

B.3.1 Aesthetics

AESTHETICS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Significance criteria established by CEQA Guidelines, Appendix G.

B.3.1.1 Setting

Aesthetics, as addressed in the California Environmental Quality Act (CEQA), refers to visual considerations in the physical environment. Aesthetics analysis, or visual resource analysis, is a systematic process to logically assess visible change in the physical environment and the anticipated viewer response to that change. This Aesthetics section describes the existing landscape character of the study area, existing views of the study area from various on-the-ground vantage points, the visual characteristics of the Downs Substation Expansion Project (Proposed Project), and the landscape changes that would be associated with the construction and operation of the Proposed Project as seen from various vantage points.

The Visual Resources technical approach has been differentiated according to: (1) federal lands administered by the U.S. Department of the Interior, Bureau of Land Management (BLM) and (2) non-federal public, and private lands. The technical approach for that portion of the Proposed Project where lands are subject to administration by the BLM is based on the BLM’s Visual Resource Management (VRM) System. This is a system that BLM requires for use on BLM-administered lands but cannot be applied to non-BLM lands where the BLM has no visual resource management authority. The analysis of non-BLM portions of the study area uses the Visual Sensitivity-Visual Change (VS-VC) System. The following sections describe the inventory and assessment methods in greater detail.

BLM Visual Resource Management (VRM) Methodology

Public lands to be occupied by the Proposed Project and administered by the BLM are subject to visual resource management objectives as developed using the BLM VRM System (BLM 1984, 1986a, 1986b). This system includes an inventory of landscape characteristics and includes assessments of scenic quality, viewer sensitivity, and viewing distance zones. This data is then evaluated with a classification matrix that results in the assignment of one of four inventory classes (I through IV) with specific management prescriptions for each class. The objective of each VRM classification, as stated in the BLM VRM Visual Resource Inventory Manual, are as follows:

- **VRM Class I.** The objective 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 must not attract attention.

- **VRM Class II.** The objective 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.
- **VRM Class III.** The objective is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate or lower. 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.
- **VRM Class IV.** The objective is to provide for management activities, which 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 in the predominant natural features of the characteristic landscape.

Visual Sensitivity-Visual Change (VS-VC) Methodology

Those portions of the Proposed Project not located on BLM-administered land, were analyzed using the VS-VC methodology. Under this methodology, the Proposed Project was viewed from various public roads and vantage points to develop an overall assessment of the existing landscape character, visual quality, and viewing conditions. Then, at representative viewpoints (Key Observation Points or KOPs), the existing landscape was characterized (for visual quality, viewer concern, and viewer exposure) and photographed. Each of the factors considered in the evaluation of the existing landscape under the VS-VC methodology, as discussed in the following paragraphs, is generally expressed as Low, Low-to-Moderate, Moderate, Moderate-to-High, or High.

Visual Quality is a measure of the overall impression or appeal of an area as determined by the particular landscape characteristics such as landforms, rockforms, water features, and vegetation patterns, as well as associated public values. The attributes of variety, vividness, coherence, uniqueness, harmony, and pattern contribute to visual quality classifications of indistinctive (Low), common (Moderate), and distinctive (High). Visual quality is studied as a point of reference to assess whether a given project would appear compatible with the established features of the setting or would contrast noticeably and unfavorably with them.

Viewer Concern addresses the level of interest or concern of viewers regarding an area's visual resources and is closely associated with viewers' expectations for the area. Viewer concern reflects the importance placed on a given landscape based on the human perceptions of the intrinsic beauty of the existing landforms, rockforms, water features, vegetation patterns, and even cultural features.

Viewer Exposure describes the degree to which viewers are exposed to views of the landscape. Viewer exposure considers landscape visibility (the ability to see the landscape), distance zones (proximity of viewers to the subject landscape), number of viewers, and the duration of view. Landscape visibility can be a function of several interconnected considerations including proximity to viewing point, degree of discernible detail, seasonal variations (snow, fog, and haze can obscure landscapes), time of day, and/or presence or absence of screening features such as landforms, vegetation, and/or built structures. Even though a landscape may have highly scenic qualities, it may be remote, receiving relatively few visitors and, thus, have a lower degree of viewer exposure. Conversely, a subject landscape or project may be situated in relatively close proximity to a major road or highway utilized by a substantial number of motorists and yet still result in relatively low viewer exposure if the rate of travel speed on the roadway is high and viewing times

are brief, or if the landscape is partially screened by vegetation or other features. Frequently, it is the subject area's proximity to viewers or *distance zone* that is of particular importance in determining viewer exposure. Landscapes are generally subdivided into three or four distance zones based on relative visibility from travel routes or observation points. Distance zones typically include foreground, middleground, and background. The actual number of zones and distance assigned to each zone is dependent on the existing terrain characteristics and public policy and is often determined on a project-by-project basis.

Overall Visual Sensitivity is a concluding assessment as to an existing landscape's susceptibility to an adverse visual outcome. A landscape with a high degree of visual sensitivity is able to accommodate only a lower degree of adverse visual change without resulting in a significant visual impact. A landscape with a low degree of visual sensitivity is able to accommodate a higher degree of adverse visual change before exhibiting a significant visual impact. Overall visual sensitivity is derived from a comparison of existing visual quality, viewer concern, and viewer exposure.

Existing Landscape Setting and Viewer Characteristics

This section discusses the existing visual character of the region, existing visual quality in the study area, viewer concern, and viewer exposure to the Proposed Project, leading to a rating of overall visual sensitivity. Also discussed are the existing sources of light and glare within the study area.

