

## 3.2 Aesthetics and Visual Resources

This section provides a description of the existing visual and aesthetic resources within the project area and relevant state and local plans and policies regarding the protection of scenic resources. Effects to the existing visual character of the project area as a result of project-related facilities are considered and mitigation is proposed based on the anticipated level of significance. The information provided in this section is summarized from the Visual Resources Technical Report (Appendix B of this EIR) and Glare Hazard Analysis Report (Appendix C of this EIR) prepared by Stantec.

### 3.2.1 Existing Conditions

The project site is located north-northeast of the intersection of Wilkins Road and an unnamed county road, about 3 miles north of the unincorporated town of Niland. Niland is the northernmost community within the agricultural portion of the Imperial Valley, which extends from the southeastern portion of the Salton Sea to the United States and Mexico border. The 45-mile-long and 20-mile-wide Salton Sea defines the landscape to the west of the project site. Elevations within the project site range from nearly 50 feet below sea level to 30 feet above mean sea level (amsl). With elevations extending to 277 feet below sea level, the Salton Sea sits comparatively lower in the landscape than the project site, as does much of the agricultural land to the immediate west and lands to the south. To the north and east of the project site are the Chocolate Mountains, which extend to heights of more than 2,000 feet amsl.

Because of this gradual downward slope from east to west within the project site and its surroundings, areas to the north and east of the project site would be more likely to have views of the project where views are not impeded by natural or built features. Viewers in this area are associated with land uses. Thus, potential viewers include workers traveling north/south on Gas Line Road, which extends north from Niland Avenue – near IID facilities and an existing solar power facility – to a facility northeast of the project site. Further away, to the southeast and just slightly higher in elevation than the project site, are Slab City and Salvation Mountain. Slab City is a former military facility that now serves as the site of an informal community for artists, travelers, and winter-time recreational vehicle (RV) campers. Salvation Mountain is an outdoor art project at the western entrance to Slab City. Both attract tourists and sight-seers. However, topography, intervening structures, and distance limit and obscure visibility of the project site in direct views from publicly accessible portions of these areas.

Land uses to the west and south include agricultural production and dispersed rural residences, and desert lands. The closest residences are aligned along Wilkins Road and an unnamed private road. The segments of these roads closest to the southwest corner of the project site are generally lower in altitude than the project site by approximately 20 feet, which reduces visibility of the project site. Areas further away – including the aforementioned IID facilities approximately 2 miles to the south, Niland and the State Route (SR) 111 corridor approximately 3 miles to the southwest, and the Wister Waterfowl Management Area approximately 3 miles to the west beyond the SR 111 corridor – are also lower in elevation, and thus do not afford direct views of the project site from public vantage points.

Views in this area are expansive and are generally characterized by sparse development framed by topographical features. Low-profile, weedy plants, such as salt cedar and russian thistle, typical of this portion of the Colorado Desert, are widespread on undeveloped and unfarmed lands, and ruderal vegetation is found along waterways associated with IID canals. Individual residences, transmission lines, transportation corridors (including roads and railroads), and agricultural equipment are discernable in the foreground (within 0.25 mile) and middleground (0.25 to 3-5 miles away) views

throughout the area. Geothermal plants in the vicinity of the Salton Sea are visible in most views to the west. They are identifiable by their vapor plumes. These views to the west from the project site are backdropped by the Santa Rosa Mountains and Vallecito Mountains. Views to the east are backdropped by the Chocolate Mountains.

### *Scenic Vista*

Scenic vistas are typically expansive views from elevated areas. They may or may not be part of a designated scenic overlook or other area providing a static vista view of a landscape. The project site is located in a rural portion of Imperial County and is not located within an area containing a scenic vista designated by the State or the County's General Plan.

### *Scenic Highways*

According to the Conservation and Open Space Element, no State scenic highways have been designated in Imperial County (County of Imperial 2016). The project site is not located within a state scenic highway corridor, nor are there any state scenic highways located in proximity to the project site. The nearest road segment considered eligible for a State scenic highway designation is the portion of SR 111 from Bombay Beach to the County line. The project site is located approximately 14 miles southeast of Bombay Beach and so would not be visible from this location.

