

Exhibit C

Project Location and Maps

**Sunstone Solar Project
June 2023**

Prepared for



Sunstone Solar, LLC

Prepared by



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Acronyms and Abbreviations

Applicant	Sunstone Solar, LLC, a subsidiary of Pine Gate Renewables, LLC
Facility	Sunstone Solar Project
kV	kilovolt
O&M	operations and maintenance
OAR	Oregon Administrative Rule

1.0 Introduction

Sunstone Solar, LLC, a subsidiary of Pine Gate Renewables, LLC (Applicant), proposes to construct and operate the Sunstone Solar Project (Facility), a solar energy generation facility and related or supporting facilities in Morrow County, Oregon. This Exhibit C was prepared to meet the submittal requirements in Oregon Administrative Rule (OAR) 345-021-0010(1)(c).

The Facility will be a photovoltaic solar energy facility with an estimated nominal and average generating capacity¹ of 1,200 megawatts of alternating current. Other Facility components include a battery energy storage system, transmission line, underground electrical collection lines, collector substations, site access roads, operations and maintenance (O&M) buildings, and temporary construction areas. These facilities are all described in greater detail in Exhibit B.

2.0 General Location

OAR 345-021-0010(1)(c) Information about the location of the proposed facility, including:

(A) A map or maps showing the proposed locations of the energy facility site, all related or supporting facility sites and all areas that might be temporarily disturbed during construction of the facility in relation to major roads, water bodies, cities and towns, important landmarks and topographic features, using a scale of 1 inch = 2000 feet or smaller when necessary to show detail;

The Facility is located south of Interstate 84, entirely in north-central Morrow County, near Lexington, Oregon, as shown on the following maps:

- Figure C-1 is an overview map of the Facility, including county boundaries, nearby major roads, communities, and other recognizable features within approximately 20 miles of the Facility.
- Figure C-2 displays the Facility layout within the site boundary, including the locations of related or supporting facilities in relation to nearby cities and towns, county boundaries, existing public roads, and other geographic features. This proposed Facility layout represents the maximum scenario in terms of potential impacts.
- Figure C-3 displays other energy generation facilities that are known to be permitted at the state or local level within 10 miles of the site boundary.

The Applicant is requesting approval to site a range of photovoltaic energy generation and associated supporting facility technology within a micrositing corridor that is equivalent to the site boundary.

¹ Based on Oregon Revised Statutes 469.300(4) definition of average generating capacity for all energy facilities besides wind and geothermal.

3.0 Location and Disturbance Areas

OAR 345-021-0010(1)(c)(B) A description of the location of the proposed energy facility site, the proposed site of each related or supporting facility and areas of temporary disturbance, including the total land area (in acres) within the proposed site boundary, the total area of permanent disturbance, and the total area of temporary disturbance. If a proposed pipeline or transmission line is to follow an existing road, pipeline or transmission line, the applicant shall state to which side of the existing road, pipeline or transmission line the proposed facility will run, to the extent this is known; and

The site boundary includes approximately 10,960 acres of private land, encompassing the major Facility components and related or supporting facilities (see Exhibit B). The site boundary provides flexibility for micrositing the Facility and related and supporting facilities. The Applicant has negotiated land access agreements, as required, with the landowners. The site boundary encompasses some or all of the townships, ranges, and sections identified below (see Table C-1).

Table C-1. Township, Range, and Section within the Facility Site Boundary

Township	Range	Sections
1N	26E	1, 2, 3, 4, 5, 8, 9, 10, 11, 12, 14, 15
2N	26E	27, 28, 29, 30, 31, 32, 33, 34, 35, 36

The Facility will interconnect with the existing Umatilla Electric Cooperative 230-kilovolt (kV) Blue Ridge Line at the northwest corner of the facility, at the intersection of two unnamed gravel roads. The Facility will have at least six supporting substations each with a generator step-up transformer that will step up from 34.5-kV to 230-kV lines that will transport power to the two primary interconnection switchyards located at the point of interconnection. Overhead transmission lines will connect the six supporting substations to the two primary interconnection switchyards to the point of interconnection, with one portion of the overhead transmission line running along the east side of Bombing Range Road and south side of Alpine Lane. The remaining overhead transmission lines will not follow an existing road, pipeline, or transmission line.

