4.1 Aesthetics

This section examines visual resources in the area of the Ivanpah-Control Project to determine how the IC Project could affect the aesthetic character of the landscape. This section includes a description of existing visual conditions and an evaluation of potential visual impacts on aesthetic resources resulting from the construction, operation, and maintenance of the IC Project. The IC Project includes rebuilding, reconductoring, and replacing existing subtransmission facilities within and immediately adjacent to an existing utility right of way (ROW) between the existing Control Substation and the existing Ivanpah Substation located in Inyo, Kern, and San Bernardino counties in southeastern California.

Visual or aesthetic resources are generally defined as the natural and built features of the landscape that can be seen. Landforms, water, and vegetation patterns are among the natural landscape features that define an area's visual character, whereas buildings, roads and other structures reflect human modifications to the landscape. These natural and built landscape features are considered visual resources that contribute to the public's experience and appreciation of the environment. This section analyzes whether the Project would alter the perceived visual character of the environment and cause visual impacts.

The visual analysis is based on site reconnaissance and review of technical data including maps and drawings as well as review of aerial and ground level photographs of the Project area, review of public policy and planning documents, and computer-generated visual simulations that portray the project's appearance. Field observations were conducted in October 2017 to document existing visual conditions in the project vicinity, including potentially affected sensitive viewing locations.

Visual simulations were prepared to support the impact analysis and illustrate before-and-after visual conditions in the Project area as seen from 16 key sensitive public viewpoints or Key Observation Points (KOPs). The KOPs represent views where the project would be most visible to the public from sensitive locations such as designated scenic roadways, recreation facilities, areas in proximity to residences, or public land subject to scenic resource management policy.

This visual assessment employs methods based, in part, on those adopted by the U.S. Department of Interior Bureau of Land Management (BLM), the U.S. Forest Service (USFS), U.S. Department of Transportation (DOT) Federal Highway Administration (FHWA), and other accepted visual analysis techniques. The impact analysis describes change to existing visual resources, and assesses viewer response to that change. Central to this assessment is an evaluation of key views from which the project would be visible to the public. The visual impact assessment is based on evaluation of the project-related changes to the existing visual resources that would result from construction and operation of the project; the changes were assessed, in part, by evaluating views of the IC Project provided by the computer-generated visual simulations and comparing them to the existing visual environment. A description of the technical methods that were employed to prepare the visual simulations is included in Section 4.1.4.1 Visual Simulations and Visual Change.

4.1.1 Environmental Setting

4.1.1.1 Regional and Local Landscape Context

The IC Project Alignment is located in southeastern California, extending an overall length of approximately 358 miles through portions of Inyo, Kern and San Bernardino counties. Situated at the confluence of the Sierra Nevada, Great Basin Desert and Mojave Desert, this region is characterized by

abrupt changes in topography, with steep, relatively narrow mountain chains separated by flat alluvial basins. Figures 4.1-1a and b show the IC Project Alignment within the regional landscape context.

The northern portion of the IC Project Alignment passes through the Owens Valley, an approximately 77 mile-long, five to ten-mile wide high desert river basin that stretches from the Volcanic Tablelands near Bishop in the north to Owens Lake in the south. Visible against the backdrop of the eastern fault scarp of the Sierra Nevada to the west, the White Mountains, Inyo Mountains to the east and Coso Range to the southeast, this part of the IC Project Alignment consists of alluvial plains, punctuated by ancient lava fields and thermal hot springs, and includes riparian areas associated with the Owens River and adjacent thermal springs, as well as dry lakebeds or playas with arid expanses largely devoid of vegetation. South of the Owens Valley the IC Project Alignment enters the more open, increasingly arid landscape of the Mojave Desert, an approximately 47,900 square-mile area bounded on the west by the southern Sierra Nevada and Tehachapi Mountains, on the southwest by Southern California's Transverse Range and to the east by the lower Colorado River valley, and featuring broad shallow playas interspersed with isolated mountainous outcrops.

Reflecting the arid desert climate, relatively sparse, low-growing scrub vegetation with its characteristic grey-green color is found throughout the region, affording open views across the landscape. Limited areas of irrigated cropland can be found in the vicinity of the Owens River and Indian Wells Valley at the north of the IC Project Alignment, and in the vicinity of Barstow in the Mojave River valley to the south. Features in this landscape also include rugged terrain with large areas of exposed, multicolored rock and flat expanses of reflective alluvial deposits.

Elevations along the IC Project Alignment range from approximately 4,800 feet above sea level in the northern Owens Valley to approximately 3,500 feet above sea level at Owens Lake at the southern end of the valley, while surrounding mountain peaks reach up to 14,000 feet above sea level on either side of the valley. South and east of the Owens Valley elevations along the IC Project Alignment range from approximately 2,450 feet above sea level at Inyokern, within Indian Wells Valley, to as low as approximately 930 feet near the town of Baker east of Barstow. The IC Project Alignment reaches its highest elevation of approximately 5,390 feet above sea level near the eastern terminus of the IC Project Alignment, in the Clark Mountains.

The majority of the IC Project Alignment consists of undeveloped open space and is sparsely populated. Residential areas are concentrated in widely scattered population centers, located primarily in the northern and western portion of the IC Project Alignment in close proximity to the major transportation corridors bisecting the region. From its northern terminus southwest of Bishop south to Kramer Junction the IC Project Alignment generally parallels U.S. Highway 395 (US 395), the main north-south transportation artery through the region. This all-season highway provides access to the region's diverse, natural landscape scenery within the Owens Valley and the surrounding mountains, attracting visitors that include hikers, campers and winter recreational visitors. The resident population within the Owens Valley and areas to the south is highly localized along this highway corridor, and include the communities of Big Pine, Independence and Lone Pine. Smaller, scattered residential areas further south along the US 395 corridor include Olancha and the nearby community of Cartago at the southern edge of Owens Lake, the area around Inyokern, within Indian Wells Valley, and the mining town of Randsburg.

East of Kramer Junction, from Barstow to the IC Project Alignment's eastern terminus in the Ivanpah Valley, the alignment closely parallels Interstate 15 (I-15), which constitutes the main east-west transportation link between Los Angeles and Las Vegas. Barstow and the surrounding Mojave Valley functions as a major highway and railroad hub where several regional highways converge, including I-15,

I-40 and SR-58 and represents the largest concentration of population in the Project area. The I-15 corridor east of Barstow is for the most part sparsely inhabited, with residents generally limited to widely scattered service locales along the interstate including Yermo and Baker. Within those portions of the IC Project Alignment removed from the major transportation arteries, access within the region is limited to widely dispersed secondary roadways such as SR-190 in the Owens Valley, SR-178 within Indian Wells Valley, and SR-127 east of Barstow. A network of unpaved roadways, generally restricted to OHV use, provides additional access within the IC Project Alignment vicinity.

Approximately half of the IC Project Alignment crosses federal land administered by the Bureau of Land Management (BLM). In addition, the alignment passes in close proximity to the Mojave National Preserve, the Mojave Trails National Monument, and is located on U.S. Air Force, Marine Corps, and Navy facilities.

The IC Project Alignment's landscape setting is comprised of diverse natural scenery as well as a variety of built features that include infrastructure associated with regional highway, electrical utility and railway corridors. Established utility elements include lattice structures and wood utility poles supporting distribution and other overhead power lines, telecommunication towers, and substations. In addition, lattice structures supporting several non-IC Project transmission lines pass through the area and cross or closely parallel the IC Project Alignment along much of its route.

4.1.1.2 Project Viewshed

A project viewshed is defined as the general area from which a project is visible. For purposes of describing a project's visual setting and assessing potential visual impacts, the viewshed can be broken down into foreground, middleground, and background zones. The foreground is defined as the zone within 0.25 to 0.5 mile from the viewer. The middleground is defined as the zone extending from the foreground to a maximum of 3 to 5 miles from the viewer; and the background zone extends from the middleground to infinity (USFS 1995).

Viewing distance is a key factor that affects the potential degree of project visibility. Visual details generally become apparent to the viewer when they are observed in the foreground, at a distance of 0.25 to 0.5 mile or less. Analysis of the IC Project primarily considers the potential effects of project elements on foreground viewshed conditions although consideration is also given to the potential effects on the middleground and background views.

4.1.1.3 Landscape Units and Representative Views

Five Landscape Units corresponding to the five Segments of the IC Project are defined to geographically-segment the IC Project Alignment; these Landscape Units or subareas are based upon the physical and cultural landscape characteristics found along the IC Project Alignment. Table 4.1-1 summarizes the Landscape Units in terms of their location and approximate length. Figures 4.1-1a and 4.1-1b depict the location of Landscape Units in relationship to the project alignment and photograph viewpoints.

Table 4.1-1: Summary of Landscape Units

Landscape Unit / IC Project Segment	Location (County)	Approximate Length
1: Control Substation to Inyokern Substation / Segment 1	Inyo, Kern	126 miles
2: Inyokern Substation to Kramer Substation / Segment 2	Kern, San Bernardino	48 miles
3: Kramer Substation to Coolwater Substation / Segment 3N	San Bernardino	44 miles
4: Kramer Substation to Coolwater Substation / Segment 3S	San Bernardino	44 miles
5: Coolwater Substation to Ivanpah Substation / Segment 4	San Bernardino	96 miles

Figures 4.1-2a through 4.1-2y present a set of 50 photographs taken from representative locations along the IC Project Alignment, within the Project viewshed. Table 4.1-2, a summary of this set of representative photographs, includes information on the viewpoint location, primary type of viewers, backdrop conditions, and approximate viewing distance to the IC Project Alignment. In addition, Table 4.1-2 also highlights a subset of the photographs that are KOPs. Taken together, these photographs convey a general sense of the existing visual character of the landscape within the vicinity of the IC Project Alignment. The set of photographs also demonstrates that existing transmission, subtransmission and distribution facilities within the IC Project Alignment viewshed, including those of the IC Project, are established elements of the visual setting of the area.

Table 4.1-2: Summary of Representative and KOP Photographs

Photograph Number and Location * denotes KOP	**Primary Viewers**	**Viewing Distance**	**Predominant Backdrop for Project Structures**
LANDSCAPE UNIT 1 (Segment 1)			
1. SR-168 near Control Substation	Recreational Motorists Local Motorists	0.5 mile	Landscape
2. Sunland Lane south of Bishop	Residents	500 feet	Sky
*3. Gerkin Road south of Bishop	Residents	600 feet	Sky
4. US 395 north of Big Pine at Big Pine Canal	Regional Motorists	650 feet	Landscape and Sky
*5. Baker Creek Campground, Big Pine	Recreationalists	500 feet	Landscape and Sky
6. Cornell Street near Rossi Lane, Big Pine	Residents	< 500 feet	Landscape
7. US 395 near Tinemaha Reservoir	Regional Motorists	1,000 feet	Landscape
8. Division Creek Roadside Rest Area	Regional Motorists	> 2 miles	Landscape
9. Manzanar Historic Site	Recreationalists	1 mile	Landscape
*10. US 395 crossing north of Lone Pine	Regional Motorists	500 feet	Sky and Landscape
11. Goodwin Road in Lone Pine Paiute-Shoshone Reservation	Residents	0.5 mile	Landscape
12. Boulder Creek RV Resort, south of Lone Pine	Residents Recreationalists	0.5 mile	Landscape
13. Owens Lake visitor information center east of US 395/ Lubken Canyon Road Junction	Recreationalists	1,000 feet	Landscape
*14. US 395 crossing near Owens Lake	Regional Motorists	< 500 feet	Sky
*15. Whitney Street near Mojave Street Cartago	Residents	1,100 feet	Landscape
*16. SR-190 crossing near Olancha	Regional Motorists	< 500 feet	Landscape
17. Fall Road, Olancha	Residents	600 feet	Landscape
18. North Haiwee Road near Haiwee Reservoir	Recreational Motorists Recreationalists	< 500 feet	Sky
19. Coso Junction Safety Roadside Rest Area	Regional Motorists	0.45 miles	Landscape
*20. Fossil Falls Campground and Trail	Recreationalists Recreational Motorists	1,800 feet	Landscape
21. US 395 at Little Lake	Regional Motorists	1,000 feet	Landscape and Sky
22. BLM OHV Road SE109	Recreational motorists	500 feet	Sky
*23. Patrice Avenue, Inyokern	Residents	< 500 feet	Sky
24. SR-178 looking toward Inyokern Substation	Regional Motorists	1,200 feet	Landscape
LANDSCAPE UNIT 2 (Segment 2)			
*25. Sydnor Avenue at Mercury Street, Inyokern	Residents	800 feet	Sky
26. US 395 near Inyokern	Local and Regional Motorists	500 feet	Landscape and Sky
27. Garlock Road	Local and Regional Motorists	1,000 feet	Landscape
*28. Lexington Avenue Randsburg	Residents Local motorists	< 500 feet	Sky and Landscape
29. Fremont Peak Road at US 395	Regional motorists Recreationalists	500 feet	Sky

Table 4.1-2: Summary of Representative and KOP Photographs

Photograph Number and Location * denotes KOP	Primary Viewers	Viewing Distance	Predominant Backdrop for Project Structures
LANDSCAPE UNIT 3 (Segment 3N)			
30. US 395 near Kramer Junction	Regional motorists	500 feet	Sky
31. US 395 at Kramer Junction	Regional motorists	500 feet	Sky
32. Harper Dry Lake Wildlife Viewing Area	Recreationalists	1.0 mile	Sky
33. Holstead Road near Hinkley Road	Residents Local motorists	600 feet	Landscape and Sky
34. Daggett-Yermo Road near Silver Valley High School	Regional motorists	1,100 feet	Landscape
LANDSCAPE UNIT 4 (Segment 3S)			
35. SR-58 near Barstow	Regional motorists	600 feet	Landscape
36. Bonanza Road near H Street, Barstow	Residents Local motorists	< 500 feet	Sky
37. SR-247 near Barstow	Regional motorists Recreational motorists	800 feet	Sky
*38. I-40 near Daggett	Regional motorists	500 feet	Landscape and Sky
39. Route 66-National Trails Highway near Daggett	Regional Motorists	650 feet	Landscape and Sky
LANDSCAPE UNIT 5 (Segment 4)			
40. Carol Ann Drive at Crystal Lakes Estates east of Barstow	Residents Local motorists	700 feet	Sky
41. I-15 near Field Road	Regional motorists	650 feet	Sky
42. Clyde V. Kane Safety Roadside Rest Area on I-15	Regional motorists at roadside rest area	600 feet	Sky
43. Afton Canyon Road	Recreationalists	500 feet	Landscape and Sky
44. I-15 near Basin Road	Regional motorists	700 feet	Landscape
*45. SR-127 at Junior High School, Baker	Regional and local motorists School visitors	900 feet	Sky
46. Halloran Springs Wash near Halloran Springs Road	Recreationalists	1,500 feet	Landscape
47. I-15 west of Halloran Summit Road	Regional motorists	800 feet	Landscape
48. Valley Wells Safety Roadside Rest Area on I-15 near Cima Road	Regional motorists at roadside rest area	0.5 mile	Landscape
49. Excelsior Mine Road	Recreationalists	1,200 feet	Sky
50. Clark Mountain Road near Mojave Preserve	Recreationalists	800 feet	Landscape

