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Project Title:	Gem Energy Storage Center
TN #:	240751-19
Document Title:	Section 5_13_Visual Resources_Gem Energy Storage Center
Description:	This chapter of the Application for Certification (AFC) discusses the existing condition of visual resources of the landscape surrounding the Applicant's (Hydrostor Inc.) Gem Energy Storage Center (Gem) proposed Advanced Compressed Air Energy Storage (A-CAES) facility in unincorporated Kern County, California (the Project) and the potential visual impacts associated with its construction and operation.
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Submitter Role:	Applicant Representative
Submission Date:	12/1/2021 3:07:04 PM
Docketed Date:	12/1/2021

5.13 Visual Resources

5.13.1 Introduction

This chapter of the Application for Certification (AFC) discusses the existing condition of visual resources of the landscape surrounding the Applicant's (Hydrostor Inc.) Gem Energy Storage Center (Gem) proposed Advanced Compressed Air Energy Storage (A-CAES) facility in unincorporated Kern County, California (the Project) and the potential visual impacts associated with its construction and operation.

For the purposes of this study, visual resources refer to the natural and cultural landscape features that comprise the landscape surrounding the Project as well as their qualities and contribution to landscape character. Natural landscape features include landforms, water features, and vegetation. Cultural landscape features include buildings, roadways, structures, and artificial lighting related to human land uses. The quality of the visual environment has a value to individuals, society, and the economy of a region, particularly in an area where scenic landscapes provide the backdrop for tourism and recreation activities.

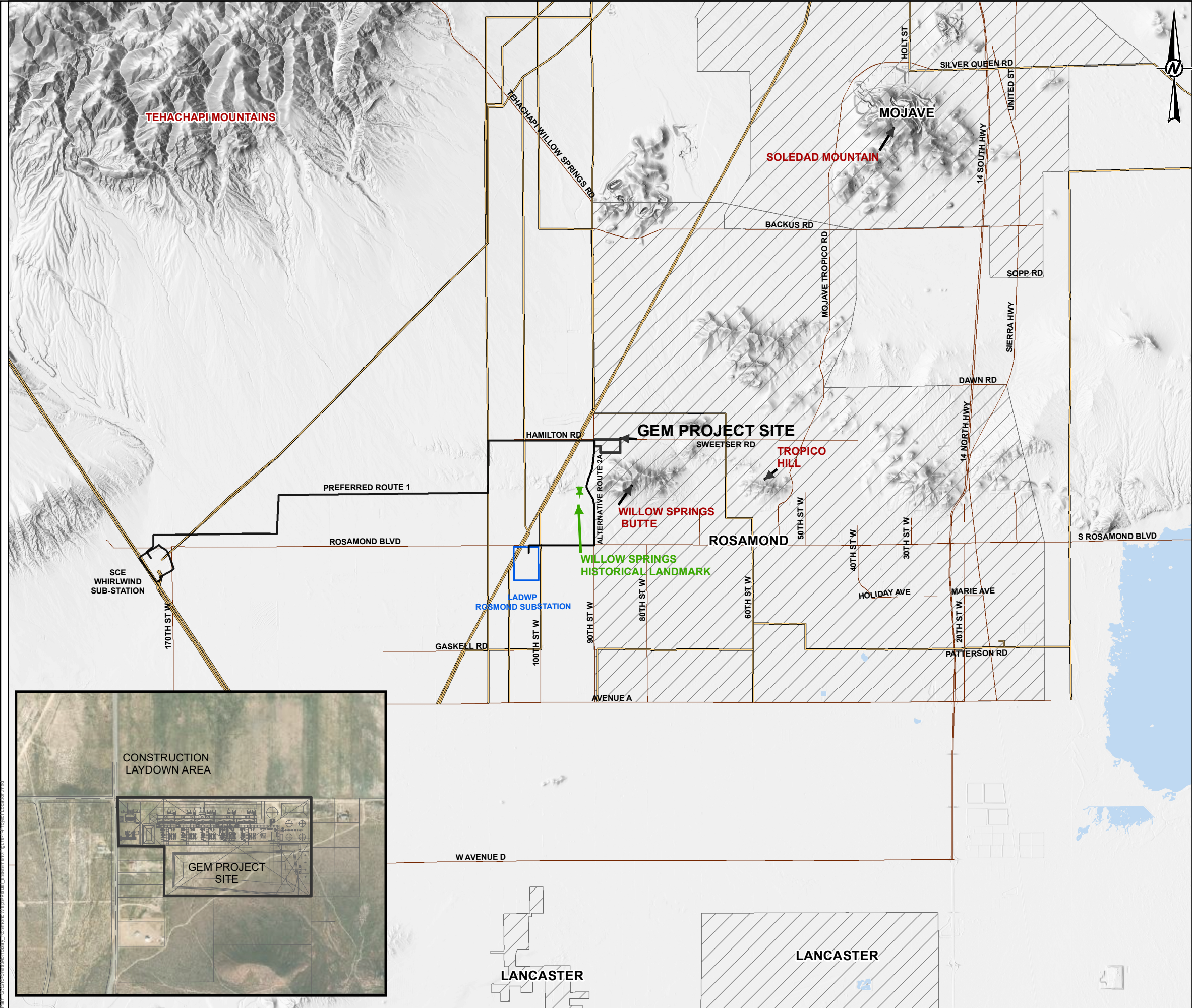
This section evaluates whether there is a potential for the visibility and visual characteristics of Project components and activities to significantly change the visual quality of the existing landscape setting surrounding the Project. Land clearing, landform modifications and the erection of built structures (i.e., Project facilities, reservoir, and an overhead transmission line) that may result in visual disturbance and alterations during construction and operations are evaluated to determine whether they are inconsistent with the current character of the landscape setting.

This section was prepared following California Energy Commission (CEC) guidelines for preparing visual impact assessments for Applications for Certification (AFC) (CEC 2021). The analysis also conforms with the documentation requirements of the California Environmental Quality Act (CEQA) (CEQA 2019).

Section 5.13.2 describes existing visual quality in the Project area. Section 5.13.3 documents the methods used to prepare this visual assessment, as well as potential environmental effects as they relate to visual resources.

Section 5.13.4 discusses the potential cumulative impacts of this and other projects in the area. Section 5.13.5 summarizes the mitigation measures proposed to address potential Project impacts on visual resources. Section 5.13.6 describes the applicable laws, ordinances, regulations, and standards (LORS) relevant to visual resources. Section 5.13.7 lists agencies involved and agency contacts, and Section 5.13.8 discusses permits. Section 5.13.9 lists the references used in preparation of this section.

Figure 5.13-1 provides a map showing the general Project location within a regional landscape context. Figure 5.13-2 illustrates the results of viewshed analysis and viewing distances zones. Figure 5.13-3 shows the locations of selected key observation points (KOPs) and light receptor locations representative of sensitive public viewing areas. The existing and simulated viewing conditions of the Project area from the selected KOPs are presented in Appendix 5.13A - Landscape Photographs and Simulations.



LEGEND

- PREFERRED TRANSMISSION ROUTE
- ALTERNATIVE TRANSMISSION ROUTE
- LADWP ROSMOND SUBSTATION
- EXISTING TRANSMISSION
- ROAD
- GEM PROJECT SITE
- LAKE
- CITY BOUNDARY

NOTES

SOURCE DATA FOR ROAD, CITY AND TRANSMISSION LINE:
[HTTPS://GEODAT-KERNCO.OPENDATA.ARCGIS.COM/](https://geodat-kernco.opendata.arcgis.com/)

0 5,000 10,000 Feet

REFERENCE


COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V
FIPS 0405 FEET

CLIENT
HYDROSTOR, INC.