Regional Context. The Proposed Project landscape is part of the Great Basin section of the Basin and Range physiographic province, a vast desert area of the western U.S. extending from eastern Oregon to western Texas (Hunt, 1974), characterized by periodic north-south trending, highly eroded mountain ranges that rise sharply from and are separated by broad, flat desert valleys. The Proposed Project is generally located within the high elevation Mojave Desert of northeastern Kern County and extends from the southern portion of Indian Wells Valley east through the City of Ridgecrest to Searles Valley beyond. To the north is the rugged Argus Range and to the south are the Spangler Hills (BLM, 2008).

The city of Ridgecrest's aesthetic setting can generally be described as an urban area set within a rural backdrop. Vistas of the mountains and the surrounding desert are found throughout the city. Vegetation consisting of creosote-white bursage series and a disturbed ruderal sink community occupy the proposed Downs Substation expansion location. Along the Inyokern-McGen-Searles 115 kV subtransmission lines the landscape includes vegetation communities dominated by desert holly (*Atriplex hymenelytra*) and spiny hopsage (*Grayia spinosa*) (Atriplex/Grayia Community), and a rusty molly (*Kochia californica*)-dominated community (Kochia Community). See the Section B.3.4, Biological Resources, for additional details regarding vegetation in the Project area.

The city of Ridgecrest is characterized by low-rise buildings (one or two stories), lower density residential, and commercial uses surrounded by vast open space. Most of the city's higher intensity development (commercial, office, civic, and institutional uses) lie adjacent to primary thoroughfares such as Ridgecrest Boulevard, State Route (SR) 178, Bowman Road, and China Lake Boulevard. Concentrations of non-residential land uses along these thoroughfares create a largely linear urban form with focal points of intensive uses at the intersections of arterial streets. Less intensive land uses, including rural residential and natural open space, are located on the urban fringe of the city.

The existing Downs Substation is located at the intersection of two major travel corridors: the north-south aligned Downs Street and the east-west aligned Ridgecrest Boulevard. The land parcels surrounding this intersection are zoned for commercial and industrial use. A hardware store/lumber yard occupies the northeast corner of the intersection; an automobile recycling operation is located to the east; the northwest corner is vacant land (with a large, single-story light industrial-type building just

to the north and visible from the intersection); and the existing Downs Substation occupies the southwest corner. The proposed Downs Substation expansion would be located west of and directly adjacent to the existing substation. Also visible from the intersection are baseball fields and a dairy products company to the south.

Vertical, man-made features are common in the study area. Existing poles, conductors, and lines are established landscape features throughout the Proposed Project landscape. Two communication towers are visible to the northeast of the substation, and the adjacent recreational fields are illuminated by tower lights to facilitate nighttime play.

Extending east from Downs Substation in Ridgecrest, the route of the proposed overhead fiber optic telecommunication cable, which would be hung on existing electrical transmission poles, passes through residential neighborhoods and then into the open desert adjacent to SR 178, extending east to McGen Substation in Trona. Views along the cable route are open and encompass broad desert panoramas ringed by rugged, rocky, hills and mountains. While there are no scenic highways in the immediate Proposed Project vicinity, State Highway 14, located more than four miles to the west of the Proposed Project, is eligible for listing as a State Scenic Highway, but has not been officially designated as such.

Project Viewshed and Key Observation Points. Given the relatively small scale of the Proposed Project, its viewshed (areas and locations from where the Proposed Project would be seen) would generally be confined to the immediate Project vicinity. Views of the substation expansion would be limited to the nearby roads (Ridgecrest Boulevard, Downs Street, West Church Avenue), the sports fields to the south, residences to the south and west, and commercial properties along W. Ridgecrest Boulevard and Downs Street.

The proposed cable route loop extending west of Downs Substation to Inyokern Substation would be visible to travelers on West Ridgecrest Boulevard, Jacks Ranch Road, West Inyokern Road, Highway 395, and scattered commercial properties and residences along the route. Extending east of Downs Substation, the proposed overhead cable loop would be visible to travelers on West Church Avenue, East Church Avenue, South China Lake Boulevard, West Springer Avenue, Country Line Road, East Saratoga Avenue, SR 178 (Trona Road), and residential areas along the route and in the community of Argus.

Three KOPs were selected to represent viewing opportunities of key project components. One viewpoint (KOP 1) was selected to evaluate the proposed substation expansion. One viewpoint (KOP 2) was selected to evaluate the overhead cable route through the residential areas along West and East Church Avenue in Ridgecrest. One viewpoint (KOP 3) was selected to evaluate the proposed structure replacement on BLM lands north of South Trona Road. A discussion of the existing visual setting for each KOP is presented in the following paragraphs.

Note: After each viewpoint heading, one of the following notations is made: (VRM) or (VS-VC). This designation indicates the methodology to which that particular viewpoint is subject.

Key Observation Point 1 – Downs Street (VS-VC)

KOP 1 was established on northbound Downs Street, near the southeast corner of the Southern California Edison (SCE) property boundary, in the City of Ridgecrest (see Figure B.3.1-1A located at the end of this section). Viewing to the northwest toward the existing substation, this KOP was selected to characterize the existing landscape at the proposed substation expansion site.

Visual Quality. Low. The view from KOP 1 encompasses a foreground industrial setting dominated by the complex forms and lines of the existing substation facilities. There are also numerous prominent, vertical utility poles adjacent to and converging on the substation site. The vacant expansion site consists primarily of scrub vegetation comprising a disturbed ruderal sink vegetative community lacking in notable aesthetic value.

Viewer Concern. Moderate. Travelers on Downs Street and West Ridgecrest Boulevard, as well as visitors to the sports park immediately south of the substation, and residents in the general vicinity of the existing substation, anticipate the presence of the substation and utility lines and the associated industrial character. While the introduction of additional facilities that are substantially out of scale or of industrial complexity relative to the existing facilities would likely raise concerns with viewers, a similar scale and character expansion, such as that proposed, should not.