### *Visual Character*

Aerial imagery was reviewed to identify where the project would potentially be visible from visually sensitive areas and selected preliminary viewpoints for site photography. Field surveys were conducted to photo-document existing visual conditions and views toward the project site. A representative subset of photographed viewpoints was selected as Key Observation Points (KOP). Assessments of existing visual conditions were made based on professional judgment that took into consideration sensitive receptors and sensitive viewing areas in the project area. The locations of the two KOPs in relation to the project site are presented on Figure 3.2-1.

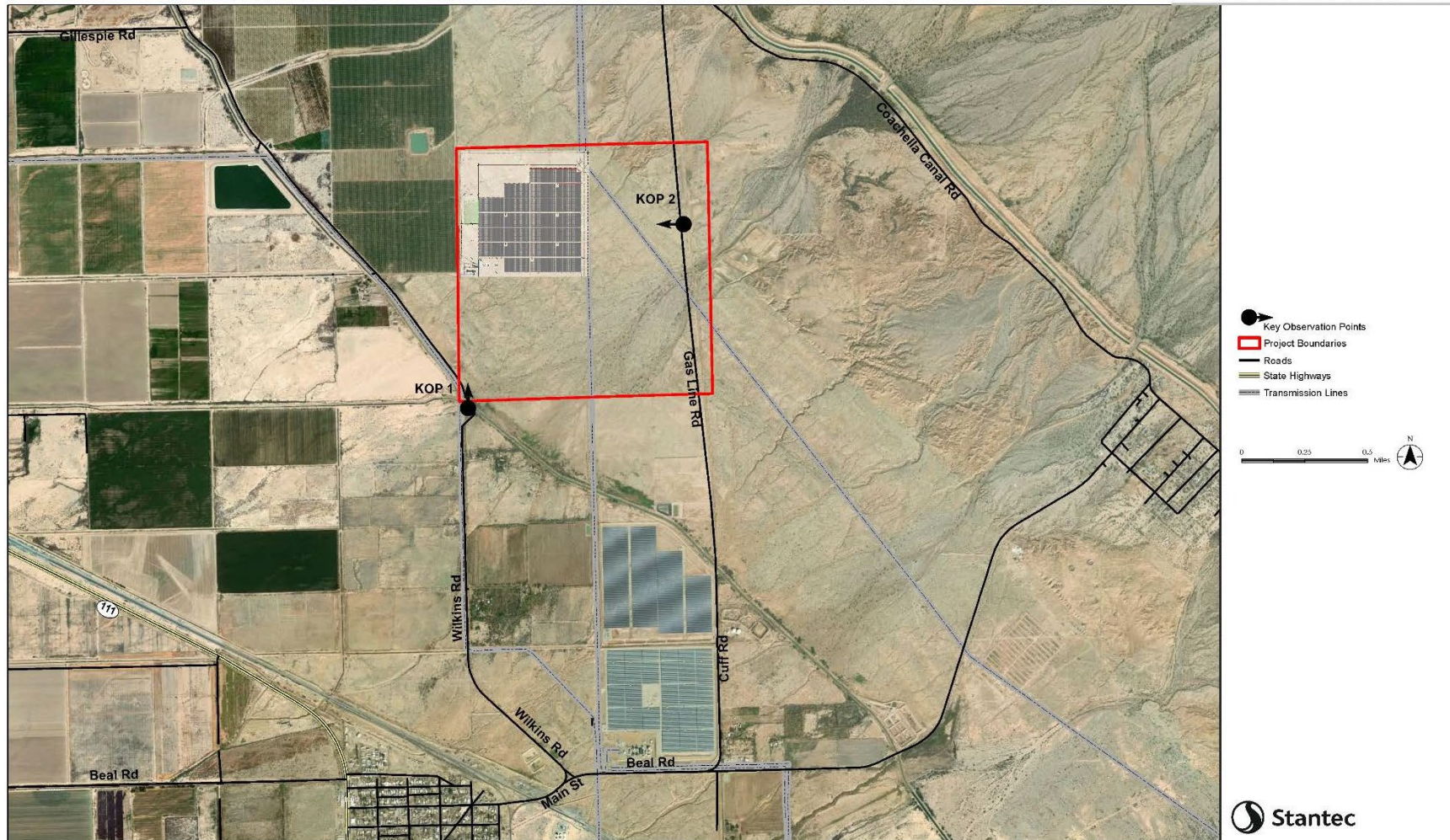
#### **KEY OBSERVATION POINT 1**

KOP 1 is located along Wilkins Road, at its intersection with an unnamed private road, adjacent to the southwest corner of the project site. The view from KOP 1 is to the north, toward the proposed project's solar arrays and substation (Figure 3.2-2).

This viewpoint represents views from an identifiable point along the most proximate roadway, where topography allows visibility of the project site. This view is characterized by the contrast between the vegetated and relatively flat area in the foreground and middleground of the view and Chocolate Mountains backdrop, which appears multi-colored and defines the skyline with its jagged and irregular form.

The tree in the center of the view, as well as other vegetation, partially blocks views toward the project site. A utility tie-in pole is visible on the far side of Wilkins Road in the left half of the view.

Figure 3.2-1. Key Observation Points



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**Figure 3.2-2. Existing View at Key Observation Point 1**



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## KEY OBSERVATION POINT 2

KOP 2 is located along Gas Line Road, 2.2 miles north of Beal Road and just under 0.5 mile east of the project site. Multiple transmission lines are visible extending across the view, with a tubular-steel pole in the immediate foreground and the H-frame towers appearing in front of the project site (Figure 3.2-3).