PROJECT
GEM ENERGY STORAGE CENTER

TITLE
PROJECT LOCATION

CONSULTANT	YYYY-MM-DD	2021-10-07
	PREPARED	MR
	DESIGN	MR
	REVIEW	DH
	APPROVED	DH

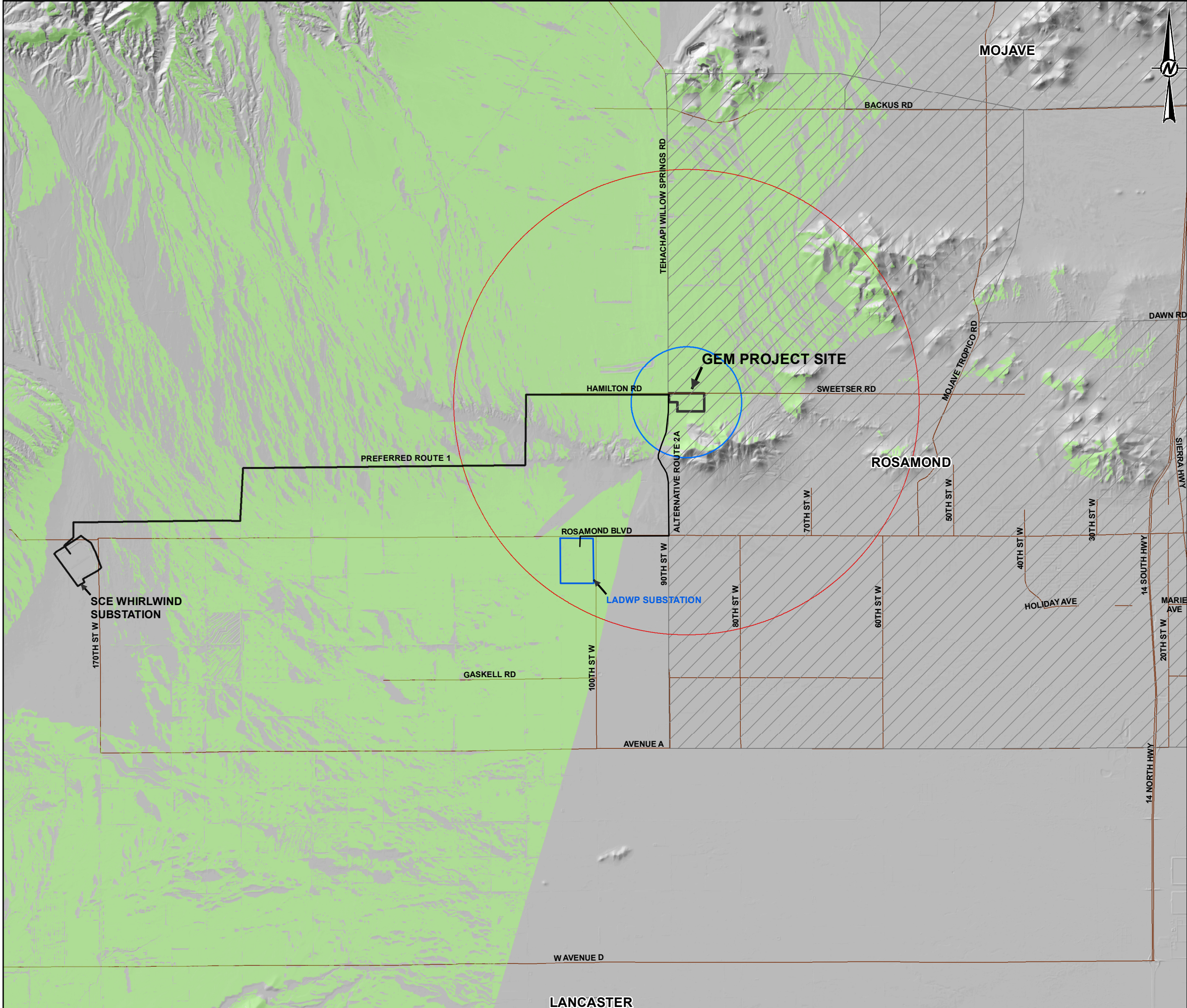
 **GOLDER**
MEMBER OF WSP

PROJECT No. 20449449	CONTROL ---	Rev. ---
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FIGURE
5.13-1

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LEGEND

- PREFERRED TRANSMISSION ROUTE
- ALTERNATIVE TRANSMISSION ROUTE
- ROAD
- GEM PROJECT SITE
- CITY BOUNDARY
- FOREGROUND ZONE (0 - 0.5 MILES)
- MIDLEGROUND ZONE (0.5 -3 MILES)

VIEWSHED

- VISIBLE AREA

NOTES

SOURCE DATA FOR ROAD, CITY AND TRANSMISSION LINE:
[HTTPS://GEODAT-KERNCO.OPENDATA.ARCGIS.COM/](https://geodat-kernco.opendata.arcgis.com/)

REFERENCE

COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V
FIPS 0405 FEET

CLIENT

HYDROSTOR, INC.


PROJECT

GEM ENERGY STORAGE CENTER

TITLE

VIEWSHED AND VIEWING DISTANCE

CONSULTANT	YYYY-MM-DD	2021-10-11
	PREPARED	MR
	DESIGN	MR
	REVIEW	DH
	APPROVED	DH



GOLDER
MEMBER OF WSP

PROJECT No. 20449449	CONTROL ---	Rev. ---	FIGURE 5.13-2
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5.13.2 Affected Environment

5.13.2.1 Regional Setting

The Project is located in unincorporated Kern County, approximately 1 mile northeast of the community of Willow Springs and 7 miles west of Rosamond, California. The regional landscape is characterized by flat and gently sloping terrain of the Antelope Valley region of the western Mohave Desert bounded by the Tehachapi Mountains to the northwest and the Liebre-Sawmill Mountains to the southwest. Regional topographical features include a number of small hills to the east and northeast of the Project (i.e., Rosamond Hills, Tropico Hill, Soledad Mountain), including the adjacent Willow Springs Butte (700' prominence) located approximately 0.25 miles to the southwest. Vegetation in the area is dominated by a mixture of grasses and desert scrub habitats. The location of the Project site is illustrated in Figure 5.13-1.

Land use patterns in the region are primarily rural residential, commercial, and industrial land uses (e.g., renewable energy production) in addition to large areas of open space and agricultural land uses. The area to the southeast of the Project site, is public land administered by the U.S. Department of the Interior (USDI), Bureau of Land Management (BLM). The village of Willow Springs is located approximately 1 mile to the southwest of the Project and is the site of a historical landmark (i.e., California Historical Landmark #130). Willow Springs International Motorsports Park is approximately 1.5 miles to the southwest of the Project on the opposite side of Willow Springs Butte. Willow Springs Butte is a noteworthy landform feature within the area. Wind and solar facilities are common in the region west of the Project. Wind turbines and related infrastructure are located in hilly terrain approximately 6.5 miles west of the Project site. Solar facilities are located as close as approximately 2.5 miles southwest and 1.25 miles northeast of the Project site.

The region is traversed by a network of paved and unpaved roads and experiences off-road vehicles use on informal trails. Major transportation routes in the region include State Route (SR) 14, a four-lane highway approximately 7 miles east of the Project site, and SR 138, a two-lane roadway approximately 1 mile south of the Project site. Communities within the region include Willows Springs, Rosamond, Lancaster, and Mohave. No eligible or designated scenic highways have been identified within the vicinity of the Project. The closest eligible scenic highway is SR 14 from near the City of Mojave to the City of Barstow which is more than 10 miles north of the Project. From this background viewing distance, the Project would not be evident within the landscape setting from SR 14.

The region also includes a number of 500 kilovolt (kV) and 250 kV transmission lines and substations, including the existing Los Angeles Department of Water and Power (LADWP) transmission corridor approximately 0.25 miles east of the Project site.

No designated scenic vistas or scenic resources have been identified surrounding the Project. Tourism locations, such as historic sites, and recreational areas may provide relatively uninterrupted and expansive viewing opportunities over the natural desert landscape. A portion of the Pacific Crest Trail is located approximately 9 miles west of the Project site and would provide users with background views where the Project would not be evident within the landscape setting.

The landscape surrounding the Project is primarily natural or agricultural land use and therefore has limited sources of artificial light at nighttime. The nighttime viewing conditions are influenced by existing lighting from rural residents, industrial facilities (numerous red safety lights related to wind turbines are visible along the horizon to the east), and ambient lighting from nearby communities (i.e., Rosamond). No street lighting exists along local roadways although cars and trucks are a potential source of temporary light.