Table C-2 provides a maximum impact scenario for temporary and permanent acreage impacts from all Facility components. Table C-2 presents the impact by disturbance type. However, some disturbance types may overlap by the nature of their development. Therefore, the last row in the table provides the disturbance area for the Facility with all development overlap removed. For purposes of analysis, the Applicant considered a solar array that will occupy approximately 9,442 acres enclosed within 20 separately fenced areas within the site boundary, using the proposed solar technology described in Exhibit B. This entire solar array area is considered permanently disturbed and includes all solar components (i.e., modules, inverters, transformers, tracking systems, posts, underground collector lines, and other associated equipment), the battery energy storage system, portions of the transmission lines, new access roads, some of the substations, and the temporary construction areas. All other permanent impacts are listed as separate line items and include

permanent impacts from the battery energy storage system, the transmission lines, the new access roads, collector substations, and the O&M buildings; however, the total eliminates any overlap of features within the solar array area fence line. Note that the vegetation within the solar array area fence line will be retained and/or planted as described in Attachment P-4 to Exhibit P. Following revegetation, there will be residual wildlife and ecological value for the life of the Facility, and the area would be returned to agricultural use or as directed by the landowner upon retirement (see Exhibit B for further information).

Any temporary disturbance impacts will only occur outside of the solar array area fence line and include temporary impacts from the underground collector lines, transmission lines, and perimeter fencing.

This layout represents the maximum scenario for purposes of analyzing land use impacts (described in detail in Exhibit K).

Table C-2. Estimated Temporary and Permanent Disturbance

Disturbance Type	Temporary (Acres)	Permanent (Acres)
Solar Array Area ¹	-	9,441.2
Collector Lines (aboveground) ²	0	0.008
Collector Lines (underground) ²	9.6	-
Battery Energy Storage System ³	-	51
Transmission Line (230 kV) ⁴	8.0	.00007
Permanent New Roads ⁵	-	88.1
Collector Substations/Switchyards ⁶	-	12.6
Construction Areas ⁷	-	-
O&M Buildings ⁸	-	11.2
Perimeter Fence Line ⁹	46.7	Included in the solar array fence line area and substation areas
Total¹⁰	64.3	9,442.0

Notes:

1. Approximately 20 solar array fence line areas are proposed: the area within the fence line including all solar components (i.e., modules, inverters, transformers, tracking systems, posts, portions of the collector lines, and other associated equipment), as well as the following supporting facilities: the battery energy storage system, portions of the transmission lines, new access roads, some of the substations, and the temporary constructions areas. Permanent impacts for each component are listed separately; however, the total eliminates any overlap of features within the fence line.
2. Temporary impact assumes a 50-foot temporary disturbance corridor for all collector lines. Overhead collector line disturbance amounts include the support poles. Assumes 14-inch-diameter permanent disturbance from the poles and approximately 150-foot spans between poles. Assumes 81.7 miles of underground 34.5-kV collector line and 4.3 miles of aboveground 34.5-kV collector line (located both inside and outside the solar array fence line area).
3. The battery energy storage system will either be distributed throughout the solar array or concentrated in a single area near the switchyards. For purposes of the analysis in this ASC, it is assumed that battery energy storage system containers will be collocated with the inverters and transformers sites, occupying approximately 0.2 to 0.4 acre each.
4. Overhead transmission line disturbance amounts include the support poles. Assumes a 200-foot temporary disturbance corridor plus pulling/tension areas and 3.1 square foot permanent disturbance from the poles (assumes 2 posts for an H-frame structure), 41 structures total. Assumes approximately 1,000-foot spans between poles. Approximately 9.5 miles of 230-kV line