This viewpoint represents views from workers and travelers along the north-south oriented Gas Line Road as well and from the broader, slightly uphill area to the east. The view is characterized by the visible striations, or the layered qualities of what appear in view as linear elements. Beyond the project site is another transmission line, an orchard that appears linear in form from this vantage point, and the railroad and SR 111 corridor, which is not discernible in this view.

The Salton Sea appears here as a strip of royal blue hue across the middleground of most of the view, beyond which are the Santa Rosa and Vallecito Mountains. While jagged and uneven, the distant mountain skyline's linear qualities are accentuated in this view due to the layer of snow visible along numerous peaks and upper extents of the mountain. The gradual downward slope of the project site is apparent only by reference to further, observably lower elements in the view.

### *Light, Glare, and Glint*

Glare is considered a continuous source of brightness, relative to diffused light, whereas glint is a direct redirection of the sun beam in the surface of a PV solar module. Glint is highly directional, since its origin is purely reflective, whereas glare is the reflection of diffuse irradiance; it is not a direct reflection of the sun.

The project site is currently vacant and does not generate any light or glare. The majority of the light and glare in the project vicinity is a result of motor vehicles traveling on surrounding roadways, airplanes, and farm equipment. Local roadways generate glare both during the night hours when cars travel with lights on, and during daytime hours because of the sun's reflection from cars and pavement surfaces.

The Chocolate Mountains are located to the north and east of the project site. The Chocolate Mountain Aerial Gunnery Range is used by the United States Marine Corps (USMC) for training purposes.

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**Figure 3.2-3. Existing View at Key Observation Point 2**



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### 3.2.2 Regulatory Setting

This section identifies and summarizes laws, policies, and regulations that are applicable to the project.

#### *State*

##### **CALIFORNIA DEPARTMENT OF TRANSPORTATION**

Caltrans manages the California Scenic Highway Program. The goal of the program is to preserve and protect scenic highway corridors from changes that would affect the aesthetic value of the land adjacent to the scenic corridor.