5.13.2.2 Project Site

The Project site covers approximately 71 acres situated at an elevation of approximately 2,625 feet above sea level with relatively flat terrain sloping to the northwest. The site is bounded on the north by Sweetser Road and to the east by 90th Street West (Tehachapi Willow Springs Road). The site is currently undeveloped with vegetated landcover consisting of allscale scrub, creosote bush scrub, and red brome grassland.

The preferred option for the 230 kV transmission line route would extent from the Project site and interconnect at the Southern California Edison's (SCE) Whirlwind Substation to the southwest. This would involve an approximately 10.9-mile transmission line route (Preferred Route 1). Alternatively, the interconnection may tie into a future LADWP Rosamond substation via an approximately 3.5-mile transmission line route to the southwest (Alternate Route 2A). The transmission line routes are considered to be preliminary and subject to change pending conclusion of interconnection agreements for the chosen point of interconnection.

The Project site and transmission line route options considered in this visual assessment are illustrated in Figure 5.13-1.

Potential viewing opportunities near the Project site include rural residential properties and views from local roadways (e.g., Sweetser Road, Tehachapi Willow Springs Road, Rosamond Boulevard). Views for affected receptor would consist largely of expansive views over the natural desert landscape and would include evident roadways, transmission lines, solar and wind facilities, rural residences, and the background views of surrounding hills and mountains.

5.13.2.3 Construction Laydown Area

Temporary construction facilities will include approximately 40 acres of land on the parcel immediately to the north of Sweetser Road and across from the Project site. This area has been allocated for construction laydown and worker parking. The general location of the construction laydown area is illustrated in Figure 5.13-1.

5.13.2.4 Project Assessment Area

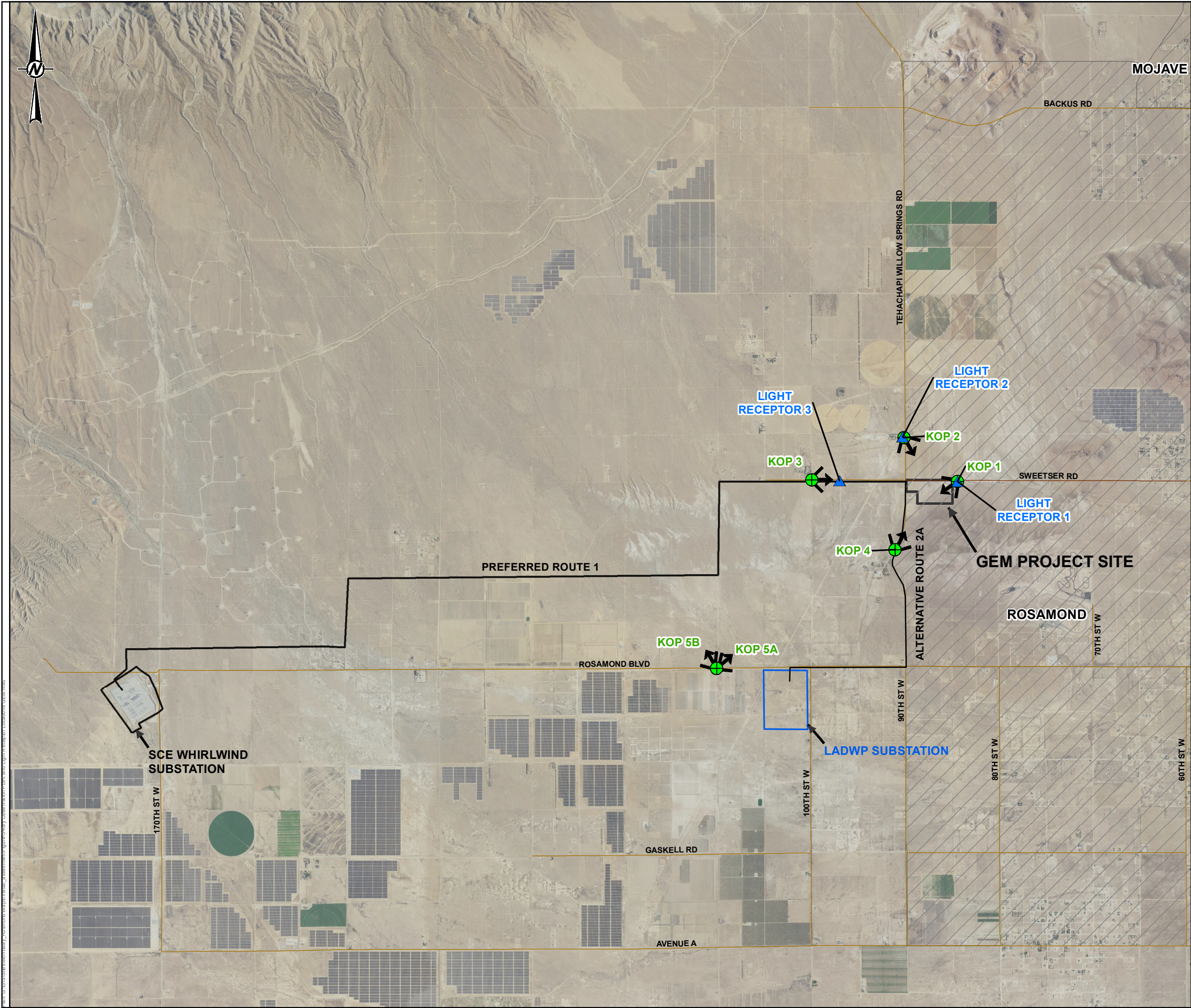
Spatial boundaries used for this visual assessment are based on the extent of area anticipated to experience direct and indirect visual effects from the Project. The assessment area boundaries considered the results of visibility analysis and viewing distances which affect the level of visible detail in the landscape that may be perceived by viewers; where visual elements of the landscape are more discernible and prominent the closer they are to the observer.

5.13.2.4.1 Project Viewshed and Visibility

Visibility analysis identifies areas across a landscape that can be seen from one or more observation point(s), also known as a 'viewshed'. A direct line-of-sight exists between each location within the viewshed and the viewpoint from which the viewshed was generated. Visibility analysis was performed using a geographic information system (GIS) and digital data to model the physical terrain surrounding the Project to define the general area from which the Project would be theoretically visible. The result of the visibility analysis is illustrated in Figure 5.13-2.

Viewing distance zones were measured outward from the Project site footprint and include foreground, middle-ground, and background distance zones (FWHA 2015). The foreground viewing zone is defined as the distance of within 0.5 miles from the Project, and the middle-ground viewing zone is defined as the distance of 0.5 to 3 miles from the Project. The assessment of Project effects was focused on foreground and middle-ground zones as this is where details in the landscape are most noticeable to the viewer and objects generally appear as distinct

shapes and forms within the setting. As viewing distance from the Project increases, visible detail and sensitivity to alteration generally decreases. The background viewing zone is defined as the distance beyond 5 miles from the Project where details in the landscape are generally less discernable to the viewer and objects begin to blend with the existing setting. Viewing distance zones are illustrated in Figure 5.13-2.

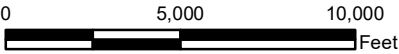


LEGEND

- LIGHT RECEPTOR
- KEY OBSERVATION POINT (KOP)
- PREFERRED TRANSMISSION ROUTE
- ALTERNATIVE TRANSMISSION ROUTE
- ROAD
- GEM PROJECT SITE
- CITY BOUNDARY

NOTES

SOURCE DATA FOR ROAD, CITY AND TRANSMISSION LINE:
[HTTPS://GEODAT-KERNCO.OPENDATA.ARCGIS.COM/](https://geodat-kernco.opendata.arcgis.com/)



REFERENCE

COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V
FIPS 0405 FEET

CLIENT
HYDROSTOR, INC.

PROJECT
GEM ENERGY STORAGE CENTER

TITLE
KEY OBSERVATION POINT AND LIGHT RECEPTOR LOCATIONS

CONSULTANT	YYYY-MM-DD	2021-10-07
	PREPARED	MR
	DESIGN	MR
	REVIEW	DH
	APPROVED	DH



PROJECT No. 20449449	CONTROL ---	Rev. ---	FIGURE 5.13-3
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5.13.3 Environmental Analysis

5.13.3.1 Analysis Procedure and Methodology

5.13.3.1.1 Regulatory Setting

A review of existing relevant LORS was conducted to understand the regulatory context for visual resource management surrounding the Project. This a review of applicable federal, state, and local policies and regulations including California Environmental Quality Act, California Scenic Highways Program, Kern County's General Plan and Kern County Code of Ordinances, and the Willow Springs Specific Plan. These are detailed in Section 5.13.6.