4.1.1.3.1 Landscape Unit 1 (Photographs 1 through 24)

From the northern IC Project Alignment's terminus at Control Substation, Landscape Unit 1 extends approximately 126 miles, traversing the length of the Owens Valley and continuing through Rose Valley to Inyokern Substation in Indian Wells Valley to the south. From Control Substation, situated approximately 5 miles southwest of Bishop, the IC Project Alignment heads in a southeasterly direction across an open, gently sloping high desert landscape, passing near several isolated residential developments nestled against the adjacent eastern Sierra foothills. Approximately 9 miles south of Bishop, the IC Project Alignment passes within less than 100 feet of the US 395 corridor, and then generally parallels this four-lane highway at varying distances from the roadway, crossing it multiple times as it runs through the valley. The IC Project Alignment is in close proximity to tribal land and other residential communities as it passes the western and eastern periphery of Big Pine and Lone Pine. The IC Project Alignment then skirts the western edge of the Owens Lake Basin, where it crosses US 395 once again, passing to the east of the historic highway towns of Cartago and Olancha, and the Cartago Wildlife

Area. After crossing SR-190 at the south end of the basin, the IC Project Alignment enters federal land managed by the BLM at the edge of the Coso Range Wilderness. The IC Project Alignment passes approximately 700 feet west of Haiwee Reservoir, a series of open water storage facilities, and also passes Haiwee Substation and Coso Substation, subsequently entering a largely uninhabited alluvial basin, approximately 8 miles south of the reservoir. Continuing along the east side of US 395, the IC Project Alignment runs alongside a series of volcanic escarpments for approximately 10 miles, before crossing into Kern County where it enters the China Lake basin and Indian Wells Valley within the western boundary of the China Lake Naval Air Weapons Station and terminating at the Inyokern Substation at the northern edge of the Mojave Desert.

Photographs 1 through 24 show representative views of the IC Project Alignment and surrounding landscape character found within Landscape Unit 1. Eight of these views are KOPs selected to show the IC Project as seen from sensitive locations including viewpoints near the communities of Bishop, Big Pine, Olancha, Cartago, and Inyokern, as well as US 395, SR-190, and the Fossil Falls BLM recreation site (refer to Figures 4.1-1a through d and Figures 4.1-2a through y). Appendix E includes a detailed description of each representative photograph.

4.1.1.3.2 Landscape Unit 2 (Photographs 25 through 29)

Landscape Unit 2 extends approximately 48 miles south, from Inyokern Substation to Kramer Substation, which is located at the junction of US 395 and SR-58. From Inyokern Substation, the IC Project Alignment traverses the southern portion of Indian Wells Valley, crossing US 395 approximately 0.75 mile from the substation, and passing an area of widely-dispersed residences around the unincorporated community of Inyokern. The IC Project Alignment enters federal land administered by the BLM at the south end of Indian Wells Valley, and traverses the El Paso Mountains where it reaches an elevation of approximately 4,500 feet above sea level. After descending into a comparatively narrow desert basin and crossing Garlock Road, a local roadway connecting US 395 to SR-14 on the west, the IC Project Alignment enters the Rand Mountains, where it skirts the historic mining community of Randsburg. Descending into the generally flat expanse of the western Mojave Desert southeast of Randsburg, the IC Project Alignment crosses into San Bernardino County. For approximately the next 18 miles it closely parallels US 395, passing in and out of BLM-administered land before crossing a railroad corridor approximately 0.75 mile north of Kramer Junction. Landscape Unit 2 terminates at Kramer Substation.

Photographs 25 through 29 show representative existing views of the IC Project Alignment and surrounding landscape character found within Landscape Unit 2. Two of the views are KOPs selected to show the IC Project as seen from locations near residences in Inyokern and Randsburg (refer to Figures 4.1-1a through d and Figures 4.1-2a through y and Appendix E).

4.1.1.3.3 Landscape Unit 3 (Photographs 30 through 34)

At Kramer Junction, the IC Project Alignment turns in an easterly direction, and divides into two separate alignments that extend north and south of SR-58 for approximately 44 miles before merging at Coolwater Substation, located approximately 9.5 miles southeast of Barstow. From Kramer Substation the northern extension, identified as Landscape Unit 3, parallels US 395 for approximately 0.5 mile before turning east and paralleling SR-58 approximately 0.4 mile north of the highway for approximately 2.8 miles, at which point the roadway veers to the southeast and the IC Project Alignment continues in an easterly direction, passing in close proximity to a large solar photovoltaic facility and skirting the south edge of Harper Dry Lake, a mostly arid playa with a seasonal wetland that includes a wildlife viewing area. At the eastern edge of Harper Dry Lake, the IC Project Alignment passes within a few hundred feet of several isolated rural residences, north of the town of Hinkley, as it traverses an otherwise unpopulated desert basin.

Crossing land under BLM jurisdiction approximately 8 miles east of Harper Dry Lake, the IC Project Alignment turns to the southeast, traversing and subsequently paralleling the northern edge of a series of granitic outcrops that extend north and east of Barstow. Entering the Mojave River Valley, the IC Project Alignment veers south, crossing Interstate 15 (I-15) where it passes in close proximity to a school and RV park west of the community of Yermo before reaching Coolwater Substation, within a somewhat populated and developed area approximately 8 miles east of central Barstow.

Photographs 30 through 34 are representative existing views of the IC Project Alignment and surrounding landscape character found within Landscape Unit 3 (refer to Figures 4.1-1a through d and Figures 4.1-2a through y and Appendix E).

4.1.1.3.4 Landscape Unit 4 (Photographs 35 through 39)

Landscape Unit 4 is the southern segment of the split alignment between Kramer Substation and Coolwater Substation. Landscape Unit 4 extends southeast from Kramer Substation for approximately 10 miles, then east for approximately 9 miles as it passes the uninhabited southern edge of the Harper Dry Lake basin south of SR-58. Approximately 7 miles west of Barstow, the IC Project Alignment enters Hinkley Valley, where it crosses an area of widely scattered rural residences and agricultural land located within the Mojave River floodplain. The IC Project Alignment parallels and subsequently crosses the Mojave River as it approaches Barstow's western outskirts, where it veers to the southeast, and within a distance of less than a mile the IC Project Alignment crosses SR-58, the National Trails Highway (historic Route 66), and I-15 before turning east once again. Skirting Barstow's southern perimeter, the IC Project Alignment traverses a residential subdivision, then crosses open desert, where it passes within 0.3 mile of a public park and recreation area, and crosses SR-247 at the northern edge of a BLM-administered OHV area. For approximately the next 8.5 miles the IC Project Alignment traverses a largely uninhabited expanse of gently sloping terrain along the southern edge of the Mojave River Valley, crossing I-40 and the National Trails Highway less than a mile from Coolwater Substation, the end of this Landscape Unit.

Photographs 35 through 39 show representative existing views of the IC Project Alignment and surrounding landscape found within Landscape Unit 4. One KOP simulation view shows the IC Project from a viewpoint from I-40, an eligible State Scenic Highway and San Bernardino County scenic route (refer to Figures 4.1-1a through d and Figures 4.1-2a through y and Appendix E).

4.1.1.3.5 Landscape Unit 5 (Photographs 40 through 50)

From Coolwater Substation, Landscape Unit 5 extends in a northeasterly direction for approximately 96 miles, largely following the I-15 corridor to the Project's terminus at Ivanpah Substation. In this Landscape Unit the IC Project Alignment initially heads north as it crosses the Mojave River and the adjacent Union Pacific railroad before turning to the northeast where it follows the northern edge of the lower Mojave River basin, a flat expanse of open desert terrain with irrigated cropland parcels and widely scattered rural homesteads. Within this area the IC Project Alignment passes in close proximity to several small residential developments northeast of the unincorporated community of Yermo and also crosses BLM-administered land at several locations. The IC Project Alignment then continues northeast, traversing a predominantly-uninhabited landscape comprised of narrow mountainous outcrops separating isolated dry lake basins or playas. The IC Project Alignment crosses I-15 at several locations in this area and also passes the northern edge of the Mojave Trails National Monument near Afton Canyon, a recreation area managed by the BLM. It subsequently skirts the northern boundary of the Mojave National Preserve and the unincorporated desert community of Baker, where the IC Project Alignment crosses SR-127, the principal southern access into Death Valley National Park. After traversing the Clark Mountain range, where surrounding peaks reach approximately 8,000 feet above sea level, the IC Project

Alignment makes a steep descent into Ivanpah Valley, where it passes alongside solar thermal and photovoltaic power generating facilities before terminating at Ivanpah Substation.

Photographs 40 through 50 show representative views of the IC Project Alignment and surrounding landscape character found within Landscape Unit 5 (refer to Figures 4.1-1a through d and Figures 4.1-2a through y). One of the views is a KOP selected to show the IC Project as seen from an eligible State Scenic Highway and San Bernardino County scenic route where the IC Project Alignment is in proximity to a public school in the community of Baker (Figures 4.1-2t, -2u, and -2w). Appendix E includes detailed descriptions of the representative photographs.

4.1.1.4 Potentially Affected Viewers

Accepted visual assessment methods, including those adopted by the BLM and other federal agencies, establish sensitivity levels as a measure of public concern for changes to scenic quality. Viewer sensitivity, one of the criteria used to evaluate visual impact significance, can be divided into high, moderate, and low categories. Factors considered in assigning a sensitivity level include viewer activity, view duration, viewing distance, adjacent land use, and special management or planning designation. Visual sensitivity would vary with the type of users. (BLM 1984) The primary viewer groups within the Project viewshed are described below.

4.1.1.4.1 Motorists

Motorists or roadway travelers are the largest viewer group along the IC Project Alignment. Included in this group are motorists traveling on the region's network of frequently used paved roadways with views of the IC Project Alignment. In Landscape Unit 1 the IC Project Alignment parallels US 395 and crosses the highway four times between Bishop and Inyokern; between Bishop and Big Pine the IC Project Alignment runs parallel to SR-168; and the IC Project Alignment crosses SR-190. Less heavily used roadways in the vicinity include SR-136, which connects to SR-190 from US 395 south of Lone Pine, and Gherkin Road, crossed and paralleled by the IC Project Alignment, and used by residents south of Bishop.

The IC Project Alignment parallels US 395 for most of Landscape Unit 2, and both Landscape Units 3 and 4 include crossings of I-15. In Landscape Unit 4 the IC Project Alignment crosses SR-58 and SR-247 near Barstow, and to the east crosses and parallels both I-40 and Route 66. In Barstow, the IC Project Alignment also follows and crosses various residential streets. Within Landscape Unit 5 the IC Project Alignment largely follows I-15, running both parallel and crossing it, and also crosses SR-127 at the town of Baker.

Motorists include both local and regional travelers who are familiar with the visual setting. Local travelers include those commuting to or residents of communities in the area, as well as drivers of commercial vehicles. Regional motorists include long distance truck drivers, and recreational visitors to the area as noted below. Depending upon the travel route and type of roadway, the duration of motorists' views is generally brief and could range from a few seconds to up to several minutes. Local and regional traveler viewer sensitivity is considered low to moderate.

4.1.1.4.2 Recreationalists

Recreationalists, including visitors to the Inyo National Forest, Mojave National Preserve, Mojave Trails National Monument, and BLM lands, constitute another important viewer group. Recreational motorists are considered part of the recreationalist viewer group. Activities include sightseeing, on- and off-road vehicle touring, hiking, bird watching, wildlife viewing, photography, stargazing, camping, horseback riding, running, bicycling, and backpacking. Off-road vehicle users include those using unpaved BLM

off-highway vehicle (OHV) recreation routes within the Coso Range Wilderness, Olancha Dunes OHV Area, Stoddard Valley OHV Area, as well as other OHV routes located on BLM-administered land. Although the total duration of views for much of this viewer group tends to be short, the general expectation of a natural-appearing landscape setting among some recreationalists raises the sensitivity to moderate to high.

4.1.1.4.3 Residents

As outlined above, most of the area along the IC Project Alignment is sparsely inhabited. Within Landscape Unit 1, residential populations are primarily concentrated in and immediately around Bishop, Big Pine and Lone Pine within the Owens Valley. Where residences border the IC Project Alignment, including at the western edge of Big Pine, the town of Cartago, and within Indian Wells Valley north of Inyokern, residential viewers experience close-range views of existing subtransmission infrastructure. Landscape Unit 2 includes scattered residences in close proximity to the IC Project Alignment south of Inyokern and residences in the community of Randsburg. In Landscape Unit 3 the IC Project Alignment passes near the community of Daggett and several residences in the valley near Harper Dry Lake. In Landscape Unit 4 the IC Project Alignment passes near residences west of Barstow and also crosses a residential area within the city of Barstow; in both cases close-range residential views of existing subtransmission infrastructure are available. Within Landscape Unit 5, a few small residential developments situated along I-15 east of Barstow and residences on the north side of the town of Baker are located in proximity to the IC Project Alignment. Residential views tend to be long in duration, and the sensitivity of this viewer group is considered moderate to high.

4.1.1.5 Scenic Resources

Scenic resources are those natural and built landscape patterns and features that are considered visually or aesthetically pleasing, and therefore contribute positively to the definition of a distinct community or region. Scenic resources may include trees or other important vegetation; landform elements, such as hills or mountains, ridgelines or rock outcroppings; water features, such as rivers, bays, or reservoirs; and landmarks, important buildings, or historic sites and structures.

As described in Section 4.1.1.1, dominant features of the landscape and scenic resources that are visible from many locations within the northern Project area include the Owens Valley, Eastern Sierra Escarpment, White Mountains, Owens Lake, and the Coso Volcanic Range to the south. East of Barstow the Mojave National Preserve and Mojave Trails National Monument are also scenic resources. In addition, built features such as the Manzanar National Historic Site and Rand Mining District State Historical Landmark, are scenic resources.