Disturbance Type	Temporary (Acres)	Permanent (Acres)
total, interconnecting the collector substations to the switchyards and then to the existing Umatilla Electric Cooperative 230-kV Blue Ridge Line. Located both inside and outside the solar array fence line area.		
5. New access roads are assumed to be up to 20 feet in width in general; all new roads are inside the solar array fence line area. Assumes 55 miles of new permanent roads.		
6. The six collector substations and one switchyard are fenced separately from and either within or adjacent to the solar array fence line area and include a surrounding gravel area and other associated components. All substations will occupy approximately 1.6 acres each and the switchyard will occupy 3 acres.		
7. Disturbance is calculated from the 54 construction areas, up to 5 acres each, inside the solar array fence line area.		
8. Assumes four O&M buildings, including parking, any adjacent storage, and surrounding graveled area (including an underground septic system; totaling 2.8 acres each), that are inside the solar array fence line area.		
9. This is the solar array fence line area perimeters as well as the substation perimeters and assumes a 6-foot temporary disturbance corridor on the outer side of the fence multiplied by the linear footage of fence for temporary workspace to install the fence. The narrow footprint of the fence is considered part of the permanently disturbed solar array area and substation area. Assumes an approximate total of 58 miles of fence, located inside the solar array fence line area.		
10. Totals eliminate any overlap of features (e.g., overlapping temporary workspace, disturbance types within the fence line).		

As noted above, the Applicant requests micro-siting flexibility within the site boundary to site the Facility and related and supporting facilities using the most efficient and effective equipment and layout possible at the time of final design. The site boundary provides the limits of the area that may be temporarily or permanently disturbed during construction of the facility. Because this analysis uses the largest anticipated footprint for the Facility, the final equipment and layout selected will not exceed the impacts analyzed. Resource surveys have been conducted for the site boundary where components of the solar arrays will be sited. See Exhibits J, P, Q, and S for details regarding wetland, biological, and cultural surveys. The solar arrays and supporting facilities will be micro-sited during the final design to avoid or minimize adverse impacts to resources to the extent practicable. Native habitat cover within the site boundary will be retained to the extent practicable.

4.0 Relation to Other Energy Generation Facilities

OAR 345-021-0010(1)(c)(C) For energy generation facilities, a map showing the approximate locations of any other energy generation facilities that are known to the applicant to be permitted at the state or local level within the study area as defined in OAR 345-001-0010 for impacts to public services.

Figure C-3 displays the location of the Facility in relation to other energy generation facilities that are known to the Applicant to be permitted at the state or local level within 10 miles of the Facility site boundary. These include six wind projects: the recently operational Wheatridge Renewable Energy Facilities I and II (both adjacent to the Facility), the approved Wheatridge Renewable Energy Facility East, the operational Echo Wind Farm, the operational Threemile Canyon Wind Project, and the operational Orchard Wind Farm. Additionally, Wheatridge Renewable Energy Facility III, a recently operational solar project, and the proposed Wagon Trail Solar Project are also adjacent to the Facility. A total of 15 in-service transmission lines and one proposed transmission

line are within 10 miles. Three in-service transmission lines run along roads that are near or upon the Facility site boundary, including Oregon Route 207, which passes through the site. In addition, a proposed transmission line passes through parts of the Facility site boundary. Lastly, the proposed Harp Solar Project, closed Boardman Coal Plant, operational Carty Generating Station (natural gas plant/solar), and Finley Butte Renewable Energy Facility are all within 10 miles.

5.0 Submittal Requirements and Approval Standards

5.1 Submittal Requirements

Table C-3. Submittal Requirements Matrix

Requirement	Location
OAR 345-021-0010(1)(c) Information about the location of the proposed facility, including:	
(A) A map or maps showing the proposed locations of the energy facility site, all related or supporting facility sites and all areas that might be temporarily disturbed during construction of the facility in relation to major roads, water bodies, cities and towns, important landmarks and topographic features, using a scale of 1 inch = 2000 feet or smaller when necessary to show detail;	Section 2.0; Figures C-1, C-2
(B) A description of the location of the proposed energy facility site, the proposed site of each related or supporting facility and areas of temporary disturbance, including the total land area (in acres) within the proposed site boundary, the total area of permanent disturbance, and the total area of temporary disturbance. If a proposed pipeline or transmission line is to follow an existing road, pipeline or transmission line, the applicant shall state to which side of the existing road, pipeline or transmission line the proposed facility will run, to the extent this is known; and	Section 3.0
(C) For energy generation facilities, a map showing the approximate locations of any other energy generation facilities that are known to the applicant to be permitted at the state or local level within the study area as defined in OAR 345-001-0010 for impacts to public services.	Section 4.0; Figure C-3

5.2 Approval Standards





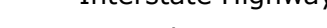




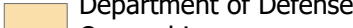
OAR 345 Division 22 does not provide an approval standard specific to Exhibit C.