5.13.3.1.2 Photographic Survey

Potential representative viewing locations were identified from the results of the visibility analysis (Section 5.13.2.4.1) and the overlay of datasets detailing the location of communities and residential property, roadways, recreational resources (e.g., recreation sites and trails), and other land uses. The identification of potential viewing locations was used to support the gathering of photographs of the landscape during a photographic field survey.

A photographic field survey was used to gain an on-the-ground familiarity with the visible area of the Project from an observer's perspective, to confirm the validity of potential viewpoints from initial visibility analysis, and to gather photographic images and related geographic data for each viewpoint. Photographs of daytime viewing conditions were taken by Golder Associates Inc. (Golder) field staff during a field survey conducted between July 8th and 9th, 2021.

Photographic survey locations were visited that represent public viewing opportunities related to tourists and residents, recreational users, and motorists. At each surveyed viewpoint location, landscape photographs were captured and observational information of viewing conditions was recorded. Photographs were taken using a digital camera with a focal length of 50 millimeters (mm) which is consistent with the view perceived by the human eye (Landscape Institute 2019). For each surveyed viewpoint field staff also completed an observation log describing geographic information gathered using a global positioning system (GPS), camera settings, and details about viewing conditions. Landscape photographs and observation log information is provided in Appendix 5.13A.

5.13.3.1.3 Key Observation Points

Because it is not feasible to analyze all potential viewing opportunities surrounding the Project, it is necessary to select a number of KOPs to represent the range of viewers and viewing conditions that would potentially be affected by the Project. The following criteria were used to identify representative KOPs:

- proximity to features that provide publicly accessible viewing including roads, trails, waterbodies, parks, recreation amenities, and locations near residential areas;
- ease of access and use by a range of viewer/user groups, including recreational users, tourists, motorists, and residents;
- representation of a range of viewing angles and distances; and
- the potential for unobstructed views of the Project.

Five KOPs were selected for evaluation of existing visual quality and analysis of the Project's potential visual effects. KOPs and the rationale for their selection are summarized in Table 5.13-1. The locations of KOPs are illustrated in Figure 5.13-3.

Table 5.13-1: Key Observation Points

Key Observation Point		Rationale
KOP1 - Sweetser Road		<ul style="list-style-type: none"> ■ represents view of residents and local motorists ■ within foreground viewing distance of the Project site (~0.07 miles) as well as a view of the SCE Whirlwind Substation option transmission line route (Preferred Route 1) ■ view from the east (235°)
KOP2 - Favorite Avenue		<ul style="list-style-type: none"> ■ represents view of residents and local motorists ■ within foreground viewing distance of the Project site (~0.48 miles) as well as a view of the SCE Whirlwind Substation option transmission line route (Preferred Route 1) ■ view from the north (150°)
KOP3 - Hamilton Road		<ul style="list-style-type: none"> ■ represents view of residents and local motorists ■ within middle-ground viewing distance of the Project site (~1.14 miles) as well as a view of the SCE Whirlwind Substation option transmission line route (Preferred Route 1) ■ view from the west (90°)
KOP4 – Tehachapi Willow Springs ^(a) Road		<ul style="list-style-type: none"> ■ represents view of tourism, residents, local motorists ■ within middle-ground viewing distance of the Project site (~0.58 miles) and the SCE Whirlwind Substation option transmission line route (Preferred Route 1) (1 mile) ■ view from the southwest (30°)
		<ul style="list-style-type: none"> ■ within foreground of the LADWP Rosamond Substation transmission line route (Alternate Route 2A) (~0.10 miles)
KOP5 - West Rosamond Boulevard ^(b)	KOP5a	<ul style="list-style-type: none"> ■ represents view of residents and local motorists ■ within middle-ground of the Project site (~2.88 miles) and the LADWP Rosamond Substation option transmission line route (Alternate Route 2A) ■ view from the southwest (50°)
	KOP5b	<ul style="list-style-type: none"> ■ represents view of residents and local motorists

Key Observation Point	Rationale
	<ul style="list-style-type: none"> ■ within middle-ground of the SCE Whirlwind Substation option transmission line route (Preferred Route 1) (~1.15 mile) ■ view from the southwest (330°)

Notes:

- a) KOP4 represents views of the SCE Whirlwind Substation option and LADWP Rosamond Substation option transmission line routes.
 - b) There are two viewing angles from KOP5 – one view directed toward the Project site and a second view directed more toward the SCE Whirlwind Substation option transmission line route. KOP5 also represents views of the SCE Whirlwind Substation option and LADWP Rosamond Substation option transmission line routes.
- ° = viewing angle towards the Project component; ~ = approximately; SCE = Southern California Edison; LADWP = Los Angeles Department of Water and Power

KOPs representing views from background viewing distances beyond 3 miles were not selected due to consideration of the scale of Project features where distant viewing of the site is likely to be obscured. The selection of KOPs focused on more sensitive viewing locations at closer viewing distances.

5.13.3.1.4 Viewers and Exposure

The range of potential viewers that may be affected by a proposed project can be described by the distinct types of viewers and the conditions they experience within the landscape. Understanding the types of viewers and their exposure to potential Project-related visual effects helps to predict sensitivity and responses to visual changes. The term exposure describes the degree to which viewers are subjected to views of the landscape. Viewer exposure considers dimensions of viewing distance (proximity of viewers to the project), frequency (the number of times the project may be seen), and the duration (the length of time the project may be seen) of the viewing opportunities¹. The primary groups of potential viewers of the Project and description of their exposure are based on definitions provided by the Federal Highway Administration (FHWA 2015).

Three types of viewers were identified in the Project assessment area that will be potentially affected by the Project. These consist of the following:

- **Residential viewers:** Residential viewers can be owners or renters of a residential property or settlement area. Residential viewers generally have a higher sense of ownership of views and a desire to maintain the existing landscape as it contributes to their quality of life. Residential viewers tend to experience frequent and continual viewing opportunities. Within the Project assessment area these include numerous rural residential properties.
- **Tourists / Recreational viewers:** Tourists / recreational viewers provide or participate in tourism or recreational uses such as sporting events, cultural attractions, or outdoor recreation. Tourists / recreational viewers are often focused on their activity and tend to be sensitive to visual disturbance that would adversely affect the setting of their activity. Tourism and recreational services provided for visitors can present permanent viewing opportunities, while visitors are more transitory may experience somewhat frequent and sustained viewing opportunities relative to the type and popularity of the activity. Within the Project

¹ Generally, the greater the exposure (i.e., closer, ~~longer~~longer, or more frequent viewing), the more viewers will be concerned about visual impacts.

assessment area this includes recreational users on public land and tourists visiting sites such as Willow Springs historical landmark.

- **Motorists:** Motorists experience views from the roadway. By necessity, the driver of a motor vehicle focuses less on the view outside the vehicle while passengers are free to view the adjacent landscape. Motorists move at higher speeds than other groups and have temporary and/or intermittent viewing opportunities. Within the Project assessment area this includes local motorists and travelers passing through the region. Local motorists will experience more frequent viewing than travelers, although travelers may be more aware of the landscape if they take a particular route for its scenic qualities.

5.13.3.1.5 Visual Impact Analysis

The assessment of visual impacts is based on the potential for Project-related visual disturbance to change the existing visual character of an area. For many established visual assessment methods, the level of visual impact is determined by combining factors related to the sensitivity of viewers to visual change with a predicted measure of the degree of visual change (USDI BLM 1986a; FHWA 2015). This section describes the approach used in this analysis to characterize and combine factors of viewer sensitivity and visual change to determine the visual impact of the Project from representative KOPs.

