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Description:	This document replaces in full TN 257910. Revisions made address CEC data requests VIS-1 through VIS-12. This Section evaluates the direct, indirect and cumulative impacts the Project may have on visual resources and identifies any required Applicant-Proposed Measures (APM) and any required Mitigation Measures.
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3.1 AESTHETICS

This section evaluates impacts to visual resources that may result directly or indirectly from the project. The analysis in this section describes the applicable regulations, presents an overview of existing conditions, identifies the criteria used for determining the significance of environmental impacts, lists applicant-proposed measures (APMs) that would be incorporated into the project to avoid or substantially lessen potentially significant impacts to the extent feasible, and describes the potential aesthetic impacts of the proposed project. The analysis is based on a review of existing resources, technical data, and applicable laws, regulations, plans, and policies, as well as the following technical reports prepared for the project:

- *Visual Resources Technical Report* prepared by SWCA Environmental Consultants (2025) (Appendix B)

3.1.1 Regulatory Setting

3.1.1.1 Federal

NATIONAL ENVIRONMENTAL POLICY ACT (42 UNITED STATES CODE 4371)

There are several applicable regulations, policies, and procedures that pertain to visual resources. The Council on Environmental Quality (CEQ) regulations for implementing the National Environmental Policy Act (NEPA) identify aesthetic effects as a type of impact to be addressed in NEPA reviews, which should include discussion of the design of the built environment (40 Code of Federal Regulations [CFR] 1502.16, 1508.8). The regulations also require discussion of possible conflicts of a proposed action with the objectives of federal, regional, state, local, and tribal land use plans and policies; federal land use plans, in particular, typically include guidance for management of visual resources. The CEQ regulations do not include more specific direction about aesthetic impact issues to be considered or provide a means for evaluating aesthetic impacts.

FEDERAL LAND POLICY AND MANAGEMENT ACT

Federal regulations for right-of-way grants under the Federal Land Policy and Management Act of 1976 (43 CFR 2800) focus on administrative and procedural aspects of the grants. The Bureau of Land Management (BLM) requires compliance with the terms and conditions of the grant to control or prevent damage to "(i) Scenic, aesthetic . . . values . . ." in accordance with 43 CFR 28 2805.12(i)(3)(i). BLM's consideration of visual resource issues associated with right-of-way grants is generally based on the visual resource provisions of standard BLM policies and procedures for land use planning and NEPA compliance.

BUREAU OF LAND MANAGEMENT VISUAL RESOURCE MANAGEMENT

The BLM has developed a formal visual resource management (VRM) system to guide inventory, classification, and management of visual resources on the lands under its jurisdiction. The system includes an inventory of scenic values (BLM Manual 8410-1 – Visual Resource Inventory [BLM 1986]) based on the following factors: 1) diversity of landscape features that define and characterize landscapes in a given planning area (scenic quality), 2) public concern for the landscapes that make up a planning area (sensitivity levels), and 3) landscape visibility from public viewing locations (distance zones). These factors are collectively described as the visual resource inventory (VRI) for BLM-administered land. Combined, the three VRI factors determine VRI classes on land managed by the BLM. VRI classes

indicate the overall existing scenic values of BLM-administered land. The VRI classes and individual factors provide baseline visual resources data that are then used, in combination with other resource needs, to determine VRM classes.

VRM classes are established to provide management objectives in terms of allowable levels of disturbance and noticeability (i.e., visual contrast), and are established through the BLM's land use planning process, as described in BLM Manual 8410-1 (BLM 1986). The objectives associated with each VRM class are defined in Table 3.1-1. The project is proposed on lands managed under the Desert Renewable Energy Conservation Plan (DRECP).

Table 3.1-1. VRM Class Descriptions

VRM Class	Description
I	The objective of this class is to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and should not attract attention.
II	The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.
III	The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.
IV	The objective of this class is to provide for management activities that require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements of the landscape.

BUREAU OF LAND MANAGEMENT TECHNICAL NOTE 457, NIGHT SKY AND DARK ENVIRONMENTS

BLM-managed lands provide differing types of activities, developments, and visitor services that include outdoor lighting where appropriate to provide for worker and visitor safety, security, and enjoyment. Due to growing public concern and research available about light pollution, this technical note provides a set of best practices for outdoor lighting.

Per *Section 3.1.2 – Types of Light Pollution*, there are different types of light pollution and associated effects:

- Glare: possible exposure because this project uses pole-top luminaires
- Skyglow: possible exposure because this project uses pole-top luminaires
- Light trespass: not applicable to this project because lighting installations are far from the property line
- Light clutter: not applicable to this project because lighting is sparse
- Over-illumination: not applicable to this project because lighting is low intensity and task driven only

Per *Section 4 – Principles of Artificial Light at Night to Avoid Light Pollution*, best practices have been identified:

- Warmer color temperature lighting (2200–3000 Kelvin) will be used.
- Automatic scheduling via lighting controls will be used to provide lighting when needed.
- When operational, this facility has no nighttime lighting requirements and, as such, all outdoor lighting will be task driven only, such as building access or security lighting.

Only LED luminaires will be used on this project.Per *Section 5 – BMPs for Artificial Light at Night on BLM-Managed Lands*, consideration has been given to nearby astronomical observatories, and there is no such facility within a 100-mile radius of this project site. The closest observatory is Mt. Potosi observatory, which is in Mountain Springs, Nevada, more than 100 miles away from this project site.

DESERT RENEWABLE ENERGY CONSERVATION PLAN

The DRECP is an interagency plan developed by the BLM, U.S. Fish and Wildlife Service, California Energy Commission, and California Department of Fish and Wildlife (CDFW) (BLM 2016). This plan was developed to address the need for a landscape approach to renewable energy and conservation planning in the California desert.

The DRECP Land Use Plan Amendment (LUPA) establishes VRM classes for lands under its direction (further listed below). The landscapes under this plan have been inventoried using the BLM's VRI system and given a VRM classification for management direction. Each VRM class allows for landscape changes form management activities and use authorizations that contrast at different levels with the existing characteristic landscapes. These LUPA-VRM and GPL (General Public Land)-VRM measures are directly quoted from the DRECP:

> **LUPA-VRM-1:** Manage visual resources in accordance with the VRM classes.
>
> **LUPA-VRM-2:** Ensure that activities with each of the VRM class polygons meets the VRM objectives described above, as measured though a visual contrast rating process.
>
> **LUPA-VRM-3**: Ensure that transmission facilities are designed and located to meet the VRM class objectives for the area in which they are located. All reasonable effort must be made to reduce visual contrast of these facilities in order to meet the VRM class before pursuing Resource Management Plan amendments. This includes changes in routing, using lattice towers (vs. monopole), color treating facilities using an approved color from the BLM Environmental Color Chart CC-001 (dated June 2008, as updated April 2014, or the most recent version) (vs. galvanized) on towers and support facilities, and employing other best management practices (BMPs) to reduce contrast.
>
> **GPL-VRM-1:** Development in GPLs is required to incorporate visual design standards and include the best available, most recent BMPs, as determined by BLM.
>
> **GPL-VRM-2: Required Visual Resource BMPs**. All development will abide by the BMPs addressed in the most recent version of *Best Management Practices for Reducing Visual Impacts of Renewable Energy Facilities on BLM-Administered Lands* (BLM 2013) or its replacement.
>
> **GPL-VRM-3:** Regional mitigation is required for visual impacts in GPLs. Mitigation will be based on the VRM class and the underlying visual values (scenic quality, sensitivity, and distance zone) for the development area as it stands at the time the ROD [Record of Decision] is signed for the DRECP. Compensation may involve reclamation of visual impacts that are present within other areas designated as BLM VRM Class I or II lands (so that they are no longer visible in the

long term). Additional mitigation will be required where projects affect viewsheds of specially designated areas (e.g., National Scenic and Historic Trails).

NATIONAL PARK SERVICE NIGHT SKY PROGRAM

The protection of night skies, nighttime views, and environments are among the critical park features the National Park Service (NPS) protects (NPS 2023). Under the Night Sky Program, NPS staff monitor dark night skies and develop exterior lighting guidelines to determine the lighting that is appropriate based on a location's historic character, energy, cost, maintenance efficiency, light pollution, and wildlife. NPS works to protect natural lightscapes by minimizing light that emanates from park facilities, and seek the cooperation of park visitors, neighbors, and state and local governments to prevent or minimize light pollution that can affect park ecosystems (NPS Management Policies 4.10) (NPS 2006).

MOJAVE NATIONAL PRESERVE

The Mojave National Preserve encompasses a diverse mosaic of ecological habitats and a 10,000-year history of human connection with the desert. Offering extensive opportunities to experience desert landscapes, the preserve promotes understanding and appreciation for the increasingly threatened resources of the Mojave Desert. This remote preserve encourages a sense of discovery and a connection to wild places. Although the proposed project site is not located within the Mojave National Preserve, the visual analysis area does overlap the westernmost portion of the preserve.

The *Foundation Document Mojave National Preserve* identifies desert scenery, encompassing geology, landscape, vegetation, big sky, and wildlife as fundamental resources and values for the preserve (NPS 2013).

General Management Plan

The *Mojave National Preserve General Management Plan* catalogs general goals and policies for preserve management, including the protection of scenic resources (NPS 2002a). To date, the NPS has not adopted specific guidelines related to preservation of visual resources or evaluating impacts of projects within or near the preserve. The General Management Plan states that NPS will, at a future date, prepare more specific guidelines to establish visual consistency and themes in facility development. Guidelines will also be created for reaching visual compatibility with surrounding landscapes, significant architectural features, and site details. These guidelines' main objective will be to create harmony between the built and natural environments.

The following management direction is provided in the General Management Plan that affects visual resources (NPS 2002a):

Viewsheds / Visual Quality:

1. Encourage compatible adjacent land uses and seek to mitigate potential adverse effects on park values by actively participating in planning and regulatory processes of neighboring jurisdictions, other federal, state, and local agencies, and Native Americans.
2. Prepare guidelines for the built environment to establish visual consistency and themes in facility development and to create harmony between the built environment and the natural environment.
3. Prepare a communication management plan to address the NPS goals and the need to establish sites for communication equipment.

> **Night Sky:** The NPS will partner with communities and local government agencies to minimize reflected light and artificial light intrusion on the dark night sky, recognizing the essential component that a carpet of stars against a black night sky is for a natural outdoor experience. The NPS will strive to set the best example in all developments that involve the use of artificial outdoor lighting, ensuring that such lighting is limited to basic safety requirements and shielded to the maximum extent possible, to keep light on the intended subject and out of the night sky. Baseline light measurements will be established to monitor changes over time. (NPS 2002a)

There are two General Management Plan land use designations within the preserve from which the project site may be seen (NPS 2002b). As described in the General Management Plan (NPS 2002a), these designations and their desired characteristics are:

> **Natural Areas:** Natural areas of the Preserve that occur outside of designated wilderness provide an informal, self-guided desert learning experience for visitors. People are encouraged to get out of their vehicles and walk to features. The pace is slow with low to moderate levels of noise. Visitors typically focus on specific resources with few visual intrusions. Visitors experience a sense of learning through onsite interpretation or other means. The length of stay at each site is relatively short in comparison to the time visitors spend in the preserve. There is a moderate amount of social crowding and moderate interaction at points of interest and along dead-end trails. Guided ranger walks are occasionally provided for visitors at some locations. Development is limited to items such as low interpretive panels, small directional signs, and hardened dirt paths. Fences are used as a last resort to protect resources if other management efforts do not work. The tolerance for resource degradation is low to moderate, depending on the sensitivity of the resource. The degree of on-site visitor and resource management is moderate and increases or decreases with visitation levels.
>
> **Wilderness:** Wilderness, as a desired future condition, is a subset of the natural environment, where protection of the natural values and resources is the primary management goal. Restrictions on use of these areas are imposed by law and policy in order to provide a primitive environment free from modern mechanization and motorized travel. The landscape offers a high degree of challenge and adventure for visitors. The visual quality of the landscape contributes significantly to the visitor experience and needs to be protected. The tolerance for resource degradation is low, with the exception of designated trail corridors, where a slightly higher level of degradation is allowed within a few feet of the trail and at points where camping occurs. A minimal amount of resource and visitor management is present. (NPS 2020a)

The General Management Plan also addresses scenery-related effects of external development on adjacent lands. In part, the plan provides the following direction:

> To fulfill the mandate to preserve park resources unimpaired for future generations, adopting strategies and actions beyond park boundaries has become increasingly necessary. Because ecological processes cross park boundaries, and parks typically do not incorporate the entire ecosystem or scenic vista, many activities proposed or existing on adjacent lands have the potential to significantly affect park resources, programs, visitor experiences and wilderness values.
>
> Recognizing these issues, the park staff will work cooperatively with others to anticipate, avoid, and resolve potential conflicts and to address mutual interests in the quality of life for community residents. (NPS 2020a)

OLD SPANISH NATIONAL HISTORIC TRAIL

The Old Spanish National Historic Trail (OSNHT) links Santa Fe and Los Angeles across six states and 2,700 miles. The Old Spanish Trail was designated by Congress as a National Historic Trail in December 2002 (Public Law 107–325). By memorandum from the Secretary of the Interior, the OSNHT is jointly administered by BLM and NPS, working in partnership with other federal, state, and local government agencies, as well as private landowners who manage or own lands along the trail route. *The Old Spanish National Historic Trail Comprehensive Administrative Strategy* guides the administrative management of the trail (NPS 2017). The Armijo Route of the OSNHT route follows the Mojave River into the Mojave National Preserve, then travels on the east side of the Soda Mountains through Zzyzx to Baker.