#### *Local*

##### **IMPERIAL COUNTY GENERAL PLAN**

The Imperial County General Plan contains policies for the protection and conservation of scenic resources and open spaces within the County. These policies also provide guidance for the design of new development. The Conservation and Open Space Element of the General Plan provides specific goals and objectives for maintaining and protecting the aesthetic character of the region. Table 3.2-1 provides an analysis of the project's consistency with the Conservation and Open Space Element Goal 5. Additionally, the Circulation and Scenic Highways Element of the General Plan provides policies for protecting and enhancing scenic resources within highway corridors in Imperial County, consistent with the Caltrans State Scenic Highway Program.

##### **COUNTY OF IMPERIAL LAND USE ORDINANCE, TITLE 9**

The County's Land Use Ordinance Code provides specific direction for lighting requirements.

##### **Division 17: Renewable Energy Resources, Section 91702.00 – Specific Standards for All Renewable Energy Projects**

- (R) Lights should be directed or shielded to confine direct rays to the Project site and muted to the maximum extent consistent with safety and operational necessity.

**Table 3.2-1. Consistency with Applicable General Plan Conservation and Open Space Policies**

General Plan Policies	Consistency with General Plan	Analysis
<p>Goal 5: The aesthetic character of the region shall be protected and enhanced to provide a pleasing environment for residential, commercial, recreational, and tourist activity.</p>	<p>Consistent</p>	<p>As described in Section 3.2.3, in close views, the proposed project would be visible and identifiable, resulting in some changes to the existing visual character of the project site. However, such views of the proposed project would be limited in both duration and availability.</p> <p>The majority of the portion of the Imperial Valley where the project site is located is dedicated to agricultural production and power production and transmission. Desert lands are generally located north and east of the East Highline Canal. The project site is located on the eastern edge of active agricultural lands with desert lands located immediately to the east and beyond. The proposed project would not substantially degrade the existing visual character or quality of views as the limited views available to the project site would appear absorbed into the broader landscape that already includes agricultural development, electricity transmission, geothermal power plants, IID facilities and infrastructure, and existing utility-scale solar facilities. The proposed project would not result in a significant deterioration in the visual character of the project site or surrounding area.</p>
<p>Objective 5.1: Encourage the conservation and enhancement of the natural beauty of the desert and mountain landscape.</p>	<p>Consistent</p>	<p>The project site is located on the eastern edge of active agricultural lands with desert lands located immediately to the north and east and beyond. The solar arrays (up to 15 feet high at maximum rotation angle) would not create a permanent visual obstruction for the background views of the desert or Chocolate Mountains. The solar arrays would be relatively low profile in the context of the mountains in the background. The proposed project would be absorbed into the broader landscape that already includes agricultural development, electricity transmission, geothermal power plants, IID facilities and infrastructure, and existing utility-scale solar facilities. With their relatively low profile, and in the context of topographical conditions, the project would not obstruct views of desert or mountain areas to the north and east of the project site.</p>

Source: County of Imperial 2016

### 3.2.3 Impacts and Mitigation Measures

#### Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to aesthetics are considered significant if any of the following occur:

- Have a substantial adverse effect on a scenic vista
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway
- In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area

#### Methodology

##### **VISUAL CHANGE**

A comparison of the project site's existing conditions and the change to the visual character of the landscape with implementation of the project is based on the production of visual simulations. As a part of this process, aerial imagery was reviewed to identify where the project would potentially be visible from visually sensitive areas and selected preliminary viewpoints for site photography. Field surveys were conducted to photo-document existing visual conditions and views toward the project site. A representative subset of photographed viewpoints was selected as KOPs, which collectively serve as the basis for this assessment. Assessments of existing visual conditions were made based on professional judgment that took into consideration sensitive receptors and sensitive viewing areas in the project area. The locations of the two KOPs in relation to the project site are presented on Figure 3.2-1.

The site photos were used to generate a rendering of the existing conditions and a proposed visualization of the proposed project. The visual simulations provide clear before-and-after images of the location, scale, and visual appearance of the features affected by and associated with the project. Design data — consisting of engineering drawings, elevations, site and topographical contour plans, concept diagrams, and reference pictures — were used as a platform from which digital models were created. In cases where detailed design data were unavailable, more general descriptions about alternative facilities and their locations were used to prepare the digital models.

