4.11 Land Use and Planning

This section discusses the existing land use along the IC Project Alignment and the potential impacts to existing land use as a result of construction and operation of the Full-Rebuild Concept and its Alternatives. For purposes of this section, Project Area is defined as the locations where work described in *Chapter 3—Project Description* would be performed. Figureset 4.11-1 and Figureset 4.11-2 show the designated land use and zoning along the IC Project Alignment.

4.11.1 Environmental Setting

The existing land use along the IC Project Alignment is primarily open space, with scattered rural residential areas and widely-distributed communities, including:

- Segment 1, Inyo County: Wilkerson, Big Pine, Lone Pine, Cartago, Olancha
- Segment 1, Kern County: Inyokern
- Segment 2, Kern County: Inyokern and Randsburg
- Segment 2, San Bernardino County: Kramer Junction
- Segment 3N, San Bernardino County: Kramer Junction and Daggett
- Segment 3S, San Bernardino County: Kramer Junction, Hinkley, Lenwood, City of Barstow, and Daggett
- Segment 4, San Bernardino County: Daggett and Baker

The existing subtransmission lines that would be rebuilt under the Full-Rebuild Concept are located in and adjacent to these communities and adjacent to scattered rural residences outside of communities.

Industrial uses, including mining and solar electric generating facilities, are found adjacent to Segments 2, 3N, and the eastern portions of Segment 4, and along Segments 3N and 3S in the vicinity of the City of Barstow. Institutional uses, including military facilities, are located adjacent to all Segments and adjacent to Inyokern Substation, Kramer Substation, and Coolwater Substation.

Much of the IC Project Alignment is located on lands managed by the Bureau of Land Management, Bureau of Indian Affairs, China Lake Naval Air Weapons Station, Edwards Air Force Base, and Marine Corps Logistics Base-Barstow.

4.11.1.1 Federal Land Use Designations

4.11.1.1.1 Bureau of Land Management, Bishop Resource Management Plan

Portions of Segment 1 are located in the Bishop Resource Management Plan Management Area 7, which encompasses 153,750 acres of BLM-managed land in the Owens Valley between Bishop and Lone Pine. The area contains the scenic Alabama Hills, three developed campgrounds, and areas of dispersed recreation use. There is also demand for community expansion in an area land-locked by City of Los Angeles (Department of Water and Power) and federal lands. The area is managed for the full spectrum of uses, with an emphasis on recreational use and environmental education while providing for land disposals. (BLM 1993)

Portions of Segment 1 are located in Management Area 9, which contains 15,790 acres of BLM-managed land near Owens Lake. The area is managed to protect and enhance wildlife habitat. (BLM 1993)

4.11.1.1.2 Bureau of Land Management, Desert Renewable Energy Conservation Plan, Land Use Plan Amendment

The IC Project Alignment is located on lands managed per their designation in the Desert Renewable Energy Conservation Plan Land Use Plan Amendment (DRECP LUPA). The DRECP LUPA establishes Conservation and Management Actions (CMAs) that designate allowable and non-allowable actions for siting, design, pre-construction, construction, maintenance, implementation, operation, and decommissioning activities on BLM land.

4.11.1.1.2.1 Special Recreation Management Areas

Special Recreation Management Areas (SRMAs) are high-priority areas for outdoor recreation opportunities, as defined in the BLM Land Use Planning Handbook. SRMAs help the BLM direct recreation program priorities toward areas with high resource values, high levels of public concern, or significant amounts of recreational activity. The following SRMAs are crossed by the IC Project Alignment: Alabama Hills and Olancha (Segment 1); El Paso/Rand and Red Mountain (Segment 2); Stoddard/Johnson (Segment 3S); and Afton Canyon (Segment 4).

4.11.1.1.2.2 Extensive Recreation Management Areas

Extensive Recreation Management Areas (ERMAs) are BLM administrative units that require specific management consideration to address recreation use and demand. These areas are managed by the BLM to support and sustain principal recreation activities and associated qualities and conditions. Recreation management actions within an ERMA are limited to only those of a custodial nature. Segment 4 of the IC Project Alignment crosses the Shadow Valley and Ivanpah Valley ERMAs.

4.11.1.1.2.3 California Desert National Conservation Lands

The LUPA identifies California Desert National Conservation Lands, in accordance with the Omnibus Public Land Management Act of 2009 (Omnibus Act), which are nationally significant landscapes within the CDCA with outstanding cultural, ecological, and scientific values. The LUPA also establishes CMAs to conserve, protect, and restore these landscapes

4.11.1.1.2.4 Areas of Critical Environmental Concern

The IC Project Alignment crosses a number of BLM-designated Area of Critical Environmental Concern. These are presented below.

Owens Lake. The Owens Lake Area of Critical Environmental Concern (ACEC) is managed by the Ridgecrest Field Office. It encompasses 10,300 acres, and was established to protect cultural resources and wildlife and plant resources.

Olancha Greasewood. The Olancha Greasewood ACEC encompasses 25,600 acres dedicated to the protection of an unusual plant assemblage (a Great Basin Enclave with greasewood [*Sarcobatus vermiculatus*] as the dominant plant).

Rose Springs. The Rose Springs ACEC encompasses 800 acres. The ACEC was designated for significant prehistoric cultural resource values associated with the Rose Spring Archaeological site complex. The site is eligible for listing on the National Register of Historic Places.

Fossil Falls. The Fossil Falls ACEC encompasses 1,600 acres. This area was designated for relevant wildlife values, significant prehistoric and historic cultural values, unique geological formations east of the Sierra Nevada and west of the Coso Range Volcanic Field. The current ACEC boundary includes portions of a larger Fossil Falls National Register Archaeological District.

Western Rand Mountains. The Western Rand Mountains ACEC encompasses 30,300 acres. The ACEC provides high density Desert Tortoise habitat and encompasses designated desert tortoise critical habitat. This area provides critical tortoise habitat linkage. It is considered to be the evolutionary home of the Desert Tortoise and the location of the highest historic Desert Tortoise population density throughout their range. The ACEC was designated because of the Desert Tortoise population conflicting with surface use activities. It overlaps the Fremont-Kramer ACEC which is critical desert tortoise habitat and the Mojave Ground Squirrel Conservation Area. It also contains habitat that supports other special status species including the Burrowing Owl.

Fremont-Kramer. The Fremont-Kramer ACEC encompasses more than 310,000 acres that provide high density Desert Tortoise habitat. This area contains Desert Tortoise Critical Habitat designated by the FWS. This habitat is considered t essential to the recovery of the federally listed Desert Tortoise. This area provides critical tortoise habitat linkage. The area also encompasses essential movement corridors which link wildlife habitats in the Western Rand Mountains and Fremont Valley to the Cuddeback Lake area and to both the Golden Valley and Grass Valley Wildernesses. The area is managed for tortoise conservation and recovery until which time the tortoise may be delisted as per criteria given in the Recovery Plan.

El Paso to Golden Valley Wildlife Corridor. The El Paso to Golden Valley Wildlife Corridor ACEC encompasses 57,900 acres. It was established to protect wildlife and vegetative resources and geologic features.

Harper Dry Lake. The Harper Dry Lake ACEC encompasses 500 acres; the ACEC was established to protect riparian and wildlife resources.

Cronese Basin. The Cronese Basin ACEC encompasses 8,500 acres; it was established to protect cultural resources.

Parish's Phacelia. The Parish's Phacelia ACEC encompasses 500 acres; it was established to protect vegetative resources, in particular the Parish's phacelia.

Rainbow Basin/Owl Canyon. The Rainbow Basin/Owl Canyon ACEC encompasses 4,100 acres. It is designated to protect wildlife resources, geologic features, and paleontological resources.

Soda Mountains Expansion. The Soda Mountains Expansion ACEC encompasses 16,700 acres. It is designated to protect wildlife resources and cultural values.

Superior-Cronese. The Superior-Cronese ACEC encompasses more than 397,000 acres. This area provides high density Desert Tortoise habitat and encompasses designated desert tortoise critical habitat. This area provides critical tortoise habitat linkage and Desert Tortoise habitat capable of sustaining viable tortoise populations.

Mojave Fringe-toed lizard. The Mojave Fringe-toed lizard Area of Critical Environmental Concern encompasses 22,400 acres designated to conserve blow sand and Dune Habitat of Mojave Fringe-toed Lizard and sensitive plant species.

Halloran Wash. The Halloran Wash Area of Critical Environmental Concern encompasses 1,700 acres designated to protect a variety of prehistoric cultural resources including rock art, prehistoric turquoise mines, and encampments.

Ivanpah. The Ivanpah Area of Critical Environmental Concern encompasses 73,800 acres. It was established to protect biological values, including habitat quality, populations of sensitive species (San

Bernardino milk-vetch (*Astragalus bernardinus*), polished blazing star (*Mentzelia polita*), and Rusby's desert-mallow (*Sphaeralcea rusbyi* var. *eremicola*)), and landscape connectivity while providing for compatible public uses. The ACEC also provides protection and special management attention for sensitive cultural resources that will enhance their status and condition while providing for uses that are compatible with the protection and enhancement of sensitive resources.

Shadow Valley. The Shadow Valley ACEC includes 197,500 acres designated to protect wildlife resources and cultural resources. The area has a unique genetic unit of desert tortoise, and provides habitat and supports regionally important populations of desert bighorn sheep and desert tortoise. The area has relevant biological (sensitive species habitat and wildlife landscape connections) and cultural resources (Old Spanish Trail and historic and prehistoric sites).

Manix. The Manix ACEC encompasses 2,900 acres designated to protect paleontological resources, cultural values, and wildlife resources. The area contains known fossil sites, as well as habitat specific to the Mojave fringe-toed lizard.

Mojave Monkeyflower. The Mojave Monkeyflower ACEC is designated to protect sensitive and restrictive plant species, in particular the Mojave monkeyflower (*Mimulus mohavense*).

4.11.1.1.2.5 Bureau of Land Management, General Public Lands

The IC Project Alignment crosses lands designated as General Public Lands; these are BLM-administered lands that do not have a specific land allocation or designation.

4.11.1.1.2.6 Bureau of Land Management, Development Focus Areas

The IC Project Alignment crosses lands designated as Development Focus Areas; these represent areas within which the activities associated with solar, wind, and geothermal development, operation, and decommissioning will be allowed, streamlined and incentivized under the DRECP. Transmission development and operation will occur in previously designated corridors and other identified areas inside the DFAs.

4.11.1.1.3 Wilderness Areas

No portion of the IC Project Alignment traverses a BLM Wilderness Area. Portions of Segment 1 are located within 1 mile of the Golden Trout Wilderness and the Sacatar Trail Wilderness, and portions of Segment 4 are located within 1 mile of the Mojave Wilderness and the Hollow Hills Wilderness.

4.11.1.1.4 Mojave Trails National Monument

The Mojave Trails National Monument is a national monument located between Joshua Tree National Park and the Mojave National Preserve along Route 66 in San Bernardino County. The Mojave Trails National Monument is managed by the BLM and covers approximately 965,000 acres. Segment 4 spans the northwest corner of the Mojave Trails National Monument.

4.11.1.1.5 Bureau of Indian Affairs

The IC Project Alignment crosses a single Bureau of Indian Affairs-owned parcel at the southwest edge of the community of Big Pine in Inyo County. This parcel contains a water storage tank and access road. No management plan for this parcel has been identified. Inyo County has designated the Land Use of this parcel Tribal Lands (TL) and has zoned it Not Zoned - Tribal Lands (TL).

4.11.1.1.6 Military Lands

The southern portion of Segment 1 is located on lands managed by the U.S. Navy's China Lake Naval Air Weapons Station (CLNAWS). The project alignment is located within the Baker Range; the Range's principal functions are weapon target sites and ordnance impact areas. (U.S. Navy 2002) While the IC Project Alignment is located on lands managed by CLNAWS, it is located outside the security fenceline.

The southern portion of Segment 2 and the western portion of Segment 3S adjacent to Kramer Substation are located on an unfenced portion of Edwards Air Force Base. The IC Project Alignment is located in the northeast corner of Management Area B, Precision Impact Range Area (PIRA). The PIRA covers a large portion of the eastern part of the Base. It is used for aircraft flight testing, explosive ordnance disposal, and the placement of communication equipment. This area is used to test aircraft targeting equipment and for practice in precision bombing. Other activities and uses in the PIRA are severely restricted and occur only occasionally, scheduled around the range use. (Edwards Air Force Base 2001) The project alignment in Segments 2 and 3S are existing utility corridors in this portion of Edwards Air Force Base.

The eastern portion of Segment 3S south of the City of Barstow is located on a portion of the United States Marine Corps Logistics Base (MCLB) Barstow; the IC Project Alignment is located outside the fenced security perimeter and routed through an area with no installation facilities. The primary mission of MCLB Barstow is to procure, maintain, store, and issue supplies and equipment for Marine Corps facilities worldwide, as well as to repair and rebuild DoD equipment. The Nebo Area contains base headquarters and administration, storage, recreational activities, shopping, and housing functions. The Yermo Annex is used for storage and industrial activities. The Rifle Range Complex contains three small arms ranges and is the only area on the installation where military training occurs.

4.11.1.2 County and City Land Use and Zoning Designations

The Land Use and Zoning designations for parcels crossed by the IC Project Alignment are presented in Table 4.11-1 below.

Table 4.11-1: Land Use and Zoning Designations

Jurisdiction	General Plan Land Use Designation	Zoning
Inyo County	Agriculture (A) Natural Hazards (NH) Natural Resources (NR) Open Space and Recreation (OSR) Residential Medium Density (RM) Rural Protection (RP) Residential Rural High Density (RRH) State and Federal Lands (SFL) Tribal Lands (TL) Residential Estate (RE) Public Service Facilities (PF) Residential Ranch (RR) General Industrial (GI)	Open Space - 40 acre minimum (OS-40) Single Residence Mobile Home Combined - 5,800 sq ft minimum (RMH-5,800) Multifamily Residential - 2 acre minimum - mobile home (R2-2.0-MH) Rural Residential - 1 acre minimum - mobile home (RR-1.0-MH) Rural Residential - 5.0 acre minimum - mobile home (RR-5.0-MH) Not Zoned - Tribal Lands (TL) Rural Residential - 10 acre minimum - mobile home (RR-10.0-MH) General Industrial and Extractive - 10 acre minimum (M1-10.0) Planned Unit Development (PUD) Single Residence Mobile Home Combined - 1 acre minimum (RMH-1.0)
Kern County	Map Code 1.1 (State and Federal Land) Map Code 3.3 (Other Facilities)	Limited Agriculture (A-1) Open Space (OS)

Table 4.11-1: Land Use and Zoning Designations

Jurisdiction	General Plan Land Use Designation	Zoning
	Map Code 4.1 (Low Density Residential) Map Code 4.2 (Resource Reserve, Minimum 20 Acre Parcel Size) Map Code 5.5 (1 Dwelling Unit/Net Acre Maximum) Map Code 5.6 (Residential - Minimum 2.5 Gross Acres/Unit) Map Code 5.7 (5.0 Gross Acres/Dwelling Unit Maximum) Map Code 5.75 (10.0 Gross Acres/Dwelling Unit Maximum) Map Code 5.8 (20+ Gross Acres/Dwelling Unit Maximum) Map Code 8.3 (Extensive Agriculture, Minimum 20 Acre Parcel Size) Map Code 8.4 (Mineral and Petroleum, Minimum 5 Acre Parcel Size) Map Code 8.5 (Resource Management, Minimum 20 Acre Parcel Size)	Estate 1-acre (E-1) Estate 2.5-acre (E-2.5) Estate 5-acre (E-5) Estate 10-acre (E-10) Estate 20-acre (E-20) Estate 40-acre (E-40) Estate 80-acre (E-80) Natural Resource 20-acre (NR-20) Light Industrial (M-1)
San Bernardino County	CR (Rural Commercial), FW (Floodway) IC (Community Industrial), IN (Institutional) IR (Regional Industrial) RC (Resource Conservation) RL (Rural Living) RS (Single Residential) SD (Special Development)	San Bernardino County utilizes a “one-map approach” that combines both General Plan land use designations and zoning classifications.
City of Barstow	GI (General Industrial) DU (Diverse Use) LDR (Low Density Residential) SFR (Single Family Residential) ROS (Resource Conservation/Open Space) IOS/ROS (Interim Open Space/Resource Conservation)	I (Industrial) DU (Diverse Use) LDR (Low Density Residential) OS (Open Space) MZ (Military Zone)

4.11.2 Regulatory Setting

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

4.11.2.1 Federal

4.11.2.1.1 Federal Land Policy and Management Act

Under the Federal Land Policy Management Act (FLPMA), Federal land management agencies are required to acknowledge local plans and participation (Title 43, United States Code Annotated (USCA) Section 1712(c)(9)).

4.11.2.1.2 Bishop Resource Management Plan

The Bishop Resource Management Plan (RMP) contains the BLM's final land use decisions for managing public lands administered by the Bishop Resource Area. The Bishop RMP designates a 1/2 mile wide utility corridor along the "115 kV SCE Double Circuit Line from the Bishop Substation to where it exits the resource area near Olancha." This line is the subtransmission line addressed in the IC Project.

4.11.2.1.3 Desert Renewable Energy Conservation Plan, Land Use Plan Amendment

The Desert Renewable Energy Conservation Plan (DRECP) Land Use Plan Amendment amends the California Desert Conservation Area (CDCA) Plan and Bishop Resource Management Plan (BRMP). The goal of the DRECP is to "provide a streamlined process for the development of utility-scale renewable energy generation and transmission consistent with federal and state renewable energy targets and policies, while simultaneously providing for the long-term conservation and management of Special Status Species and vegetation types as well as other physical, cultural, scenic and social resources within the DRECP Plan Area through the use of with durable regulatory mechanisms." (BLM 2016) The DRECP LUPA identifies specific Conservation and Management Actions (CMAs) for lands identified as California Desert National Conservation Lands, ACECs, Wildlife Allocations, SRMAs, ERMAs, DFAs, and GPLs. These CMAs are analogous to the multiple-use classes (MUCs) used in previous BLM land use management documents.

4.11.2.2 State

4.11.2.2.1 California Public Utilities Commission

Pursuant to California Public Utilities Commission (CPUC) General Order (GO) 131-D, the CPUC has sole and exclusive jurisdiction over the siting and design of electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities in the State of California. Under California Environmental Quality Act (CEQA), the CPUC is the Lead Agency with respect to such IC Project elements within the State of California. SCE is required to comply with GO 131-D and is seeking a Permit to Construct from the CPUC for the IC Project.

4.11.2.2.2 State Lands Commission and Wildlife Conservation Board

The IC Project Alignment crosses parcels owned by the State of California and managed by the State Lands Commission and the State of California Department of Fish and Wildlife's Wildlife Conservation Board.

The parcels managed by the State Lands Commission are "school lands." The Commission's Strategic Plan, 2016-2020 notes these lands are:

> "...what remain of the nearly 5.5 million acres throughout the State that Congress granted to California in 1853 to benefit public education. School lands were placed into a statutory trust in 1984 when the Legislature enacted the School Land Bank Act (Act) and created the School Land Bank Fund. The Commission is the trustee of the Fund. Today these lands support common schools and the revenue, by statute, supports the State Teachers' Retirement System. Over half of school lands are located in the California Desert. The Act states that school lands and attendant interests are to be proactively managed and enhanced to provide an economic base in support of public education. The Act further requires the Commission to take all action necessary to fully develop school lands, indemnity interests, and attendant mineral interests into a permanent and productive resource base." (California State Lands Commission 2015)

The parcels owned by the California Wildlife Conservation Board (CWCB) are managed according to the Board's Strategic Plan. (CWCB 2014) The Strategic Plan is organized around five major goal areas. The first three Strategic Plan goals include WCB "mission goals," which relate directly to fulfilling WCB's stated mission. The final two goals are supporting goals—without these areas of focus, achieving the organization's mission would not be possible. The five goal areas are:

- Environmental Protection and Conservation
- Environmental Restoration and Enhancement
- Public Use and Recreation
- Public Awareness and Education
- Fiscal and Organizational Effectiveness

No specific management plans for these state-owned parcels have been identified.

4.11.2.3 Local

As noted above, 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.

4.11.2.3.1 Kern County General Plan, Energy Element

The Kern County Energy Element is a comprehensive document which defines critical energy related issues facing the County and sets forth goals, policies, and implementation measures to protect the County's energy resources and encourage orderly energy development while affording the maximum protection for the public's health, safety, and the environment.

The Energy Element has three primary objectives:

- Resource management and protection.
- Establishing development standards to provide for the protection of the environment, public health, and safety.
- Promoting and facilitating energy development.

Section 5.4.7, Transmission Lines, states a goal to "encourage the safe and orderly development of transmission lines to access Kern County's electrical resources along routes, which minimize potential adverse environmental effects." Achievement of this goal will be driven by a number of Policies, including:

1. The County should encourage the development and upgrading of transmission lines and associated facilities (e.g., substations) as needed to serve Kern County's residents and access the County's generating resources, insofar as transmission lines do not create significant environmental or public health and safety hazards.
2. The County shall review all proposed transmission lines and their alignments for conformity with the Land Use, Conservation, and Open Space Element of this General Plan.

3. In reviewing proposals for new transmission lines and/or capacity, the County should assert a preference for upgrade of existing lines and use of existing corridors where feasible.
4. The County should work with other agencies in establishing routes for proposed transmission lines.
5. The County should discourage the siting of above-ground transmission lines in visually sensitive areas.
6. The County should encourage new transmission lines to be sited/configured to avoid or minimize collision and electrocution hazards to raptors.

4.11.2.3.2 Kern County, Zoning Ordinance

Per Section 19.08.090 of the Kern County Zoning Ordinance, the provisions of the Ordinance do not apply to the construction, installation, operation and maintenance of the types of facilities that would be replaced under the IC Project:

> 19.08.090 - Public utility uses—County review.
> The provisions of this title shall not be construed to apply to the construction, installation, operation and maintenance of public utility distribution and transmission lines or supporting towers, and poles and underground facilities for providing gas, water, electricity, or telephone and telegraph services by public utility companies or any other company under the jurisdiction of the California Public Utilities Commission. Additionally, the provisions of this title shall not apply to privately constructed, operated or maintained electrical transmission lines and towers, provided that said lines are constructed, maintained and operated in accordance with, and subject to, the requirements of the California Public Utilities Commission and further provided that said transmission lines are tied into a public utility grid system, and except as otherwise provided for in Chapter 19.64. Microwave and cellular transmission facilities shall be subject to the provisions of this title, except where local land use authority is expressly preempted by state or federal laws or regulations.

4.11.2.3.3 Inyo County General Plan, Land Use Element

This Land Use Element identifies goals, policies and implementation measures designed to encourage and allow appropriate development throughout the County. The Land Use Element also addresses public services and utilities.

The Gas and Electrical Facilities section of the Land Use Element includes the following:

> GOAL PSU-10. To provide efficient and cost-effective utilities that serves the existing and future needs of people in the unincorporated areas of the County.
>
> Policy PSU-10.1 Expansion of Services. The County shall work with local electric utility companies to design and locate appropriate expansion of electric systems, while minimizing impacts to agriculture and minimizing noise, electromagnetic, visual, and other impacts on existing and future residents

The Land Use Element designations for properties traversed by the IC Project Alignment are presented in Table 4.11-1.

4.11.2.3.4 Inyo County, Zoning Ordinance

Section 18.03.040, Interpretation, of the Zoning Ordinance of the County of Inyo, California, states:

> "The provisions of this title shall be held to the minimum requirements. Nothing in this title shall repeal or amend any ordinance requiring a permit or license to cover any business activity. These regulations are not intended to impair or interfere with any existing easement, covenant or other agreement between

parties; provided, however, that where this title imposes a greater restriction upon any use or upon the height or bulk of a building or structure, or requires larger building sites, yards or other open spaces than are imposed or required by any other law, ordinance, covenant or easement, than the provisions of this title shall control. (Ord. 943 § 4, 1994.)"

4.11.2.3.5 San Bernardino County General Plan, Land Use Element

The Land Use Element is a guide for the County of San Bernardino's future development. It designates the distribution and general location of land uses, such as residential, retail, industrial, open space, recreation, and public areas. The Land Use Element also addresses the permitted density and intensity of the various land use designations.

San Bernardino County uses a "one-map approach" that permits the use of a single map showing both General Plan land use designations and zoning classifications. The one-map approach assures that there will always be land use consistency between the County's General Plan and its Zoning Code. There are 18 land use zoning districts that apply only to privately owned lands in the County and not to the lands controlled by other jurisdictions. The designations for properties traversed by the IC Project Alignment are presented in Table 4.11-1.

4.11.2.4 San Bernardino County, Code of Ordinances

Division 2: Land Use Zoning Districts and Allowed Land Uses of the Code of Ordinances establishes allowable uses for land use zoning designations. For all land use zoning designations, the Code notes that "transmission lines...are regulated and approved by the Public Utilities Commission. See alternate review procedures in §85.02.050, Alternate Review Procedures."

Section 85.02.050, Alternate Review Procedures of the Code of Ordinances states in relevant part:

"Unless preempted by State or Federal Law, the specific land uses listed in the land use tables in Chapters 82.03 through 82.22 shall be allowed without a Conditional Use Permit when the following alternate review procedures have been completed to the satisfaction of the Director.
...
(b) Acceptable Alternate Procedures. Projects approved by the following agencies shall qualify as the alternate review authority:
...
5) Projects approved by the State Public Utilities Commission."

4.11.2.4.1 City of Barstow General Plan, Land Use Element

The Land Use Element establishes the vision of Barstow for its long-term development. The land use designations for parcels within the City crossed by the IC Project Alignment are shown in Table 4.11-1.

4.11.2.4.2 City of Barstow, Route 66 Business Corridor/Downtown Business and Cultural District Specific Plan

The City of Barstow has developed the Route 66 Business Corridor / Downtown Business and Cultural District Specific Plan to identify wayfinding and branding, land use and urban design guidelines for the corridor. The Specific Plan does not contain any goals, policies, or strategies of relevance to the IC Project.

4.11.2.4.3 City of Barstow, The Code of the City

Title 19, Zoning, Chapter 19.24, Other Uses, Section 19.24.110, Public utility lines, of The Code of the City of Barstow states:

"The provisions of this title shall not be so construed as to limit or interfere with the use of property in any land use district for installation, maintenance and operation of public utility pipelines and under aerial transmission and supply lines, when located in accordance with the applicable rules and regulations of the Public Utilities Commission of the state of California within rights-of-way, easements, franchises or other ownerships of such public utilities."

4.11.3 Significance Criteria

The significance criteria for assessing the impacts to land use and planning are derived from the California Environmental Quality Act (CEQA) Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would:

- Physically divide an established community
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Proposed Project (including, but not limited: to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect
- Conflict with any applicable habitat conservation plan or natural community conservation plan

4.11.4 Impact Analysis

4.11.4.1 Would the Project physically divide an established community?

4.11.4.1.1 Construction

No Impact. The Full-Rebuild Concept is located in rural areas where the land is undeveloped and is generally described as open space. The existing subtransmission lines that would be rebuilt under the Full-Rebuild Concept are currently, and have historically been, located in and adjacent to a number of established communities along the alignment. The reconstructed subtransmission line would be located within, or immediately proximate to, the existing alignment, and thus would also be present in these existing communities. Neither the replacement subtransmission structures, the conductor, nor fiber optic cable would physically divide an established community. Therefore, no impacts would occur under this criterion during construction.

4.11.4.1.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing operation and maintenance (O&M) activities, including inspections, along the subtransmission lines that would be rebuilt under the Full-Rebuild Concept. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the Full-Rebuild Concept, and therefore no impacts would be realized under this criterion during operations and maintenance.

4.11.4.2 Would the Project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Proposed Project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

4.11.4.2.1 Construction

No Impact. The Full-Rebuild Concept would be re-constructed in existing and new ROWs located on federal, state, and private lands within Inyo County, Kern County, San Bernardino County, and the City of Barstow.

In addition to the fact that GO 131-D preempts local agencies from regulating land use matters associated with investor-owned utilities, as presented in the Regulatory Setting section, the construction or operation of electric infrastructure as included in the Full-Rebuild Concept is not prohibited in any of the land uses designated in the Kern County General Plan, Inyo County General Plan, San Bernardino County General Plan, or the City of Barstow General Plan. The Full-Rebuild Concept is consistent with Policy PSU-10.1 of the Inyo County General Plan, as the reconstruction of the subtransmission lines in and immediately proximate to the existing alignment would minimize impacts to agriculture and would minimize noise, electromagnetic, visual, and other impacts on existing and future residents. Further, the Full-Rebuild Concept is consistent with Policies contained in the Kern County General Plan Energy Element, as it is routed to minimize potential adverse environmental effects and meets the County's preference for the use of existing corridors where feasible.

As presented in the Regulatory Setting section, the provisions of the Kern County Zoning Ordinance do not apply to the construction, installation, operation and maintenance of transmission lines or supporting towers, and poles for providing electricity services by public utility companies or any other company under the jurisdiction of the CPUC.

The Zoning Ordinance of the County of Inyo is silent regarding the use of all zones crossed by the Full-Rebuild Concept for the construction or operation of electric transmission lines; the reconstruction of existing electrical infrastructure is not listed as a prohibited use in any zoning designation.

Transmission lines regulated and approved by the CPUC are an allowable use in all land use zoning designations in San Bernardino County and the City of Barstow. Therefore, reconstruction of the existing subtransmission lines does not conflict with these zoning ordinances.

The Full-Rebuild Concept would reconstruct the "115 kV SCE Double Circuit Line" that is located within a one half-mile wide utility corridor designated in the Bishop RMP, and thus is a recognized existing land use in the Bishop RMP.

The Full-Rebuild Concept crosses BLM lands designated as California Desert National Conservation Lands, ACECs, ERMAs, SRMAs, GPL, and DFA. The LUPA-wide CMAs permit transmission lines in ACECs, DFAs, and California Desert National Conservation Lands. The DRECP LUPA does not include any CMAs that permit or disallow transmission lines in SRMAs, ERMAs, or GPL lands. The DRECP LUPA recognizes valid existing rights such as those held by SCE and that would be utilized under the Full-Rebuild Concept. The BLM will evaluate the applicability of valid existing rights on a case-by-case basis, and in situations where the BLM retains authority to require design features or mitigation, the BLM will apply DRECP LUPA decisions to the extent authorized by the relevant statutes and regulations. The Full-Rebuild Concept would comply with all conditions and measures included in federal authorizations for the purpose of avoiding or mitigating an environmental effect. Therefore, construction of the Full-Rebuild Concept would be consistent with the LUPA. Accordingly, no impacts would occur under this criterion.

4.11.4.2.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing operation and maintenance (O&M) activities, including inspections, along the subtransmission lines that would be rebuilt under the Full-Rebuild Concept. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the Full-Rebuild Concept, and therefore no impacts would be realized under this criterion during operations and maintenance.

4.11.4.3 Would the Project conflict with any applicable habitat conservation plan or natural community conservation plan?

4.11.4.3.1 Construction

No Impact. No portion of the Full-Rebuild Concept is located in an area covered by a Natural Community Conservation Plan or Habitat Conservation Plan. Therefore, no impact would occur under this criterion.

4.11.4.3.2 Operations

No Impact. No portion of the Full-Rebuild Concept is located in an area covered by a Natural Community Conservation Plan or Habitat Conservation Plan. Therefore, no impact would occur under this criterion.

4.11.5 Applicant Proposed Measures

Because no impacts to land use or planning would occur as a result of the Full-Rebuild Concept, no avoidance and minimization measures are proposed.

4.11.6 Alternatives

Alternatives to the Full-Rebuild Concept are addressed in Section 5.2, Description of Project Alternatives and Impact Analysis.

4.11.7 References

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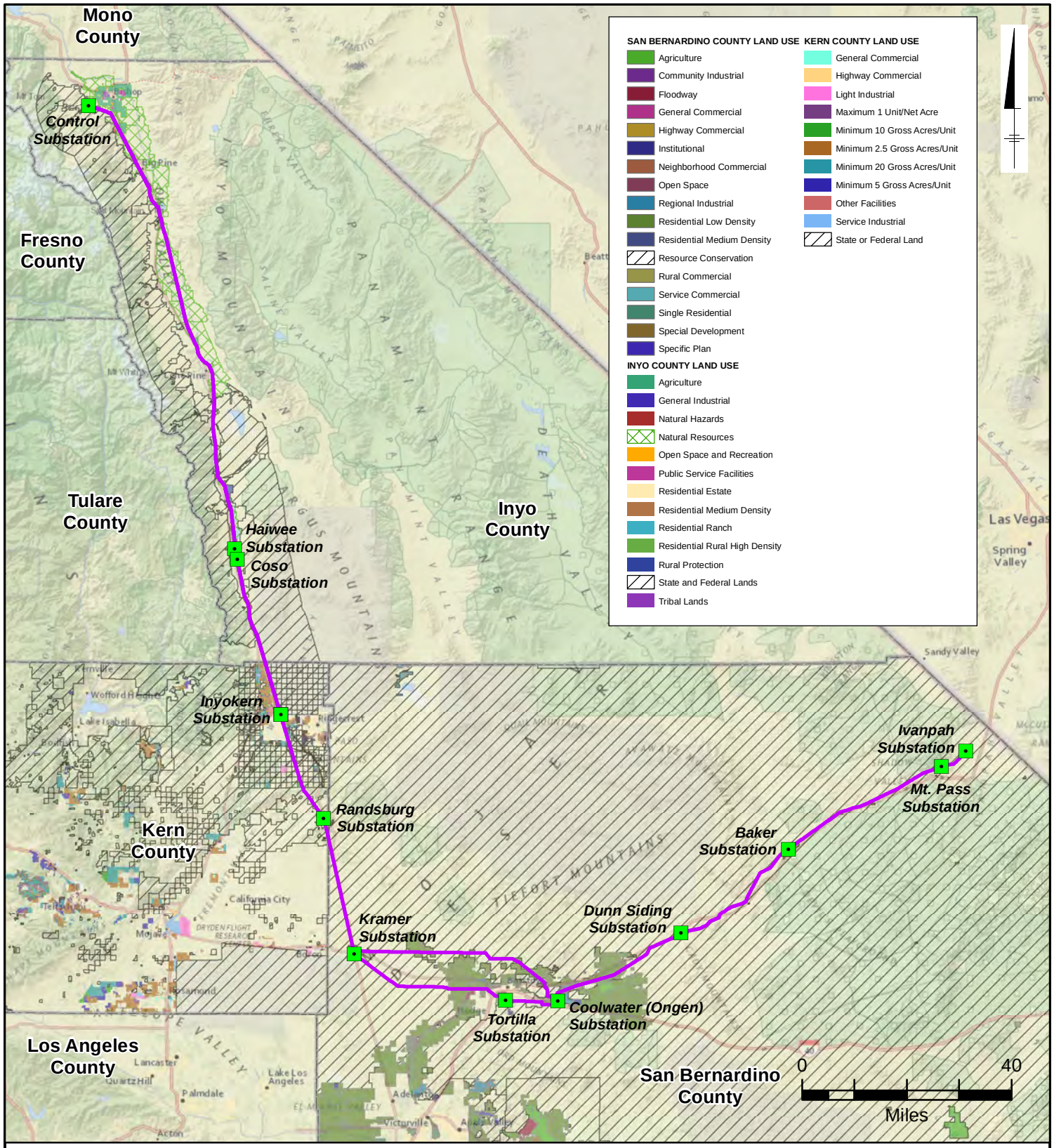

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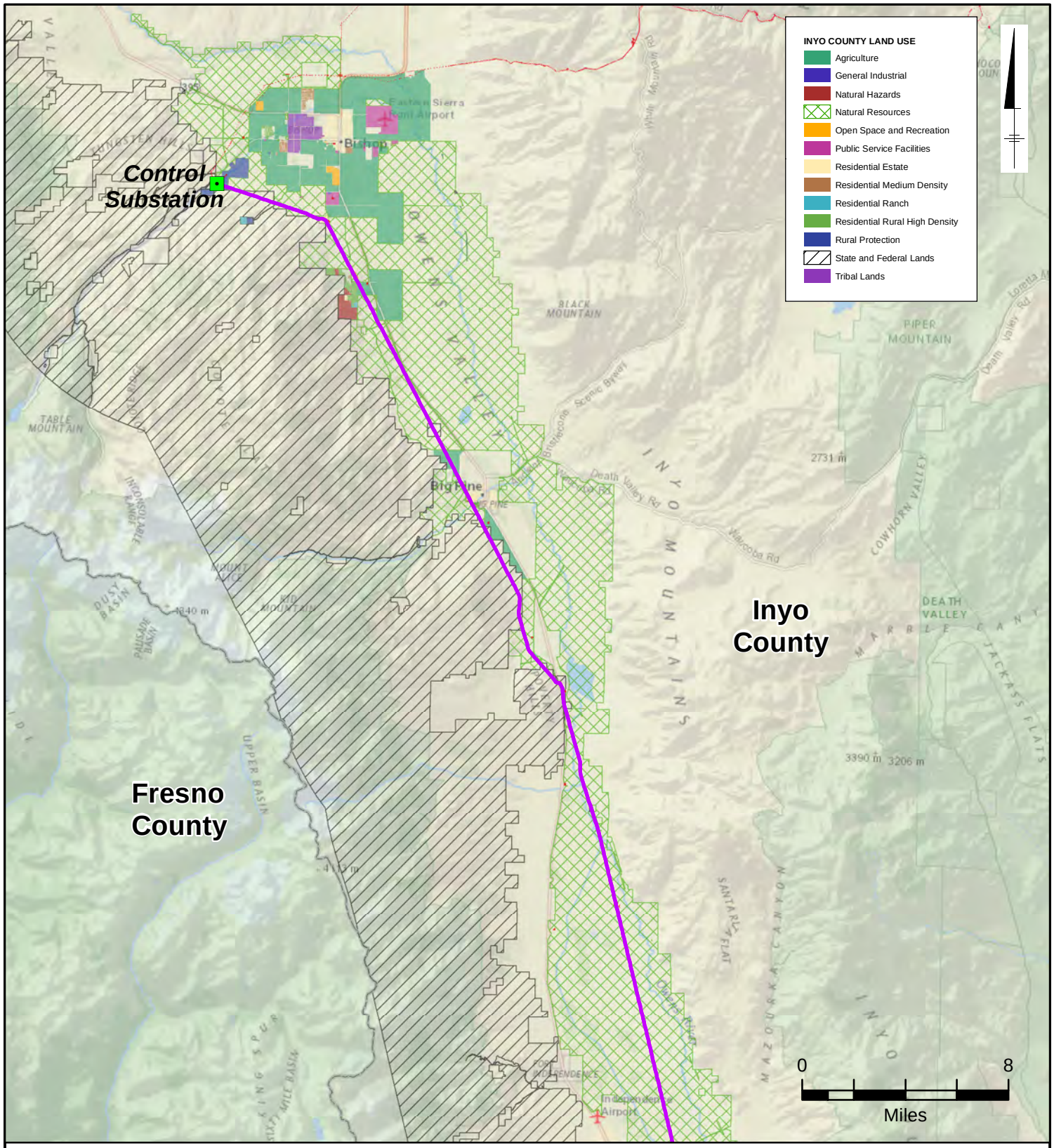

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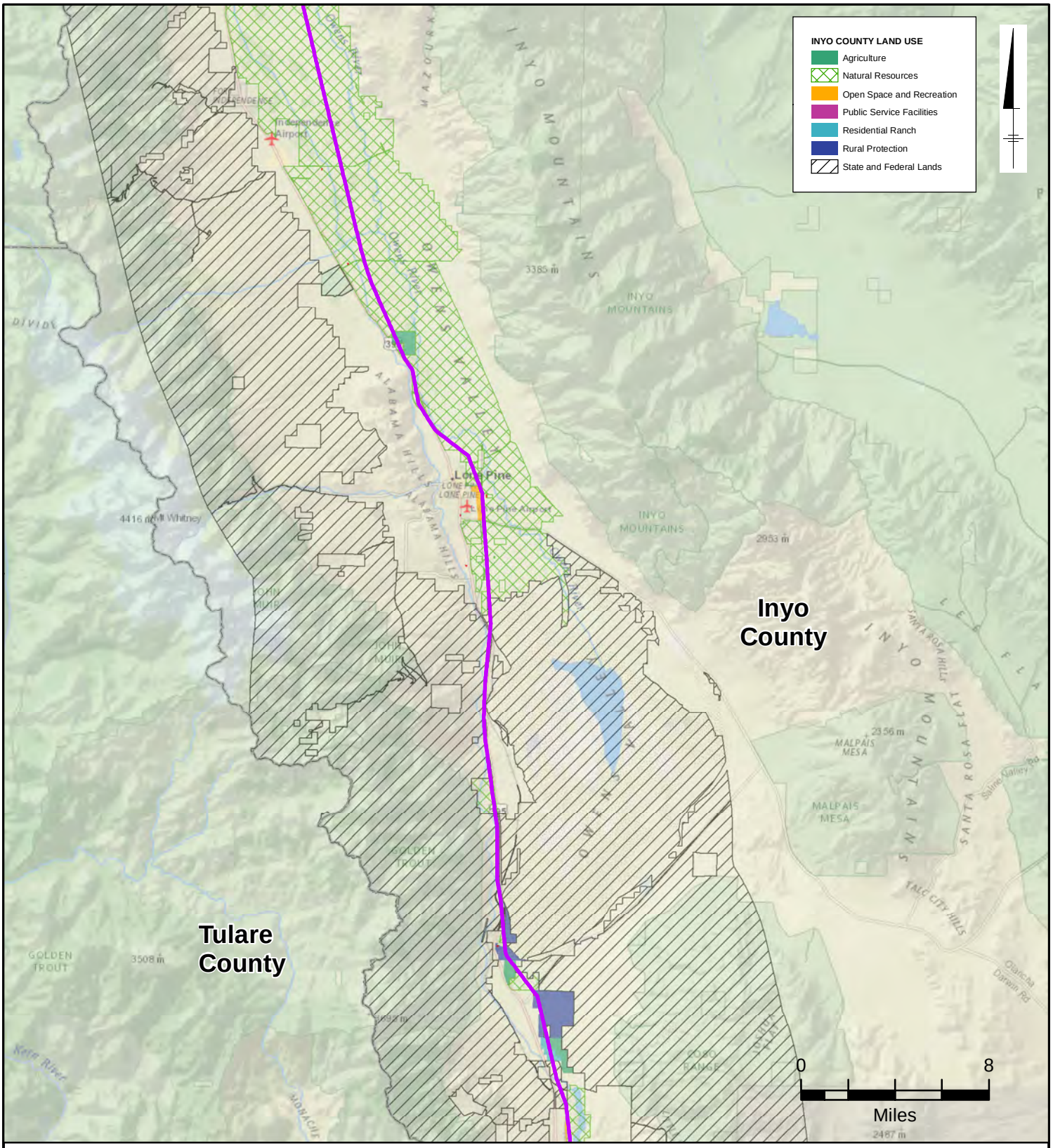

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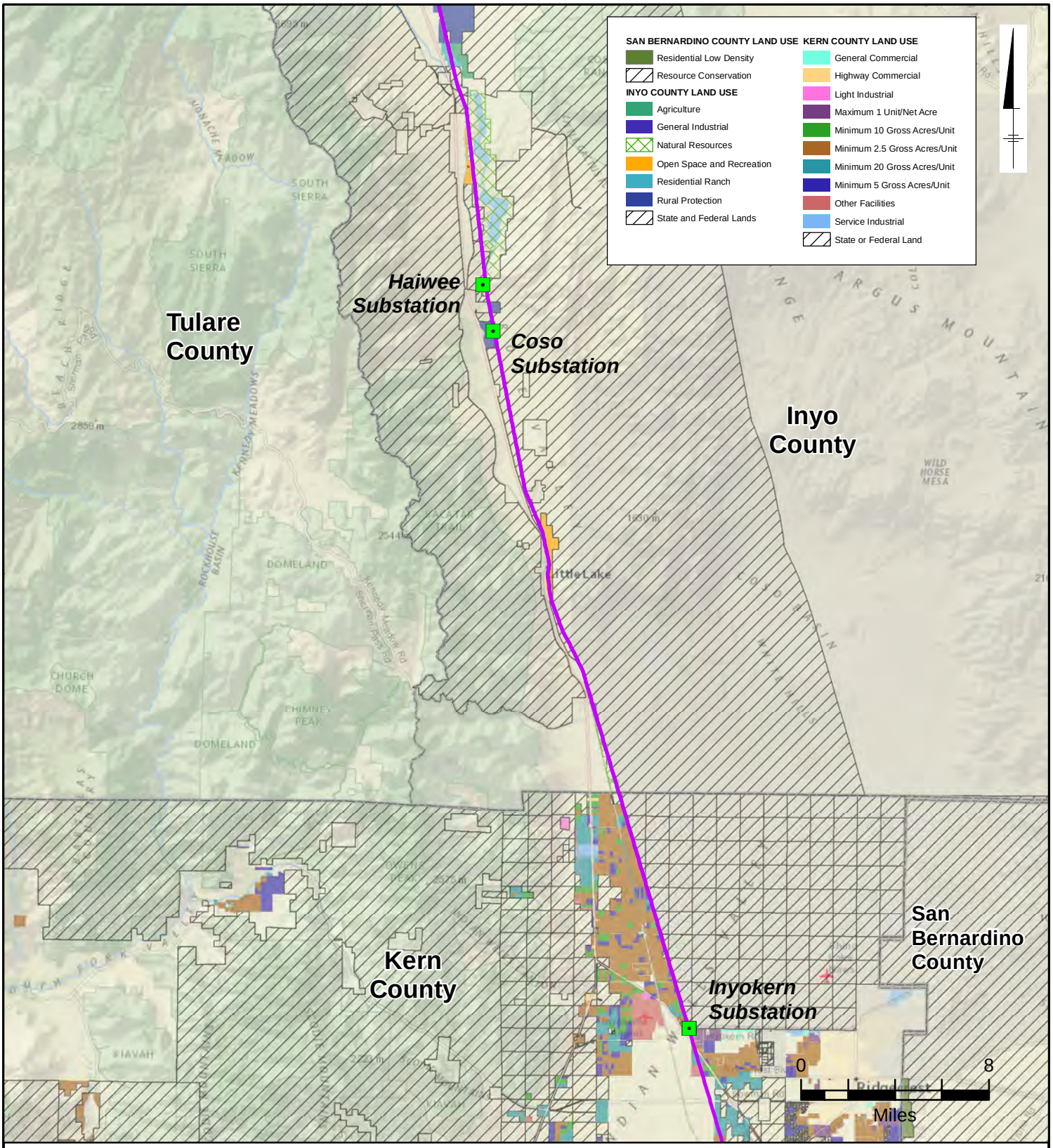

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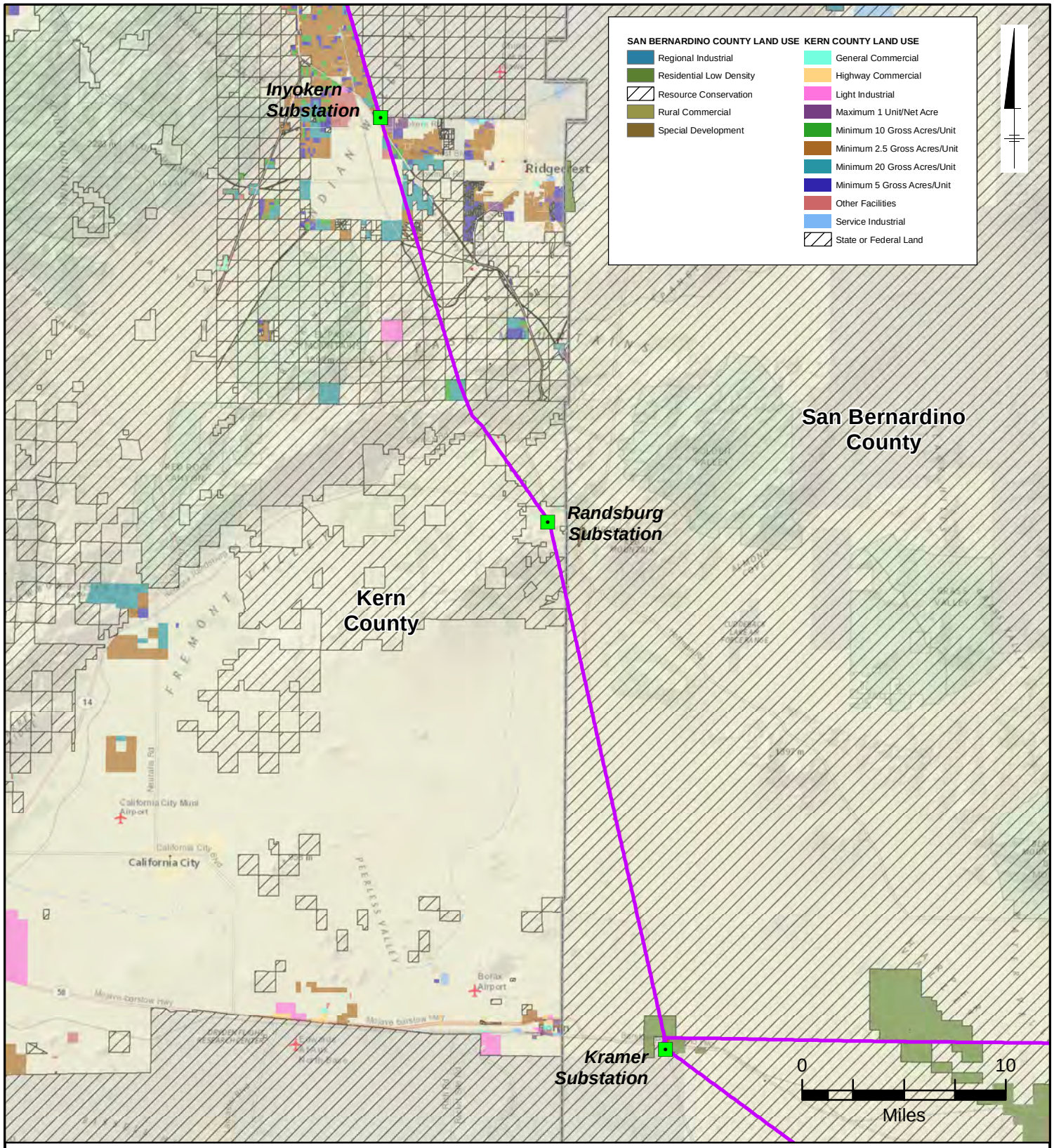