Various public roadways are recognized for providing visual access to scenic resources in the vicinity of the IC Project Alignment. Scenic roadways are listed in Table 4.1-3 and shown on Figures 4.1-1a and 4.1-1b. In the Owens Valley near its northern terminus at Control Substation, the IC Project Alignment can be seen from SR-168 where this roadway is a designated State Scenic Highway. South of Bishop, the IC Project Alignment parallels and crosses US 395 at several locations where this roadway is a designated State Scenic Highway, and crosses and parallels this highway where it is an eligible State Scenic Highway. US 395 is part of the Eastern Sierra Scenic Byway, designated by the Coalition for Unified Recreation in the Eastern Sierra, a coalition partnership of public agencies and recreation providers. Near Owens Lake, the IC Project Alignment crosses SR-190, an eligible State Scenic Highway. Near Kramer Substation and again immediately west of Barstow, the IC Project Alignment crosses SR-58, an eligible State Scenic Highway. To the south and east of Barstow, the IC Project Alignment crosses SR-247, I-40, and SR-127, also eligible State Scenic Highways and county scenic routes. The IC Project Alignment also

parallels and crosses I-15 where it is an eligible State Scenic Highway and county scenic route, and Route 66, a National Trails Highway and county scenic route.

Additionally, approximately 172 miles of the IC Project Alignment cross BLM-administered land. Section 4.1.2, Regulatory Setting, and Table 4.1-5 provide additional information regarding BLM-administered land and scenic resources management of this area. Figures 4.1-1c and -1d show BLM visual management classifications in the vicinity of the IC Project Alignment.

Table 4.1-3: Summary of Scenic Roadways

Roadway Location	Designation	Relationship to IC Project Alignment	Representative Photograph and Viewpoint Number (Figures 4.1-1 and 4.1-2)
SR-168 West of US 395	Designated State Scenic Highway	Near Control Substation	1
SR-168 East of and co-located with US 395	Eligible State Scenic Highway	Alignment runs parallel	4
US 395 Inyo County	Designated State Scenic Highway	Alignment crosses and runs parallel	7,8
US 395 Kern/Inyo County	Eligible State Scenic Highway; Eastern Sierra Scenic Byway	Alignment crosses and runs parallel	9, 10, 14, 19, 21
SR-190 Inyo County	Eligible State Scenic Highway; Eastern Sierra Scenic Byway	Alignment crosses	16
SR-58 Kern/San Bernardino County	Eligible State Scenic Highway; County Scenic Route	Alignment crosses	35
SR-247 San Bernardino County	Eligible State Scenic Highway County Scenic Route	Alignment crosses	37
I-40 San Bernardino County	Eligible State Scenic Highway County Scenic Route	Alignment crosses	38
Route 66 San Bernardino County	National Trails Highway; County Scenic Route	Alignment crosses	39
I-15 San Bernardino County	Eligible State Scenic Highway; County Scenic Route	Alignment crosses and runs parallel	41, 42, 44
SR-127 San Bernardino County	Eligible State Scenic Highway; County Scenic Route	Alignment crosses	45
Cima Road San Bernardino County	County Scenic Route	0.75 mile away; Alignment visibility is minimal	Not needed due to viewing distance
Kelbaker Road San Bernardino County	County Scenic Route	1.0 mile away; Alignment visibility is minimal	Not needed due to viewing distance

4.1.2 Regulatory Setting

Federal, state, and local regulations were reviewed for applicability to the IC Project.

4.1.2.1 Federal

4.1.2.1.1 Federal Land Policy and Management Act of 1976

The Federal Land Policy and Management Act of 1976 (FLPMA) (43 United States Code [U.S.C.] 1701) and the U.S. Department of the Interior's (DOI) Bureau of Land Management (BLM) Land Use Planning Handbook (BLM 2005) both emphasize the importance of protecting the quality of scenic resources on public lands. FLPMA sections relevant to the IC Project are:

Section 102(a): "The public lands [shall] be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archaeological values."

Section 103(c): Identifies "scenic values" as resources for public management. Section 201(a): "The Secretary shall prepare and maintain on a continuing basis and inventory of all public lands and their resources and other values (including...scenic values)."

Section 505(a): "Each right-of-way shall contain terms and conditions which will...minimize damage to the scenic and esthetic values."

FLPMA's legal mandate to protect the quality of scenic resources on public lands is carried out by BLM and detailed in BLM's Visual Resource Management (VRM) system, described below.

4.1.2.1.2 US Department of Interior, Bureau of Land Management (BLM)

The Federal Land Policy and Management Act of 1976 requires BLM to protect the quality of scenic values on public lands (43 U.S.C. 1701). To this end, BLM has developed the Visual Resource Management (VRM) system to identify and maintain scenic values and visual quality. Under this system, BLM-administered lands are inventoried, analyzed, and assigned visual ratings or Management Classes. Class designations are derived from an analysis of scenic quality (rated by landform, vegetation, water, color, influence of adjacent scenery, scarcity, and cultural modification), a determination of viewer sensitivity levels (sensitivity of people to changes in the landscape), and distance zones. Management Classes describe the different degrees of modification allowed to the basic elements of the landscape (form, line, color, texture). Management classes and their corresponding goals are defined in Table 4.1-4 and discussed below.

Table 4.1-4: BLM Visual Management Classes and Goals

Management Class	Goals
Class I	To preserve the existing character of the landscape. The level of change to the characteristic landscape should be very low and must not attract attention.
Class II	To retain the existing character of the landscape. The level of change to the characteristic landscape should be low.
Class III	To partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate.
Class IV	To provide for management activities that require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high.

Source: BLM

Approximately 170 miles of the IC Project Alignment cross BLM-administered land. Table 4.1-5 shows the number of miles crossed by each Segment. As indicated on Figures 4.1-1c and d, the majority of this land is designated as VRM Classes III and IV. In Landscape Unit 1 south of Big Pine, approximately 4 miles of the IC Project Alignment crosses BLM-administered land that is VRM Class II, where management goals allow for a low level of change to existing landscape character, and any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape. In Class II areas, management activities may be seen, but should not attract the attention of the casual observer.

Table 4.1-5: BLM Land Crossed by IC Project Alignment

Landscape Unit / Project Segment	Number of Miles Crossed by IC Project Alignment				
	Total	VRM Class I	VRM Class II	VRM Class III	VRM Class IV
1 / 1	37.9	0	4.1	24.8	9
2 / 2	27.3	0	0	27.3	0
3 / 3N	21.9	0	0	0.2	21.7
4 / 3S	19.2	0	0	3.8	15.4
5 / 4	63.8	0	0	62	1.8
Total	170.1	0	4.1	118.1	47.9

4.1.2.1.3 BLM Desert Renewable Energy Conservation Plan (DRECP) Record of Decision

Covering more than 20 million acres in seven California counties including Imperial, Inyo, Kern, Los Angeles, Riverside, San Bernardino, and San Diego County, the DRECP was developed as an interagency plan by the BLM, the U.S. Fish and Wildlife Service (USFWS), the California Energy Commission (CEC), and the California Department of Fish and Wildlife. The BLM manages approximately 10 million acres of the 22.5 million acres covered in the overall Plan area.

The DRECP landscape-scale planning effort was undertaken to achieve two sets of overarching goals. The first is Renewable Energy. To address these goals, the plan identifies specific development focus areas with high- quality renewable energy potential and access to transmission in areas where environmental impacts can be managed and mitigated. The second overarching goal concerns Conservation. The plan specifies species, ecosystem and climate adaptation requirements for desert wildlife, as well as the protection of recreation, cultural, visual, and other desert resources. Through the DRECP Record of Decision (ROD) an approved Land Use Plan Amendment (LUPA) establishes a policy framework for BLM-managed land, including management and conservation of visual resources. With the exception of a small area in the northern portion of Landscape Unit 1, all BLM-administered land crossed by the IC Project Alignment is within the area governed by the DRECP ROD. Two maps showing the IC Project Alignment with VRM classes on BLM-administered are included as Figures 4.1-1c and -1d.

4.1.2.1.4 BLM Bishop Resource Management Plan Record of Decision

A limited part of Segment 1 crosses BLM-administered land that lies outside the area governed by the DRECP. A portion of this area is located in the Bishop Resource Management Plan Management Area 7, which includes BLM-managed land in the Owens Valley between Bishop and Lone Pine, while another part is in Management Area 9, an area near Owens Lake that the BLM manages to protect and enhance wildlife habitat. The Bishop Resource Management Plan (RMP) provides guidance for visual resources management in these areas. Area-wide visual resources policies of the Bishop RMP Record of Decision (1993) require use of non-specular wire for all power lines, and also calls for managing all activities to conform with Visual Resource Management (VRM) standards, stating that enforcement emphasis for

Visual Resource Management (VRM) classes 2 - 4 will be along key observation points. Outside key observation points, the Bureau will apply designated VRM class prescriptions but the Area Manager may allow development to exceed the VRM class for reasons such as technological infeasibility or low visitor use.

4.1.2.1.5 Best Management Practice for Reducing Visual Impacts of Renewable Energy Facilities on BLM-Administered Lands

Bureau of Land Management guidance is provided in this document in the form of 122 best management practices (BMPs) to avoid or reduce potential visual impacts associated with the siting, design, construction, operation, and decommissioning of utility-scale renewable energy generation facilities, including wind, solar, and geothermal facilities as well as ancillary components, such as electric transmission structures and access. (BLM 2013) Selection of structure types and selection of appropriate materials surface treatments are among the pertinent BMPs outlined in this document to minimize potential visual effects and contrast associated with transmission facilities.

4.1.2.2 State

4.1.2.2.1 California Department of Transportation: Scenic Highway Program

The State Scenic Highway Program—a provision of Sections 260 through 263 of the Streets and Highways Code—was established by the Legislature in 1963 to preserve and enhance the natural beauty of California. The State Scenic Highway System includes highways that are either eligible for designation as scenic highways or have been designated as such. The status of a State Scenic Highway changes from "eligible" to "officially designated" when the local jurisdiction adopts a scenic corridor protection program, applies to the California Department of Transportation (Caltrans) for scenic highway approval, and receives the designation from Caltrans. A city or county may propose adding routes with outstanding scenic elements to the list of eligible highways. However, State legislation is required.

State Scenic Highways are listed on Table 4.1-3 and shown on Figures 4.1-1a and 4.1-1b.

4.1.2.2.2 California State Parks Office of Historic Preservation (OHP) California Landmarks and Points of Historic Interest

The OHP is responsible for administering federally and state mandated historic preservation programs to further the identification, evaluation, registration, and protection of California's historic resources including California Historic Landmarks and Points of Historic Interest. These resources are buildings, sites, features, or events that are of statewide significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other historical value. Description of the Project's visual setting includes two such resources.

Listed on the National Registry of Historic Places and located 9 miles north of Lone Pine, Manzanar is a California Historic Landmark commemorating the approximately 800-acre site where Japanese American citizens and resident Japanese aliens were incarcerated during World War II, when in 1942, the United States government detained more than 110,000 men, women, and children in remote, military-style camps. The Project alignment passes within approximately one mile of Manzanar, which is managed by the National Park Service and open to the public. Photograph 9 is a view toward the IC Project Alignment from Manzanar (refer to Figure 4.1-2c and Table 4.1-2).

Situated near US 395 in Kern County, the Rand Mining District is a California Historic Landmark commemorating discovery of Rand mine in 1895, along with the town of Randsburg and several other

nearby sites that developed in conjunction with mining activity in the late 1800s and early 1900s. The Project alignment crosses this state Historic Landmark site near US 395 and Randsburg; Photograph 28 (Figures 4.1-2n) is a view toward the IC Project Alignment taken near residences in Randsburg.

4.1.2.3 Local

The California Public Utilities Commission (CPUC) has sole and exclusive state jurisdiction over the siting and design of the IC Project. Pursuant to CPUC General Order 131-D (GO 131-D), Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the counties' and cities' regulations are not applicable as the counties and cities do not have jurisdiction over the IC Project. Accordingly, the following discussion of local land use regulations is provided for informational purposes only.

4.1.2.3.1 Inyo County General Plan

The Inyo County General Plan Circulation Element and Conservation/Open Space Element contain the following goals, respectively:

> Goal SH-1. Maintain a system of scenic routes that will preserve and enhance the quality of life for present and future generations.
>
> Goal VIS-1. Preserve and protect resources throughout the County that contribute to a unique visual experience for visitors and quality of life for County residents.

4.1.2.3.2 Kern County General Plan

Section 2.3.9, Scenic Route Corridors, of the Circulation Element recognizes several Caltrans-designated "Eligible State Scenic Highways" within the county including portions of US 395 and SR-58 (refer to Table 4.1.3 in Section 4.1.1.5, Scenic Resources). In addition, the Land Use, Open Space, and Conservation Element addresses visual resources and aesthetics primarily in commercial and industrial settings, outdoor storage, and landscaping. It also includes general policies for the protection of oak woodlands and the conservation of open space (Section 1.10, 10, Oak Tree Conservation, Policies 65 and 66). (Kern County 2009)

4.1.2.3.3 San Bernardino County General Plan

The San Bernardino County General Plan Conservation Element and Open Space Element contain the following:

> GOAL D/CO 1. Preserve the unique environmental features and natural resources of the Desert Region, including native wildlife, vegetation, water and scenic vistas.
>
> GOAL OS 5. The County will maintain and enhance the visual character of scenic routes in the County.

The Open Space Element of the General Plan indicates that county scenic routes in the Project area include US 395, SR-247, I-40, Route 66, and I-15 as well as Cima Road and Kelbaker Road. Information regarding these designated scenic routes is included on Table 4.1-3 in Section 4.1.1.5 Scenic Resources and on Figures 4.1-1a and 4.1-1b.

4.1.2.3.4 City of Barstow General Plan

The City of Barstow General Plan Land Use Element includes Goal 2, which states "The City seeks to ensure an aesthetically pleasing appearance to the community that will maintain and enhance property values throughout the planning area." (LU-12). Additionally, Strategy 7.A1 of the Resource and Open Space Element indicates the City should "Work with the utility companies owning large "cross-town" easements to ensure that these areas remain as open space for recreation, circulation, etc."

