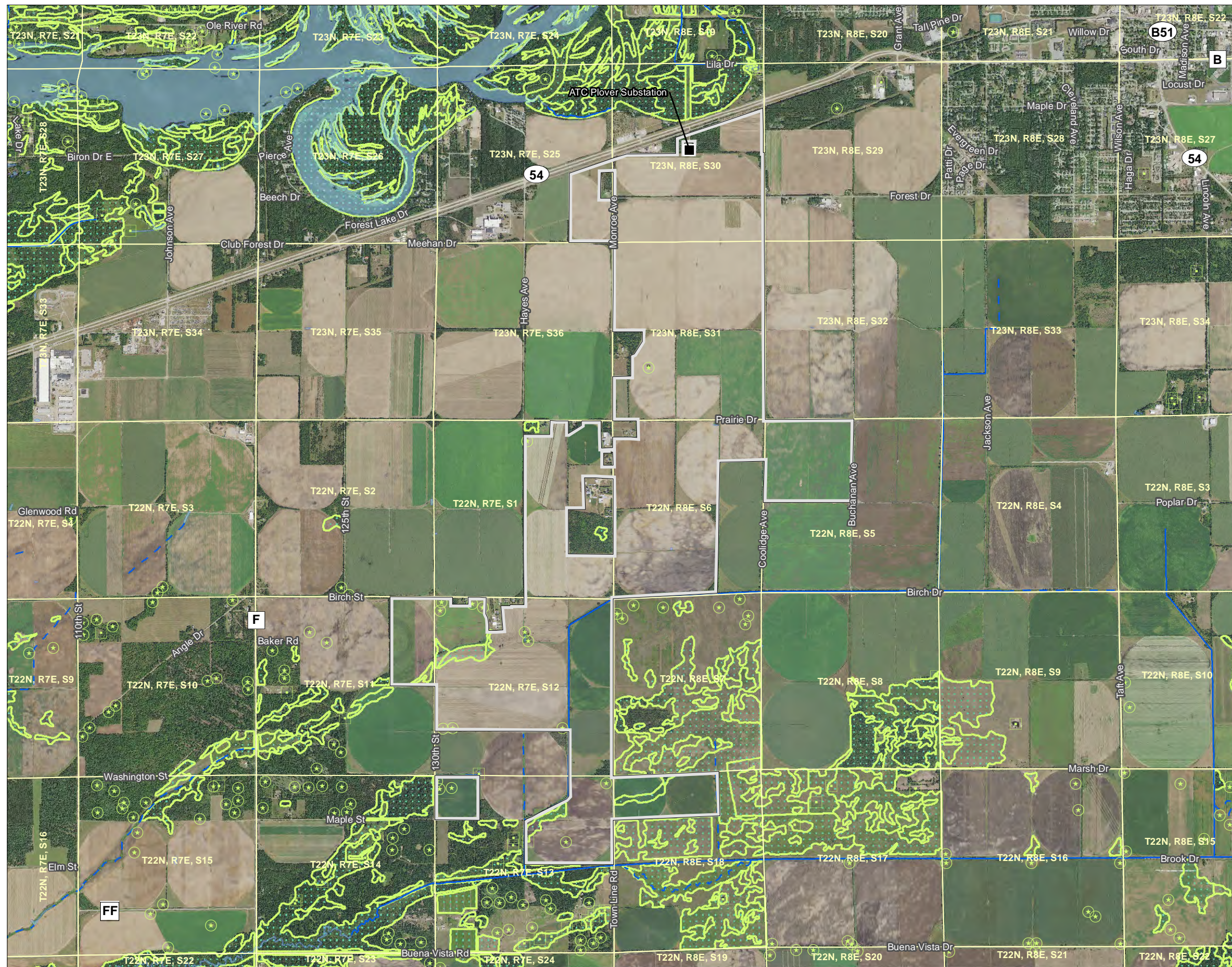


Figure No.