5.13.3.1.5.1 Visual Resources Inventory

The Project is located within an area that includes established BLM Visual Resources Inventory (VRI) polygons and respective ratings for visual resource values. The VRI process applies the technical approach of the USDI BLM Visual Inventory Rating system to characterize dimensions of scenic quality and viewer sensitivity and spatially delineate the distribution of these ratings (USDI BLM 1986a). The dimension of scenic quality is assessed through an evaluation of the overall scenic appeal of the landscape determined by the visual characteristics and relationship of its natural and cultural features. The analysis of scenic quality is based on established research in perceptual psychology and the premise that all landscapes have some scenic value, but those with visual diversity, harmonious composition and/or containing distinct features have the greatest potential for high scenic quality (USDI BLM 1986a). Quality is rated by High, Medium, and Low categories (i.e., classes A, B, or C). The dimension of viewer sensitivity is assessed through the identification of typical viewers and the associated potential for public concern related to change in visual quality. The analysis of viewer sensitivity is based on factors related to viewing conditions (e.g., type of users, amount of use) and an understanding of general public interest for visual quality². Viewer sensitivity is rated by High, Medium, and Low categories.

The VRI designates the lands within and surrounding the Project as Scenic Quality Class C, indicating a Low value for the scenic quality of the landscape seen within the rating unit, and a Viewer Sensitivity Rating of Low indicating that the maintenance of visual quality has low value to the public (USDI BLM 2020).

BLM administered lands are also assigned to one of four VRI Management classes (i.e., Class I, II, III, or IV) which establish planned objectives to manage lands in a manner that will protect the quality of scenic values. The VRI designates Willow Springs Butte lands, adjacent to the Project site, as VRI Class IV (USDI BLM 2020). Class IV designates areas with the objective to manage activities which require major modifications of the existing character of the landscape and where the level of change to the characteristic landscape can be high (i.e., may

² A key assumption of this technical approach to determining viewer sensitivity is that it relates to ~~typical~~typical, or known or likely values viewers place on the existing level of visual quality and is not related to potential viewer preferences or concepts of beauty.

dominate the view and be the major focus of viewer attention). Management objectives also specify that attempts should be made to minimize the visual impact of development activities (USDI BLM 1986a).

5.13.3.1.5.2 Landscape Modelling

To determine potential visual effects of the Project components and activities, a computer-generated 3D landscape model was developed in advanced 3D landscape modelling software (Autodesk 3D Studio MAX), based on available spatial data describing the terrain and Project components (i.e., the Project disturbance area, facilities and earthworks, transmission line components). This modelling allowed for the rendering of ground-based perspective images that include modeled Project landform, vegetation clearing, and built features to be located accurately on the terrain. Simulation images rendered for KOPs were combined with site photography to create photo-composite images of the predicted arrangement and visual character of Project components. These images were used to support the visual effects assessment and are presented in Appendix 5.13A.

5.13.3.1.5.3 Visual Contrast Rating

The physical characteristics of Project components were evaluated by visual design elements (i.e., color, form, line, texture, scale, spatial dominance) and compared to the existing landscape conditions. The overall contrast created by the visual design elements of Project components was characterized using the following descriptive categories (USDI BLM 1986b):

- **Negligible:** The disturbance is barely perceptible without any noticeable contrast within the existing landscape character.
- **Weak:** The disturbance is evident, but the contrast does not attract the attention of the viewer.
- **Moderate:** The disturbance provides a noticeable contrast that begins to attract attention but is subordinate to the existing landscape character.
- **Strong:** The disturbance contrasts with the surrounding landscape elements in such a way that it attracts attention and is a dominant feature of the landscape.
- **Severe:** The disturbance highly modifies the surrounding landscape elements in such a way that the disturbance is a dominant element of the landscape with a high degree of contrast to the existing landscape character.

5.13.3.1.5.4 Visual Impact Assessment

A visual impact assessment was completed for each KOP to determine how the predicted level of visual contrast from the Project is related to anticipated viewer sensitivity. This was conducted as a qualitative assessment of the level of visual impact that the Project-related disturbances are predicted to have on the existing visual quality and character. This assessment considering the exposure and sensitivity of viewers to change (Section 5.13.3.1.4 and Section 5.13.3.1.5.1) and the Contrast Rating (Section 5.13.3.1.5.3) which describes the predicted level of visual contrast of the Project components.

The resulting ratings of visual impacts are defined as follows:

- **Negligible:** a very minor loss or alteration to one or more key elements/features of the existing landscape.
- **Low:** minor loss or alteration to one or more key elements/features of the existing landscape and/or introduction of elements that may be characteristic within the existing landscape.

- **Moderate:** partial loss or alteration to one or more key elements/features of the existing landscape and/or introduction of elements that may be prominent and may partially change the existing landscape character.
- **High:** a loss of or major alteration to key elements/features of the existing landscape and/or introduction of elements considered to change in the existing landscape.

5.13.3.1.6 Lighting Assessment

The assessment of the existing nighttime visual character is based on the current perceived lighting conditions experienced by viewers during the nighttime. To establish a baseline of pre-Project lighting conditions, existing skyglow light levels were measured at selected receptor locations. Skyglow is stray light scattering in the atmosphere, brightening the natural sky background level, and reducing star visibility. Sky glow effects are often associated with light pollution that can have a regional effect on perceived lighting conditions.

Receptor locations were selected to represent a range of sites that experience use during the nighttime and that could potentially be affected by the presence of Project-related exterior lighting including locations related to residences or motorists. The light receptor locations are shown in Figure 5.13-3.

Lighting conditions were evaluated in terms of percentage brightness above natural dark sky background and were classified based on definitions and descriptions from established international lighting guidelines, which consist of a set of established Environmental Lighting Zones for classifying exterior light levels (CIE 1997; CIE 2003). Environmental Lighting Zones and related quantitative thresholds are shown in Table 5.13-2.

Table 5.13-2: Environmental Lighting Zone Classification for Sky Glow

Environmental Lighting Zone (a)	Description of the Environmental Lighting Zone	Sky Glow (% brightness above natural dark sky)
E1	Intrinsically dark natural (e.g., national parks or protected sites, roads usually unlit)	$0 \% < x \leq 20 \%$
E2	Areas of low district brightness (e.g., agricultural, industrial, or outer urban / rural residential areas)	$20 \% < x \leq 100 \%$
E3	Areas of medium district brightness (e.g., industrial, or small-town center's / residential suburbs)	$100 \% < x \leq 200 \%$
E4	Areas of high district brightness (e.g., town / city centers and commercial areas urban areas, residential and commercial with high levels of nighttime activity)	$x > 200 \%$

Notes: a) from the Commission Internationale de l'Eclairage (CIE 1997; CIE 2003)
%: percentage; <: less than; ≤: less than or equal to; >: greater than

The assessment of Project related lighting involved a review of available information of the Project lighting layout, luminaires, and illumination levels required for safe operations. This information provided an estimate of the potential incremental increase in lighting that may result from the Project and would influence the current skyglow level. This incremental change was combined with the measured percentage brightness above natural dark sky background at light receptors to determine if anticipated light levels with the Project would exceed thresholds for Environmental Lighting Zones class. A change in an Environmental Lighting Zone class would signal a noticeable change in the perceived lighting conditions experienced by viewers during the nighttime.

A determination of existing light trespass, which is light or illuminance that strays from its intended purpose and potentially becomes an annoyance to nearby receptors, was quantified by comparing the amount of sky glow measured in the 90° angle with that of the horizontal (0°) angle. This serves as an indicator of the light that may be experienced by viewers that could affect perceived lighting conditions at adjacent locations.

5.13.3.2 Impact Evaluation Criteria

The significance of visual changes was evaluated in terms of criteria provided by CEQA guidelines (CEQA 2019). Appendixes G and I of the CEQA guidelines indicate that a project will have a significant effect on the environment if it will:

- Have a substantial, adverse effect on a scenic vista.
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
- Substantially degrade the existing visual character or quality of the site and its surroundings.
- Create a new source of substantial light or glare, which will adversely affect day or nighttime views in the area.

5.13.3.3 Project Appearance

5.13.3.3.1 Project Structures, Dimensions, and Materials

The Project components are described in detail in Section 2.0, Project Description. Figures 2-2 to 2-5 show the general arrangement, layout, and various elevation views of the proposed Project components.