4.1.3 Significance Criteria

The significant criteria for assessing the impacts to aesthetics come from the CEQA Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would:

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

4.1.4 Impact Analysis

4.1.4.1 Visual Simulations and Visual Change

The set of visual simulations presented on Figures 4.1-3 through 4.1-14 document the IC Project-related visual change that would occur at 12 KOPs, and provides the basis for evaluating potential visual effects associated with the IC Project from these key public views. The methodology employed for preparing the simulations includes systematic site photography, computer modeling, and digital rendering techniques. Photographs were taken using a digital single-lens reflex camera with standard 50-millimeter lens equivalent, which represents an approximately 40-degree horizontal view angle. Photography viewpoint locations were documented in the field using photo log sheet notation, global positioning system (GPS) recording, and basemap annotation. Digital aerial photographs and project design information provided the basis for developing three–dimensional computer modeling of the new project components. For each simulation viewpoint, viewer location was input from global positioning system data using 5 feet as the assumed eye level. Computer "wireframe" perspective plots were overlaid on the simulation photographs to verify scale and viewpoint location. Digital visual simulation images were then produced based on computer renderings of the three-dimensional modeling combined with selected digital site photographs. The simulations presented on Figuresets 4.1-3 through 4.1-14 consist of two full-page images designated "a" and "b," with the existing views shown in the "a" figure and the after visual simulations in the "b" figure.

This section includes a description of the project-related change and an evaluation of potential visual effects on key public views, primarily as represented by the set of 12 KOP visual simulations. Table 4.1-6 presents an overview including viewpoint location with corresponding visual sensitivity factor(s); approximate viewing distance; and summary of visible change and potential effect that would occur each KOP location. As summarized in Table 4.1-6 and detailed under discussion of the five Landscape Units, the visual change associated with the IC Project would not substantially alter existing visual conditions in the area.

Table 4.1-6: Summary of Visual Change at KOPs

Photograph Number and Location *(Figureset number)*	Visual Sensitivity Factor(s)	Viewing Distance	Visual Change and Effect
LANDSCAPE UNIT 1			
3. Gerkin Road south of Bishop ***(Figureset 4.1-3)***	Proximity to residences	600 feet	Taller steel poles replace existing lattice towers; the closest lattice tower is permanently removed. Reduction in number of transmission structures in vicinity of residences. Increased height of replacement pole represents an incremental change that would not substantially affect visual character of landscape experienced in this area.
5. Baker Creek Campground in Big Pine ***(Figureset 4.1-4)***	Proximity to recreational facility	500 feet	Taller steel pole replaces existing lattice tower. Minor shift in location of new structure within existing alignment; existing vegetation partially screens replacement pole. Narrower profile of replacement pole less noticeable against backdrop. Increased height of replacement pole does not affect views of White Mountains in backdrop, and overall change would not substantially affect existing view.
10. US 395 crossing north of Lone Pine ***(Figureset 4.1-5)***	Eligible State Scenic Highway Eastern Sierra Scenic Byway	500 feet	Taller steel poles replace existing lattice towers. Replacement poles visible in distance somewhat more noticeable. Permanent removal of one lattice tower and wood guy poles. Project modifications result in more uniform appearance of built elements in the landscape. Incremental visual change would not adversely affect views of the landscape including the nearby hills.
14. US 395 crossing near Owens Lake ***(Figureset 4.1-6)***	Eligible State Scenic Highway Eastern Sierra Scenic Byway	< 500 feet	Somewhat taller steel poles replace two existing lattice towers. Permanent removal of two existing lattice towers. Similarity of form and color to adjacent transmission structures results in more uniform appearance of utility structures seen at this location. Overall change would not substantially affect existing view from roadway.
15. Whitney Street near Mojave Street in Cartago ***(Figureset 4.1-7)***	Proximity to residences Recreational motorists	1,100 feet	Two taller steel poles replace existing lattice tower and pair of wood poles; one existing lattice tower and pair of wood poles permanently removed. Vertical form of replacement poles more closely resemble adjacent utility structures, resulting in more unified appearance of built elements in the landscape. Incremental increase in height of replacement poles does not adversely affect views of the landscape backdrop and overall change would not substantially affect existing view at this location.
16. SR-190 crossing near Olancha ***(Figureset 4.1-8)***	Eligible State Scenic Highway	< 500 feet	Taller steel pole replaces existing lattice tower. Replacement pole location is further from the highway. Vertical form of replacement pole more closely resembles adjacent utility structures, resulting in more unified appearance of built elements seen in the landscape. Incremental increase in height of replacement poles does not adversely affect views of the landscape backdrop and overall

Table 4.1-6: Summary of Visual Change at KOPs

Photograph Number and Location *(Figureset number)*	Visual Sensitivity Factor(s)	Viewing Distance	Visual Change and Effect
			change would not substantially affect existing motorists' view.
20. Fossil Falls Campground and Trail ***(Figureset 4.1-9)***	Proximity to BLM recreational facilities Proximity to BLM-designated ACEC	1,800 feet	Taller steel poles replace two existing lattice towers; two wood poles permanently removed. Increased height of replacement poles not particularly noticeable against dominant landscape backdrop. Reduction in number of visible utility structures seen in landscape. Overall change would not adversely affect existing view experienced by recreational visitors.
23. Patrice Avenue, Inyokern ***(Figureset 4.1-10)***	Proximity to residences	<500 feet	Slightly taller steel poles replace existing lattice towers. Narrower vertical profile of replacement poles more closely resembles form of nearby utility structures, resulting in more uniform appearance of built elements seen in the landscape. Three orange FAA marker balls visible against sky. Overall change would not have a substantial effect on existing view from this rural location.
LANDSCAPE UNIT 2			
25. Sydnor Avenue at Mercury Street in Inyokern ***(Figureset 4.1-11)***	Proximity to residences	800 feet	Slightly shorter steel poles replace two existing lattice towers, and pole of equal height replaces one existing lattice tower. Although color is similar, the form of replacement poles could contrast with adjacent existing lattice towers; resulting in new poles being more noticeable. Incremental visual change could be noticeable; however, given presence of existing prominent utility structures seen in this location, the project would not substantially affect existing visual character of residential area.
28. Lexington Avenue in Randsburg ***(Figureset 4.1-12)***	Location is within Rand Mining District State Historical Landmark Proximity to residences	<500 feet	Somewhat shorter steel poles replace two existing lattice towers. Replacement pole visible along ridgetop against sky less noticeable due to narrower profile; increased visibility of replacement TSP at base of hill due to contrast with backdrop. Modification represents incremental change that would not adversely affect visual quality of the landscape given presence of utility structures and mining facilities.
LANDSCAPE UNIT 4			
38. I-40, near Daggett ***(Figureset 4.1-13)***	Project route crossing of eligible State Scenic Highway San Bernardino County scenic route	500 feet	Two separate three-pole TSP structures replace two existing three-pole wood structures. Color of replacement poles blends more effectively with light colored backdrop making them slightly less noticeable. Overall change would not substantially affect existing motorist view.

LANDSCAPE UNIT 5			
45. SR-127 at Baker Junior High School ***(Figureset 4.1-14)***	Proximity to public school Project route crossing of eligible State Scenic Highway San Bernardino County scenic route	900 feet	New LWS H-frame installed near Baker Substation. Incremental visual change could be noticeable; however, given presence of existing utility structures seen in this location, the new LWS H-frame would not adversely affect views of the landscape setting.

4.1.4.1.1 Landscape Unit 1

In Landscape Unit 1, close-range views of the IC Project are seen from near the communities of Bishop, Big Pine, Olancha, Cartago, and Inyokern and from scattered rural residences within Owens Valley, as well as from the Fossil Falls BLM recreation site and along US 395 and SR-190, which are crossed by the IC Project Alignment.

4.1.4.1.1.1 Figureset 4.1-3: Visual Simulation, Viewpoint 3: Gerkin Road, South of Bishop

Looking north from Gerkin Road, Figureset 4.1-3 represents a close-range view of the IC Project from the edge of a residential community approximately 4.5 miles south of Bishop. The IC Project Alignment crosses the roadway, approximately 900 feet from the viewpoint, and can be seen by motorists as well as nearby residents. To the left and right of the roadway, Figure 4.1-3a shows two prominent existing lattice towers, partially silhouetted against the sky in the foreground. On the left side of the roadway, additional towers recede into the distance, as their visibility decreases against a backdrop of similar colored mountains. In this open view of the northern Owens Valley basin, multiple transmission towers supporting two adjacent power alignments are also visible in the backdrop east of the roadway. As seen from the nearby residence in the immediate foreground on the right, views toward the IC Project Alignment are partially screened by landscaping out of the view to the right.

The Figure 4.1-3b simulation shows the replacement of towers under the IC Project left of the roadway with taller steel poles, and the permanent removal of the nearest structure in the foreground to the right of the roadway. Compared to the existing structures being replaced, the new poles are noticeably taller; however, their overall form with a considerably narrower profile is simpler than the complex form of existing lattice towers. The closest replacement structure seen in the visual simulation is approximately 0.25 mile from the viewpoint, whereas Figure 4.1-3a shows a noticeably closer existing tower that is only approximately 750 feet away. A comparison of Figures 4.1-3a and 4.1-3b demonstrates that the increased height of the new poles would not substantially alter the overall visibility of the IC Project in relation to the landscape backdrop. Additionally, as shown in Figure 4.1-3b visual simulation, the removal of the closest structure would represent an incremental improvement to the visual setting that includes numerous transmission structures of varied design. The introduction of the new poles thus represents an incremental effect that would not result in a substantial change in the existing landscape character.

4.1.4.1.1.2 Figureset 4.1-4: Visual Simulation, Viewpoint 5: Baker Creek Campground in Big Pine

Figure 4.1-4a photograph is a view looking east from Baker Creek Campground, a public recreation area located northwest of the town of Big Pine in Owens Valley. From this location existing structures are visible against a backdrop comprised of sky as well as the distant White Mountains. In the immediate

foreground a restroom building and a darker colored trash receptacle can be seen partially screened by vegetation. Part of an unpaved campsite access road is also visible near the left edge of the view, and the existing lattice tower situated approximately 500 feet away is a vertical element seen on the right. In addition to the built campground features seen in the foreground, the structure is a noticeable built element within the predominantly natural appearing landscape setting.

The Figure 4.1-4b simulation shows a taller steel pole has replaced the existing tower under the IC Project. The replacement pole is noticeably taller; the taller pole is required because an existing lattice tower located at the campground situated to the left of this view is removed and not replaced. Vegetation along the roadway partially screens the lower portion of the new structure. A comparison of the existing view and simulation indicates that the existing and replacement structures are similar in color and the horizontal cross arms at the top of both structures are similar in appearance. Due to its narrower profile the new pole is less noticeable than the existing lattice tower, particularly as seen against the mountain and sky backdrop. The visual simulation demonstrates that taken together the IC Project-related change represents a minor, incremental effect that would not significantly alter the overall composition or visual character of the existing landscape experienced by recreational visitors at this location.

4.1.4.1.1.3 Figureset 4.1-5: Visual Simulation, Viewpoint 10: US 395 Crossing North of Lone Pine

Figure 4.1-5a is a motorist's view of the IC Project Alignment from US 395, approximately 2 miles north of Lone Pine. This KOP location represents a close-range view of the IC Project Alignment crossing as seen along an eligible State Scenic Highway, and also along the Eastern Sierra Scenic Byway. This northbound motorist view shows the roadway gradually descending a high-desert alluvial plain, flanked by the Alabama Hills on the left. On the right, the Inyo Mountains border the east side of the Owens Valley, and multiple lattice structures, along with adjacent wood guy poles, are visible on both sides of the roadway. In the immediate foreground on the right, a prominent lattice structure is visible primarily against the sky while the closest wood pole and the next lattice structure are seen against a backdrop composed of landscape and sky. Beyond the highway crossing, structures become progressively less evident where their contrast against the darker color and varied texture of the mountain backdrop is weak. Near the center of this view several towers are barely visible silhouetted against the sky, on the low distant horizon.

The Figure 4.1-5b visual simulation shows steel poles have replaced the two closest existing lattice towers under the IC Project, and an existing tower on the left side of the highway has been removed and not replaced. Additional less visible lattice towers in the distance are also replaced with steel poles under the IC Project. The simulation also portrays the removal of the wood guy pole and cables supporting the closest structure on the right side of the road. The new poles are somewhat taller than the existing towers being replaced. As seen at this location the most noticeable change relates to the design of the new structures being a more simplified vertical form compared to the form and appearance of existing towers. To a degree the vertical form of the new structures would contrast with the predominantly horizontal form seen within the surrounding landscape; however, this effect would be less apparent where the structures recede into the background. The color of the new poles would also tend to blend in against the light-colored backdrop. Additionally, the IC Project would result in a more uniform appearance of built features seen within the landscape and the permanent removal of the lattice tower and wood pole would result in a decreased number of visible structures seen at this location. A comparison of the Figures 4.1-5a existing view and the 4.1-5b visual simulation demonstrates that while the visual change could be somewhat noticeable, taken together the IC Project-related modifications represent an incremental effect that would not substantially alter motorist views of the landscape experienced along this part of an eligible State Scenic Highway and the Eastern Sierra Scenic Byway.

4.1.4.1.1.4 Figureset 4.1-6: Visual Simulation, Viewpoint 14: US 395 Crossing Near Owens Lake

The IC Project Alignment crosses US 395 again at the northwest edge of the Owens Lake Basin. Taken from northbound US 395, the photograph in Figure 4.1-6a shows towers on both sides of the highway near this crossing, and represents the view from an eligible scenic highway and a portion of the Eastern Sierra Scenic Byway. In this area the roadway climbs a low summit along the former lake shoreline, and the IC Project Alignment traverses open, desert terrain bordering the lake basin. Existing structures are seen primarily against the sky on both sides of the highway and an adjacent parallel power line supported by smaller steel poles is also visible approximately 300 feet to the west of the IC Project Alignment. BLM-managed lands on the left of the photograph are designated VRM III.

The Figure 4.1-6b visual simulation shows two IC Project replacement poles located in close proximity to where the existing lattice towers have been removed. The new structures are somewhat taller than the existing structures being replaced; however, the visual simulation also shows that a more distant existing tower seen to the right of the blue colored roadway sign has been removed but not replaced. Additionally, another existing tower situated to the left of the highway, and outside the left edge of the view shown in Figure 4.1-6b is also permanently removed. A comparison of the existing view and visual simulation indicates that although taller, the replacement poles are similar in form and color to existing poles supporting the adjacent power alignment, thus IC Project-related change would result in greater overall uniformity in the appearance of built elements seen within the landscape. Together with the decrease in the number of structures visible at the highway crossing, these changes would not substantially alter the existing visual character of the landscape setting in this location.