**3**

Title

**Water Resources**

Client/Project  
Portage Solar, LLC  
Portage Solar

193708026

Project Location  
T. of Grant and Plover,  
Portage Co., WI

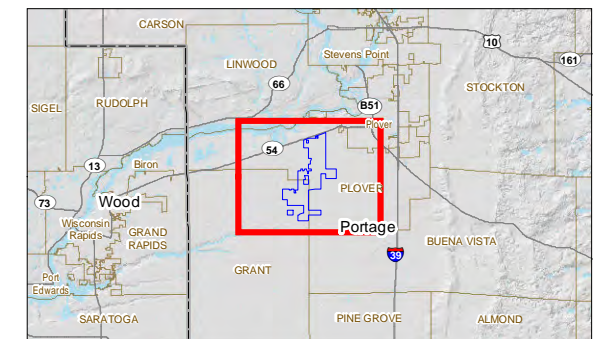
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Feet  
(At original document size of 11x17)  
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Legend

- Project Area
- Existing Substation
- WWI Wetland Class Points
  - Excavated Pond
  - Wetland Too Small to Delineate
- WWI Wetland Class Areas
  - Wetland
- DNR 24k Hydrography
  - Perennial Stream
  - Intermittent Stream
  - Waterbody



- Notes
1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet
  2. Data Sources: Stantec, WisDOT, WDNR
  3. Background: NAIP 2020



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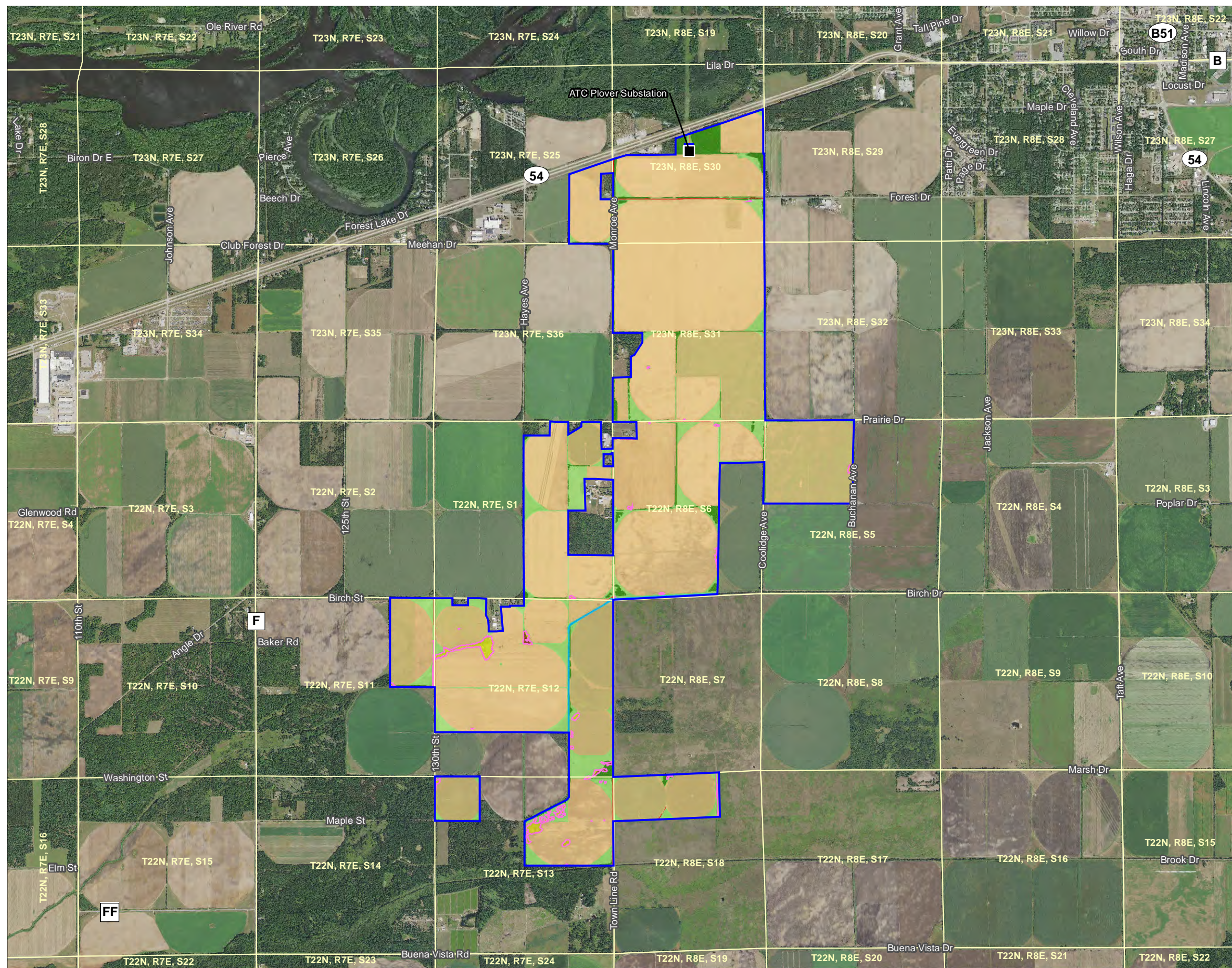


Figure No.