Figures

Sunstone Solar Project

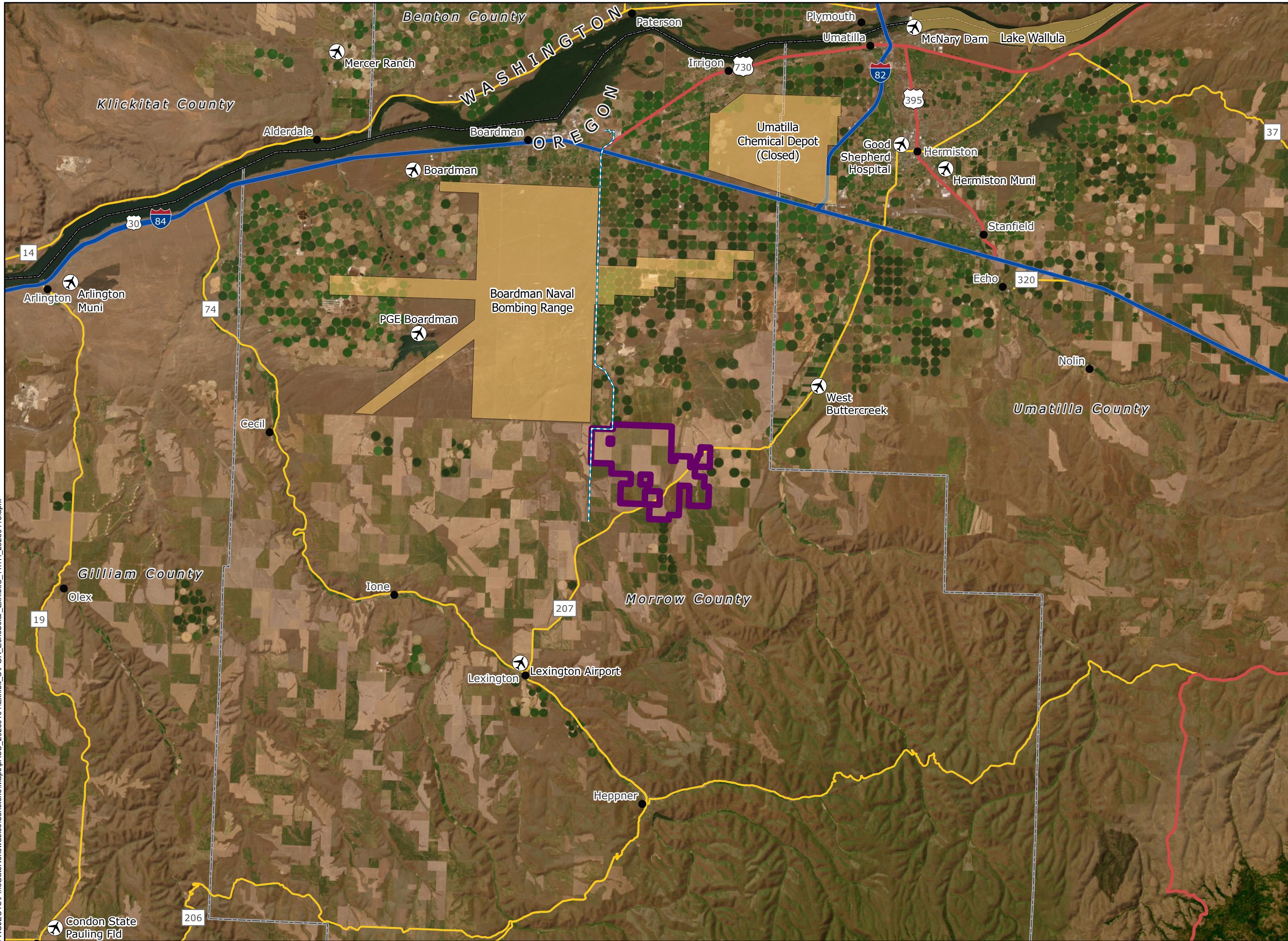
Figure C-1 Vicinity Map

MORROW COUNTY, OR

-  Site Boundary
-  City/Town
-  County Boundary
-  State Boundary
-  Interstate Highway
-  US Highway
-  State Highway
-  Existing UEC Transmission Line
-  Airports
-  Department of Defense Ownership



