

## **Site Coverage Calculations**

### **PLP16-0055**

#### **1. Area of Solar Arrays**

The proposed solar farm consists primarily of solar panel arrays arranged on a north-south axis. Each array supports multiple solar modules mounted on a bar that can rotate from east to west to track the Sun's movement throughout the day. The rotating bars sit atop galvanized steel posts.

Our engineers have proposed installing approximately 8,064 solar modules. According to specifications for potential modules, each unit would measure approximately 994 mm by 1958 mm. An individual module would therefore measure approximately 1,946,252 square millimeters (approximately 20.949 square feet)

Calculation:

Array coverage:  $20.949 \times 8,064 = 168,933$  square feet (3.88 acres)

#### **2. Solar Facility Support Features**

The following non-agricultural features would be constructed at the site:

##### **a. Internal Access Road**

A 20-foot wide gravel access road, consisting of existing onsite materials or a blend of existing and imported materials, would run from the northern site entrance to the center of the project. The road would run approximately 1,110 feet.

Road Coverage:  $1,110 \times 20 = 22,200$  square feet

##### **b. Switchgear Pads**

A switchgear pad for each one-megawatt system would support transformers, plant control and other related equipment. Each pad would measure approximately 51 x 12 feet.

Switchgear pad coverage:  $(51 \times 12) \times 2 = 1,224$  square feet.

##### **c. Solar Array Posts**

The mounting support structures typically consist of metal pipe pile or beam foundations that measure 4 to 6 inches in diameter. The beams would be driven into the soil using a pile/vibratory/rotary driving technique similar to that used to

install freeway guardrails. Based on preliminary site plans, the racking system will require approximately 165 posts to support the arrays.

Solar Array Posts Calculation:  $165 \times (6 \times 3.14) = 3,110$  square feet

**Total Converted Land**

Road:	22,200	
Switchgear pads:	1,224	
Array posts:	3,110	
Total:	26,534	(0.61 acres)