4

Title

Landcover

Client/Project  
Portage Solar, LLC  
Portage Solar

193708026

Project Location  
T. of Grant and Plover,  
Portage Co., WI

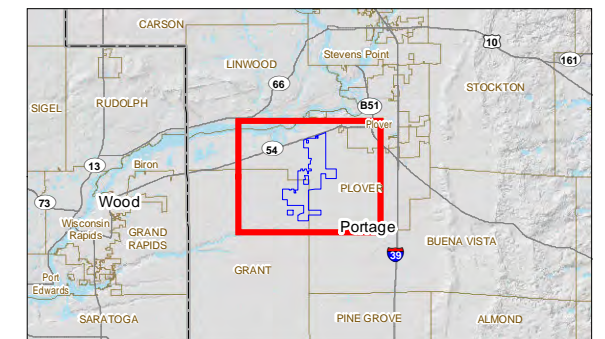
Prepared by JM on 2022-01-06  
TR by DG on 2022-01-06  
IR by XX on 2022-XX-XX



0 1,500 3,000  
Feet  
(At original document size of 11x17)  
1:36,000

Legend

- Project Area
- Existing Substation
- Field Delineated Waterway
- Field Delineated Wetland
- Landcover**
- Cropland
- Developed (Non-Residential)
- Developed (Residential)
- Forested Wetland
- Grassland
- Non-Forested Wetland
- Open Water
- Upland Woodland



Notes

1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet
2. Data Sources: Stantec, WisDOT, WDNR
3. Background: NAIP 2020