Reference Map








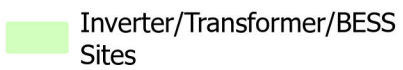










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Sunstone Solar Project

Figure C-2 Facility Layout

MORROW COUNTY, OR

-  Site Boundary
-  Map Grid
-  Fence Line (Maximum)
-  Collection Line (34.5-kV)
-  Transmission Line (230-kV)
-  Access Road
-  Solar Array
-  Inverter/Transformer/BESS Sites
-  Laydown Yard
-  O&M Area
-  Switchyard
-  Collector Substation
-  State Highway
-  County Highway
-  Local Roads
-  In Service Transmission Line



Reference Map



Figure 2.1

Figure 2.3

Figure 2.2

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WGS 1984 UTM Zone 11N









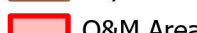

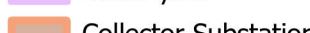
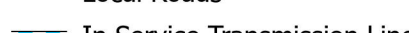
0 0.5 1 2 3 4 Miles

NOT FOR CONSTRUCTION

Sunstone Solar Project

Figure C-2.1 Facility Layout

MORROW COUNTY, OR

-  Site Boundary
-  Fence Line (Maximum)
-  Collection Line (34.5-kV)
-  Transmission Line (230-kV)
-  Access Road
-  Solar Array
-  Inverter/Transformer/BESS Sites
-  Laydown Yard
-  O&M Area
-  Switchyard
-  Collector Substation
-  Local Roads
-  In Service Transmission Line