4.1.4.1.1.5 Figureset 4.1-7: Visual Simulation, Viewpoint 15: Whitney Street Near Mojave Street in Cartago

Looking southeast across the southern tip of the Owens Lake Basin from the northeast corner of Cartago, Figure 4.1-7a represents the KOP view from a residential community within the southern Owens Valley as well as the view from a roadway providing access to the Cartago Wildlife Area, situated at the edge of Owens Lake. In this view a variety of wood and steel utility structures are discernible, including two lattice towers located approximately 0.25 mile away that can be seen beyond the roadway intersection in the immediate foreground. Also visible are a pair of wood poles, situated midway between the two towers. In addition, another pair of wood poles can be seen near the right edge of this view. In the immediate foreground, more prominent vertical elements include wood H-frame structures supporting an adjacent power line that passes within approximately 300 feet of residences located along Cartago's eastern perimeter, as well as a wood utility pole near the left edge of the view that supports a variety of power and telecommunication lines.

The Figure 4.1-7b simulation shows the existing wood poles and the lattice tower in the center of the view have been removed and not replaced under the IC Project. The lattice tower on the left has been replaced by a taller steel pole, as has the pair of wood poles near the right edge of the view. Where the top of the new taller pole on the left projects above the mountain horizon, and is seen against the sky, it is somewhat more noticeable compared to the existing lattice tower it has replaced. At the same time, the removal of existing elements in the center of the view results in a decrease in the number of utility structures seen from this KOP and thus represents an incremental improvement to the overall setting. At this location where numerous existing transmission elements are currently seen, the overall visual change is incremental and the effect would not substantially alter the composition or quality of the landscape as seen by community residents or motorists.

4.1.4.1.1.6 Figureset 4.1-8: Visual Simulation, Viewpoint 16: SR-190 Crossing Near Olancha

The view shown in Figure 4.1-8a depicts the IC Project Alignment from SR-190, an eligible State Scenic Highway that skirts the southern perimeter of the Owens Lake Basin and serves as the principal western gateway for travelers to Death Valley. This two-lane highway also provides access to Olancha Dunes, a nearby OHV recreation area. Figure 4.1-8a shows a lattice structure supporting multiple overhead conductors in the immediate foreground, at a distance of approximately 400 feet from where the alignment crosses the roadway. This prominent vertical element is seen just to the right of the roadside primarily against a backdrop of the Sierra Nevada, although the upper part is silhouetted against the sky. Multiple wood utility poles and conductors are also visible in the foreground along both sides of the roadway as well as in the distance, where numerous poles are discernible in the vicinity of the town of Olancha, located approximately 0.8 miles away and partially visible near the center of this view.

The Figure 4.1-8b simulation shows a new steel pole that replaces the lattice tower that has been removed under the IC Project. A comparison of Figures 4.1-8a and 4.1-8b indicates that the replacement pole is somewhat taller and similar to the existing lattice structure; most of the replacement pole is visible against the mountain backdrop and the upper portion can be seen against the sky. When compared with the existing lattice structure, the design of the new structure is a more streamlined vertical form that more closely resembles the form of existing wood utility structures seen along the roadside at this KOP location. Overall, the new structure would not substantially alter the composition or character of the existing landscape seen at this location, and the change brought about by the IC Project would result in a more uniform appearance of built elements seen in the landscape. In addition, an existing lattice structure approximately 650 feet to the right, and beyond the view captured in Figure 4.1-8a photograph, would be removed under the IC Project and would not be replaced. Given this project-related change, there would be a decrease in the number of visible structures seen in the vicinity of the highway crossing, which would represent an incremental visual improvement. In light of the changes described above, the effect would not substantially alter existing composition or visual character of the landscape seen in this location.

4.1.4.1.1.7 Figureset 4.1-9: Visual Simulation, Viewpoint 20: Fossil Falls Campground and Trail

Figure 4.1-9a is a KOP view showing the IC Project Alignment where it passes near a BLM-managed recreational site including a campground within a BLM Area of Critical Environmental Concern (ACEC). This area is located on an elevated terrace approximately 0.5 mile east of US 395. Looking southwest from the parking area of the recreational facility, Figure 4.1-9a shows existing lattice towers and wood interset poles approximately 0.35 mile away, visible against the large-scale backdrop of the distant Sierra Nevada. These structures are seen beyond an expanse of dark-colored basalt. Although visible, the structures are not particularly noticeable given the dominant backdrop and presence of visual elements in the foreground landscape, including the informational kiosk structure and exposed basalt formation. BLM-managed lands in the photograph are designated VRM III.

The Figure 4.1-9b simulation shows the two existing lattice towers replaced by two somewhat taller steel poles under the IC Project, while the two wood interset poles have been removed and not replaced. A comparison of the existing and simulation views indicates that the height difference between the new poles and the existing lattice structures is not particularly noticeable given the viewing distance and landscape context of the dominant mountain backdrop. Combined with the removal of the existing wood poles, the IC Project represents a minor, incremental change that does not substantially alter or degrade the existing landscape character seen at this BLM-managed recreation area.

4.1.4.1.1.8 Figureset 4.1-10: Visual Simulation, Viewpoint 23: Patrice Avenue in Inyokern

A view toward the IC Project Alignment from within the community of Inyokern is shown in Figure 4.1-10a, which represents a close-range view of the IC Project Alignment as seen by residents in the rural desert landscape setting characteristic of the area near Inyokern Substation in Indian Wells Valley. Figure 4.1-10a shows a single story house, assorted outbuildings, vehicles and fencing, interspersed with clusters of small trees and large shrubs on a rural residential property in the foreground, and on the left a prominent tower is silhouetted against the sky. The top of a second tower appears against the sky near the right edge of the view. Additionally, a variety of wood utility pole structures supporting several nearby power lines, including single pole and H-frame structures, can be seen at this KOP location.

The Figure 4.1-10b visual simulation shows a IC Project-related replacement steel pole in the foreground. Small trees screen the bottom part of this new structure. Near the right edge of the view the upper portion of a second replacement IC Project-related pole can be seen beyond the building. Although slightly taller than the existing lattice structures being replaced, the horizontal arms at the top of the new poles are similar in appearance to the cross arms of the lattice towers that have been removed. Compared with the more complex trapezoidal form of the existing lattice structures, the narrower vertical profile of the new steel poles is similar to the form of nearby existing wood poles and therefore the IC Project would result in a slightly more uniform overall appearance with respect to the utility structures seen at this location. The simulation also shows three orange FAA marker balls silhouetted against the sky between the replacement poles; the marker balls are 36” in diameter each and spaced along the wire at approximately 200-foot (61-meter) intervals. Although their bright color could be somewhat noticeable, the size of the marker balls is relatively small and their color is not dissimilar to the reddish color of the outbuilding seen nearby, on the left. Taken together, the visual changes would not result in substantial alteration or degradation of the landscape setting.

4.1.4.1.2 Landscape Unit 2

Within Landscape Unit 2, the alignment crosses largely unoccupied, desert terrain. Open views of the Project can be seen by passing motorists where the alignment closely parallels US 395 within flat terrain of the northern Mojave Desert, south of Indian Wells Valley. Close-range views of the Project are generally limited, and include a small number of scattered residents in the area immediately south of Inyokern Substation in addition to a small number of residents at Randsburg, an historic mining community located in mountainous terrain that separates Indian Wells Valley from the Mojave Desert basin.

4.1.4.1.2.1 Figureset 4.1-11: Visual Simulation, Viewpoint 25: Sydnor Avenue at Mercury Street in Inyokern

Taken near the US 395/SR-178 junction approximately 0.8 mile south of Inyokern Substation, Figure 4.1-11a represents a close-range view of the IC Project Alignment at a KOP within this low-density suburban residential area. Looking southeast from this location, Figure 4.1-11a shows multiple transmission structures including three IC Project-related lattice towers as well as lattice towers, wood H-frame structures and wood utility poles that support three parallel power lines. These noticeable vertical elements are seen primarily against a backdrop of sky, and extending toward the low hills seen along the horizon on the right. On the left, the closest and most prominent lattice tower supports a non-Project transmission line, while the closest of the three IC Project-related towers is to its right and situated approximately 450 feet beyond the residence. Although situated less than 200 feet to the east, the US 395 corridor is generally screened from view by vegetation surrounding the residence.

The Figure 4.1-11b visual simulation shows three new single circuit poles have replaced the three double circuit lattice towers under the IC Project. The height of the new poles is comparable to the height of the existing structures being replaced. Although the color of the new pole is similar to the color of the adjacent lattice towers, the form of the replacement structures is somewhat dissimilar and thus could be seen to contrast with the form of these towers and other landscape elements. At the same time, the new poles would not be dissimilar to the vertical form of some of the existing wood power poles. Given the presence of existing prominent utility structures seen in this location, together with other visible built elements in the landscape, the IC Project represents a noticeable but incremental change that would not affect the composition of the landscape or existing visual character of this area.

4.1.4.1.2.2 Figureset 4.1-12: Visual Simulation, Viewpoint 28: Lexington Avenue in Randsburg

As it crosses the historic mining community of Randsburg, the IC Project Alignment passes within 300 feet of residences located at the town's northeastern perimeter. Figure 4.1-12a represents a view taken from a residential street in this area. Houses and a church as well as utility structures and various mining facilities are located within the immediate vicinity. Figure 4.1-12a shows a lattice structure, and to its right a taller tower supports an adjacent line. Both structures are seen silhouetted against the sky on the ridge, beyond the houses in the foreground. A second tower, seen against the mottled hillside backdrop near the right edge of the view, is barely visible. Also in the foreground, a telecommunication line is a noticeable horizontal feature. BLM-managed lands on the left of the photograph are designated VRM III.

The Figure 4.1-12b simulation shows two steel poles installed under the IC Project that are slightly taller than the two lattice towers they replace. The replacement pole on the left has a more-slender form that would contrast with the broader, trapezoidal shape of the existing lattice tower while the steel replacement structure on the right would be somewhat more noticeable against the hillside backdrop compared with the existing tower that is removed. At the same time, the new pole is partially screened by the residence seen in the foreground. It is also noted that existing utility structures located nearby although not visible in this view, more closely resemble the new poles in terms of their form. In this respect the change would be less noteworthy. Additionally, because the visual juxtaposition of older and newer built elements such as relic mining equipment and transmission structures is a characteristic feature of this landscape, and given the presence of existing utility structures and mining facilities within this vicinity, the visual effect of IC Project modifications represents an incremental change that would not substantially affect the visual character or quality of the landscape in this location.

4.1.4.1.3 Landscape Unit 3

Located primarily away from regional transportation corridors, Landscape Unit 3 is the most isolated of the five Landscape Units. Throughout the length of this Landscape Unit, the IC Project Alignment closely parallels one or more existing transmission alignments. Few close-range public views of the IC Project Alignment are available and overall, visual change would not be particularly discernible given the isolated nature of structures to be replaced, the similar form and scale of the replacement structures compared to the existing structures, and the similar diameters of the existing and replacement conductors.

4.1.4.1.4 Landscape Unit 4

Within Landscape Unit 4 the IC Project Alignment generally parallels, and in several locations crosses, local and regional roadway corridors. A small portion passes in close proximity to residential areas near the City of Barstow. As shown in Figureset 4.1-13, some of these public views are within a few hundred feet of existing IC Project-related elements.

4.1.4.1.4.1 Figureset 4.1-13: Visual Simulation, Viewpoint 38: I-40

Figureset 4.1-13, a view from I-40 approximately 6.5 miles southeast of Barstow near the community of Daggett, represents a close-range motorist's view of the IC Project Alignment crossing of an eligible State Scenic Highway and San Bernardino County scenic route. Figure 4.1-13a shows a noticeable H-frame structure and a three-pole structure seen to the right of the highway in the foreground against a backdrop of mountains and sky. Due to the oblique angle of the alignment crossing, multiple structures can be seen receding into the distance on the left side of the highway where they are less noticeable against the light colored backdrop as viewing distance increases. Beyond the IC Project Alignment and somewhat visible in the distance is an array of lattice towers supporting multiple nearby transmission alignments. BLM-managed lands on the left of the photograph are designated VRM IV, while lands on the right are designated VRM III.

In the Figure 4.1-13b visual simulation, three-pole TSP structures have replaced the three-pole wood structures on both sides of the highway under the IC Project. The replacement poles are slightly shorter but larger in diameter than the existing wood poles, and the form of the replacement structures mimics the form of the removed three-pole wood structures. A comparison of the existing and simulation views indicates the lighter color of the replacement poles would be less noticeable when seen at close-range in the foreground and would also more effectively blend in with the light-colored sky backdrop. Taken together, the change and overall visual effect is incremental at a location that includes numerous existing utility structures. As a result, the IC Project would not significantly degrade the visual quality of the landscape setting as seen by motorists.

4.1.4.1.5 Landscape Unit 5

Within Landscape Unit 5 the IC Project Alignment parallels I-15 for much of its length, passing within approximately 0.5 and 2 miles of the highway corridor through a sparsely inhabited landscape characterized by broad flat basins and rugged mountainous outcrops. Due to viewing distance and landscape backdrop conditions, the existing components are not readily discernible along large portions of this Landscape Unit, and close-range public views of components are generally limited to locations at or near highway crossings, and from a few widely-dispersed residential and service centers located along the highway.

4.1.4.1.5.1 Figureset 4.1-14: Visual Simulation, Viewpoint 45: SR-127 at Baker Junior High School

Figure 4.1-14a represents a view from the town of Baker, where the IC Project Alignment can be seen crossing SR-127, an eligible State Scenic Highway and San Bernardino County scenic route as well as the southern gateway to Death Valley National Park from I-15. Taken near the entrance to a junior high school campus seen in the immediate foreground, Figure 4.1-14a shows a flat desert playa against a backdrop of distant mountains and sky at the town's northern edge with structures seen on both sides of the roadway at distances ranging between approximately 900 and 1,400 feet. On the left, a steel H-frame and a lattice tower are silhouetted against the sky. On the right, the dark steel framework of the existing Baker Substation stands out against the lighter-colored terrain in the backdrop, and to the right of the substation facility, a lattice H-frame structure blends in with the backdrop and is less noticeable. Adjacent utility components that are unrelated to the IC Project include a prominent lattice tower with overhead conductors at the right edge of the roadway in the foreground, multiple wood power poles near the substation, and an array of wood utility poles along the left side of the roadway. BLM-managed lands in the photograph are designated VRM III.

The Figure 4.1-14b visual simulation shows the installation of a new LWS H-frame structure between the roadway and the existing Baker Substation. The new structure on the right side of the road is similar in appearance to the existing steel H-frame structures seen on the left side of the roadway. Although the new LWS H-frame structure at the right edge of the roadway is a noticeable new built landscape element, its predominantly vertical form is not inconsistent with the form of most of the numerous utility structures seen in the landscape at this location. A comparison of Figures 4.1-14a and 4.1-14b further demonstrates that the new structure would not substantially change the overall visibility of the IC Project in this landscape setting. Taken together, the modification at the SR-127 crossing represents a minor, incremental effect that would not result in a substantial change in the existing landscape character or quality as seen by motorists as well as by school campus attendees within the town of Baker.[16]

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

4.1.4.2.1 Construction

No Impact. For the purpose of this evaluation, a scenic vista is defined as a distant public view along or through an opening or corridor that is recognized in land management documents. By this definition, there are no scenic vistas in the area from which the IC Project would be visible. Therefore, the IC Project would not result in effects on a scenic vista.