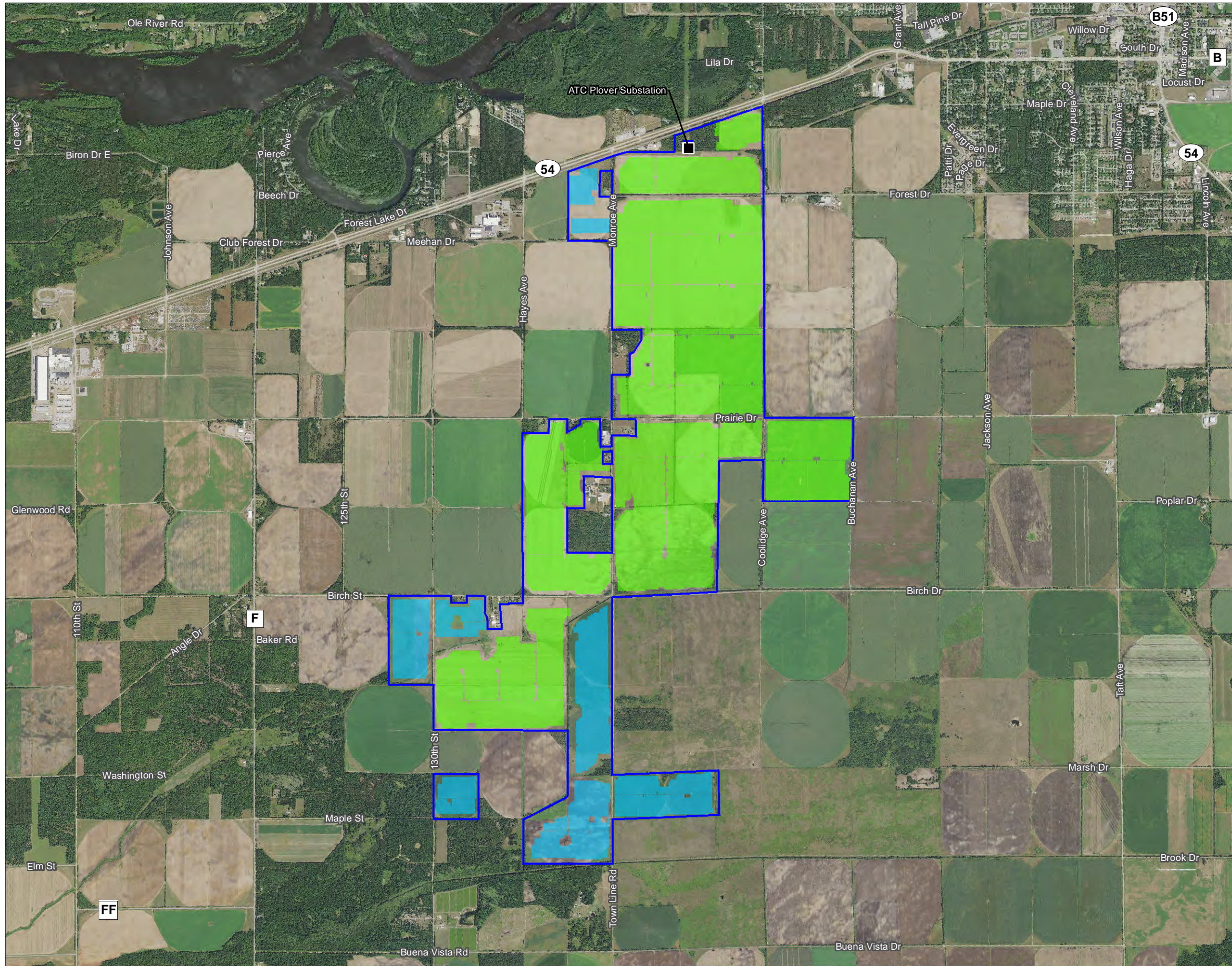


Figure No.

**5**

Title

**Layout Overview**

Client/Project  
**Portage Solar, LLC**  
 Portage Solar

193708026

Project Location  
 T. of Grant and Plover,  
 Portage Co., WI

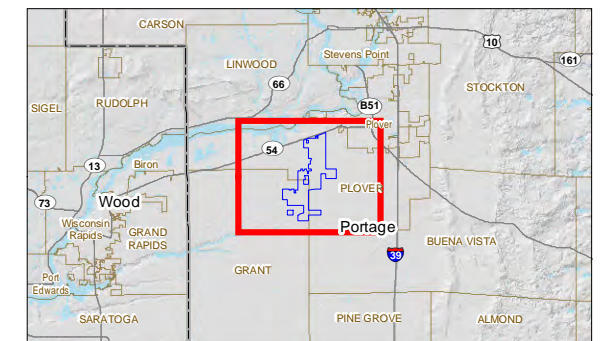
Prepared by JM on 2022-01-06  
 TR by DG on 2022-01-06  
 IR by XX on 2022-XX-XX



0 1,500 3,000  
 Feet  
 (At original document size of 11x17)  
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Legend

- Project Area
- Existing Substation
- Primary Array
- Alternate Array



- Notes**
1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet
  2. Data Sources: Stantec, WisDOT, WDNR
  3. Background: NAIP 2020