Viewer Exposure. Moderate-to-High. The expansion area would be moderately visible in the foreground of views from the east and south of the substation although the existing substation facilities would provide partial screening when viewed from the east, and the sports park outfield fencing would provide partial screening of lower structural components when viewed from the south. The expansion area would, however, be highly visible in views from the north and west. The number of viewers would be Moderate and the duration of view would be Brief to Extended. Combining these four equally weighted factors (i.e., visibility, distance zone, number of viewers, and duration of view) results in an overall rating of Moderate-to-High for viewer exposure.

Overall Visual Sensitivity. Moderate. For viewers in the vicinity of the substation expansion site, combining the equally weighted Low visual quality, Moderate viewer concern, and Moderate-to-High viewer exposure results in an overall rating of Moderate for visual sensitivity of the visual setting and viewing characteristics.

Key Observation Point 2 – Westbound East Church Avenue (VS-VC)

KOP 2 was established on East Church Avenue, just east of the intersection with South Desert Candles Street, in the City of Ridgecrest (see Figure B.3.1-2A located at the end of this section). Viewing to the southwest toward the existing utility poles that would carry the new cable, this KOP was selected to characterize the existing residential landscape along the cable route in Ridgecrest.

Visual Quality. Low-to-Moderate. The view from KOP 2 encompasses a foreground urban, well maintained residential landscape that consists of single-story structures that front onto a paved street with sidewalks and an existing wood-pole electric transmission line with distribution and cable underbuilds. The transmission, distribution, and cable lines present prominent linear horizontal lines in the existing landscape. The wood poles present dominant vertical features.

Viewer Concern. High. Residents along the route would consider any noticeable built structures or addition of industrial character visible from their residential properties to be an adverse visual change in the landscape.

Viewer Exposure. Moderate-to-High. The cable line would be highly visible in the foreground of views from the adjacent residences. The line would also be visible within the primary cone of vision of travelers (i.e., 45 degrees on either side of the primary direction of travel) on West and East Church Avenue. The number of viewers would be Low-to-Moderate and the duration of view would be Extended. Combining these four equally weighted factors (i.e., visibility, distance zone, number of viewers, and duration of view) results in an overall rating of Moderate-to-High for viewer exposure.

Overall Visual Sensitivity. Moderate-to-High. For the residents along the cable route in general and along East Church Avenue specifically, combining the equally weighted Low-to-Moderate visual quality, High viewer concern, and Moderate-to-High viewer exposure result in an overall rating of Moderate-to-High for visual sensitivity of the visual setting and viewing characteristics.

Key Observation Point 3 – Eastbound SR 178 (VRM)

KOP 3 was established on eastbound SR 178 (Trona Road), just north of South Trona Road and is representative of views of the cable line along SR 178 and views of the structure to be replaced (see Figure B.3.1-3A located at the end of this section). KOP 3 was selected to characterize the existing desert valley landscape and BLM-administered lands along the cable route adjacent to SR 178. Viewing to the north toward the existing transmission structure that would be replaced, this view encompasses a portion of Searles Valley and the rugged mountains that define its extent. The flat desert valley floor supports sparse vegetation of subdued color. Although the adjacent ridgelines create variation in the land and add visual interest, the overall scenic quality of the desert basin landscape is somewhat compromised by the prominence of the highway, the presence of the existing wood-pole transmission line with its industrial character, and the existing mineral extraction activities that occur in the valley. The BLM-administered land that would be impacted by the structure replacement has not been inventoried and has not been assigned a VRM classification. However, given the existing compromised landscape characteristics, the lands would likely be assigned Class IV or Class III at best. The VRM Class III and Class IV Management Objectives are as follows:

- **VRM Class III.** The objective is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate or lower. 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.
- **VRM Class IV.** The objective is to provide for management activities, which 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 in the predominant natural features of the characteristic landscape.

Applicable Regulations

Federal

Portions of the Proposed Project (cable routes and structure replacements) would be subject to the California Desert Conservation Areas (CDCA; BLM 1980) Plan Visual Resources Management (VRM) requirements. Specifically, the Proposed Project would be required to be consistent with the applicable VRM class management objectives (as stated in the BLM VRM Visual Resource Inventory Manual) where the project is located on BLM-administered lands. However, the BLM-administered lands crossed by the Proposed Project have not been inventoried and VRM Classes have not been established. Nevertheless, given the landscape characteristics of the non-inventoried lands, only two VRM classes would be feasible: VRM Class III or VRM Class IV (see descriptions above).

State

The California Streets and Highway Code, Sections 260-263, define the State's Scenic Highways. There are no state designated or eligible scenic highways in the immediate Proposed Project area. However,

Highway 14 from Route 58 near Mojave to Route 395 near Little Lake (about four miles west of the Proposed Project) is identified in the code as being eligible as a scenic highway (Caltrans, 2010). Therefore, the Proposed Project would not conflict with the State's scenic highways program.

Local

The Proposed Project is located within three local jurisdictions: Kern County, San Bernardino County, and the city of Ridgecrest. The Kern County General Plan contains no guidance related to aesthetics or visual resources that would be applicable to the Proposed Project. Planning and regulatory guidance for San Bernardino County and the city of Ridgecrest are described below.

San Bernardino County. The Conservation Element of the General Plan lists as a goal to “[p]reserve the unique environmental features and natural resources of the Desert Region, including native wildlife, vegetation, water and scenic vistas” (Goal D/CO 1). This is supported by Policy D/CO 1.2, which requires “future land development practices to be compatible with the existing topography and scenic vistas, and protect the natural vegetation.”

The Open Space Element of the General Plan defines a scenic resource as follows: “A roadway, vista point, or area that provides a vista of undisturbed natural areas; a unique or unusual feature that comprises an important or dominant portion of the viewshed (the area within the field of view of the observer); or offers a distant vista that provides relief from less attractive views of nearby features (such as views of mountain backdrops from urban areas)” (Policy OS 5.1).