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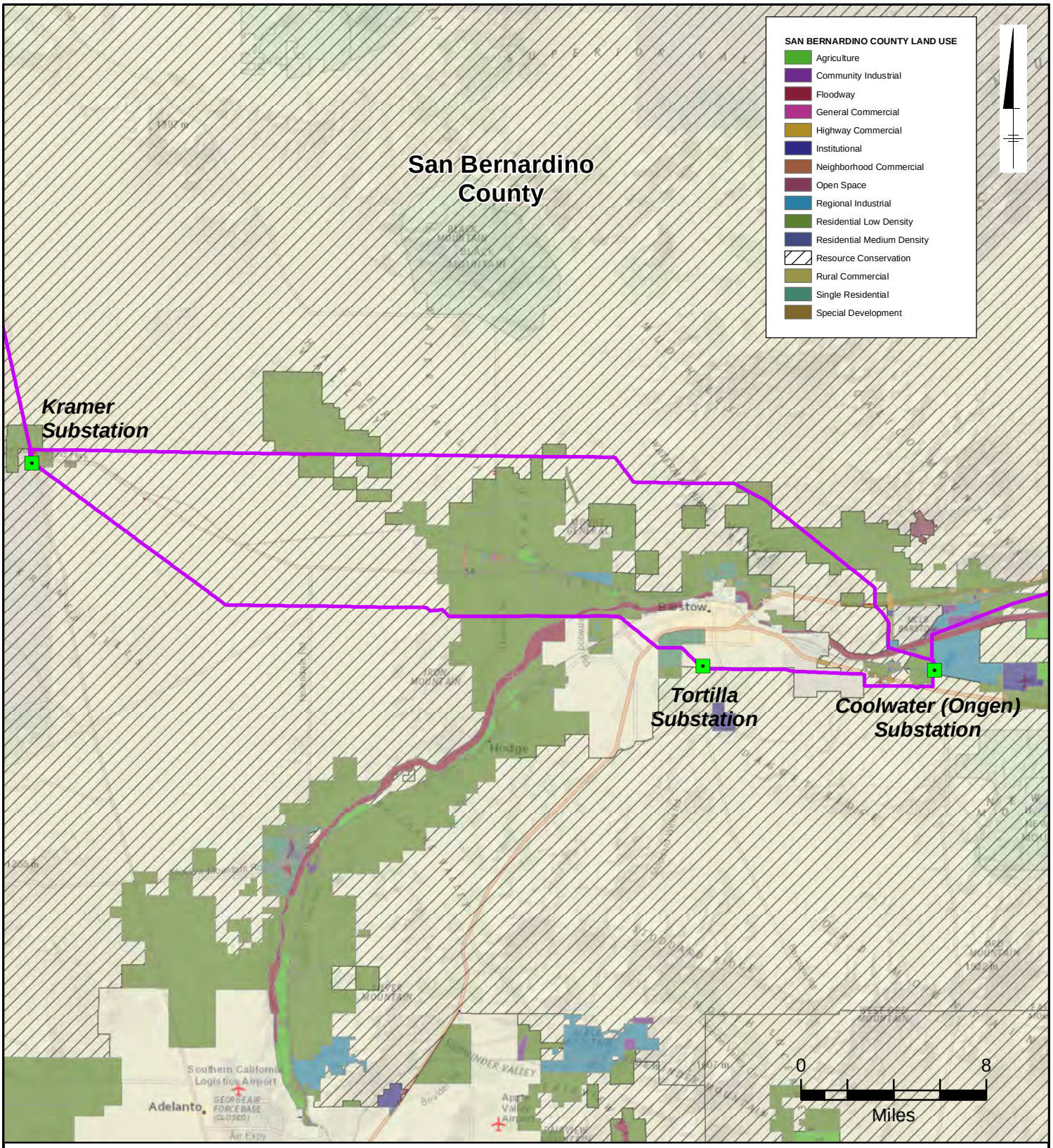

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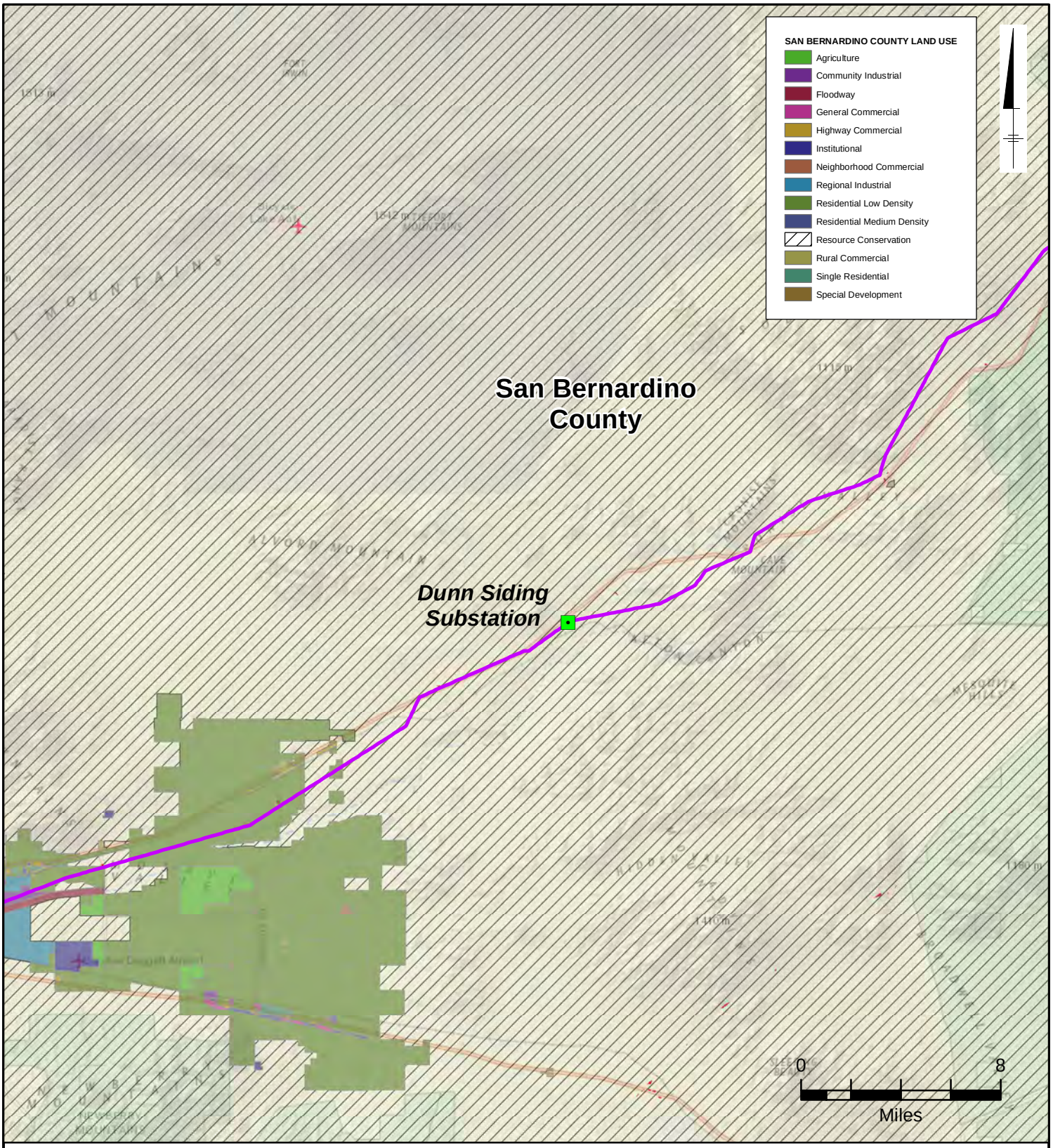

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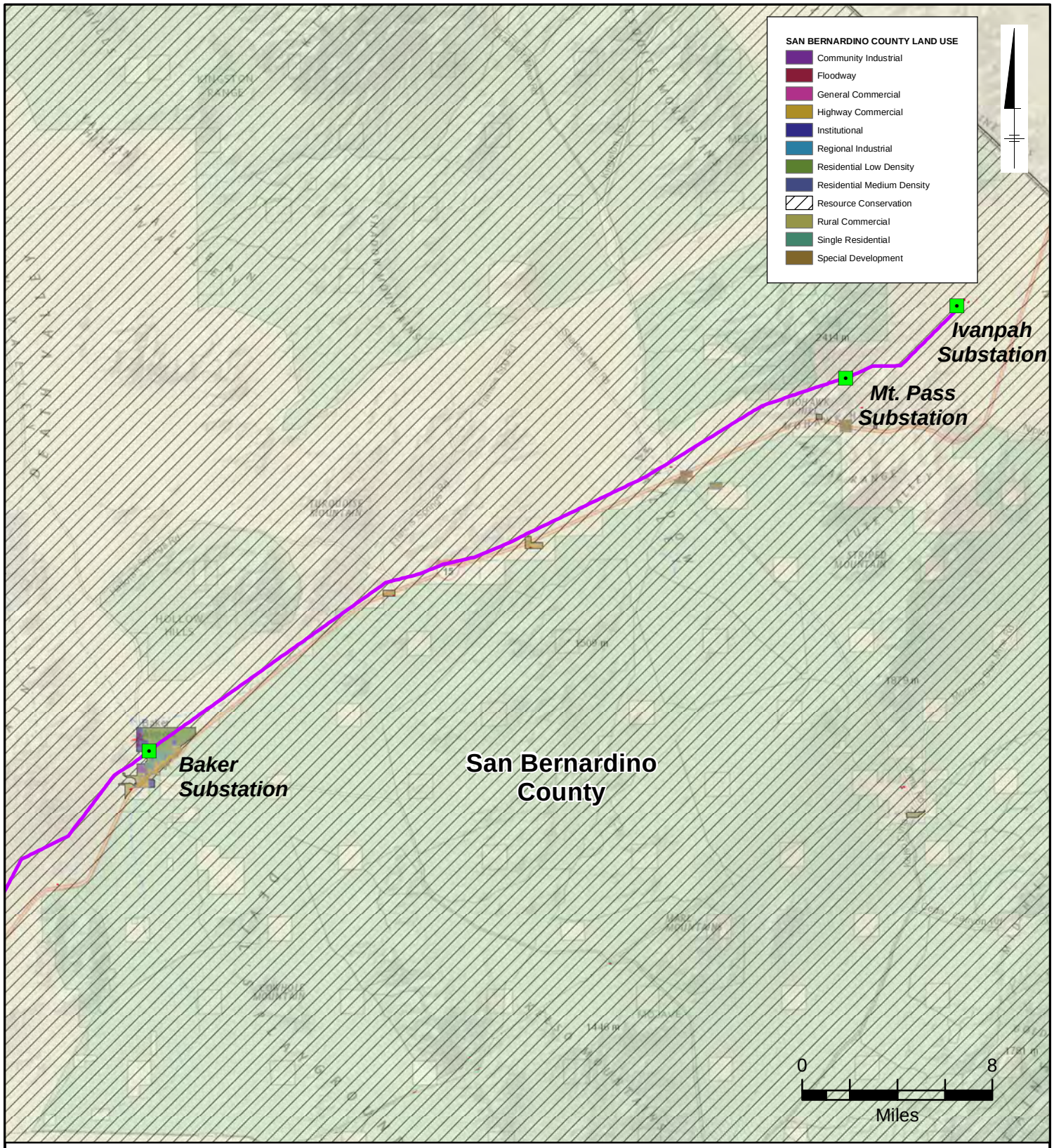

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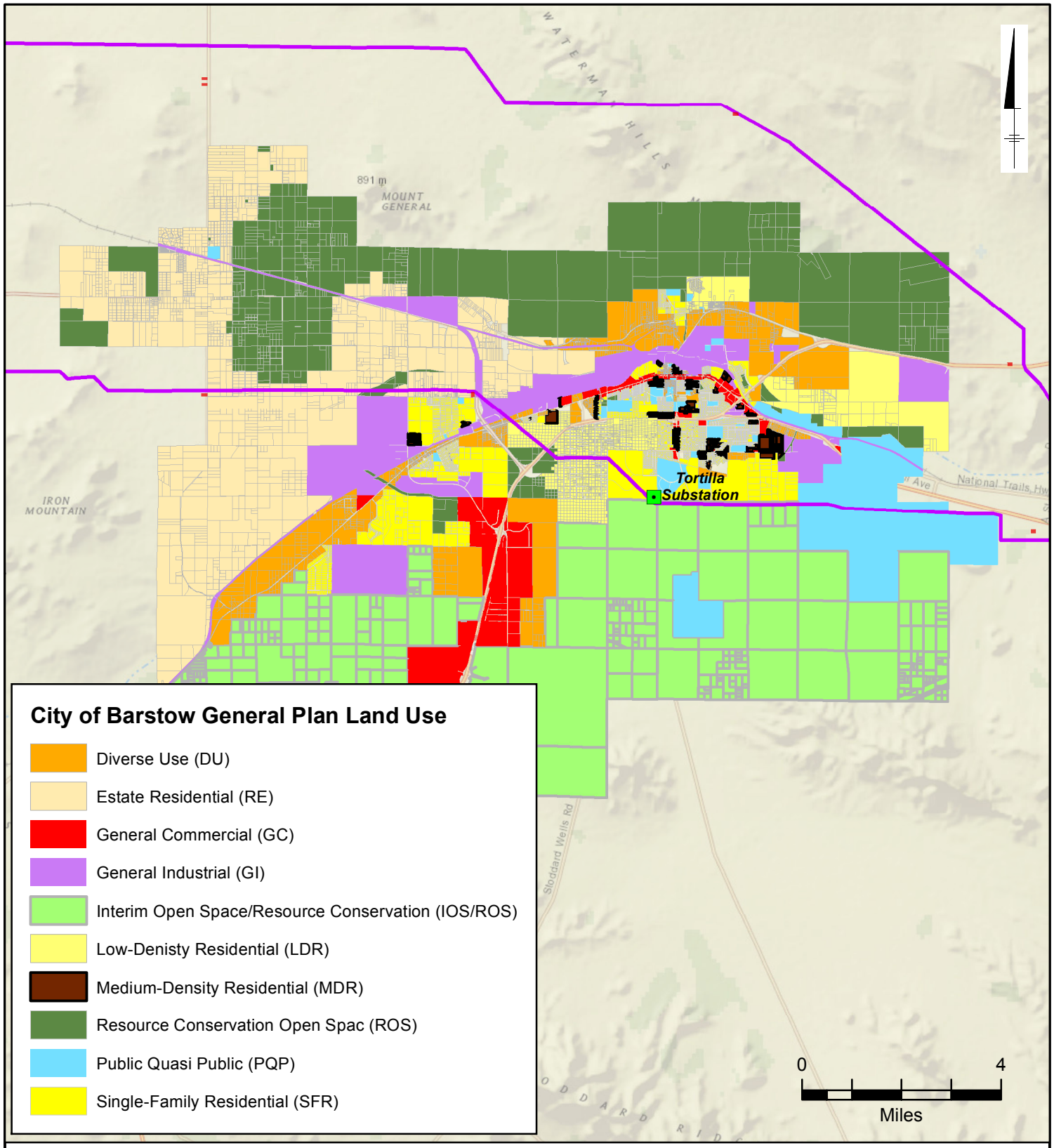

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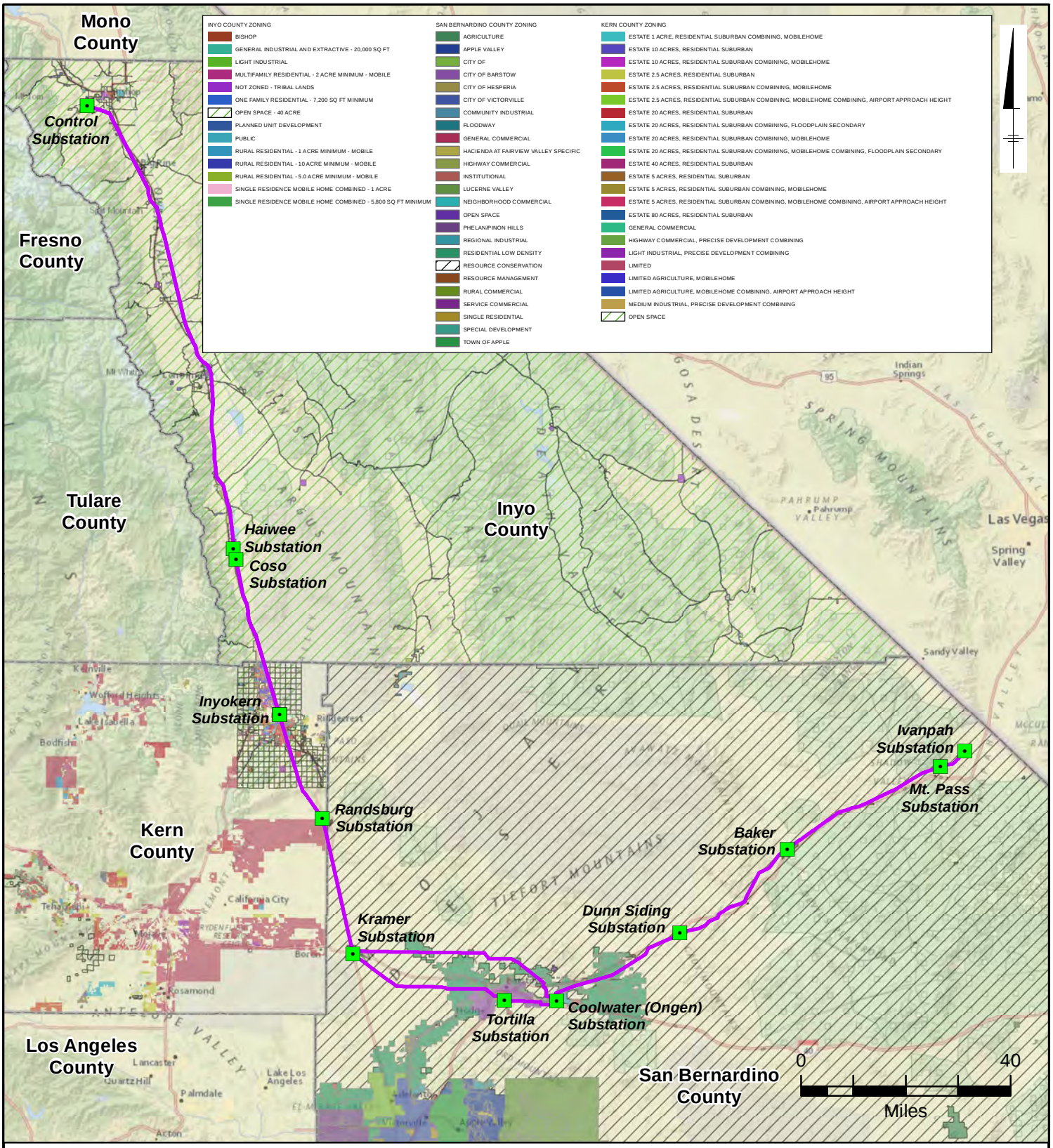

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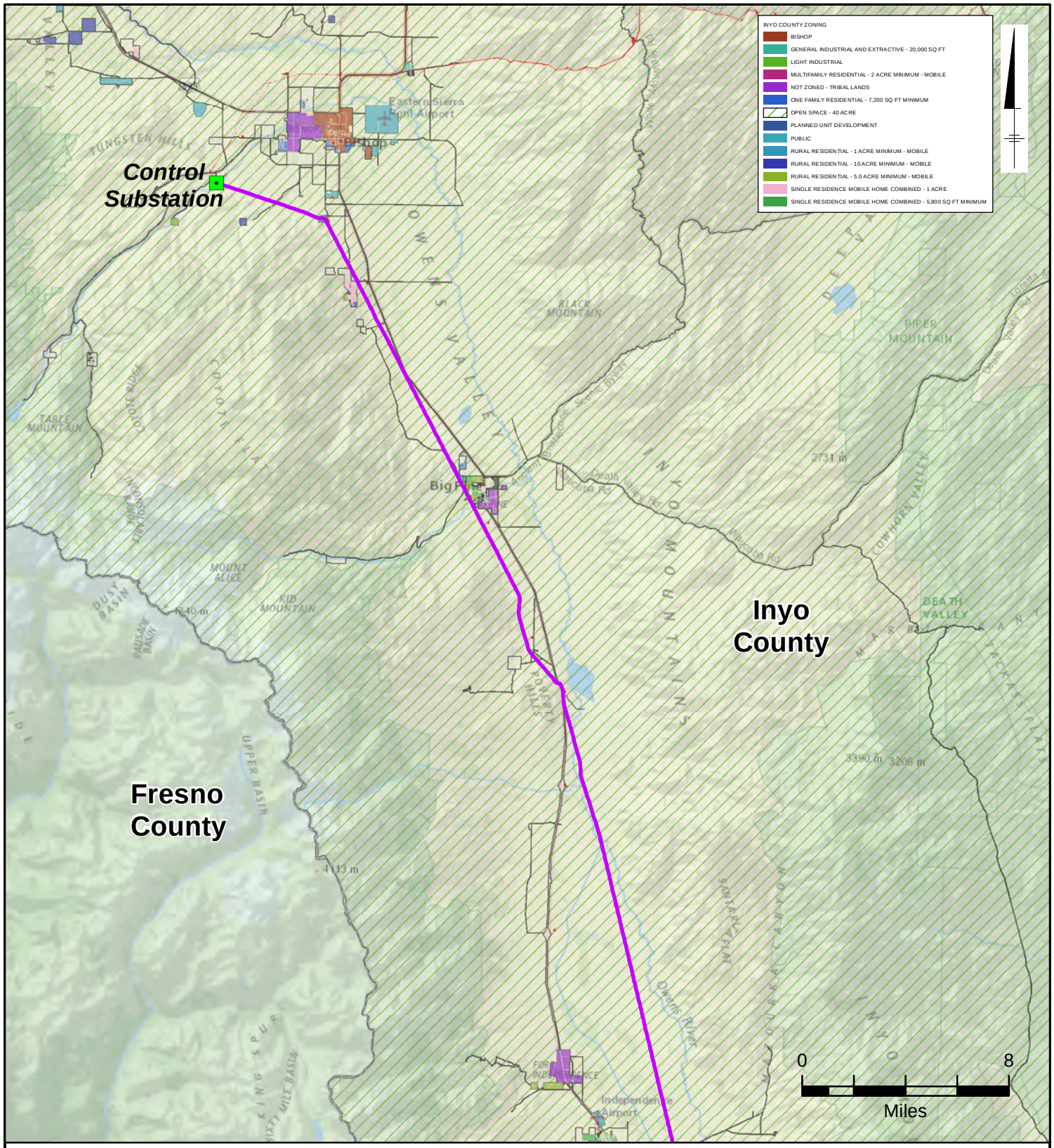

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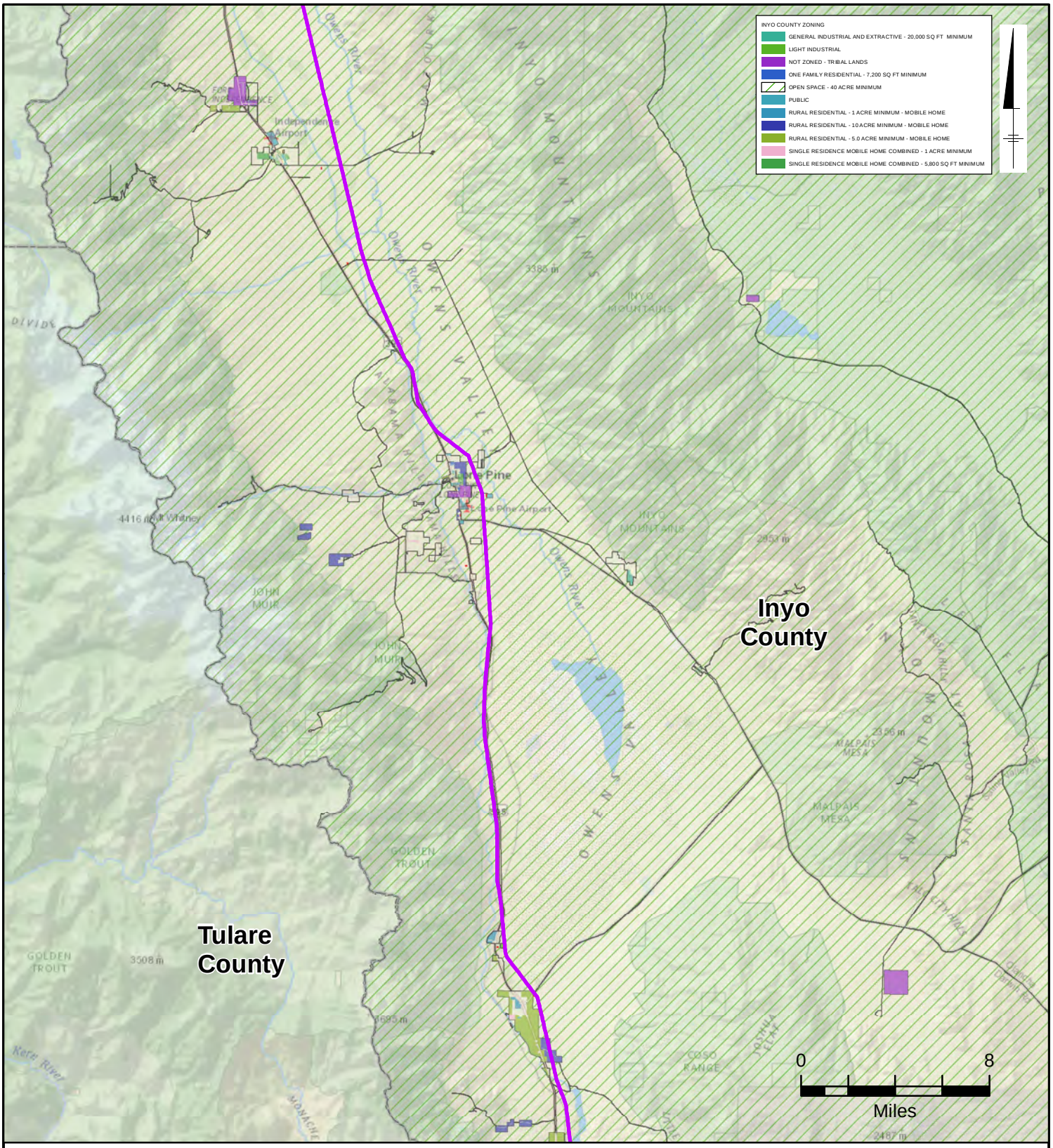

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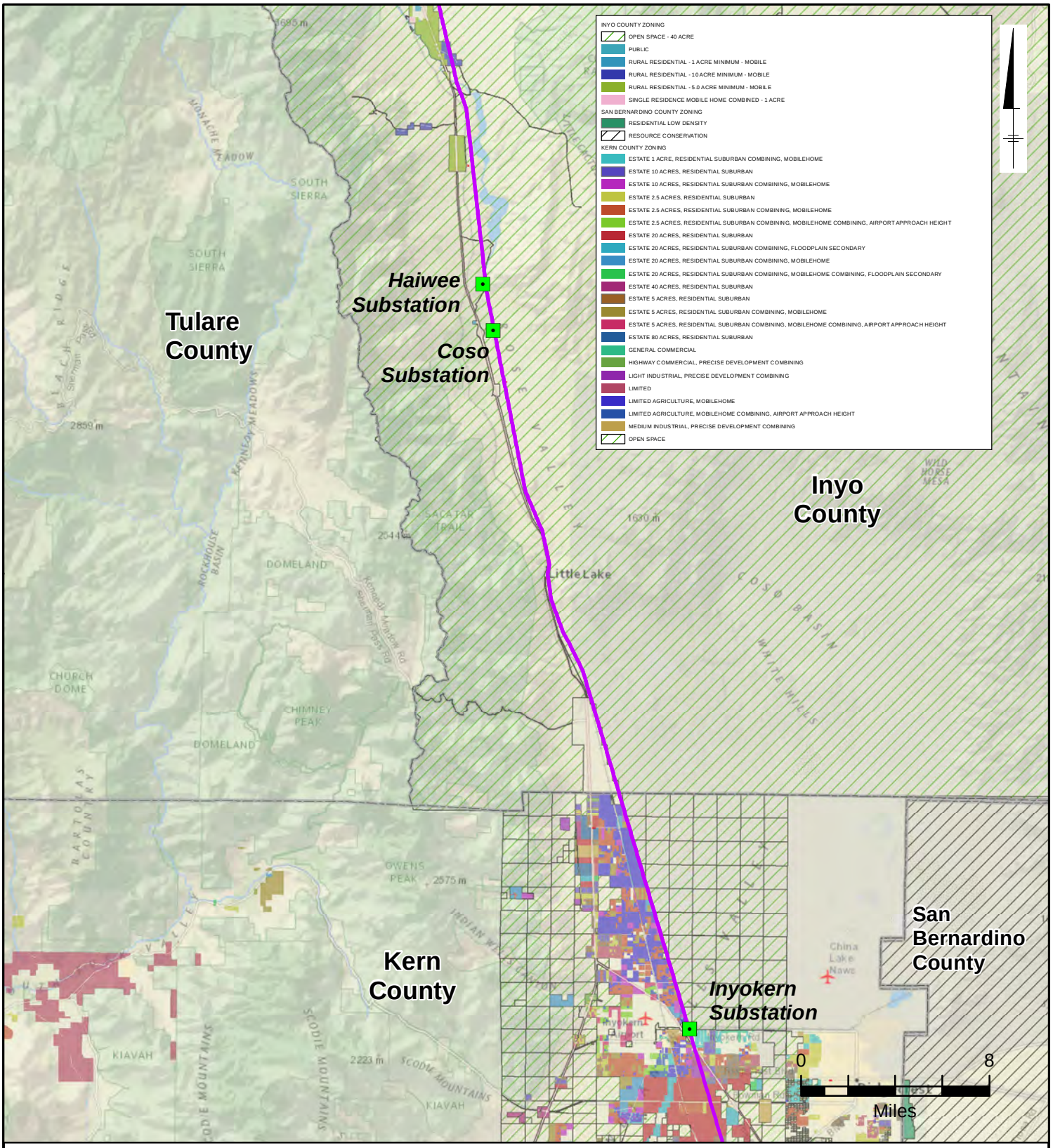

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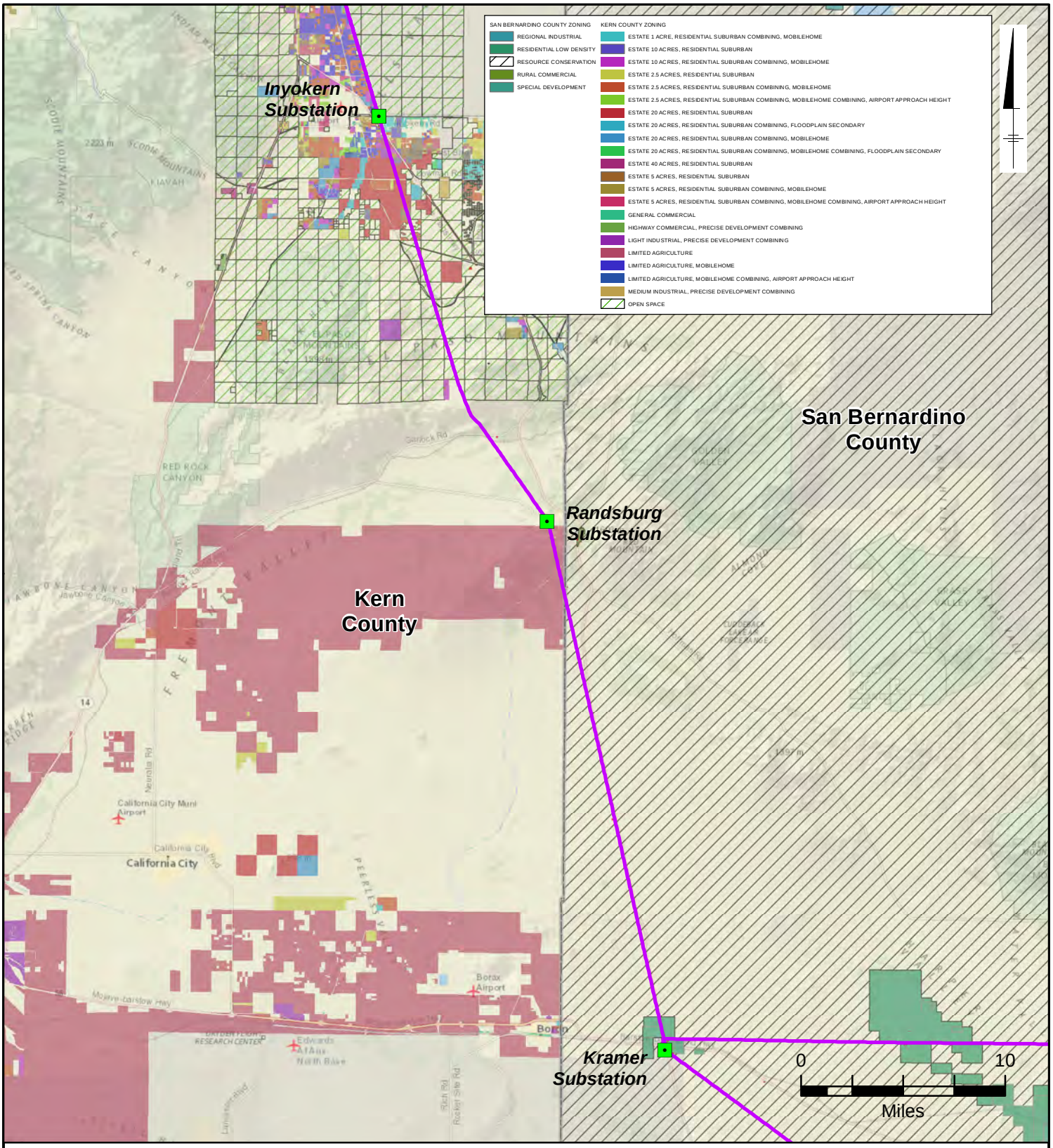

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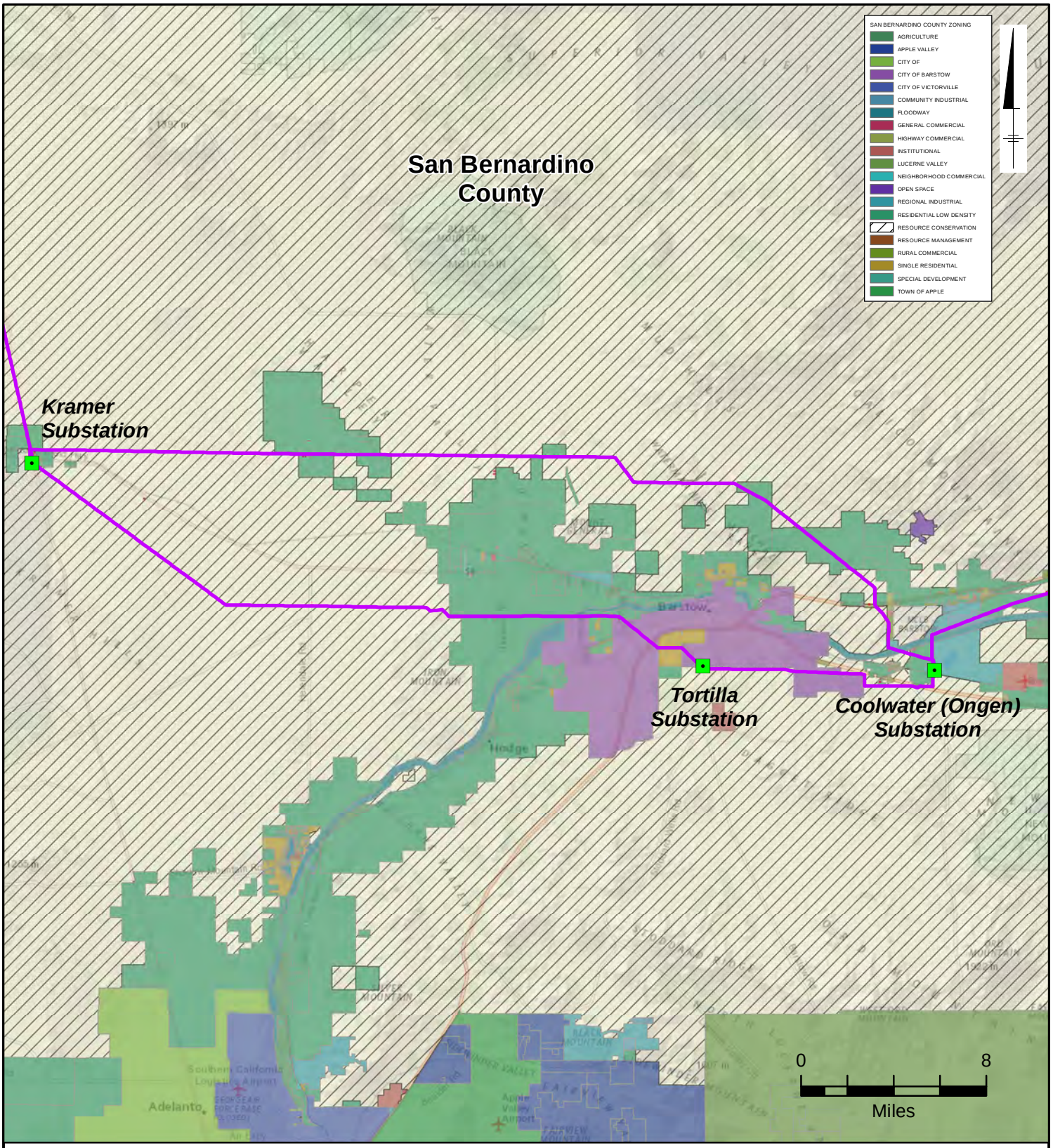

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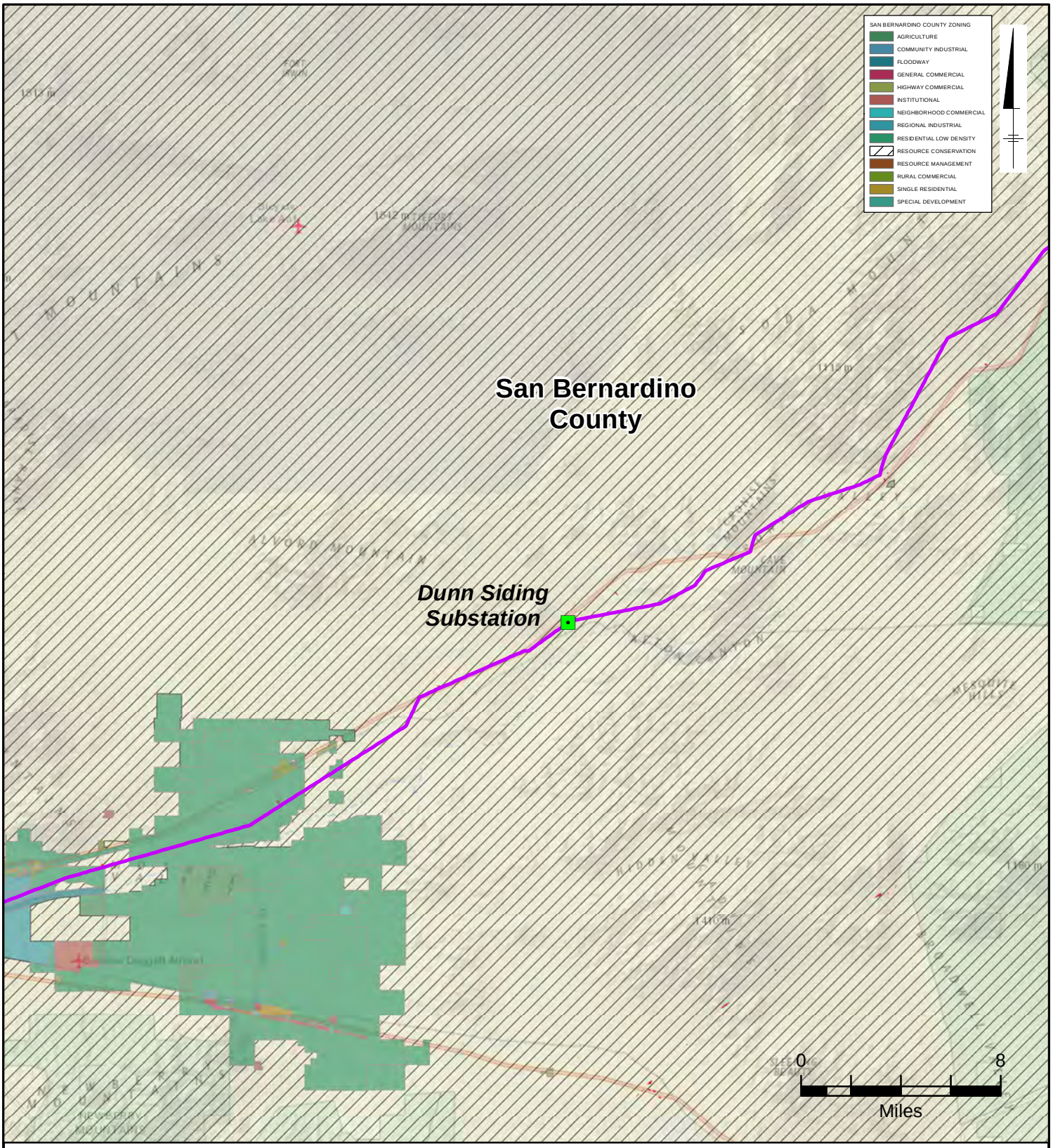

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(3) Inyo County Zoning source:
https://services.arcgis.com/0jRlQ17Qmni5zEMr/arcgis/rest/services/Zoning/FeatureServer

IVANPAH-CONTROL PROJECT

ZONING DESIGNATIONS

ARCADIS | SOUTHERN CALIFORNIA EDISON

FIGURESET: **4.11-2**

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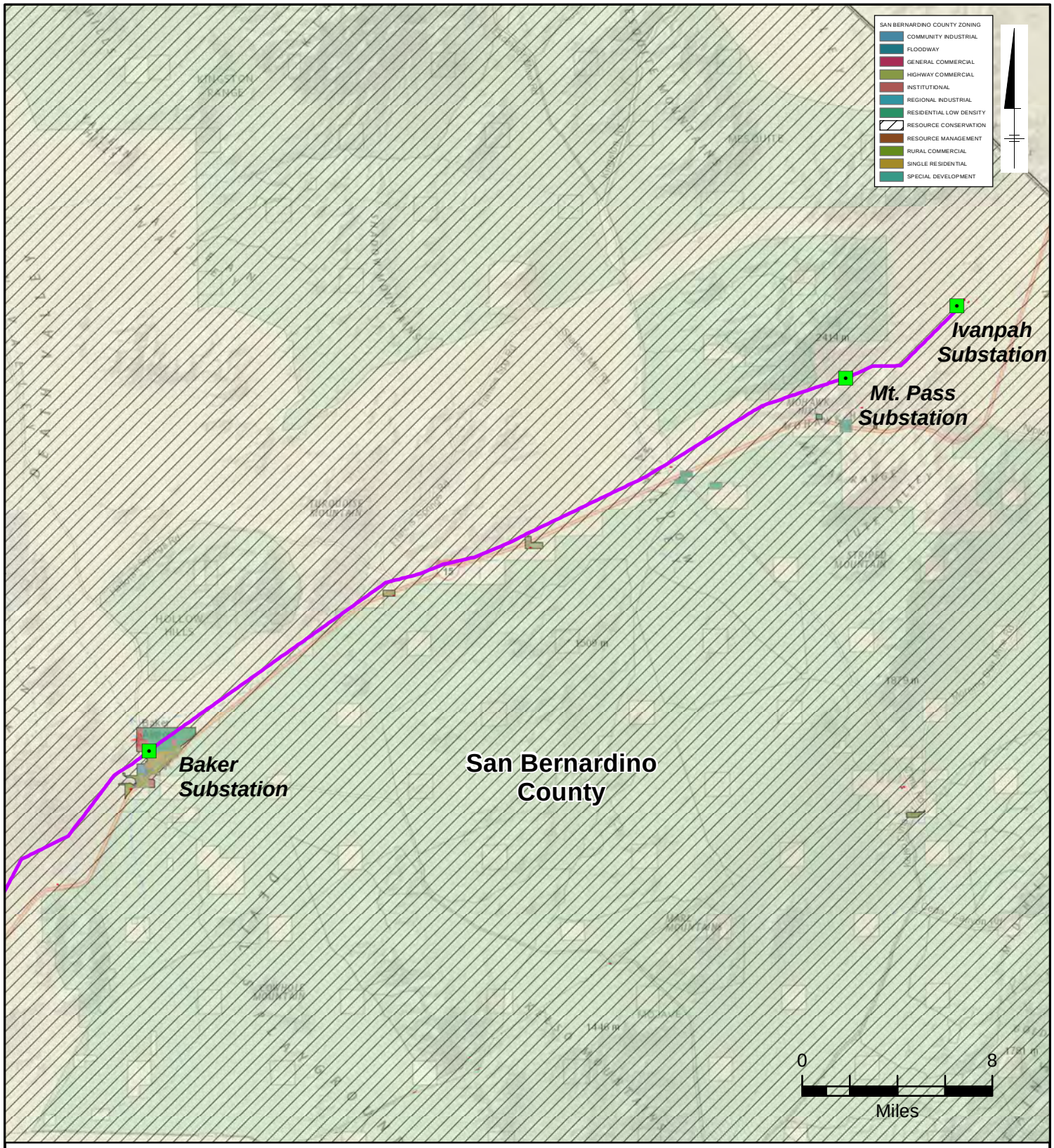

Legend

- Substation
- IC Project Alignment
- County

Page 8 of 8

NOTES:
(1) San Bernardino Co Zoning source:
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(2) Kern Co Zoning source:
http://esps.kerndsa.com/gis/gis-download-data
(3) Inyo County Zoning source:
https://services.arcgis.com/0jRlQ17Qmni5zEMr/arcgis/rest/services/Zoning/FeatureServer

IVANPAH-CONTROL PROJECT

ZONING DESIGNATIONS

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FIGURESET: 4.11-2

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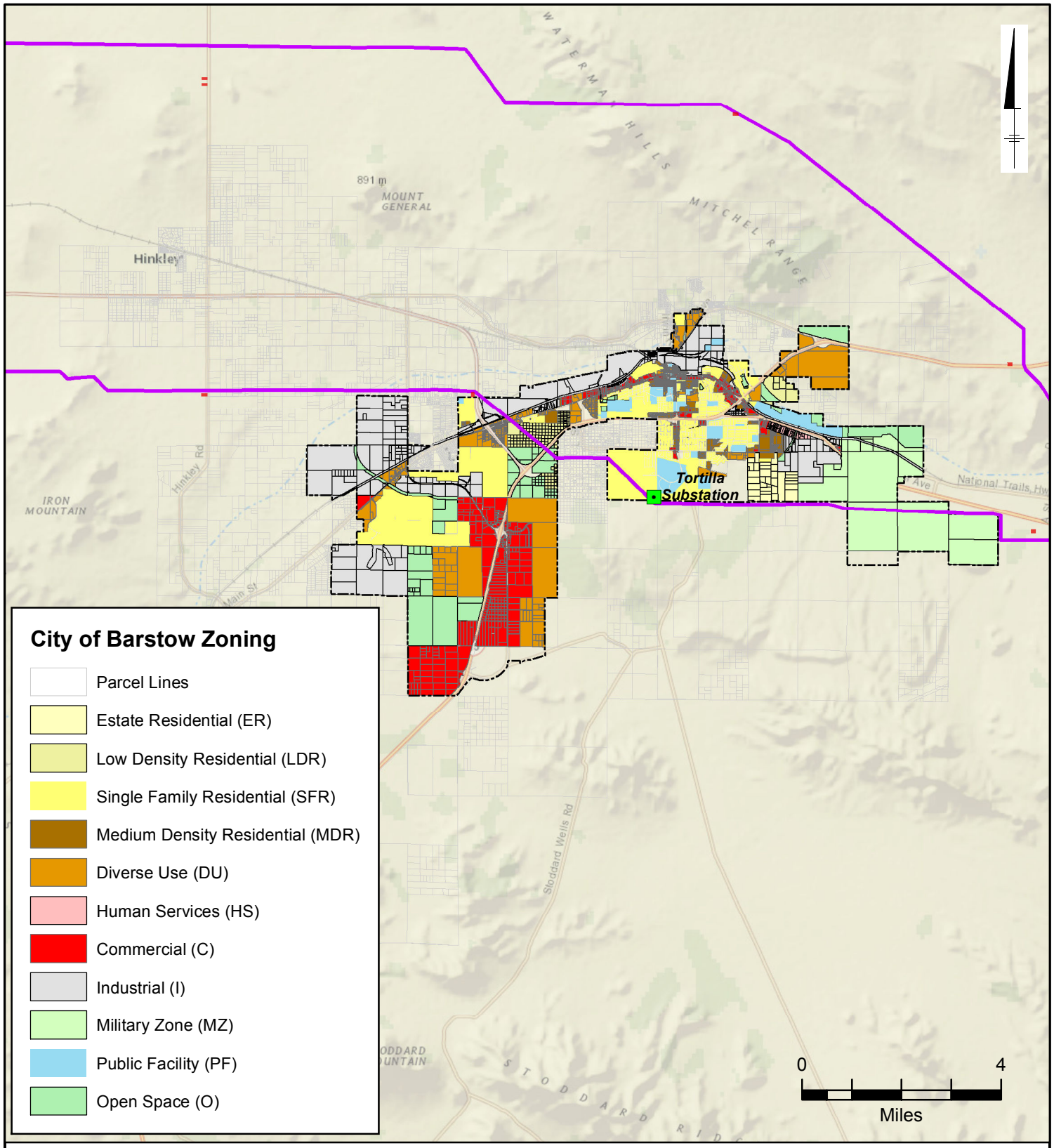

City of Barstow Zoning

- Parcel Lines
- Estate Residential (ER)
- Low Density Residential (LDR)
- Single Family Residential (SFR)
- Medium Density Residential (MDR)
- Diverse Use (DU)
- Human Services (HS)
- Commercial (C)
- Industrial (I)
- Military Zone (MZ)
- Public Facility (PF)
- Open Space (O)

Legend

- Substation
- IC Project Alignment
- County
- Cities

NOTES:
(1) City of Barstow Zoning source:
http://www.barstowca.org/business/general-plan-map