SOLAR ENERGY PROGRAM

The Record of Decision for the Solar Programmatic Environmental Impact Statement, signed in October 2012, amended 89 BLM land use plans in a six-state study area (Arizona, California, Colorado, Nevada, New Mexico, and Utah), which included southern California (BLM 2012). The BLM adopted programmatic design features for visual resources, including VRM BMPs, procedures for coordinating with BLM staff during the project application process, evaluating visual resources, analyzing potential visual effects, and avoiding or minimizing potentially significant effects.

3.1.1.2 State

CALIFORNIA SCENIC HIGHWAY SYSTEM

California's Scenic Highway Program was created by the Legislature in 1963. Its purpose is to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of lands adjacent to highways. The state laws governing the Scenic Highway Program are found in the Streets and Highways Code, Section 260 et seq.

The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been so designated. The status of a state scenic highway changes from eligible to officially designated when the local jurisdiction adopts a scenic corridor protection program, applies to the California Department of Transportation (Caltrans) for scenic highway approval, and receives notification from Caltrans that the highway has been designated as a state scenic highway.

Interstate 15 (I-15) is identified by San Bernardino County as a County scenic route and by Caltrans as an eligible state scenic highway (Caltrans 2019; San Bernardino County 2024). However, in order for a route to be designated as a state scenic highway, it must first be nominated for designation by the County. I-15 has not been nominated for designation by the County for state scenic highway status.

2022 CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS, TITLE 24, PART 6

The Building Energy Efficiency Standards serve to reduce wasteful, uneconomical, and unnecessary uses of energy for the state. They include requirements in the Energy Code (Title 24, Part 6) and voluntary energy efficiency provisions in CALGreen (Title 24, Part 11). Outdoor lighting installations of this project will follow prescriptive requirements set forth in Title 24, Part 6; specifically, *Section 130.2 – Outdoor Lighting Controls and Equipment* and *Section 140.7 – Prescriptive Requirements for Outdoor Lighting.* These requirements are summarized below for ease of reference:

- Per Section 130.2 (b), all outdoor luminaires of 6,200 initial luminaire lumens or greater will comply with the applicable Backlight, Uplight, and Glare (BUG) ratings.

- Per Section 130.2 (c) 1-3, all outdoor luminaires will be controlled by a photocell for daylight harvesting and provided with automatic scheduling controls. Some of these lights intended to be used for security purposes will also have motion sensing controls.

- Per Section 140.7 (a)–(d), all outdoor luminaires will have a maximum lighting power density calculated per the allowed lighting power method.

2022 CALIFORNIA ADMINISTRATIVE REGULATIONS, TITLE 24, PART 1

This article applies to all residential and nonresidential buildings and contains administrative regulations relating to the energy building regulations in Title 24, Part 6. The specific section of this code utilized in the project is *Section 10-114 – Determination of Outdoor Lighting Zones and Administrative Rules For Use*.

3.1.1.3 Local

The project is located entirely on BLM-administered public land. While the project is not subject to San Bernardino County jurisdictional authority, the following local policies, ordinances, and goals serve as indicators of potential sensitivity to changes in the visual environment for purposes of assessing visual impacts associated with the implementation of the project.

SAN BERNARDINO COUNTY GENERAL PLAN

The San Bernardino County Policy Plan (Policy Plan), a component of the San Bernardino Countywide Plan, contains the long-term goals and policies that will guide County decisions, investments, and improvements toward achieving the countywide vision (San Bernardino County 2024). The Policy Plan represents a unique approach to county planning. It serves as the County's General Plan for the unincorporated areas, which is mandated by state law but it also includes policy direction for adult and child supportive services, healthcare, public safety, and other regional services the County administers in both incorporated and unincorporated areas.

The following policies are relevant to this analysis (San Bernardino County 2024):

- **Policy LU-2.3 Compatibility with natural environment.** We require that new development is located, scaled, buffered, and designed for compatibility with the surrounding natural environment and biodiversity.
- **Policy LU-4.1 Context-sensitive design in the Mountain/Desert Regions.** We require new development to employ site and building design techniques and use building materials that reflect the natural mountain or desert environment and preserve scenic resources.
- **Policy LU-4.7 Dark skies.** We minimize light pollution and glare to preserve views of the night sky, particularly in the Mountain and Desert regions where dark skies are fundamentally connected to community identities and local economies. We also promote the preservation of dark skies to assist the military in testing, training, and operations.
- **Policy IU-5.5 Energy and fuel facilities.** We encourage the development and upgrade of energy and regional fuel facilities in areas that do not pose significant environmental or public health and safety hazards, and in a manner that is compatible with military operations and local community identity.
- **Policy NR-4.1. Preservation of scenic resources.** We consider the location and scale of development to preserve regionally significant scenic vistas and natural features, including prominent hillsides, ridgelines, dominant landforms, and reservoirs.

- **Policy NR-4.2. Coordination with agencies.** We coordinate with adjacent federal, state, local, and tribal agencies to protect scenic resources that extend beyond the County's land use authority and are important to countywide residents, businesses, and tourists.
- **Policy RE-4.4.** Encourage siting, construction, and screening of renewable energy (RE) generation facilities to avoid, minimize or mitigate significant changes to the visual environment including minimizing light and glare.
- **RE 4.4.1.** Reduce visual impacts through a combination of minimized reflective surfaces, context sensitive color treatments, nature-oriented geometry, minimized vegetation clearing under and around arrays, conservation of pre-existing native plants, replanting of native plants as appropriate, maintenance of natural landscapes around the edges of facility complexes, and lighting design to minimize night-sky impacts, including attraction of and impact to nocturnal migratory birds.
- **Goal RE-5 Siting.** Renewable energy facilities will be located in areas that meet County standards, local values, community needs and environmental and cultural resource protection priorities.
- **Policy RE-5.7.** Support renewable energy projects that are compatible with protection of the scenic and recreational assets that define San Bernardino County for its residents and make it a destination for tourists.
- **RE 5.7.1**. Site RE generation facilities in a manner that will avoid, minimize or substantially mitigate adverse impacts to sensitive habitats, cultural resources, surrounding land uses, and scenic viewsheds.

SAN BERNARDINO COUNTY DEVELOPMENT CODE -TITLE 8 (2014)

The following policies from the San Bernardino County Development Code help minimize aesthetic and light and glare impacts and are relevant to this analysis:

83.07.060 Mountain and Desert Requirements.

This section provides standards for outdoor lighting in the Mountain and Desert regions of the County.

a) *Shielding Required.* All outdoor light fixtures shall be fully shielded, installed and maintained in such a manner that the shielding does not permit light trespass in excess of amounts set forth in subdivision (f).

b) *Light Pollution Standards.* Light pollution and trespass shall be minimized through the use of directional lighting, fixture location, height and the use of shielding and/or motion sensors and timers in such a manner that the light source does not permit light trespass in excess of amounts set forth in subdivision (f).

c) *Automated Controls.* Automated control systems, such as motion sensors and timers, shall be used to meet curfew requirements set forth in subdivision (d). Photocells or photo controls shall be used to extinguish all outdoor lighting automatically when sufficient daylight is available. Automated controls should be fully programmable and supported by battery or similar backup.

d) *Dark Sky Curfew.* All outdoor lighting shall be extinguished by 11:00 p.m., close of business, or when people are no longer present in exterior areas, whichever is later, except for the following.

    1. Lighting used for entry and exit points of a structure, parking areas, driveways and driveway ingress/egress points; or
    2. Lighting activated by a motion sensor that extinguishes no later than five minutes after activation.

e) *Lighting Color.* The correlated color temperature of all outdoor lighting shall be 3,000 Kelvin or less except for seasonal lighting.

f) *Allowable Light Trespass.* Outdoor lighting shall not cause light trespass exceeding one-tenths foot-candles measured with a light meter oriented vertically or horizontally either at the property line of the adjacent property or measured from some other point on the property where light trespass may be reasonably determined to occur due to differences in property or improvement elevations.

g) *Blinking, Flashing, or High Intensity Lighting.* Permanently installed lighting that blinks, flashes or is of high intensity or brightness that causes a light trespass is prohibited.

84.29.035 Required Findings for Approval of a Commercial Solar Energy Facility.

a) In order to approve a commercial solar energy generation facility, the Planning Commission shall determine that the location of the proposed commercial solar energy facility is appropriate in relation to the desirability and future development of communities, neighborhoods, and rural residential uses, and will not lead to loss of the scenic desert qualities that are key to maintaining a vibrant desert tourist economy by making each of the findings of fact in Subdivision (c).

b) In making these findings of fact, the Planning Commission shall consider:

    1. The characteristics of the commercial solar energy facility development site and its physical and environmental setting, as well as the physical layout and design of the proposed development in relation to nearby communities, neighborhoods, and rural residential uses; and

    2. The location of other commercial solar energy generation facilities that have been constructed, approved, or applied for in the vicinity, whether within a city or unincorporated territory, or on State or Federal land.

c) The findings of fact shall include the following:

    1. The proposed commercial solar energy generation facility is either: Sufficiently separated from existing communities and existing/developing rural residential areas so as to avoid adverse effects, or of a sufficiently small size, provided with adequate setbacks, designed to be lower profile than otherwise permitted, and sufficiently screened from public view so as to not adversely affect the desirability and future development of communities, neighborhoods, and rural residential use.

    2. Proposed fencing, walls, landscaping, and other perimeter features of the proposed commercial solar energy generation facility will minimize the visual impact of the project so as to blend with and be subordinate to the environment and character of the area where the facility is to be located.

    3. The siting and design of the proposed commercial solar energy generation facility will be either: unobtrusive and not detract from the natural features, open space and visual qualities of the area as viewed from communities, rural residential uses, and major roadways and highways,[1] or located in such proximity to already disturbed lands, such as electrical substations, surface mining operations, landfills, wastewater treatment facilities, etc., that it will not further detract from the natural features, open space and visual qualities of the area as viewed from communities, rural residential uses, and major roadways and highways.

    4. The siting and design of project site access and maintenance roads have been incorporated in the visual analysis for the project and shall minimize visibility from public viewpoints while providing needed access to the development site.

5. The proposed commercial solar energy generation facility will minimize site grading, excavating, and filling activities by being located on land where the existing grade does not exceed an average of five percent across the developed portion of the project site, and by utilizing construction methods that minimize ground disturbance.
6. Adequate provision has been made to maintain and promote native vegetation and avoid the proliferation of invasive weeds during and following construction.
7. The proposed commercial solar energy generation facility will avoid modification of scenic natural formations.
8. For proposed facilities within two miles of the Mojave National Preserve boundaries, the location, design, and operation of the proposed commercial solar energy facility will not be a predominant visual feature of, nor substantially impair views from, hiking and backcountry camping areas within the National Preserve.
9. For proposed facilities within two miles of the boundaries of a County, State or Federal agency designated wilderness area, the location, design, and operation of the proposed commercial solar energy facility will not be a predominant visual feature of, nor substantially impair views from, the designated wilderness area.