The proposed fiber optic telecommunications cable within the 115-kV subtransmission line corridors would be placed on existing structures with other wires and cables and would result in low levels of visual change and less than significant visual impacts (see impact discussion below). Therefore, the Proposed Project would be consistent with the applicable San Bernardino County Conservation Element and Open Space Element.

City of Ridgecrest Scenic Corridor Plan. The city of Ridgecrest's Scenic Corridor Plan, referenced in the City's General Plan, identifies several scenic corridors in the General Plan Planning Area. These corridors have been identified because of their scenic qualities and their existing or potential function as gateways into the city. The corridor boundary is defined by topographic features along the most southerly extent of China Lake Boulevard and by significant landmarks or man-made features up to 1,000 feet from the center of the roadway in areas of level terrain. In areas of urban character, corridor limits have been defined as up to 200 feet from the center of the roadway.

The identification of these corridors is utilized by the city of Ridgecrest's planners to “provide for and enhance the aesthetic visual experience of travelers using the city's highway and roadway systems” as contained in Circulation Element Goal C-8.

The proposed fiber optic telecommunications cable would be located within the following scenic corridors:

- West Inyokern Road (Inyokern-McGen-Searles No. 2 115-kV subtransmission line is routed along this scenic corridor)
- North and South China Lake Boulevard (Inyokern-McGen-Searles No. 1 and No. 2 115-kV subtransmission lines cross this scenic corridor)

- East and West Ridgecrest Boulevard (Proposed Downs Substation expansion and Inyokern- McGen-Searles No. 2 115-kV subtransmission line [proposed cable route] are located along this scenic corridor)
- College Heights Boulevard (Inyokern-McGen-Searles No. 1 115-kV subtransmission line [proposed cable route] crosses this scenic corridor)
- West Drummond Avenue (Inyokern-McGen-Searles No. 2 115-kV subtransmission line crosses this scenic corridor)
- Jacks Ranch Road (Inyokern-McGen-Searles No. 2 115-kV subtransmission line is routed along this scenic corridor)

City of Ridgecrest Draft General Plan 2010, Circulation Element. The City of Ridgecrest’s Draft General Plan 2010, Circulation Element, designates the scenic corridors contained in the Scenic Corridor Plan. Scenic Highways and Corridors are addressed under Goal C-8 of the Circulation Element, which states “Provide for and enhance the aesthetic visual experience of travelers using the city’s highway and roadway systems.” The following components of Goal C-8 are relevant to aesthetics and the Proposed Project:

- **C-8.3 Landscaping of Scenic Corridors.** The city shall require corridors along the state highways and all major arterials designated as scenic corridors to be landscaped. Developers shall be required to provide installation and establish a means of providing for maintenance of landscaping and utility undergrounding.
- **C-8.6 Scenic Corridor Standards.** The following standards for scenic corridors are applicable to the Proposed Project:
 - *Building Exterior Treatment.* Building exteriors should be predominantly natural-appearing and use material and colors suited to the desert environment. A harmonious relationship among the various elements of a development and the natural landscape should be achieved.
 - *Landscaping and Visual Screening.* Landscaping using desert-compatible plants should be encouraged to enhance important views and screen offensive land uses. Use of earth berms or other natural materials should be encouraged for visual screening, especially adjacent to a road right-of-way. Block walls and similar structures should be used only when necessitated by site constraints. When block walls are utilized, design shall incorporate elements that would mitigate a “canyon” effect.
 - *Utility Lines.* New or relocated utility lines within 1,000 feet of a scenic highway shall be placed underground whenever feasible. Undergrounding would be accomplished in accordance with the utility's rules and tariff schedules on file with the California Public Utilities Commission (CPUC).

Effective implementation of Mitigation Measures V-1 and V-2 (below) would ensure that the Proposed Project is consistent with (a) City landscaping requirements within City-designated scenic corridors and (b) the scenic corridor standards pertaining to exterior treatments, landscaping, and visual screening. The proposed overhead fiber optic telecommunications cable would not be consistent with the utility lines standard of undergrounding new utility lines within 1,000 feet of a City-designated scenic corridor. However, this inconsistency would not result in a significant visual impact given the small scale of the

proposed cable line and its proposed location on an existing facility with other similar structural features.

City of Ridgecrest Draft General Plan 2010, Open Space and Conservation Element. The City of Ridgecrest's Draft General Plan 2010, Open Space and Conservation Element, Aesthetic Resources section, contains six goals designed to protect and enhance the natural setting and scenic resources within the city. These goals address preservation of views, protection and enhancement of scenic resources and significant natural features, preservation of significant plant communities and native desert vegetation, and removal of significant trees. Of relevance to the Proposed Project is the following goal:

- **OSC-2.6 Control of Lighting and Glare.** The city shall require that all outdoor light fixtures including street lighting, externally illuminated signs, advertising displays, and billboards use low energy, shielded light fixtures, which direct light downward. Where public safety would not be compromised, the city shall encourage the use of low-pressure sodium lighting for all outdoor light fixtures. Implementation of Mitigation Measure V-3 (below) would ensure that the Proposed Project is consistent with this local requirement.

B.3.1.2 Environmental Impacts and Mitigation Measures

Visual Impact Assessment Methodology

The factors considered in determining impacts on visual resources included: (1) scenic quality of the study area site and vicinity; (2) available visual access and visibility, and frequency and duration that the landscape is viewed; (3) viewing distance and degree to which Proposed Project components would dominate the view of the observer; (4) resulting contrast of the Proposed Project components or activities with existing landscape characteristics; (5) the extent to which Proposed Project features or activities would block views of higher value landscape features; and (6) the level of public interest in the existing landscape characteristics and concern over potential changes.