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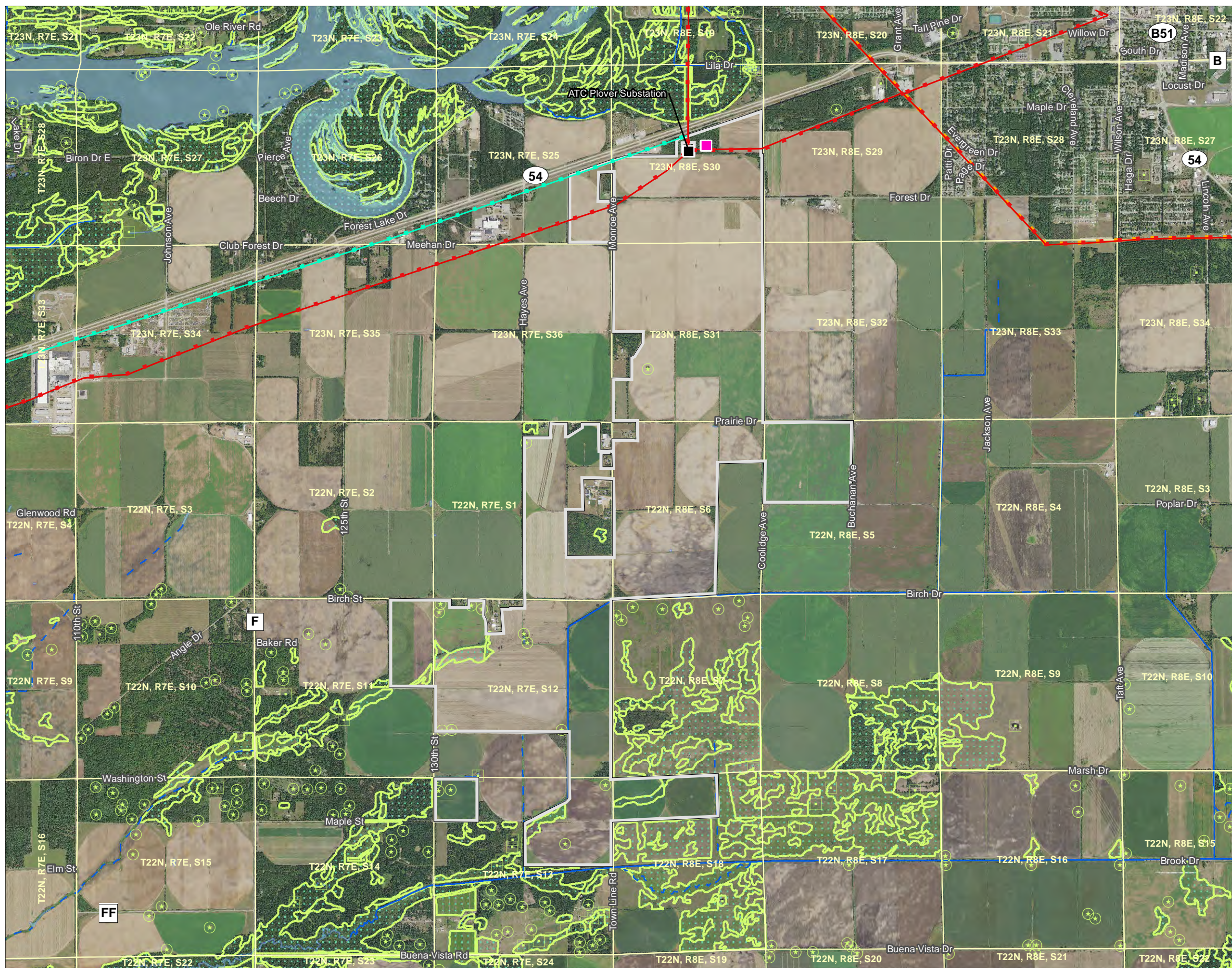


Figure No.

6

Title

### Existing Facilities

Client/Project  
Portage Solar, LLC  
Portage Solar

193708026

Project Location  
T. of Grant and Plover,  
Portage Co., WI

Prepared by JM on 2022-01-06  
TR by DG on 2022-01-06  
IR by XX on 2022-XX-XX

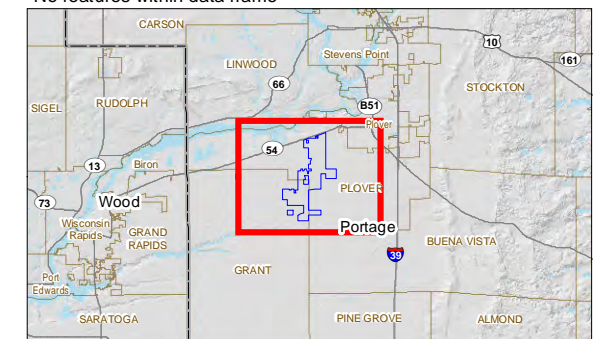


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(At original document size of 11x17)  
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### Legend

- Project Area
- Proposed Substation
- Existing Substation
- 0-69 kV Line
- 70-138 kV Line
- 231-345 kV Line
- Sensitive Receptors**
- Daycare Center\*
- Hospital / Polyclinic\*
- School / University\*
- WWI Wetland Class Points**
- Excavated Pond
- Wetland Too Small to Delineate
- WWI Wetland Class Areas**
- Wetland
- DNR 24k Hydrography**
- Perennial Stream
- Intermittent Stream
- Waterbody

\*No features within data frame



- Notes**
1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet
  2. Data Sources: Stantec, WisDOT, WDNR, PennWell
  3. Background: NAIP 2020