84.29.070 Decommissioning Requirements

a) *Closure Plan.* Following the operational life of the project, the project owner shall perform site closure activities to meet federal, state, and local requirements for the rehabilitation and revegetation of the project site after decommissioning. The project owner shall prepare a Closure, Revegetation, and Rehabilitation Plan and submit it to the Planning Division for review and approval prior to building permit issuance. Under this plan, all aboveground structures and facilities shall be removed to a depth of three feet below grade and removed offsite for recycling or disposal. Concrete, piping, and other materials existing below three feet in depth may be left in place. Areas that had been graded shall be restored to original contours unless it can be shown that there is a community benefit for the grading to remain as altered. Succulent plant species native to the area shall be salvaged prior to construction, transplanted into windrows, and maintained for later transplanting following decommissioning. Shrubs and other plant species shall be revegetated by the collection of seeds and re-seeding following decommissioning (San Bernardino County 2024).

3.1.2 Environmental Setting

3.1.2.1 Project Location

The project would occupy the alluvial valley dividing the northern and southern portions of the Soda Mountains in the Mojave Desert. The project site is composed of rural desert land and is almost entirely undeveloped. The project is located entirely on federally owned land managed by the BLM.
The 2,670-acre project site is located approximately 7 miles southwest of the community of Baker in unincorporated San Bernardino County, California, approximately 50 miles northeast of Barstow.
The project site is located in portions of Sections 1 and 11–14, Township 12 North, Range 7 East; Sections 25 and 36, Township 13 North, Range 7 East; and Sections 6, 7, 8, and 18, Township 13 North, Range 8 East, San Bernardino Meridian, California.

3.1.2.2 Visual Setting

The project site is bounded directly to the east by the Mojave National Preserve (administered by the NPS) and BLM-managed land, including the Rasor OHV recreation area at the southeast corner. Rasor Road, an unimproved BLM public access road, runs from the southwest corner of the site and splits into two forks. I-15, the former Arrowhead Trail Highway, runs along the western boundary of the project site, with Rasor Road Services Shell Oil gas station located off I-15 southwest of the project site, along the access road to the project site. This gas station is illuminated by nighttime lighting.

The existing scenery in the visual analysis area is characterized by a gently downward-sloping and undulating broad unnamed alluvial valley nearly enclosed by mountains contained within the Soda Mountains Wilderness to the west and the Mojave National Preserve. A sense of visual enclosure results from the surrounding mountains, Rasor Road interchange to the west, and the Zzyzx Road interchange through the east. Soda Lake and the town of Baker are east of the I-15/Zzyzx Road interchange and about 300 feet below it in elevation. Due to these elevational changes, in addition to the ridgelines of the Soda Mountains, Cronese Valley, Soda Lake, and Baker are visually disconnected from the site. Erosion associated with water and the alluvial fans has created washes in the area and allowed for the population of vegetation. Vegetation within the area is characterized by a typical creosote desert scrub interspersed between areas of exposed soils.

The visual character of the landscape within the region has substantial variability based on the location of the viewer and other variables, such as seasonal climate, atmospheric and lighting conditions, cultural modifications, and the visibility, presence, and extent of character-defining visual features. Generally, the landscape can be characterized as a broadly enclosed valley that is unencumbered by intervening features. I-15 and the surrounding Soda Mountains dominate the visual landscape associated with the analysis area. The primary travel route through the site, I-15, typically provides viewers low-angle perspectives of the valley, and viewer attention is most typically drawn to the Soda Mountain range due to the size and dominant nature of the mountains. The foreground consists of straight lines, I-15 asphalt and accompanying guardrails that cut through the open valley, sandy soil and dotted scrub brush and grasses. The light tan sandy soil and various shades of low green vegetation, combined with areas of rocky outcroppings, stretch through the middle ground to meet up with the base of the surrounding mountains and background. As viewers gain elevation in the landscape, the form, lines, colors, and textures of the pyramidal mountains and the alluvial washes flowing from the mountains draw the observer's eye toward the middle of the valley creating a focal point. The NPS-managed Mojave National Preserve is east of the project site. A portion of the preserve boundary is immediately east of the project and is visible in the foreground/middleground distance zone. The BLM-managed Soda Mountains Wilderness is west of the project site. While the project site is classified and managed according to the BLM's VRM Class III, no natural features, objects, or geologic distinguishing characteristics within the project site have been recognized for their aesthetic value. Figure 3.1-1 shows the location of the Mojave National Preserve along with other designated recreation and potentially sensitive scenic vista and resource areas within 5 miles of the project.

Human development within the analysis area includes two existing transmission lines northwest of I-15, opposite the project site. A smaller distribution line can also be seen to the northwest. These vertical structures stand out against the relatively low and flat landscape, and contrast with the background mountains. The transmission lines (the 500-kV Mead-Adelanto transmission line and the Southern California Edison 115-kV transmission line) somewhat parallel I-15, at a distance ranging from approximately 1.0 to 1.5 miles. The most prominent visual features associated with these transmission lines are the geometric vertical support structures. The accompanying horizontal conductor lines, although less noticeable, can also be seen. Two overcrossings, one at Rasor Road and another at Zzyzx Road, cross I-15 in the project vicinity. Buildings can be seen in the southeast quadrant of the I-15/ Rasor Road overcrossing, including a gas station, convenience store, and scattered utility buildings. Several

unimproved roadways cross the landscape in the vicinity. The nearest concentration of residential development is Baker, California, about 6 miles from the project site.

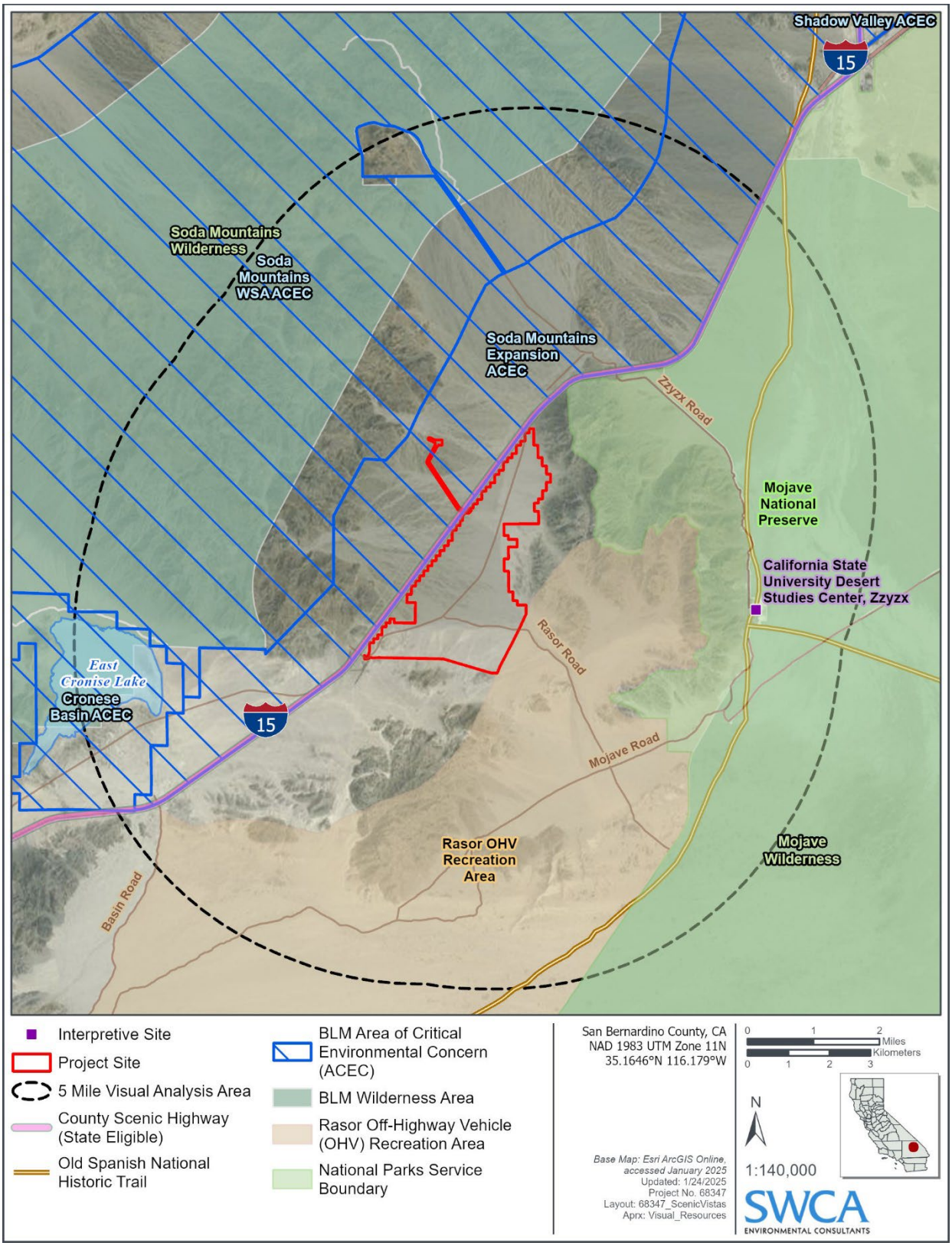

Figure 3.1-1. Designated recreation and potentially sensitive scenic vista areas.

3.1.2.3 Project Components

The following sections describe the physical and visual aspects of the project components. Table 2.1 in the Visual Resources Technical Report lists the dimensions, materials, and finishes for the primary project components. Additionally, typical elevation drawings for project components are provided in Appendix C of the Visual Resources Technical Report.

PHOTOVOLTAIC PANELS AND MOUNTING STRUCTURES

The project would employ flat-plate crystalline silicon solar panels, also called photovoltaic (PV) panels, to generate power for delivery to the high-voltage transmission grid. The panels would be dark blue or black in color and include an anti-reflective coating. Overall maximum height of the PV panels would be 12 feet. The solar panel arrays would be organized into Area 1, Area 2, Area 3, and Area 4 on the southeast side of I-15.

Individual PV panels would be mounted onto bare aluminum frames and attached to linear tracker structures oriented in a north-south direction. The panels would rotate throughout the day to increase total solar exposure. Each solar tracker would be approximately 400 feet long and would be used to mount 45 to 120 solar panels. The trackers would be mounted on support posts spaced 13 feet apart along the length of the tracker. The trackers would be approximately 8 to 12 feet tall, depending on site conditions.

OPERATIONS AND MAINTENANCE FACILITIES

The O&M building (approximate dimensions: 5,000 square feet, 30 feet high), O&M facility (approximate dimensions: 2,400 square feet, 35 feet high), and warehouse facility (approximate dimensions: 6,000 square feet, 35 feet high) would be clustered east of the BESS yard. To reduce visual contrast, the O&M buildings' exterior walls will be painted a matte-finish dark brown, Sudan Brown, from the BLM Standard Environmental Color Chart (BLM 2021). Parking areas would be located adjacent to the buildings. The parking areas are not expected to exceed approximately 0.33 acre, or 13,200 square feet.

O&M activities would include washing solar modules; maintenance of transformers, inverters, or other electrical equipment; road and fence repairs; vegetation/pest management; and site security. Solar modules would be washed as needed to maintain optimal electricity production (up to four times each year) using light utility vehicles with tow-behind water trailers.

DRAINAGE FACILITIES

The site drainage is designed to follow the existing natural drainage patterns, or generally from the northwest to the southeast across the site in three engineered channels between the solar array areas. None of the site components, including fences and solar panel structures, would prevent stormwater flow.

PERIMETER FENCING

All project components would be surrounded by perimeter security fencing and desert tortoise exclusionary fencing. Combined security and desert tortoise fencing would be installed surrounding each individual array field and extend to include the substation and battery energy storage system (BESS) area. The security fencing would be an 8-foot-high chain-link fence with an additional 1 foot of barbed wire.