IVANPAH-CONTROL PROJECT

ZONING DESIGNATIONS

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FIGURESET:
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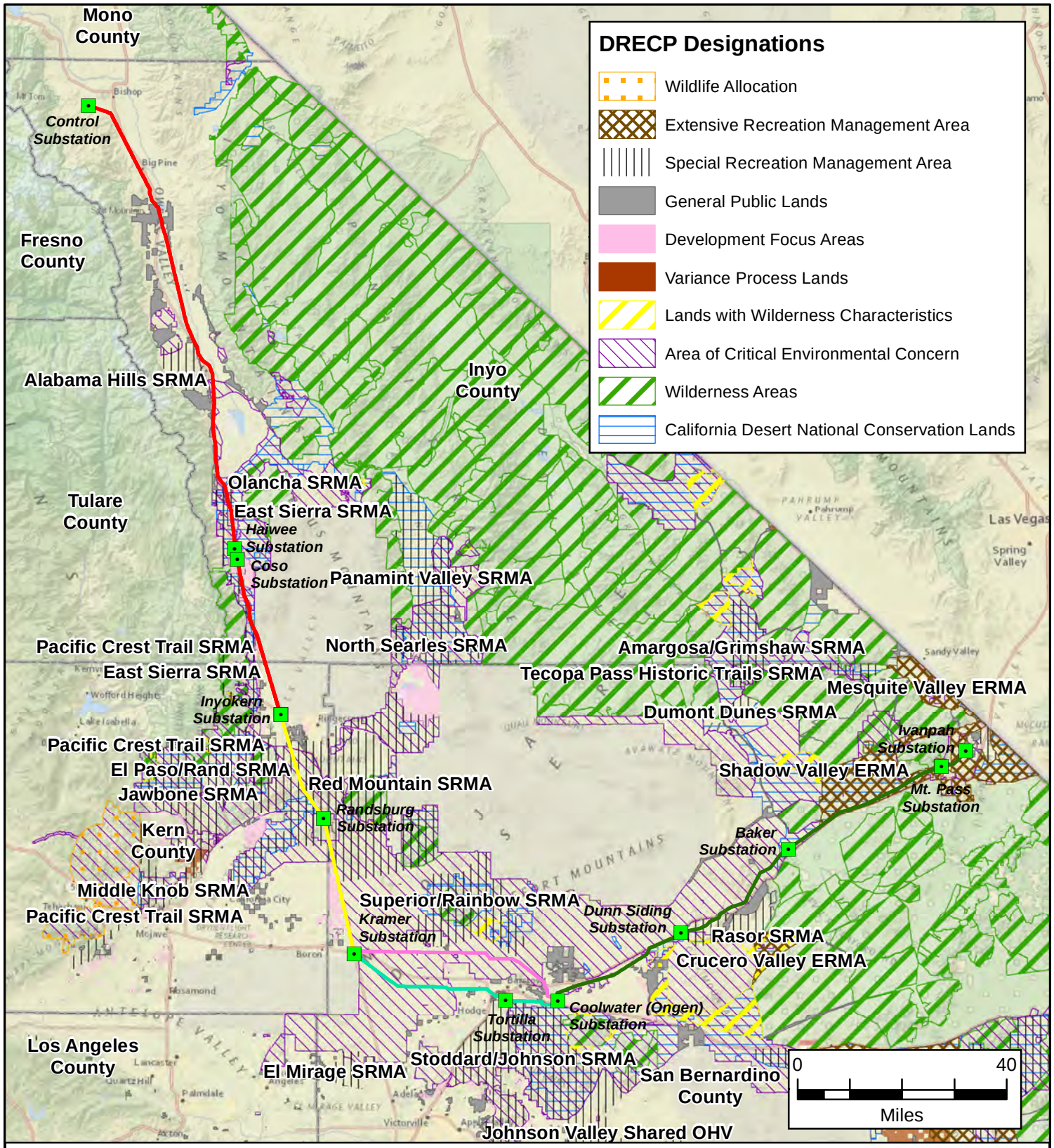

IVANPAH-CONTROL PROJECT

DRECP LAND DESIGNATIONS

ARCADIS | SOUTHERN CALIFORNIA EDISON

FIGURESET: 4.11-3

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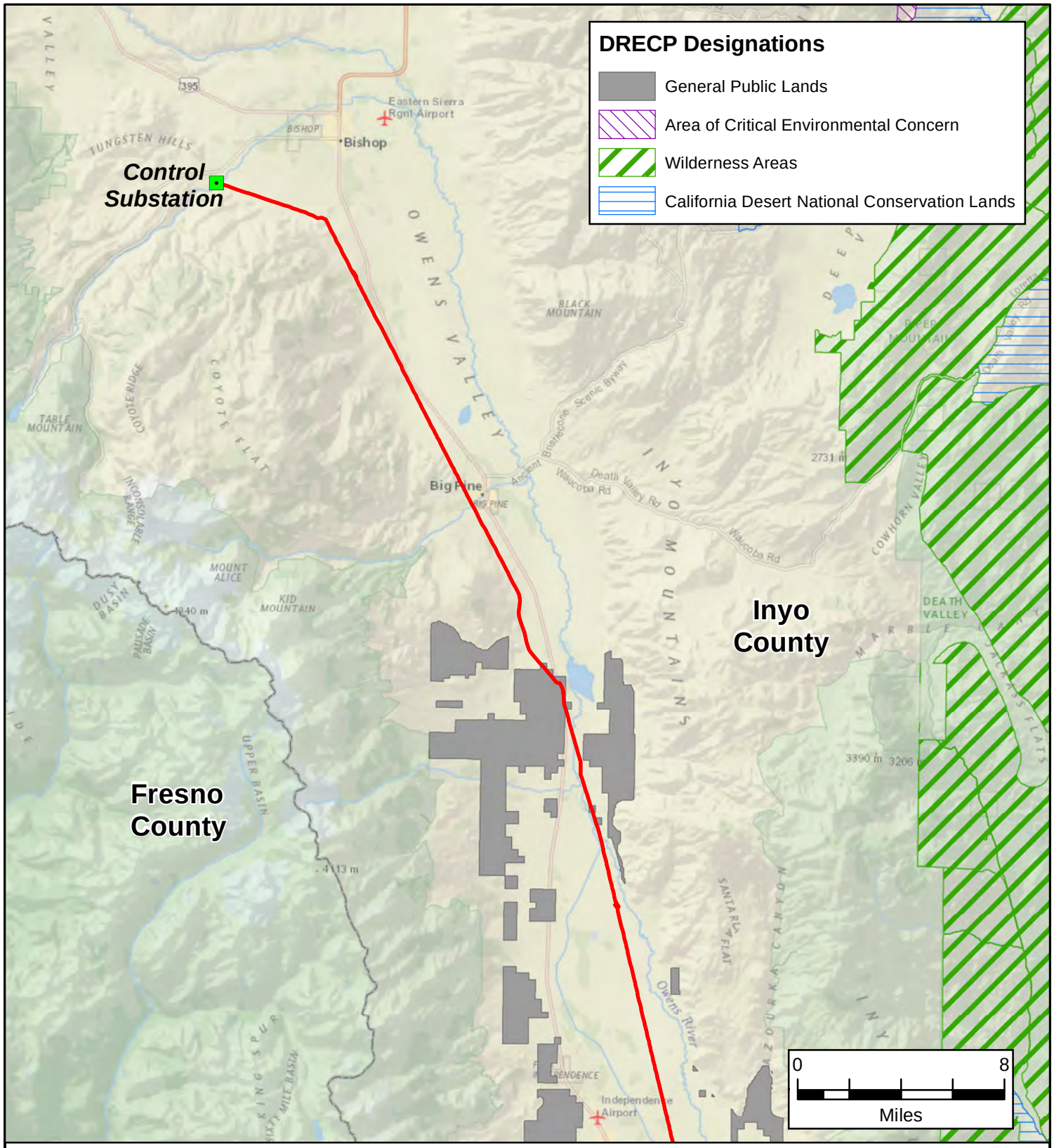


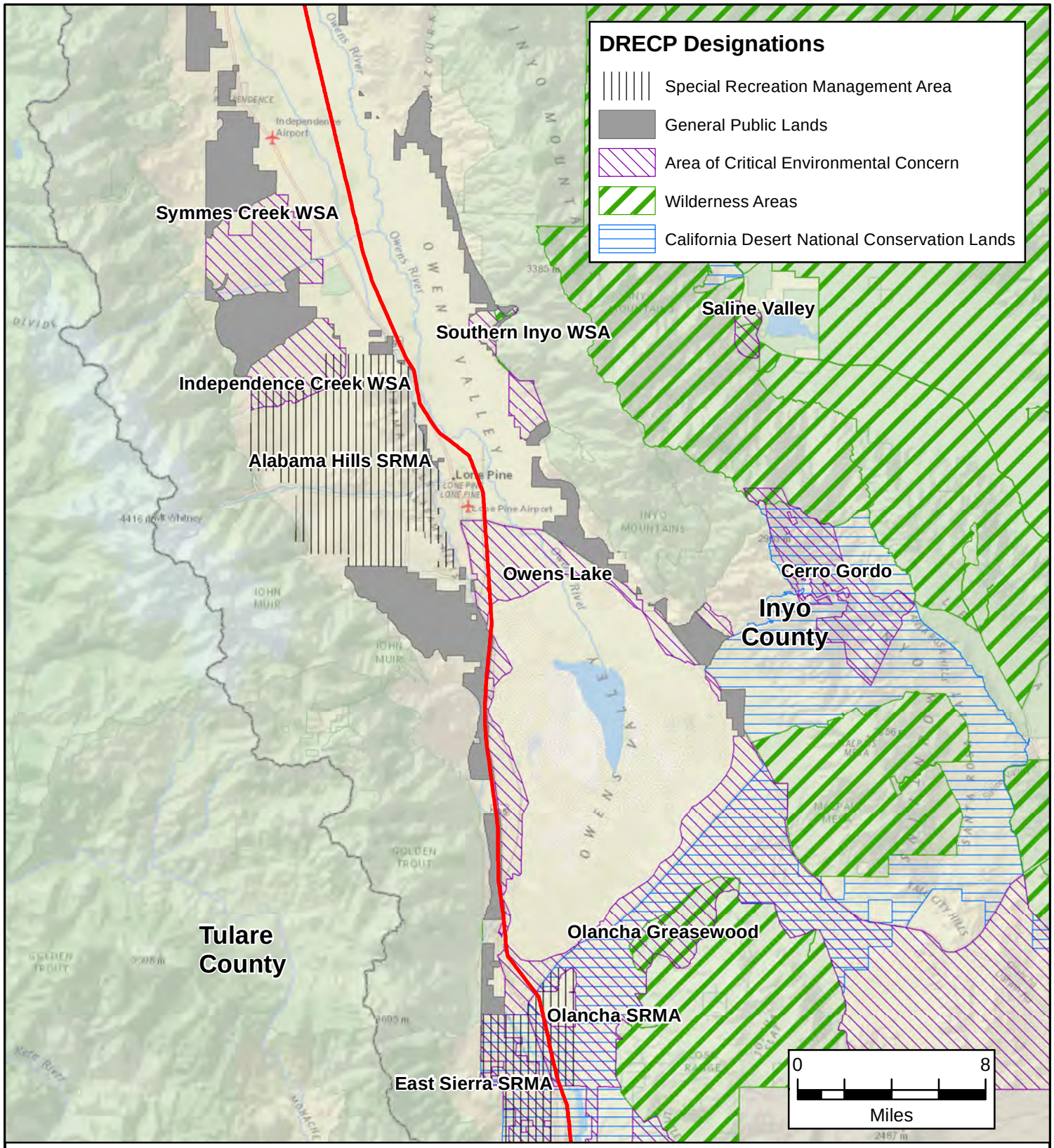
Substations
Counties
Segment 1
Segment 2
Segment 3N
Segment 3S
Segment 4

IVANPAH-CONTROL PROJECT

DRECP LAND DESIGNATIONS

ARCADIS
SOUTHERN CALIFORNIA EDISON

FIGURESET: 4.11-3



Substations
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Segment 3N
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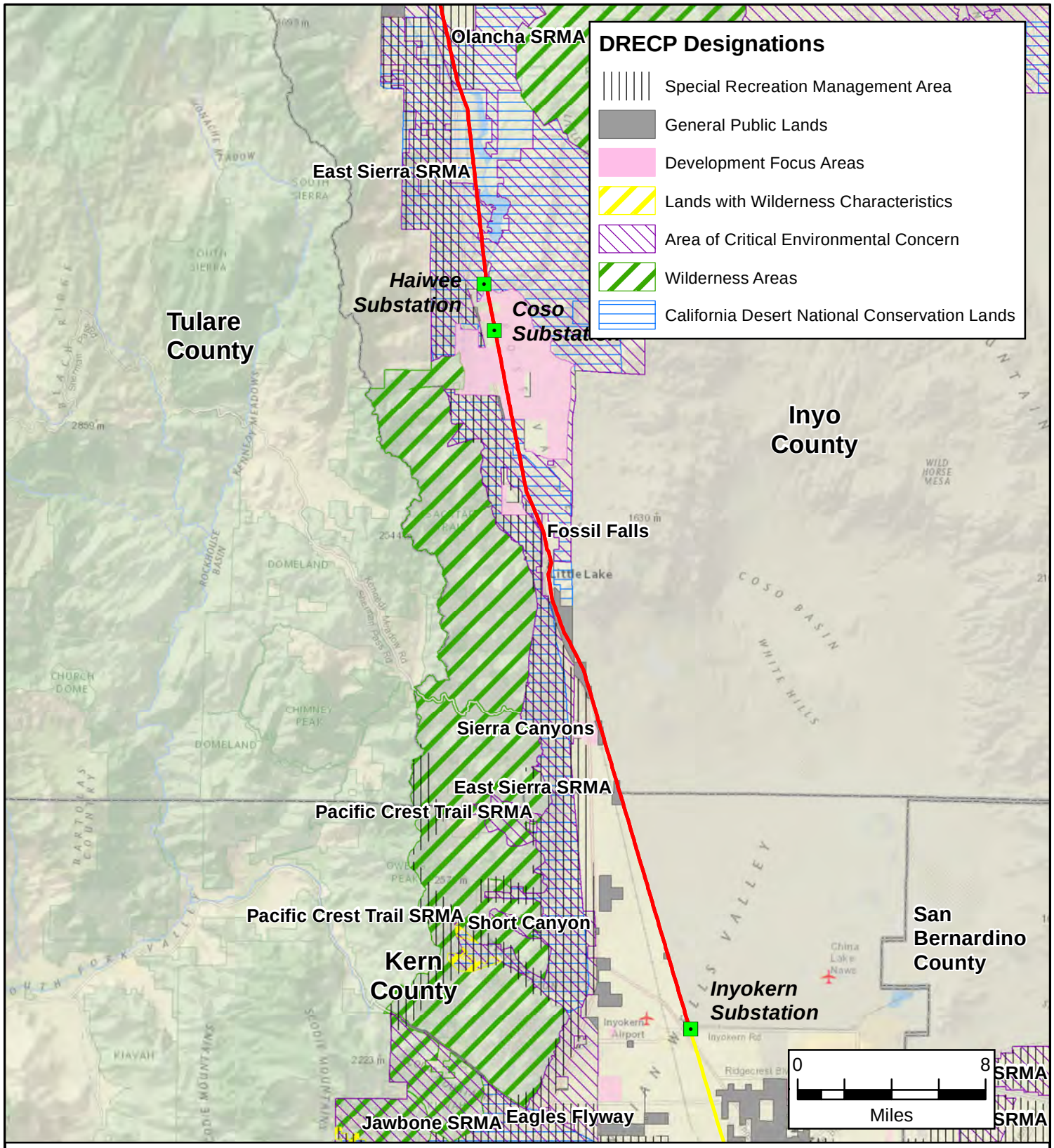
IVANPAH-CONTROL PROJECT

DRECP LAND DESIGNATIONS

ARCADIS
SOUTHERN CALIFORNIA EDISON

FIGURESET: 4.11-3



Substations
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IVANPAH-CONTROL PROJECT

DRECP LAND DESIGNATIONS

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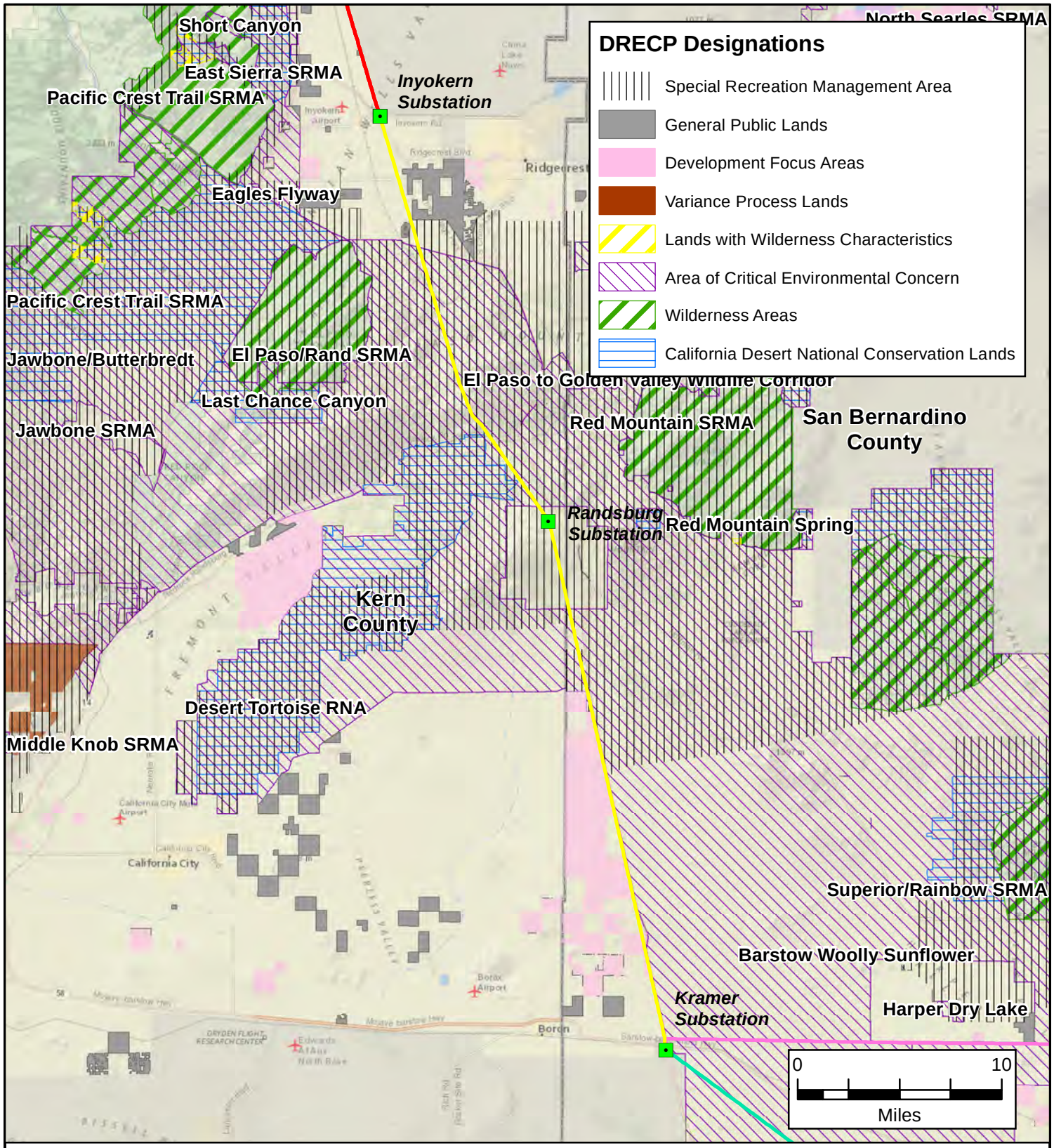

Substations
Counties
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IVANPAH-CONTROL PROJECT

DRECP LAND DESIGNATIONS

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SOUTHERN CALIFORNIA EDISON

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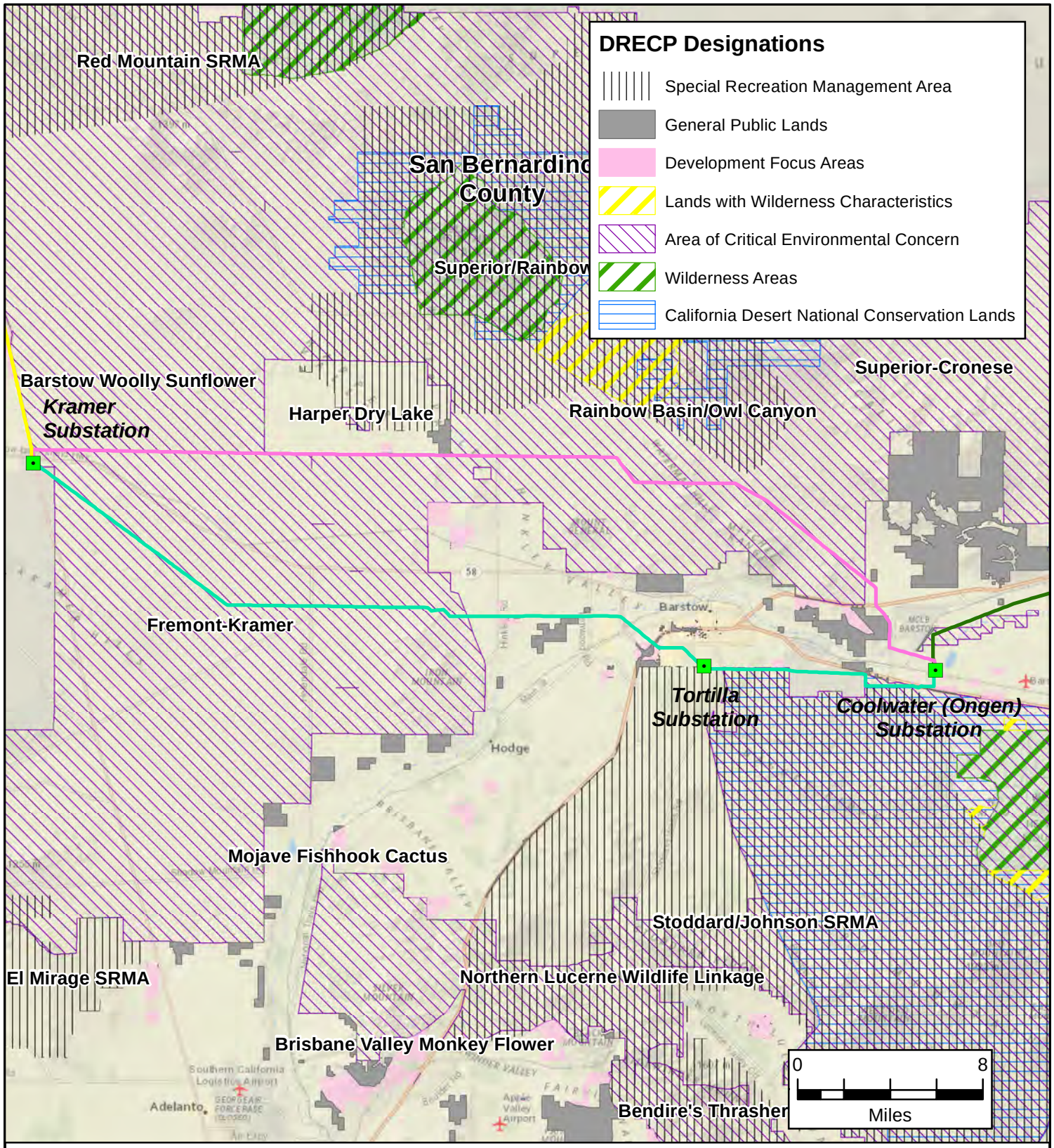

Substations
Counties
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Segment 2
Segment 3N
Segment 3S
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IVANPAH-CONTROL PROJECT

DRECP LAND DESIGNATIONS

ARCADIS
SOUTHERN CALIFORNIA EDISON

FIGURESET: 4.11-3

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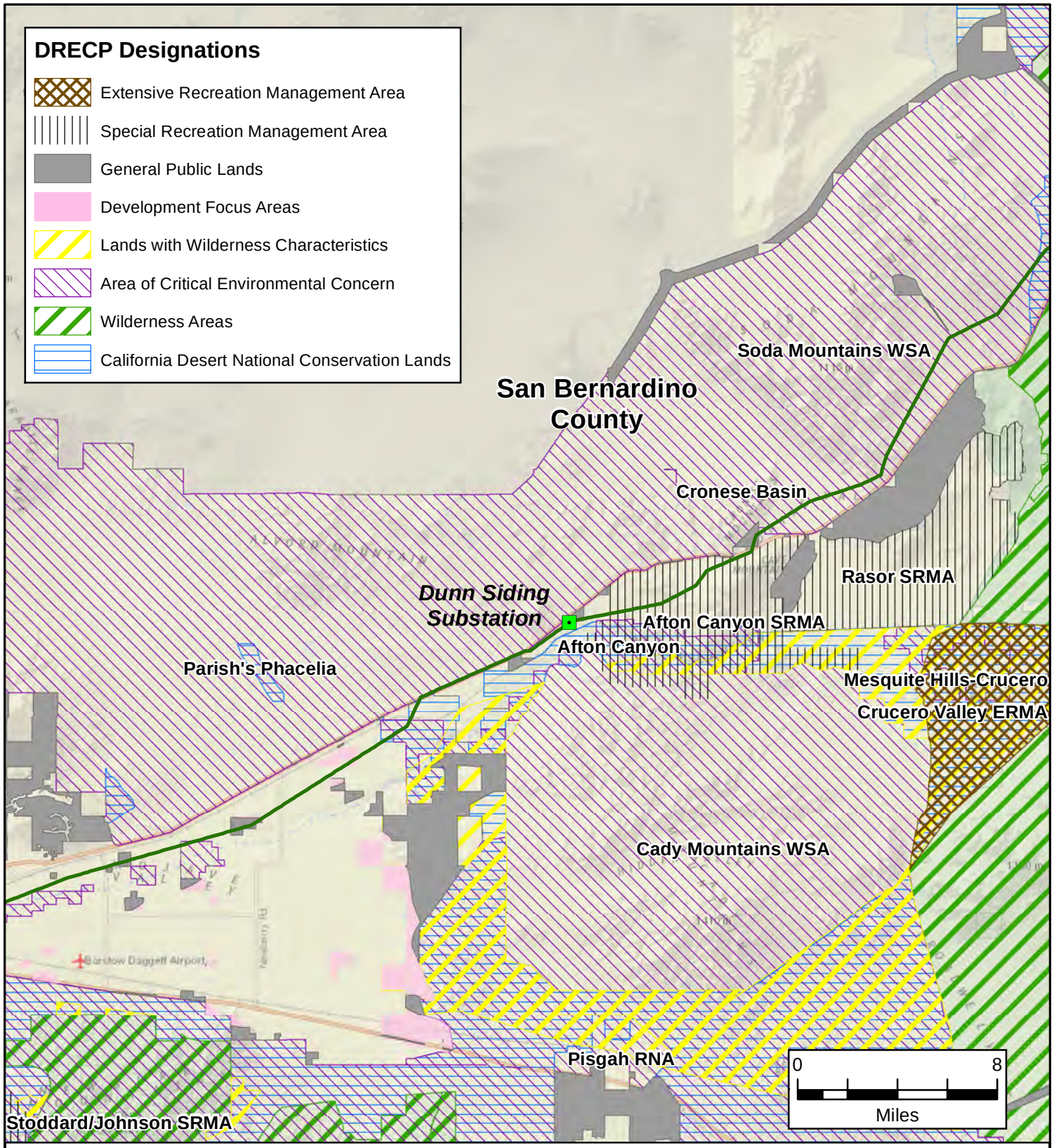

Substations
Counties
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IVANPAH-CONTROL PROJECT

DRECP LAND DESIGNATIONS

ARCADIS
SOUTHERN CALIFORNIA EDISON

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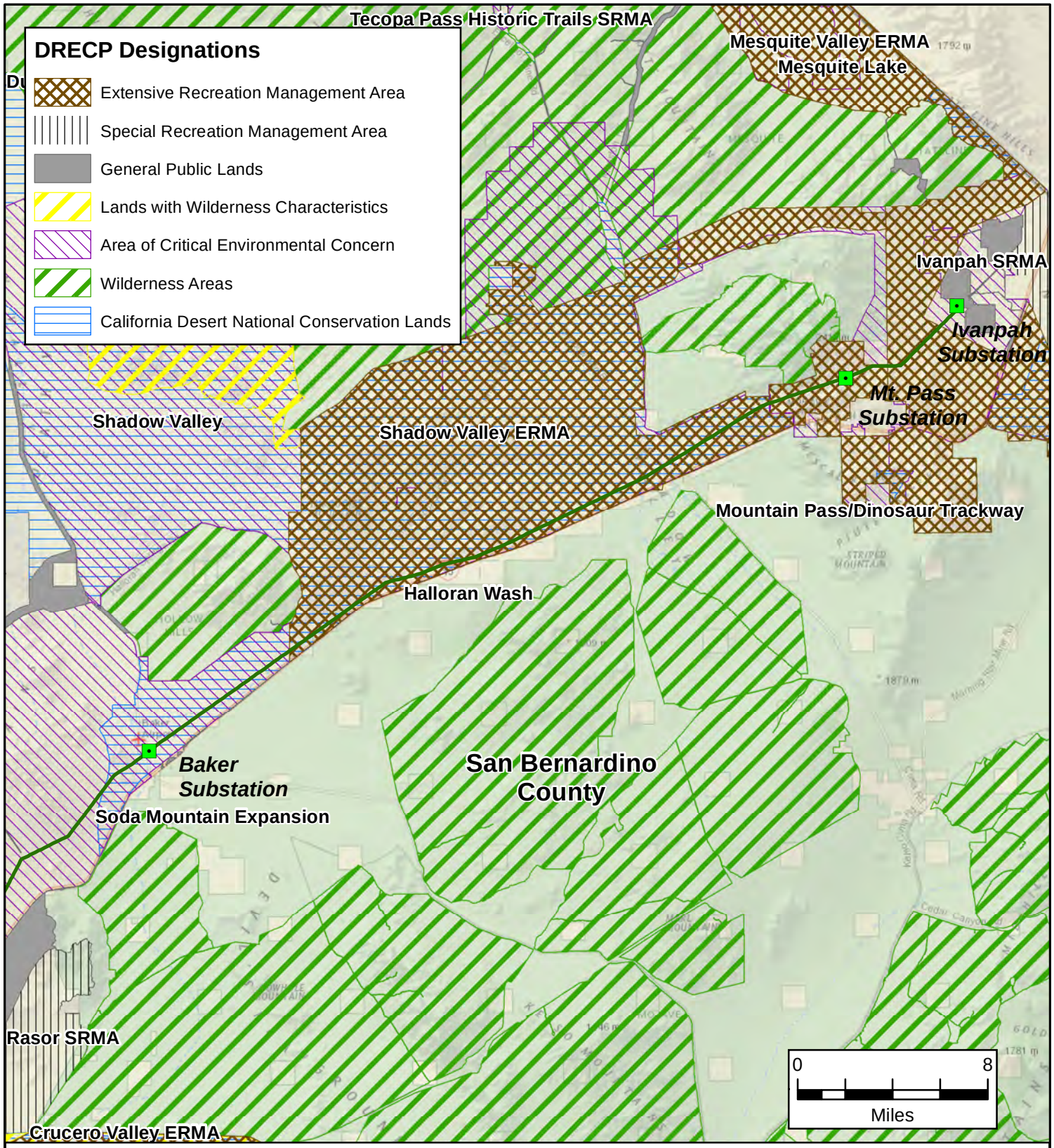

Substations
Counties
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Segment 3N
Segment 3S
Segment 4

IVANPAH-CONTROL PROJECT

DRECP LAND DESIGNATIONS

ARCADIS
SOUTHERN CALIFORNIA EDISON

FIGURESET: 4.11-3

4.12 Mineral Resources

This section describes the mineral resources in the area of the IC Project Alignment, as well as the potential impacts resulting from construction and operation of the Full-Rebuild Concept and its Alternatives.

According to the United States Geological Survey (USGS), a mineral resource is defined as a concentration of naturally occurring solid, liquid, or gaseous materials in or on the earth's crust in such a form and quantity, and of such a grade or quality, that it has reasonable prospects for economic extraction, either currently or in the future. Mineral resources include oil, natural gas, and metallic and non-metallic deposits. Mineral resources data were obtained from the following resources:

- USGS
- California Department of Conservation (DOC)
- California Geological Survey (CGS)
- Kern County General Plan
- Inyo County General Plan
- San Bernardino County General Plan
- City of Barstow General Plan

Aerial photographs were also used to analyze mineral resources in the vicinity of the IC Project Alignment.

4.12.1 Environmental Setting

The sections below describe the mineral resources extant along the IC Project Alignment. These discussions are divided by geopolitical boundaries. The locations of active mines within two miles of the IC Project Alignment are presented in Figureset 4.12-1.

4.12.1.1 Mineral Resources in Inyo County

Inyo County is located within the Basin and Range Geomorphic Province, with this region historically producing substantial amounts of mineral resources such as base and precious metals (e.g., gold, silver and copper). The County includes extensive occurrences of known and potential mineral resources, along with associated past and current mineral production.

The occurrence of mineral resources was an important factor in much of the early settlement within the County, and mining operations remain a substantial, albeit declining, local industry. Currently, aggregate resources (e.g., sand, gravel, clay and stone) represent the predominant mining activity in the County, although development of other mineral resources such as base and precious metals, borates, volcanic materials (e.g., pumice, perlite and cinders) and geothermal resources are occurring in various locations. A number of studies on mineral resource occurrences and potential have been conducted for areas within the County, including efforts by the USGS, BLM, CGS, and South Coast Geological Society. (Inyo County 2001)

The IC Project Alignment does not cross, nor is proximate to, any areas designated as an MRZ. (California Department of Conservation 2018) No locally important mineral resource recovery sites are delineated in the Inyo County General Plan or associated specific plans or other land use plans. The IC Project Alignment crosses, and is located in close proximity to, active mining sites in Inyo County (Figureset 4.12-1). These mines produce decomposed granite, clay, sand and gravel, rock, and fill dirt. (California Department of Conservation 2018)

4.12.1.2 Mineral Resources in Kern County

Mineral resource and petroleum extraction are basic to Kern County's economy. Borax, cement production, and construction aggregates constitute major economic mineral resources. (Kern County 2009) The State Geologist has classified more than 2,970 square miles of land in Kern County as Mineral Resource Zones (MRZs) of varying significance. (Koehler 1999) The project alignment does not cross, nor is proximate to, any areas designated as an MRZ. (Kern County 2018)

No locally-important mineral resource recovery sites are delineated in the Kern County General Plan or associated specific plans or other land use plans. The IC Project Alignment does not cross, and is not located in close proximity to, any active mining sites in Kern County (California Department of Conservation 2018).

4.12.1.3 Mineral Resources in San Bernardino County

The State Mineralogist in 1893 said that "No portion of California has more diversified mineral wealth than the County of San Bernardino… In its rugged mountains and desert [expanse], are found a wide range of geological formations from Paleozoic to Tertiary, and a great variety of rocks of igneous origin… The mines are scattered all over its thousands of square miles of territory, and have already added millions of dollars to the wealth of the state and the world." (San Bernardino County 2018)

Mineral resources are an integral part of development and the economic well-being of the County. The conservation, extraction and processing of those mineral resources is essential to meeting the needs of society. In San Bernardino County minerals are a foremost natural resource, with the Desert Planning Area—in which the Project alignment is located—accounting for over 90 percent of all County mining activities. (San Bernardino County 2007)

Approximately 95 active mines are located in San Bernardino County; these mines produce a variety of products including aggregates, clays, gold, silver, limestone, saline compounds, borates, talc, gypsum, and iron, among others. There are several large calcium carbonate mining operations in San Bernardino County. The County is home to the largest cement producer in the state. It also has the largest rare earth mine in North America. Extensive aggregate mining is also a major component of the mining industry within the County. The IC Project Alignment is located proximate to active and former mines, crosses areas designated as mineral resource zones (MRZs) in reports published by the California Department of Conservation's Division of Mines and Geology and the California Geological Survey, and crosses "High Potential Mineral Areas" delineated in Appendix D to the BLM DRECP LUPA. The County has not delineated any mineral resource recovery sites in its general plan, specific plan or other land use plan.

4.12.1.4 Mineral Resources in the City of Barstow

The project alignment is not located on, or adjacent to, any mineral extraction operation or site within the City of Barstow.

4.12.2 Regulatory Setting

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

4.12.2.1 Federal

4.12.2.1.1 Surface Mining Control and Reclamation Act of 1977

This Act (30 U.S.C. §§ 1201-1328) establishes a program for regulating surface coal mining and reclamation activities. It establishes mandatory uniform standards for these activities on state and federal

lands, including a requirement that adverse impacts on fish, wildlife, and related environmental values be minimized. The Act creates an Abandoned Mine Reclamation Fund for use in reclaiming and restoring land and water resources adversely affected by mining practices.

4.12.2.2 State

4.12.2.2.1 California Surface Mining and Reclamation Act

The protection of regionally significant mineral resource deposits is one of the main emphases of the Surface Mining and Reclamation Act (SMARA) (Public Resources Code § 2710 et seq.). The law specifically mandates a two-phased process, commonly referred to as classification and designation, for mineral resources. The California Geological Survey is responsible under SMARA for carrying out the classification phase of the process. The California Mining and Geology Board is responsible for the second phase, which allows the Board to identify areas within a production-consumption region that contain significant deposits of certain mineral resources that may be needed to meet the region's future demand.

SMARA requires the State Geologist to classify lands into Mineral Resource Zones (MRZs) based on the known or inferred mineral resource potential of that land. The classification process is based solely on geology, without regard to land use or ownership. The primary goal of mineral land classification is to help ensure that the mineral resource potential of land is recognized and considered in the land use planning process. MRZ definitions are provided in Table 4.12-1, Mineral Resource Zone Definitions.

Table 4.12-1: Mineral Resource Zone Definitions

MRZ-1	Areas where available geologic information indicates there is little likelihood for the presence of mineral resources.
MRZ-2a	Areas that contain significant measured or indicated reserves.
MRZ-2b	Areas where geologic information indicates that significant inferred resources or demonstrated subeconomic resources are present.
MRZ-3a	Areas likely to contain undiscovered mineral deposits similar to known deposits in the same producing district or region (hypothetical resources).
MRZ-3b	Areas judged to be favorable geologic environments for mineral resource occurrence, but where mineral discoveries have not been made in the region (speculative resources).
MRZ-4	Areas where geologic information does not rule out either the presence or absence of mineral resources.
ARA-6	Area with aggregate resources rated as highly significant.

Source: California Department of Conservation, Division of Mines and Geology

4.12.2.3 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.

4.12.2.3.1 Inyo County General Plan, Conservation and Open Space Element

Section 6.3, Mineral & Energy Resources, includes the following goals, policies, and implementation measures:

GOAL MER-1: Protect the current and future extraction of mineral resources that are important to the County's economy while minimizing impacts of this use on the public and the environment.

Policy MER-1.5: Maintain Accessibility: Ensure that extractive resource areas are protected from incompatible development that could interfere with extractive operations, now or in the future.

Implementation Measure 7.0: Discourage incompatible development on lands identified as containing significant mineral resources. Support uses that will not preclude future mining activities.

4.12.2.3.2 Kern County General Plan: Land Use, Open Space, and Conservation Element

The policies, goals, and implementation measures in the Kern County General Plan for mineral resources are contained in Section 1.9, Resources, and provided below:

Goals:

Goal 2. To protect areas of important mineral, petroleum, and agricultural resource potential for future use.

Policies:

Policy 17. Lands classified as MRZ-2, as designated by the State of California, should be protected from encroachment of incompatible land uses.

Policy 25. Discourage incompatible land use adjacent to Map Code 8.4 (Mineral and Petroleum) areas.

Implementation Measures:

Implementation Measure H. Use the California Geological Survey's latest maps to locate mineral deposits until the regional and statewide importance mineral deposits map has been completed, as required by the Surface Mining and Reclamation Act.

4.12.2.3.3 San Bernardino County General Plan

The Land Use Element of the County of San Bernardino 2007 General Plan contains the following policy that is relevant to the IC Project:

- **Policy LU 7.1:** Ensure that land use developments within the state-delineated Mineral Resource Zones (MRZs) are in accordance with the adopted mineral resources management policies of the County.

The Conservation Element of the County of San Bernardino 2007 General Plan contains the following policy that is relevant to the IC Project:

- **Policy CO 7.2:** Implement the state Mineral Resource Zone (MRZ) designations to establish a system that identifies mineral potential and economically viable reserves.

4.12.3 Significance Criteria

The significance criteria for assessing the impacts to mineral resources come from the California Environmental Quality Act (CEQA) Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would:

- Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state
- Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan

4.12.4 Impact Analysis

4.12.4.1 Would the Project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

4.12.4.1.1 Construction

No Impact. The IC Project Alignment crosses lands with known or inferred mineral resource that are of value to the region and the residents of the State; however, the Full-Rebuild Concept would not result in the loss of availability of any of these known mineral resources. The Full-Rebuild Concept involves the reconstruction of existing subtransmission facilities within or immediately proximate to the existing alignment. The existing infrastructure has been in place for more than 60 years; in that time and to the knowledge of SCE, the presence of the subtransmission infrastructure has not resulted in the loss of availability of any mineral resource. Because replacement subtransmission structures would be located proximate to existing subtransmission structures, mineral resources located within or proximate to the existing rights-of-way and easements that can be and are currently available to be safely extracted (i.e., that are available or that are actively mined) would continue to be available. Therefore, there would be no impact under this criterion.

4.12.4.1.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing operation and maintenance (O&M) activities, including inspections, along the subtransmission lines that would be rebuilt under the Full-Rebuild Concept. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the Full-Rebuild Concept, and therefore no impacts would be realized under this criterion during operations and maintenance.

4.12.4.2 Would the Project result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

4.12.4.2.1 Construction

No Impact. No mineral resource recovery sites are delineated in a General Plan, in a specific plan, or in any other land use plan prepared by Kern County, Inyo County, San Bernardino County, or the City of Barstow. Therefore, there would be no impacts under this criterion.

4.12.4.2.2 Operations

No Impact. No mineral resource recovery sites are delineated in a General Plan, in a specific plan, or in any other land use plan prepared by Kern County, Inyo County, San Bernardino County, or the City of Barstow. Therefore, there would be no impacts under this criterion.

4.12.5 Applicant Proposed Measures

Because no significant impacts to mineral resources would occur as a result of the Full-Rebuild Concept, no avoidance and minimization measures are proposed.

4.12.6 Alternatives

Alternatives to the Full-Rebuild Concept are addressed in Section 5.2, Description of Project Alternatives and Impact Analysis.

4.12.7 References

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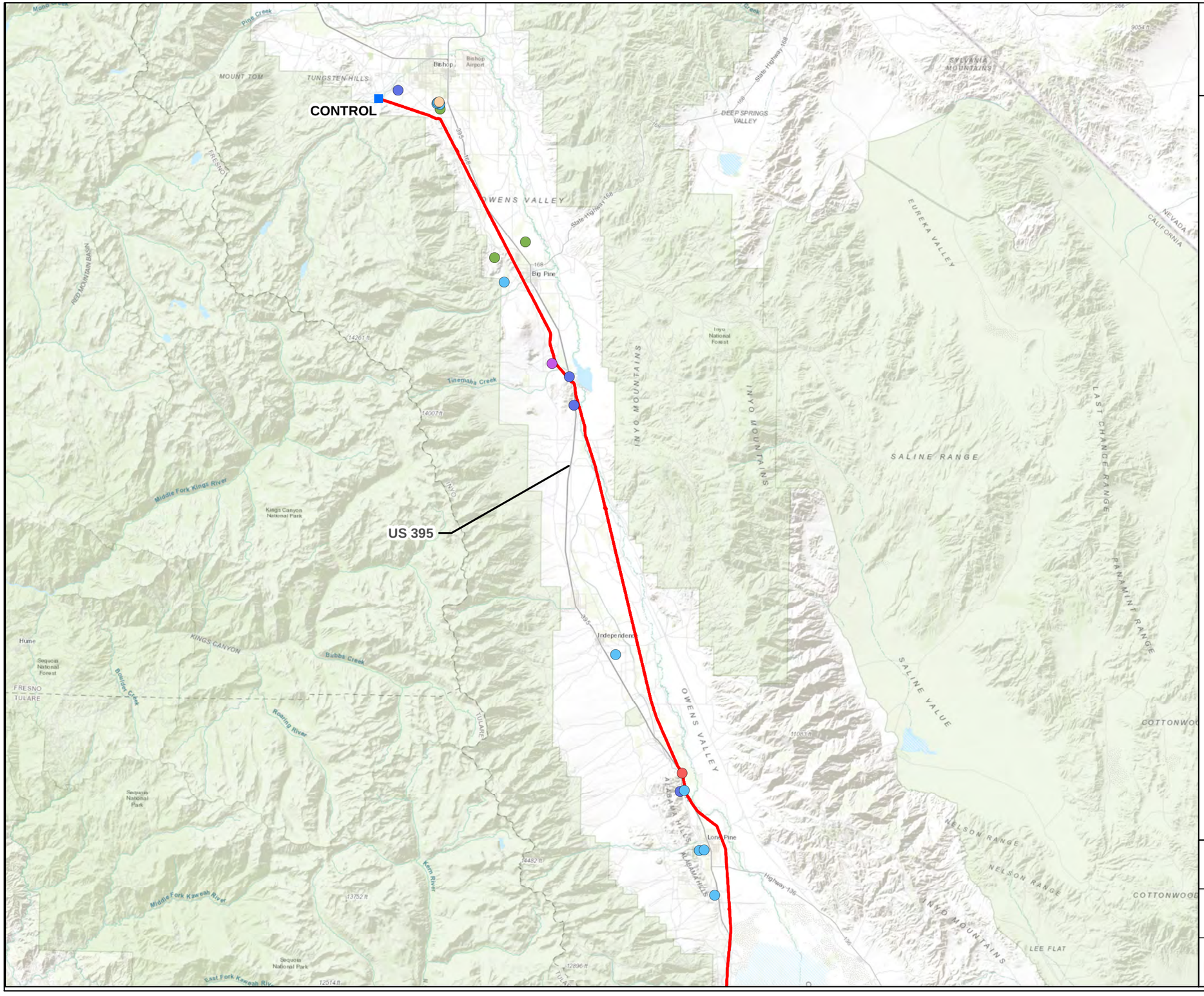

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Legend

- SUBSTATION
- SEGMENT 1

MINES: PRIMARY PRODUCT

- CINDERS
- CLAY
- DECOMPOSED GRANITE
- FILL DIRT
- SAND AND GRAVEL
- OTHER

0 6 12
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IMAGERY SOURCE: ESRI ONLINE NATIONAL GEOGRAPHIC AND WORLD IMAGERY 2015

IVANPAH-CONTROL PROJECT

MINES IN VICINITY OF IC PROJECT ALIGNMENT

ARCADIS Design & Consultancy for natural and built assets

FIGURESET: **4.12-1**

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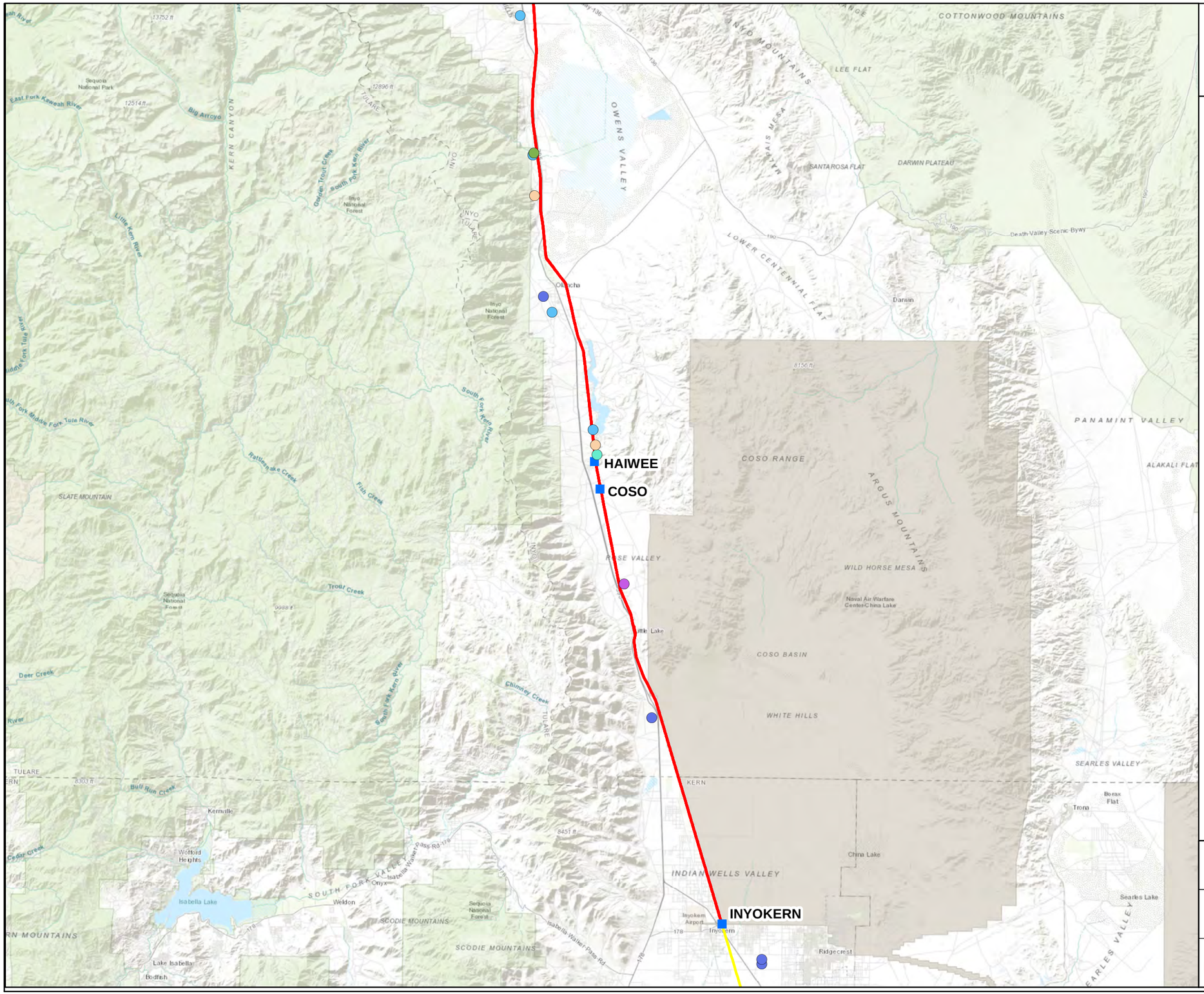

SOUTHERN CALIFORNIA EDISON
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Legend