##### **GLARE/GLINT**

The web-based ForgeSolar Pro glare hazard analysis program was utilized to perform the glare/glint analysis of the proposed project. ForgeSolar provides a quantified assessment of (1) when and where glare will occur throughout the year for a prescribed solar installation, (2) potential effects on the human eye at locations where glare occurs, (3) a general map showing where glare is coming from within an array, and (4) the annual energy production from the PV array so that alternative designs can be compared to maximize energy production while mitigating the impacts of glare. ForgeSolar employs an interactive Google Map for site location, mapping the proposed PV array(s), and specifying



observer locations or flight paths. Latitude, longitude, and elevation are automatically recorded through the Google Interface, providing necessary information for sun position and vector calculations. Additional information regarding the orientation and tilt of the PV panels, reflectance, environment, and ocular factors are entered by the user.

**Flight Path Analysis.** The glare study analyzed the flight path provided by the USMC (Figure 3.2-4) and two observation points at ground level. If glare is found, the tool calculates the retinal irradiance and subtended angle (size/distance) of the glare source to predict potential ocular hazards ranging from temporary after-image to retinal burn.

**Adjacent Roadways.** Two observation points (Figure 3.2-1) were analyzed for vehicles travelling along adjacent roads:

- Intersection of Wilkins and an unnamed county road
- Gas Line Road

Potential glare to drivers was evaluated for both passenger vehicles and semi-trucks, where the passenger vehicles were assumed to have a maximum viewing height of 5 feet while the viewing height for drivers of semi-trucks was assumed to be a maximum of 9 feet.

Figure 3.2-4. Flight Path Analysis



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## Impact Analysis – Solar Energy Facility and Gen-Tie Line

### ***Impact 3.2-1 Would the project have a substantial adverse effect on a scenic vista?***

There are no designated scenic vistas in the project vicinity. The proposed project would involve the use of standard construction equipment including, but limited to, trucks, cranes, and tractors. The presence of this equipment within the project area during construction would alter views of the area from undeveloped land to a construction site. However, the views of construction activity from the surrounding vicinity would be temporary and would not involve any designated scenic vistas. Therefore, impacts to a scenic vista are considered less than significant during construction.

Views to the west from elevated areas near the project site, including views from Gas Line Road (KOP 2), could be considered scenic vistas given the expansiveness of the views and distance one can see under favorable conditions. However, as described under Impact 3.2-3, the project would not have a substantial adverse effect on such views. The proposed project would not be a prominent visual presence in the context of the surrounding development, as it would largely be absorbed into the broader landscape that already includes agricultural development, electricity transmission, geothermal power plants, IID facilities and infrastructure, and an existing utility-scale solar facility 0.5 mile to the south. Also, the project's low profile in the context of topographical conditions would not obscure or degrade views of the desert lands and mountains north and east of the site. Therefore, impacts to a scenic vista would be less than significant during project operation.

#### *Mitigation Measure(s)*

No mitigation measures are required.

### ***Impact 3.2-2 Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?***

The project site is not located within a state scenic highway corridor, nor are there any state scenic highways located in proximity to the project site. The nearest road segment considered eligible for a State Scenic Highway designation is the portion of SR 111 from Bombay Beach to the County line. The project site is located approximately 14 miles south of Bombay Beach. Therefore, no impacts to scenic resources within a designated state scenic highway would occur.

#### *Mitigation Measure(s)*

No mitigation measures are required.

### ***Impact 3.2-3 In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?***

Short-term visual impacts would occur in association with construction activities, including introducing heavy equipment (e.g., cranes), staging and materials storage areas and potential dust and exhaust to the project area. While construction equipment and activity may present a visual nuisance, it is temporary (approximately 6-9 months) and does not represent a permanent change in views.