An *adverse visual impact* occurs within public view when: (1) an action perceptibly changes existing features of the physical environment so that they no longer appear to be characteristic of the subject locality or region; (2) an action introduces new features to the physical environment that are perceptibly uncharacteristic of the region and/or locale; or (3) aesthetic features of the landscape become less visible (e.g., partially or totally blocked from view) or are removed. Changes that seem uncharacteristic are those that appear out of place, discordant, or distracting. The degree of the visual impact depends upon how noticeable the adverse change may be. The noticeability of a visual impact is a function of project features, context, and viewing conditions (angle of view, distance, primary viewing directions, and duration of view).

Impacts on visual resources within the study area could result from various activities including substation expansion construction, installation of the cable loops, structure replacement, and Proposed Project operation or presence of the built facilities. As stated above, the Visual Resources technical approach utilizes two technical methodologies — the BLM's VRM System for BLM-administered public lands, and the VS-VC System for all other public and private lands throughout the study area.

The approach to impact assessment under each methodology is discussed in the following sections.

BLM VRM Contrast Analysis Methodology

The key component of the impact assessment under the BLM's VRM System is the determination of visual contrast caused by a project's features or activities. A Visual Contrast Rating analysis was conducted using the BLM's VRM System manuals (BLM 1984, 1986a). The Visual Contrast Rating Form is provided at the end of this section. Under the VRM System, the degree to which a project or activity affects the visual quality of a landscape depends on the visual contrast created between the project components and the major features, or predominant qualities, in the existing landscape. Visual contrast evaluates a project's consistency with the visual elements of form, line, color, and texture already established in the viewshed. In a sense, visual contrast indirectly indicates a particular landscape's ability to absorb a project's components and location without resulting in an uncharacteristic appearance. Other elements that are considered in evaluating visual contrast include the degree of natural screening by vegetation and landforms; placement of structures relative to existing vegetation, landforms and other structures; distance from the point of observation; and relative size or scale of a project. Once the degree of anticipated contrast is determined (ranging from None to Strong), a conclusion on the overall level of change is made (ranging from Very Low to High) and compared to the applicable VRM class objective for a determination of consistency with the management objectives and level of visual impact.

Visual Sensitivity – Visual Change (VS-VC) Methodology

Under the VS-VC methodology, field analysis at each KOP included assessment of visual contrast, project dominance, and view blockage. Subsequently, a conclusion was made regarding the extent of overall visual change, and taken together with the existing landscape's visual sensitivity, the level of probable visual impact significance was determined. A visual simulation was also prepared with which to further evaluate the preliminary impact determination. A conclusion on initial impact significance was then reached. The impact situation was further evaluated against the application of feasible mitigation measures in an effort to reduce the visual impact. A final conclusion on impact significance was then reached.

Each of the key factors considered in the evaluation of visual change is generally expressed as Low, Low-to-Moderate, Moderate, Moderate-to-High, or High and is discussed below.

Visual Contrast describes the degree to which a project's visual characteristics or elements (consisting of form, line, color, and texture) differ from the same visual elements established in the existing landscape. The degree of contrast can range from Low to High. The presence of forms, lines, colors, and textures in the landscape similar to those of a project's indicates a landscape more capable of accepting those project characteristics than a landscape where those elements are absent. This ability to accept alteration is often referred to as visual absorption capability and typically is inversely proportional to visual contrast.

Project Dominance is a measure of a feature's apparent size relative to other visible landscape features and the total field of view. A feature's dominance is affected by its relative location in the field of view and the distance between the viewer and the feature. The level of dominance can range from Subordinate to Dominant.

View Blockage or Impairment describes the extent to which any previously visible landscape features are blocked from view as a result of a project's scale and/or position. Blockage of higher quality landscape features by lower quality project features causes adverse visual impacts. The degree of view blockage can range from None to High.

Overall Visual Change is a concluding assessment as to the degree of change that would be caused by a project. Overall visual change is derived by combining the three equally weighted factors of visual contrast, project dominance, and view blockage. Overall visual change can range from Low to High.

Under the VS-VC methodology, the degree of impact significance is a function of overall visual sensitivity and visual change. Table B.3.1-1, below, illustrates the general interrelationship between visual sensitivity and visual change and is used as a consistency check between individual KOP evaluations. Actual parameter determinations (e.g., visual contrast, project dominance, and view blockage) are based on analyst experience and site-specific circumstances.

While the interrelationships presented in Table B.3.1-1 are intended as guidance only, it is reasonable to conclude that lower visual sensitivity ratings paired with lower visual change ratings will generally correlate well with lower degrees of impact significance when viewed in the field. Conversely, higher visual sensitivity ratings paired with higher visual change ratings will tend to result in higher degrees of visual impact.

Implicit in this rating methodology is the acknowledgment that, for a visual impact to be considered significant, two conditions generally exist: (1) the existing landscape is of reasonably high quality and is relatively valued by viewers and (2) the perceived incompatibility of one or more project elements or characteristics tends toward the high extreme, leading to a substantial reduction in visual quality.

Table B.3.1-1. Visual Sensitivity–Visual Change Guidance for Review of Impact Significance

OVERALL VISUAL SENSITIVITY	OVERALL VISUAL CHANGE				
	Low	Low-to-Moderate	Moderate	Moderate-to-High	High
Low	Not Significant ¹	Not Significant	Adverse but Less Than Significant	Adverse but Less Than Significant	Adverse but Less Than Significant
Low-to-Moderate	Not Significant	Adverse but Less Than Significant	Adverse but Less Than Significant	Adverse but Less Than Significant	Adverse and Potentially Significant
Moderate	Adverse but Less Than Significant ²	Adverse but Less Than Significant	Adverse but Less Than Significant	Adverse and Potentially Significant	Adverse and Potentially Significant
Moderate-to-High	Adverse but Less Than Significant	Adverse but Less Than Significant	Adverse and Potentially Significant	Adverse and Potentially Significant	Significant ⁴
High	Adverse but Less Than Significant	Adverse and Potentially Significant ³	Adverse and Potentially Significant	Significant ⁴	Significant

1 **Not Significant** Impacts may or may not be perceptible but are considered minor in the context of existing landscape characteristics and view opportunity.