4.1.4.2.2 Operations

No Impact. For the purpose of this evaluation, a scenic vista is defined as a distant public view along or through an opening or corridor that is recognized and valued for its scenic quality. By this definition, there are no scenic vistas in the area from which the IC Project would be visible. Therefore, the IC Project would not result in effects on a scenic vista.

4.1.4.3 Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway?

4.1.4.3.1 Construction

Less than Significant Impact. As documented in Section 4.1.2.2 and on Table 4.1-3, there are two designated scenic highways in the Project area: SR-168 and a portion of US 395. Impacts to scenic resources within these roadway corridors would be less than significant.

Photograph 1 in Figureset 4.1-2a is a view from SR-168 looking south toward the IC Project Alignment and Control Substation. From this location the substation and lattice towers that extend along the base of the hills approximately 0.45 miles away are barely discernable against the desert landscape backdrop. To a degree, the new steel poles installed under the IC Project may be more visible than the lattice structures at this distance; however, it is expected that visual change associated with the replacing existing steel structures with fewer new, taller steel poles would not be readily noticeable given the viewing distance and background conditions.

Photographs 7 and 8 in Figureset 4.1-2d are views taken from the portion of US 395 that is a designated State Scenic Highway. Photograph 7 shows a close-range view of the crossing where steel poles have replaced older structures more typical of those seen along the Project corridor. At this location the

[16] Note that modifications to the SCE-owned Baker Substation and electrical infrastructure in the immediate vicinity of the substation are planned to be completed by SCE under a separate (non-IC Project) project. These modifications are planned to be completed prior to the construction of the IC Project. Potential cumulative impacts from the Baker Substation modifications and IC Project-related work in the vicinity of the Baker Substation is addressed in Section 4.21.1.

existing steel poles would be replaced with slightly shorter steel poles under the IC Project. It is therefore expected that there would not be an effect on motorists' views from the designated State Scenic Highway portion of US 395. Photograph 8 is a view from the Division Creek Safety Roadside Rest Area along US 395, looking east. In this view, lattice towers of two adjacent transmission lines located approximately 1.8 miles east of the highway are barely visible against the mottled landscape backdrop. Because the smaller structures located approximately 2.2 miles away are generally imperceptible, the change associated with replacement IC Project structures would not be evident as seen from this location along US 395. In light of the change described above, the IC Project would not result in damage to scenic resources within a designated State Scenic Highway.

As noted on Table 4.1-3, the IC Project Alignment is also visible from portions of the two roadways discussed above where they are eligible State Scenic Highways. The visual simulations in Figuresets 4.1-5 and 4.1-6 demonstrate the IC Project would result in a minor incremental change that would not substantially affect scenic resources or views from this portion of US 395. Table 4.1-3 also notes that portions of the IC Project Alignment are visible from several other eligible State Scenic Highways, including SR-190, SR-58, I-15, SR-247, and I-40. The evaluation presented in Section 4.1.4.1, and outlined in Table 4.1-6, describes visual change associated with the IC Project at KOPs along these roadway corridors. The Figureset 4.1-8 visual simulation indicates the IC Project would not substantially affect motorist views along SR-190. Similarly, the Figureset 4.1-13 and 4.1-14 visual simulations demonstrate the IC Project-related change would not substantially affect existing scenic resources or views along I-40 or SR-127, respectively. Additionally, in a view where the IC Project Alignment crosses SR-58, Photograph 35 in Figure 4.1-2r shows that steel poles have already replaced older Project structures while Photograph 37 in Figure 4.1-2s, taken from SR-247 near Barstow, illustrates a similar condition and also shows that where IC Project components are seen within a landscape context that includes utility structures supporting adjacent power lines, the overall visibility of the IC Project Alignment is diminished. Taken together, the incremental effects described above would not result in damage to existing scenic resources along a State Scenic Highway. Therefore, the impact is less than significant.

4.1.4.3.2 Operations

No Impact. Operation and Maintenance (O&M) activities required for the rebuilt power lines would not change from those currently required for the existing system; thus, no operation-related impacts to aesthetic conditions would occur.

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

4.1.4.4.1 Construction

Less than Significant Impact. Construction-related visual impacts resulting from the temporary presence of equipment, materials, and work crews along the IC Project Alignment, staging and work areas, and stringing sites would not substantially degrade the existing visual character of the landscape. To varying degrees, construction activity would be noticeable to local residents, motorists, and recreational visitors. Trees or portions of trees that encroach on the 18-foot wide access and spur road prism may be removed to facilitate the safe movement of construction equipment. Similarly, trees or portions of trees within or adjacent to stringing sites, construction laydown areas, construction work areas, material yards, and helicopter landing zones may be trimmed or removed to permit the safe operation of construction equipment; however, these areas would be preferentially selected to minimize the trimming or removal of trees. With these noted exceptions, IC Project construction is not anticipated to require removal of trees,

and effects on existing vegetation would be limited to tree trimming and some removal of shrubs and desert scrub. If restoration and/or revegetation occurs within sensitive habitats, a habitat restoration and/or revegetation plan(s) would be developed by SCE with the appropriate resource agencies and implemented after construction is complete. In general, the visual effects of vegetation removal would be minor and not noticeable to the public and the impact would be less than significant.

During construction, migration of fugitive dust from the construction sites would be limited by control measures set forth by regional air quality management districts; these measures may include the use of water trucks and other dust control measures. Minor disturbance of land within and along the IC Project would occur as a result installing replacement poles and removing existing structures. In addition, minor land disturbance may occur at some of the temporary staging and work areas that would be established as part of the project construction; these areas would generally be located on disturbed land located near or on existing project alignments. It is expected that the effect could be most noticeable at staging or work areas located in close proximity to residences in Lone Pine and Inyokern, and in close proximity to major roadways such as US 395. A limited degree of visual contrast could occur as a result of land disturbance activity such as creation of newly exposed soil areas; however, because SCE would restore all areas that would be temporarily disturbed by construction including locations where structures are removed, material yards, construction work areas, and stringing sites, among others, to as close to pre-construction conditions as feasible, or to the conditions agreed upon between the landowner and SCE following the completion of construction of the IC Project, the effect would be minimized so that the disturbed areas would blend in with the surrounding landscape setting, thus reducing visual contrast and potential visibility of these areas. As a result, any visual character degradation resulting from temporary construction activity would be less than significant.

The IC Project would result in incremental permanent visual change that would not substantially alter or degrade the existing visual character in the area. Replacement structures would be dulled galvanized steel or wood, and existing conductor would be replaced with new non-specular conductor. Marker balls are shown installed on overhead groundwire in Figure 4.1-10b. To varying degrees, IC Project components would be visible from locations along public roadways as well as publicly-accessible unpaved off-road tracks. In addition, they would be seen from limited numbers of residential and public recreation areas. At some locations intervening landforms, vegetation and structures partially or fully screen IC Project elements from all but a small number of viewers. In addition, in many areas of the IC Project Alignment, surrounding or backdrop landforms and vegetation, combined with the effect of distance, would diminish the visibility of project components.

In Landscape Unit 1, approximately 126 miles of the existing alignment would be rebuilt under the IC Project. The portion of the IC Project Alignment passes within less than 100 feet of the US 395 and also comes in close proximity to tribal land and other residential communities as it passes the western and eastern periphery of Big Pine and Lone Pine. Figures 4.1-3 through 4.1-10 show existing and post- IC Project views as seen from eight KOPs within this Landscape Unit; these portray views from sensitive locations in proximity to residences and recreational facilities as well as from scenic roadways. As discussed in Section 4.1.4.1 and outlined on Table 4.1-6, the simulations demonstrate that the incremental change associated with the IC Project would not substantially alter or degrade existing landscape or visual character in the area.

In Landscape Unit 2, approximately 48 miles of existing IC Project Alignment would be replaced under the IC Project. Within this Landscape Unit, the IC Project Alignment crosses largely unoccupied, desert terrain. Open views of the IC Project Alignment can be seen by passing motorists where the alignment closely parallels US 395, south of Indian Wells Valley, and close-range views of the IC Project

Alignment are generally limited to a small number of scattered residents in the area immediately south of Inyokern Substation and a small number of residents at Randsburg, an historic mining community. Figures 4.1-11 and 4.1-12 are before and after views from KOPs in proximity to residences that show the IC Project's incremental visual change would not substantially affect or degrade existing visual character at these or similar areas.

Approximately 44 miles of existing IC Project Alignment would be reconductored under the IC Project in Landscape Unit 3, the most isolated of the five Landscape Units, and where few close-range public views of the IC Project Alignment are available. Throughout the length of this unit, the IC Project Alignment closely parallels one or more existing transmission alignments and visual change associated with the IC Project would not be particularly discernable.

In Landscape Unit 4, approximately 44 miles of existing IC Project Alignment would be reconductored under the IC Project. Within this unit the IC Project Alignment generally parallels, and in several locations crosses, various roadway corridors, and a small portion is in close proximity to residential areas in the city of Barstow. The Figureset 4.1-13 simulation from a KOP along an eligible State Scenic Highway and San Bernardino County scenic route demonstrates that the IC Project's incremental visual change would not substantially affect or degrade the existing visual character at these or similar key viewing locations.

Geographically-scattered structures in Landscape Unit 5 would be replaced under the IC Project, an area where the project crosses a sparsely inhabited area and landscape characterized by flat basins and rugged mountainous outcrops. Existing infrastructure is not readily discernible along large portions of this unit due to the viewing distance and landscape backdrop conditions. Close-range public views of the IC Project Alignment are generally limited to locations near highway crossings, and a few dispersed residential or service centers located along the highway. Figureset 4.1-14 shows a KOP view from along an eligible State Scenic Highway. This simulation illustrates that the incremental visual change associated with the IC Project would not substantially alter or degrade existing visual character of the landscape.

As outlined above and summarized in Table 4.1-6, as well as demonstrated by the set of visual simulations from 12 KOPs presented on Figures 4.1-3 through 4.1-14, the IC Project would result in incremental visual change that would not substantially alter or degrade existing visual character or quality in the area. Therefore, the impact would be less than significant.

4.1.4.4.2 Operations

No Impact. Operation activities required for the rebuilt power lines would not change from those currently required for the existing system; thus, no operation-related impacts to aesthetic conditions would occur.

4.1.4.5 Would the project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

4.1.4.5.1 Construction

Less than Significant Impact. Most construction would take place during daylight hours; however, at limited times some construction along the project alignment may be required or finished at night, and these activities would require lighting for safety. Any required lighting would be limited to an individual work area and would be temporary in nature. Material yards may be lit for staging and security; this lighting would be directed on site and away from potentially sensitive receptors. Non-specular conductors and galvanized steel poles with a dulled finish would replace existing components, thus

reducing potential glare. Therefore, the IC Project would not result in a substantial light or glare effect and the impact would be less than significant.

4.1.4.5.2 Operations

No Impact. No new permanent lighting is proposed for the IC Project. Operation activities required for the rebuilt power lines would not change from those currently required for the existing system; thus, no operation-related impacts to daytime or nighttime conditions would occur.

4.1.5 Applicant Proposed Measures

Because no significant impacts to aesthetics would occur as a result of the IC Project, no avoidance or minimization measures are proposed.

4.1.6 Alternatives

Alternatives to the IC Project are addressed in Section 5.2, Description of Project Alternatives and Impact Analysis.

4.1.7 References

Benchmark Maps. 2017. *California Road and Recreation Atlas*. Santa Barbara, California.

City of Barstow. Undated. 2015-2020 General Plan. Available at http://www.barstowca.org/city-hall/city-departments/community-development-department/planning/draft-general-plan-and-master-environmental-impact-report

California Department of Transportation. 2017. California Scenic Highway Program. Available at http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm

California Public Utilities Commission (CPUC). 1995. Public Utilities Commission of the State of California, General Order No. 131-D. Adopted August 11, 1995. Decision 95-08-038.

California State Parks. Office of Historic Preservation. California Landmarks and Points of Historic Interest. Available at http://ohp.parks.ca.gov/?page_id=21387

Eastern Sierra Scenic Byway Map. Available at http://www.easternsierrabyway.com/

Inyo County. 2001. Goals and Policy Report for the Inyo County General Plan. Available at http://inyoplanning.org/general_plan/goals.htm

Kern County. 2009. General Plan. Available at https://kernplanning.com/planning/planning-documents/general-plans-elements/

San Bernardino County. 2007. 2007 General Plan. Available at http://www.sbcounty.gov/Uploads/lus/GeneralPlan/FINALGP.pdf

U.S. Department of Agriculture, Forest Service. 1995. Landscape Aesthetics: A Handbook for Scenery Management. USDA Agriculture Handbook No. 701. Available at https://www.fs.fed.us/cdt/carrying_capacity/landscape_aesthetics_handbook_701_no_append.pdf

U.S. Department of the Interior, Bureau of Land Management.1984. Manual 8400 - Visual Resource Management. Available at https://www.blm.gov/download/file/fid/20548

U.S. Department of the Interior, Bureau of Land Management. 1993. Bishop Resource Management Plan Record of Decision. Available at https://eplanning.blm.gov/epl-front- office/projects/lup/70447/92777/111784/Bishop_RMP_ROD_1993_w_app_glossary_508.pdf

U.S. Department of the Interior, Bureau of Land Management. 2005. Land Use Planning Handbook. Available at https://www.ntc.blm.gov/krc/uploads/360/4_BLM%20Planning%20Handbook%20H-1601-1.pdf

U. S. Department of the Interior, Bureau of Land Management. 2013. Best Management Practices for Reducing Visual Impacts of Renewable Energy Facilities on BLM-Administered Lands. Available at http://blmwyomingvisual.anl.gov/docs/BLM_RenewableEnergyVisualBMPs_LowRes.pdf

U.S. Department of the Interior, Bureau of Land Management. 2015a. California Historic Route 66 Needles to Barstow Corridor Management Plan. Final Draft May 2015. Available at http://route66ca.org/corridor-management-plan/