LIGHTING

As shown in Appendix B, lighting would be provided at the Rasor Road site entrance, O&M buildings, substation, and switchyard. Exterior security lighting would be installed to provide safe access to project facilities as well as visual surveillance. Some portable lighting also could be required for essential nighttime maintenance activities. All lighting would be kept to the minimum required for safety and security; sensors, motion detectors, and switches would be used to keep lighting turned off when not required. All lights would be downward, shielded, and directed to minimize light exposure.

The project would use restricted nighttime task lighting during construction. Lighting would include only that needed to provide a safe workplace, and lights would be focused downward, shielded, and directed toward the interior of the site to minimize light exposure outside the construction area.

LANDSCAPING

Screen planting is proposed along the western perimeter of the project site. A variety of shrubs would be installed adjacent to the solar arrays, and clustered trees would be installed near the BESS and substation in particular to help screen these taller components. The Preliminary Landscape Concept Plan shows a variety of trees and shrubs in an approximately 251,000-square-foot landscaped area (Appendix B).

3.1.2.4 Project Viewing Distances

Potential viewing distances can be defined as foreground/middleground (visibility distance of 3–5 miles), background (visibility distance of 5 miles to a maximum of 15 miles based on atmospheric conditions), and seldom seen (portions of the landscape that are not visible or visible at distances greater than 15 miles). These definitions contribute to the framework for contrast and impact analysis.

As seen from public viewpoints, the project is primarily located within the foreground/middle ground. The overall analysis area is also in the foreground/middleground distance zone. Since project elements located in this distance range would have a closer proximity to potential viewers, the project site is considered to be visually sensitive.

3.1.2.5 Project Viewshed and Key Observation Points

PROJECT VIEWSHED

Based on field review, an analysis area was defined as a 5-mile-radius area surrounding the project site. The size of the analysis area was selected based on the assumptions that 1) visibility of the project would attenuate at this distance when observed from inferior or at-grade observer positions; 2) visual contrast of the project would be weak when viewed from higher elevations at this distance, and 3) topographic conditions surrounding the project would limit exposure to visual contrast introduced by the project for observers beyond this distance. The analysis area was further refined after analyzing the potential project visibility illustrated by the viewshed analysis.

The viewshed analysis was conducted using a digital elevation model and numerous points laid out in a grid pattern inside the solar array polygons in a geographic information system (GIS). Potential visibility was determined with the results of the viewshed based on topography, height of project components (solar arrays), and the average eye-level height of observers. The resulting viewshed map (Figure 3.1-2) illustrates where theoretical direct line-of-site views may occur between terrain locations and selected points used to represent the locations and heights of the solar panels at full tilt height. This model is based on elevation and landform and does not account for vegetation, existing structures, and other elements in the landscape that could potentially obstruct views. It is possible that the project may be seen to some

degree from beyond the 3-mile analysis area; however, the project is not expected to draw the attention of viewers from such areas due to distance, viewing angle, and the presence of intervening and surrounding landscape features where viewer focus would be directed.

The results of the viewshed analysis illustrate that visibility of the project outside of the valley is substantially reduced. The viewshed is limited by the surrounding high-elevation landforms of the Soda Mountain Wilderness, which extend from the northeast to the southeast, and the mountains at the western edge of the Mojave National Preserve. Review of the viewshed data shows that the project is almost entirely surrounded by these mountains, which limit the extent of views due to their elevations, rising at least 100 feet higher than the project site.

VIEWPOINTS AND KEY OBSERVATION POINTS

Visually sensitive viewing locations represent specific historic places, public gathering areas, natural scenic features, and recreational activities that have scenic importance relative to one's home, social, business, and recreational environments. They include viewpoints where the public would experience the project from a stationary (e.g., residential area) or a linear (e.g., major roadway) location. Potential changes in the viewshed are evaluated primarily from these identified viewpoints. Identification of viewpoints and key observation points (KOPs) for this analysis was also based on a review of aerial photography and topographic maps, and field investigations. Analyzed sensitive viewing locations included:

- **Vehicular travel routes** – highways and roads used by origin/destination travelers, designated scenic or historic byways, and recreation destination roads (i.e., roads that provide access to designated recreation areas).
- **Recreation areas** – existing recreation sites used for picnicking, camping, hiking, scenic overlooks, OHV driving, rest areas, or other recreational activities.
- **Residences** – single-family detached structures and permanent mobile homes or mobile home parks and associated land uses. A viewpoint at the Rasor Road Services Shell Oil Station was considered in this analysis.

Based in part on the review of the project viewshed analysis (see Figure 3.1-2), 16 field viewpoints were selected to represent typical viewing locations, and nine of those viewpoints were chosen to be carried forward as KOPs for simulations and further analysis (Figure 3.1-3 and Figure 3.1-4; Table 3.1-2). SWCA conducted in-field assessments on January 24, 2023 and October 2, 2024, including contrast rating evaluations in support of the California Environmental Quality Act (CEQA) analysis. Data collected at each of the KOPs included the following: GPS location, digital photographic panorama of the viewshed (used for visual simulations and context imagery), required information to complete the Visual Contrast Rating Worksheets, time of day and atmospheric conditions, and existing structures and roads in the viewshed. Table 3.1-2 details the distance from project components, sensitive viewer types, and the rationale for inclusion from each viewpoint and the selected KOPs.

Vehicular Travel Routes

KOPs 1a, 1b, 2, 3, 4, and 5 – I-15: I-15 is the fourth-longest north-south transcontinental interstate highway in the United States, passing through California, Nevada, Arizona, Utah, Idaho, and Montana. This roadway bisects the valley where the project is contained and provides north and south views along the vehicular corridor. This portion of I-15 has been identified as an eligible state scenic highway (but has not been nominated for designation) but is identified as a San Bernardino County scenic route.

KOP 6 – Transmission line access road: Located west of I-15, this unnamed gravel road is accessed via Arrowhead Trail and terminates at a communications tower located approximately 1 mile northwest of the Rasor Road overcrossing. This access road connects with several recreational roads that run along the alluvial valley west of the project and provide elevated views to the east. This KOP is representative of both vehicular travel routes and recreational areas.

Recreation Areas

KOP 7 – Transmission Line Road B: This KOP is located on the west side of the valley on the transmission line maintenance road. This area has slightly elevated views of the valley and provides a full panoramic view of most of the surrounding valley.

KOP 8 – OHV Recreational Area B: This KOP is just northwest of an intersection of two recreational roadways (Zzyzx Road north of I-15 and the road that runs parallel to the two transmission lines). This area was identified by the viewshed analysis as having high visibility of the project site.

KOP 9 – OHV Recreational Area A: This KOP is on Rasor Road right before it begins to pass over the mountains and enter the BLM OHV recreational area headed toward the Mojave Wilderness and National Preserve. There are many recreational roadways in the OHV recreation area, and Rasor Road is the most direct route to the Shell Oil gas station for fueling recreational and other vehicles.

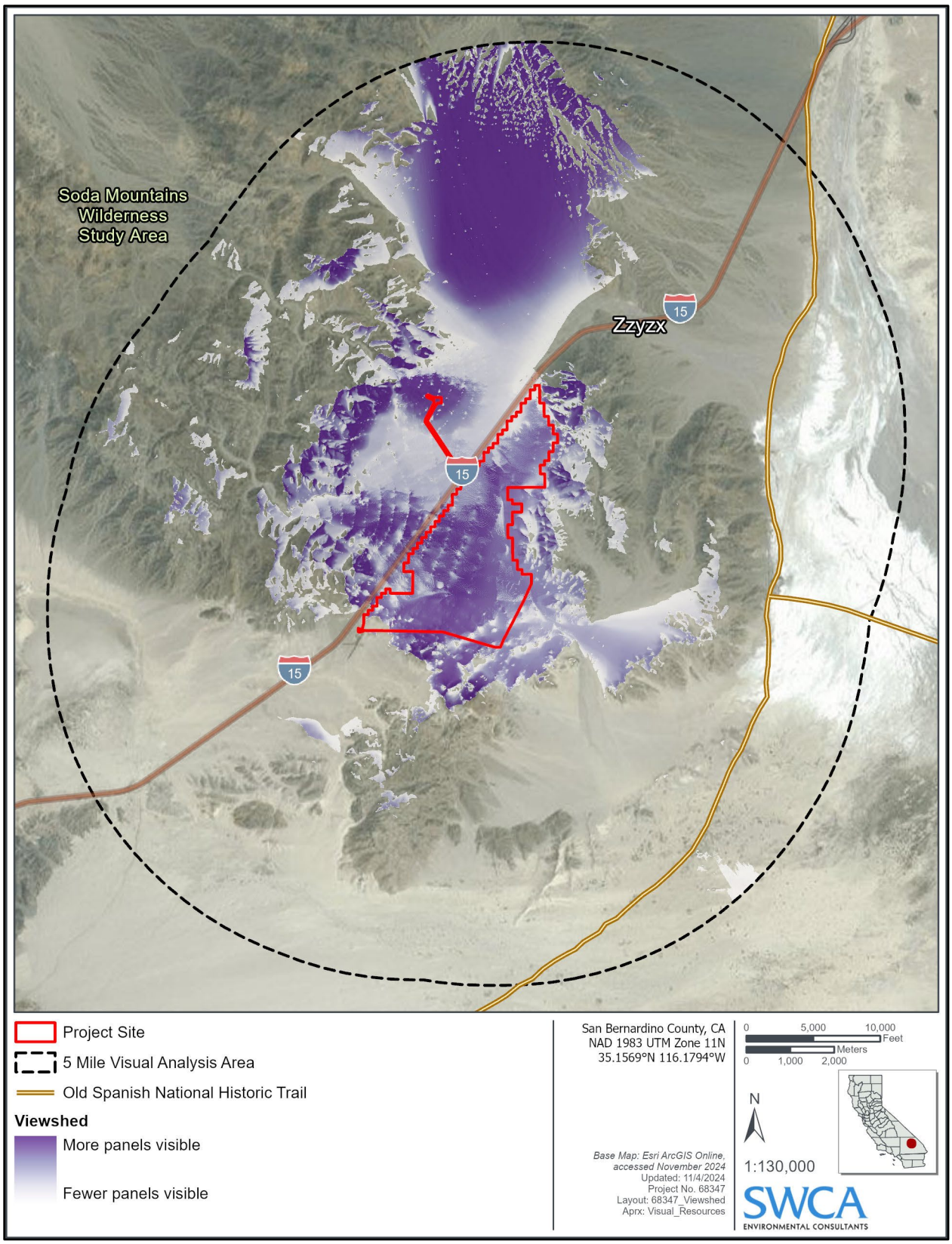

Figure 3.1-2. Viewshed analysis map.