Table 5.13-3 identifies the Project sites main above-ground components and their dimensions, materials, and finishes.

Table 5.13-3: Project Site Components Approximate Dimension, Materials, and Finishes

Project Component	Dimensions	Materials	Finishes
Turbine Hall Additional buildings connected the Turbine Hall include: <ul style="list-style-type: none"> ■ Maintenance Hall ■ Electrical Gallery ■ Control House 	Turbine Hall - 100 ft high by 65 ft wide by 1365 ft long Maintenance Hall - 70 ft high by 52 ft wide Electrical Gallery - 28 ft high by 45 ft wide Control House - 40 ft high by 60 ft wide	metal siding	light beige/tan
Series of heat exchangers and thermal storage equipment	20 ft high	prefabricated metal material	primarily light to dark gray
Low pressure exhaust stack	125 ft high	prefabricated metal material	primarily light to dark gray

Project Component	Dimensions	Materials	Finishes
One cold thermal fluid tank	150 ft diameter and 90 ft high	insulated metal plates	white to light gray
Four hot thermal fluid tanks	83 ft diameter and 90 ft high	insulated metal plates	white to light gray
Two stormwater ponds	150 ft long by 260 ft wide (south) 180 ft wide by 245 long (north)	excavated soil and mined rock	similar to existing exposed soil and rock
Surface Water Reservoir ^(a)	covering 31 acres with 16 ft high earth berms	excavated soil and mined rock berms; non-reflective cover	similar to existing exposed soil and rock
230 kV onsite electrical switchyard	20 ft to 40 ft high	prefabricated metal material	primarily light to dark gray
GIS building	85 ft wide by 140 ft long by 70 ft high	metal siding	light beige/tan

Notes: a) Subsequent to preparation of the AFC photo-composite images in Appendix 5.13A, the berm height of the surface water reservoir was modified from 16 feet to 40 feet. Updated photo-composite image work is in progress to address the higher 40-foot berm height and will be submitted during Data Adequacy review. We do not anticipate that the pending photo-composite image revision will materially change the visual impact assessment or findings in this Visual Resources section, but this will be confirmed once the updated photo-composite images are complete.

ft = feet/foot; kV = kilovolt; GIS = gas insulated substation

Finishes for materials and surface treatments will be predominately flat and non-reflective to minimize the potential for glare. The terrain around buildings and equipment will be graded and have gravel surfacing where not paved or concreted. The Project site will also be surrounded by a 6-to 8-foot-tall chain link security fencing with access gates at the main entrance on Sweetser Road and a secondary access gate on 90th Street West.

Preferred Route 1 is an approximately 10.9-mile 230 kV transmission line interconnected at SCE's Whirlwind substation. Alternate Route 2A interconnection to a future LADWP Rosamond substation is an approximately 3.5-mile 230 kV transmission line. Table 5.13-4 identifies the transmission line components and their dimensions, materials, and finishes.

Table 5.13-4: Transmission Line Components Approximate Dimension, Materials, and Finishes

Project Component	Dimensions	Materials	Finishes
Tapered metal monopole towers	120 ft high and approximately 600 ft to 900 ft spans (conservative average of 650 ft) span between poles	steel	light to dark gray

Notes: ft = foot/feet

The right-of-way width for the 230 kV transmission line routes is expected to be up to 150 feet where clearing is required.

5.13.3.3.2 Construction Laydown Area

Construction of the Project facilities is expected to last approximately 63 months. Temporary construction facilities will include a laydown area to the north of Sweetser Road and across from the Project site. During the construction period, construction materials, large equipment, trucks, and parked vehicles will be present in this area. No excavation spoils from mining the underground facilities will be stored at the laydown area.

5.13.3.3.3 Lighting

Nighttime construction is anticipated primarily for the cavern mining process and some intermittent localized 24-hour construction activities. When nighttime construction activity is required, all necessary temporary lighting will be directed on work areas and away from sensitive receptors such as nearby residences.

Operation of the Project will require onsite lighting for safety and security and approach lighting for the substation, control equipment enclosures, and operator interface locations. This will include a combination of pole mounted LED lighting ranging from 11 feet to 40 feet heights, and wall mounted fixture on buildings mounted between 23 feet and 30 feet. All new lighting will be dark sky compliant and include shielding and/or be directed downward to minimize the potential for glare, light trespass, and skyglow. Project lighting will use dimmable motion-sensitive and scheduling controls to minimize the use of the lights. Light level will comply with recommendations of the Illuminating Engineering Society (IES), as well as CEC and local jurisdictions ordinances or codes, to ensure lighting is no brighter than necessary.

5.13.3.3.4 Water Vapor Plumes

During operations, compressed air that has been routed through the power turbines and expanded during the power generation cycle will be discharged to the environment through the low-pressure exhaust stacks. During the power generation cycle, as the compressed air expands and cools, water vapor is condensed and recovered for process use. The condensation and removal of water will result in a relatively dry air discharge that has very low absolute humidity. As a result, when the ambient temperature is low, there is not sufficient water vapor in the discharge from the exhaust stack to form a visible water vapor plume in the environment.

The psychrometric analysis provided in Appendix 5.13B demonstrates that the conditions for visible steam plume are unlikely to occur. In the unlikely event that plumes are present, they would be relatively small and temporary, and would not likely result in a noticeable impact to visual resources.

5.13.3.4 Assessment of Visual Effects

This section provides an assessment of visual effects provided for daytime viewing from KOPs and lighting effects from light receptor locations.

5.13.3.4.1 Key Observation Points

Five KOPs were selected for assessment of the predicted level of visual contrast and visual impact from the Project. Photo-composite images presented in Appendix 5.13A, representing the viewing conditions during operations at KOPs, were evaluated using the methods detailed in Section 5.13.3.1.5. Ratings of visual contrast defined in Section 5.13.3.1.5.3 were assigned for each KOP considering the characteristics of Project components within the existing landscape conditions. Ratings of level of visual impact defined in Section

5.13.3.1.5.4 were assigned for each KOP considering the sensitivity of viewers to change, and the predicted level of visual contrast of the Project components.

Table 5.13-5 summarizes the viewers and conditions associated with each KOP, as well as the assessed Contrast Rating and Visual Impact Rating and a rationale for each.

Table 5.13-5: Visual Contrast and Visual Impact for Key Observation Points

Key Observation Point	Viewers	Visual Contrast	Visual Impact
<p>KOP1 - Sweetster Road</p> <p>(Project Site with Preferred Route 1)</p>	<ul style="list-style-type: none"> Represents view of residents and local motorists. Located within foreground viewing distance of the Project site. Anticipated to be a relatively low number of viewers. VRI Viewer Sensitivity rating for the area surrounding KOP1 is identified as Low. 	<ul style="list-style-type: none"> Contrast Rating: Severe Round, geometric pattern of built structures. Smooth surface of built structures, and light colour provides some contrast. Scale of turbine hall and thermal fluid tanks is very large relative to other features in the landscape. Overall level of contrast that demands attention and dominant in the landscape. 	<ul style="list-style-type: none"> Visual Impact Rating: High Major alteration to the existing landscape through the introduction of Project components that are dominant and change the existing landscape character for viewers at this location.
<p>KOP2 - Favorite Avenue</p> <p>(Project Site with Preferred Route 1)</p>	<ul style="list-style-type: none"> Represents view of residents and local motorists. Anticipated to be a relatively low number of viewers. Located within foreground viewing distance of the Project site. VRI Viewer Sensitivity rating for the area surrounding KOP2 is identified as Low. 	<ul style="list-style-type: none"> Contrast Rating: Moderate Smooth surface of built structures, and light colour provides some contrast. The visible portion of Turbine Hall is of a similar scale to other built features in the landscape. Overall level of contrast from the Project is evident and is distinct feature in the existing landscape features. 	<ul style="list-style-type: none"> Visual Impact Rating: Moderate Alteration to the existing landscape through the introduction of Project components that are prominent and may partially change the existing landscape character for viewers at this location.
<p>KOP3 - Hamilton Road</p> <p>(Project Site with Preferred Route 1)</p>	<ul style="list-style-type: none"> Represents view of residents and local motorists Located within middle-ground viewing distance of the Project site. Anticipated to be a relatively low number of viewers VRI Viewer Sensitivity rating for the area 	<ul style="list-style-type: none"> Contrast Rating: Weak A portion of the geometric pattern of the Turbine Hall is visible behind existing vegetation and built features. The visible portion of Turbine Hall is of a similar scale to other features in the landscape. Overall level of contrast from the Project is 	<ul style="list-style-type: none"> Visual Impact Rating: Low Minor alteration to the existing landscape through the introduction of Project components that are evident but compatible with the existing landscape character for viewers at this location.