2 **Adverse but Less Than Significant** Impacts are perceived as negative but do not exceed environmental thresholds.

3 **Adverse and Potentially Significant** Impacts are perceived as negative and may exceed environmental thresholds depending on project and site-specific circumstances.

4 **Significant** Impacts with feasible mitigation may be reduced to levels that are less than significant or avoided all together. Without mitigation, significant impacts would exceed environmental thresholds.

Project Visual Description

The Proposed Project represents additions to existing infrastructure and would include the addition of new low-profile electric substation components immediately adjacent and to the west of the existing Downs Substation. The Proposed Project would also include a telecommunications component consisting of adding a small diameter fiber optic telecommunication cable to existing 115-kV subtransmission structures in existing rights-of-way (ROWs). Lastly, the Proposed Project would also include the replacement of six wood-pole structures with poles of a height and diameter similar to the existing poles.

Aesthetics Impacts

a. Would the project have a substantial adverse effect on a scenic vista?

LESS THAN SIGNIFICANT. Although no designated scenic vistas were identified in the immediate study area, panoramic views and scenic vistas of the Proposed Project are available to viewers along SR 178 and in the surrounding landscape due to the openness of the terrain along the fiber optic cable routes and at the structure replacement locations. However, the fiber optic cable would be strung on existing poles supporting existing subtransmission lines and communication cables with linear horizontal forms and lines similar to the proposed cable. Furthermore, the visual character of the six replacement poles would be of similar height, diameter, color, and complexity compared to the existing structures to be replaced. Given the relatively small scale of these changes in the context of the panoramic views and scenic vistas from the surrounding landscape, and minimal noticeability of the changes, the resulting visual impact would be less than significant and no mitigation is proposed.

b. 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. There are no state designated or eligible scenic highways in the immediate Project vicinity that would be affected by the Proposed Project. Therefore, the Proposed Project would not damage scenic resources within a State Scenic Highway. No impact would occur and no mitigation is proposed.

c. Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

DURING CONSTRUCTION, LESS THAN SIGNIFICANT. Construction equipment, personnel, and activities would be seen by various viewers in the immediate vicinity of Downs Substation, the fiber optic telecommunication cable routes, and the six structure replacement locations. These viewers would include nearby residents and travelers and recreationists on SR 178 and local roads. View durations from these vantage points would vary from Brief to Extended. However, construction activities would be temporary, and cable installation would be transient with limited viewing opportunities of any given location or segment. As a result, the temporary visual impacts associated with Project construction would be less than significant and no mitigation is proposed.

DURING OPERATIONS, LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. The Proposed Project was evaluated from three representative KOPs, one for the substation expansion, fiber optic telecommunication cable installation, and structure replacement. The following paragraphs discuss the visual impacts that would be experienced at each of the three representative KOPs.

Downs Street – KOP 1 (VS-VC). Figure B.3.1-1A (located at the end of this section) presents the existing view from KOP 1 on northbound Downs Street, near the southeast corner of the SCE property boundary, in the city of Ridgecrest. The view is to the northwest and shows the proposed expansion site in context

with the existing substation and sports park fields. Figure B.3.1-1B (located at the end of this section) presents a visual simulation that depicts the addition of the proposed substation expansion. As shown in the simulation, the expansion would result in the introduction of additional substation components of similar scale, structural complexity, and character compared to the existing substation facilities. The Proposed Project would also introduce several new wood, LWS, and tubular steel poles within and in the immediate vicinity of the substation site. The Proposed Project would also remove one wood pole, top two other existing wood poles, and reframe another wood pole. In the context of the numerous existing vertical elements (transmission and utility poles) at and converging on the Downs Substation site, the proposed pole changes, while visible from both Downs Street and Ridgecrest Boulevard, would not appear inconsistent or out of character with the other numerous vertical features in the substation landscape. The resulting visual contrast associated with structural forms, lines, colors, and textures would be Low-to-Moderate and the expansion facilities and subtransmission structures would appear Co-dominant relative to the existing substation and subtransmission facilities. View blockage of the background Sierra Nevada Mountains and sky would be Moderate. The overall visual change would be Moderate when the three equally weighted factors of visual contrast, project dominance, and view blockage are combined. In the context of the existing landscape's Moderate visual sensitivity, the resulting visual impact would be less than significant. However, in order to further minimize the apparent visual impact and improve the visual character of the substation complex when viewed from adjacent vantage points, it is recommended that a permanent vegetative screen be established. As discussed in Section B.1.10.5, Substation Perimeter, SCE plans to install landscaping around the proposed Downs Substation expansion property that is "designed to filter views for the surrounding community and other potential sensitive receptors". To ensure adequate vegetative screening at the Downs Substation expansion property, Mitigation Measure V-1 (Downs Substation expansion area Landscaping Plan), below, is recommended. Figure B.3.1-1C (located at the end of this section) presents a simulation of the proposed landscape screening at five years of growth as viewed from KOP 1 on Downs Street. As shown in the simulation, the vegetation would soften the structural contrast and reduce the visible industrial character of the site to a less-than-significant level.