- SUBSTATION
- SEGMENT 1
- SEGMENT 2

MINES: PRIMARY PRODUCT

- CINDERS
- DECOMPOSED GRANITE
- FILL DIRT
- ROCK
- SAND AND GRAVEL
- OTHER

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IMAGERY SOURCE: ESRI ONLINE NATIONAL GEOGRAPHIC AND WORLD IMAGERY 2015

IVANPAH-CONTROL PROJECT

MINES IN VICINITY OF IC PROJECT ALIGNMENT

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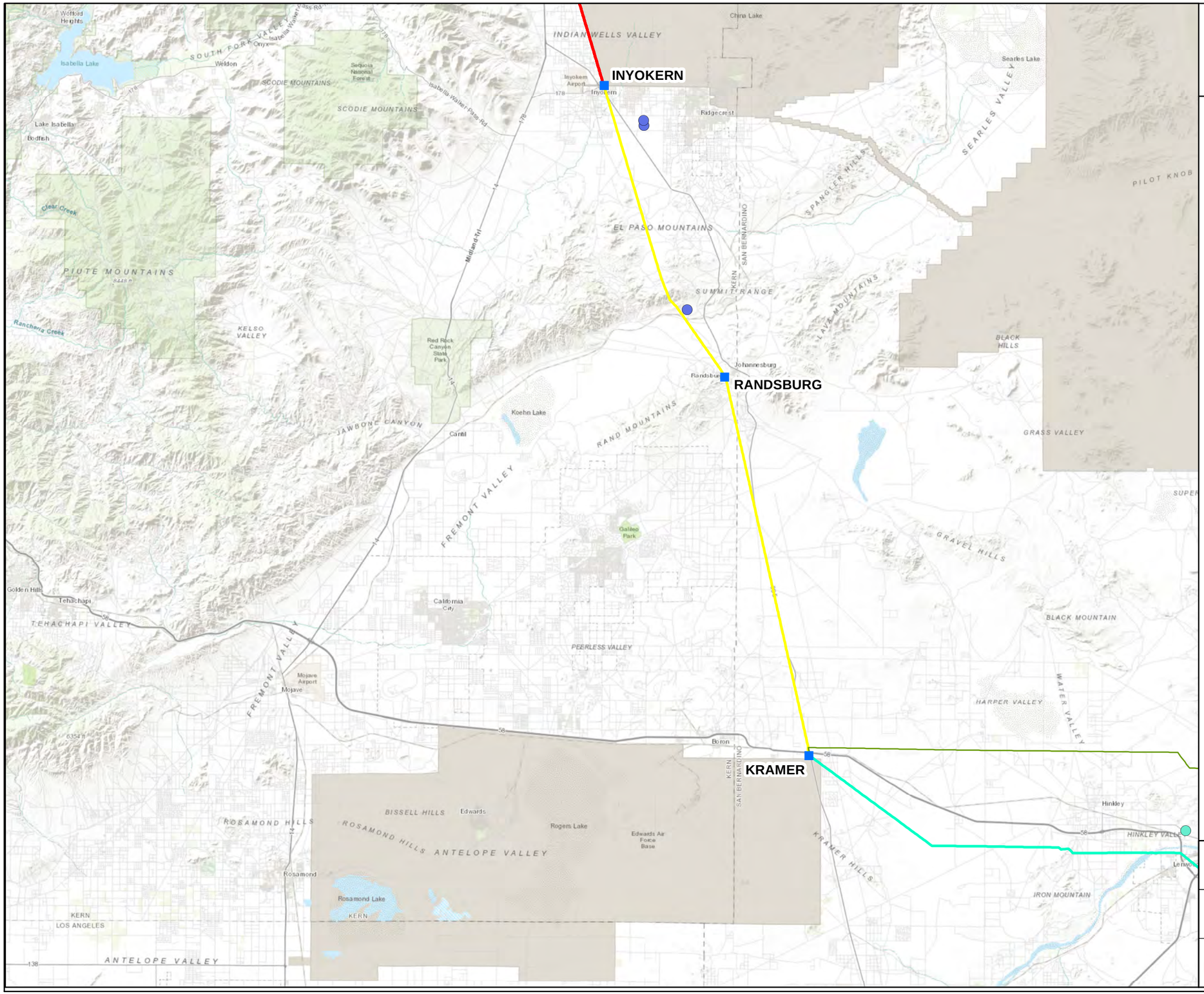

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Legend

- SUBSTATION
- SEGMENT 1
- SEGMENT 2
- SEGMENT 3S

MINES: PRIMARY PRODUCT

- ROCK
- SAND AND GRAVEL

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IMAGERY SOURCE: ESRI ONLINE NATIONAL GEOGRAPHIC AND WORLD IMAGERY 2015

IVANPAH-CONTROL PROJECT

MINES IN VICINITY OF IC PROJECT ALIGNMENT

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FIGURESET: **4.12-1**

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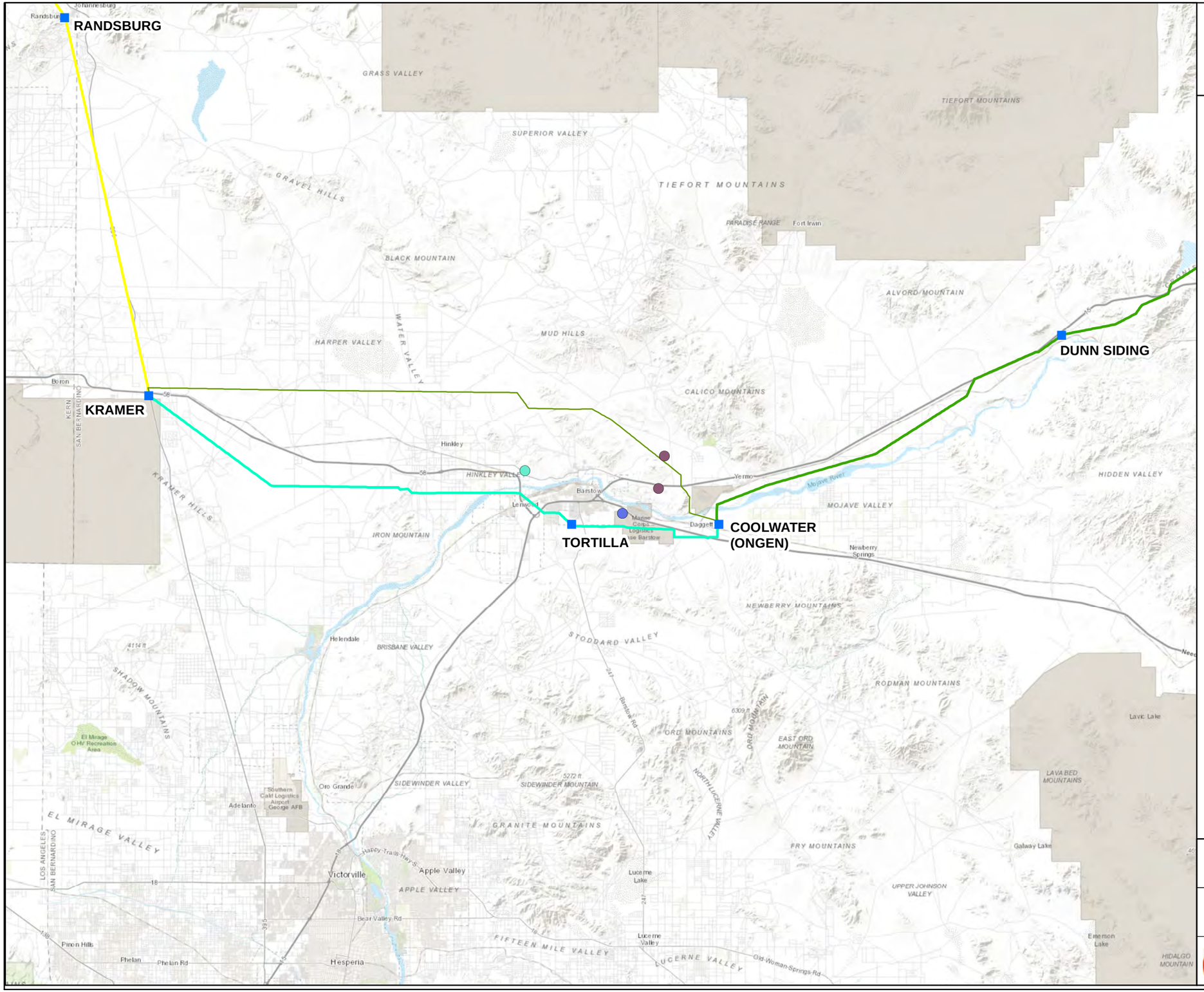

SOUTHERN CALIFORNIA EDISON
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N

Legend

- SUBSTATION
- SEGMENT 2
- SEGMENT 3S
- SEGMENT 4

MINES: PRIMARY PRODUCT

- DECORATIVE ROCK
- ROCK
- SAND AND GRAVEL

0 6 12
Miles

IMAGERY SOURCE: ESRI ONLINE NATIONAL GEOGRAPHIC AND WORLD IMAGERY 2015

IVANPAH-CONTROL PROJECT

MINES IN VICINITY OF IC PROJECT ALIGNMENT

ARCADIS Design & Consultancy for natural and built assets

FIGURESET: 4.12-1

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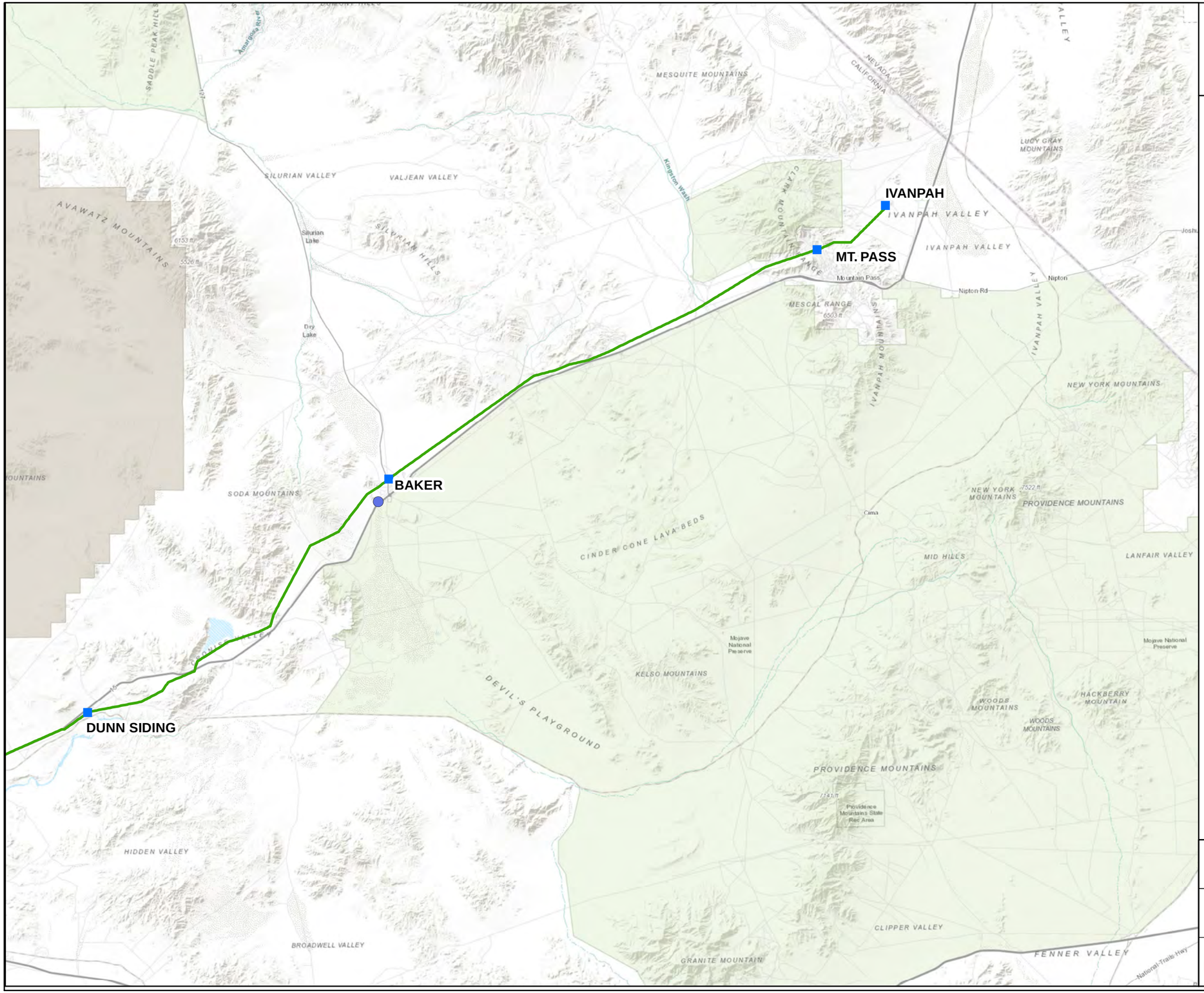

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FIGURESET: **4.12-1**

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4.13 Noise

This section describes the noise in the area of the IC Project Alignment, as well as the potential impacts resulting from construction and operation of the Full-Rebuild Concept and its Alternatives.

4.13.1 Environmental Setting

The IC Project Alignment is located in unincorporated Inyo County, Kern County, and San Bernardino County, and in the City of Barstow. Full-Rebuild Concept-related construction activities would occur mainly in open space areas. However, some Full-Rebuild Concept activities would be conducted in proximity to rural residences and residential areas, schools, and parks located near the existing subtransmission lines. Existing noise sources in proximity to these potentially noise-sensitive receptors include community noise and roadway and highway noise. The definition of a sensitive receptor varies by jurisdiction; for the purposes of this analysis, sensitive receptors include those defined in the San Bernardino County Development Code, Section 83.01.080: "Noise-sensitive land uses shall include residential uses, schools, hospitals, nursing homes, religious institutions, libraries, and similar uses."

Few sensitive receptors are located along the IC Project Alignment; areas with sensitive residential receptors are generally found in the unincorporated communities of Wilkerson, Big Pine, Lone Pine, Cartago, Olancha, Inyokern, Randsburg, Hinkley, Lenwood, and Baker, and in and around the City of Barstow, with scattered rural residences along the IC Project Alignment. Hospitals, nursing homes, libraries, and religious institutions are largely centered in the City of Ridgecrest and the City of Barstow; none are located nearer than 1,000 feet from the IC Project Alignment. Sensitive receptor locations are illustrated in Figureset 4.13-1; the distance from the IC Project Alignment to each of these receptor locations is shown in Table 4.13-1.

Table 4.13-1: Distance from Sensitive Receptor Locations to IC Project Alignment

Location	Approximate Distance (feet)	Location	Approximate Distance (feet)
R1	65	R11	250
R2	250	R12	60
R3	200	R13	280
R4	520	R14	70
R5	120	R15	500
R6	260	S1	1,500
R7	400	R16	300
R8	200	R17	350
R9	500	S2	1,000
R10	500	R18	720

4.13.1.1 Ambient Noise

Ambient noise data are available from monitoring locations in the vicinity of the IC Project Alignment. Along the IC Project Alignment, vehicle traffic is identified in general plans and previous environmental impact analyses as the primary source of ambient noise, with additional ambient noise from railroad operations in the City of Barstow. For areas along the IC Project Alignment that are not adjacent to roadways or railways, ambient noise has been reported to be approximately 55 dBA. (City of Barstow 2014; County of San Bernardino 2005; Inyo County 2014)

At locations in the vicinity of the IC Project Alignment in Segment 1, a mean day-night average sound level (L_{dn}) of 53.5 dBA (decibel A-weighted) has been recorded, with a range of L_{dn} measurements from

43.4 dBA to 61.1 dBA. (Inyo County 2014) In the vicinity of Inyokern Substation in Segment 2, daytime L_{eq} values have been recorded ranging from 40 to 44 dBA. (CEC 2010) Along Segment 3N west of Harper Lake, measurements indicate L_{eq} values ranging from 42.0 to 52.6 dBA. (Abengoa Solar 2009)

In the City of Barstow in Segment 3S, noise monitoring sites in the vicinity of the IC Project Alignment recorded L_{eq} levels of 65.3 dBA and 64.4 dBA, with L_{max} levels of 75.0 and 75.5 dBA. (City of Barstow 2014) In Segment 4, noise in the vicinity of the IC Project Alignment east of Coolwater Substation was measured at 54.9 dBA L_{eq} with an L_{max} level of 77.8 dBA, and near Baker Substation was measured at 55.4 dBA L_{eq} with an L_{max} level of 63.9 dBA. (County of San Bernardino 2005)

4.13.2 Regulatory Setting

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

4.13.2.1 Federal

4.13.2.1.1 U.S. Environmental Protection Agency

The United States Environmental Protection Agency has developed and published criteria for environmental noise levels with a directive to protect public health and welfare with an adequate margin of safety. (USEPA 1974) This USEPA criterion (Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety) was developed to be used as an acceptable guideline when no other local, county, or state standard has been established. However, the USEPA criterion is not meant to substitute for agency regulations or standards in cases where states and localities have developed criteria according to their individual needs and situations.

4.13.2.1.2 Federal Transit Administration

The Federal Transit Administration (FTA) has developed vibration impact thresholds for noise-sensitive buildings, residences, and institutional land uses. These thresholds are 80 VdB at residences and buildings where people normally sleep (e.g., nearby residences and daycare facilities) and 83 VdB at institutional buildings (e.g., schools and churches). These thresholds were developed to assess the potential impacts from the operation of mass transit systems (heavy and light rail, busses, etc.).

4.13.2.2 State

4.13.2.2.1 California Noise Control Act

The California Noise Control Act states that excessive noise is a serious hazard to public health and welfare, and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. It also recognizes that continuous and increasing bombardment of noise exists in urban, suburban, and rural areas. This act declares that the State of California has the responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. The Office of Noise Control in the Department of Health Services provides assistance to local communities developing local noise control programs, and works with the Governor's Office of Planning and Research to provide guidance for the preparation of the required noise elements in city and county general plans, pursuant to Section 65302(f) of the California Government Code.

4.13.2.3 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.

4.13.2.3.1 Inyo County Code of Ordinances

The Inyo County Code of Ordinances does not contain any standards or regulations applicable to the IC Project.

4.13.2.3.2 Inyo County General Plan, Public Safety Element

The Public Safety Element of the Inyo County General Plan contains the following definition, policies and implementation measure:

- Noise Sensitive Land Uses (Receptors). Noise sensitive land uses (receptors) are defined to include residential areas, hospitals, convalescent homes and extended care facilities, schools, libraries, daycare centers, and other similar land uses as determined by the County.
- Policy NOI-1.7 Noise Controls During Construction. Contractors will be required to implement noise-reducing mitigation measures during construction when residential uses or other sensitive receptors are located within 500 feet.
- Implementation Measure 5.0: Construction activities within 500 feet of existing noise sensitive uses shall be limited to the hours of 7:00 a.m. to 7:00 p.m. Monday through Saturday. No construction shall occur on Sunday or federal holidays without a special permit from the County for unusual circumstances.

4.13.2.3.3 Inyo County Policy Plan and Airport Comprehensive Land Use Plan

The Inyo County Airport Land Use Commission adopted a Policy Plan and Airport Comprehensive Land Use Plan (CLUP) in December 1991, which guides the orderly development of each public use airport in the County.

4.13.2.3.4 Kern County Code of Ordinances

Title 8, Health and Safety, Chapter 8.36 – Noise Control, details prohibitions on the generation of construction noise in unincorporated Kern County:

> Section 8.36.020 - Prohibited sounds.
>
> It is unlawful for any person to do, or cause to be done, any of the following acts within the unincorporated areas of the county:
> ...
> H. To create noise from construction, between the hours of nine (9:00) p.m. and six (6:00) a.m. on weekdays and nine (9:00) p.m. and eight (8:00) a.m. on weekends, which is audible to a person with average hearing faculties or capacity at a distance of one hundred fifty (150) feet from the construction site, if the construction site is within one thousand (1,000) feet of an occupied residential dwelling except as provided below:
>
> 1. The development services agency director or his designated representative may for good cause exempt some construction work for a limited time.
>
> 2. Emergency work is exempt from this section.

4.13.2.3.5 Kern County General Plan, Noise Element

The major purpose of the Noise Element is to: (1) establish reasonable standards for maximum desired noise levels in Kern County, and; (2) develop an implementation program which could effectively deal with the noise problem. Section 3.2 of the Noise Element identifies the following as noise sensitive land uses: residential areas, schools, convalescent and acute care hospitals, parks and recreational areas, and churches.

The Noise Element of the Kern County General Plan does not establish standards for construction activities. Land use compatibility standards established in the Noise Element for new land uses are not relevant as the IC Project does not constitute a new land use.

4.13.2.3.6 Kern County Airport Land Use Compatibility Plan

The Kern County Airport Land Use Compatibility Plan established procedures and criteria by which the County of Kern and the affected incorporated cities can address compatibility issues when making planning decisions regarding airports and the land uses around them. The Plan serves as a guidance document for the regulation of land uses around the various public use airports found in the County.

4.13.2.3.7 San Bernardino County General Plan, Noise Element

The Noise Element in the County of San Bernardino 2007 General Plan contains specific goals and policies focused on reducing noise to a level consistent with health and quality of life goals. The following policies related to noise are relevant to the IC Project:

> GOAL N 1. The County will abate and avoid excessive noise exposures through noise mitigation measures incorporated into the design of new noise-generating and new noise-sensitive land uses, while protecting areas within the County where the present noise environment is within acceptable limits.
>
> POLICY N 1.5. Limit truck traffic in residential and commercial areas to designated truck routes; limit construction, delivery, and through-truck traffic to designated routes; and distribute maps of approved truck routes to County traffic officers.
>
> POLICY N 1.6. Enforce the hourly noise-level performance standards for stationary and other locally regulated sources, such as industrial, recreational, and construction activities as well as mechanical and electrical equipment.

4.13.2.3.8 San Bernardino County Development Code

Section 83.01.080 establishes standards concerning acceptable noise levels for both noise-sensitive land uses and for noise-generating land uses. The Section notes the following:

> (a) Noise measurement. Noise shall be measured: (1) At the property line of the nearest site that is occupied by, and/or zoned or designated to allow the development of noise-sensitive land uses;
>
> (b) Noise impacted areas. Areas within the County shall be designated as "noise impacted" if exposed to existing or projected future exterior noise levels from mobile or stationary sources exceeding the standards listed in Subsection (d) (Noise standards for stationary noise sources) and Subsection (e) (Noise standards for adjacent mobile noise sources), below.
>
> ...
>
> Noise-sensitive land uses shall include residential uses, schools, hospitals, nursing homes, religious institutions, libraries, and similar uses.

(c) Noise standards for stationary noise sources.

(1) Noise standards. Table 83-2 (Noise Standards for Stationary Noise Sources) describes the noise standard for emanations from a stationary noise source, as it affects adjacent properties:

Table 83-2
Noise Standards for Stationary Noise Sources

Affected Land Uses (Receiving Noise)	7:00 a.m. - 10:00 p.m. Leq	10:00 p.m. - 7:00 a.m. Leq
Residential	55 dB(A)	45 dB(A)
Professional Services	55 dB(A)	55 dB(A)
Other Commercial	60 dB(A)	60 dB(A)
Industrial	70 dB(A)	70 dB(A)

Leq = (Equivalent Energy Level). The sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over a given sample period, typically one, eight or 24 hours.
dB(A) = (A-weighted Sound Pressure Level). The sound pressure level, in decibels, as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound, placing greater emphasis on those frequencies within the sensitivity range of the human ear.
Ldn = (Day-Night Noise Level). The average equivalent A-weighted sound level during a 24-hour day obtained by adding 10 decibels to the hourly noise levels measured during the night (from 10:00 p.m. to 7:00 a.m.). In this way Ldn takes into account the lower tolerance of people for noise during nighttime periods.

(2) Noise limit categories. No person shall operate or cause to be operated a source of sound at a location or allow the creation of noise on property owned, leased, occupied, or otherwise controlled by the person, which causes the noise level, when measured on another property, either incorporated or unincorporated, to exceed any one of the following:

(A) The noise standard for the receiving land use as specified in Subsection B (Noise-impacted areas), above, for a cumulative period of more than 30 minutes in any hour.

(B) The noise standard plus 5 dB(A) for a cumulative period of more than 15 minutes in any hour.

(C) The noise standard plus 10 dB(A) for a cumulative period of more than five minutes in any hour.

(D) The noise standard plus 15 dB(A) for a cumulative period of more than one minute in any hour.

(E) The noise standard plus 20 dB(A) for any period of time.

(d) Noise standards for adjacent mobile noise sources. Noise from mobile sources may affect adjacent properties adversely. When it does, the noise shall be mitigated for any new development to a level that shall not exceed the standards described in the following Table 83-3 (Noise Standards for Adjacent Mobile Noise Sources).

Table 83-3
Noise Standards for Adjacent Mobile Noise Sources

Land Use		Ldn (or CNEL) dB(A)	
Categories	**Uses**	**Interior (1)**	**Exterior (2)**
Residential	Single and multi-family, duplex, mobile homes	45	60 (3)
Commercial	Hotel, motel, transient housing	45	60
	Commercial retail, bank, restaurant	54	N/A
	Office building, research and development, professional offices	45	65
	Amphitheater, concert hall, auditorium, movie theater	45	N/A
Institutional/Public	Hospital, nursing home, school classroom, religious institution, library	45	65
Open Space	Park	N/A	65

Notes:
1 The indoor environment shall exclude bathrooms, kitchens, toilets, closets and corridors.
2 The outdoor environment shall be limited to:
- Hospital/office building patios
- Hotel and motel recreation areas
- Mobile home parks
- Multi-family private patios or balconies
- Park picnic areas
- Private yard of single-family dwellings
- School playgrounds

3 An exterior noise level of up to 65 dB(A) (or CNEL) shall be allowed provided exterior noise levels have been substantially mitigated through a reasonable application of the best available noise reduction technology, and interior noise exposure does not exceed 45 dB(A) (or CNEL) with windows and doors closed. Requiring that windows and doors remain closed to achieve an acceptable interior noise level shall necessitate the use of air conditioning or mechanical ventilation.

CNEL = (Community Noise Equivalent Level). The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of approximately five decibels to sound levels in the evening from 7 p.m. to 10 p.m. and 10 decibels to sound levels in the night from 10 p.m. to 7 a.m.

...

(g) Exempt noise. The following sources of noise shall be exempt from the regulations of this Section:

...

(3) Temporary construction, maintenance, repair, or demolition activities between 7:00 a.m. and 7:00 p.m., except Sundays and Federal holidays.

Section 83.01.090, Vibration, includes the following:

(a) Vibration standard. No ground vibration shall be allowed that can be felt without the aid of instruments at or beyond the lot line, nor shall any vibration be allowed which produces a particle velocity greater than or equal to two-tenths (0.2) inches per second measured at or beyond the lot line.

(c) Exempt vibrations. The following sources of vibration shall be exempt from the regulations of this Section.

...

(2) Temporary construction, maintenance, repair, or demolition activities between 7:00 a.m. and 7:00 p.m., except Sundays and Federal holidays.

4.13.2.3.9 City of Barstow General Plan, Noise Element

The City of Barstow's Noise Element establishes policies and programs designed to reduce noise levels in the long term. The Element includes the following:

GOAL 2: Minimize adverse noise impacts of development anticipated under the General Plan.

POLICY 2.B: Minimize noise and ground vibration associated with project construction.

STRATEGY 2.B.1: Exempt construction activities from the operational noise standards set forth in Table N-1 between the hours of 7:00 a.m. and 7:00 p.m. and enforce the standards outside of these hours.

STRATEGY 2.B.2: Pursuant to San Bernardino County Ordinance 87.0910 vibration levels shall be limited to 0.2 inches per second at the property line (or nearest sensitive receptor).

Table N-1 from the General Plan is shown here:

Table N-1: State of California Interior and Exterior Noise Standards

		CNEL (dBA)	
Categories	**Uses**	**Interior[1]**	**Exterior[2]**
Residential	Single-family, Duplex, Multi-family	45[3]	65
	Mobile Homes	--	65[4]
Commercial Industrial	Hotel, Motel, Transient Lodge	45	65[5]
	Commercial retail, Bank, Restaurants	55	--
	Office Building, R&D, Professional & Government Offices	50	--
	Amphitheater, Concert Hall, Auditorium, Meet Hall	45	--
	Gymnasium (multipurpose)	50	--
	Sports Club	55	--
	Manufacturing, Warehousing, Wholesale, Utilities	65	--
	Movie Theaters	45	--
Institutional	Hospitals, Schools, Classrooms	45	65
	Church, Library	45	--
Open Space	Parks and Outdoor Active and Passive Recreation Facilities	--	65

4.13.2.3.10 City of Barstow Municipal Code

The City of Barstow's Municipal Code does not contain limitations on construction times or establish noise standards.

4.13.3 Significance Criteria

The significance criteria for assessing the impacts from noise are determined from the California Environmental Quality Act (CEQA) Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would cause:

- Exposure of people to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies
- Exposure of people to, or generation of, excessive groundborne vibration or groundborne noise levels
- A substantial permanent increase in ambient noise levels in the Proposed Project vicinity above levels existing without the Proposed Project

- A substantial temporary or periodic increase in ambient noise levels in the Proposed Project vicinity above levels existing without the Proposed Project
- Exposure of people residing or working in the Proposed Project area to excessive noise levels for a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport
- Exposure of people residing or working in the Proposed Project area to excessive noise levels for a project within the vicinity of a private airstrip

4.13.4 Impact Analysis

4.13.4.1 Would the Project result in the exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

4.13.4.1.1 Construction

Less than Significant Impact with Mitigation. There are no established noise level standards applicable to Full-Rebuild Concept-related construction activities in Inyo County or Kern County; therefore, work in Inyo County and Kern County would not result in the exposure of persons to or generation of noise levels in excess of established standards.

Construction activities would require the temporary use of various types of noise-generating construction equipment; Table 4.13-2 provides a list of the typical construction equipment involved in Full-Rebuild Concept activities, and Table 4.13-3 presents the noise generated by typical construction activities. Helicopter operations could be expected to generate noise levels of approximately 88 dBA at a distance of 150 feet.

Table 4.13-2: Typical Construction Equipment Noise Levels

Equipment	Noise Level (dBA) at 50 feet
Backhoe	80
Concrete mixer	85
Pump truck	82
Crane, Mobile	85
Dozer	85
Excavator	85
Generator	82
Grader	85
Man lift	85
Loader	80
Paver	85
Roller	85
Scraper	85
Trucks	80-84

Source: FHWA 2006

Table 4.13-3: Construction Activity Noise Generation

Construction Operations	Contour Distance (feet)				
	75 dBA L_{eq}	70 dBA L_{eq}	65 dBA L_{eq}	60 dBA L_{eq}	55 dBA L_{eq}
Conductor Removal	183	327	572	975	1,610
Existing Structure Removal	171	307	537	916	1,517
TSP Foundation Installation	173	309	539	924	1,534
TSP Assembly	134	243	428	739	1,240
TSP Erection	132	239	420	726	1,219
Conductor Installation	204	364	630	1,067	1,757
Staging Yard	16	28	50	89	158

Noise standards established by San Bernardino County and the City of Barstow are presented in Table 4.13-4. In San Bernardino County, construction activities performed Monday through Saturday between the hours of 7:00 a.m. and 7:00 p.m. are exempt from noise standards established by the County. Outside of these times and on Sundays and holidays, the controlling thresholds for stationary sources of noise are 55 dBA between the hours of 7 a.m. and 10 p.m. and 45 dBA between the hours of 10 p.m. and 7 a.m., for residential land uses in San Bernardino County.

Table 4.13-4: Established Noise Standards, Residential Land Uses

Jurisdiction	Construction Period	Noise Standard
Unincorporated San Bernardino County	Sundays and Federal Holidays, 7 a.m. to 10 p.m.	55 dBA
Unincorporated San Bernardino County	Sundays and Federal Holidays, 10 p.m. to 7 a.m.	45 dBA
Unincorporated San Bernardino County	Monday through Saturday (inclusive), 7 a.m. to 7 p.m.	None; exempt
Unincorporated San Bernardino County	Monday through Saturday (inclusive), 7 p.m. to 10 p.m.	55 dBA
Unincorporated San Bernardino County	Monday through Saturday (inclusive), 10 p.m. to 7 a.m.	45 dBA
City of Barstow	Any day, 7 a.m. to 7 p.m.	None; exempt
City of Barstow	Any day, 7 p.m. to 7 a.m.	65 dBA

In the City of Barstow, construction activities performed on all days between the hours of 7:00 a.m. and 7:00 p.m. are exempt from noise standards established by the City. Outside of these times, the controlling threshold for noise is 65 dBA for noise sensitive land uses in the City of Barstow.

The Full-Rebuild Concept crosses areas with designated residential land uses in both San Bernardino County and the City of Barstow. In these areas, construction would generally be limited to the exempted hours presented above. If construction activities are necessary on days or hours outside of what is specified by ordinance (for example, if existing lines must be taken out of service for the work to be performed safely and the line outage must be taken at night for system reliability reasons, or if construction needs require continuous work), SCE would provide notification, including a general description of the work to be performed, location, and hours of construction anticipated, to the CPUC, San Bernardino County, the City of Barstow. Further, SCE would route construction traffic and/or helicopter flight(s) away from residences, schools, and recreational facilities to the extent feasible.

In the event that the noise generated by a given construction activity would exceed the standards listed in Table 4.13-1 at a sensitive receptor, SCE would implement APM NOI-1; with implementation of this APM, impacts would be less than significant.

4.13.4.1.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing operation and maintenance (O&M) activities, including inspections, along the subtransmission lines that would be rebuilt under the Full-Rebuild Concept. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the Full-Rebuild Concept, and therefore no impacts would be realized under this criterion during operations and maintenance.

4.13.4.2 Would the Project result in the exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

4.13.4.2.1 Construction

Less than Significant Impact. Construction activities would not expose persons to or generation of excessive groundborne vibration or groundborne noise levels. Construction activities would generate groundborne vibration from geotech drill rigs, excavators, augers, dump trucks, backhoes, and other general construction equipment. The threshold of vibration perception for most humans is around 65 VdB, levels in the 70 to 75 VdB range are often noticeable but acceptable, and levels in excess of 80 VdB are often considered unacceptable. (FTA 2006) For human annoyance, there is some relationship between the number of events and the degree of annoyance caused by the vibration. More frequent vibration events, or events that last longer, would be more annoying to building occupants. To account for this effect, the Federal Transit Administration's Guidance Manual includes higher VdB impact thresholds for infrequent events, noting that vibration of 85 VdB is "acceptable only if there are an infrequent number of events per day." Based on the approach set forth in the FTA guidelines, and because activities at any single construction work area would be infrequent and temporary, this analysis adopts a threshold of significance of 85 VdB for groundborne vibration impacts for work in Kern County, Inyo County, and the City of Barstow, which have not established a threshold of significance.

Section 83.01.090 of the San Bernardino County Development Code states that "[n]o ground vibration shall be allowed that can be felt without the aid of instruments at or beyond the lot line, nor shall any vibration be allowed which produces a particle velocity greater than or equal to two-tenths (0.2) inches per second measured at or beyond the lot line." The Code also exempts from the regulations "[t]emporary construction, maintenance, repair, or demolition activities between 7:00 a.m. and 7:00 p.m., except Sundays and Federal holidays." A particle velocity of 0.2 inches per second is equivalent to 106 VdB.

Vibration impacts associated with construction operations would primarily affect those receptors located closest to TSP and LWS pole installation sites, and those located near conductor removal/replacement locations. Vibration calculations based on the FTA guidelines are provided in Table 4.13-5.

Table 4.13-5: Vibration Source Levels for Typical Construction Equipment

Equipment	Vibration Level at 25 feet (VdB)
Large bulldozer	87
Jackhammer	79
Caisson drilling	87
Loaded trucks	86
Small bulldozer	58

Source: FTA 2006

Construction activities would occur as near as 35 feet to some residences in unincorporated San Bernardino County, although most activities would be performed at several times that distance in the

vicinity of sensitive receptors. The data in Table 4.13-2 show that vibration levels associated with these activities are all below the 106 VdB threshold in unincorporated San Bernardino County.

In Inyo County, Kern County, and the City of Barstow, construction activities would occur as near as 50 feet to some residences. Screening-level calculations indicate that vibration levels associated with these activities would attenuate to a level of approximately 82 VdB at the nearest residence.[13] This analysis shows that vibration levels at all identified sensitive receptors would be below the Full-Rebuild Concept-specific threshold of 85 VdB given the distance from the construction activity to the sensitive receptor. Therefore, groundborne vibration impacts associated with construction activities would be less than significant.

4.13.4.2.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing operation and maintenance (O&M) activities, including inspections, along the subtransmission lines that would be rebuilt under the Full-Rebuild Concept. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the Full-Rebuild Concept, and therefore no impacts would be realized under this criterion during operations and maintenance.

4.13.4.3 Would the Project result in a substantial permanent increase in ambient noise levels in the Proposed Project vicinity above levels existing without the Proposed Project?

4.13.4.3.1 Construction

No Impact. The Full-Rebuild Concept includes the reconstruction of existing subtransmission lines. Construction of the Full-Rebuild Concept would be temporary, and thus would not result in a permanent increase in ambient noise levels. Therefore, there would be no impact.

4.13.4.3.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing operation and maintenance (O&M) activities, including inspections, along the subtransmission lines that would be rebuilt under the Full-Rebuild Concept. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the Full-Rebuild Concept, and therefore no impacts would be realized under this criterion during operations and maintenance activities.

During operation of the rebuilt subtransmission lines, the new conductor would not increase the amount of corona noise (the crackling, hissing, or humming that can be heard from power lines) generated by operation of the subtransmission lines beyond the existing conditions; rather, installation of new conductor and associated hardware may reduce the amount of corona noise. No permanent increase in ambient noise levels would occur in the vicinity.

[13] The following equation estimates the vibration level Lv at any distance (D):
Lv(D) = Lv(25 feet) – 30Log(D/25), where: Lv(D) = vibration level at a given distance D (in feet).
For a distance of 50 feet, Lv(D) = 87 – 30Log(50/25) = 87 – 4.9 = 82.1 VdB

4.13.4.4 Would the Project result in a substantial temporary or periodic increase in ambient noise levels in the Proposed Project vicinity above levels existing without the Proposed Project?

4.13.4.4.1 Construction

Less than Significant Impact. Noise associated with construction of the Full-Rebuild Concept would exceed the ambient noise levels in the vicinity of the Full-Rebuild Concept, and thus would result in a temporary increase in ambient noise levels. The magnitude of the increase would vary across the Full-Rebuild Concept alignment, as the ambient noise levels vary across the alignment. In general, areas with receptors that may be sensitive to temporary increases in ambient noise levels are characterized as those areas with the highest ambient noise levels, and thus the increase in ambient noise levels attributed to construction of the Full-Rebuild Concept would be less than significant.

As shown by the activity durations listed in Table 3.7-8: Construction Equipment and Workforce, construction at any given location would not be sustained for more than a few days at a time and would generally occur within the time restrictions identified in local ordinances. Construction activities at any given location would be short-term, and thus would not represent a periodic increase in ambient noise levels. Due to the short-term and temporary nature of construction activities, and the limited number of noise sensitive receptors in the immediate vicinity of construction work areas along the Full-Rebuild Concept alignment, the increase in ambient noise levels would not be substantial, and thus impacts would be less than significant.

Activities at staging yards would generally occur over a period of months, and would represent a temporary increase in ambient noise levels. As presented above, noise associated with activities at staging yards would not exceed established thresholds, and therefore would not result in a substantial increase in ambient noise levels.

Because construction of the Full-Rebuild Concept would result in a temporary, non-substantial increase in ambient noise levels in the Full-Rebuild Concept vicinity, impacts under this criterion would be less than significant.

4.13.4.4.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing operation and maintenance (O&M) activities, including inspections, along the subtransmission lines that would be rebuilt under the Full-Rebuild Concept. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the Full-Rebuild Concept, and therefore no impacts would be realized under this criterion during operations and maintenance.

4.13.4.5 For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Proposed Project expose people residing or working in the Proposed Project area to excessive noise levels?

4.13.4.5.1 Construction

No Impact. The southern portion of Segment 1 and the northwestern terminus of Segment 2 are located within two miles of Inyokern Airport (Kern County). Lone Pine Airport (Inyo County) is also found along the southern portion of Segment 1. Inyokern Airport is addressed in the Kern County Airport Land Use Compatibility Plan, and the Lone Pine Airport is included in the Inyo County Policy Plan and Airport

Comprehensive Land Use Plan (CLUP). The Barstow-Daggett Airport, located east of the eastern termini of Segments 3N and 3S, and Baker Airport, located along Segment 4, are both covered under their respective airport comprehensive land use plans.

As described above, construction of the Full-Rebuild Concept would not expose people residing in the area to noise levels in excess of standards established in a general plan or ordinance. Further, increases in noise levels in the vicinity of individual construction work areas during construction would be short term, intermittent, and temporary, and would not expose people residing near individual construction work areas to excessive noise levels. The Full-Rebuild Concept is located outside the 60 dBA and 60 dBA CNEL noise contours for all airports. Thus, project construction workers would not be exposed to excessive noise levels from airport operations.

Because construction of the Full-Rebuild Concept would not expose people residing within two miles of a public airport and near individual construction work areas to excessive noise levels, and because construction of the Full-Rebuild Concept would not expose workers to excessive noise levels, no impact would be realized under this criterion.

4.13.4.5.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing operation and maintenance (O&M) activities, including inspections, along the subtransmission lines that would be rebuilt under the Full-Rebuild Concept. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the Full-Rebuild Concept, and therefore no impacts would be realized under this criterion during operations and maintenance.

4.13.4.6 For a project within the vicinity of a private airstrip, would the Proposed Project expose people residing or working in the Proposed Project area to excessive noise levels?

4.13.4.6.1 Construction

No Impact. The Full-Rebuild Concept is not within the vicinity of a private airstrip; therefore, there would be no impact under this criterion.

4.13.4.6.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing operation and maintenance (O&M) activities, including inspections, along the subtransmission lines that would be rebuilt under the Full-Rebuild Concept. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the Full-Rebuild Concept, and therefore no impacts would be realized under this criterion during operations and maintenance.

4.13.5 Applicant Proposed Measures

SCE has designed and incorporated the following APM into the Full-Rebuild Concept to avoid or minimize potential impacts to noise sensitive receptors:

APM NOI-1: Implement Best Management Practices for Construction Noise. SCE shall employ the following noise-control techniques, at a minimum, to reduce construction noise exposure at noise-sensitive receptors during construction:

- To the extent feasible, construction activities shall be confined to daytime, weekday and weekend established by the applicable local jurisdiction. In the event construction is required beyond those hours, SCE will notify the appropriate local agency or agencies regarding the description of the work, location, and anticipated construction hours.
- Construction equipment shall use noise reduction features (e.g., mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer.
- Construction traffic and helicopter flight shall be routed away from residences and schools, where feasible.
- Unnecessary construction vehicle use and idling time shall be minimized. If a vehicle is not required for use immediately or continuously for construction activities, its engine shall be shut off.

4.13.6 Alternatives

Alternatives to the Full-Rebuild Concept are addressed in Section 5.2, Description of Project Alternatives and Impact Analysis.