Key Observation Point	Viewers	Visual Contrast	Visual Impact
	surrounding KOP3 is identified as Low	noticeable but would not attract the attention of viewers.	
KOP4 - Willow Springs (Project Site with Preferred Route 1)	<ul style="list-style-type: none"> Represents view of tourism, residents, local motorists Located within middle-ground viewing distance of the Project site. Anticipated to be a moderate number of viewers VRI Viewer Sensitivity rating for the area surrounding KOP4 is identified as Low 	<ul style="list-style-type: none"> Contrast Rating: Weak A portion of the geometric pattern of the Turbine Hall is visible behind existing vegetation, landforms, and built features. The visible portion of Turbine Hall is of a similar scale to other features in the landscape. Overall level of contrast from the Project is noticeable but would not attract the attention of viewers. 	<ul style="list-style-type: none"> Visual Impact Rating: Low Minor alteration to the existing landscape through the introduction of Project components that are evident but compatible with the existing landscape character for viewers at this location.
KOP4 - Willow Springs (Project Site with Alternate Route 2A)	<ul style="list-style-type: none"> Represents view of tourism, residents, local motorists Located within foreground viewing distance of the transmission line route. Anticipated to be a moderate number of viewers VRI Viewer Sensitivity rating for the area surrounding KOP4 is identified as Low 	<ul style="list-style-type: none"> Contrast Rating: Moderate Horizontally oriented transmission conductors and vertically oriented transmission structures. Internal texture created by conductors Relatively tall transmission structures seen against a backdrop of sky. Overall level of contrast from the Project is evident and is distinct feature in the existing landscape features. 	<ul style="list-style-type: none"> Visual Impact Rating: Low Minor alteration to the existing landscape through the introduction of Project components that are evident but compatible with the existing visual character for viewers at this location.
KOP5a - West Rosamond Boulevard (Project Site with Preferred Route 1)	<ul style="list-style-type: none"> Represents view of residents and local motorists Located within middle-ground viewing distance of the Project site. Anticipated to be a relatively low number of viewers VRI Viewer Sensitivity rating for the area surrounding KOP5 is identified as Low 	<ul style="list-style-type: none"> Contrast Rating: Negligible Visible Project components are very small in scale and are indistinct features in the landscape. Overall level of contrast from the Project is inconspicuous and would not attract the attention of viewers. 	<ul style="list-style-type: none"> Visual Impact Rating: Negligible Very minor alteration to the existing landscape through the introduction of Project components that are inconspicuous and do not change the existing overall landscape character for viewers at this location.

Key Observation Point	Viewers	Visual Contrast	Visual Impact
KOP5a - West Rosamond Boulevard (Project Site with Alternate Route 2A)	<ul style="list-style-type: none"> Represents view of residents and local motorists Located within middle-ground viewing distance of the Project site. VRI Viewer Sensitivity rating for the area surrounding KOP5 is identified as Low 	<ul style="list-style-type: none"> Contrast Rating: Negligible Visible Project components are very small in scale and are indistinct features in the landscape. Overall level of contrast from the Project is inconspicuous and would not attract the attention of viewers. 	<ul style="list-style-type: none"> Visual Impact Rating: Negligible Very minor alteration to the existing landscape through the introduction of Project components that are inconspicuous and do not change the existing overall landscape character for viewers at this location.
KOP5b - West Rosamond Boulevard (Preferred Route 1)	<ul style="list-style-type: none"> Represents view of residents and local motorists Located within middle-ground viewing distance of the transmission line route Anticipated to be a relatively low number of viewers VRI Viewer Sensitivity rating for the area surrounding KOP5 is identified as Low 	<ul style="list-style-type: none"> Contrast Rating: Negligible Visible Project components are very small in scale and are indistinct features in the landscape. Overall level of contrast from the Project is inconspicuous and would not attract the attention of viewers. 	<ul style="list-style-type: none"> Visual Impact Rating: Negligible Very minor alteration to the existing landscape through the introduction of Project components that are inconspicuous and do not change the existing overall landscape character for viewers at this location.

Notes: ° = viewing angle towards the Project component

For KOP1, KOP2 and KOP4, which have an unobstructed view of the Project site or the transmission line route, the Contrast Rating of the Project ranges from 'Severe' to 'Moderate'. KOP1 will experience substantial visual impacts where the Project components will attract attention and be dominant feature within the landscape setting. Alterations to the existing landscape may partially change the existing landscape character for viewers at KOP1 and KOP2. At all other KOPs surrounding the Project site, Project components are less visible and Contrast Ratings range from 'Weak' to 'Negligible' resulting in alteration to the existing landscape that does not change the existing landscape character for most viewers.

5.13.3.4.2 Lighting Effects

New light sources will be introduced by the Project into the existing nighttime environment, which presently has a range of direct light sources and ambient lighting. Existing sources of lighting are localized and associated with exterior lighting from rural residents, industrial facilities, and nearby communities.

Table 5.13-6 summarizes the measured sky glow levels for selected light receptor locations near the Project site. These values range from 19.42 to 20.80 for measurement of % brightness above natural dark sky. This indicates nighttime light levels are generally representative of an E2 Environmental Lighting Zone; an area of low district brightness such as a rural residential environment.

Table 5.13-6: Environmental Light Classification for Light Receptors

Light Receptors	Sky Glow (% brightness above natural dark sky)			Environmental Lighting Zone	Description
	0°	45°	90°		
Light Receptor 1 - Sweetser Road	20.70	20.67	20.80	E2	Areas of low district brightness
Light Receptor 2 - Favorite Avenue	19.42	20.00	20.69	E2	Areas of low district brightness
Light Receptor 3 - Hamilton Road	20.29	20.37	20.80	E2	Areas of low district brightness

Notes: ° = degrees; % - percentage

Construction related lighting is anticipated to be limited to the period of the cavern mining process which is estimated to last for 41 months during which there will be intermittent localized 24-hour construction activities. This would result in a temporary increase in perceivable light sources and light levels at viewing locations adjacent to the Project. It is anticipated that there will be a short-term impact to sky glow and light trespass.

The changes to light sources during Project operations will include new lighting of Project facilities for safety and security purposes. This will include a combination of pole mounted LED lighting and wall mounted fixture on buildings, as well as the application of best practices to minimize the effects of obtrusive exterior lighting (e.g., shielding light fixtures directed downward, scheduling controls).

Based on a review of the Project lighting design information, light levels are anticipated to increase by a minor amount. Typical new LEEDS certified building exterior lighting can account for a vertical and horizontal illuminance value no greater than 0.1 lux (15.1 as a sky glow measurement ³) at the property boundary. A recent study completed for the U.S. Department of Energy about the effect of luminescence of LED streetlights indicated they can increase sky glow between 0.2 and 1.6 times the baseline sky glow for nearby receptors (U.S. Department of Energy 2017). Conservatively using an increase of 1.6 times the measured skyglow light levels, the lowest (90° angle) sky glow measurement of 20.69 would decrease to 20.18 as a % brightness above natural dark sky⁴. This level would still be classified as an Environmental Lighting Zone designation of E2 representing an area of low district brightness.

The estimated light trespass would range from a difference of 0.10 to 1.27; the lower the difference, the less light trespass is indicated. A difference of 0.10 indicates little to no light trespass and a difference of 1.27 indicates a minimal degree of light trespass that could affect perceived light levels. It's expected that light trespass effects would most likely occur at locations adjacent the property boundary.