East Church Avenue – KOP 2 (VS-VC). Figure B.3.1-2A (located at the end of this section) presents the existing view from KOP 2 on westbound East Church Avenue, just east of the intersection with South Desert Candles Street in the city of Ridgecrest. The view is to the southwest and shows the existing utility poles that would carry the new fiber optic telecommunication cable, in context with the existing residential neighborhood. Figure B.3.1-2B (located at the end of this section) presents a visual simulation that depicts the addition of the proposed telecommunications cable. As shown in the simulation, the Proposed Project would result in the introduction of an additional cable and a single horizontal cross-arm of similar scale, structural complexity, color, and character compared to the existing utility pole characteristics. The resulting visual contrast associated with structural forms, lines, colors, and textures would be Low and the cable and cross-arm would appear Subordinate-to-Co-dominant relative to the existing utility pole components. View blockage of the background sky would be Low. The overall visual change would be Low when the three equally weighted factors of visual contrast, project dominance, and view blockage are combined. In the context of the existing landscape's Moderate-to-High visual sensitivity, the resulting visual impact would be less than significant and no mitigation is proposed.

SR 178 – KOP 3 (VRM). Figure B.3.1-3A (located at the end of this section) presents the existing view from KOP 3 on eastbound SR 178 (Trona Road), just north of South Trona Road. The view is to the north and shows the existing utility structure to be replaced. Figure B.3.1-3B (located at the end of this section) presents a visual simulation that depicts the replacement with a new pole. As shown in the

simulation, the Project would result in the introduction of a wood pole of slightly different design, but of similar scale, structural complexity, color, and character compared to the adjacent utility poles. Per BLM's VRM method, a Visual Contrast Rating was conducted for this Project component. The rating worksheet is presented at the end of this section. As shown in the simulation and in the contrast analysis worksheet, there would be no landform or vegetation contrast resulting from the Proposed Project and the structural visual contrast would be Weak. The Very Low visual change that would occur would be consistent with either VRM Class III or VRM Class IV management objectives (VRM Class III allows up to moderate levels of change to the characteristic landscape while VRM Class IV allows high levels of change). The resulting visual impact would be less than significant and no mitigation is proposed.

Consistency with Local Plans. As discussed above under "Applicable Regulations", the proposed overhead fiber optic telecommunications cable would not be consistent with the City of Ridgecrest Draft General Plan 2010, Circulation Element, Scenic Corridor Standard C-8.6 for utility lines which requires undergrounding of new utility lines placed within 1,000 feet of a city-designated scenic corridor, whenever feasible. This inconsistency, however, would not result in a significant visual impact given the small scale of the proposed cable line and its proposed location on an existing facility with other similar structural features.

Mitigation Measures for Impacts to Existing Visual Character

V-1 Downs Substation expansion area Landscaping Plan. SCE shall provide landscaping that is effective in screening the proposed substation expansion area and existing facilities from surrounding views. Trees and/or shrubs must be strategically placed and of sufficient density and height to effectively screen the majority of structural forms within five years of Project construction. SCE shall submit a Landscaping Plan to the city of Ridgecrest for review and approval and shall include a detailed list of plants to be used and times to maturity given their size and age at planting. The Landscaping Plan shall also be submitted to the CPUC for review. The Landscaping Plan shall be submitted at least 90 days prior to installing the landscaping. SCE shall not implement the plan until approval of the submittal from the CPUC and the city of Ridgecrest is received. If the CPUC notifies SCE that revisions of the plan are needed, within 30 days of receiving that notification, SCE shall prepare and submit to the CPUC a revised plan. SCE shall notify the CPUC within seven days after completing installation of the landscaping that the landscaping is ready for inspection.

d. 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 WITH MITIGATION INCORPORATED. The new subtransmission line tubular steel poles and lightweight steel poles to be installed in the vicinity of the proposed substation expansion and some other substation components (e.g., switchracks and buses) may reflect light during the day. However, SCE has committed to coating the new poles with a dull matte, galvanized finish to reduce glare, and the other substation components would be painted with matte finishes to reduce glare (SCE. 2010). These surface treatment strategies along with the landscape screening per Mitigation Measure V-1 (Downs Substation expansion area Landscaping Plan) should sufficiently mitigate the potential for daytime structural glare. However, to ensure that significant structural glare impacts do not occur, SCE shall prepare a Surface Treatment Plan as required per Mitigation Measure V-2 (Surface Treatment Plan). The resulting visual impact would be less than significant.

The wooden poles replaced as part of the proposed fiber optic telecommunication cable installation would be replaced with new wooden poles, which would not generate glare. The new fiber optic telecommunication cable that would be installed in the existing 115-kV subtransmission line corridors has a small diameter and would not represent a new source of glare, and no additional mitigation is proposed.

Lighting at the proposed substation expansion has the potential to adversely affect nighttime views in the immediate substation vicinity. As described in Section B.1.10.4, Substation Lighting, lighting would consist of high-pressure sodium, low intensity lights located in switchyards, around the transformer banks, and in areas of the yard where operating and maintenance activities may take place during evening hours for emergency and/or scheduled work. Maintenance lights would be controlled by a manual switch and would normally be in the “off” position. The lights would be shielded and directed downward to reduce glare outside the facility, per city of Ridgecrest General Plan Goal OSC-2.6, Control of Lighting and Glare. One beacon light on the automatic entry gate would indicate the operation of the rolling gate; this light would automatically turn on when the gate is opened and turn off when the gate is closed. In general, a substation similar to the proposed substation expansion requires a maximum of 40, 120-watt lights. Generally, the lighting is divided into four regions/zones of the substation. When it is necessary to turn on lights for maintenance or operations activities, only the region/zone where activities are taking place would be illuminated. The lights in the expansion area and the new gate beacon light would supplement lights in the existing substation area. In the context of the existing nighttime lighting environment, it is expected that the nighttime lighting impacts caused by the proposed substation expansion would be minimal. However, to ensure that significant nighttime lighting impacts do not occur, SCE shall prepare a Substation Lighting Mitigation Plan as required per Mitigation Measure V-3 (Downs Substation expansion area Nighttime Lighting Mitigation Plan). The resulting visual impact would be less than significant.