Therefore, impacts associated with degrading the existing visual character or quality of the project site during construction are considered less than significant.

Figure 3.2-5 and Figure 3.2-6 illustrates the visual changes from KOP 1 and KOP 2 with the proposed project.

#### **KEY OBSERVATION POINT 1**

Figure 3.2-5 shows the view from KOP 1 with the proposed project simulated. As simulated, the gen-tie structures, which would extend from the project site approximately 2,500 feet toward the KOP, would be the most prominently visible portion of the project from this location. As conceptually shown in the simulation, the gen-tie structures would be visible in the center of the view and the southernmost structure would connect to the existing IID line in the left edge of the view, replacing the current interconnection to the parcel. The photosimulation illustrates that while appearing as new and highly visible features, the transmission structures would be comparable in size and appearance to other existing structures and would blend with the numerous lines visible throughout the landscape, including the existing line to which the project would interconnect. They would also occupy a relatively narrow portion of the view to the north from KOP 1.

The substation for the proposed project has not yet been designed. However, the facility shown on Figure 3.2-5 is an approximation based on representative examples of substations of similar size and in similar environments. The proposed substation would be low-profile and would be approximately 300 feet by 175 feet. As simulated, the substation would be partially visible in views from KOP 1, alongside the solar arrays, which would appear as a comparatively dark, horizontal bar across a portion of the view's middle ground. Aside from the relatively narrow gen-tie structures, no project component would substantially obscure or appear above the mountain skyline from this vantage point.

#### **KEY OBSERVATION POINT 2**

Figure 3.2-6 shows the view from KOP 2 with the proposed project simulated. The proposed project appears within the front portion of the view's middle ground, within the layered landscape described for the existing view. From 0.5 mile away and at a slightly higher elevation, the project would appear as a generally uniform line across the view, with solar arrays broken up by internal roads. The substation would be detectable beyond the arrays in the southern portion of the project site, and the gen-tie structures would be visible extending to the south from the project site. The land east of the Salton Sea would serve as backdrop to the substation, which the gen-tie poles would appear against the water body, itself.

Portions of the landscape beyond the project, including the orchard, would be obscured by the project. The blue-toned color of the arrays under conditions simulated here (morning light, mostly sunny skies) would be similar to that of the Salton Sea, the southeastern shoreline of which would remain visible beyond the project. This would distinguish the project from the Salton Sea in this view, reinforcing their respective scales. With this definition, the size of the proposed project relative to the broader landscape, and its visual similarity to – but physical distinction from – a body of water, would be observable by workers and travelers along the north-south oriented Gas Line Road as well and from the broader, slightly uphill area to the east. The overall effect, shown in Figure 3.2-6, is the relatively small degree of contrast that the project would have with its broader surroundings, as seen in the expansive, slightly uphill views from the east.



## CONCLUSION

In the close-up, unobstructed views of the project, the existing visual character of the site and the quality of views in terms of visibility beyond the site would be substantially altered. However, such immediate views of the project site are not readily available to the general public from a publicly accessible vantage point.

In the view from KOP 1, new transmission structures that would be part of the project's interconnection and would appear large in scale; however, the new transmission structure would be comparable in size and appearance to other structures visible throughout the surrounding landscape with multiple existing transmission lines. The view from KOP 1 affords a direct line-of-sight from the nearest public roadway into the project site. Any view from other nearby publicly accessible viewpoints, including from points further north or south along Wilkins Road or east along Wiest Road, would be partially to fully obscured by roadside vegetation or berms. Like the view from KOP 1, such views would likely be of short duration given the probability of the viewers being in moving vehicles.

The view from KOP 2 represents elevated views from the nearest roadway to the east. The project would not substantially degrade the existing visual character or quality of views from this distance; rather, it would appear as a similar element within the existing context of the broader landscape that already includes agricultural development, electricity transmission poles and lines, geothermal power plants, IID facilities and infrastructure, and an existing utility-scale solar facility 0.5 mile to the south. Therefore, the project elements would not constitute a substantial degradation of the existing visual character from both KOP 1 and KOP 2, and impacts to visual character would be less than significant.