4.13.7 References

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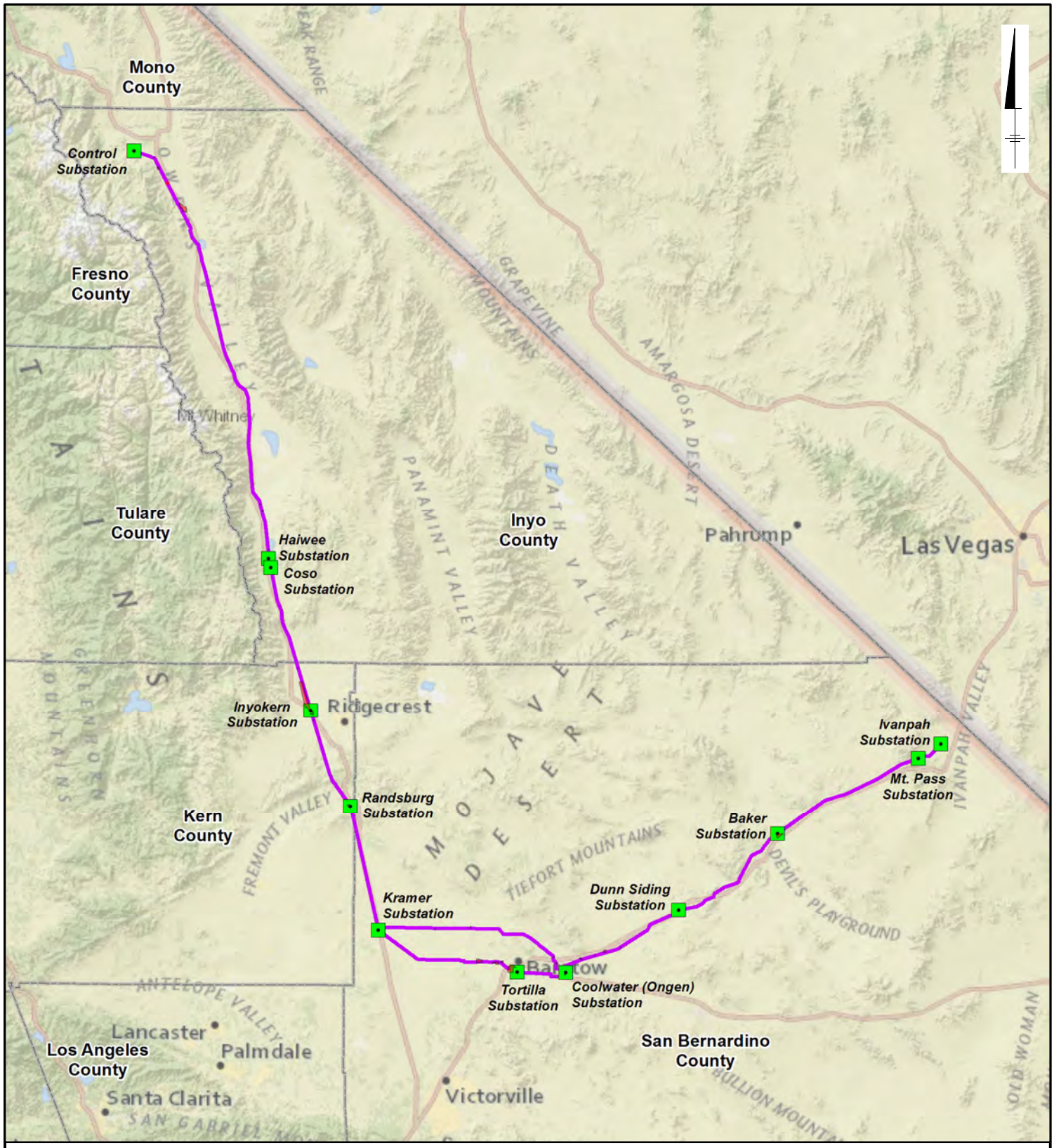

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SENSITIVE RECEPTORS

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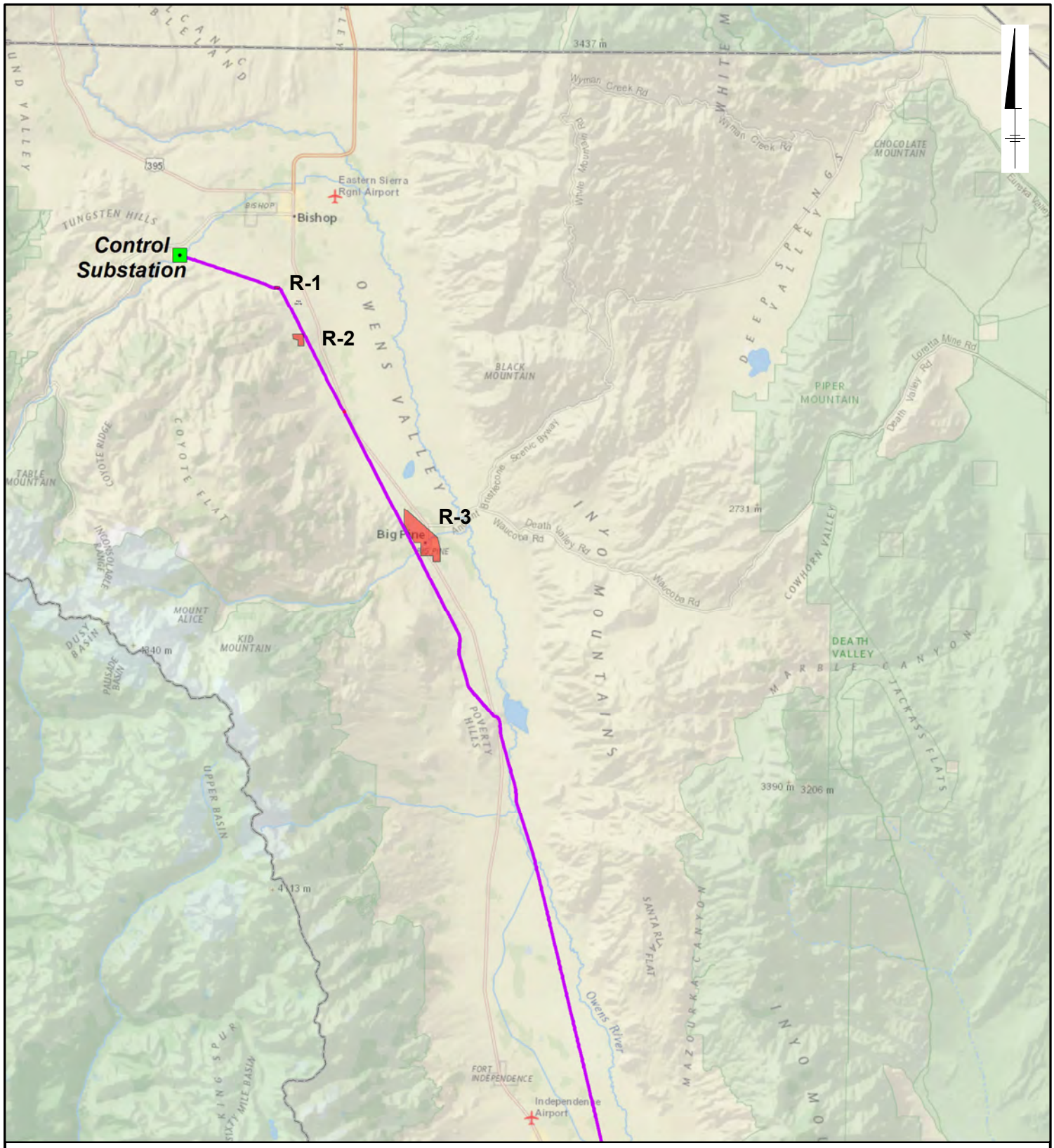

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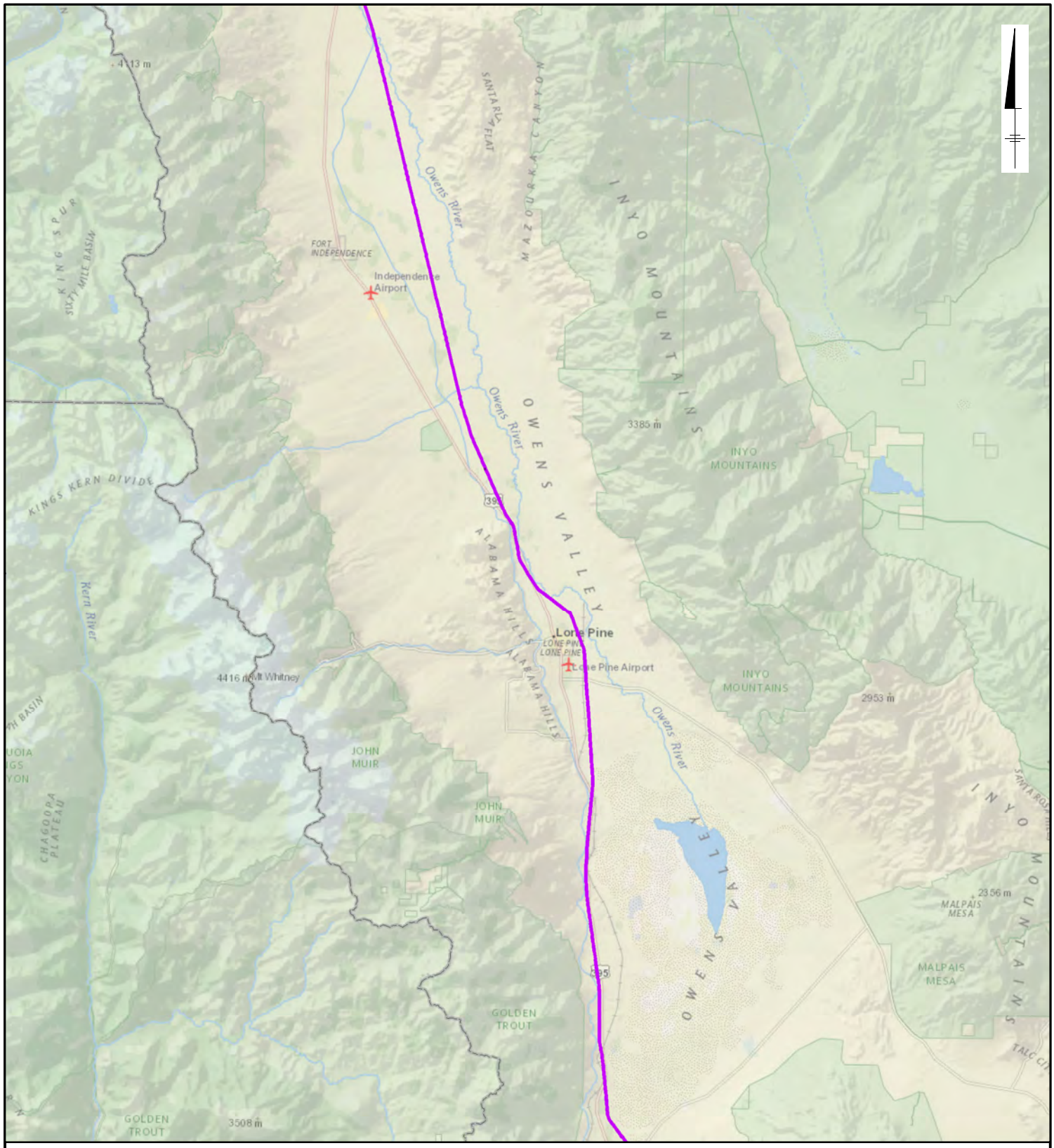

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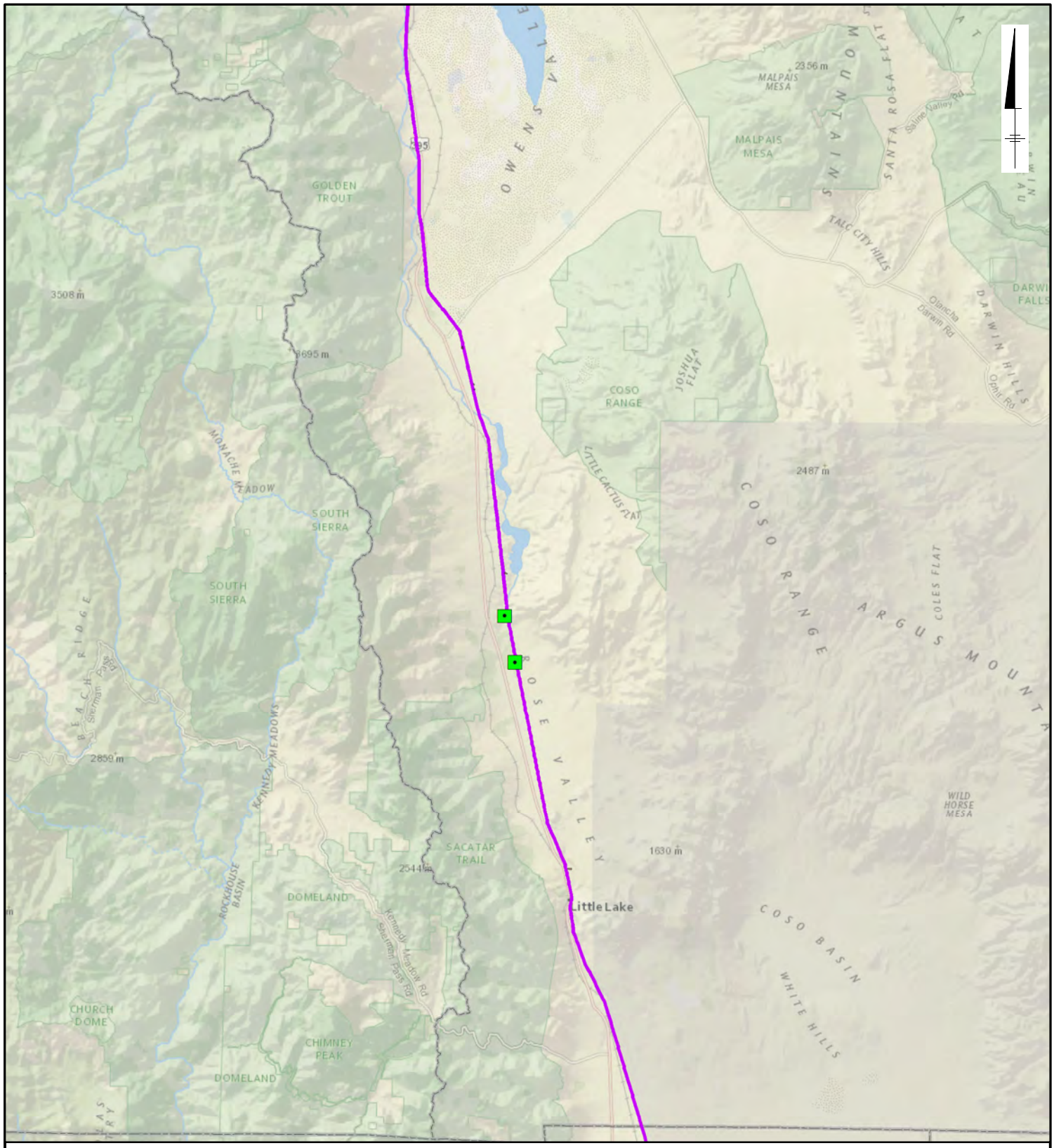

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FIGURESET 4.13-1

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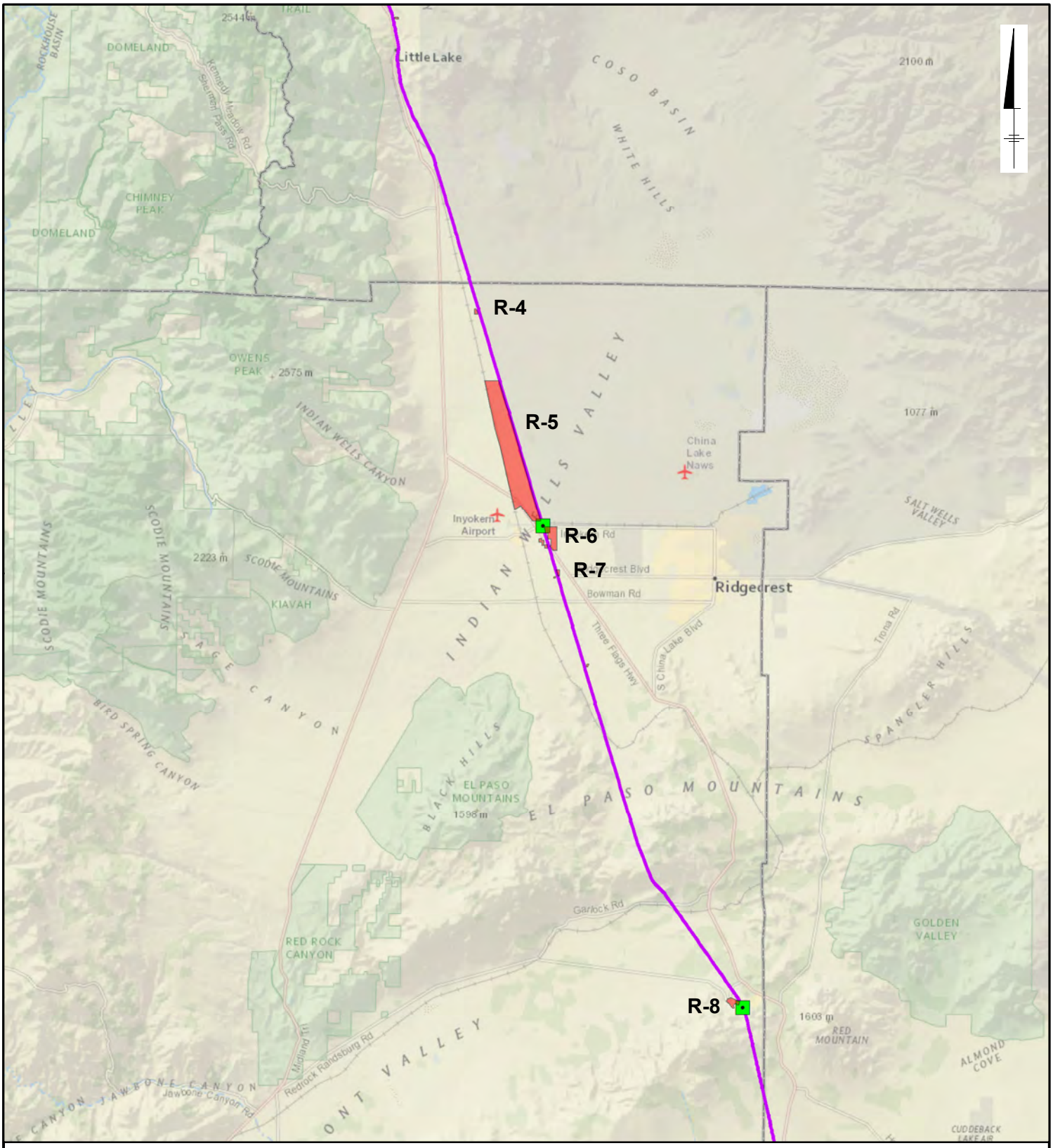

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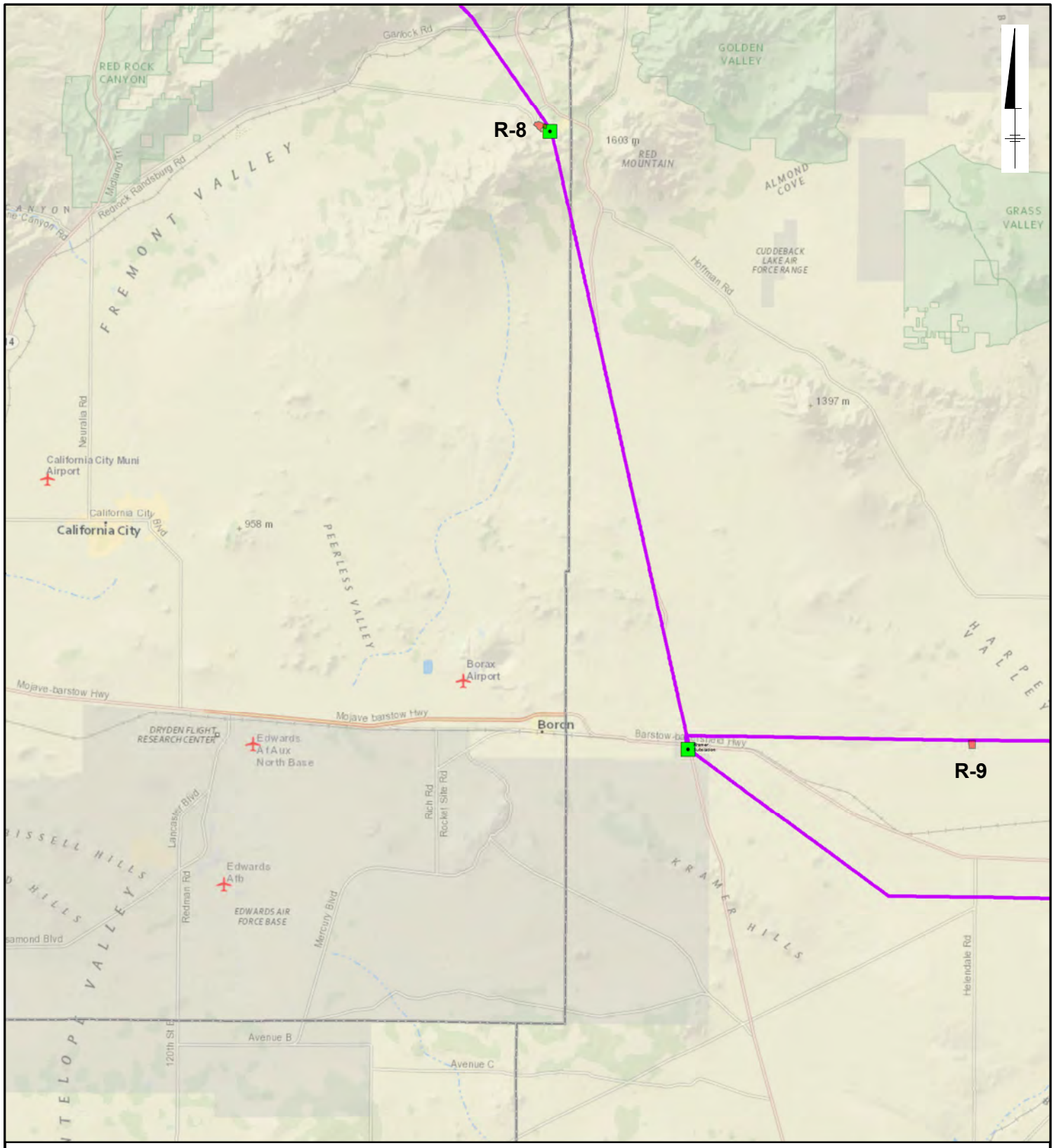

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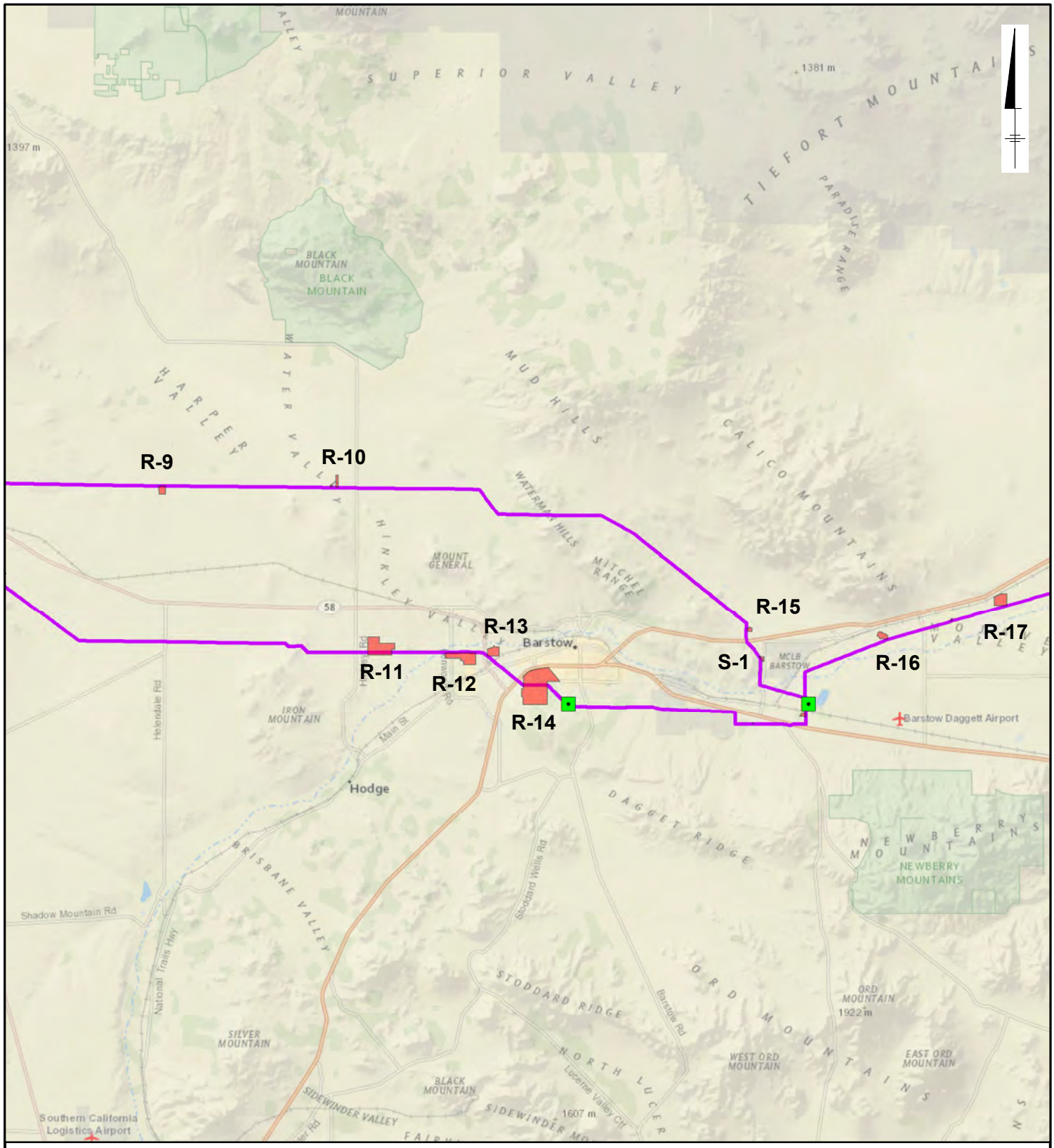

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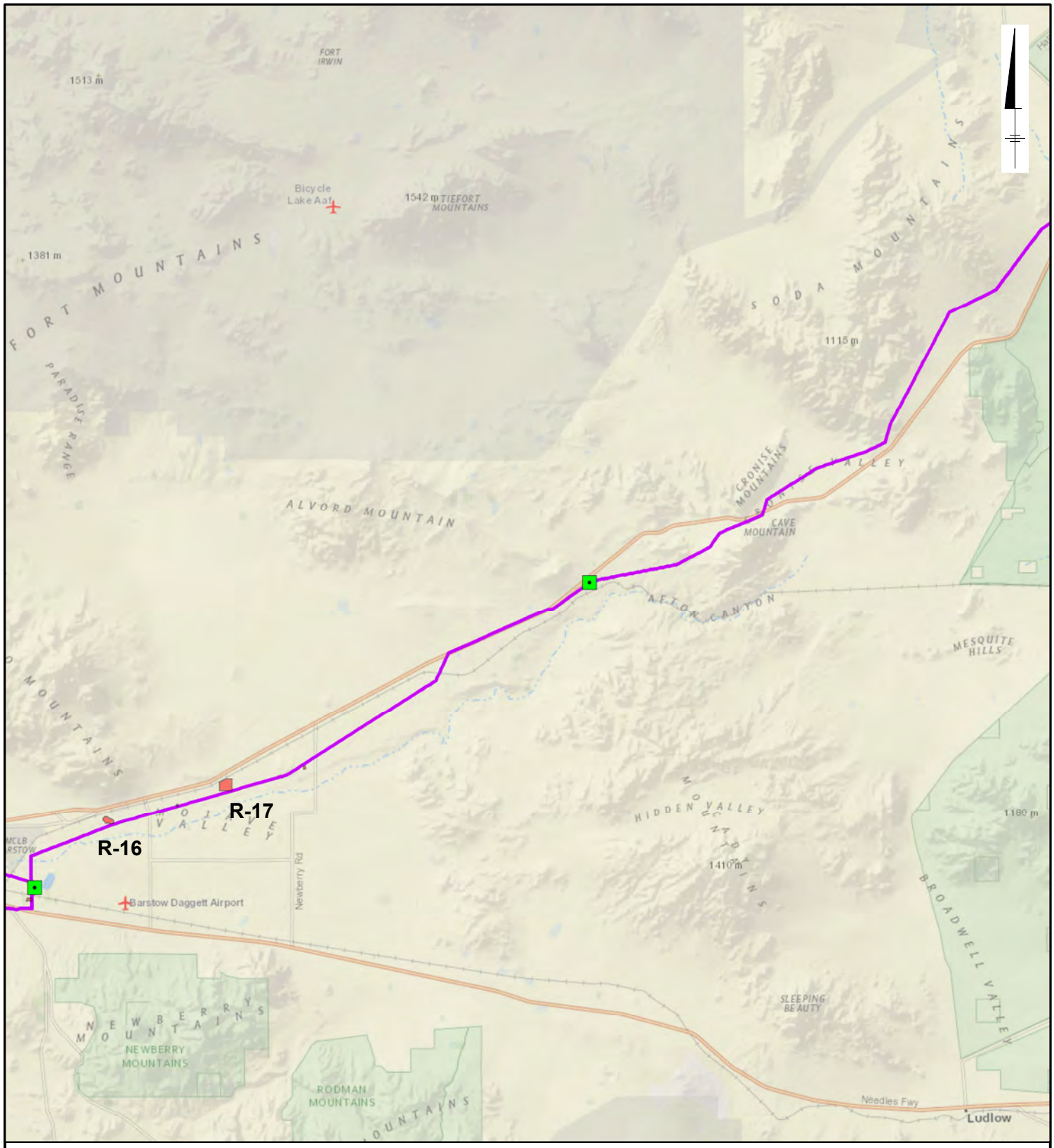

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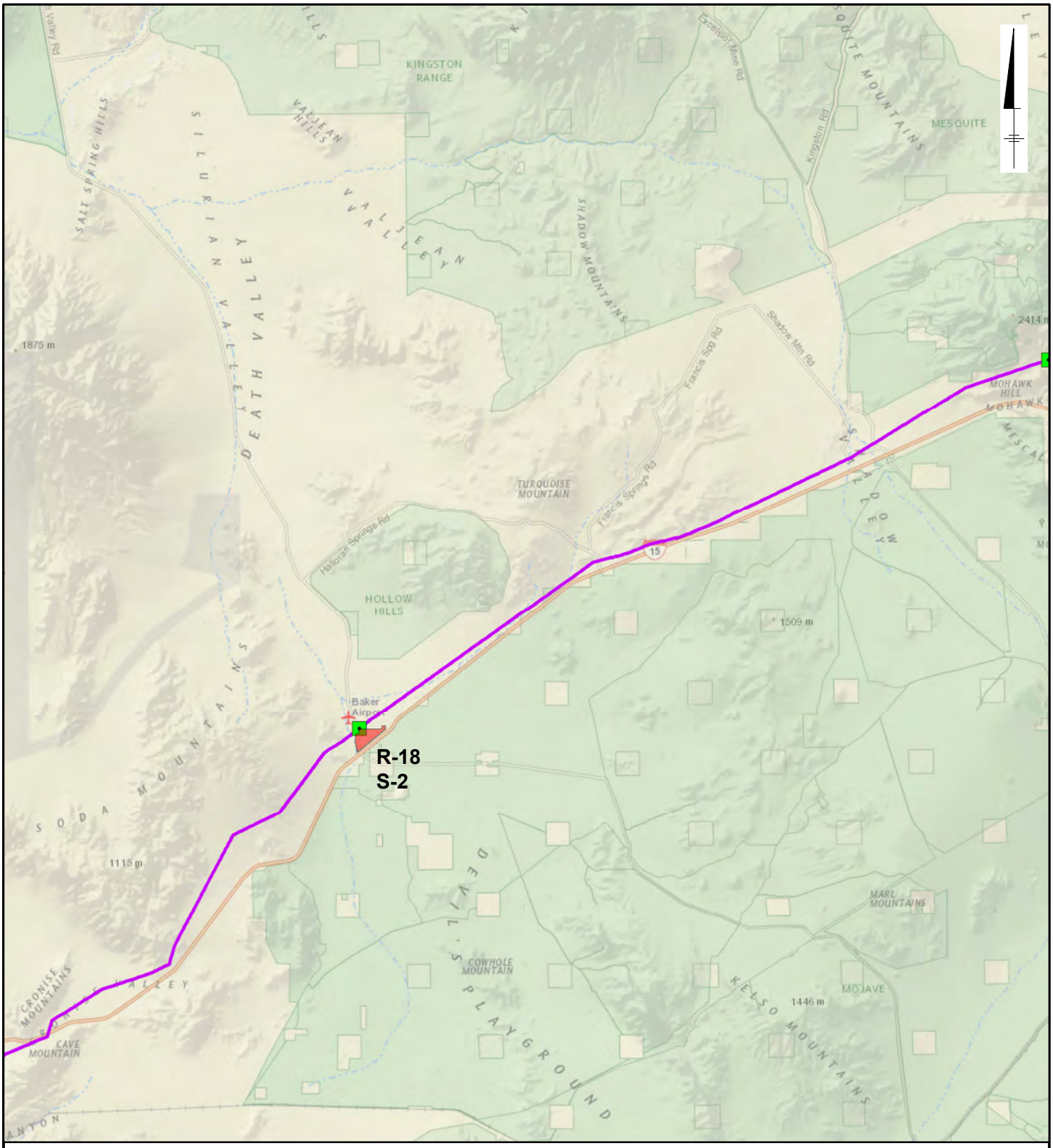

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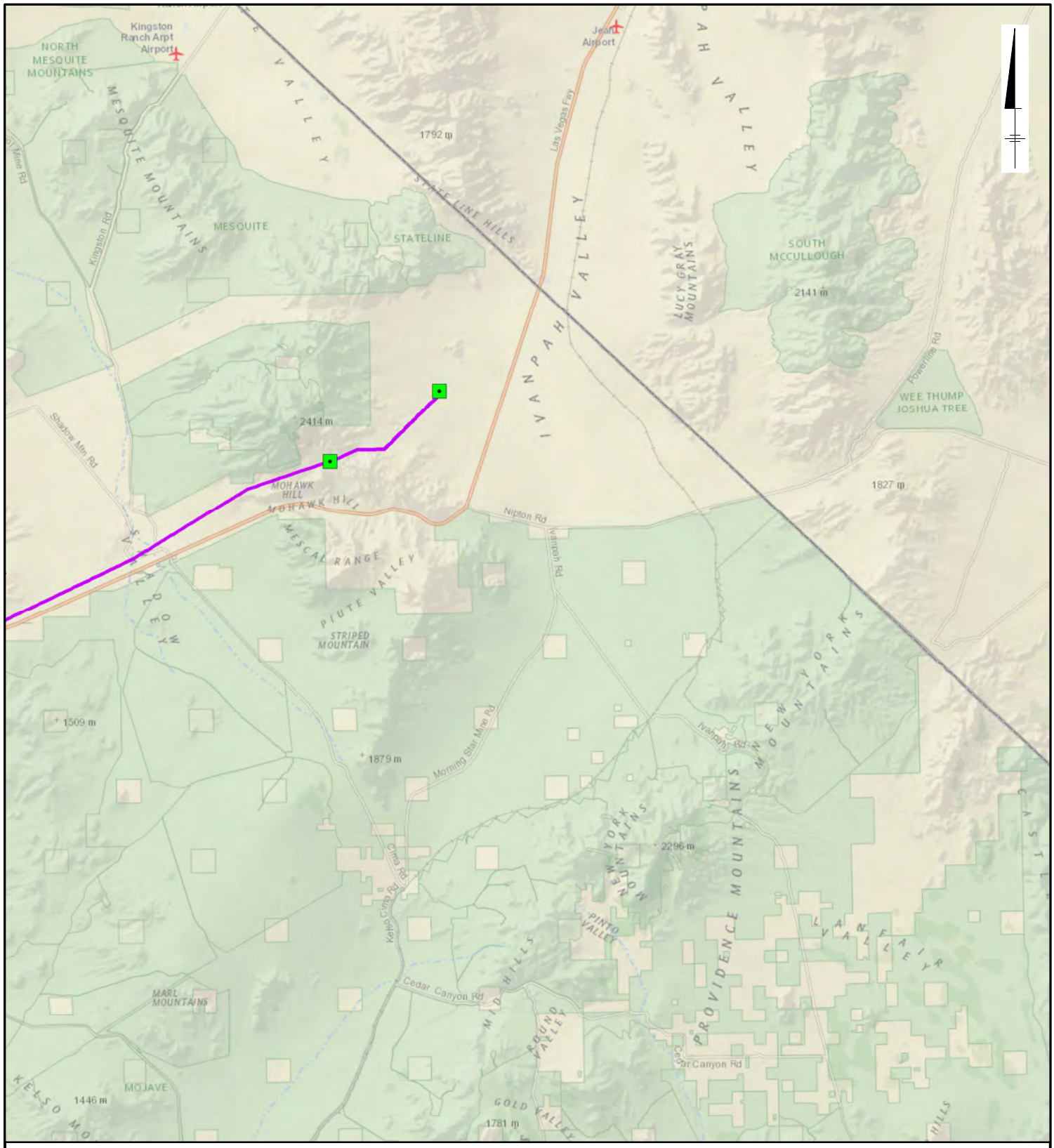

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FIGURESET 4.13-1

4.14 Population and Housing

This section describes socioeconomic conditions in the area of the IC Project Alignment, as well as the potential impacts that could result from construction and operation of the Full-Rebuild Concept and its Alternatives.

4.14.1 Environmental Setting

The IC Project Alignment traverses unincorporated areas of Inyo, Kern, and San Bernardino counties and the City of Barstow; the IC Project Alignment does not cross any Reservation lands. The IC Project Alignment is located near the following: City of Bishop, West Bishop Census-Designated Place (CDP), Lone Pine CDP, Big Pine CDP, Independence CDP, Wilkerson CDP, Olancha CDP, Pearsonville CDP, Inyokern CDP, Baker CDP, Bishop Reservation, Big Pine Reservation, Lone Pine Reservation, and Fort Independence Reservation. Figureset 4.14-1 illustrates the location of these areas with respect to the IC Project Alignment.

Population and housing data are presented in the following sections for these areas. Historical race and ethnicity, population, and housing data presented below were obtained from U.S. Census Bureau decadal censuses. Population projections were obtained from the California Department of Finance.

4.14.1.1 Race and Ethnicity

The racial and ethnic composition of the population of Inyo, Kern, and San Bernardino counties, the City of Barstow, and areas near the IC Project Alignment in 2010 is shown in Table 4.14-1. The majority of the population in Inyo, Kern, and San Bernardino counties as a whole, and all non-Reservation locations along the IC Project Alignment, identify as white and non-Hispanic. The four Reservations in the vicinity of the IC Project Alignment have a majority of non-Hispanic people, as well as a majority of people who self-identify as American Indian and Alaska Native.

4.14.1.2 Population Profile

Population data from the 2000 and 2010 decadal Censuses are presented in Table 4.14-1. With the exception of the West Bishop CDP and Pearsonville CDP, all areas experienced no change or an increase in population. The population of Inyo County is projected to increase in 2020, 2030, and 2040, with the population in 2040 estimated to reach 19,360. The population of Kern County is also projected to increase over this timeframe, with the population in 2040 estimated to reach 1,213,558. The population of San Bernardino County is projected to increase in 2020, 2030, and 2040, with the population in 2040 estimated to reach 2,730,966.

4.14.1.3 Housing Profile

Data on the number of housing units and rental vacancy rates for each of the locations is presented in Table 4.14-1 below. As shown in the table, vacant rental units are available across the length of the IC Project Alignment. Short-term lodging along the IC Project Alignment is available at hotels and motels in Bishop, Ridgecrest, Barstow, as well as in the Big Pine and Lone Pine areas.

Table 4.14-1: Population and Housing

	Inyo County	Kern County	San Bernardino County	City of Barstow	City of Bishop	West Bishop CDP	Lone Pine CDP	Big Pine CDP	Independence CDP
Race/Ethnicity (% of population)									
White	74.1	61.6	56.7	52.3	73.9	91	65.6	67.9	73.7
Black or African American	0.6	6.0	8.9	14.6	0.6	0.4	0.3	0.2	0.9
American Indian and Alaska Native	11.4	1.5	1.1	2.1	2.3	1.1	10.1	24.9	14.6
Asian	1.3	3.4	6.3	3.2	1.6	1.7	0.8	0.7	1.2
Native Hawaiian/Other Pacific Islander	0.1	0.1	0.3	1.2	0	0	0	0.1	0.1
Some Other Race	9.0	23.2	21.6	18.7	18.6	2.8	18.5	3	4.2
Two or More Races	3.5	4.1	5.0	7.8	2.9	3	4.7	3.2	5.2
Hispanic or Latino	19.4	38.4	49.2	42.8	30.9	10	34.1	10.4	13.9
Not Hispanic or Latino	80.6	61.6	50.8	85.0	69.1	90	65.9	89.6	86.1
Population, 2000	**17,945**	**661,645**	**1,709,518**	**22,569**	**3,575**	**2,807**	**1,655**	**1,350**	**574**
Population, 2010	**18,546**	**839,631**	**2,035,210**	**22,639**	**3,879**	**2,607**	**2,035**	**1,756**	**669**
Pop. Below Poverty Level, 2016 (%)	**10.8**	**23.1**	**19.1**	**36.7**	**13.5**	**2.6**	**13.8**	**10.1**	**14.1**
Housing, Total	**9,478**	**284,367**	**699,637**	**9,555**	**1,926**	**1,29**	**1.004**	**871**	**389**
Housing, Occupied	**8,049**	**254,610**	**611,618**	**8,085**	**1,748**	**1,133**	**831**	**764**	**301**
Housing, Vacant	**1,429**	**29,757**	**88,019**	**1,470**	**178**	**96**	**173**	**107**	**88**
Rental Vacancy Rate (%)	**5.8**	**8.7**	**8.7**	**20.8**	**5.8**	**4.2**	**7.1**	**6.3**	**6.1**

	Wilkerson CDP	Olancha CDP	Pearsonville CDP	Inyokern CDP	Baker CDP	Bishop Reservation AIAN	Big Pine Reservation AIAN	Lone Pine Reservation AIAN	Fort Independence AIAN
Race/Ethnicity (% of population)									
White	93.1	69.3	94.1	84.6	41.1	20.9	13.4	21.7	31.2
Black or African American	0	0	0	1.3	0.1	0.3	0	0	0
American Indian and Alaska Native	2.3	2.1	0	2.2	0.7	69.9	82.4	75.5	54.8
Asian	0.9	4.2	0	2.3	1.4	0.4	0.2	0	0
Native Hawaiian/Other Pacific Islander	0.2	0	0	0.2	1.9	0.1	0	0	0
Some Other Race	0.9	19.8	5.9	4.5	51.7	3.8	2.6	0.9	2.2
Two or More Races	2.7	4.7	0	5.0	3.1	4.6	1.4	1.9	11.8
Hispanic or Latino	9.4	24.5	5.9	10.6	68.3	16.9	8.6	7.1	9.7
Not Hispanic or Latino	90.6	75.5	94.1	89.4	31.7	83.1	91.4	92.9	90.3
Population, 2000	**562**	**134**	**27**	**984**	**--**	**1,441**	**462**	**212**	**86**
Population, 2010	**563**	**192**	**17**	**1,099**	**735**	**1,588**	**499**	**212**	**93**
Pop. Below Poverty Level, 2016 (%)	**1.1**	**0**	**0**	**13.8**	**23.2**	**19.3**	**26.7**	**23.2**	**16.0**
Housing, Total	**265**	**97**	**16**	**537**	**303**	**602**	**202**	**102**	**49**
Housing, Occupied	**244**	**78**	**9**	**484**	**215**	**556**	**186**	**92**	**47**
Housing, Vacant	**21**	**19**	**7**	**53**	**88**	**46**	**16**	**10**	**2**
Rental Vacancy Rate (%)	**4.3**	**2.9**	**0**	**5.7**	**20.8**	**7.6**	**7.3**	**0**	**0**

Source: US Census Bureau

4.14.2 Regulatory Setting

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

4.14.2.1 Federal

There are no applicable regulations for population and housing that apply to the IC Project.

4.14.2.2 State

There are no applicable regulations for population and housing that apply to the IC Project.

4.14.2.3 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. However, there are no applicable regulations for population and housing that apply to the IC Project.

4.14.3 Significance Criteria

The significance criteria for assessing the impacts to population and housing are derived from the CEQA Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would:

- Induce substantial population growth in the area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through the extension of new roads or other infrastructure)
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere

4.14.4 Impact Analysis

4.14.4.1 Would the Project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

4.14.4.1.1 Construction

No Impact. The Full-Rebuild Concept would not induce, either directly or indirectly, substantial population growth in the area. SCE expects to utilize up to approximately 200 workers per day. The labor demands of the Full-Rebuild Concept would be met by existing SCE employees or by hiring specialty electrical transmission contractors. Given the small number of positions required for construction of the Full-Rebuild Concept and the short term of the construction period in any given location, no population growth would be induced by the rebuilding of the subtransmission lines.

The Full-Rebuild Concept would not indirectly induce an increase in population. The Full-Rebuild Concept is designed to remediate GO 95 clearance discrepancies; it would not provide new or upgraded electrical service to the area. In addition, the Full-Rebuild Concept does not include any new infrastructure such as publicly accessible roads that could induce population growth. Therefore, no impacts would occur under this criterion as a result of the Full-Rebuild Concept.

4.14.4.1.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing operation and maintenance (O&M) activities, including inspections, along the subtransmission lines that would be rebuilt under the Full-Rebuild Concept. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the Full-Rebuild Concept, and therefore no impacts would be realized under this criterion during operations and maintenance.

4.14.4.2 Would the Project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

4.14.4.2.1 Construction

No Impact. The Full-Rebuild Concept would not displace any existing housing. The existing subtransmission lines that would be rebuilt are located on existing SCE-owned property, in existing rights-of-way (ROWs), on lands where SCE has easement rights, or immediately adjacent to ROWs or existing easements. No housing would be displaced, and thus it would not be necessary to construct replacement housing elsewhere.

4.14.4.2.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing operation and maintenance (O&M) activities, including inspections, along the subtransmission lines that would be rebuilt under the Full-Rebuild Concept. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the Full-Rebuild Concept, and therefore no impacts would be realized under this criterion during operations and maintenance.

4.14.4.3 Would the Project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

4.14.4.3.1 Construction

No Impact. Portions of the Full-Rebuild Concept are located adjacent to residential areas; however, no housing would be displaced, and therefore no people would be displaced during construction of the Full-Rebuild Concept. Thus, there would be no impacts under this criterion.

4.14.4.3.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing operation and maintenance (O&M) activities, including inspections, along the subtransmission lines that would be rebuilt under the Full-Rebuild Concept. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the Full-Rebuild Concept, and therefore no impacts would be realized under this criterion during operations and maintenance.

4.14.5 Applicant Proposed Measures

Because no impacts to population and housing would occur as a result of the Full-Rebuild Concept, no avoidance or minimization measures are proposed.

4.14.6 Alternatives

Alternatives to the Full-Rebuild Concept are addressed in Section 5.2, Description of Project Alternatives and Impact Analysis.

4.14.7 References

State of California. 2018. Demographics Projections. Department of Finance. Data available at http://www.dof.ca.gov/Forecasting/Demographics/Projections/

United States Census Bureau. 2017. S1701, Poverty Status in the Past 12 Months. 2012-2016 American Community Survey 5-Year Estimates. Data accessed at https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t

United States Census Bureau. 2012. DP-1: Profile of General Population and Housing Characteristics: 2010. 2010 Census Summary File 1. Data accessed at https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t

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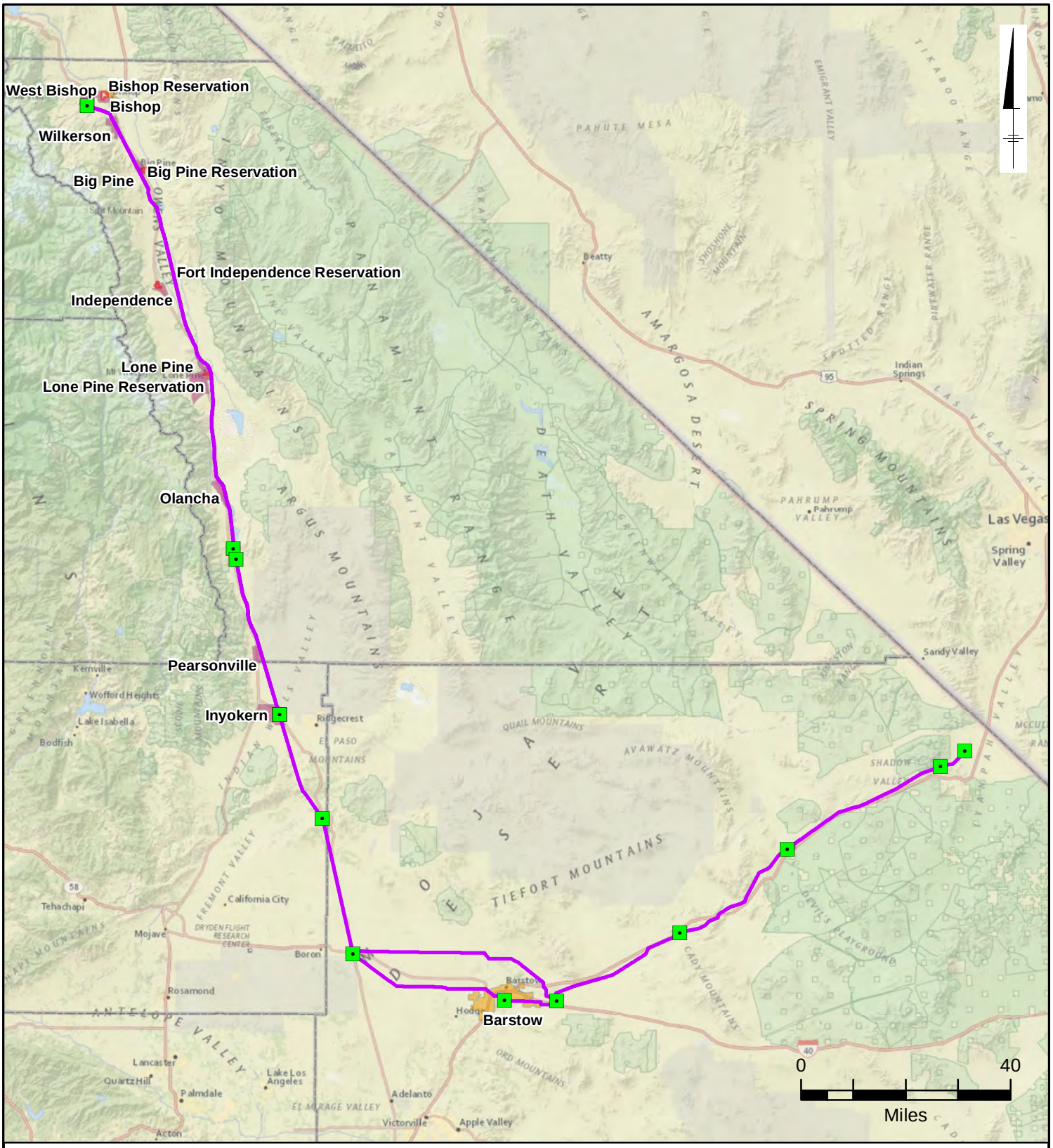

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- Substation
- IC Project Alignment
- Census-Designated Place
- City
- County
- Reservation

NOTES:
(1) Cities and Census-Designated Places source:
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(2) Reservations source: United States Census Bureau
https://www.census.gov/geo/maps-data/data/cbf/cbf_aiannh.html

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FIGURESET:
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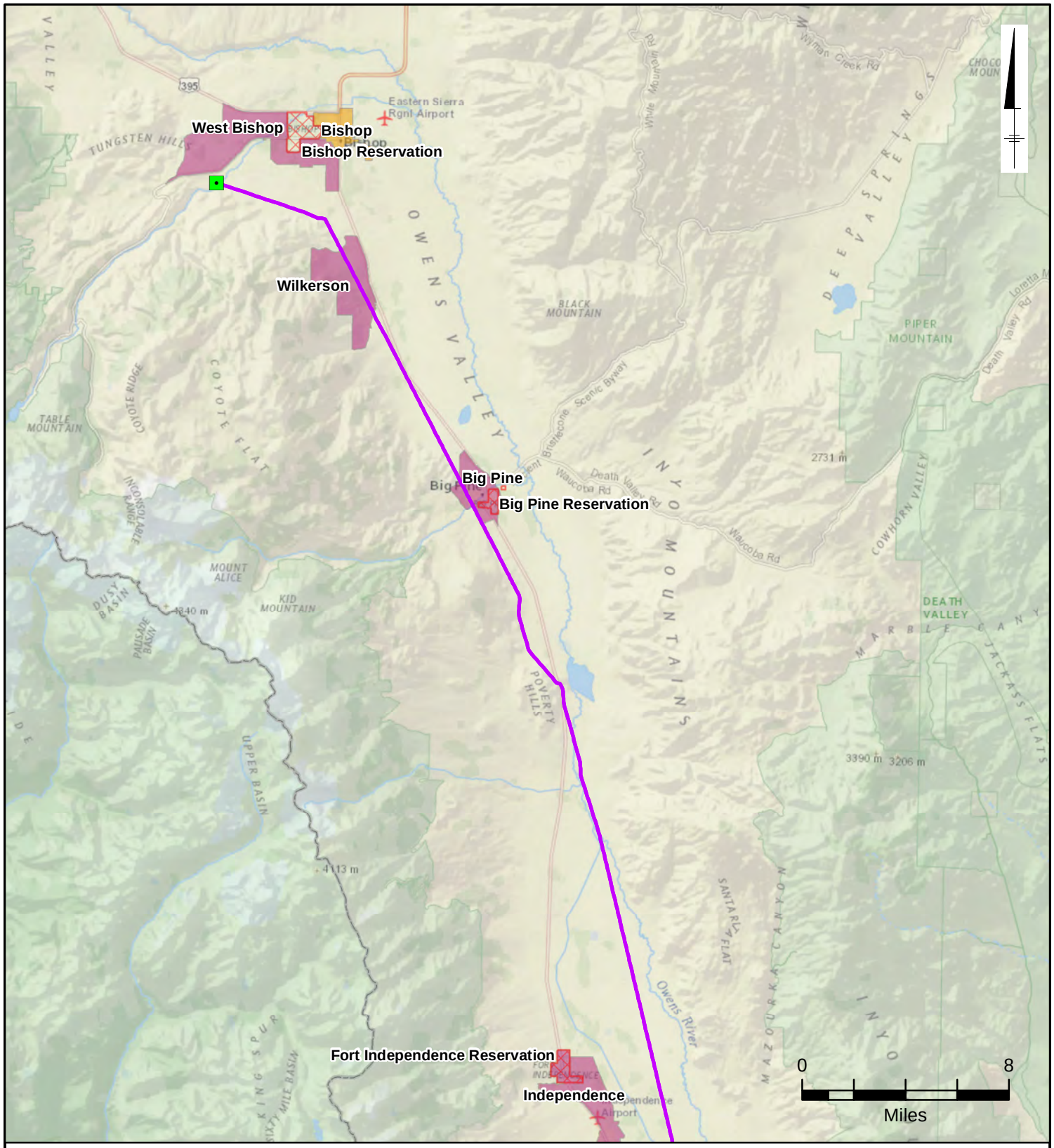

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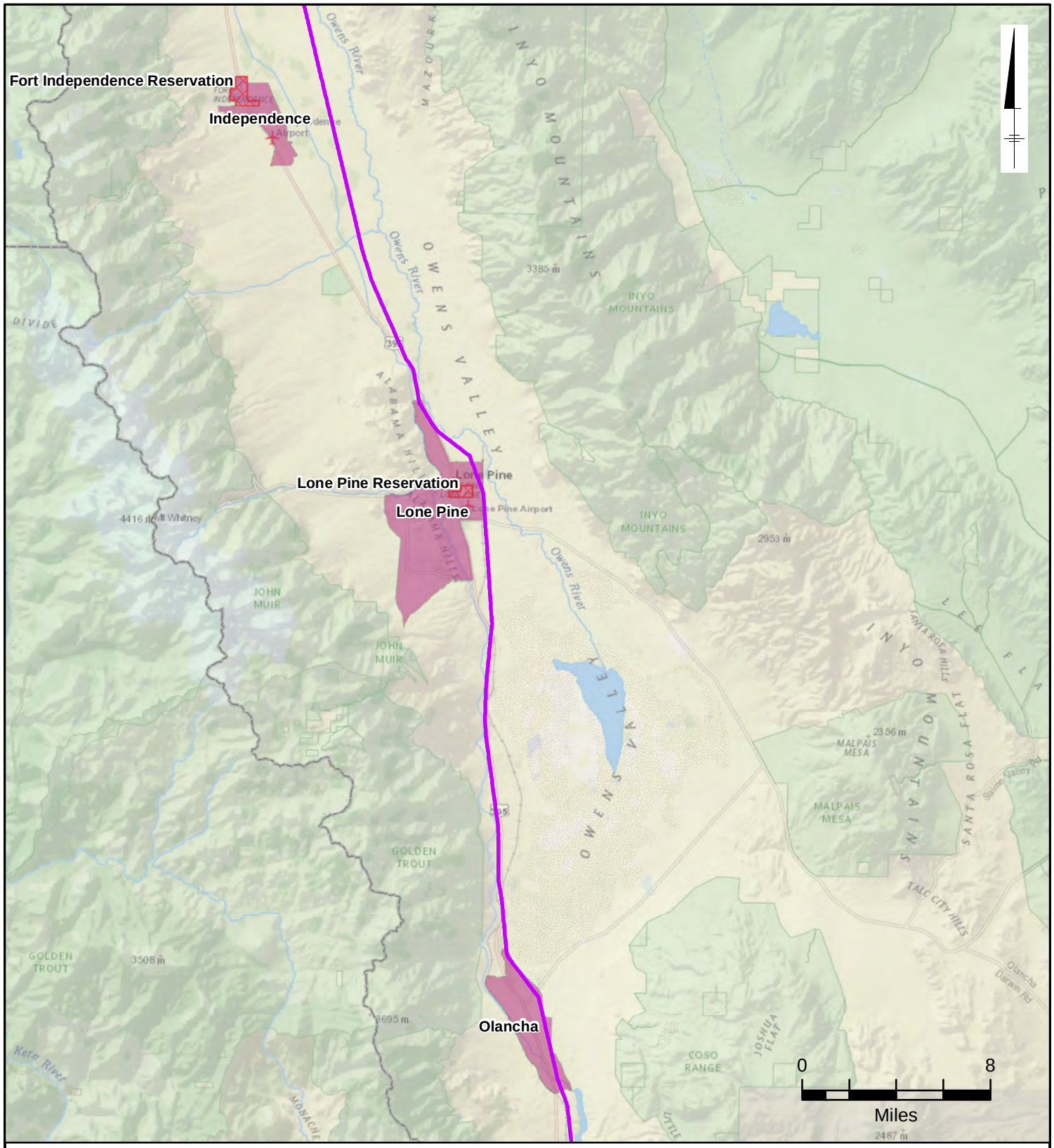