Mitigation Measures for Light and Glare

V-2 Surface Treatment Plan. SCE shall submit to the CPUC a Surface Treatment Plan describing the application of dulling treatments (galvanizing and/or painting) to substation structural steel components and steel poles necessary to reduce the potential for daytime structural glare. The Surface Treatment Plan shall be submitted to CPUC for approval at least 90 days prior to (a) ordering the first structures that are to be color treated during manufacture, or (b) construction of any of the substation components before the plan can be approved. SCE shall not implement the plan until the plan has been approved by the CPUC. If the CPUC notifies SCE that revisions of the plan are needed, within 30 days of receiving that notification, SCE shall prepare and submit for review and approval a revised plan. The Surface Treatment Plan shall include:

- A list of each major Project structure specifying the treatment and finish proposed for each;
- Two sets of brochures and/or color chips for each proposed treatment/color;
- A detailed schedule for completion of the treatment; and
- A procedure to ensure proper treatment maintenance for the life of the Project.

SCE shall not specify to the vendors the treatment of any structures or components treated during manufacture, or perform the final treatment on any structures or components treated on site, until SCE receives notification of approval of the Surface Treatment Plan by the CPUC. Within 30 days following the start of commercial operation, SCE shall notify the CPUC that all structures and components are ready for inspection.

V-3 Downs Substation expansion area Nighttime Lighting Mitigation Plan. SCE shall design and install all permanent lighting such that light bulbs and reflectors are not visible from public viewing areas; lighting does not cause reflected glare; and illumination of the Project facilities, vicinity, and nighttime sky is minimized.

SCE shall submit a Lighting Mitigation Plan to the city of Ridgecrest for review and comment prior to submitting the plan to the CPUC for review and approval. The plan shall be submitted to the CPUC at least 90 days prior to ordering any permanent exterior lighting fixtures or components. SCE shall not order any exterior lighting fixtures or components until the Lighting Mitigation Plan is approved by the CPUC. The plan shall include, but is not necessarily limited to, the following:

- Lighting shall be designed so exterior light fixtures are hooded, with lights directed downward or toward the area to be illuminated and so that backscatter to the nighttime sky is minimized. The design of the lighting shall be such that the luminescence or light source is shielded to prevent light trespass outside the project boundary.
- All lighting shall be of minimum necessary brightness consistent with operational safety and security.
- High illumination areas not occupied on a continuous basis shall have switches or motion detectors to light the area only when occupied.
- Appropriate brochures and other descriptive materials describing the lighting components to be employed at the substation are to be included in the plan.
- Lighting shall meet the requirements of the City of Ridgecrest General Plan Goal OSC-2.6, Control of Lighting and Glare.

Visual Contrast Rating Data Sheet

Downs Substation Expansion Project Initial Study

KEY OBSERVATION POINT DESCRIPTION

Key Observation Point
3

Location
Eastbound State Route 178, just north of South Trona Road, viewing to the northeast.

VRM Class
Not Established

Analyst
Michael Clayton

Date
November 09, 2010



Latitude: 35° 43' 10.06" N Longitude: 117° 24' 1.42" W

CHARACTERISTIC LANDSCAPE DESCRIPTION

	LANDFORM / WATER	VEGETATION	STRUCTURES
Form	Flat, horizontal (valley floor) to angular (ridge)	Patchy to more uniform at distance	Linear and geometric
Line	Horizontal (valley floor) to diagonal and irregular (ridgeline)	Irregular	Vertical and horizontal (poles), curvilinear to diagonal (SR178 and lines/cables)
Color	Light to dark tans	Grasses: tans to pale yellow; Shrubs: muted greens, tans, and reddish hues	Gray, black, reddish brown
Texture	Smooth to granular	Matte	Smooth to granular

PROPOSED ACTIVITY DESCRIPTION

	LANDFORM / WATER	VEGETATION	STRUCTURES
Form	Same	Same	Same
Line	Same	Same	Same
Color	Same	Same	Same
Texture	Same	Same	Same

DEGREE OF CONTRAST

	LANDFORM / WATER				VEGETATION				STRUCTURES			
	NONE	WEAK	MODERATE	STRONG	NONE	WEAK	MODERATE	STRONG	NONE	WEAK	MODERATE	STRONG
Form	4				4					4		
Line	4				4				4			
Color	4				4				4			
Texture	4				4				4			

LEVEL OF CHANGE & VRM CLASS CONSISTENCY

Term: Short Long Level of Change: Very Low Low Moderate High

Does the Project Design Meet VRM Objectives? Yes No

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EXISTING CONDITIONS



PROPOSED PROJECT SIMULATION

This pair of images presents: (1A) the existing view to the northwest from northbound Downs Street, near the southeast corner of the property boundary; and (1B) a visual simulation of the proposed expansion and new 115 kV subtransmission poles.



PROPOSED PROJECT SIMULATION

This image presents a simulation of the proposed landscaping that would be installed to partially screen the expansion site. The simulation is preliminary and represents five years of landscape growth. The landscape design is to be finalized closer to the final design of the project.



EXISTING CONDITIONS



PROPOSED PROJECT SIMULATION

This pair of images presents: (2A) the existing view to the southwest from westbound East Church Avenue, just east of the intersection with South Desert Candles Street; and (2B) a visual simulation of the proposed telecommunications cable and supporting cross-arms.



EXISTING CONDITIONS



PROPOSED PROJECT SIMULATION

This pair of images presents: (3A) the existing view to the north from eastbound SR 178 (Trona Road), just north of South Trona Road; and (3B) a visual simulation of a proposed structure replacement.