A comparison of existing sky glow levels to the predicted sky glow levels for the light receptors suggests that there will be a minor change to the existing level of sky glow due to Project-related lighting. The Environmental Lighting Zone for all light receptors are predicted to remain within the E2 classification. As such, lighting from Project

³ Luminance measurements in units of mag/arcsec² (magnitudes per square arcsecond), a logarithmic astronomical unit used commonly for measuring sky glow.

⁴ In relation to measurements for sky quality, the greater the value that darker the environment.

during operations will be a minor contributor to light levels and is not anticipated to change the overall existing light environment during night-time viewing.

5.13.3.5 Impact Significance

There are no federal, state, or locally designated scenic vistas identified in the Project assessment area. Therefore, scenic vistas would not be affected by the Project during construction and operation.

There are no eligible or designated scenic highways identified in the Project assessment area. The closest eligible scenic highway is more than 10 miles from the Project. Project components would not be discernible from state scenic highways and will not affect scenic resources during construction and operation.

As assessed in Section 5.13.3.4.1, visual impacts from KOPs are expected to range from a High to Negligible degree of effect. For views of residents where high sensitivity to visual change is anticipated, the rating of visual contrast of the Project predominately ranges from Moderate to Negligible; KOP1 experiencing more substantial visual impacts where the Project components will attract attention and be dominant features of the landscape setting. The majority of other KOP locations will experience more modest visual effects where the Project will result in a minor alteration to the existing landscape that does not change the existing landscape character for viewers. The overall visual impact ratings of the Project ranges from Low to Negligible at nearly all KOP locations and indicates that while visually evident to nearby viewers, the Project would not substantially degrade the existing visual character or quality of the landscape setting for most viewing locations. Therefore, Project effects on the existing visual character of the site and its surroundings would be less than significant.

The limited lighting required during Project construction will be temporary and short-term and is not expected to substantially effect nighttime viewing. The lighting required during Project operation would follow best practices to minimize obtrusive lighting effects while meeting requirements for safety and security. It's anticipated that Project-related light sources will be evident to nearby viewers but would not increase the overall perceived light levels, thereby maintaining current nighttime viewing conditions anticipated for a rural setting. While lighting required during Project operations would create new sources of light, Project effects from light and glare on day or nighttime views would be less than significant.

5.13.4 Cumulative Effects

The CEQA Guidelines (Section 15355) define cumulative impacts as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” (CEQA 2019). The assessment of cumulative effects measures and describes the effects of adding the incremental changes from the Project to the effects of past projects, and the predicted incremental change of current planned projects, and proposed future projects.

The landscape in the region surrounding the Project demonstrates evidence of past and present visible disturbances related to agriculture, industrial land uses (i.e., renewable energy production), transmission and transportation infrastructure, and rural residential development. The Project effects on the existing visual character are predicted to be a minor or partial alteration to the existing landscape that would not degrade the existing visual character. Moreover, there are no planned or proposed future projects within the Project assessment area that would create cumulative visual impacts in combination with the Project. As a result, the Project will not cause significant cumulative effects to visual resources.

5.13.5 Mitigation Measures

As no significant adverse impacts to visual resources were identified, no mitigation measures are necessary.

5.13.6 Laws, Ordinances, Regulations, and Standards

This section lists and discusses relevant laws, ordinances, regulations, and standards to understand the regional and local context for management of visual resource or lighting that apply to the Project assessment area.

Federal Policies and Regulations

No federal visual resource related laws, ordinances, regulations, and standards exist relevant to the Project assessment area.

State Policies and Regulations

California Environmental Quality Act

The CEQA requires an evaluation of scenic resources when considering project effects on the environment. In accordance with CEQA requirements (Appendix G and I), an evaluation also considers site-specific history, context, and area sensitivity, such as whether light and glare, demolition, and new development that potentially change visual character and affect scenic views and natural and manmade visual resources (CEQA 2019). CEQA guidance is also identified as it provides guidance for determination of significance for the Projects potential effects.

California Scenic Highways Program

The California Scenic Highways Program helps to preserve and protect scenic highway corridors of the State's highway system from change that would diminish the aesthetic value of lands adjacent to highways. The program identifies portions of the state highway system that require special conservation treatments through land use regulations, design guidelines, and site planning measures. This applies to highways that are either Eligible for designation as scenic highways or have been so Designated. Any project that may affect the scenic value of an identified scenic corridor is required to consider the provisions of the program.

Review of the California Scenic Highway Mapping System (Caltrans 2018) indicates there are no officially Eligible or Designated state scenic highway was identified within the Project assessment area. The closest Eligible state scenic highway is SR-14 extending from near the City of Mojave to the City of Barstow which is more than 10 miles from the Project. From this background viewing distance, the Project would not be evident within the landscape setting. Therefore, the Project is not required to consider the state scenic highway program.

Local Policies and Regulations

Kern County General Plan

The current Kern County General Plan (Kern County 2009) consists of goals and polices pertaining to a number of elements that guide the long-term outlook for development in Kern County.

The Land Use, Open Space, and Conservation Element, Section 1.10.7 Light and Glare focused on ensuring that light and glare from new development projects are minimized in urban and rural areas and encourages the use of low-glare lighting to minimize nighttime effects on neighboring properties. The implementation utilizes CEQA guidelines and the provisions of the Kern County Zoning Ordinance light and glare standards. The Project will comply with local ordinance for lighting and apply best practices to minimize the effects of obtrusive exterior lighting.

The Land Use, Open Space, and Conservation Element, Section 1.8 includes the policies related to visual character. Policy 6 encourages upgrading the visual character of existing industrial areas through the use of landscaping, screening, or buffering. Policy 7 require that industrial uses provide design features such as screen walls, landscaping, increased heights and/or setbacks, and lighting restrictions between the boundaries of adjacent residential land use designations so as to reduce impacts on residences.

The Circulation Element, Section 2.3.9 Scenic Route Corridors details that while the County's Scenic Highway Element was rescinded in 1992, Kern County has the discretion to designate local scenic routes if circumstances warrant such designation. No local scenic routes are designated in relation to the Project assessment area.

Kern County Code of Ordinance

The Kern County Zoning Ordinance implements the Kern County General Plan through regulations and specific standards on how land may be developed. Title 19 of the Kern County Code of Ordinance describes permitted uses and design standards within various zones of the County (Kern County 2021). This includes the following chapters that pertain to visual resources or lighting.

Chapter 19.74, Scenic Corridor Combining District establishes a Scenic Corridor Combining District intended to protect areas with unique visual and scenic resources from disturbance as viewed from major highways or freeways and to safeguard the scenic qualities of the natural environment of primary entranceways into the county. The Project site is not located in or near a designated Scenic Corridor.

Chapter 19.81, Dark Skies Ordinance (Outdoor Lighting) is established to maintain the natural dark skies of Kern County by requiring a minimal approach to outdoor lighting to avoid excessive illumination that may obscure the night sky and or may constitute a nuisance. The ordinance provides requirements for outdoor lighting within specified unincorporated areas of Kern County. The Project will comply with local ordinance for lighting including requirements for lighting plans, light fixtures, maintenance, and hours of operation.

Willow Springs Specific Plan

The Project is located within the Willow Springs Specific Plan area (Kern County 2008). The policies of the Willow Springs Specific Plan encourage the visual aesthetics of new commercial, industrial, and residential construction. Implementation measure for commercial development highlight the screening of outdoor storage of materials from public view.

5.13.7 Agencies and Agency Contacts

Agencies and contacts related to visual resources are provided in Table 5.13-7.

Table 5.13-7: Agency Contacts for Visual Resources

Issue	Agency	Contact
Visual Resources	Kern County Planning and Natural Resources Department	Lorelei H. Oviatt AICP, Director Phone: (661) 862-8600 Public Services Building 2700 "M" Street., Suite 100 Bakersfield, CA 93301-2370

5.13.8 Permits and Permit Schedule

There are no permits related to visual resources that are required to construct the Project. The CEC will work with the Kern County Planning Commission on review of the AFC to ensure compliance with Kern County land use policy and ordinance related to visual resources as well as, potential conditions (e.g., landscaping plan).

5.13.9 References

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USDI BLM. 2020. BLM National Data Web Map - Landscape Approach Data Portal. Available at: <https://www.landscape.blm.gov/geoportal/catalog/BLMNational/BLMNational.page>. Accessed July 2021