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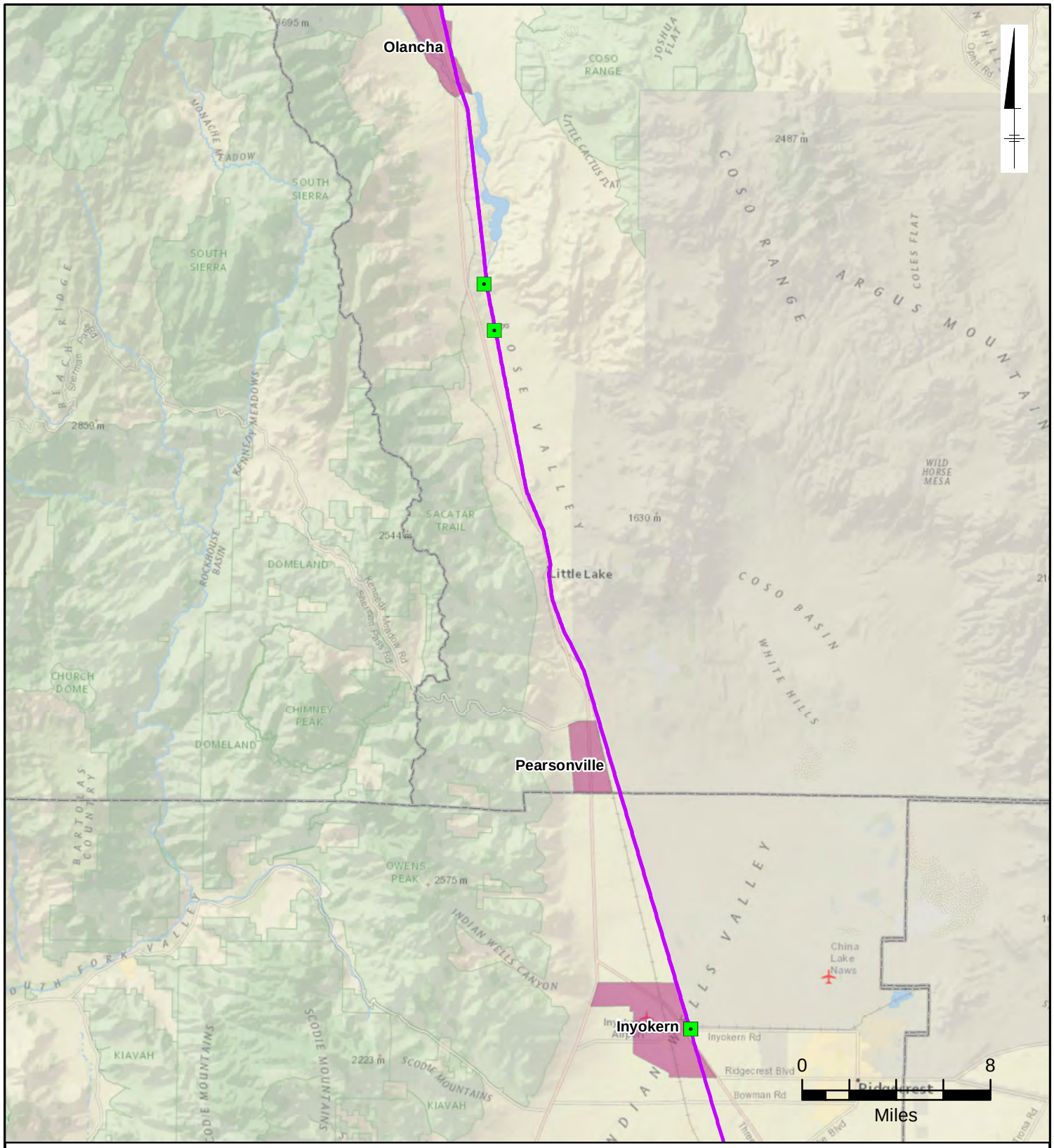

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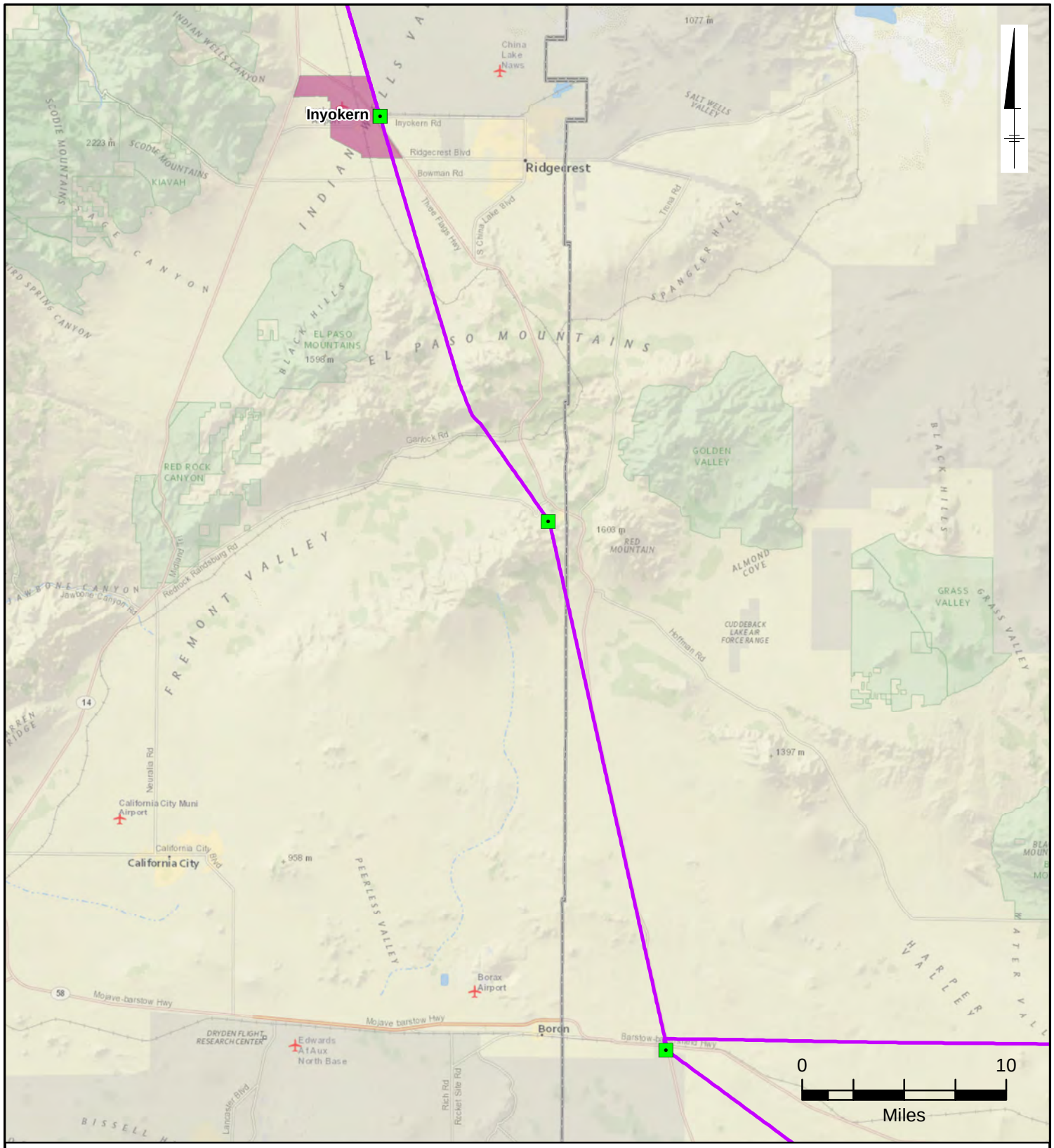

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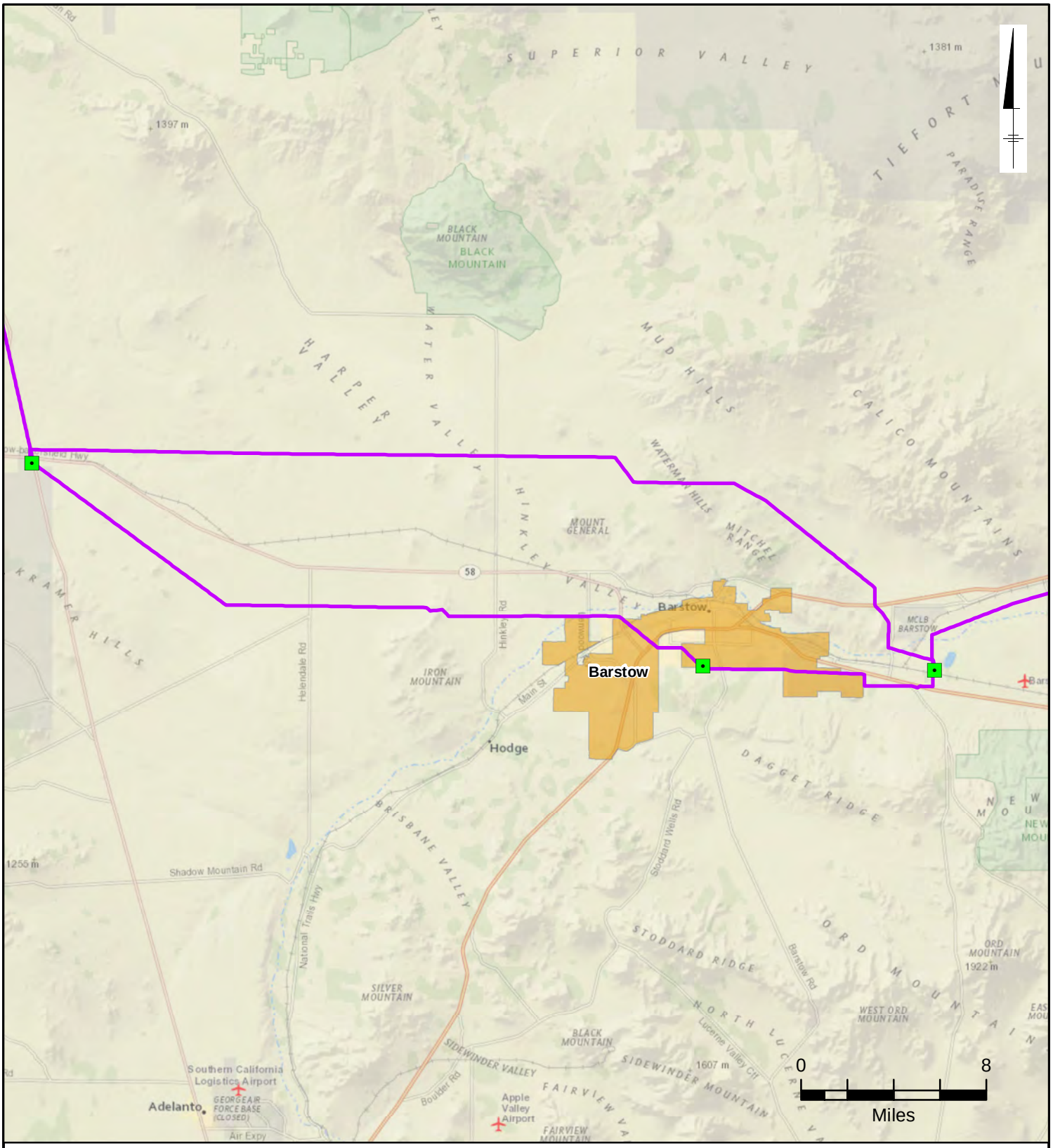

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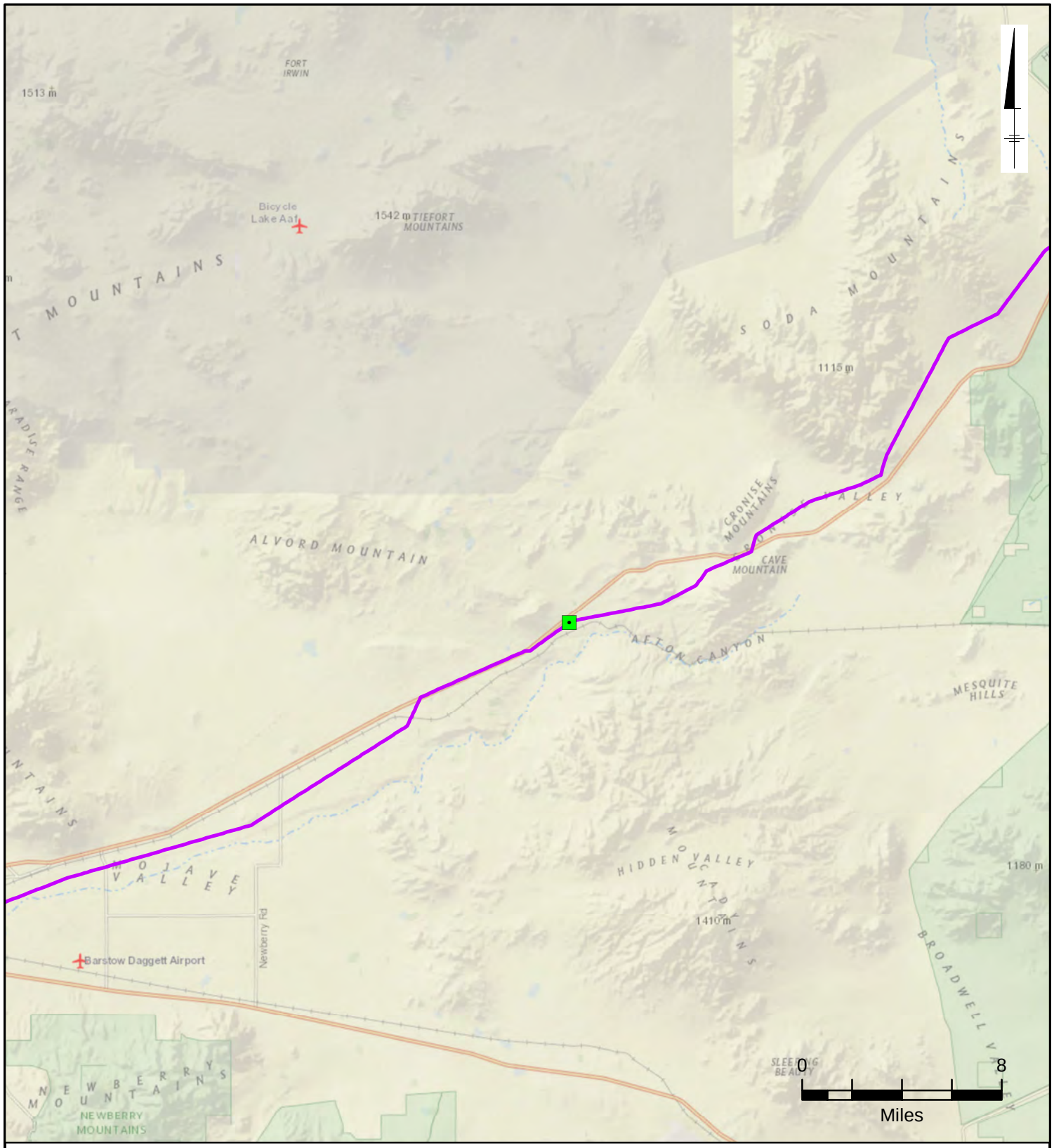

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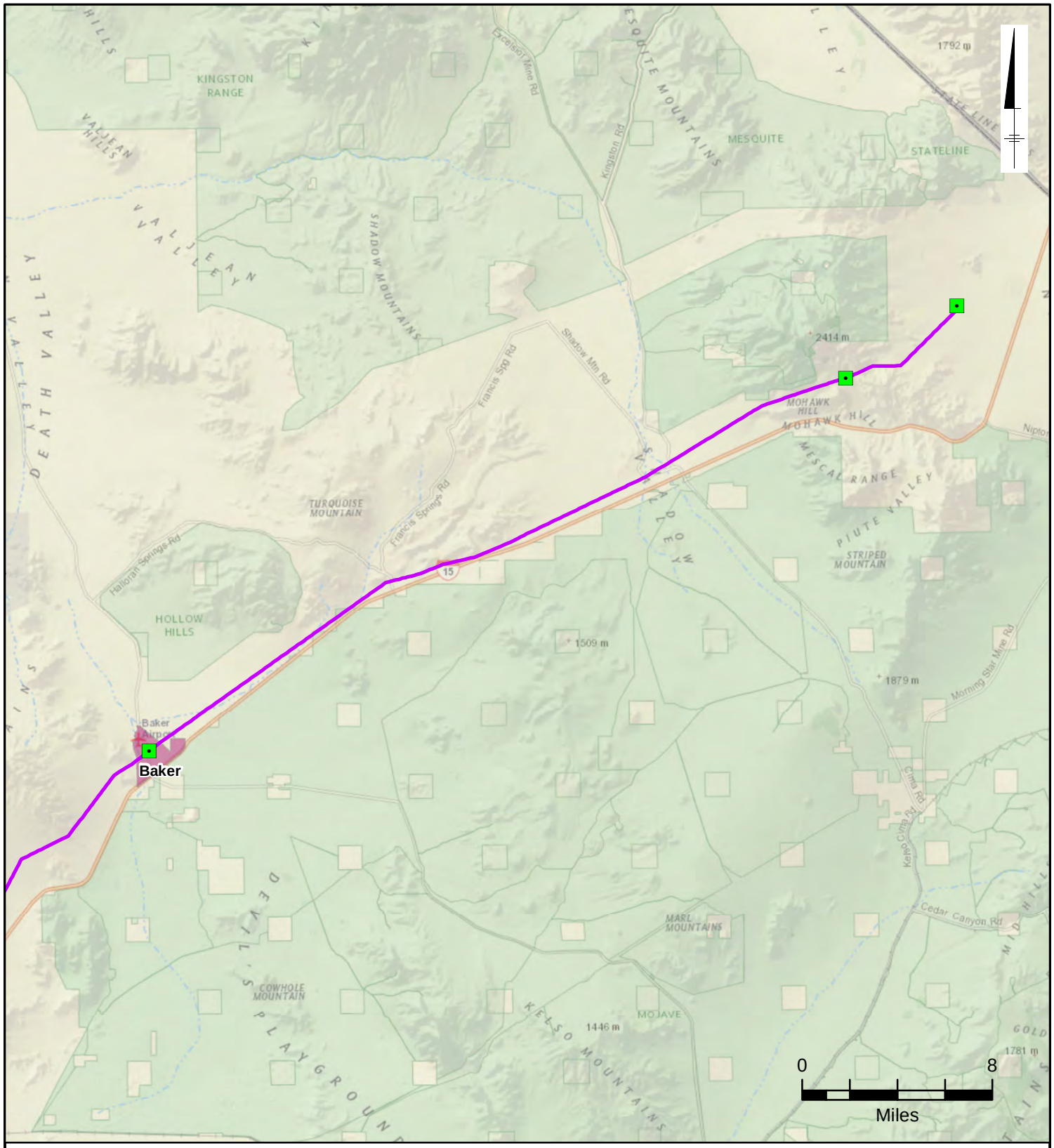

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4.15 Public Services

This section of the PEA describes the public services in the area of the IC Project Alignment, as well as the potential impacts from the Full-Rebuild Concept and its Alternatives.

4.15.1 Environmental Setting

The sections below describe the existing public services in the vicinity of the IC Project Alignment. Public services were identified through review of general and comprehensive plans, county and city websites, school district websites, and aerial imagery. Information in this section is organized by public service type and the provider(s) of those services. Information on parks is provided in Section 4.16. Figureset 4.15-1 displays the locations of public services in relation to components of the Project.

4.15.1.1 Fire Protection

4.15.1.1.1 Segment 1

Volunteer Fire Departments provide fire protection services to Inyo County and the City of Bishop. The fire protection districts (FPD) present within Inyo County in the vicinity of the IC Project Alignment include the Bishop FPD, Big Pine FPD, Independence FPD, Lone Pine FPD, and Olancha-Cartago FPD. The Kern County Fire Department (KCFD) also provides fire protection services in the vicinity of Segment 1. Stations associated with these FPDs and the KCFD in the vicinity of the IC Project Alignment are listed in Table 4.15-1.

The Bureau of Land Management (BLM) Bishop Field Office fire organization is combined with the Inyo National Forest fire organization into one Interagency Fire Management Organization. The management area combines the public land of the Inyo National Forest and Bishop Field Office in Inyo and Mono counties in California. The Interagency Fire Management Organization maintains 8 fire stations with 9 engines, 7 fire prevention patrol units, 2 water tenders, a 10-person hand crew, a 20-person hotshot crew, an air tanker reload base and a helitack base. Of these, the following are located along the IC Project Alignment:

- White Mountain Ranger Station. This station, located in Bishop, has a Type 3 wildland engine, two fire prevention patrol units, one 20-person hotshot crew (the Boundary Peak Hotshots), a District Fire Management Officer and an Assistant District Fire Management Officer, all from the FS. In the summer, a BLM fire prevention unit also works out of this station. Also located in Bishop are various "Fire Overhead" personnel—fire planners, Forest Fire Management Officers, Interagency Mitigation/Education Specialist, etc. These employees are a mixture of FS and BLM, and manage the overall direction of the interagency fire program for the area.
- Bishop Air Tanker Reload Base. At the Eastern Sierra Regional Airport is the Bishop Air Tanker Base, capable of reloading nearly all air tankers in service today, except for the Very Large Air Tankers (VLATs) such as the DC-10 and 747. The tanker base is operated on an as-needed basis, but also hosts a Single Engine Air Tanker (SEAT) during the summer.
- Independence Helitack Base. The home to Helicopter 525, a Type 3 ship, the helitack base is located at the north end of Independence.

A portion of Segment 1 parallels the Naval Air Warfare Center China Lake. The China Lake Federal Fire Department (CLFD) provides mutual aid firefighting services to KCFD and the State of California when needed. (Commander, Navy Installations Command [CNIC] 2017)

4.15.1.1.2 Segments 2, 3N, 3S, and 4

The Kern County Fire Department (KCFD) and San Bernardino County Fire Department (SBCFD) provide fire protection services along the majority of Segments 2, 3N, 3S, and 4. The SBCFD provides fire, safety, and emergency medical services to more than 60 communities and cities and all unincorporated areas of the county. (SBCFD 2018a)

Segment 3S is routed through the City of Barstow; fire services within the City are provided by the City of Barstow Fire Protection District (CBFPD). (City of Barstow 2018)

Segments 3N, 3S, and 4 cross a portion of the Marine Corps Logistics Base (MCLB) Barstow, Yermo and Nebo annexes. Emergency services on MCLB are provided by the Fire and Emergency Services Division (FMSD); the FMSD serves the MCLB along with local community residents and travelers on I-40 and I-15. (MCLB FMSD 2018) Table 4.15-1 provides a list of the fire stations in the vicinity of Segments 2, 3N, 3S, and 4.

Table 4.15-1: Fire Stations Proximate to the IC Project Alignment

Project Segment	Name	Location	Approximate Distance to the IC Project Alignment (miles)
1	USFS White Mountain Ranger Station	798 N Main Street, Bishop	2.0
1	USFS Bishop Air Tanker Reload Base	Bishop Airport	2.5
1	City of Bishop Volunteer Fire Department – Station 2 West Ridge	209 W Line Street, Bishop	2.4
1	Big Pine Volunteer Fire Department	190 North Main Street, Big Pine	0.8
1	USFS Independence Helitack Base	760 North Edwards Street, Independence	2.5
1	CAL FIRE San Bernardino Unit – Independence	103 Clay Street, Independence	2.4
1	Independence Volunteer Fire Department	200 South Jackson Street, Independence	2.5
1	Lone Pine Volunteer Fire Department	130 North Jackson Street, Lone Pine	0.9
1	Olancha Cartago Volunteer Fire Department	Highway 395, Olancha	0.8
1	Kern County Fire Department – Station 73	6919 Monache Mountain Avenue, Inyokern	1.6
2	Kern County Fire Department – Station 73	6919 Monache Mountain Avenue, Inyokern	1.6
2	Kern County Fire Department –Station 75	26804 Butte Avenue, Randsburg	0.2
3N	MCLB Barstow Fire Station 2	F Street and 13th Street, MCLB, Yermo	0.9
3S	MCLB Barstow Fire Station 1	C Street and 6th Street, MCLB, Barstow	0.9
3S	Barstow Fire Protection District	861 Barstow Road, Barstow	1.7
3S	Barstow Fire Protection District, Station #363	2600 West Main Street, Barstow	0.1
4	MCLB Barstow Fire Station 2	F Street and 13th Street, MCLB, Yermo	1.4
4	San Bernardino County Fire Department Fire Station 53	72734 Baker Boulevard, Baker	0.7

4.15.1.2 Law Enforcement

The Kern County Sheriff's Office (KCSO) and Inyo County Sheriff's Office (ICSO) provide public safety service to unincorporated Inyo and Kern counties, including along the IC Project Alignment. The KCSO employs more than 1,400 people and has 14 substations (KCSO 2017); none of the substations are in the vicinity of the IC Project Alignment. The ICSO employs more than 96 people. (Inyo County 2001) The San Bernardino County Sheriff's Department (SBCSD) employs 3,800 people and has 15 patrol stations and serves over 2.1 million people in San Bernardino County. (SBCSD 2018) The Barstow Police Department serves 40 square miles serving 60,000 people from one police station and with 40 police officers. (City of Barstow 2018) The IC Project Alignment also crosses through the MCLB Barstow Yermo and Nebo annexes, and is served by the Marine Corps Police Department (MCPD). Table 4.15-2 provides a list of law enforcement stations that are proximate to the IC Project Alignment.

Table 4.15-2: Law Enforcement Stations Proximate to the IC Project Alignment

Project Segment	Name	Location	Approximate Distance to the IC Project Alignment (miles)
1	Inyo County Sheriff's Office, Bishop Operations Headquarters	Bishop	3.0
1	Lone Pine Operations Headquarters	Lone Pine	1.0
3S	Barstow Police Department	Barstow	2.0
3S	Marine Corps Police Department	Barstow	1.0
3S	SBCSD Barstow Patrol Office	Barstow	2.0

4.15.1.3 Schools

Kern County has 47 school districts, two of which are crossed by the IC Project Alignment; no schools in Kern County are located within 1 mile of the IC Project Alignment. (Kern County Superintendent of Schools [KCSS] 2017) There are five school districts in Inyo County, four of which are crossed by the IC Project Alignment; several schools in Inyo County are located within 1 mile of the IC Project Alignment. San Bernardino County has 33 school districts, three of which are crossed by the IC Project Alignment. (San Bernardino County Superintendent of Schools [SBCSS] 2018) Table 4.15-3 lists the schools that are proximate to the IC Project Alignment.

Table 4.15-3: Schools within One Mile of the IC Project Alignment

Project Segment	Name	Location	District	Grades	Approximate Distance to the IC Project Alignment (miles)
1	Cerro Coso Community College	Bishop	Bishop Joint Union High School District	College	0.9
1	Big Pine K-8 Elementary School and Big Pine High School	Big Pine	Big Pine Unified School District	K-8 9-12	0.6
1	Lone Pine High School	Lone Pine	Lone Pine Unified School District	9-12	0.9
1	Lo-Inyo Elementary and Middle School	Lone Pine	Lone Pine Unified School District	K-8	0.9
3N	Silver Valley High School	Yermo	Silver Valley Unified School District	9-12	0.4
3S	Barstow Community College	Barstow	Barstow Unified School District	Two-year College	0.6
4	Yermo School	Yermo	Silver Valley Unified School District	K-8	0.8

Table 4.15-3: Schools within One Mile of the IC Project Alignment

Project Segment	Name	Location	District	Grades	Approximate Distance to the IC Project Alignment (miles)
4	Baker Elementary School	Baker	Baker Valley Unified School District	K-5	0.2
4	Baker Junior High and High School	Baker	Baker Valley Unified School District	6-12	0.3

4.15.1.4 Parks

There are a number of parks and recreational areas located in the vicinity of the IC Project Alignment; these are described in detail in Section 4.16, Recreation and Table 4.16-1. Kern County Parks and Recreation Department manages approximately 4,726 acres of parks and open space. (Kern County 2010) The Inyo County Parks and Recreation operates fifteen parks and campgrounds. (Inyo County 2017) In San Bernardino County, the Regional Parks Department manages and maintains nine regional parks totaling approximately 9,200 acres.

4.15.1.5 Other Public Facilities

Additional public services along the IC Project Alignment include medical facilities and libraries. The hospitals closest to the IC Project Alignment are shown in Table 4.15-4.

Table 4.15-4: Other Public Facilities in the Vicinity of the IC Project Alignment

Project Segment	Name	Distance from IC Project Alignment (miles)
1	Ridgecrest Regional Hospital	7.0
1	Northern Inyo Hospital	3.0
1	Southern Inyo Hospital	0.6
2	Ridgecrest Regional Hospital	7.0
3S	Barstow Community Hospital	2.0

Public libraries are located in Bishop, Lone Pine, and Barstow. These public facilities are depicted in Figureset 4.15-1, Public Services.

4.15.2 Regulatory Setting

The regulatory framework that is discussed below in this section identifies the state, regional, and local statutes, ordinances, or policies that were reviewed during the preparation of this analysis and would be considered during the decision-making process in order to determine the potential for the IC Project to result in significant impacts related to public services.

4.15.2.1 Federal

No federal regulations related to public services are applicable to the IC Project.

4.15.2.2 State

4.15.2.2.1 California Fire Code

The California Code of Regulations (CCR), Title 24, Part 9 is known as the California Fire Code. This code provides provisions for planning, precautions, and preparations for fire safety and fire protection

during various activities, including, but not limited to, construction and demolition, as well as requirements for buildings and guidelines for working with flammable chemicals and materials. The IC Project Alignment is located in areas that range from moderate to high fire hazard potential. (California Department of Forestry and Fire Protection [CAL FIRE] 2007) As such, the California Fire Code was reviewed for this analysis.

4.15.2.2.2 California Public Resources Code Sections 4292 and 4293

California Public Resources Code (PRC) Section 4292 states:

> [A]ny person that owns, controls, operates, or maintains any electrical transmission or distribution line…shall, during such times and in such areas as are determined to be necessary by the director or the agency, has primary responsibility for fire protection of such areas, maintain around and adjacent to any pole or tower which supports a switch, fuse, transformer, lightening arrester, line junction, or dead end or corner pole, a firebreak which consists of a clearing of not less than 10 feet in each direction from the outer circumference of such a pole or tower.

PRC Section 4293 states:

> [A]ny person that owns, controls, operates, or maintains any electrical transmission or distribution line upon any mountainous land, or in forest-covered land, or grass-covered land shall, during such times and in such areas as are determined to be necessary by the director or the agency which has primary responsibility for the fire protection of such area, maintain a clearance of the respective distances which are specified in this section in all directions between all vegetation and all conductors which are carrying electric current:
>
> (a) For any line which is operating at 2,400 or more volts, but less than 72,000 volts, four feet
>
> (b) For any line which is operating at 72,000 or more volts, but less than 110,000 volts, six feet
>
> (c) For any line which is operating at 110,000 or more volts, 10 feet
>
> In every case, such distance shall be sufficiently great to furnish the required clearance at any position of the wire, or conductor when the adjacent air temperature is 120 degrees Fahrenheit, or less. Dead trees, old decadent or rotten trees, trees weakened by decay or disease and trees or portions thereof that are leaning toward the line which may contact the line from the side or may fall on the line shall be felled, cut, or trimmed so as to remove such hazard.

4.15.2.2.3 Red Flag Fire Warning and Weather Watches

Like PRC Sections 4292 and 4293, red-flag warnings and fire-weather watches aim to prevent fire events and reduce the potential for substantial damage. When extreme fire weather or behavior is present or predicted in an area, a red-flag warning or fire-weather watch may be issued to advise local fire agencies that these conditions are present. The National Weather Service issues the red flag warnings and fire weather watches and the CAL FIRE has provided safety recommendations for preventing fires, including clearing and removing vegetation, and ensuring the proper use of equipment.

4.15.2.3 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.

4.15.2.3.1 Inyo County General Plan

The Inyo County General Plan does not contain any specific goals relevant to the IC Project.

4.15.2.3.2 Kern County General Plan

Kern County recognizes the importance of environmental and public health and has developed policies to protect the public health and safety in the Kern County General Plan. Kern County has policies that encourage availability of adequate emergency services and facilities to the residents of Kern County through the coordination, planning, and development of emergency facilities and services. The Safety Element of the Kern County General Plan does not contain any specific goals or policies that are relevant to the IC Project. (Kern County 2009)

4.15.2.3.3 San Bernardino County General Plan

The Safety Element of the County of San Bernardino 2007 General Plan contains goals and policies for fire protection and emergency response. The Safety Element contains goals to protect residents and visitors from injury and loss of life, and to protect property from fires. The Safety Element of the County of San Bernardino 2007 General Plan does not contain any specific goals or policies that are relevant to the IC Project.

4.15.2.3.4 City of Barstow General Plan

The City's Safety Element of the General Plan has established goals to maintain optimal levels of service and quality for fire and police protection, expanding police and fire facilities as needed in conjunction with future planned development, and continuing to promote public safety by maintaining and enhancing prevention, education and outreach programs. The Safety Element does not contain any specific goals or policies that are relevant to the IC Project.

4.15.3 Significance Criteria

The significance criteria for assessing the impacts to public services are derived from the California Environmental Quality Act (CEQA) Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services: fire protection; police protection; schools; parks; other public facilities.

4.15.4 Impact Analysis

4.15.4.1 Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

4.15.4.1.1 Construction

No Impact. The Full-Rebuild Concept would not affect service ratios, response times, or other objectives for public services in the area. Fire, emergency and police services currently serve, and would continue to serve, the areas in which the existing and rebuilt subtransmission lines are located.

The Full-Rebuild Concept would not require the expansion of fire protection services. Work areas would be cleared of vegetation, or vegetation trimmed, before staging construction equipment, thus minimizing the probability of fire during construction. Although the need for emergency services may arise during construction of the Full-Rebuild Concept, such a need would not substantially affect the provision of existing emergency services or require the provision of service beyond existing capacities. Construction is not anticipated to affect response times because any lane or road closures, if necessary, would be temporary and would be coordinated with local jurisdictions per APM TRA-1, and traffic control would be implemented as necessary per APM TRA-1.

It is not anticipated that the Full-Rebuild Concept would adversely affect the use or operation of any public services or facilities in the vicinity of the Full-Rebuild Concept alignment, including schools, fire, and police protection services, emergency services, hospitals, or other services. Construction of the Full-Rebuild Concept would not generate the need for new or additional public services such as school or other facilities because it would not result in construction of residential or other land uses that would directly or indirectly induce population growth in the area. Therefore, no impacts on public services are anticipated during construction of the Full-Rebuild Concept.

4.15.4.1.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing operation and maintenance (O&M) activities, including inspections, along the subtransmission lines that would be rebuilt under the Full-Rebuild Concept. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the Full-Rebuild Concept, and therefore no impacts would be realized under this criterion during operations and maintenance.

4.15.5 Applicant Proposed Measures

Because no potentially significant impacts to public services would occur as a result of the Full-Rebuild Concept, no avoidance or minimization measures are proposed.

4.15.6 Alternatives

Alternatives to the Full-Rebuild Concept are addressed in Section 5.2, Description of Project Alternatives and Impact Analysis.

4.15.7 References

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IVANPAH-CONTROL PROJECT

PUBLIC SERVICES ALONG THE IC PROJECT ALIGNMENT

ARCADIS

SOUTHERN CALIFORNIA EDISON

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- IC Project Alignment
- County
- Police Station
- Fire Station
- School
- Hospital
- Libraries

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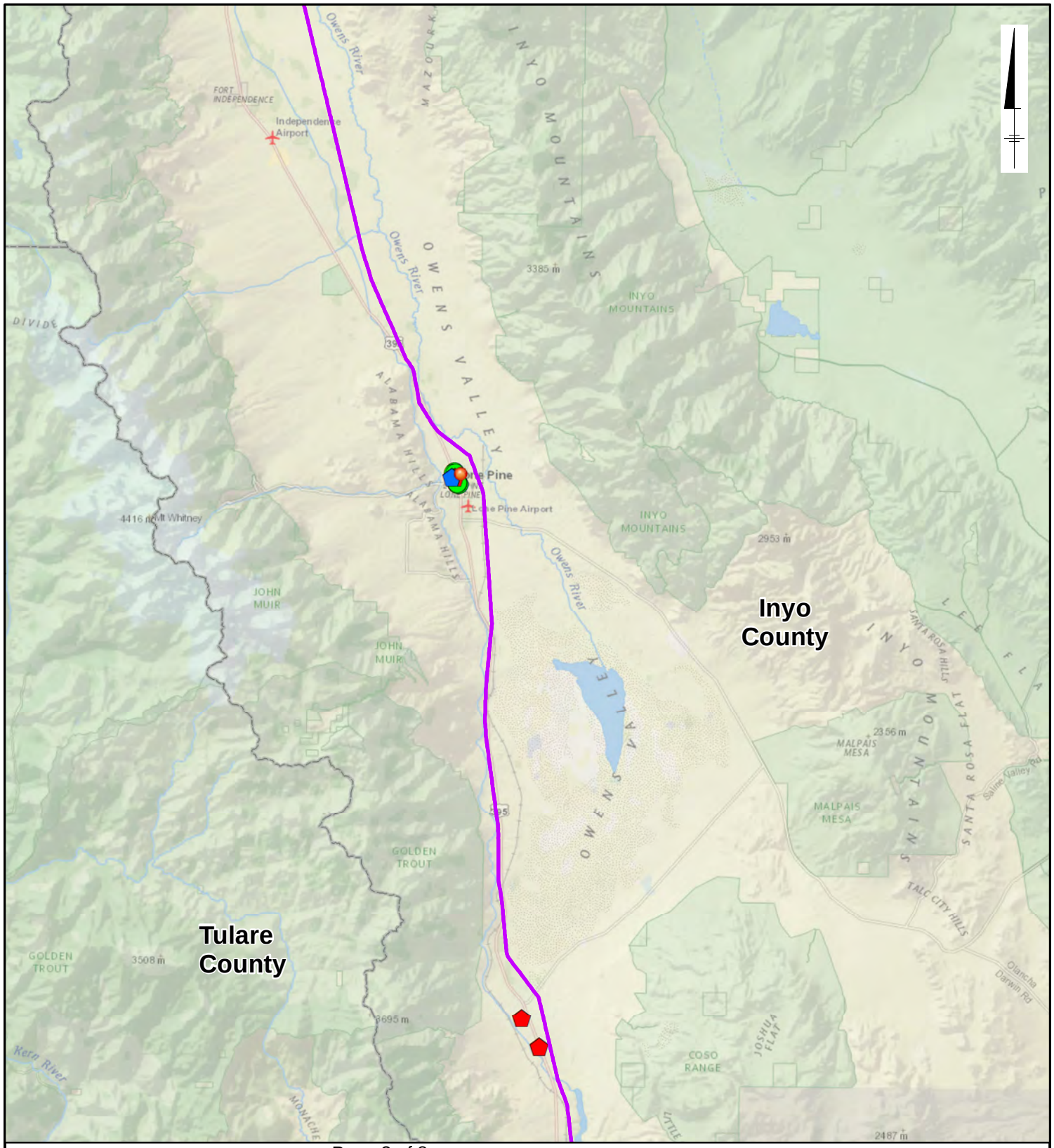

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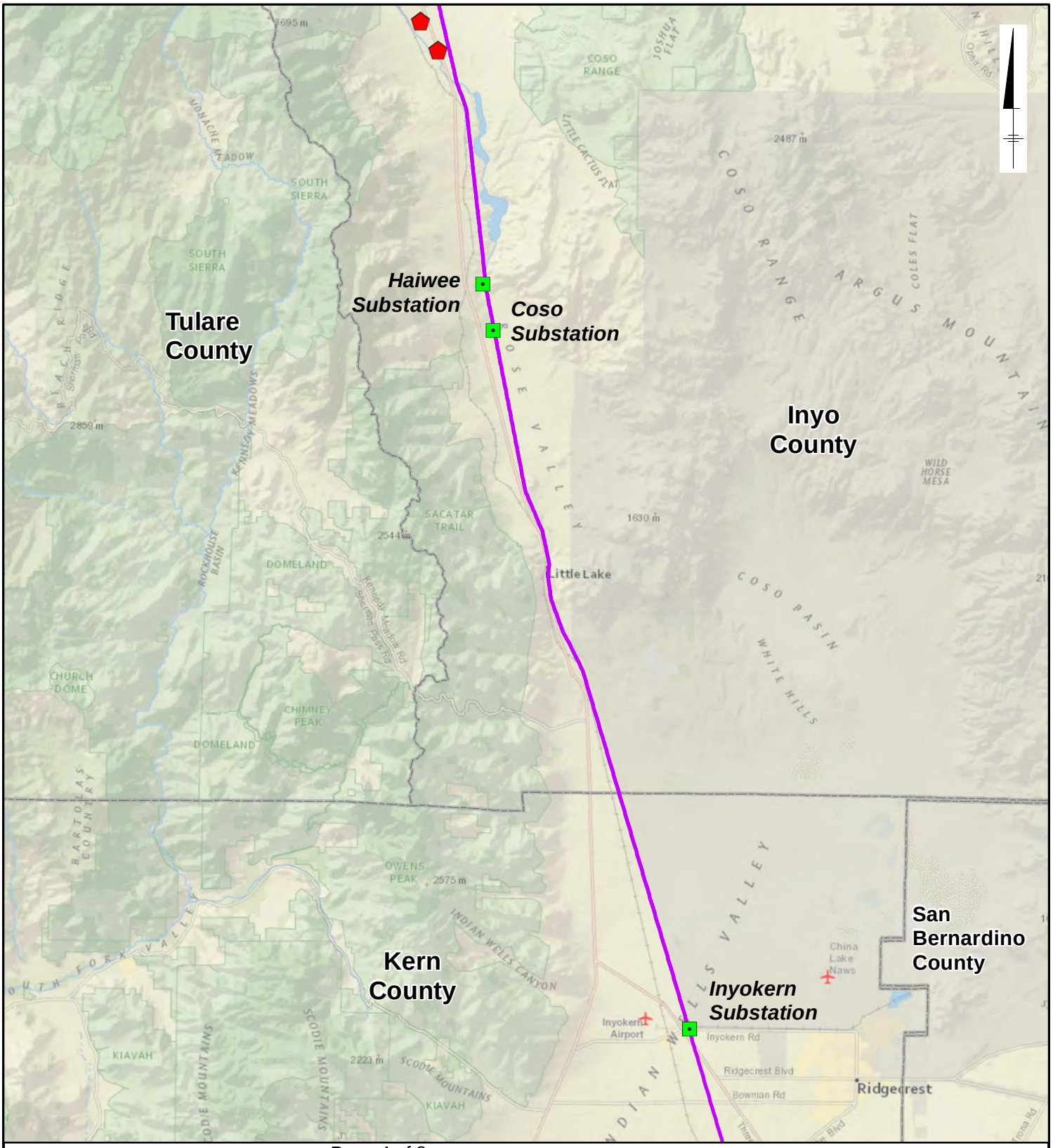

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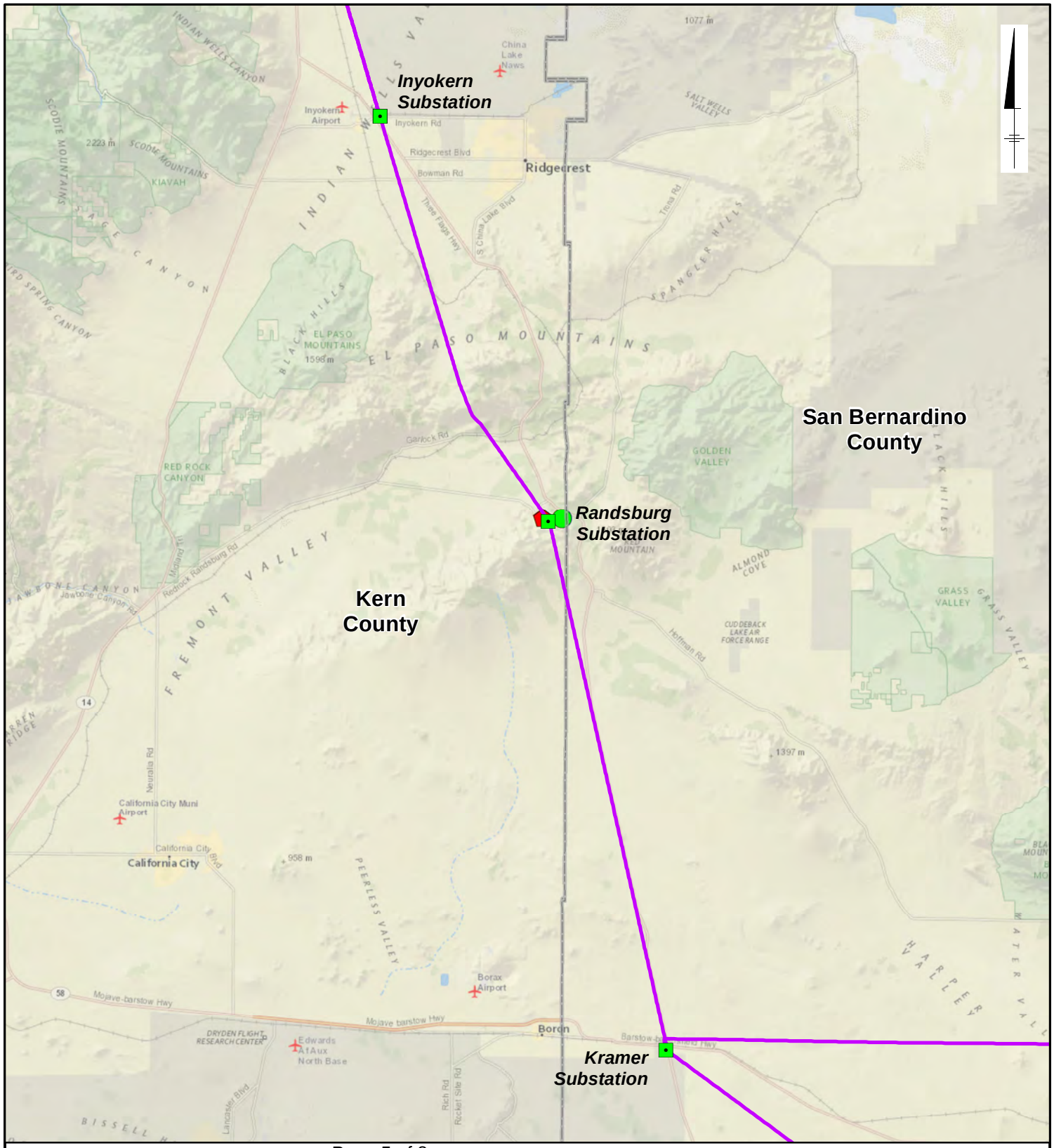

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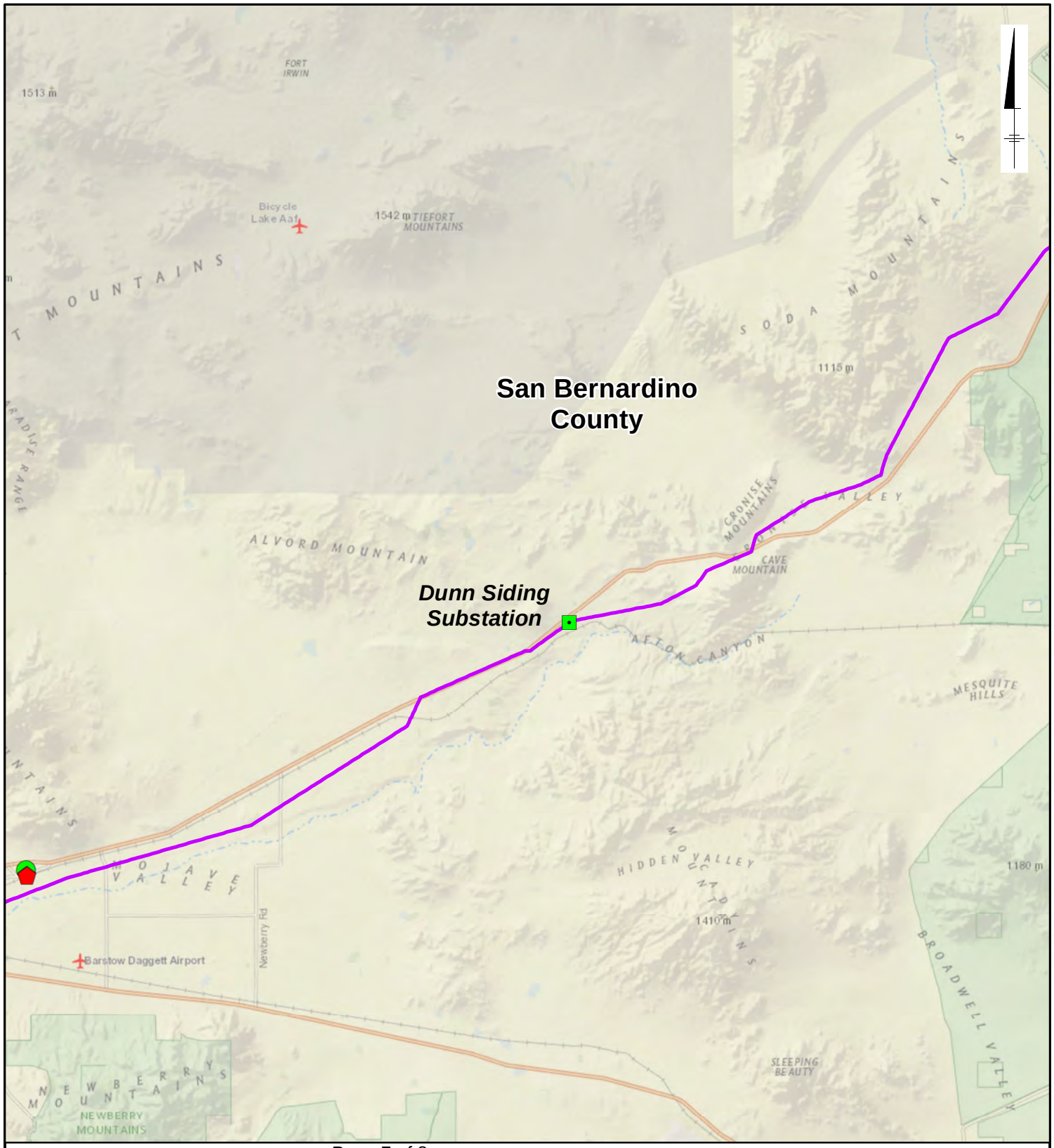

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4.16 Recreation

This section describes recreation in the vicinity of the IC Project Alignment, as well as the potential impacts that could result from construction and operation of the Full-Rebuild Concept and its Alternatives.