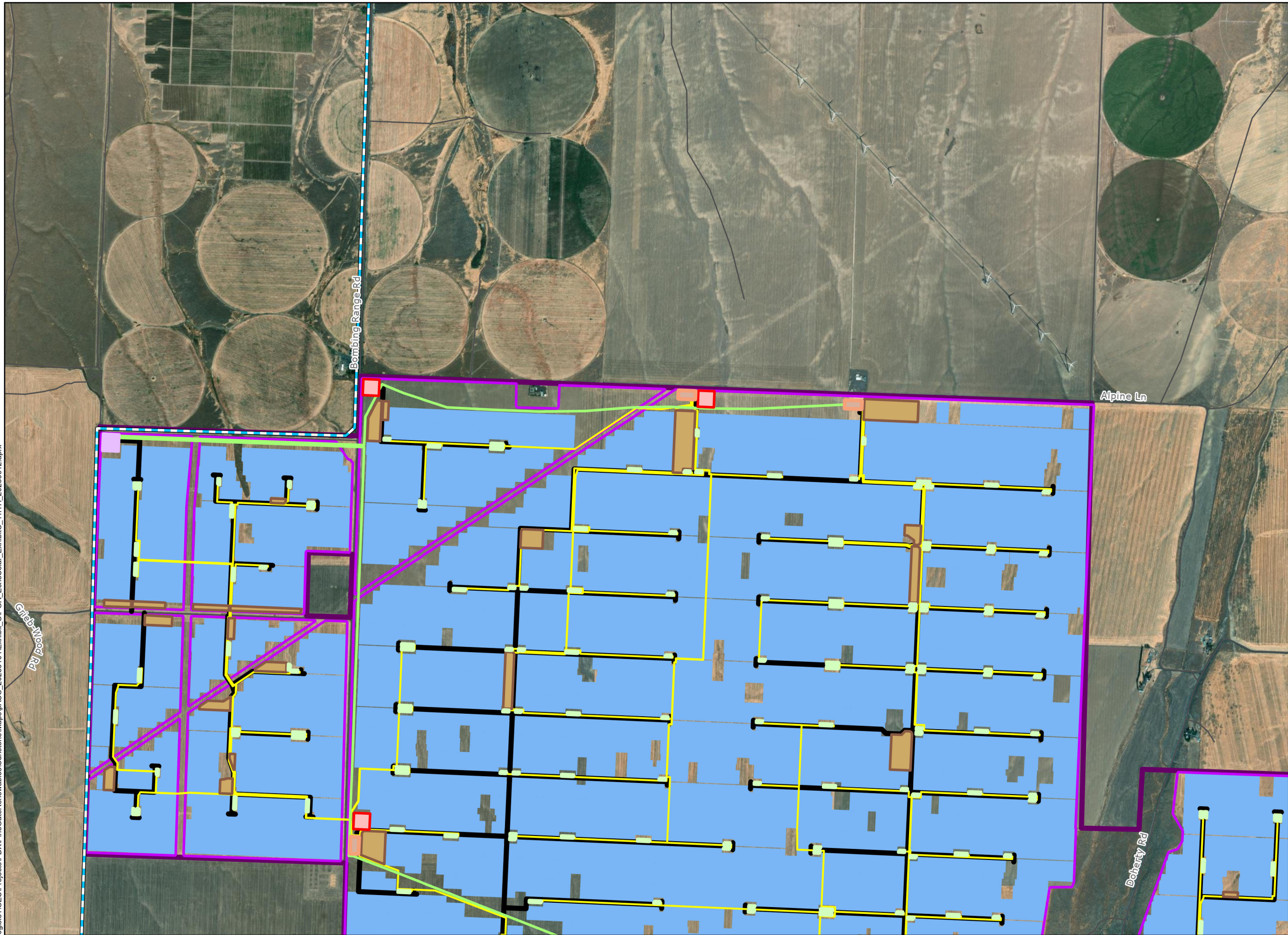


Reference Map

Figure 2.1

Figure 2.3

Figure 2.2

















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