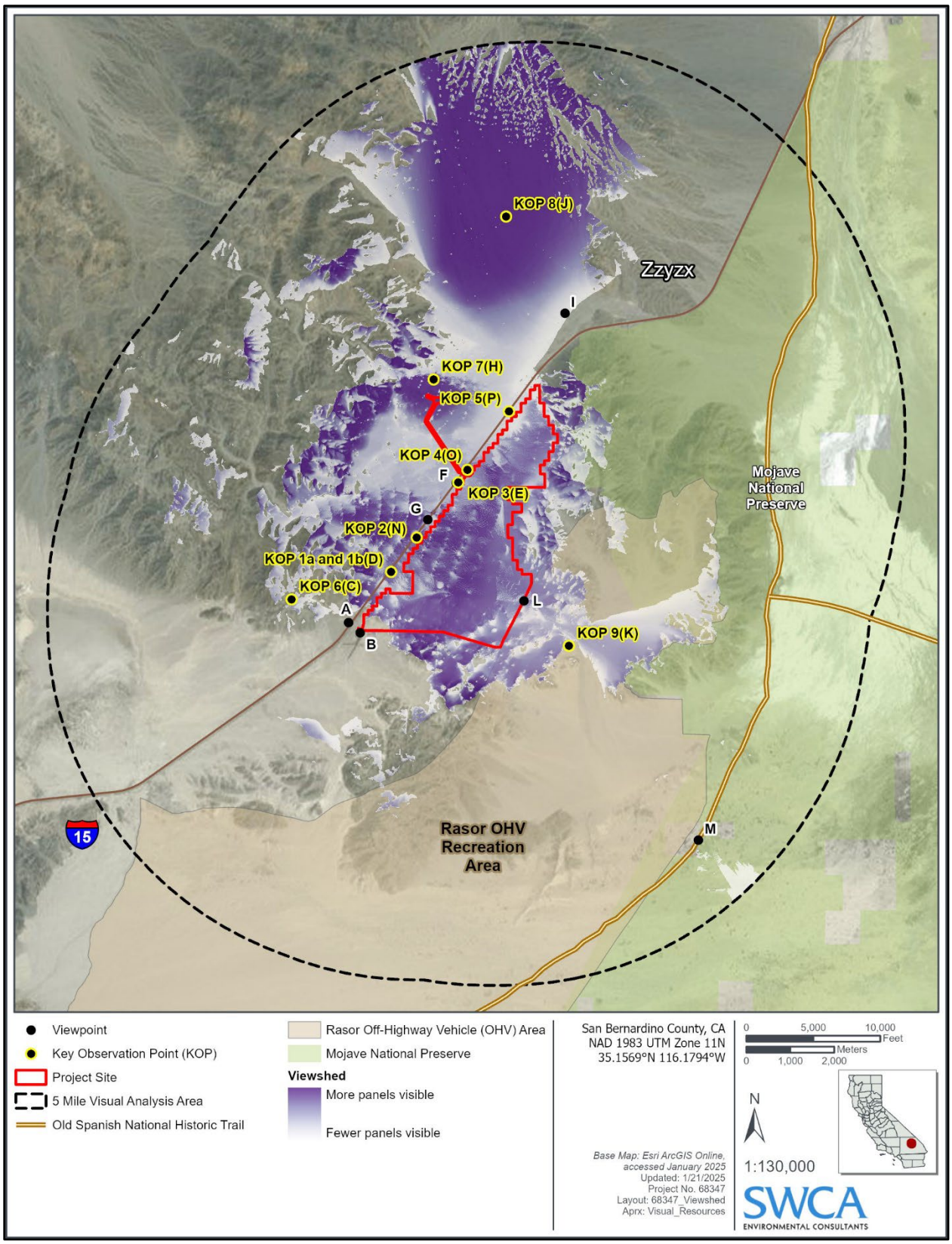

Figure 3.1-3. Preliminary viewpoints and KOP simulation locations.

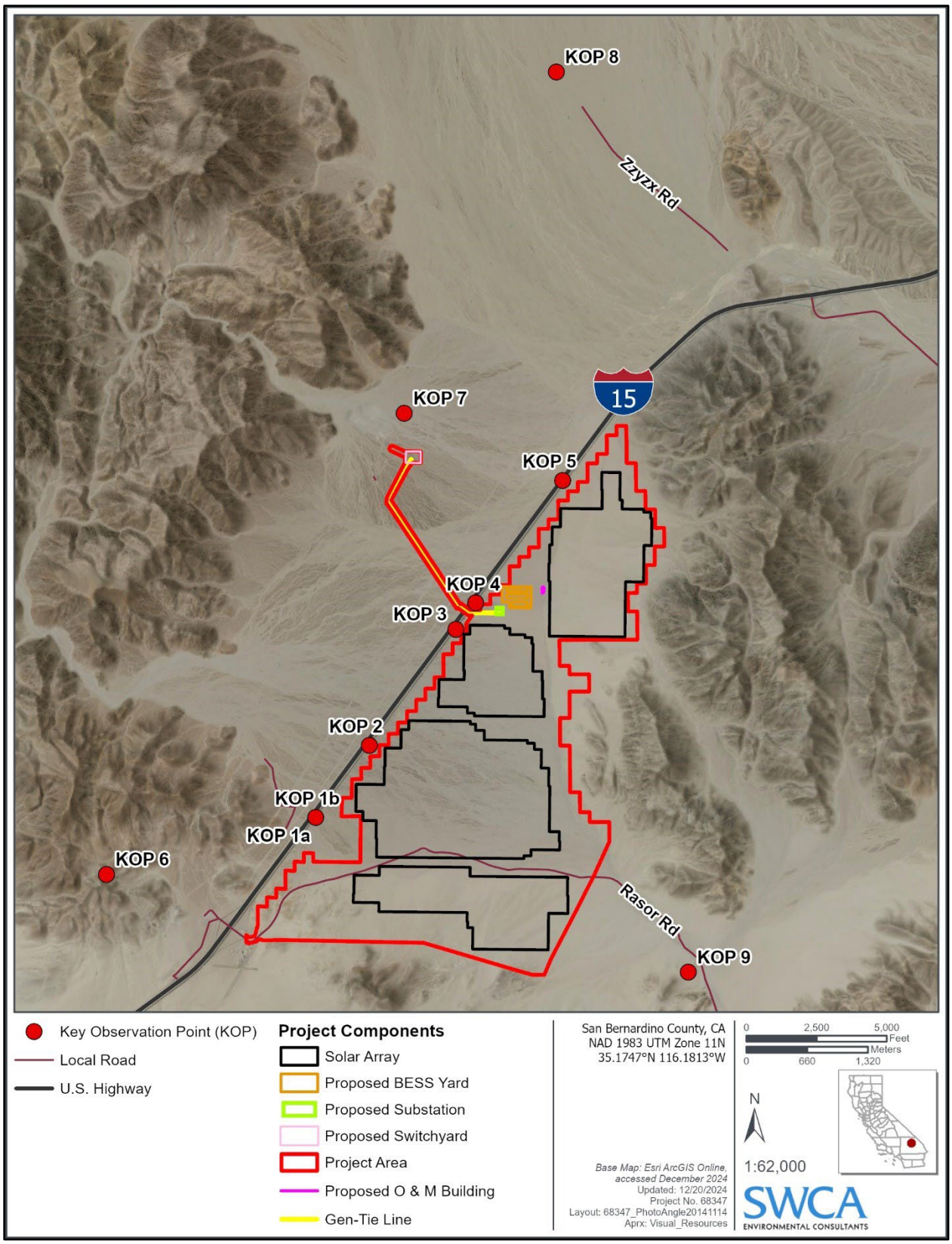

Figure 3.1-4. KOP simulation locations.

Table 3.1-2. Viewpoint and KOP Descriptions

[Field] Viewpoint ID	Name/Location	Sensitive Viewer Group	Approximate Distance to Nearest Solar Equipment (miles) Analysis Area Distance Zone	Rationale for Inclusion	Carried Forward for Simulation?
A	I- 15 Rasor Road Overpass	Vehicular Travel Route	0.73 Foreground	Representative of foreground views for vehicular drivers including working and recreational drivers.	No, context only
B	Rasor Road Services Shell Oil Station	Residential Area	0.56 Foreground	Representative of foreground view for local working residents, visiting tourists, and recreators.	No, context only
C	Communications Tower Road	Vehicular Travel Route/Recreational Area	1.55 Foreground	Representative of foreground views for vehicular drivers including working and recreational drivers.	**YES – [KOP 6]**
D	I-15 Northbound – South End	Vehicular Travel Route	0.32 Foreground	Representative of foreground view for local residential, recreational, and destination/origin commuters headed southbound on the south end of the project.	**YES – [KOP 1a and 1b]**
E	I-15 Northbound – North End	Vehicular Travel Route	0.11 Foreground	Representative of foreground view for local residential, recreational, and destination/origin commuters headed northbound on the north end of the project.	**YES – [KOP 3]**
F	I-15 Southbound – North End	Vehicular Travel Route	0.19 Foreground	Representative of foreground view for local residential, recreational, and destination/origin commuters headed southbound on the north end of the project.	No, context only
G	I-15 Southbound – South End	Vehicular Travel Route	0.21 Foreground	Representative of foreground view for a local residential, recreational, and destination/origin commuters headed southbound on the south end of the project.	No, context only
H	Transmission Line Road B	Vehicular Travel Route/Recreational Area	1.21 Foreground	Representative of foreground view of recreational visitors with elevated views on the west side of the alluvial valley.	**YES – [KOP 7]**
I	Transmission Line Road A	Vehicular Travel Route/Recreational Area	1.39 Foreground	Representative of foreground view of recreational visitors with elevated views on the north side of the alluvial valley.	No, context only

[Field] Viewpoint ID	Name/Location	Sensitive Viewer Group	Approximate Distance to Nearest Solar Equipment (miles) Analysis Area Distance Zone	Rationale for Inclusion	Carried Forward for Simulation?
J	OHV Recreational Area B	Recreational Area	2.56 Foreground	Representative of foreground views of recreational visitors with elevated views from the north end of the alluvial valley.	**YES – [KOP 8]**
K	OHV Recreational Area A – Hill Top	Recreational Area	0.87 Foreground	Representative of the foreground views of recreationalists with elevated views on the south end of the alluvial valley headed to or from the Mojave Wilderness and National Preserve.	**YES – [KOP 9]**
L	Rasor Road	Recreational Area	0.19 Foreground	Representative of the foreground views of recreationalists with elevated views on the south end of the alluvial valley headed to or from the Mojave Wilderness and National Preserve.	No, context only
M	OSNHT and Mojave National Preserve	Recreational Area	4.02 Background	Representative of views of recreationalists of the surrounding OHV area, the Mojave National Preserve, and the OSNHT.	No, context only
N	I-15	Vehicular Travel Route	0.1 Foreground	Representative of foreground view of solar arrays for local residential, recreational, and destination/origin commuters headed northbound.	**YES – [KOP 2]**
O	I-15	Vehicular Travel Route	0.5 Foreground	Representative of foreground view of substation, BESS, and O&M buildings for local residential, recreational, and destination/origin commuters headed northbound.	**YES – [KOP 4]**
P	I-15	Vehicular Travel Route	0.2 Foreground	Representative of foreground view of solar arrays for local residential, recreational, and destination/origin commuters headed southbound.	**YES – [KOP 5]**

Note: The number identification of the nine KOP locations (KOPs 1a, 1b, 2–9) were identified during multiple desktop and field assessments, resulting in their appearing out of numerical order here.

3.1.3 Impact Analysis

3.1.3.1 Thresholds of Significance

The determinations of significance of project impacts are based on applicable policies, regulations, goals, and guidelines defined by the CEQA Environmental Checklist Form in Appendix G of the State CEQA Guidelines. The project would be considered to have a significant effect on visual/aesthetic resources if the effects exceed the significance criteria described below:

1. Have a substantial adverse effect on a scenic vista.
2. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
3. In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings, or in an urbanized area, conflict with applicable zoning and other regulations governing scenic quality.
4. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

3.1.3.2 Methodology

FIELD RECONNAISSANCE AND VISUAL CONTEXT ESTABLISHMENT

The physical conditions and viewing context of the project are analyzed to gain an understanding of the existing landscape quality and character, and its potential relationship to the viewing public. In addition to relevant document research, field reviews of the project site and its surroundings are documented in order to establish a visual baseline of the affected visual environment. Resource inventories related to existing visual character, quality, and scenic views are conducted both on foot and from moving vehicles.
The visual setting is analyzed and defined as experienced primarily from surrounding public viewpoints. Planning documents and previous studies relevant to the surrounding area are referenced to gain an understanding of community and regional aesthetic values.

Field reconnaissance was conducted on January 24, 2023, and included review of the entire project site as well as the surrounding area. Existing visual resources and site conditions were photographed and recorded. Site assessment of proposed project elements (e.g., solar arrays, battery storage facilities, substations, gen-tie lines, etc.) in relation to the site and its surroundings was based on plans and descriptions provided by the project applicant.

VIEWSHEDS AND KEY OBSERVATION POINT SELECTION

The project site was viewed from potential viewer group locations in the surrounding area. Representative public viewpoints were identified for further analysis, based on dominance of the site within the view, the relationship to visual resources, duration of views, and expected sensitivity of the viewer group. Of those representative viewpoints, KOPs were selected that best illustrate the visual changes that would occur as a result of the project.

VISUAL SIMULATIONS

Visual simulations were prepared to quantify potential project visibility and to assess related visual effects (Appendix B). The appearance of structures shown in the photo-simulations is based on preliminary

designs provided by the project applicant and as identified in the project description. Where project information was not available, those project features were assigned a physical appearance typical of similar solar energy facilities built throughout the region and state. Landscaping shown in the visual simulations is depicted prior to full maturity (at approximately 5 years after planting).