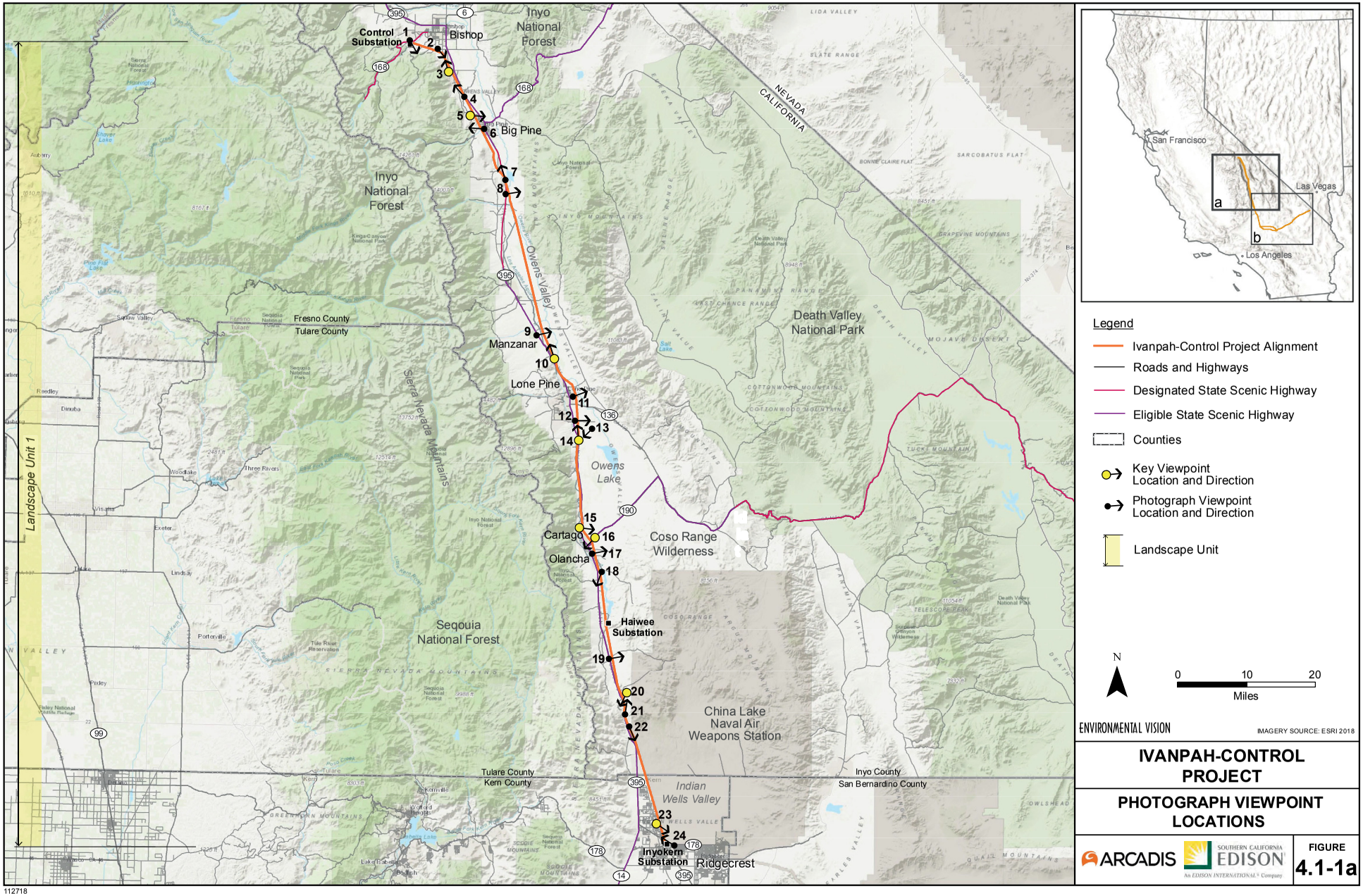
U.S. Department of the Interior, Bureau of Land Management. 2016. Desert Renewable Energy Conservation Plan. Proposed Land Use Plan Amendment and Final Environmental Impact Statement. Available at https://www.drecp.org/finaldrecp/

U.S. Department of the Interior, Bureau of Land Management. 2016. Desert Renewable Energy Conservation Plan (DRECP) Record of Decision. Available at https://www.drecp.org/finaldrecp/

U.S. Department of the Interior, Bureau of Land Management. Manual H-8410-1 - Visual Resource Inventory. Available at http://www.blm.gov/nstc/VRM/8410.html

U.S. Department of the Interior, Bureau of Land Management. Manual 8431 - Visual Resource Contrast Rating. Available at http://www.blm.gov/nstc/VRM/8431.html

U.S. Department of Transportation. 2015. Visual Impact Assessment for Highway Projects Available at http://www.environment.fhwa.dot.gov/guidebook/documents/VIA_Guidelines_for_Highway_Projects.asp#f



IVANPAH-CONTROL PROJECT

PHOTOGRAPH VIEWPOINT LOCATIONS

ARCADIS | SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE 4.1-1a

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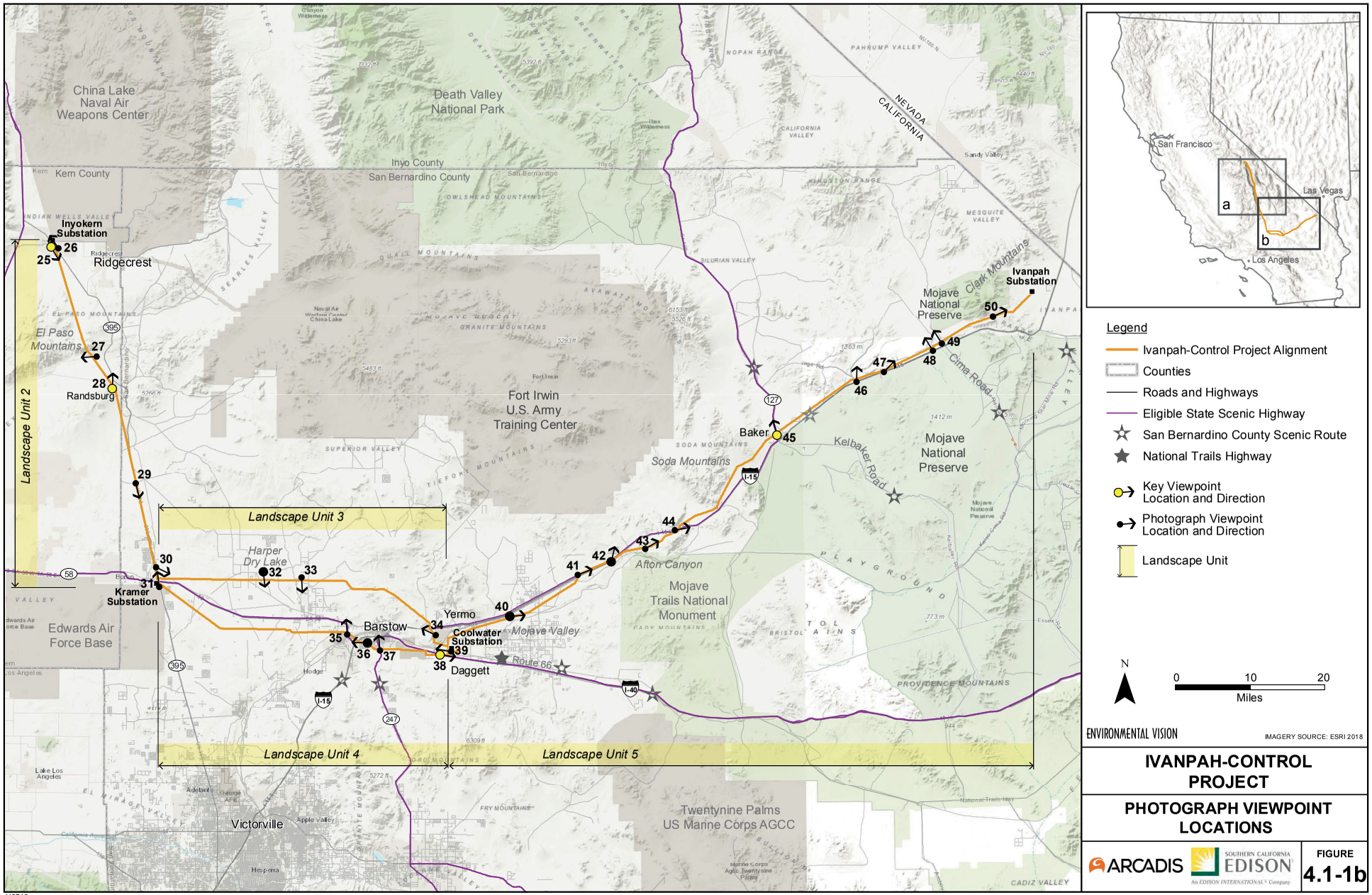

ENVIRONMENTAL VISION

IMAGERY SOURCE: ESRI 2018

IVANPAH-CONTROL PROJECT

PHOTOGRAPH VIEWPOINT LOCATIONS

ARCADIS

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

FIGURE
4.1-1b

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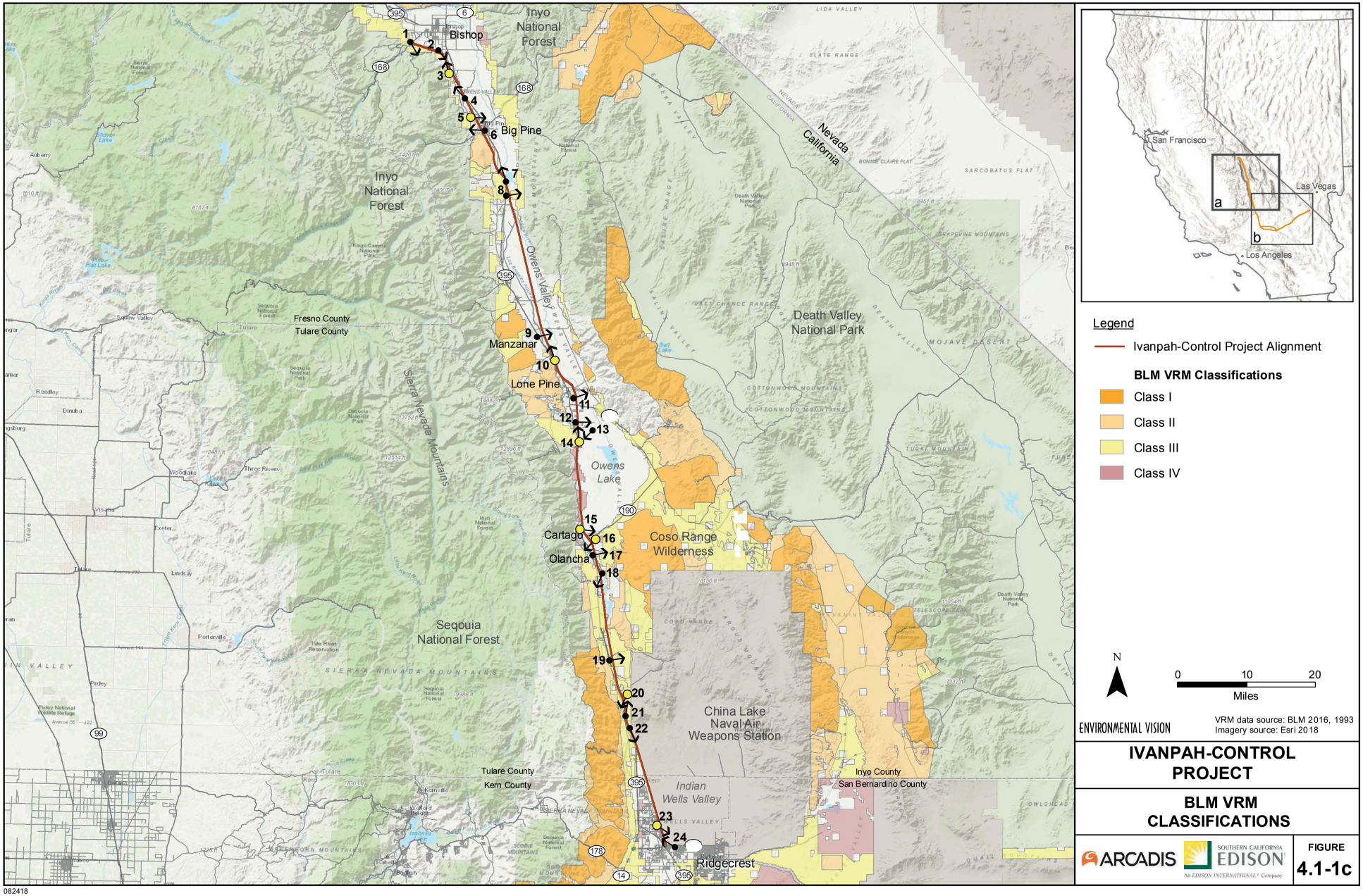
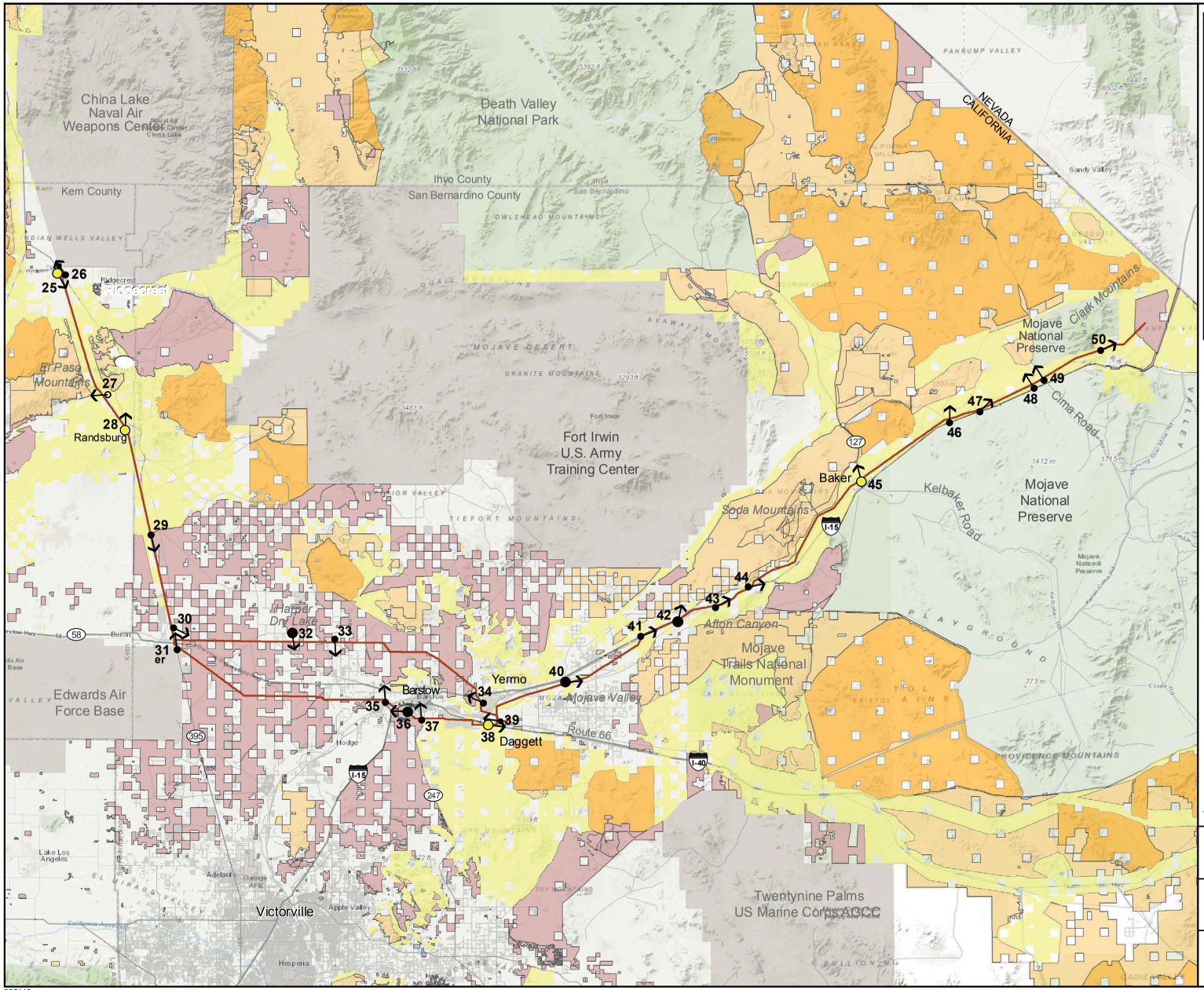
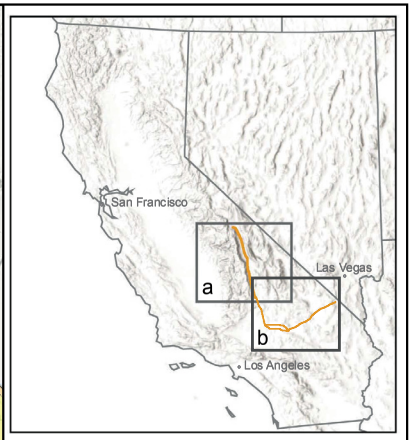