4.16.1 Environmental Setting

The Environmental Setting section describes the existing conditions for recreation in the vicinity of the IC Project Alignment. The IC Project Alignment is located in unincorporated Inyo, Kern, and San Bernardino counties and the City of Barstow. The land along and proximate to the IC Project Alignment is primarily open space. Agricultural and mineral extraction activities are found along the alignment. Residential land uses are scattered along the IC Project Alignment, generally concentrated in developed communities. Portions of the IC Project Alignment is located on and adjacent to China Lake Naval Air Weapons Station, Edwards Air Force Base, and the Marine Corps Logistics Base (MCLB) Barstow Yermo and Nebo annexes. Generally, dispersed recreation on public lands is the principal recreational opportunity available to visitors within the vicinity of the IC Project Alignment; few developed recreational areas are present along the IC Project Alignment.

Parks and recreation areas were identified by reviewing the Inyo County General Plan, Kern County General Plan, Kern County Parks and Recreation Master Plan, San Bernardino County General Plan, City of Barstow General Plan, Los Angeles Department of Water and Power (LADWP) information accessible online, and federal land management documents. Parks and recreation areas located within approximately one mile of the IC Project Alignment are identified and discussed below, are listed in Table 4.16-1, and are shown on Figureset 4.16-1.

Table 4.16-1: Parks and Recreation Areas Within One Mile of the IC Project Alignment

Project Segment	Name	Management Entity	Distance from IC Project Alignment (miles)
1	Sacatar Wilderness Area	BLM	~1.0
1	Tinemaha Viewing Area	BLM	0.2
1	Fossil Falls Campground	BLM	0.3
1	Manzanar National Historic Site Visitor's Center	NPS	1.0
1	Baker Creek Campground	Inyo County	0
1	Glacier View Campground	Inyo County	0.9
1	Mendenhall Park	Inyo County	0.5
1	Diaz Lake Campground	Inyo County	0.8
1	Spainhower Park	Inyo County	1.0
1	Eastern Sierra Visitor Center	Multiple Agencies	1.0
1	Mt. Whitney Golf Course	Private	1.0
1	Boulder Creek RV Resort	Private	1.0
3N	Harper Dry Lake Site	BLM	1.0
3S	Robert A Sessions Memorial Sportspark	City of Barstow	0.2
4	Camp Cady Wildlife Area	CDFW	1.0

4.16.1.1 Federal Lands

The IC Project Alignment traverses lands managed by the U.S. Department of the Interior Bureau of Land Management (BLM) Barstow Field Office, Bishop Field Office, Needles Field Office, and Ridgecrest Field Office (Figureset 4.16-1). Recreation on these lands is generally dispersed, and not tied to

developed infrastructure. In Segment 1, the IC Project Alignment passes within approximately 0.2 miles of the Tinemaha Viewing Area, which allows visitors a 360 degree view of this portion of the Owens Valley. Tule elk, a variety of birds, and stunning geology can be seen from the location overlooking Tinemaha Reservoir. The IC Project Alignment is also within 1 mile of the Sacatar Trail Wilderness, which offers dispersed backcountry recreation.

The IC Project Alignment in Segment 3N is located approximately 1 mile from the Harper Dry Lake site, which offers interpretative programs, hiking, wildlife viewing, and photography. No other developed recreational facilities have been identified on BLM-managed lands in the vicinity of the IC Project Alignment, although dispersed recreational opportunities can be found on BLM lands across the IC Project Alignment.

Segment 4 of the IC Project Alignment crosses near the northwest corner of the National Park Service's Mojave Trails National Monument (Monument), in the Afton Canyon Natural Area. The Monument comprises approximately 1.6 million acres; it is home to rugged mountain ranges, ancient lava flows, and sand dunes. Historical resources including ancient Native American trading routes, World War II-era divisional training camps (Patton Camps), and the longest remaining undeveloped stretch of Route 66. Recreational opportunities in the Monument include auto touring, bicycling, rock climbing, historical and cultural sites, camping, hiking, horseback riding, hunting, picnicking, wildlife viewing, wilderness, and photography. There are few developed recreational areas within the Monument; the Afton Canyon campground is located approximately 1.3 miles south of the IC Project Alignment.

The IC Project Alignment crosses lands designated as a Special Recreation Management Area (SRMA) or Extensive Recreation Management Area (ERMA), including: Alabama Hills SRMA and Olancha SRMA (Segment 1); El Paso/Rand SRMA and Red Mountain SRMA (Segment 2); Stoddard/Johnson SRMA (Segment 3S); Afton Canyon SRMA, Shadow Valley ERMA, and Ivanpah Valley ERMA (Segment 4). No developed recreational facilities within these SRMAs or ERMAs beyond those listed above are located within 1 mile of the IC Project Alignment.

4.16.1.2 State Lands

Segment 4 of the IC Project Alignment is located approximately 1 mile north of the California Department of Fish and Wildlife's Camp Cady Wildlife Area, an area of approximately 1,900 acres around the Mojave River. Recreational opportunities at Camp Cady include wildlife viewing, birdwatching, hiking, and hunting. Hunting opportunities include dove, quail, and rabbits. There are restrooms and camping areas. Camping is allowed at Camp Cady.

4.16.1.3 Inyo County/Los Angeles Department of Water and Power

The City of Los Angeles, through the Los Angeles Department of Water and Power (LADWP), owns approximately 250,000 acres in Inyo County along Segment 1. The Los Angeles Aqueduct is located in the Owens River Valley, proximate to the IC Project Alignment. Most LADWP-owned land is leased to private individuals or organizations for agricultural and livestock purposes; however, to maintain public access, approximately 75 percent of LADWP-owned land in Inyo County is open to the public for recreational uses. A number and variety of recreational facilities are located on LADWP-owned lands in the vicinity of the IC Project Alignment in Segment 1:

- Baker Creek Campground is crossed by the IC Project Alignment. The campground is located at Baker Creek Road near Big Pine; the campground is leased to Inyo County Parks and Recreation.

It has 70 camping sites, recreational vehicle (RV) hookups, vault toilets, drinking water, tables, grills, fire rings, and stream fishing.

- Glacier View Campground is located approximately 0.9 miles from the IC Project Alignment, near Big Pine. It has 40 camping sites, restrooms, drinking water, tables, and grills.
- Mendenhall Park is located approximately 0.5 miles from the IC Project Alignment, in Big Pine; the park is leased to Inyo County Parks and Recreation. It has a basketball court, restrooms, picnic gazebo, horseshoes, playground, and two baseball diamonds.
- Diaz Lake Campground is located approximately 0.8 miles from the IC Project Alignment, at South Main Street near Lone Pine; the campground is leased to Inyo County Parks and Recreation. It has 200 camping sites, grills, tables, drinking water, and restrooms. Diaz Lake has a boat launch and concession stand along with fishing, water-skiing, and swimming opportunities.
- The Eastern Sierra Visitor Center is located approximately one mile from the IC Project Alignment, south of Lone Pine. The Interagency Visitor Center is a cooperative venture between LADWP, USFS, BLM, the National Park Service (NPS), California Department of Fish and Game, Caltrans, CALFIRE, and Inyo and Mono counties. The Center features a native plant garden, restrooms, picnic facilities, exhibits, maps, brochures, and books about the Eastern Sierra area. In addition, wilderness permits can be obtained there.
- Mt. Whitney Golf Course is a nine-hole course located approximately one mile from the IC Project Alignment near Lone Pine.
- Spainhower Park (formerly Lone Pine Park) is approximately one mile from the IC Project Alignment in Lone Pine; the park is leased to Inyo County Parks and Recreation. It has a basketball court, tennis court, restrooms, horseshoe pits, picnic tables, drinking water, and a playground.
- Owens Lake is located south of Lone Pine and owned by LADWP. There are three public access trails (Owens Lake Trails) and viewing areas in the vicinity of Owens Lake. Of these, the "Dirty Socks Route" is located nearest the IC Project Alignment at a distance of approximately 3 miles from the IC Project Alignment. The Owens Lake area is a popular bird watching location; more than 100 species of birds have been spotted there.

4.16.1.4 Kern County

Segments 1 and 2 of the IC Project Alignment traverse northeastern and eastern Kern County. The Kern County Parks Master Plan divides Kern County among five areas; the IC Project Alignment falls within Area 1. Within Kern County, there are no regional or other notable recreational facilities in the vicinity of the IC Project Alignment. (Kern County Parks Master Plan 2010)

4.16.1.5 San Bernardino County

The San Bernardino Department of Regional Parks manages nine regional parks throughout the County; none are located in the vicinity of the IC Project Alignment.

4.16.1.6 City of Barstow

The City of Barstow Parks and Recreation Department is responsible for park and facilities planning, development, and maintenance. The City-owned Robert A. Sessions Memorial Sportspark is located within one mile of the IC Project Alignment.

4.16.1.7 Private Lands

Boulder Creek RV Resort is a private recreational vehicle and camping resort located approximately 4 miles south of Lone Pine and 0.5 miles from the IC Project Alignment. It offers 77 RV hook-up sites, tent camping, and rental cabins. There are various amenities onsite including a mini mart and a gift shop.

4.16.2 Regulatory Setting

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

4.16.2.1 Federal

4.16.2.1.1 BLM Bishop Resource Management Plan (RMP) Record of Decision, Recreation Standard Operating Procedures

The BLM Bishop RMP states that the type of recreation best suited for eastern Sierra BLM land is "predominantly dispersed use in semi-primitive, undeveloped settings." The RMP strategy is to maintain and enhance these undeveloped settings.

General Policy Number 4 states that "public lands will be managed in a manner that will…provide for outdoor recreation and human occupancy and use". The area-wide management strategy includes the following:

- Emphasize primitive, semi-primitive motorized, semi-primitive nonmotorized and roaded natural experiences.
- Maintain and enhance semi-primitive and other physical settings by providing compatible recreation opportunities within those settings.
- Manage visitor use to conform with semi-primitive and other physical settings.
- Recreation management may include developing trails for hiking, mountain biking, and horseback riding; providing off-highway vehicle use opportunities; designating scenic byways; interpreting natural and cultural resources; and establishing an environmental education program.
- Vehicle use is limited to designated roads and trails.

More specific management strategies are discussed by area. The IC Project Alignment is located within three different management areas within this BLM resource area.

Portions of Segment 1 are located within the "Owens Valley Management Area," more than 150,000 acres between Bishop and Lone Pine. The management theme for this area is to "emphasize recreational use and environmental education while providing for land disposals." One of the needs for this area is to "coordinate mutual recreation interests with the City of Los Angeles Department of Water and Power and Inyo County."

Portions of the IC Project Alignment are located within the "South Inyo Management Area," 65,000 acres at the southern end of the Inyo Mountain Range. The management theme for this area is to "manage to protect wilderness, wildlife, visual and cultural values and to enhance recreation opportunities." It additionally includes:

- Manage for primitive recreation opportunities in the proposed Southern Inyo Wilderness Area.
- Provide for semi-primitive motorized and semi-primitive nonmotorized recreation opportunities in the remainder of the area.

Portions of Segment 1 are also located within the BLM "Owens Lake Management Area," approximately 15,800 acres near Owens Lake. The management theme for this area is to "protect and enhance wildlife habitat."

4.16.2.1.2 BLM Desert Renewable Energy Conservation Plan, Land Use Plan Amendment (DRECP LUPA)

The DRECP LUPA includes two types of recreation designations: Special Recreation Management Areas (SRMAs) and Extensive Recreation Management Areas (ERMAs).

SRMA-designated lands are recognized and managed for their recreation opportunities, unique value and importance. SRMAs are high-priority areas for outdoor recreation as defined in the BLM Land Use Planning Handbook H-1601-1 (2005). It is a public lands unit identified in land use plans to direct recreation funding and personnel to manage for a specific set of recreation activities, experiences, opportunities and benefits. Both land use plan decisions and subsequent implementing actions for recreation in each SRMA are geared to a strategically identified primary market—destination, community, or undeveloped areas.

ERMA-designated lands require specific management consideration in order to address recreation use and demand. The ERMAs are managed to support and sustain the principal recreation activities and associated qualities and conditions. Recreation management actions within an ERMA are limited to only those of a custodial nature. Management of ERMA areas are commensurate with the management of other resources and resource uses.

4.16.2.2 State

There are no state regulations pertaining to the IC Project and this resource.

4.16.2.3 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.

4.16.2.3.1 Inyo County General Plan

The Inyo County General Plan contains a number of goals, policies, and implementation measures related to parks and recreational facilities; none are relevant to the IC Project.

4.16.2.3.2 County of Kern, Parks and Recreation Master Plan

The County of Kern Parks and Recreation Master Plan contains a number of goals, policies, and implementation measures related to parks and recreational facilities; none are relevant to the IC Project.

4.16.2.3.3 San Bernardino County General Plan

The San Bernardino County General Plan contains a number of goals related to parks and recreational facilities; none are relevant to the IC Project.

4.16.2.3.4 City of Barstow General Plan, Resource Conservation and Open Space Element

The City of Barstow General Plan contains a number of goals, policies, and strategies related to parks and recreational facilities, including the following:

Strategy 7.A.1: Work with the utility companies owning large "cross-town" easements to ensure that these areas remain as open space for recreation, circulation, etc.

4.16.3 Significance Criteria

The significance criteria for assessing the impacts to recreational resources are derived from the California Environmental Quality Act (CEQA) Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would:

- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated
- Include recreational facilities, or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment

4.16.4 Impact Analysis

4.16.4.1 Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

4.16.4.1.1 Construction

Less than Significant Impact. The use of parks and recreational facilities is closely tied to population; as population increases, the use of existing parks and recreational facilities can be expected to increase proportionally. Similarly, the loss of existing parks and recreational facilities would result in a concentration of use at remaining parks and facilities.

As presented in Section 4.14, Population and Housing, the Full-Rebuild Concept would not directly or indirectly induce any population growth during construction. During construction, local parks may be used by workers during their lunch or break periods; this would not represent a significant increase in the use of existing parks or recreational facilities.

The limited increase in the use of parks and recreational facilities by workers during construction and the lack of population growth resulting from the Full-Rebuild Concept would not result in either a significant increase in the use of existing parks or recreational facilities or the occurrence or acceleration of substantial physical deterioration to existing parks and recreational facilities.

The Full-Rebuild Concept would temporarily disrupt access to a portion of the Baker Creek campground in Segment 1; the disruption would occur during the replacement of the existing subtransmission structure located within the campground. This disruption would be temporary, lasting only a number of non-consecutive days when the existing structure is removed, when the new structure is installed, and when conductor is removed and installed. While this short-term disruption could result in potential recreationalists using other campground sites; the use of other campground sites would be typical of the

use of these sites, and would not result in any physical deterioration of these other campground sites. Therefore, less than significant impacts would occur under this criterion.

4.16.4.1.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing operation and maintenance (O&M) activities, including inspections, along the subtransmission lines that would be rebuilt under the Full-Rebuild Concept. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the Full-Rebuild Concept, and therefore no impacts would be realized under this criterion during operations and maintenance.

4.16.4.2 Would the Project include recreational facilities, or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

4.16.4.2.1 Construction

No Impact. The Full-Rebuild Concept does not include any recreational facilities. The Full-Rebuild Concept would not result in a population increase and would not require the construction or expansion of any recreational facilities. As a result, there would be no adverse physical effect on the environment from the construction of new, or expansion of existing, recreational facilities. Therefore, no impacts would occur under this criterion.

4.16.4.2.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing operation and maintenance (O&M) activities, including inspections, along the subtransmission lines that would be rebuilt under the Full-Rebuild Concept. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the Full-Rebuild Concept, and therefore no impacts would be realized under this criterion during operations and maintenance.

4.16.5 Applicant Proposed Measures

Because no significant impacts to recreation resources would occur as a result of the Full-Rebuild Concept, no avoidance or minimization measures are proposed.

4.16.6 Alternatives

Alternatives to the Full-Rebuild Concept are addressed in Section 5.2, Description of Project Alternatives and Impact Analysis.

4.16.7 References

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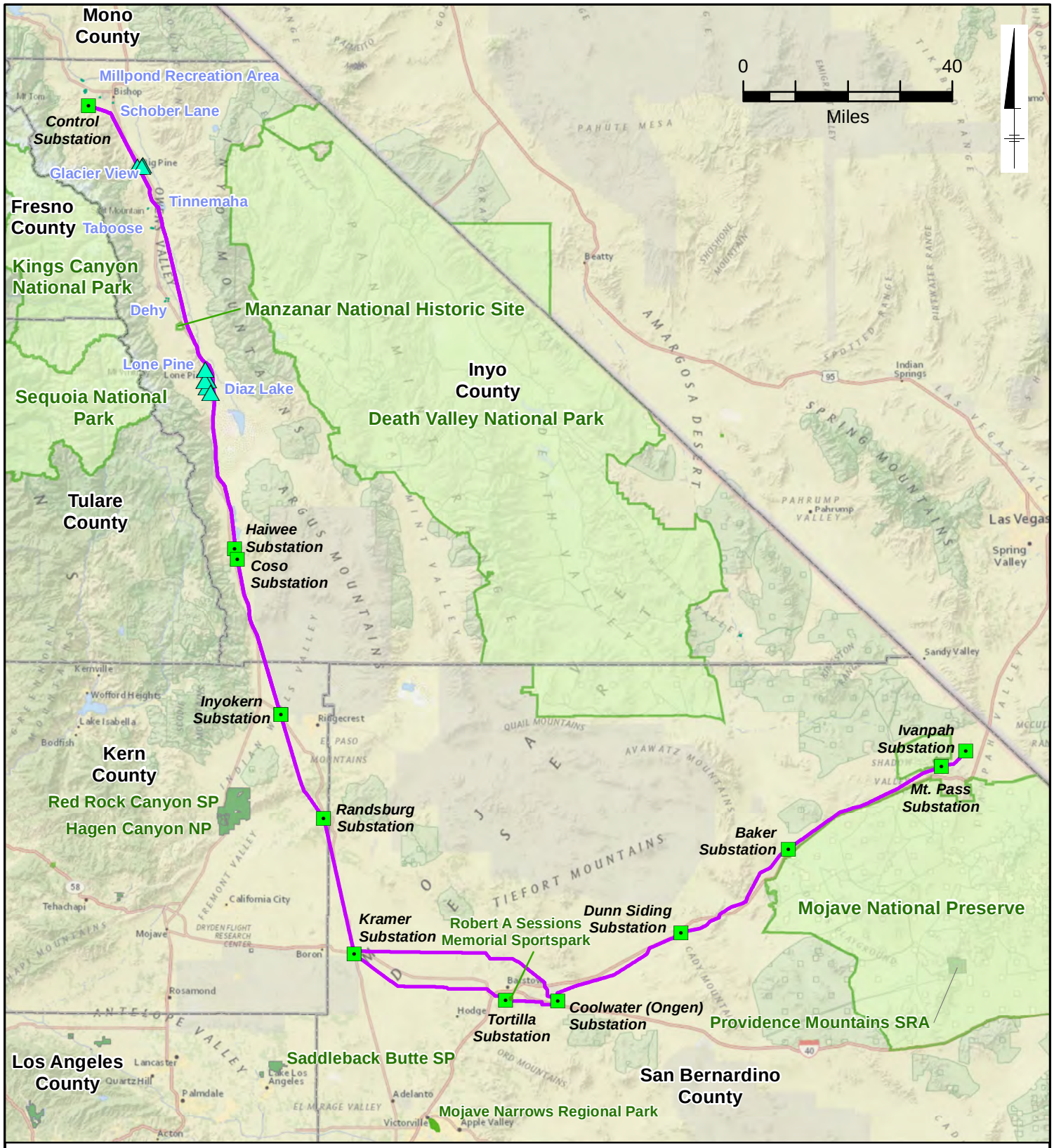

Legend

- Substation
- Recreation Location
- IC Project Alignment
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- SanBernardino Co Parks
- CA State Parks
- National Parks

NOTES:
(1) Sources: *http://services.gis.ca.gov/arcgis/services*;
https://services2.arcgis.com/AhxrK3F6WM8ECvDi/arcgis/rest/services/Park_Boundaries_2017/FeatureServer;
https://services1.arcgis.com/fBc8EJBxQRMcHlei/arcgis/rest/services/NPS_Park_Boundaries/FeatureServer
(2) Kern County parks are not shown on the map because there were none located near the IC project alignment.

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PARKS AND RECREATIONAL FACILITIES

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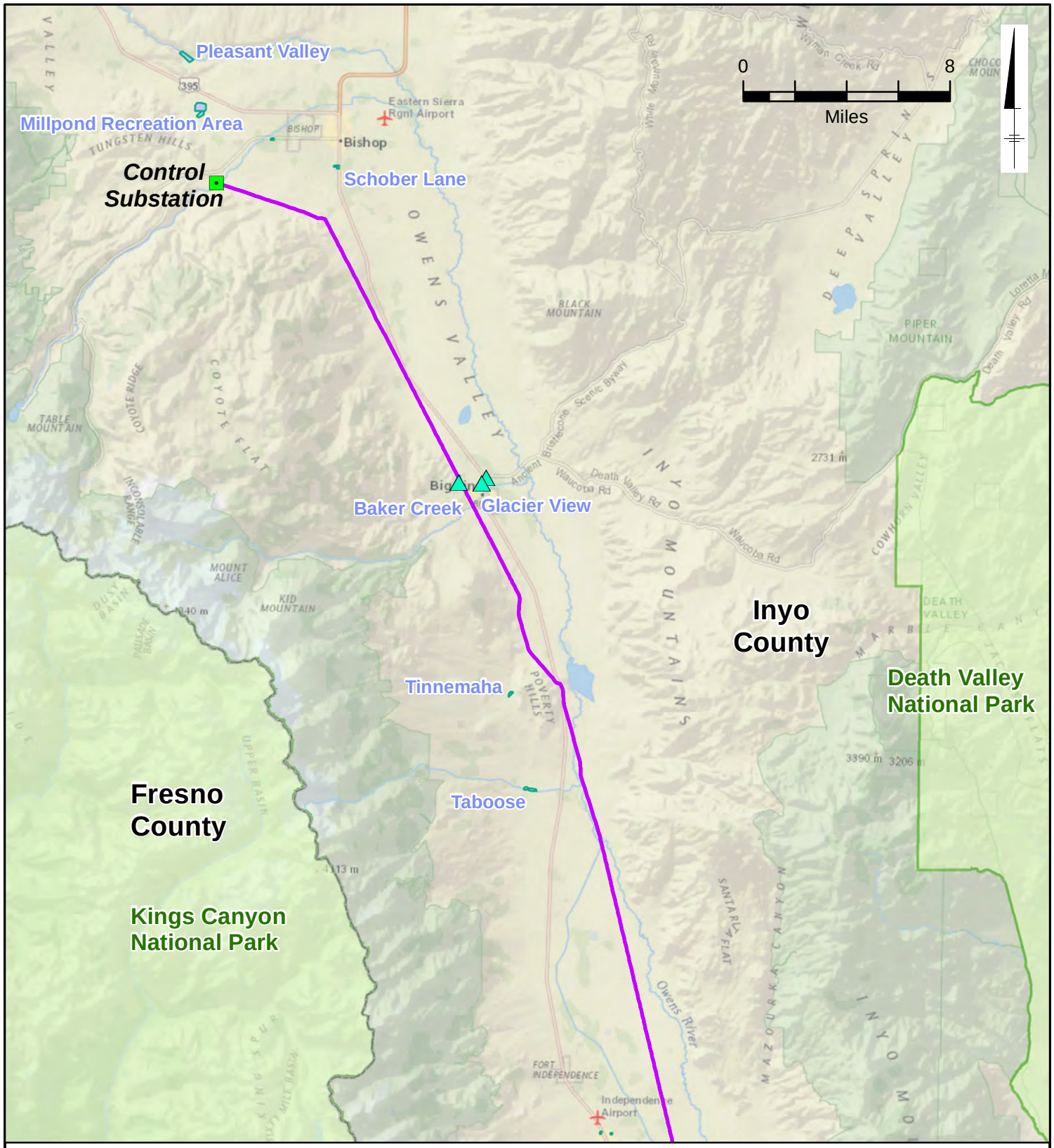

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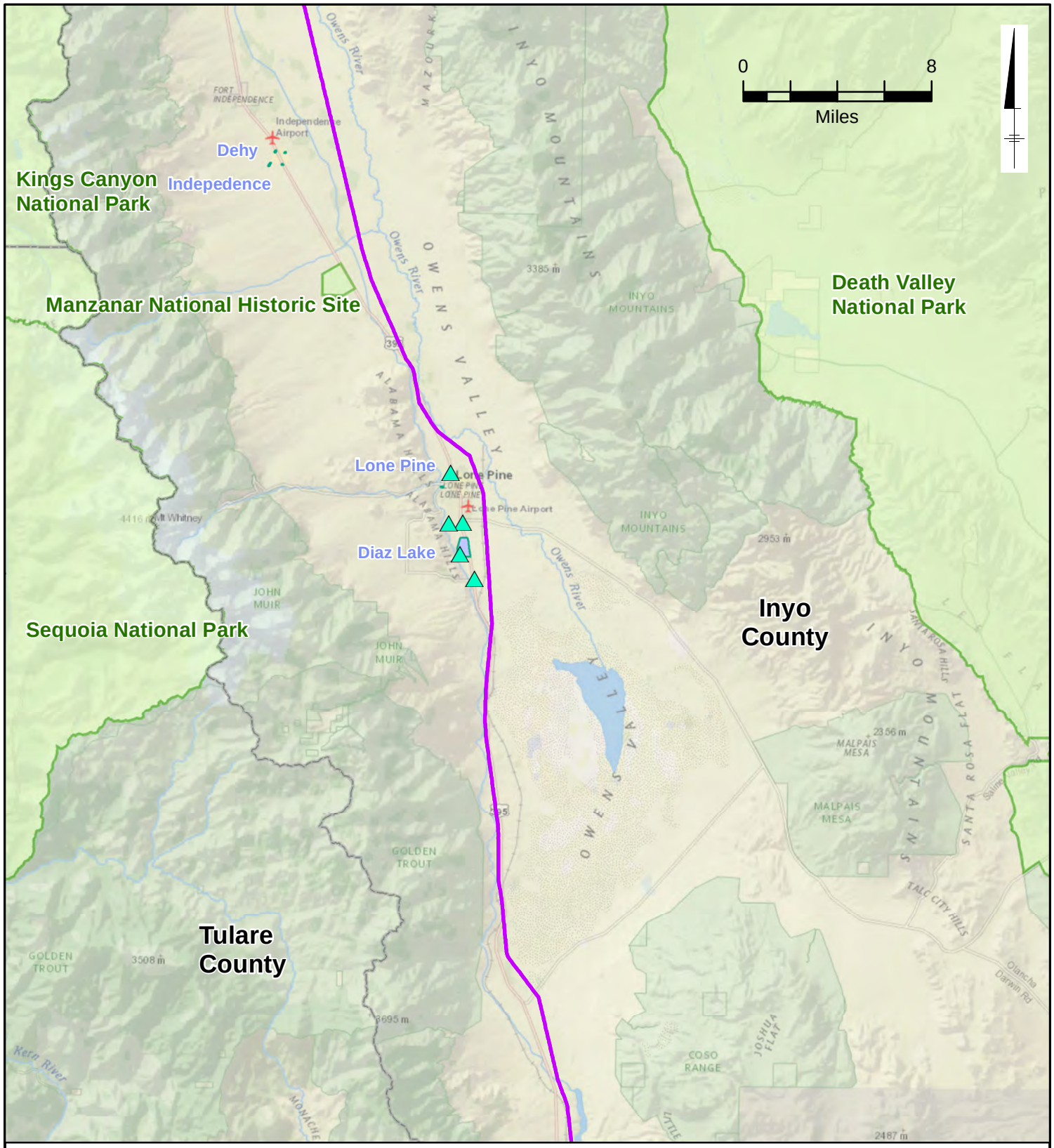

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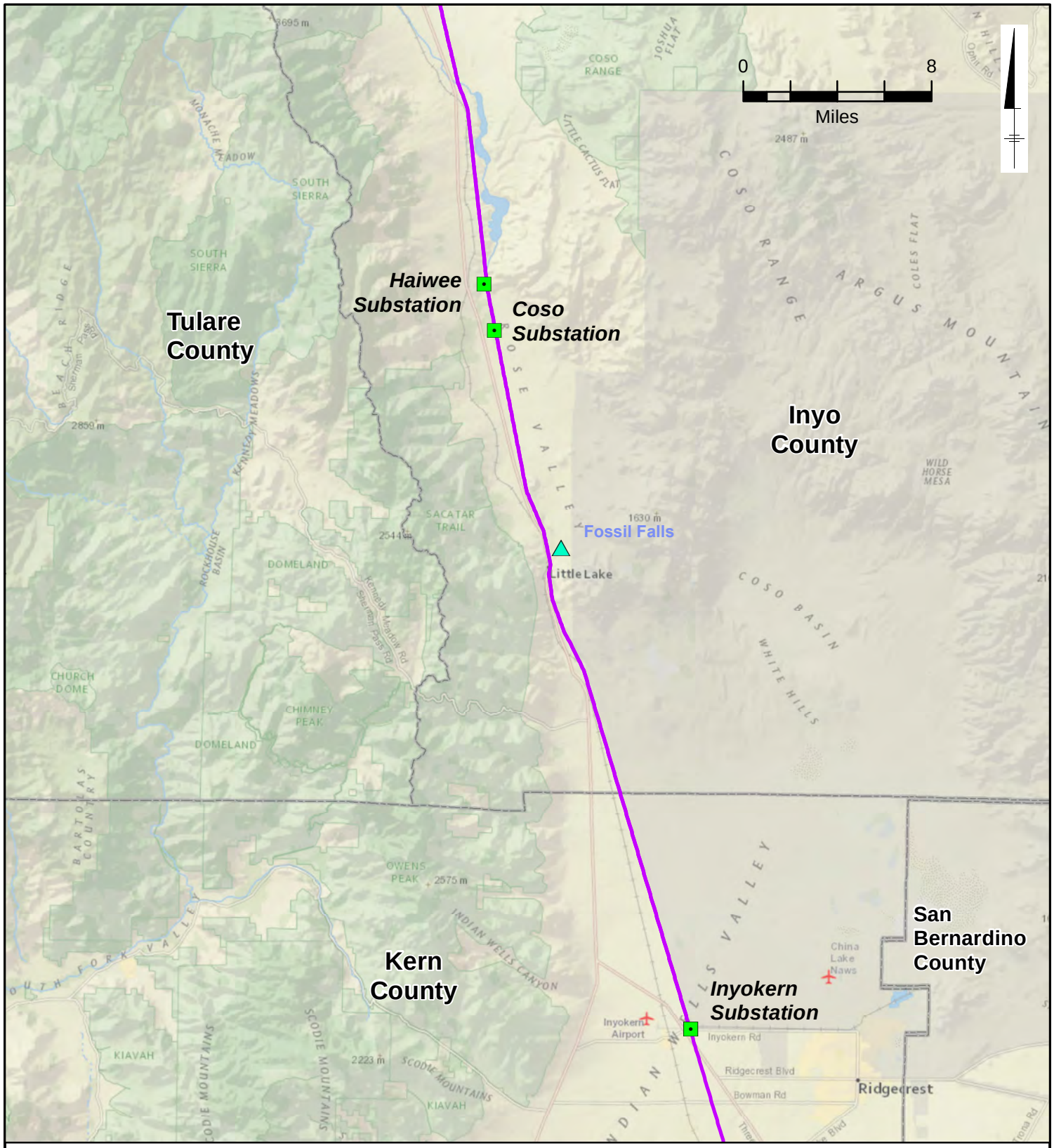

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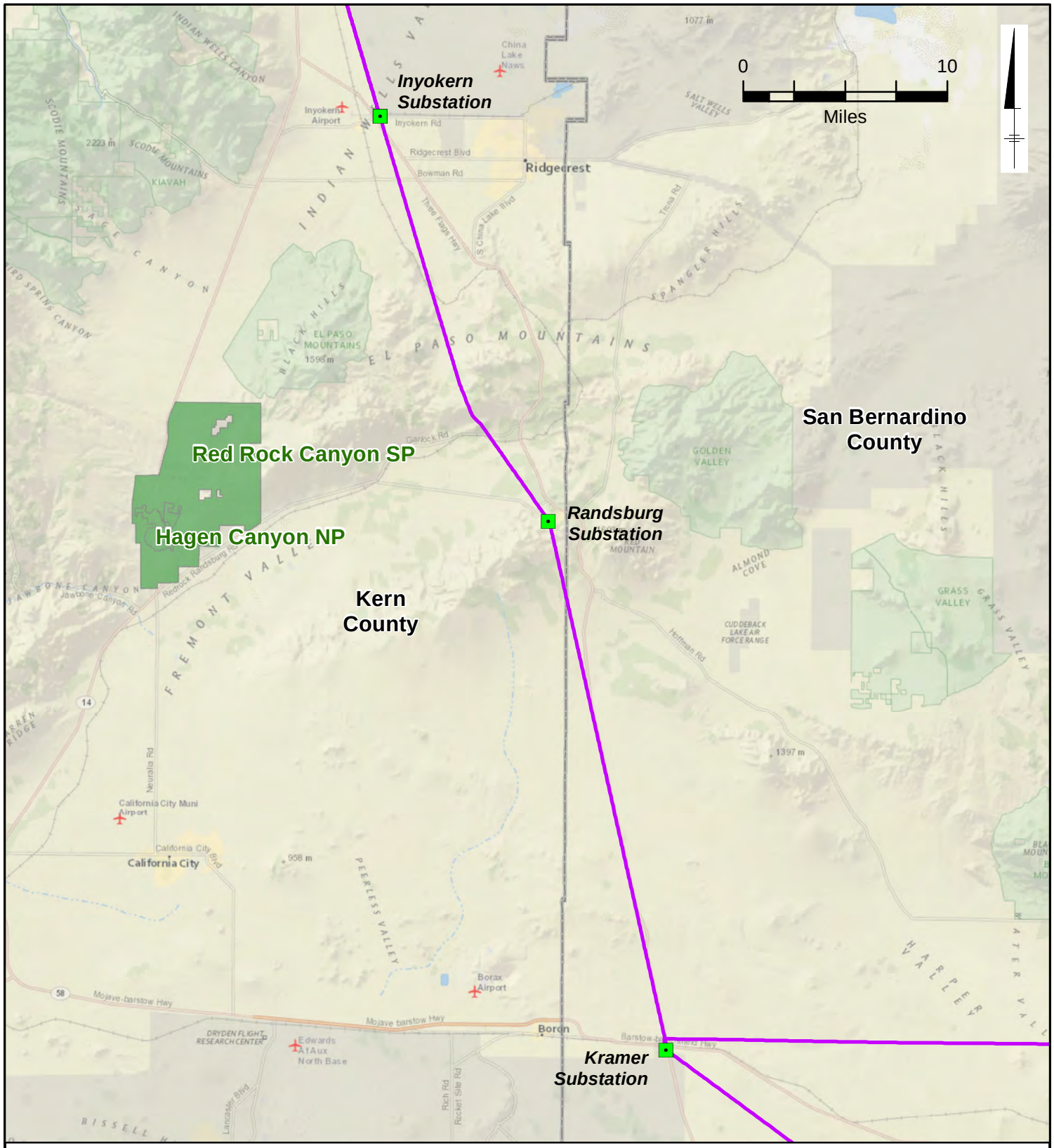

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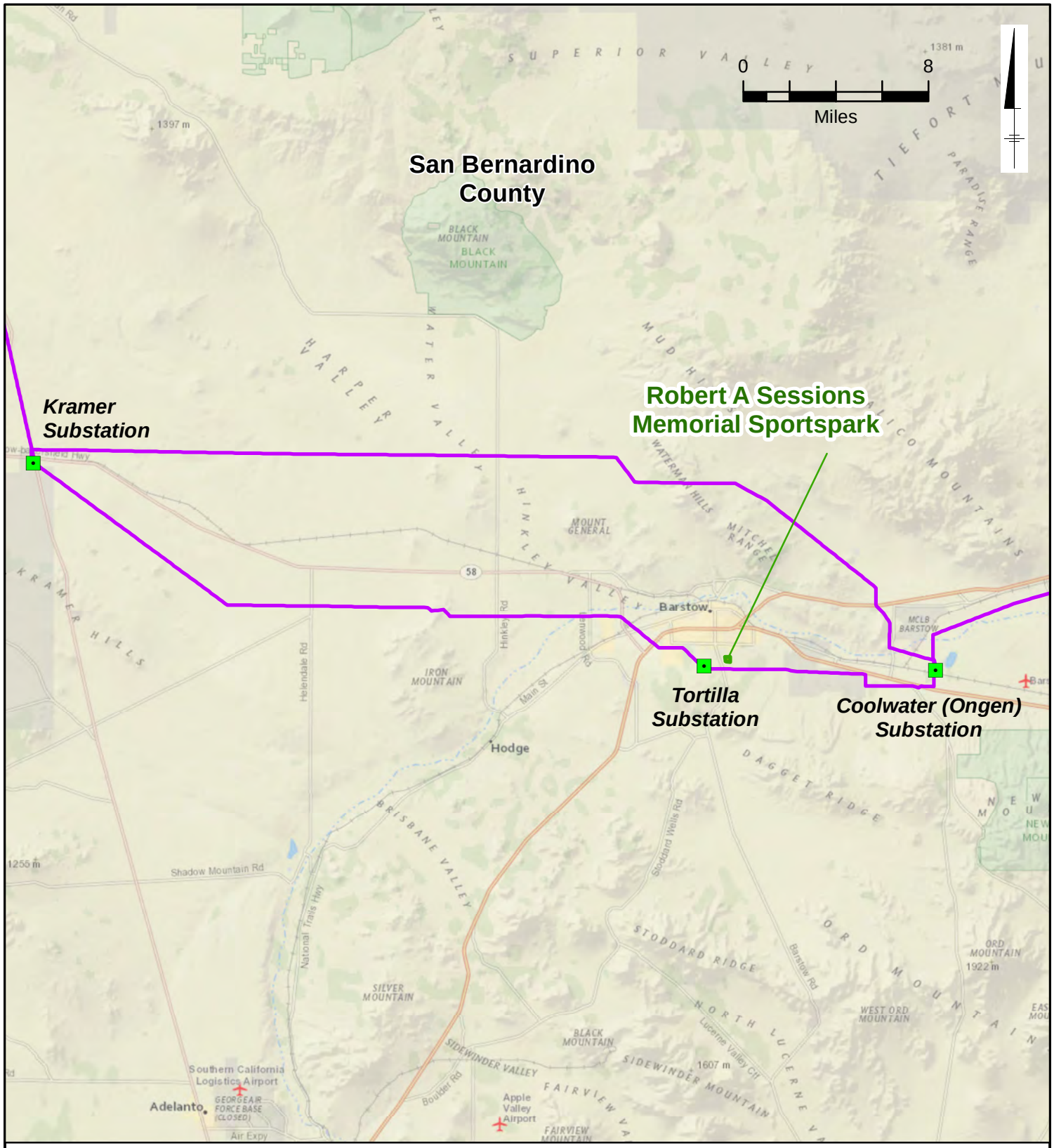

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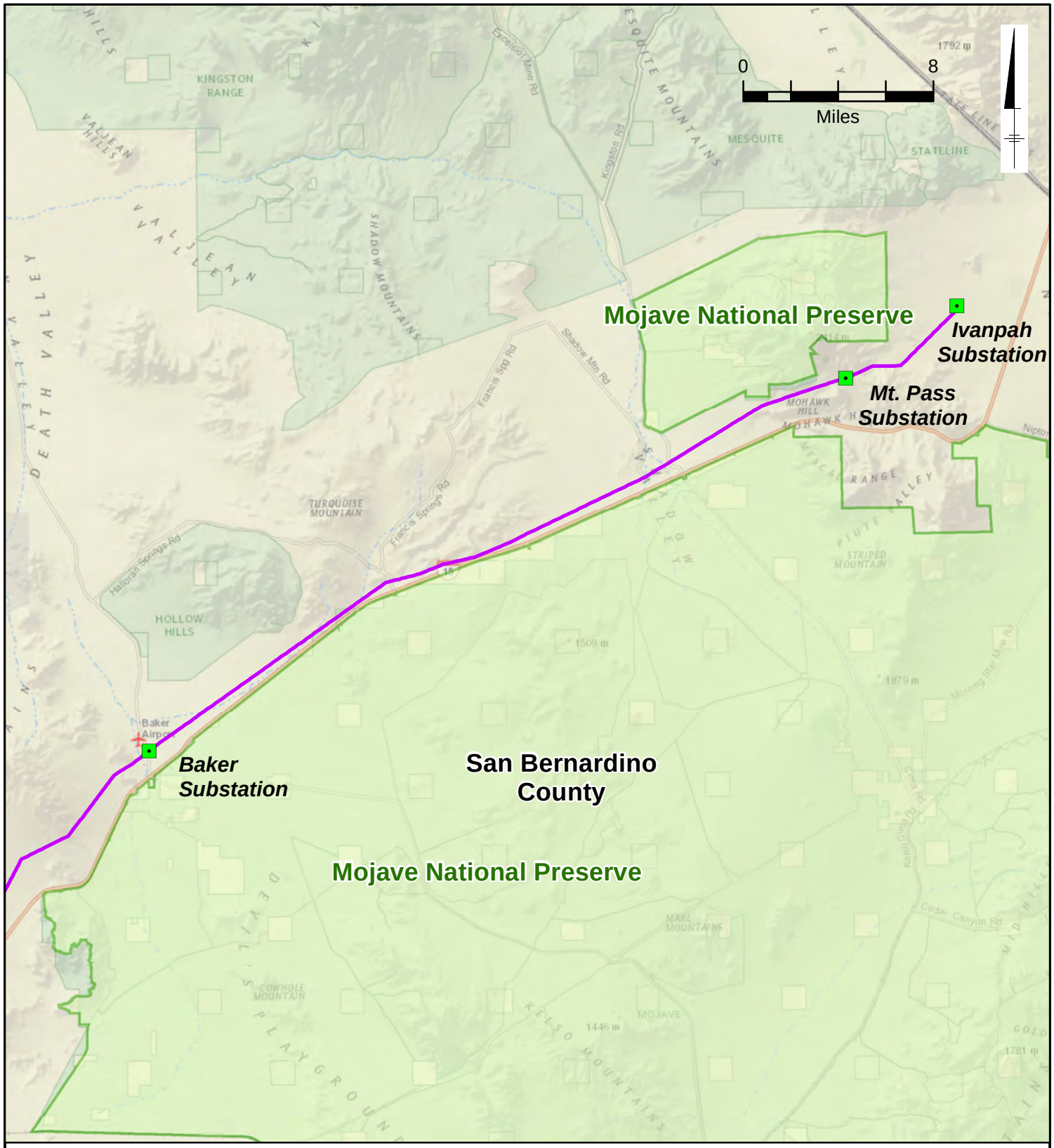

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PARKS AND RECREATIONAL FACILITIES

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4.17 Transportation and Traffic

This section of the PEA describes the transportation and traffic in the area of the IC Project Alignment, as well as an assessment of impacts that have the potential to occur during construction and operation of the Full-Rebuild Concept and its Alternatives.

4.17.1 Environmental Setting

The environmental setting section describes the existing conditions for transportation and traffic in the area of the IC Project Alignment. The IC Project Alignment is located within unincorporated Inyo County, Kern County, and San Bernardino County, and in the City of Barstow. The predominant land use across the IC Project Alignment is open space. In Segment 1, residential and agricultural land uses are scattered and generally concentrated in developed communities. Scattered residential land uses are also found along each of the Segments. Widely-dispersed industrial uses are found in the eastern portions of Segment 4 (mining and solar electric generating facilities). Institutional uses, primarily military facilities, are located adjacent to all Segments. Figureset 4.17-1 illustrates the transportation-related infrastructure discussed in the following sections.

4.17.1.1 Highways and Roadways

Much of the IC Project Alignment is located proximate to highways and major roadways. Segment 1 of the IC Project Alignment is located in the Owens River valley, and generally parallels U.S. Route 395 (US 395). The northern and southern portions of Segment 2 also parallel US 395. Segment 3N parallels State Route 58 (SR-58) at a distance, and Segment 4 largely parallels Interstate 15 (I-15).

The regional transportation system is comprised of state highways and county and local roads. I-15, I-40, US 395, SR-31, SR-91, SR-58, SR-127, SR-136, SR-168, SR-178, and SR-190 provide regional access to the area. The IC Project Alignment crosses the following major transportation corridors:

- Segment 1
  - US 395 (four-lane) west of Tinemaha Reservoir;
  - US 395 northbound (two-lane) at two locations approximately 3 miles and 4 miles north of Lone Pine;
  - SR-136 (two-lane) at one location;
  - SR-190 (two-lane) at one location;
  - US 395 (four-lane) at one location approximately 7 miles south of Lone Pine; and
  - US 395 (two-lane) at one location approximately 1 mile north of Cartago.
- Segment 2
  - SR-178 (four-lane) at one location;
  - US 395 (two-lane) at one location; and
  - SR-58 (two-lane) at one location.
- Segment 3N
  - SR-58 (two-lane) at one location;
  - US 395 (two-lane) at one location; and
  - I-15 (four-lane) at one location.
- Segment 3S
  - US 66 (four-lane) at one location;
  - US 395 (two-lane) at one location;

  - SR-58 (four-lane) at one location;
  - I-15 (eight-lane) at one location;
  - SR-247 (two-lane) at one location; and
  - I-40 (four-lane) at one location.

- Segment 4
  - I-15 (four-lane) at four locations; and
  - SR-127 (two-lane) at one location.

The IC Project Alignment also crosses numerous other county and local roads.

4.17.1.1.1 Level of Service

Level of service (LOS) is a qualitative performance measure used to rank roadways and traffic conditions. LOS values range from A through F with "A" representing "free flow" conditions to "F" representing "stop-and-go gridlock" traffic conditions. (Kern COG 2014) Table 4.17-1 provides a description of the LOS designations and descriptions that are applied in Inyo, Kern, and San Bernardino counties.

Table 4.17-1: Level of Service Descriptions

LOS Designation	Description
Level of Service "A"	Free flow: no approach phase is fully used by traffic and no vehicle waits longer than one red indication. Insignificant delays.
Level of Service "B"	Stable operation: an occasional approach phase is fully used. Many drivers begin to feel somewhat restricted within platoons of vehicles. Minimal delays.
Level of Service "C"	Stable operation: major approach phase may become fully used and most drivers feel somewhat restricted. Acceptable delays.
Level of Service "D"	Approaching unstable: drivers may have to wait through more than one red signal cycle. Queues develop but dissipate without excessive delays.
Level of Service "E"	Unstable operation: volumes at or near capacity. Vehicles may wait through several signal cycles and long queues form upstream from intersection. Significant delays.
Level of Service "F"	Forced flow: represents jammed conditions. Intersection operates below capacity with several delays that may block upstream intersections.

Source: Inyo County 2015, Kern COG 2014, Kern County 2009, and Caltrans 2002.

Performance conditions, or LOS, on state and federal highways are set by the California Department of Transportation (Caltrans). The LOS for roadways along the IC Project Alignment is presented in Table 4.17-2. Much of the IC Project Alignment crosses rural, agricultural, and sparsely populated areas. A review of the Kern COG Regional Transportation Plan shows that roadways in the IC Project area are either unrated or operate at a Level C or better. (Kern COG 2014) The Kern County General Plan Goal is to maintain a minimum LOS Level D for all roads throughout Kern County. (Kern County 2009) The San Bernardino County Congestion Management Program shows that the county has adopted LOS standard Level E. (SANBAG 2016)

Table 4.17-2: Level of Service Descriptions

Project Segment	Route	Concept LOS	Actual LOS
1	US 395	C	C or better
1	SR-136	C	A
1	SR-190	C	A
2	US 395	D	D
2	SR-58	C	B
2	SR-178	D	C
3N	I-15	D	D
3N	US 395	D	D
3N	SR-58	C	B
3S	I-15	D	D
3S	I-40	D	B
3S	US 66	N/A	N/A
3S	US 395	D	D
3S	SR-58	C	B
3S	SR-247	D	A
4	I-15	D	D
4	SR-127	C	A

Note: US 395 in the Cartago-Olancha area operates at less than LOS C
Source: CALTRANS Transportation Concept Reports

4.17.1.1.2 Traffic Volumes

Caltrans reports average peak traffic hour and annual average daily traffic volumes along Interstate highways and State Routes. Table 4.17-3: Average Peak Daily Traffic Volumes lists the traffic volumes at major intersections that may be used by project-related construction traffic.