VISUAL CONTRAST ANALYSIS

To provide a systematic basis for evaluating impacts to visual resources resulting from the construction and operation of the proposed project, the visual assessment was based in part on the BLM VRM system. BLM Form 8400-4 (BLM 2018) was adapted for project purposes and used to document the potential visual contrast of the proposed project components to the surrounding landscape (Appendix B).
The BLM's contrast analysis is an industry standard and can be used as a basis for CEQA visual impact assessments and provides the public and authorizing agencies a consistent and translatable methodology for understanding potential visual impacts from proposed projects.

GLARE ANALYSIS

To determine the potential for significant glint or glare from solar panels and other built-project components, an analysis of the project glare potential was completed using the ForgeSolar Solar Glare Hazard Analysis Tool (SGHAT) (Appendix B). The glare tool and associated analysis illustrate via Google Earth imagery where the project is located relative to sensitive viewing locations such as public roadways, airports, and other locations. The glare analysis provides a quantitative assessment of when and where glare from the project components will occur throughout the year and shows potential effects on the human eye at locations where glare occurs. Additional information regarding the orientation and tilt of the PV panels, reflectance of project components, local environmental conditions, and ocular factors (e.g., flash blindness) are considered in the glare analysis (Appendix B).

APPLICANT-PROPOSED MEASURES

The applicant identified and committed to implementing the following APMs as part of the proposed project to avoid or substantially lessen potentially significant impacts to visual and aesthetic resources, to the extent feasible. The APMs, where applicable, are discussed in the impact analysis section below. These measures include the following:

- **APM AES-1: Siting and Design.** Visual design elements shall be integrated into the construction plans, details, shop drawings and specifications; these shall include, but not be limited to, grubbing and clearing, vegetation thinning and clearing, grading, revegetation, drainage, and structural plans. Visual design elements within the plans shall be measurable by size and monitored while under construction, while operational, and when decommissioned. Visual design elements to be integrated into construction plans, details, shop drawings and specifications must at a minimum include:
    1. *Vary the grid layout to reduce contrast caused by long straight roads.* Employ an offset in the grid layout to reduce visual contrast caused by long straight roads and, to the extent possible, arrays. The result shall be that no road extends from one side of the solar field to the other in a straight line. To further reduce contrast caused by exposing un-oxidized soils and rock in roadways, at select locations of concern from KOPs, spot applications of a product such as Permeon shall be used to dull and darken the ground plane in a short time.
    2. *Color treat structures to reduce contrasts with the existing landscape.* The applicant shall treat surfaces of all permanent, large project structures and buildings (operations and maintenance building, inverters, electrical enclosures, gen-tie poles, conductors, tanks,

pipes, and walls) and chain-link fences visible to the public such that: (a) their colors minimize visual intrusion and contrast by blending with (matching) the existing characteristic landscape colors; (b) their colors and finishes do not create excessive glare from surface brightness; and (c) their colors and finishes are consistent with local policies and ordinances. The transmission line conductors shall be non-specular and non-reflective, and the insulators shall be non-reflective and non-refractive.

Following consultation with the BLM Visual Resources specialist, and other representatives as deemed necessary, the applicants shall submit a specific Surface Treatment Plan for the BLM and CEC's review that will satisfy these requirements. The consultation would be in-field at the agencies' election, or as a desktop review if preferred by the agencies. The treatment plan shall include:

a. A description of the overall rationale for the proposed surface treatment, including the selection of the proposed color(s) and finishes based on the characteristic landscape. Colors will be fielded tested using the actual distances from the KOPs to the proposed structures, using the proposed colors painted on representative surfaces;

b. A list of each major project structure, building, tank, pipe, and wall; the transmission line towers and/or poles; and fencing, specifying the color(s) and finish proposed for each. Colors must be identified by vendor, name, and pantone number; or according to a universal designation system;

c. One set of color brochures or color chips showing each proposed color and finish;

d. A specific schedule for completion of the treatment; and

e. A procedure to ensure proper treatment maintenance for the life of the project. The applicant shall not specify to the vendors the treatment of any buildings or structures treated during manufacture or perform the final treatment on any buildings or structures treated in the field, until the applicant receives notification of approval of the treatment plan by the BLM. Subsequent modifications to the treatment plan are prohibited without the BLM's approval for components under their respective authorities; however, the applicant may consider the agencies' failure to respond to a request for review within 60 days an acceptance of the proposal.

3. *Lighting* – Consistent with safety and security considerations, the applicant shall design and install all permanent exterior lighting and all temporary construction lighting such that (a) lamps and reflectors are not visible from beyond the project site, including any off-site security buffer areas; (b) lighting does not cause excessive reflected glare; (c) direct lighting does not illuminate the nighttime sky, except for required Federal Aviation Administration (FAA) aircraft safety lighting; (d) illumination of the project and its immediate area is minimized and it complies with local policies and ordinances. Prior to construction, the applicant shall submit to BLM and CEC a Lighting Management Plan that outlines the following:

   a. *Construction and operational (permanent) light*ing – Except as required to meet safety and security requirements, there shall be no exterior nighttime lighting on the project site during the construction and operation periods. For these purposes, "nighttime" means the period of time between two hours after sunset until sunrise. To verify compliance with this measure, safety and security reasons that created the need for nighttime lighting shall be included in the log as well.

b. *Facility lighting* – Lighting for facilities shall not exceed the minimum number, intensity, and coverage required for safety and basic security. Lighting shall be amber in color when accurate color rendition is not required. Use low-pressure sodium lamps or yellow LED lighting, or equivalent. No bluish-white lighting shall be used in permanent outdoor lighting.

c. *Lighting plan* – Prior to construction, a lighting plan shall be prepared that documents how security and safety lighting will be designed and installed to minimize night-sky impacts during facility construction and operation. The lighting plan shall include the safety and security reasons that require the need for all nighttime lighting on the facility during construction and operation periods. Lighting for facilities shall not exceed the minimum number of lights and brightness required for safety and security and shall not cause excessive reflected glare. Low-pressure sodium light sources shall be used to reduce light pollution. Full cut-off luminaires shall be used to minimize uplighting. Lights shall be directed downward or toward the area to be illuminated. Light fixtures shall not spill light beyond the project boundary. Lights in highly illuminated areas that are not occupied on a continuous basis shall be equipped with switches, timer switches, or motion detectors so that the lights operate only when the area is occupied. Wherever feasible, consistent with safety and security, lighting shall be kept off when not in use. The lighting plan shall include a process for promptly addressing and mitigating complaints about potential lighting impacts. The applicant shall submit the lighting plan to the BLM and CEC for review and approval at least 30 days prior to construction.

4. Vegetation and ground disturbance associated with access road construction, and distribution line installations shall be minimized and take advantage of existing clearings wherever feasible.

5. Along all off-site access roads, all off-site distribution line corridors, and all internal access roads 16 feet or wider, graveled surfaces, areas to be permanently cleared of vegetation, and (if applicable) cut slopes shall be treated with rock stains or other color treatment appropriate with the surrounding landscape.

6. Openings in vegetation for facilities, structures, and roads shall be feathered and shaped to repeat the size, shape, and characteristics of naturally occurring openings.

7. The distribution line shall utilize non-specular conductors and non-reflective coatings on insulators.

- **APM AES-2: Construction.** A pre-construction meeting with BLM landscape architects or other designated visual/scenic resource specialists shall be held before construction begins to coordinate on the mitigation strategy and confirm the compliance checking schedule and procedures. Final design and construction documents will be reviewed for completeness with regard to the visual mitigation elements, assuring that requirements and commitments are adequately addressed. The construction documents shall include, but not be limited to grading, drainage, revegetation, vegetation clearing, and feathering plans, and must demonstrate how VRM objectives will be met, monitored, and measured for conformance.

    1. The applicant shall reduce visual impacts during construction by clearly delineating construction boundaries and minimizing areas of surface disturbance; preserving existing, native vegetation to the extent feasible; utilizing undulating surface-disturbance edges; stripping, salvaging, and replacing topsoil; using contoured grading; controlling erosion; using dust suppression techniques; and restoring exposed soils to their original contour

and vegetation.

2. Visual impact mitigation objectives and activities shall be discussed with equipment operators before construction activities begin.
3. Existing rocks, vegetation, and drainage patterns shall be preserved to the extent feasible.
4. Brush-beating or mowing or using protective surface matting rather than removing vegetation shall be employed where feasible.
5. Where not in conflict with other mitigation requirements, slash from vegetation removal shall be mulched and spread to cover fresh soil disturbances as part of the revegetation plan. Slash piles shall not be left in sensitive viewing areas.
6. If graveled surfaces are used during construction, the visual color contrast of graveled surfaces shall be reduced with approved color treatment practices.
7. No paint or permanent discoloring agents shall be applied to rocks or vegetation to indicate surveyor construction activity limits.
8. All stakes and flagging shall be removed from the construction area and disposed of in an approved facility.

- **APM AES-3: Operation and Maintenance.** Terms and conditions for VRM mitigation compliance shall be maintained and monitored on an annual basis for the life of the project for compliance with visual objectives, adaptive management adjustments, and modifications listed below and as necessary and approved by the BLM landscape architect or other designated visual/scenic resource specialist. Minimum measures are as follows:

    1. The applicant shall maintain revegetated surfaces until a self-sustaining stand of vegetation which does not require supplemental water or fertilizer is re-established and visually adapted to the undisturbed surrounding vegetation. No new disturbance shall be created during operation without completion of a VRM analysis and approval by the BLM Authorized Officer.
    2. Interim restoration shall be undertaken during the operating life of the project as soon as possible after disturbances.
    3. Painted facilities shall be kept in good repair and repainted when color fades or flakes.
    4. Color-treated solar panel backs/supports shall be kept in good repair and retreated when color fades and/or flakes.

- **APM AES-4: Decommissioning and Site Reclamation.** A Decommissioning and Site Reclamation Plan, covering visual impact mitigation measures, shall be in place prior to construction, and reclamation activities shall be undertaken as soon as possible after disturbances occur and be maintained throughout the life of the project. The following decommissioning/reclamation activities/practices shall be implemented to partially mitigate visual impacts associated with solar energy development, where feasible:

    1. Pre-development visual conditions, and the B-Quality scenery, and integrity shall be reviewed, and the visual elements of form, line, color, and texture shall be restored to pre-development visual compatibility or to that of the surrounding landscape setting conditions, whichever achieves the better visual quality and most ecologically sound outcome.
    2. A Decommissioning and Site Reclamation Plan shall be developed, approved by the BLM, and implemented. The plan shall require that all aboveground and near-ground

structures be removed. Some structures shall be removed only to a level below the ground surface that will allow reclamation/restoration. Topsoil from all decommissioning activities shall be salvaged and reapplied during final reclamation. The plan shall include provisions for monitoring and determining compliance with the project's visual mitigation and reclamation objectives.

3. Soil borrow areas, cut-and-fill slopes, berms, water bars, and other disturbed areas shall be contoured to approximate naturally occurring slopes, thereby avoiding form and line contrasts with the existing landscapes. The applicant shall contour to a rough texture (i.e., use large rocks/boulders, grade uneven surfaces, and/or vegetation mulches/debris) in order to trap seed and to discourage off-road travel, thereby reducing associated visual impacts.
4. A combination of seeding, planting of nursery stock, transplanting of local vegetation within the proposed disturbance areas, and staging of decommissioning activities enabling direct transplanting shall be utilized. Where feasible, native vegetation shall be used for revegetating to establish a composition consistent with the form, line, color, and texture of the surrounding undisturbed landscape.
5. Stockpiled topsoil shall be reapplied to disturbed areas, and the areas shall be revegetated by using a mix of native species selected for visual compatibility with existing vegetation, where applicable, or by using a mix of native and non-native species if necessary to ensure successful revegetation. Gravel and other surface treatments shall be removed or buried.
6. Rocks, brush, and vegetal debris shall be restored whenever possible to approximate preexisting visual conditions.
7. Edges of revegetated areas shall be feathered to reduce form and line contrasts with the existing landscapes.
8. A decommissioning VRM Monitoring and Compliance Plan shall be prepared by the applicant and approved by the BLM that establishes the schedule and terms for monitoring and the conditions and methods of measurement for determining compliance.