Sunstone Solar Project

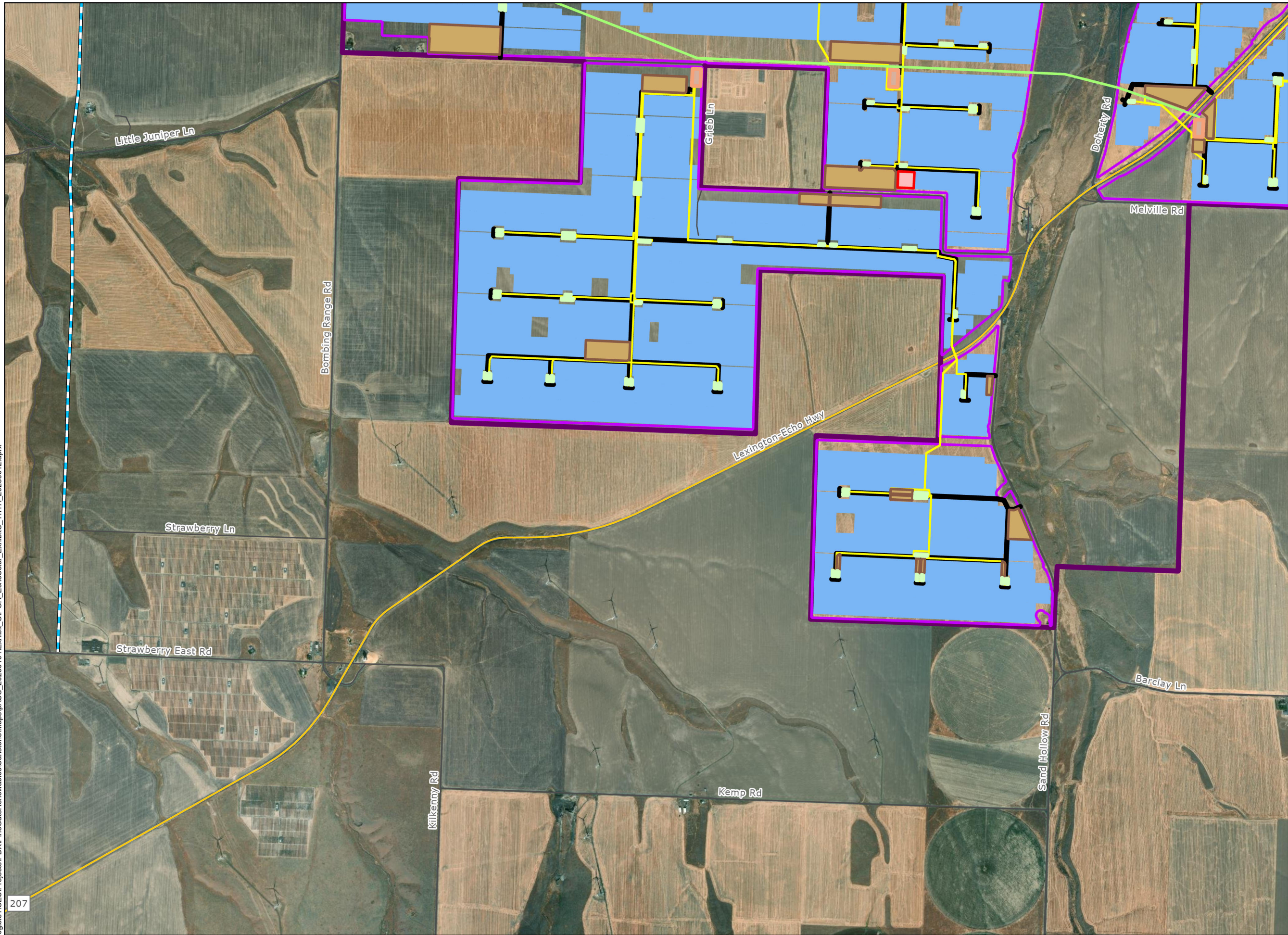
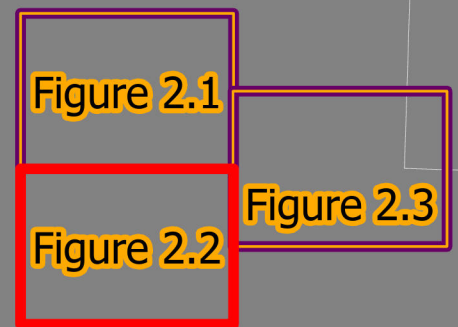
Figure C-2.2 Facility Layout