### *Mitigation Measure(s)*

No mitigation measures are required.

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**Figure 3.2-5. Project View Simulation at Key Observation Point 1**



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**Figure 3.2-6. Project View Simulation at Key Observation Point 2**



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**Impact 3.2-4 Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?**

As described in Chapter 2, Project Description, the project would include new sources of nighttime lighting. In addition, given the nature of the project (e.g., solar facility), this discussion also considers potential glare- and glint-related impacts generated by the proposed solar arrays. This discussion considers each issue under the associated headings below.

**NIGHTTIME LIGHTING**

Minimal lighting would be required for project operation and would be limited to safety and security functions. All lighting would be directed downward and shielded to confine direct rays to the project site and muted to the maximum extent consistent with safety and operational necessity (Title 9, Division 17, Chapter 2: Specific Standards for all Renewable Energy Projects, of the County's Zoning Ordinance).

If additional lighting should be required for nighttime maintenance, portable lighting equipment would be used. Based on these considerations, and the distance to potential viewers, the project is not anticipated to create a new source of substantial light which would adversely affect nighttime views in the project area, and the impact is considered less than significant.

**GLARE AND GLINT**

A glare hazard analysis was prepared to analyze the project's potential glare/glint impacts on USMC's training operations and adjacent roadway travelers. The complete report is provided as Appendix C of this EIR.

**Flight Path Analysis.** The glare study analyzed the flight path provided by the USMC (Figure 3.2-4) and two observation points at ground level. Based on the glare analysis (Appendix C of this EIR), glare is not expected for the flight path provided by the USMC. Therefore, the proposed project would not result in ocular hazards to USMC flight operations.

**Adjacent Roadways.** Two observation points (Figure 3.2-1) were analyzed for vehicles travelling along adjacent roads:

- Intersection of Wilkins and an unnamed county road
- Gas Line Road

Based on the glare analysis (Appendix C of this EIR), glare is not predicted for drivers of vehicles at the two observation points (Intersection of Wilkins and an unnamed county road, and Gas Line Road) adjacent to the project site at either 5 feet (cars and small trucks) or 9 feet (semi-trucks) viewing heights. Therefore, the proposed project would not result in a significant glare impact to motorists driving on roadways adjacent to the project site.

*Mitigation Measure(s)*

No mitigation measures are required.

### Impact Analysis – Fiberoptic Cable

The proposed project includes the installation of approximately two miles of fiber optic cable to connect the proposed substation to the existing Niland Substation. No new transmission structures would be required to install the fiberoptic cable. The installation process involves aerial stringing of the fiber optic cable between existing transmission poles. The additional cable would be comparable in material and appearance to the existing cables on the transmission poles. The proposed fiber optic cable would result in a less than significant impact on a scenic vista, state scenic highway, degrade the existing visual character or quality of the site and its surroundings, or create a new source of light or glare.

### 3.2.4 Decommissioning/Restoration and Residual Impacts

#### Decommissioning/Restoration

If at the end of the PPA term, no contract extension is available for a power purchaser, no other buyer of the energy emerges, or there is no further funding of the project, the project will be decommissioned and dismantled. The project site is relatively flat and primarily characterized by a level elevation. Therefore, no grading or significant land form modifications would be required during decommissioning activities upon site restoration in the future. Although the project site would be visually disrupted in the short-term during decommissioning activities, because extensive grading is not required and these activities would be temporary, the visual character of the project site would not be substantially degraded in the short-term and related impacts would be less than significant.

#### Residual

Impacts related to glare and glint impacts to roadway travelers and USMC flight operations would be less than significant and no additional mitigation measures are required. Changes to visual character of the project area would be less than significant and would be transitioned back to their prior (pre-solar project) conditions following site decommissioning. Based on these conclusions, implementation of the project would not result in residual significant unmitigable impacts to the visual character of the project area or add substantial amounts of light and glare.