- **APM AES-5: Glint and Glare Mitigation and Monitoring.** Consistent with *Best Management Practices for Reducing Visual Impacts of Renewable Energy Facilities on BLM-Administered Lands* (BLM 2013), the applicant shall prepare and submit to the BLM a Glint and Glare Mitigation and Monitoring plan identifies mitigation measures to reduce the potential health, safety, and visual impacts associated with glint and glare, and provides for monitoring of the effectiveness and maintenance of such measures. The goals of the mitigation shall be to ensure that glare with the potential for temporary after-image effects is not visible to drivers on I-15, and that glare visible from observation points does not exceed a cumulative total duration of 30 minutes per day. Mitigation measures to achieve these goals shall include, but not be limited to:

    1. Program solar tracker arrays contributing to glare to turn away from affected KOPs during the times of day when glare visible at that KOP is generated.
    2. Use solar panels made with textured glass surfaces to diffuse reflected light. If the use of textured glass panels is found not to be feasible, the plan shall describe the reason for its infeasibility.
    3. Employ materials to reduce the effect of glare where such materials would not result in greater adverse visual impacts than the glint or glare that would be offset and would not result in shading the solar panels. These materials may include fencing with privacy slats

or fabric screening of a BLM standard environmental color that is identified through a site study for color and texture selection and approved by the BLM, earthen berms, or vegetative screening.

4. If glare with the potential for temporary after-image remains visible to drivers on I-15, coordinate with Caltrans to place signs warning drivers of the potential for hazardous glare.

3.1.3.3 Impact Assessment

Impact AES-1: Would the project have a substantial adverse effect on a scenic vista? (Less than Significant)

Scenic vistas are generally defined as a specific viewpoint or viewing location (often an elevated overlook) displaying good aesthetic and compositional value of a highly valued landscape accessible by the public. If the project substantially degrades the scenic landscape as viewed from public roads or from other public or recreation areas, this would be considered a potentially significant impact to the scenic vista. The degree of potential impact to scenic vistas also varies with factors such as viewing distance, duration, viewer sensitivity, and the visual context.

Scenic vistas in the region that are either identified in County planning policy or otherwise meet the quality definition of a scenic vista typically include views of surrounding hills and mountains, and the native desert landscape. From KOPs and other viewpoints in the project vicinity, scenic vistas as determined by field reconnaissance and/or official scenic designations primarily include hillsides and ridgeline backdrops associated with the Soda Mountain Wilderness and Mojave National Preserve.

The results of the viewshed analysis and visual simulations show that visibility of the project outside of the valley is substantially reduced (Appendix B). The viewshed is limited by the surrounding high-elevation landforms of the Soda Mountains Wilderness, which extend from the northeast to the southeast, and the mountains at the western edge of the Mojave National Preserve. Although the project is bordered by the Mojave National Preserve and Soda Mountain Wilderness, views within these areas would be obscured by the surrounding mountains or at a such a distance that the project would become increasingly perceptibly smaller and less discernable, and any infrequent views of solar arrays would look like a mirage or shadow on the valley floor. Both the viewshed analysis and the visual simulations are included within Appendix B.

The congressionally designated alignment of the Armijo Route of the Old Spanish National Historical Trail is present just outside of the visual analysis area to the east and south of the project. There are no high-value sites or segments along this portion of the OSNHT. At its closest point, the OSNHT is approximately 3.4 miles from the project, and no visibility along the OSNHT was shown in the viewshed analysis. It is anticipated that there would be negligible or no visual contrast from the proposed project based on the viewshed analysis and field assessment from viewpoint M. The project would have no discernible visual contrasts with current views from the trail, and the project would not interfere with the trail's nature and purpose or other trail management direction.

Most viewpoints surrounding the project, including views from I-15 (KOPs 1a, 1b, 2–5) and recreation areas (KOPs 6–9) would allow unaltered views over and beyond the proposed PV arrays, substations, BESS, and other project components. As a result, the project would maintain existing views of identified scenic vistas such as the surrounding mountains. Where visible, although the project would introduce new structures and development on the site, these changes would not substantially affect public access to the visual resources that comprise scenic vistas in the area.

Implementation of APMs AES-1 through AES-5 would ensure that the visual design elements are integrated into the project to minimize substantial adverse effects on a scenic vista. Impacts would be **less than significant**.

Impact AES-2: Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? (No Impact)

The project site is not within the view corridor of any officially designated state scenic highway. I-15, which crosses through the project site, is identified by Caltrans as an eligible state scenic highway. However, in order for a route to be designated as an Official State Scenic Highway, it must first be nominated for designation by the County. I-15 has not been nominated for designation by San Bernardino County for state scenic highway status. The nearest state scenic highway to the project is Interstate Route 40 approximately 25 miles to the south. Due to distance and intervening terrain, this highway is outside of the project viewshed. Therefore, there would be **no impacts** to scenic resources within a state scenic highway.

Impact AES-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? (Significant and Unavoidable)

Project-related actions would be considered to have a significant impact to the visual character of the site and surroundings if they altered the area in a way that substantially changed, detracted from, or degraded the visual quality of the site. The degree to which that change reflects documented community values and meets viewers' aesthetic expectations is the primary basis for determining the extent of potential visual impact. Visual contrast and compatibility can be used as a measure of the potential impact that the project may have to the visual quality of the site. If a strong contrast occurred where project features or activities alter and dominate the landscape setting, this would be considered a potentially significant impact to visual character or quality of the site. Project components that are not compatible with the visual context could result in a significant change in the character of the community. Consideration of potential significance includes analysis of visual character elements such as land use and intensity, visual integrity of the landscape type, and other factors.

The project site itself is of high visual quality. The project would redefine the visual character of the site and the project vicinity. A change in character is inherent with the conversion of vacant land to an industrial utility-scale solar development.

Construction

During the construction period, earthmoving activities and construction materials, equipment, trucks, and parked vehicles could be visible on the site. Construction would occur over 18 consecutive months, during which a number of activities would take place, including large-scale vegetation removal, earthwork, and installation of concrete foundations and equipment. These construction activities could result in a degree of visual contrast within the landscape that is greater than the operation phase discussed below. The predominant visual impacts would be dust and vehicular traffic caused by grading, on-site traffic, and the presence of construction workers. As outlined in the Air Quality Technical Report (Appendix C), implementation of APM AIR-1 through APM AIR-8 would minimize dust emissions. Additionally, the color of the underlying earth (light tan) stands in lesser contrast within the landscape than the dark gray or black, non-reflective surfaces of the solar panels that would be installed. However, the overall degree of visual impact would be somewhat lessened because the area covered by any one phase of construction would be smaller compared to full build-out of the project, and the visual effects

would be temporary. Visual impacts associated with construction would create a weak temporary contrast with the existing landscape character, resulting in low impacts to scenery from identified KOP locations.

Operation

During project operation and maintenance, visual impacts would consist of the contrast created from the presence of project elements, compared with the existing setting, resulting in modifications to the existing scenery and affecting views from identified KOP locations.

The project would introduce forms, lines, colors, and textures associated with the PV arrays and associated infrastructure that are uncommon and not currently found in the existing landscape character. The addition of the repetitive, vertical upright forms, angular and horizontal lines, dark colors and textures associated with the solar arrays, trackers, and security-fenced land would be uncommon in this natural setting. Project structures and buildings would additionally be uncommon within this currently undeveloped area, with the only existing development within this valley currently being the Shell Oil gas station. Implementation of the project would add geometrical and angular forms and lines not commonly found in the area. The substation, switchyard, and associated infrastructure would add muted gray elements, and irregular forms and lines not commonly found in the area. Development in this area is limited, and due to the lack of existing development of the area, the project would be noticeable and would visually dominate and attract attention in the primarily enclosed low, gently sloped alluvial valley, resulting in strong impacts to landscape character and scenery.

Portions of the project would be highly visible from important public transportation corridors and recreation areas. Views of the project from both I-15 northbound (KOPs 1a, 1b, 2) and southbound (KOP 5) and OHV recreational areas to the east (KOP 9) would be substantially changed. The existing high visual quality visual character as seen from these viewpoints would be degraded, and the existing rural and open space would be replaced with an inherent semi-industrial, utilitarian landscape character.

Sensitive viewing locations within the Mojave National Preserve (Soda Dry Lake, Zzyzx Spring, and the Desert Studies Center) located within the analysis area would have no or very limited views of the project due to the significant changes in topography between those locations and the project. Other sensitive viewing locations outside of the visual analysis area and within the preserve identified on the Mojave National Preserve NPS website are located 10 or more miles away from the project. The low profile of the solar arrays, combined with the degree of topographical change, distance, and atmospheric conditions between these sites and the project viewers indicate that viewers would have indiscernible views, if any, of the project. Where visible, the project would be less discernable, and any infrequent views of solar arrays would resemble a mirage or shadow. Additionally, no area of the preserve would experience full views of the project.

As outlined in APM AES-4, following the end of its useful life (approximately 40 years), the project would be subject to decommissioning and site reclamation. Structures and equipment would be removed, and new project access roads and corridors would be closed, except the relocated Rasor Road. Decommissioning of the substation and switchyard would involve deconstruction of those structures. The substation and O&M building areas would be graded to approximate the natural contour. Construction hours and site cleanliness practices would be the same during decommissioning as during construction. The decommissioning of the project would create new visual impacts similar to those seen during construction. After decommissioning and with time, the project site would be restored to a landscape that once again blends into the surrounding valley's forms, vegetation, and textures.

Potential effects on existing visual quality and character would be minimized by implementation of APM AES-1 through AES-4. However, the project would remain highly visible and out-of-character with the existing high-quality visual landscape as seen from public viewpoints, resulting in **significant and**

unavoidable impacts to the existing visual quality and character of the site and surroundings. No other potentially feasible mitigation measures would avoid or substantially lessen this significant effect.

Impact AES-4: Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? (Less than Significant)

The project would result in a significant impact if it subjects public viewing locations to a substantial amount of point-source lighting visibility at night, or if project illumination results in a noticeable spillover effect into the nighttime sky, increasing the ambient light over the region. The placement of lighting, source of illumination, and fixture types combined with viewer locations, adjacent reflective elements, and atmospheric conditions can affect the degree of change to nighttime views. If the project results in direct visibility of a substantial number of lighting sources, or allows a substantial amount of light to project toward the sky, it would result in significant impacts to nighttime views and aesthetic character.

Light

Existing nighttime lighting conditions vary throughout the area. No light sources currently exist on the project site. However, I-15 introduces a substantial amount of lighting in the nighttime environment from vehicle lights and from the sparsely located overcrossings. Open space and rural lands, including the Mojave National Preserve and Rasor OHV recreation area, have little to no night lighting.

Project use of uncontrolled or excessive lighting would be noticeable to nearby motorists on I-15. Nighttime lighting would also affect the nighttime experience for dispersed recreational users in the surrounding wilderness and recreational areas. Excessive lighting can also cause an adverse effect to viewers of the night sky via sky glow, which diminishes the visibility of the nighttime sky and stars. Prevention of off-site light spillage for ground observers does not necessarily prevent back-reflected light (i.e., light reflected off the ground and/or structures from down-directed lamps) from diminishing the visibility of the night sky. Normally, the contribution of project-related lighting is negligible when in an environment with abundant light sources; however, the project site is highly valued in terms of the quality of its nighttime skies. This is attributable to the scarce and scattered nature of existing light sources in the surrounding area and the prevalence of federally administered land in the region, which limits opportunities for development.