MORROW COUNTY, OR

-  Site Boundary
-  Fence Line (Maximum)
-  Collection Line (34.5-kV)
-  Transmission Line (230-kV)
-  Access Road
-  Solar Array
-  Inverter/Transformer/BESS Sites
-  Laydown Yard
-  O&M Area
-  Switchyard
-  Collector Substation
-  State Highway
-  Local Roads
-  In Service Transmission Line



Reference Map



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Sunstone Solar Project

Figure C-2.3 Facility Layout

MORROW COUNTY, OR

- Site Boundary
- Fence Line (Maximum)
- Collection Line (34.5-kV)
- Transmission Line (230-kV)
- Access Road
- Solar Array
- Inverter/Transformer/BESS Sites
- Laydown Yard
- O&M Area
- Switchyard
- Collector Substation
- State Highway
- Local Roads
- In Service Transmission Line



Reference Map

Figure 2.1

Figure 2.2

Figure 2.3

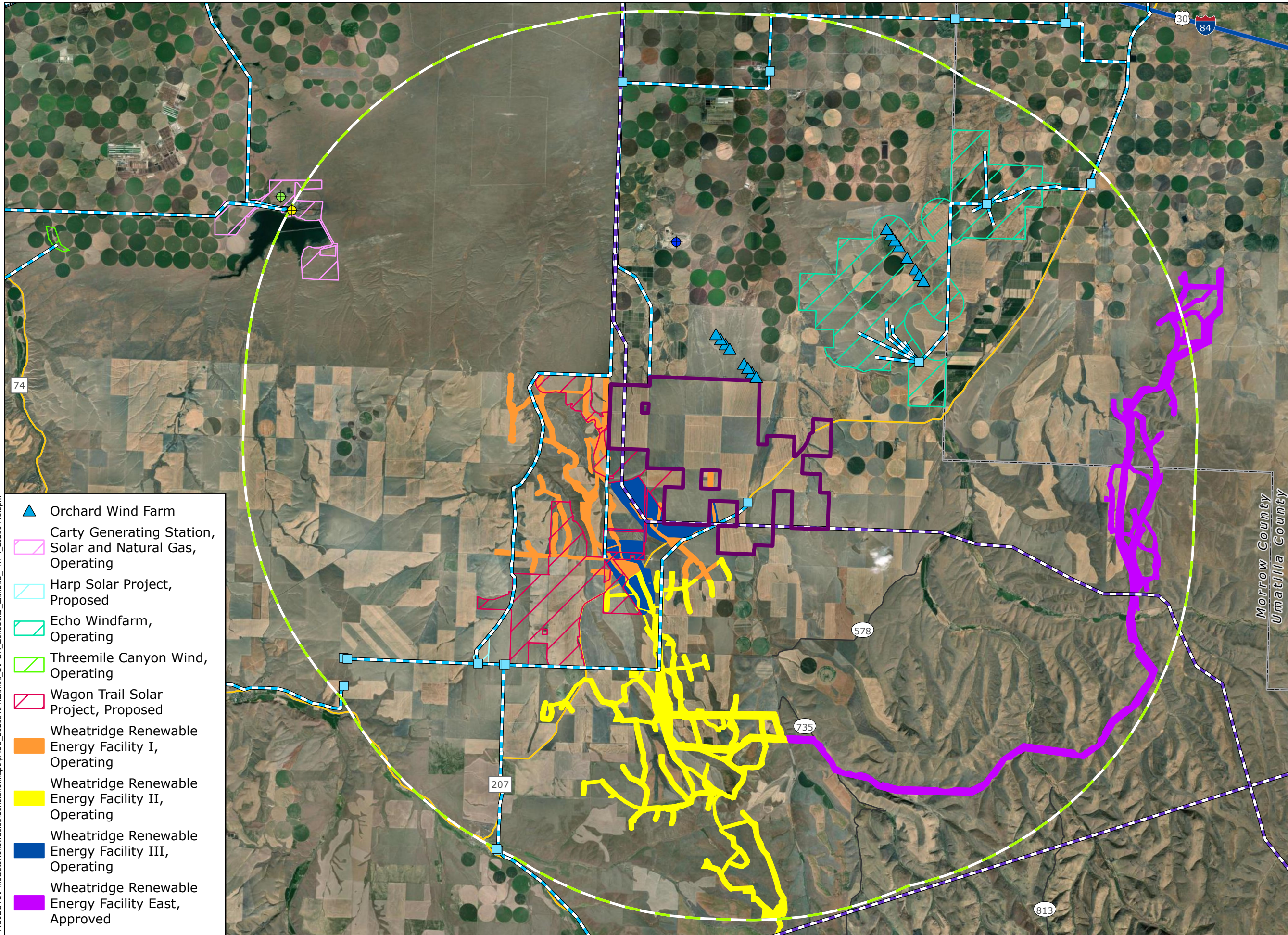


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Sunstone Solar Project

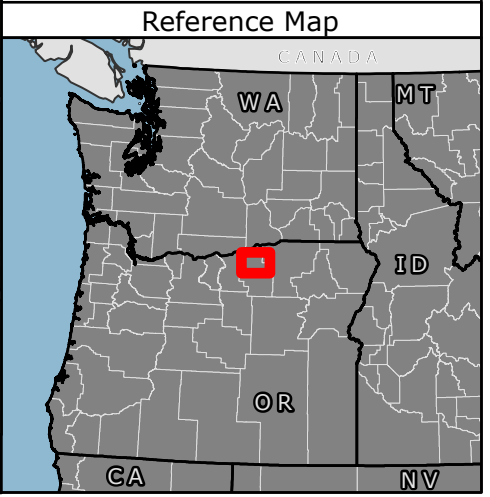
Figure C-3 Energy Facilities Within 10 Miles

MORROW COUNTY, OR



- Site Boundary
- Analysis Area (10-mile Buffer)
- Interstate Highway
- US Highway
- State Highway
- County Highway
- County Boundary
- Substation
- Natural Gas Power Plant
- Boardman Coal Plant (Closed)
- Finley Butte Renewable Energy Facility
- Transmission Line
- In Service
- Proposed

- Orchard Wind Farm
- Carty Generating Station, Solar and Natural Gas, Operating
- Harp Solar Project, Proposed
- Echo Windfarm, Operating
- Threemile Canyon Wind, Operating
- Wagon Trail Solar Project, Proposed
- Wheatridge Renewable Energy Facility I, Operating
- Wheatridge Renewable Energy Facility II, Operating
- Wheatridge Renewable Energy Facility III, Operating
- Wheatridge Renewable Energy Facility East, Approved



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