082418

DRAFT





Legend

Ivanpah-Control Project Alignment

BLM VRM Classifications

- Class I
- Class II
- Class III
- Class IV

N

0 10 20

Miles

ENVIRONMENTAL VISION

VRM data source: BLM 2016, 1993
Imagery source: Esri 2018

IVANPAH-CONTROL PROJECT

BLM VRM CLASSIFICATIONS

ARCADIS | SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE
4.1-1d

082418

1. SR-168 looking southeast toward Control Substation

2. Sunland Lane looking southeast

Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

REPRESENTATIVE PHOTOGRAPHS--SEGMENT 1

ARCADIS

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

FIGURE 4.1-2a

*3. Gerkin Road looking north

4. US-395 at Big Pine Canal looking northwest

IVANPAH-CONTROL PROJECT

REPRESENTATIVE PHOTOGRAPHS--SEGMENT 1

ARCADIS SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE 4.1-2b

* Key viewpoint; see Figure 4.1-10 for visual simulation
Refer to Figure 4.1-1 for photograph viewpoint locations

*5. Baker Creek Campground in Big Pine looking east

6. Cornell Street at Rossi Lane in Big Pine looking west

IVANPAH-CONTROL PROJECT

REPRESENTATIVE PHOTOGRAPHS--SEGMENT 1

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FIGURE 4.1-2c

* Key viewpoint; see Figure 4.1-10 for visual simulation
Refer to Figure 4.1-1 for photograph viewpoint locations

7. US-395 near Tinemaha Reservoir looking north

8. Division Creek Safety Roadside Rest Area looking east

Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

REPRESENTATIVE PHOTOGRAPHS--SEGMENT 1

ARCADIS

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FIGURE 4.1-2d

9. Manzanar National Historic Site looking east

*10. US-395 north of Lone Pine looking north

IVANPAH-CONTROL PROJECT

REPRESENTATIVE PHOTOGRAPHS--SEGMENT 1

ARCADIS

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FIGURE 4.1-2e

* Key viewpoint; see Figure 4.1-10 for visual simulation
Refer to Figure 4.1-1 for photograph viewpoint locations

11. Goodwin Road at Substation Road in Lone Pine Paiute-Shoshone Reservation looking northeast

12. Boulder Creek RV Resort looking east

Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

REPRESENTATIVE PHOTOGRAPHS--SEGMENT 1

ARCADIS

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FIGURE 4.1-2f

13. Owens Lake visitor information center looking southwest

*14. US-395 near Owens Lake looking north

IVANPAH-CONTROL PROJECT

REPRESENTATIVE PHOTOGRAPHS--SEGMENT 1

ARCADIS

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An EDISON INTERNATIONAL Company

FIGURE 4.1-2g

* Key viewpoint; see Figure 4.1-10 for visual simulation
Refer to Figure 4.1-1 for photograph viewpoint locations

*15. Whitney Street near Mojave Street in Cartago looking southeast

*16. SR-190 near Olancha looking southwest

IVANPAH-CONTROL PROJECT

REPRESENTATIVE PHOTOGRAPHS--SEGMENT 1

ARCADIS

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

FIGURE 4.1-2h

* Key viewpoint; see Figure 4.1-10 for visual simulation
Refer to Figure 4.1-1 for photograph viewpoint locations

17. Fall Road in Olancha looking northeast

18. North Haiwee Road near Haiwee Reservoir looking southwest

Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

REPRESENTATIVE PHOTOGRAPHS--SEGMENT 1

ARCADIS

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FIGURE 4.1-2i

19. Coso Junction Safety Roadside Rest Area looking east

*20. Fossil Falls Trailhead looking southwest

* Key viewpoint; see Figure 4.1-10 for visual simulation
Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

REPRESENTATIVE PHOTOGRAPHS--SEGMENT 1

ARCADIS

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FIGURE 4.1-2j

21. US-395 at Little Lake looking north

22. BLM OHV Road SE109 looking south

Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

REPRESENTATIVE PHOTOGRAPHS--SEGMENT 1

ARCADIS

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FIGURE 4.1-2k

*23. Patrice Avenue in Inyokern looking southeast

24. SR-178 looking northwest towards Inyokern Substation

IVANPAH-CONTROL PROJECT

REPRESENTATIVE PHOTOGRAPHS--SEGMENT 1

ARCADIS

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

FIGURE 4.1-2I

* Key viewpoint; see Figure 4.1-10 for visual simulation
Refer to Figure 4.1-1 for photograph viewpoint locations

*25. Syndor Avenue at Mercury Street in Inyokern looking southeast

26. US-395 near Inyokern looking northwest

* Key viewpoint; see Figure 4.1-10 for visual simulation
Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

REPRESENTATIVE PHOTOGRAPHS--SEGMENT 2

ARCADIS

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

FIGURE 4.1-2m

27. Garlock Road looking west

*28. Lexington Avenue in Randsburg looking north

IVANPAH-CONTROL PROJECT

REPRESENTATIVE PHOTOGRAPHS--SEGMENT 2

ARCADIS

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

FIGURE 4.1-2n

* Key viewpoint; see Figure 4.1-10 for visual simulation
Refer to Figure 4.1-1 for photograph viewpoint locations

29. Fremont Peak Road near US-395 looking south

30. US-395 near Kramer Junction looking southeast

Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

REPRESENTATIVE PHOTOGRAPHS--SEGMENT 2

ARCADIS

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

FIGURE 4.1-2o

31. US-395 at Kramer Junction looking north

32. Harper Dry Lake Wildlife Viewing Area looking south

Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

REPRESENTATIVE PHOTOGRAPHS--SEGMENT 3N

ARCADIS

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

FIGURE 4.1-2p

33. Holstead Road near Hinkley Road looking south

34. Daggett-Yermo Road near Silver Valley High School looking northwest

Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

REPRESENTATIVE PHOTOGRAPHS--SEGMENT 3N

ARCADIS

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

FIGURE 4.1-2q

35. SR-58 near Barstow looking north

36. Bonanza Road near H Street in Barstow looking west

Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

REPRESENTATIVE PHOTOGRAPHS--SEGMENT 3S

ARCADIS

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

FIGURE 4.1-2r

37. SR-247 near Barstow looking north

*38. I-40 near Daggett looking east

IVANPAH-CONTROL PROJECT

REPRESENTATIVE PHOTOGRAPHS--SEGMENT 3S

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SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

FIGURE 4.1-2s

* Key viewpoint; see Figure 4.1-10 for visual simulation
Refer to Figure 4.1-1 for photograph viewpoint locations

39. Route 66 - National Trails Highway near Daggett looking west

40. Carol Ann Drive at Crystal Lakes Estates, east of Barstow looking east

Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

REPRESENTATIVE PHOTOGRAPHS--SEGMENT 4

ARCADIS

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

FIGURE 4.1-2t

41. I-15 near Field Road looking northeast

42. Clyde V. Kane Safety Roadside Rest Area on I-15 looking north

Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

REPRESENTATIVE PHOTOGRAPHS--SEGMENT 4

ARCADIS

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

FIGURE 4.1-2u

43. Afton Canyon Road looking northeast

44. I-15 near Basin Road looking east

Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

REPRESENTATIVE PHOTOGRAPHS--SEGMENT 4

ARCADIS

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

FIGURE 4.1-2v

*45. SR-127 at Baker Junior High School looking north

46. Halloran Wash near Halloran Springs Road looking north

* Key viewpoint; see Figure 4.1-10 for visual simulation
Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

REPRESENTATIVE PHOTOGRAPHS--SEGMENT 4

ARCADIS

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

FIGURE 4.1-2w

47. I-15 west of Halloran Summit Road looking northeast

48. Valley Wells Safety Roadside Rest Area on I-15 near Cima Road looking northwest

Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

REPRESENTATIVE PHOTOGRAPHS--SEGMENT 4

ARCADIS

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

FIGURE 4.1-2x

49. Excelsior Mine Road looking northwest

50. Clark Mountain Road near Mojave Preserve looking northeast

Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

REPRESENTATIVE PHOTOGRAPHS--SEGMENT 4

ARCADIS

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

FIGURE 4.1-2y

Existing View from Gerkin Road, south of Bishop (VP3)
Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

EXISTING VIEW--GERKIN ROAD

ARCADIS SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE:
4.1-3a

Visual Simulation of IC Project
Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

VISUAL SIMULATION--GERKIN ROAD

ARCADIS SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE:
4.1-3b

Existing View from Baker Creek Campground in Big Pine (VP 5)
Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

**EXISTING VIEW--
BAKER CREEK CAMPGROUND**

ARCADIS SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE:
4.1-4a

Visual Simulation of IC Project
Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

VISUAL SIMULATION- BAKER CREEK CAMPGROUND

ARCADIS | SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE:
4.1-4b

Existing View from US-395 north of Lone Pine (VP 10)
Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

**EXISTING VIEW--
US 395 NORTH OF LONE PINE**

ARCADIS | SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE:
4.1-5a

Visual Simulation of IC Project
Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

VISUAL SIMULATION--
US 395 NORTH OF LONE PINE

ARCADIS | SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE:
4.1-5b

Existing View from US-395 near Owens Lake (VP 14)
Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

**EXISTING VIEW--
US 395 NEAR OWENS LAKE**

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FIGURE:
4.1-6a

Visual Simulation of IC Project
Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

**VISUAL SIMULATION--
US 395 NEAR OWENS LAKE**

ARCADIS SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE:

4.1-6b

Existing View from Whitney Street near Mojave Street in Cartago (VP 15)
Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

**EXISTING VIEW--
WHITNEY STREET**

ARCADIS SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE:
4.1-7a

Visual Simulation of IC Project
Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

**VISUAL SIMULATION--
WHITNEY STREET**

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FIGURE:
4.1-7b

Existing View from SR-190 near Olancha (VP 16)
Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

**EXISTING VIEW--
SR-190 NEAR OLANCHA**

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FIGURE:

4.1-8a

Visual Simulation of IC Project
Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

**VISUAL SIMULATION--
SR-190 NEAR OLANCHA**

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FIGURE:

4.1-8b

Existing View from Fossil Falls Trailhead (VP 20)
Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

EXISTING VIEW-- FOSSIL FALLS

ARCADIS SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE: 4.1-9a

Visual Simulation of IC Project
Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

VISUAL SIMULATION-- FOSSIL FALLS

ARCADIS SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE: 4.1-9b

Existing View from Patrice Avenue in Inyokern (VP 23)
Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

**EXISTING VIEW--
PATRICE AVENUE**

ARCADIS SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE:
4.1-10a

Visual Simulation of IC Project
Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

**VISUAL SIMULATION--
PATRICE AVENUE**

ARCADIS | SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE:
4.1-10b

Existing View from Syndor Avenue at Mercury Street in Inyokern (VP 25)
Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

EXISTING VIEW--SYNDOR AVENUE

ARCADIS SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE:
4.1-11a

Visual Simulation of IC Project
Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

VISUAL SIMULATION--SYNDOR AVENUE

ARCADIS | SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE:
4.1-11b

Existing View from Lexington Avenue in Randsburg (VP 28)
Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

**EXISTING VIEW--
LEXINGTON AVENUE**

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FIGURE:
4.1-12a

Visual Simulation of IC Project
Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

VISUAL SIMULATION-LEXINGTON AVENUE

ARCADIS | SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE: 4.1-12b

Existing View from I-40 near Daggett (VP 38)
Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

**EXISTING VIEW--
I-40 NEAR DAGGETT**

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**FIGURE:
4.1-13a**

Visual Simulation of IC Project
Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

**VISUAL SIMULATION--
I-40 NEAR DAGGETT**

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FIGURE:
4.1-13b

Existing View from SR-127 at Baker Junior High School (VP 45)
Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

**EXISTING VIEW--
SR-127 AT BAKER JUNIOR
HIGH SCHOOL**

ARCADIS | SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE:
4.1-14a

Visual Simulation of IC Project
Refer to Figure 4.1-1 for photograph viewpoint locations

IVANPAH-CONTROL PROJECT

**VISUAL SIMULATION--
SR-127 AT BAKER JUNIOR
HIGH SCHOOL**

ARCADIS SOUTHERN CALIFORNIA EDISON An EDISON INTERNATIONAL Company

FIGURE:
4.1-14b