As described in the Outdoor Lighting Assessment Report (Appendix B), the project would require permanent lighting at the Rasor Road site entrance, O&M buildings, substation, and switchyard. Some portable lighting also could be required for essential nighttime maintenance activities. In accordance with **APM AES-1**, lighting would be limited to areas required for operations or safety, directed on-site to avoid backscatter and minimize spillover, and shielded from public view. Lighting that is not required during nighttime hours shall be controlled with sensors or switches operated such that lighting will be on only when needed. The project's O&M area would be located near the project substation, somewhat concentrating new visible light sources as seen from I-15, but also introducing noticeable lighting into an existing undeveloped desert area where no artificial lighting outside of the freeway corridor exists. Northwest of the freeway, the project switchyard would introduce additional noticeable lighting to the affected viewsheds and would draw attention, both as point-source lights and by altering the nighttime landscape character from primarily undeveloped to developed. These new sources of visible light would be seen from viewing locations along I-15 (KOPs 1a, 1b, 2–5) and from recreation areas (KOPs 6–9). Given the relatively sparse development in the surrounding area and the general lack of stationary nighttime lighting, the introduction of nighttime task lighting would constitute a potentially significant impact.

Therefore, the project would implement **APM AES-1** to reduce potential off-site lighting impacts. **APM AES-1** requires the preparation of a lighting plan that documents how lighting will be designed and installed to minimize night-sky impacts during facility construction and operation. The project lighting plan specifies the locations and types of lighting and includes numerous measures to prevent unnecessary use of lights, minimize light intensity, and prevent light spillage and reflectance to off-site areas.

The implementation of **APM AES-1** would minimize the amount of lighting potentially visible off-site. While these measures would not totally eliminate the light visible by surrounding user groups, project lighting would be minimized and controlled such that it would not be a nuisance and would not detract from the ability of affected viewers to enjoy their surroundings or view the night sky. Therefore, impacts related to light would be **less than significant**.

Glare

The project would use PV panels that are uniformly dark in color, non-reflective, and designed to be highly absorptive of all light that strikes their glass surfaces. The project would use an anti-reflective coating, designed to generate electricity rather than reflect light. The solar panels are also designed to track the sun to maximize panel exposure to the sun, which would direct most reflected light back toward the sun in a skyward direction. PV panels have a lower index of refraction/reflectivity than common sources of glare in residential environments. The glare and reflectance levels from a given PV system are lower than the glare and reflectance levels of steel, snow, standard glass, plexiglass, and smooth water. The glare and reflectance levels of panels are further reduced with the application of anti-reflective coatings. PV suppliers typically use stippled glass for panels as the “texturing” of the glass allows more light energy to be channeled/transmitted through the glass while weakening the reflected light. With the application of anti-reflective coatings and use of modern glass technology, the PV panels would display overall low reflectivity.

Any glare that results from project facilities (not panels) and the high-voltage gen-tie line would be reduced by incorporation of APM AES-1. This would require that the gen-tie facilities be finished with non-specular and non-reflective material and that the insulators be non-reflective and non-refractive. The O&M buildings and BESS units would be painted a medium brown color with a matte finish to blend with the landscape. These measures would prevent glare or reduce glare from structural (not panel) surfaces to minimal levels that would not be noticeable or distracting to potential viewers.

The Visual Resources Technical Report (Appendix B) found that the project would create a new source of glint/glare. Potentially affected observers would be travelers on I-15 and recreationalists in the OHV area. As summarized in Table 3.1-3, the project could produce glare over the course of a typical year for two of the glare receptor locations. Glare analysis point receptors (referred to as OPs) 4 and 8 could receive green glare. No OPs would experience red glare. No glare impacts would affect OPs along I-15.

Travelers along I-15 northbound and southbound (point receptors 1–7) experience views to the northeast, east, and southwest of the project and have superior views of the landscape. Travelers along these routes would experience "0" minutes of potential glint or glare; therefore, there are no glare impacts to vehicular travel routes. However, a viewer standing along I-15, represented by point receptor 4, could experience up to 329 minutes per year of green ocular impact. The glare would occur from mid-November to the end of January from 6:00 a.m. to 7:30 a.m. for approximately 8 minutes per day. Point receptor 8 could experience up to 198 minutes per year of green ocular impact; the glare would occur from the beginning of November to the beginning of February from 6:30 a.m. to 8:00 a.m. for approximately 5 minutes per day.

Regarding the nearest airport, two potential flight paths were considered. The closest airport considered in the analysis includes the public Baker Airport, approximately 5.8 miles to the northeast. During takeoff

and landing procedures, airborne viewers (e.g., pilots) would be elevated relative to the project site. The results of the glare analysis conducted for this project indicate that airborne viewers would not experience glare within the two 2-mile-long takeoff and landing flight path segments analyzed to meet FAA requirements. Glare results for the analysis are summarized in Table 3.1-3 for each photo receptor and path analyzed.

Table 3.1-3. Glare Analysis at Analyzed Photo Receptors

KOP Number or Location Name	Green Glare (minutes)	Yellow Glare (minutes)	Red Glare (minutes)	Glare Results
Baker Airport – Northwest Runway	0	0	0	No glare produced over the course of a typical year.
Baker Airport – Southeast Runway	0	0	0	No glare produced over the course of a typical year.
1	0	0	0	No glare produced over the course of a typical year.
2	0	0	0	No glare produced over the course of a typical year.
3	0	0	0	No glare produced over the course of a typical year.
4	329	0	0	Glare observed: 329 minutes of green glare per year.
5	0	0	0	No glare produced over the course of a typical year.
6	0	0	0	No glare produced over the course of a typical year.
7	0	0	0	No glare produced over the course of a typical year.
8	198	0	0	Glare observed: 198 minutes of green glare per year.
9	0	0	0	No glare produced over the course of a typical year.
10	0	0	0	No glare produced over the course of a typical year.
11	0	0	0	No glare produced over the course of a typical year.
12	0	0	0	No glare produced over the course of a typical year.
13	0	0	0	No glare produced over the course of a typical year.
I-15 – Northbound	0	0	0	No glare produced over the course of a typical year.
I-15 – Southbound	0	0	0	No glare produced over the course of a typical year.

Therefore, glare impacts would be brief (a few minutes in the morning) and would not shine light directly at motorists on I-15 nor cause a nuisance to vehicular travel routes. As the impacts associated glare would be limited in nature and reduced by APMs AES-4 and AES-5, impacts would be **less than significant**.

MITIGATION MEASURES

In addition to APMs, no other potentially feasible measures were identified to further avoid or substantially lessen impacts to aesthetics.

3.1.3.4 Cumulative Impacts

Impact C-AES-1: Would the impacts of the proposed project, in combination with other past, present, and reasonably foreseeable future projects, contribute to a cumulative impact related to aesthetics? (Significant and Unavoidable)

Multiple projects are proposed or operating within the 50-mile radius of the project site. Projects under construction or currently operating within the project viewshed have the potential to combine for significant cumulative aesthetic impacts. As described in Chapter 3.0, Environmental Impacts Analysis, several solar energy generation facilities are proposed, in addition to the proposed Barstow International Gateway (BIG) Specific Plan Area from the County of San Bernadino into the City of Barstow. The nearest of the past, present, or reasonably foreseeable future projects would be located a minimum of 30 miles from the Soda Mountain Solar project and concentrated southwest of the project in the mostly developed areas adjacent to the I-40 corridor. However, the project's visual impacts in combination with two proposed small solar developments near the community of Harvard, along I-15, would contribute to an incremental shift in the landscape character viewed from this travel route from mostly undeveloped natural desert to increasingly a landscape of energy generation infrastructure.

Cumulative aesthetic impacts would be reduced through compliance with local laws and regulations, in addition to APMs. Cumulative renewable energy projects and other development that are subject to the environmental permitting process would have a detailed analysis of aesthetic conflicts as part of the project-level environmental review. The permitting process normally requires each project to comply with local standards and to minimize aesthetic impacts. Additional mitigation may be applied to the cumulative projects through environmental permitting by lead agencies. This would ensure that cumulative aesthetic impacts during construction would be less than significant. However, the project's considerable contribution to the cumulative aesthetic impacts caused by other past, present, and foreseeable future projects would be cumulatively considerable and **significant and unavoidable**.

3.1.4 Laws, Ordinances, Regulations, and Standards

While the CEQA thresholds analysis and consideration of the project site's existing BLM VRM class III designation are required and important analyses, no permits are required that explicitly or specifically address visual resources. However, several federal, state, and local laws, ordinances, regulations, and standards applicable to visual resources are discussed and summarized in Table 3.1-4.

Table 3.1-4. Laws, Ordinances, Regulations, and Standards

Law, Ordinance, Regulation, or Standard	Administering Agency	Applicability	Conformance
Federal			
40 CFR 1502.16, 1508.8	CEQ	Calls for projects subject to NEPA to consider and identify aesthetic effects.	This Visual Resources Technical Report
43 CFR section 28 2805.12(i)(3)(i)	BLM	BLM, as a federal land manager, shall control or prevent damage to "(i) Scenic, aesthetic . . . values . . ."	This Visual Resources Technical Report
Desert Renewable Energy Conservation Plan – Land Use Plan Amendment			
LUPA-VRM-1	BLM	The project site is within lands categorized VRM Class III	This Technical Report: Sections 3.1.3; Section 5
LUPA-VRM-2	BLM	The project site is within lands categorized VRM Class III.	This Technical Report: Section 5
LUPA-VRM-3	BLM	Directly guides aesthetic considerations of proposed transmission lines.	This Technical Report: Section 5
GPL-VRM-1	BLM	Calls for developments to incorporate design standards and BMPs to reduce visual impacts.	This Technical Report: Section 2; Table 2.1; Appendix A, Appendix D, Appendix E, Appendix F
GPL-VRM-2	BLM	Identifies the BMP plan for reducing visual impacts from development.	This Technical Report: Section 2; Table 2.1; Appendix A, Appendix D, Appendix E, Appendix F
GPL-VRM-3:	BLM	Guides mitigation standards according to region and VRM Class.	This Technical Report: Section 2; Table 2.1; Appendix A, Appendix D, Appendix E, Appendix F
National Park Dark Sky Program	NPS	Guides monitoring and minimizing undue light pollution and trespassing on NPS lands.	This Technical Report: Appendix D
General Management Plan for the Mojave National Preserve	NPS	Not directly applicable but included for the sake of completeness. The General Management Plan for the Mojave National Preserve catalogs general goals and policies for preserve management, including the protection of scenic resources.	This Technical Report: Sections 3.1.5, 5.2.3
Old Spanish National Historic Trail Comprehensive Administrative Strategy	NPS	Not directly applicable but included for the sake of completeness. Establishes a framework for developing future trail planning efforts to support the protection and interpretation of the resources and values of the OSNHT.	This Technical Report: Sections 3.1.6, 5.2.4, Figure 5

Law, Ordinance, Regulation, or Standard	Administering Agency	Applicability	Conformance
BLM Solar Energy Program	BLM	Includes programmatic design practices for considering visual resources.	This Technical Report: Sections 4 and 5, Appendix A
State			
California State Scenic Highway System (I-15)	Caltrans	Although not directly applicable, the 'eligible' status of I-15 signals its sensitivity as a visual resource.	N/A
Local			
San Bernardino County Countywide Plan; County Development Code	County of San Bernardino	The project is located entirely within lands administered by the BLM. Although local plans and ordinances are considered with the CEQA analysis, they have no direct regulatory authority regarding the project.	N/A

Permits with considerations for visual effects required to construct, operate, and maintain the project are summarized in Table 3.1-5.

3.1.5 Agencies Contacted and Permits

A list of agencies that were contacted during the preparation of this application is provided in Appendix V, **Table 2-1. Permits Required for Soda Mountain Solar Project**. Permits required to construct, operate, and maintain the project are also summarized in Table 2.1. Pursuant to Assembly Bill 205 subsection 25545.1(b)(1), the CEC retains exclusive authority over permitting and supersedes any applicable statute, ordinance, or regulation of a local jurisdiction. The Applicant and CEC would collaborate with San Bernardino County on review of this Opt-in Application to ensure compliance with rules and regulations. No permits for visual resources are required.

Table 3.1-5. Permits Required

Regulatory Agency	Permit Required	Agency Contact	Schedule
County of San Bernardino	N/A County review of Outdoor Lighting Assessment Report and Landscape Concept Plan	Delanie Garlick San Bernardino County, Contract Planner Harris & Associates 3620 American River Drive Suite 175 Sacramento, CA 95864 Delanie.Garlick@lus.sbcounty.gov	Completed

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