Table 4.17-3: Average Peak Daily Traffic Volumes

Project Segment	Highway	Intersection	Peak Hour Traffic Volume (vehicles)	Annual Average Daily Traffic (vehicle)
1	US 395	US 395 / SR-168 (Bishop)	1,600	13,500
1	US 395	US 395 / SR-168 (Big Pine)	1,050	6,200
1	US 395	US 395 / SR-136 (Lone Pine)	1,200	7,000
1	US 395	US 395 / SR-190 (Olancha)	1,250	6,800
1	US 395	US 395 / SR-14 (Inyokern)	450	2,750
1	US 395	US 395 / SR-178 (Inyokern)	410	2,950
1	SR-136	SR-136 / US 395	120	730
1	SR-190	SR-190 / US 395	50	240
2	US 395	US 395 / Randsburg Road	570	3,960
2	US 395	US 395 / SR-58	920	7,550
2	SR-58	SR-58 / US 395	1,350	12,000
2	SR-178	SR-178 / US 395	600	6,250
3N	SR-58	SR-58 / US 395	1,350	12,000
3N	US 395	US 395 / SR-58	920	7,550
3N	I-15	I-15 / Ghost Town Road	5,100	44,000
3S	US 395	US 395 / SR-58	920	7,550
3S	SR-58	SR-58 / Harper Lake Road	1,350	11,800
3S	SR-58	SR-58 / I-15	1,400	13,300
3S	I-15	I-15 / SR-58	6,300	58,000

Table 4.17-3: Average Peak Daily Traffic Volumes

Project Segment	Highway	Intersection	Peak Hour Traffic Volume (vehicles)	Annual Average Daily Traffic (vehicle)
3S	US 66	—	—	—
3S	SR-247	SR-247 / I-15	2,000	18,400
3S	I-40	I-40 / A Street	1,900	16,500
4	I-15	I-15 / SR-247	8,300	71,000
4	I-15	I-15 / I-40	7,700	66,000
4	I-15	I-15 / SR-58	5,500	47,000
4	I-15	I-15 / East Yermo Road	4,900	42,000
4	I-15	I-15 /Afton Road	4,850	41,500
4	I-15	I-15 / Zzyzx Road	4,850	41,500
4	I-15	I-15 / SR-127	4,200	36,200
4	I-15	I-15 /Halloran Springs	5,100	42,000
4	I-15	I-15 /Yates Well Road	5,200	42,600

Source: Caltrans Traffic Census Program, 2016 data

4.17.1.2 Truck Routes

According to the Kern County General Plan, at least 26 percent of all vehicle circulation in Kern County is completed by trucks. (Kern County 2009) Approximately 40 percent of the nation's containerized freight flows through the Ports of Los Angeles and Long Beach, and 80 percent of that funnels through San Bernardino County by rail or truck. (SANBAG 2014)

In the IC Project Alignment area, I-15, I-40, US 6, US 395, SR-58, SR-127, SR-136, SR-178, SR-190, and SR-247 represent the major truck network. (Caltrans 2016) The state highway system is a vital link for the region's economy due to the geographic isolation from large population centers; the region heavily depends upon goods shipped in by truck. (Caltrans 2015)

4.17.1.3 Bikeways

The IC Project Alignment is located in Caltrans District 8 and District 9. In District 8, bicyclists are permitted on certain highway routes: in the vicinity of the IC Project Alignment, bicyclists are permitted to use the shoulder along US 395, SR-18, SR-58, SR-127, and SR-247. (Caltrans 2017) On I-15 and I-40 within the vicinity of the IC Project Alignment, bicyclists are generally prohibited.

In District 9, bicyclists are allowed on all Caltrans highways in the vicinity of the IC Project Alignment with a few exceptions such as the freeway portions of SR-14 and SR-58. (Caltrans 2015, 2017) Bikes are allowed on all of US 395; for the majority of the route, there is no bikeway designation. A Class II bikeway is designated on US 395 in and around Bishop. Additional Class I, II, and III bikeways are found along portions of the following roadways in Bishop:

- Class I: Sierra Street Path; South Barlow Lane
- Class II: North Barlow Lane, Saniger Lane, SR-168
- Class III: Sunland Drive

North of the community of Wilkerson in Segment 1, the IC Project Alignment crosses a designated Class II/ III bikeway on Gerkin Road. In one location, Segment 3S crosses Main Street, a bicycle route identified by the City of Barstow and the San Bernardino County Wide Bicycle Plan. (City of Barstow 2014) The IC Project Alignment does not cross any other designated bikeways.

4.17.1.4 Bus Routes

4.17.1.4.1 Segment 1

The area along Segment 1 is served by the Eastern Sierra Transit Authority (ESTA) in Inyo County. There are three ESTA bus routes that operate in the vicinity of the IC Project Alignment that include the Lancaster Route, Reno – Lone Pine Route, and the Lone Pine Express.

Kern Regional Transit is the main transit operator for Kern County, providing connections for outlying regions. Bus routes 230 (Mojave-Ridgecrest) and 227 (Lake Isabella-Ridgecrest) run three days a week in the vicinity of the IC Project Alignment in Segment 1. (Kern Regional Transit 2017)

4.17.1.4.2 Segments, 2, 3, 4, and 5

Kern Regional Transit is the main transit operator for Kern County, providing connections for outlying regions. In the vicinity of Segment 2, routes 230 (Mojave-Ridgecrest) and 227 (Lake Isabella-Ridgecrest) run three days a week. (Kern Regional Transit 2017)

There are seven public transit agencies that operate within San Bernardino County. These provide approximately 17.5 million passengers per year with access to a vast majority of the Valley and Mountain Regions of San Bernardino County and to the more developed areas of the Desert Region. Of the seven transit operators described above, six are located almost entirely within the County and are provided funds and received oversight from SANBAG, the County's transportation planning agency. (San Bernardino County 2014)

The Victor Valley Transit Authority (VVTA) operates three bus routes in the vicinity of the IC Project Alignment: route 15 (San Bernardino-Barstow), route 200 (Needles-Barstow-Victorville), and the Fort Irwin National Training Center (NTC) five-day work week commuter bus which serves the High Desert cities of Hesperia, Victorville, Helendale, Barstow, and Fort Irwin. (VVTA 2017)

4.17.1.5 Railroads

There are no active rail lines in the vicinity of Segment 1. Burlington Northern and Santa Fe Railway (BNSF) and Union Pacific Railroad (UPRR) operate lines in the vicinity of Segments 2, 3N, 3S, and 4.

4.17.1.6 Airports

There are 16 public airports 21 private airports, and 8 private heliports within Kern County. (Kern County 2012) There are seven publicly-operated airports in Inyo County and six private airstrips and one private heliport. (Inyo County 2015) There are 44 public and private airports operating throughout San Bernardino County. San Bernardino County manages, operates, and maintains six of these facilities. San Bernardino County also has a total of 25 heliports; 4 are publicly-operated, 11 are for private medical use, and 10 are for private general use. (San Bernardino County 2014)

4.17.1.6.1 Segment 1

Two airports anchor Segment 1: The Eastern Sierra Regional Airport is located in Bishop at the northern end of the Segment, and the Inyokern Airport is west of Inyokern Substation at the southern end of the Segment. The nearest public airports to the IC Project Alignment in Segment 1 are Inyokern Airport (approximately 1.2 miles west of the alignment), Independence Airport (approximately 2.6 miles west), and the Eastern Sierra Regional Airport (approximately 4.4 miles east). The Inyo County Sheriff Search and Rescue Heliport is co-located with the Eastern Sierra Regional Airport.

4.17.1.6.2 Segments 2, 3N, 3S, and 4

The nearest public airports to Segments 2, 3N, 3S, and 4 are Inyokern Airport (approximately 1.2 miles from the northern terminus of Segment 2), Baker Airport (approximately 0.4 miles from the IC Project Alignment in Segment 4), and the Barstow-Daggett Airport (approximately 3 miles from the confluence of Segments 3N, 3S, and 4).

The nearest private airports to the IC Project Alignment are Boron Airstrip Airport (3.4 miles east of Segment 2); Depue Airport (approximately 2.5 miles from Segment 3S); and Harvard Airport (approximately 1.9 miles from Segment 4).

4.17.1.6.3 Military Installations

Two military aviation installations—the China Lake Naval Air Weapons Station (CLNAWS) and Edwards Air Force Base—are located adjacent to Segments 1 and 2, respectively. Each installation has unique flying operations, and their primary missions are to test military aircraft and weapon systems. (Kern County 2012)

Due to the required flying mission at these military bases, aircraft fly beyond the boundaries of the installations at supersonic speeds and sometimes as low as 200 feet above the ground. In order to minimize flight hazards to non-military aircraft, the military aircraft from these installations fly within restricted airspace known as the Joint Service Restricted R-2508 Complex. This complex is considered an extension of the airspace for these military aviation installations and their flying mission. For the IC Project, China Lake Naval Air Weapons Station and Edwards Air Force Base both shall be notified of development that falls within any of the following categories:

- Any structure within 75 miles of the installations that is greater than 50 feet tall;
- Any environmental document of discretionary project with 25 miles of the military installation boundaries;
- Any project that would create environmental impacts (e.g. visibility, elevated obstructions) within 25 miles of the complex;
- Any project within 25 miles of the centerline of any route/corridor; and
- Any project with the potential to impact the utilities of the military installation (water, gas, electricity, phone, roads, railway, etc.) required for normal bases operations.

4.17.2 Regulatory Setting

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

4.17.2.1 Federal

Code of Federal Regulations (CFR) Title 49, Subtitle B includes procedures and regulations pertaining to interstate and intrastate transport (including hazardous materials program procedures), and provides safety measure for motor carriers and motor vehicles that operate on public highways.

All airports and navigable airspace not administered by the Department of Defense are under the jurisdiction of the Federal Aviation Administration (FAA). CFR Title 14, Section 77 establishes the standards and required notification for objects affecting navigable airspace. In general, construction projects exceeding 200 feet in height above ground or extending at a ratio greater than 50 to 1 (horizontal to vertical) from a public or military airport runway less than 3,200 feet long out to a horizontal distance of 20,000 feet are considered potential obstructions, and require notification to the FAA. For helicopters,

1 vertical foot for every 25 horizontal feet for a horizontal distance of 5,000 feet. In addition, the FAA requires a Helicopter Lift Plan for operating a helicopter within 1,500 feet of residences.

4.17.2.2 State

4.17.2.2.1 California Department of Transportation

The California Department of Transportation (Caltrans) manages state highways in California. The use of California state highways for reasons other than normal transportation purposes may require written authorization or an encroachment permit from Caltrans. Caltrans has jurisdiction over the state's highway system and is responsible for protecting the public and infrastructure. Caltrans reviews all requests from utility companies that plan to conduct activities within its rights-of-way. Encroachment permits may include conditions or restrictions that limit when construction activities can occur within or above roadways under the jurisdiction of Caltrans.

Caltrans prepared a document, *Guide for the Preparation of Traffic Studies* (2002) that describes when a traffic impact study is needed. The intent of this guide is to provide a starting point and a consistent basis which Caltrans evaluates traffic impacts to state highway facilities. The applicability of the guide for local streets and roads (non-state highways) is at the discretion of the effected jurisdiction.

The IC Project Alignment falls entirely within Caltrans Districts 8 and 9.

4.17.2.2.2 California Transportation Commission

The California Transportation Commission (CTC) was established in 1978 out of a growing concern for a single, unified California transportation policy. The CTC is responsible for the programming and allocating of funds for the construction of highway, passenger rail, active transportation, aeronautics, and transit improvements throughout California. The CTC also advises and assists the Secretary of the California State Transportation Agency (CalSTA) and the Legislature in formulating and evaluating state policies and plans for California's transportation programs. The CTC is also an active participant in the initiation and development of state and federal legislation that seeks to secure financial stability for the state's transportation needs.

4.17.2.2.3 California Streets and Highway Code

The State of California Streets and Highway Code (Code) requires the IC Project proponent to obtain permits from Caltrans for any roadway encroachment during truck transportation and delivery. The Code includes regulations for the care and protection of highways (both state and county) and requires permits for any load that exceeds Caltrans weight, length, or width standards for public roadways.

Sections 700 through 711 provide provisions that are specific to utility providers. The Code also outlines directions for cooperation with local agencies, guidelines for permits, as well as general provisions relating to state highways and Caltrans' jurisdiction. (State of California 2017)

4.17.2.3 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 is 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.

4.17.2.3.1 Inyo County General Plan, Circulation Element

Policy RH-1.4, Level of Service, in the Circulation Element of the Inyo County General Plan, states:

> "Maintain a minimum level of service (LOS) "C" on all roadways in the County. For highways within the County, LOS "C" should be maintained except where roadways expansions or reconfigurations will adversely impact the small community character and economic viability of designated Central Business Districts."

4.17.2.3.2 Inyo County Regional Transportation Plan

The Inyo County 2015 Regional Transportation Plan (RTP) provides a coordinated, 20-year vision of the regionally significant transportation improvements and policies needed to efficiently move goods and people in the region. As the Regional Transportation Planning Agency (RTPA), the Inyo County Transportation Commission (ICLTC) is required by California law to adopt and submit an approved RTP to the California Transportation Commission (CTC) every five years. Caltrans assists with plan preparation and reviews draft documents for compliance and consistency. The RTP must be consistent with other planning guidance in the region such as adopted general plans, airport plans, bicycle plans, and public transit plans. (Inyo County 2015)

4.17.2.3.3 Kern Council of Governments Regional Transportation Plan

The Kern Council of Governments (COG) is an association of city and county governments created to address regional transportation issues. Its member agencies include the County of Kern and 11 incorporated cities within Kern County. The Kern COG is responsible for developing and updating a variety of transportation plans, determining priority projects, allocating the federal and state funds to implement the plans, and assuring money accepted for improving plans are properly utilized.

The Kern COG prepared the Regional Transportation Plan, a long-term general plan for the region's transportation network, and encompasses projects for all types of travel, including aviation and freight movement. (Kern COG 2014) The plan assesses environmental impacts of proposed projects, and establishes air quality conformity as required by federal regulations.

The Kern COG is required to periodically update the Regional Transportation Plan to ensure that the transportation system addresses the transportation and traffic plans for Kern County in a manner that is consistent with the applicable federal and state requirements.

4.17.2.3.4 Kern County General Plan and Circulation Element

The Kern County General Plan's Circulation Element includes the following goal:

> "Maintain a minimum Level Of Service (LOS) D for all roads throughout the County unless the roads are part of an adopted Community Plan or Specific Plan which utilizes Smart Growth policies that encourage efficient multi-modal movements."

4.17.2.3.5 San Bernardino County General Plan, Circulation and Infrastructure Element

Policy D/CI 1.1 of the County of the San Bernardino County General Plan Circulation and Infrastructure Element states:

> "The County shall ensure that all new development proposals do not degrade Levels of Service (LOS) on Major Arterials below LOS C in the Desert Region."

4.17.2.3.6 Southern California Association of Governments

The Southern California Association of Governments' (SCAG) 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) is a long-range Plan for the six-county region that includes Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial counties. The RTP/SCS is a visioning plan that balances future mobility and housing needs with economic, environmental and public health goals. The RTP/SCS embodies a collective vision for the region's future and is developed with input from local governments, County Transportation Commissions, tribal governments, non-profit organizations, businesses and local stakeholders within the region. Ultimately, the vision of the RTP/SCS is to improve the quality of life for the region's residents by making the best transportation and land use choices for the future and supporting those choices with wise investments. Among the goals of the Plan are to reduce greenhouse gas emissions 8 percent per capita by 2020, with an 18 percent reduction by 2035 and a 21 percent reduction by 2040. The Plan also aims to reduce daily Vehicle Miles Traveled (VMT) per capita in San Bernardino County by nearly 10 percent (to 19.7 miles from 21.8 miles) and Vehicle Hours Traveled (VHT) per capita by 18 percent (for automobiles and light/medium duty trucks).

4.17.3 Significance Criteria

The significance criteria for assessing the impacts to transportation and traffic are derived from the California Environmental Quality Act (CEQA) Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would:

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit
- Conflict with an applicable congestion management program, including Level of Service (LOS) standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)
- Result in inadequate emergency access
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities

4.17.4 Impact Analysis

4.17.4.1 Would the Project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

4.17.4.1.1 Construction

Less than Significant Impact with Mitigation. Construction activities would include the movement of medium and heavy-duty vehicles (including oversize vehicles such as cranes) along Interstates, US

Routes, State Routes, and county and city-maintained roads. Construction activities would require the temporary closure of traffic lanes or roads during installation or removal of structures located adjacent to roadways, and temporary and short-term road closures would also be required during the removal and installation of overhead wire (see Figureset 4.17-2).

Full-Rebuild Concept-related vehicles and equipment would generally travel from staging yards or contractor yards to work sites in the morning, returning to their points of departure in the evening. The typical crew size needed to accomplish each of the construction activities, and the equipment typically used to accomplish each of the construction activities, is provided in Table 3.7-8: Construction Equipment and Workforce. SCE anticipates that up to 200 workers could be working on the Full-Rebuild Concept on any given day. It is estimated that work described in *Chapter 3—Project Description* would generate approximately 300 daily vehicle trips across the breadth of the Full-Rebuild Concept. The 300 daily vehicle trips is inclusive of each worker making two daily personal vehicle trips (one trip in the morning from home to a staging yard, and one trip in the reverse in the evening, for a total of 200 roundtrips per day); due to the working hours of utility and construction crews, the majority of these personal vehicle trips would occur outside the morning and evening peak hours. Further, vehicle movements would be geographically- and temporally-dispersed across the Full-Rebuild Concept. Note also that due to the remoteness of much of the area in which the Full-Rebuild Concept would be constructed, construction equipment would likely be parked along the alignment at the end of each construction day rather than it being transported to a staging yard.

A temporary increase in vehicle movements during Full-Rebuild Concept construction activities would occur at a number of the intersections identified in Table 4.17-3. Given that construction activities will be physically dispersed; that construction activities would be temporally dispersed across this area over the construction period; that a small number of Full-Rebuild Concept-related vehicle movements would likely occur at any given intersection on any given day; and that those movements generally would occur outside of morning and evening peak times, construction of the Full-Rebuild Concept would not result in the lowering of the existing LOS along a roadway or intersection given the low volume of non-project traffic across much of the area in which the Full-Rebuild Concept would be constructed and the presence of high-capacity roadways where traffic volumes are greater. The Full-Rebuild Concept-related vehicle movements would account for a minimal increase over peak hour and average daily volumes along roadways and intersections.

Full-Rebuild Concept construction activities would require temporary lane or road closures that could impact the performance of the circulation system in populated areas, including but not limited to intersections, streets, highways, and public transit. In these areas, SCE would obtain encroachment permits from the local jurisdictions and Caltrans, as appropriate, for lane or roadway closures. In addition, SCE would implement APM TRA-1 to ensure the safe and efficient transit of vehicles, trains, bicyclists, and pedestrians.

Based on the number of daily vehicle trips generated during construction, and the implementation of APM TRA-1, the Full-Rebuild Concept would not create any inconsistency or conflict with an applicable plan, ordinance or policy that establishes measures of effectiveness, and impacts would be less than significant with mitigation.

4.17.4.1.2 Operations

No Impacts. As presented in Chapter 3, SCE is currently performing operation and maintenance (O&M) activities, including inspections, along the subtransmission lines that would be rebuilt under the Full-Rebuild Concept. No material changes in O&M activities or the locations of these activities are

anticipated with implementation of the Full-Rebuild Concept, and therefore no impacts would be realized under this criterion during operations and maintenance.

4.17.4.2 Would the Project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

On September 27, 2013, Senate Bill 743 was signed into law, starting a process that is changing transportation impact analysis as part of CEQA compliance. These changes include elimination of auto delay, level of service (LOS), and other similar measures of vehicular capacity or traffic congestion as a basis for determining significant impacts for land use projects and plans in California, and establishment of metrics to measure transportation impacts that may include, but are not limited to, vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated.

Upon completion of the "rulemaking" process in 2018, SB 743 went into effect, although agencies will have an opt-in period until January 1, 2020.

4.17.4.2.1 Construction

No Impact. The Southern California Association of Governments 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) has established a goal to reduce daily Vehicle Miles Traveled (VMT) per capita in San Bernardino County by nearly 10 percent (to 19.7 miles from 21.8 miles) and Vehicle Hours Traveled (VHT) per capita by 18 percent (for automobiles and light/medium duty trucks).The Kern Council of Governments' 2018 Regional Transportation Improvement Program establishes a goal to reduce VMT per capita from 27.21 in 2020 to 26.45 in 2040. The Inyo County Regional Transportation Plan 2015 does not establish any VMT or VHT goals.

As presented in *Chapter 3 – Project Description*, up to 200 workers could be working on the Full-Rebuild Concept on any given day. SCE anticipates that its own crews or specialty electrical contractors would be used for this work. The short duration of the construction period would not trigger the creation of any new employment positions—SCE crews and contractor crews are currently employed and utilized on projects across the broader region. Because of this, no population growth would be induced by the rebuilding of the subtransmission lines included in the Full-Rebuild Concept, and therefore the Full-Rebuild Concept would not result in a per capita increase in VMT or VHT. Because construction of the Full-Rebuild Concept would not result in an increase in a per capita increase in VMT or VHT, no impact would occur under this criterion.

4.17.4.2.2 Operations

No Impact. As presented in Section 4.14, the Full-Rebuild Concept would not provide new or upgraded electrical service. In addition, the Full-Rebuild Concept does not include any new infrastructure such as publicly accessible roads that could induce population growth during operations.

As presented in Chapter 3, SCE is currently performing operation and maintenance (O&M) activities, including inspections, along the subtransmission lines that would be rebuilt under the Full-Rebuild Concept. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the Full-Rebuild Concept.

Because the operation of the Full-Rebuild Concept infrastructure would not induce any population growth, and because no material changes in O&M activities would occur, no increase in VMT, VHT, or

automobile trips would result, and therefore no impacts would be realized under this criterion during operations and maintenance.

4.17.4.3 Would the Project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

4.17.4.3.1 Construction

Less than Significant Impact. The nearest public airports to the Full-Rebuild Concept are the Eastern Sierra Regional Airport (approximately 4 miles east of Segment 1), Independence Airport (approximately 2.6 miles west of Segment 1), Inyokern Airport (approximately 1.2 miles distant from Segments 1 and 2), Baker Airport (approximately 0.4 miles distant from Segment 4), and the Barstow-Daggett Airport (approximately 3 miles distant from the confluence of Segments 3N, 3S, and 4). The nearest private airstrips are the Inyo County Sheriff Search Rescue Heliport (approximately 4.3 miles from Segment 1), Depue airstrip (approximately 2.5 miles distant from Segment 3S) and the Harvard airstrip (approximately 1.75 miles distant from Segment 4).

The Full-Rebuild Concept includes the reconstruction of subtransmission lines in and immediately proximate to existing subtransmission line alignments, and therefore there would be no substantial change in location of the subtransmission lines that could impact air traffic patterns.

The Full-Rebuild Concept would not result in a population increase, and therefore would not trigger a population-induced increase in air traffic at local airports.

Helicopters would be used to install new subtransmission structures and conductor, and to remove existing structures or conductor. Therefore, construction activities would result in a short-term increase in air traffic levels. This work would not result in a change in established air traffic patterns, but would result in an increase in aircraft traffic in the area during construction of the Full-Rebuild Concept. SCE would implement APM TRA-2, and through coordination with the FAA impacts to air traffic patterns would be less than significant. The Full-Rebuild Concept falls within the R-2508 Complex which would require notifications to the China Lake Naval Air Weapons Station and Edwards Air Force Base. With notification and coordination with federal authorities, and compliance with applicable regulations, less than significant impacts would occur under this criterion as a result of Full-Rebuild Concept activities.

4.17.4.3.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing operation and maintenance (O&M) activities, including inspections, along the subtransmission lines that would be rebuilt under the Full-Rebuild Concept. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the Full-Rebuild Concept, and therefore no impacts would be realized under this criterion during operations and maintenance.

4.17.4.4 Would the Project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

4.17.4.4.1 Construction

No Impact. No incompatible uses or construction or alteration of any public roads are proposed. Therefore, no impacts would occur under this criterion as a result of the Full-Rebuild Concept.

4.17.4.4.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing operation and maintenance (O&M) activities, including inspections, along the subtransmission lines that would be rebuilt under the Full-Rebuild Concept. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the Full-Rebuild Concept, and therefore no impacts would be realized under this criterion during operations and maintenance.

4.17.4.5 Would the Project result in inadequate emergency access?

4.17.4.5.1 Construction

Less than Significant Impact with Mitigation. Construction activities would not result in inadequate emergency access. All construction at substations would be conducted within, or immediately proximate to, the fencelines of the facilities; activities and construction vehicles would not reduce the dimensions of access roads or driveways, or block roads or driveways, and thus would not impair emergency access to substations.

Subtransmission-related construction activities may require temporary closure of travel lanes on public roadways, private roads, and driveways, and would involve the movement of oversize vehicles that could affect emergency vehicle access to and through Full-Rebuild Concept construction areas. To ensure that construction related activities result in less than significant impacts to emergency access, SCE would implement APM TRA-1. Implementation of this APM would provide for efficient and safe transit of emergency vehicles through construction areas. SCE would also obtain the appropriate permits from the local jurisdictions, UPRR, BNSF, and Caltrans, as applicable, for construction activities that would encroach upon any public ROW or easement.

Vehicle movements along, and use of, access roads would be communicated to and coordinated with the appropriate agencies as necessary. At construction work areas, equipment would be situated or attended to facilitate adequate emergency vehicle access. Therefore, less than significant impacts would occur under this criterion.

4.17.4.5.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing operation and maintenance (O&M) activities, including inspections, along the subtransmission lines that would be rebuilt under the Full-Rebuild Concept. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the Full-Rebuild Concept, and therefore no impacts would be realized under this criterion during operations and maintenance.

4.17.4.6 Would the Project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

4.17.4.6.1 Construction

Less than Significant Impact with Mitigation. Full-Rebuild Concept construction activities would not conflict with adopted policies, plans, or programs regarding railroad, public transit, bicycle, or pedestrian facilities. Construction activities in any given location would occur over a short time period, and would largely be conducted in rural areas with no public transit service, bicycle or pedestrian facilities. Construction activities conducted in populated areas with public transit service, rail service or bicycle or pedestrian facilities are generally confined to subtransmission line reconstruction work in and in the

vicinity of the City of Barstow. Work in this area would be conducted within existing public utility easements, or in a public ROW. SCE would obtain encroachment permits from the local jurisdictions, UPRR, BNSF, and Caltrans, as appropriate, for future construction activities that would encroach upon any public ROW or easement. In cases where future construction work may require temporary closure of travel lanes or oversize vehicle trips that could disrupt public transit, rail service, bicycle, or pedestrian traffic, SCE would implement APM TRA-1 to ensure the safety of pedestrians and bicyclists and reduce any performance impacts to less than significant levels.

4.17.4.6.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing operation and maintenance (O&M) activities, including inspections, along the subtransmission lines that would be rebuilt under the Full-Rebuild Concept. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the Full-Rebuild Concept, and therefore no impacts would be realized under this criterion during operations and maintenance.

4.17.5 Applicant Proposed Measures

SCE has designed and incorporated the following APMs into the Full-Rebuild Concept to avoid or minimize potential impacts to transportation and traffic:

TRA-1. SCE shall follow its standard safety practices, including installing appropriate traffic control devices between work zones and transportation facilities, posting adequate signs, and using proper construction techniques. SCE is a member of the California Inter-Utility Coordinating Committee, which published the Manual on Uniform Traffic Control Devices, as amended for the state of California (CA MUTCD; CALTRANS 2018) and using standard templates from the California Temporary Traffic Control Handbook. (CATTCH 2018) This handbook was previously known as the California Joint Utility Traffic Control Manual. (CJUTCM 2010) SCE would follow the recommendations in this manual regarding basic standards for the safe movement of traffic on highways and streets in accordance with Section 21400 of the CVC. These recommendations include provisions for safe access of police, fire, and other rescue vehicles.

TRA-2. SCE would consult with the FAA regarding helicopter flight plans that would take place during construction.

4.17.6 Alternatives

Alternatives to the Full-Rebuild Concept are addressed in Section 5.2, Description of Project Alternatives and Impact Analysis.

4.17.7 References

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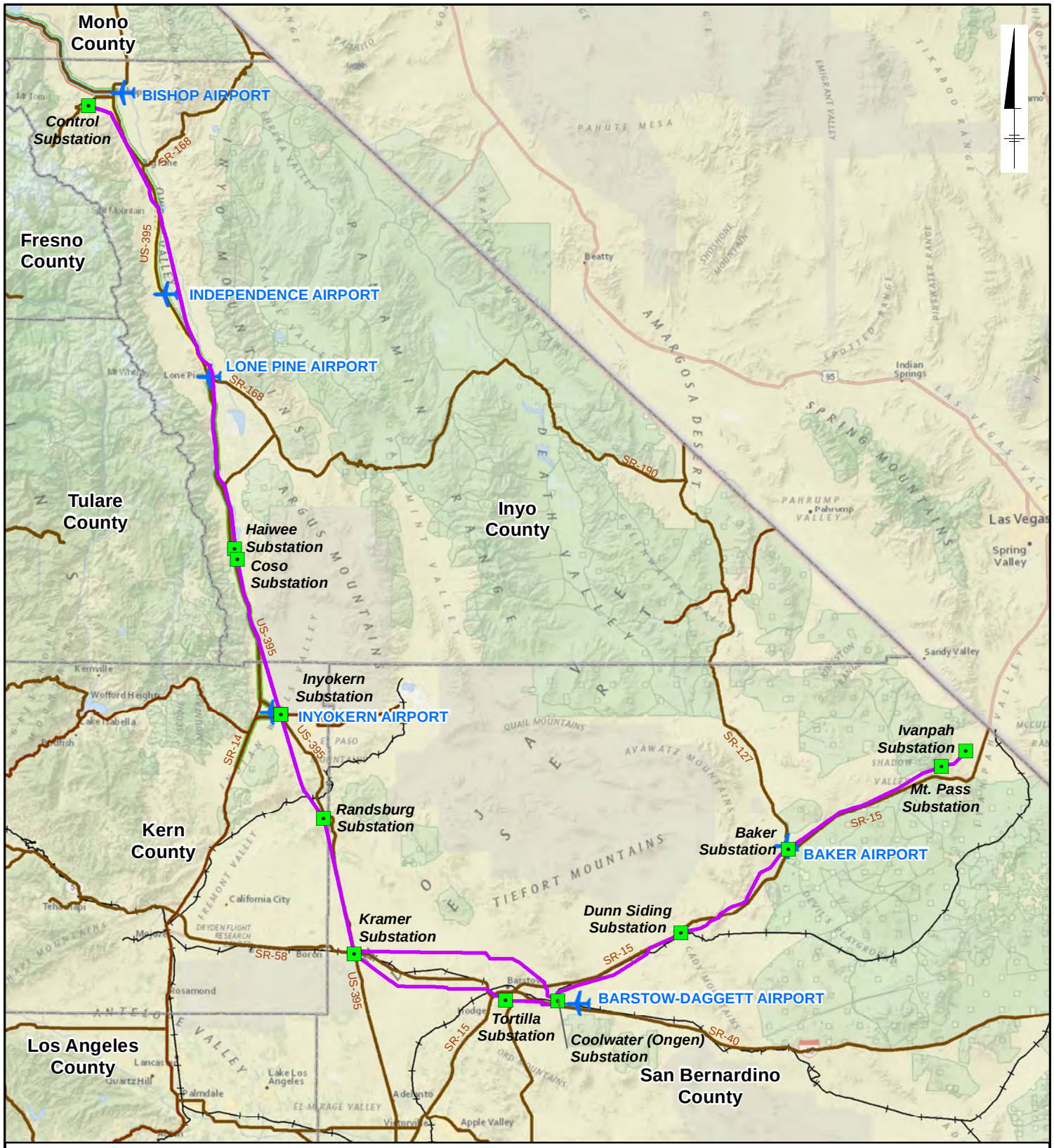

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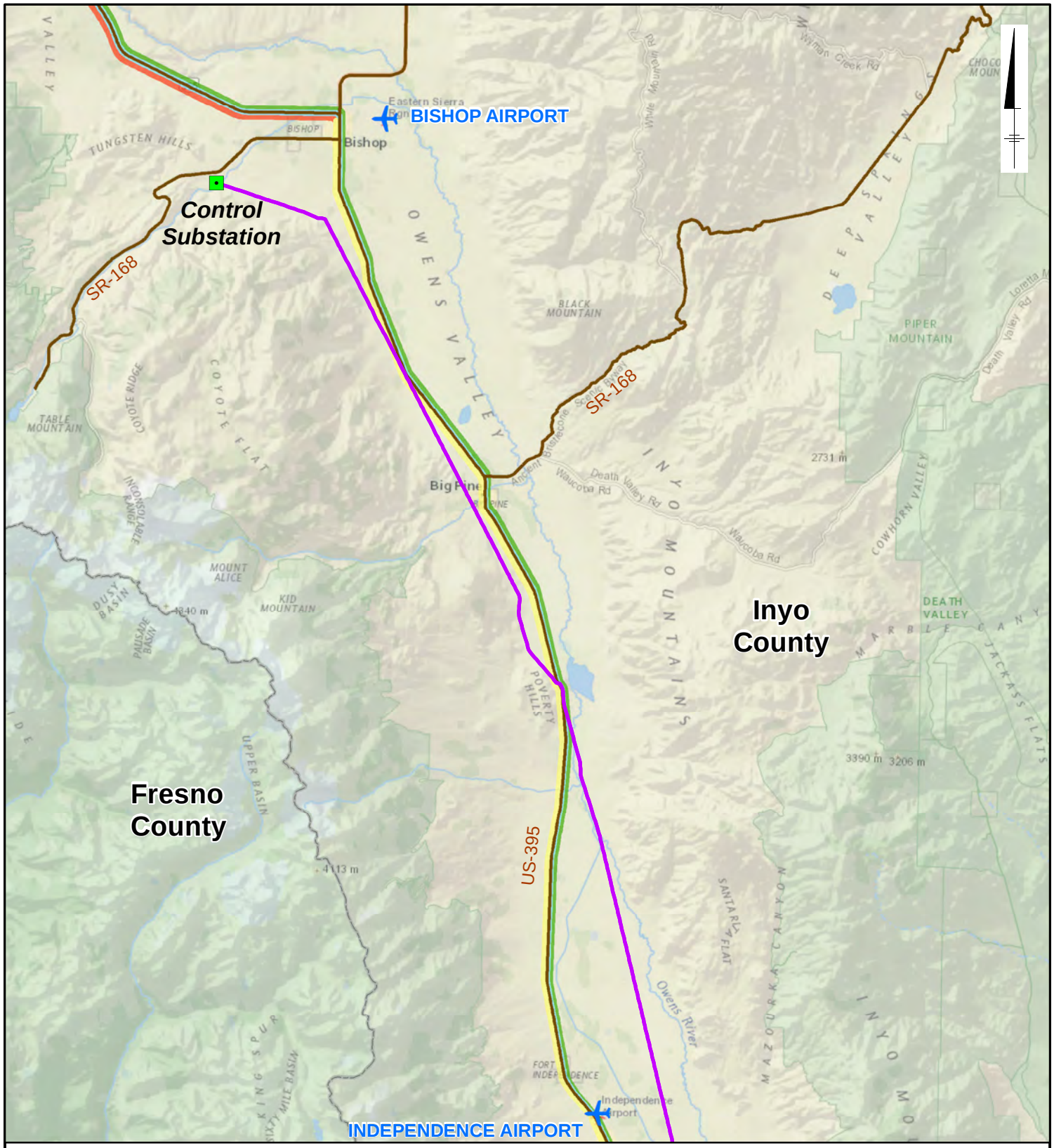

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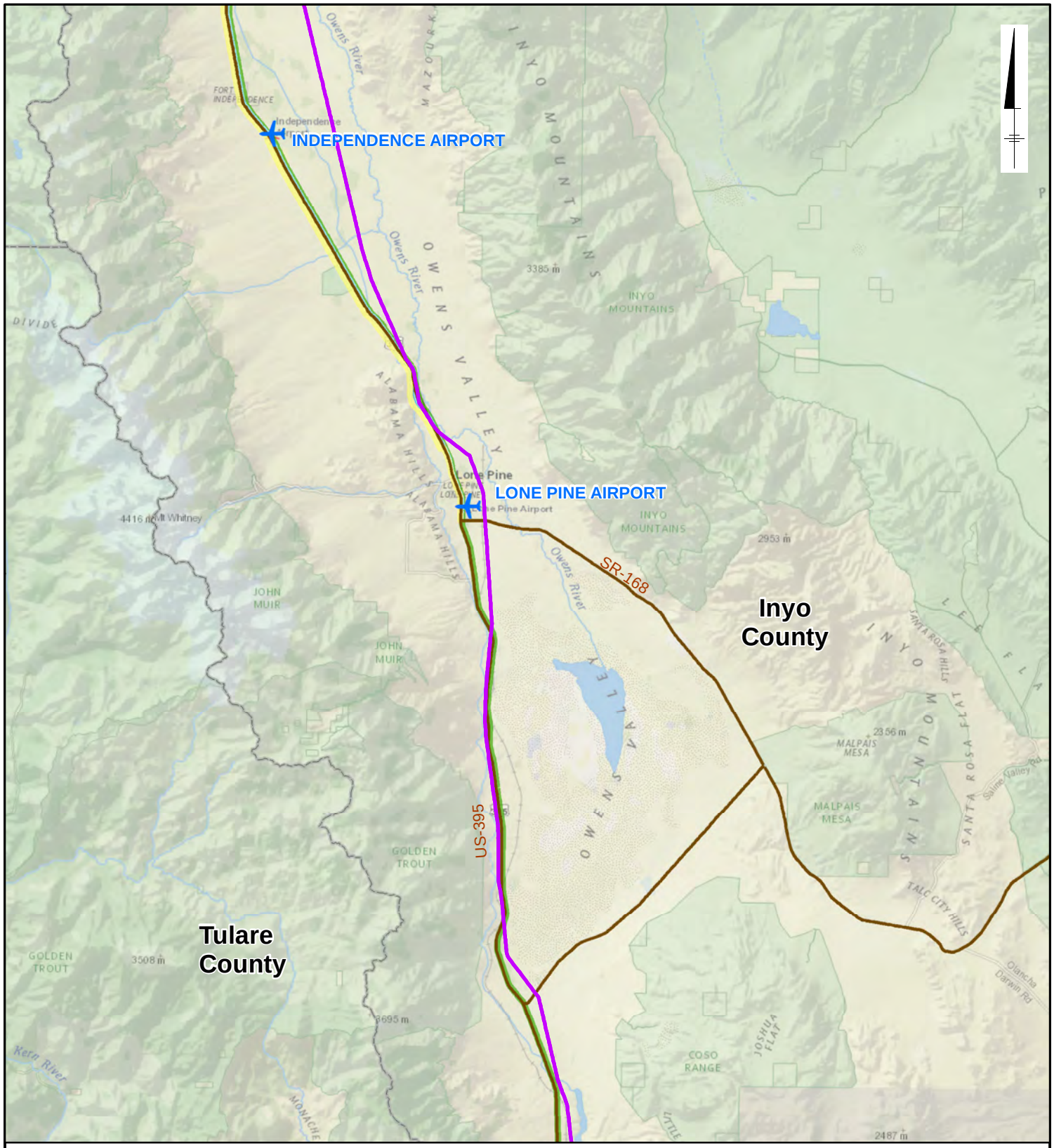

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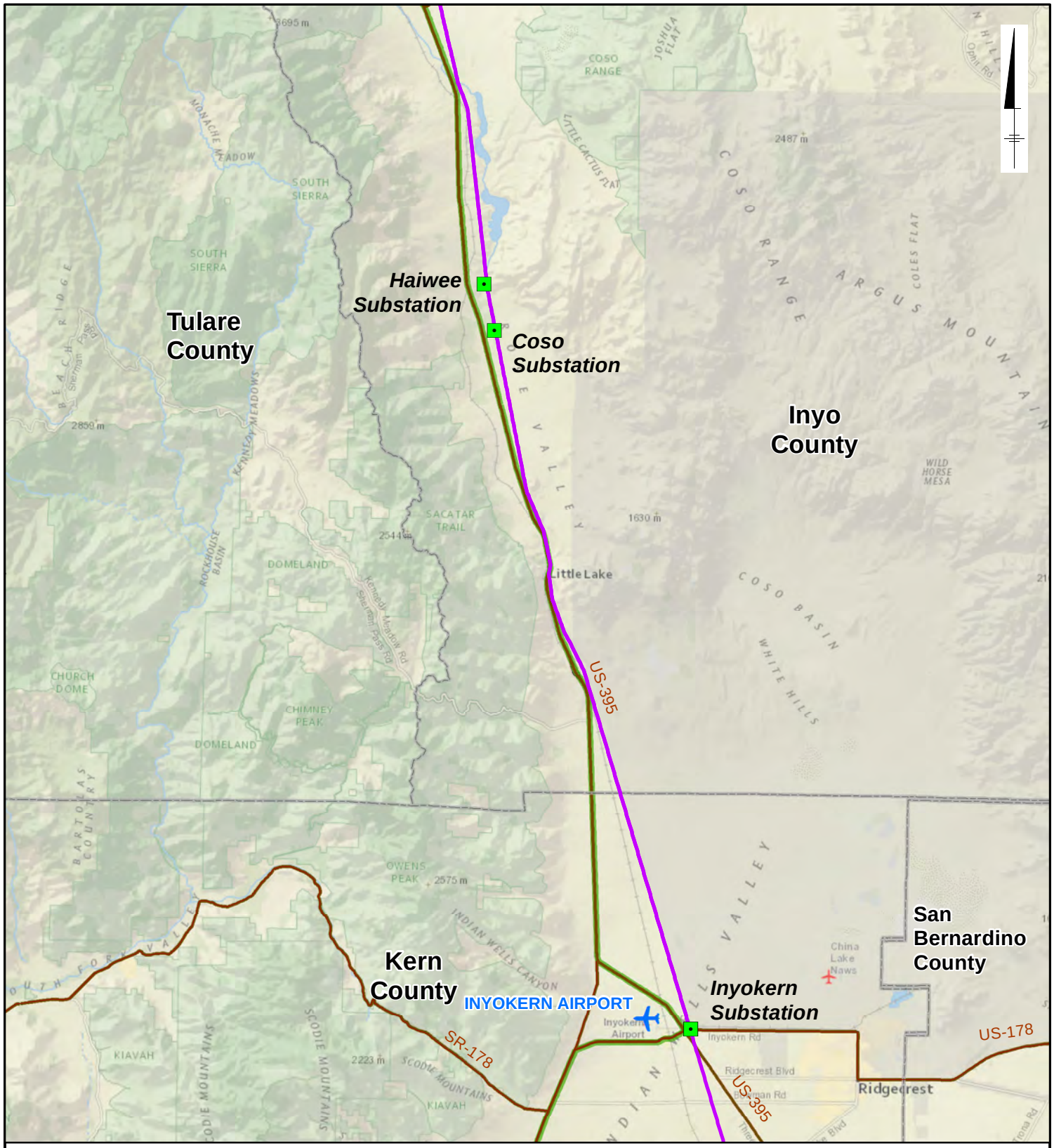

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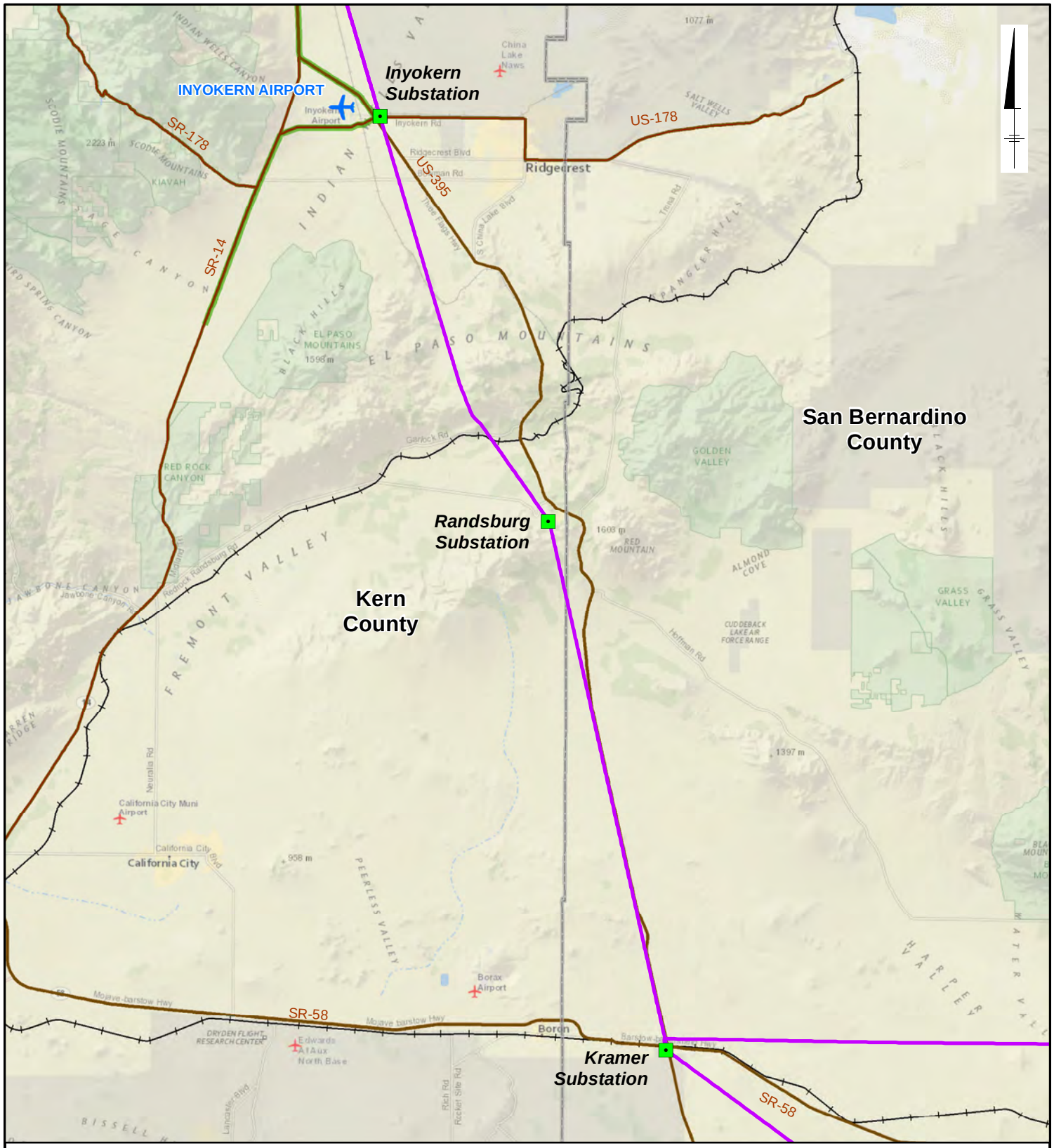

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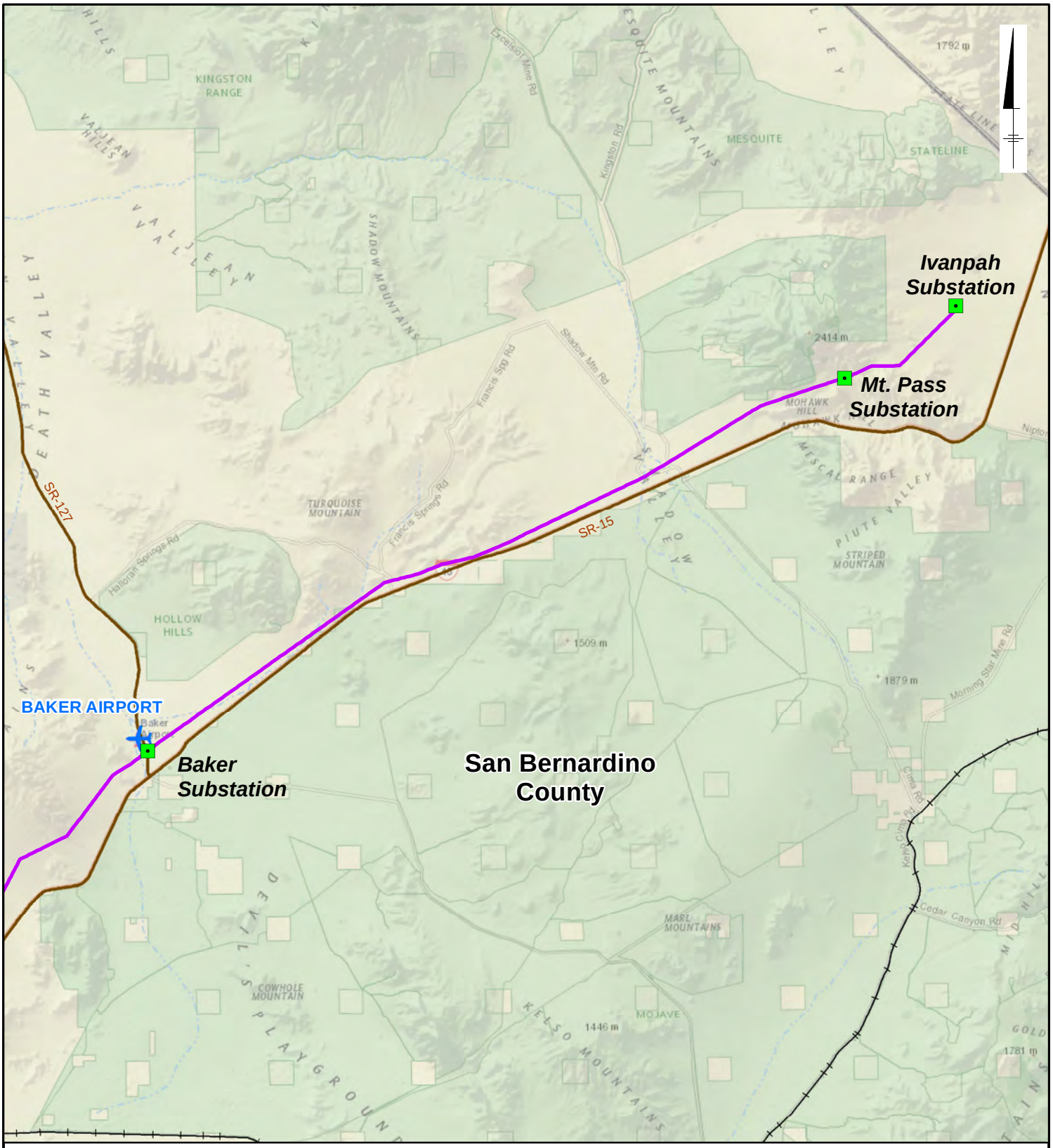

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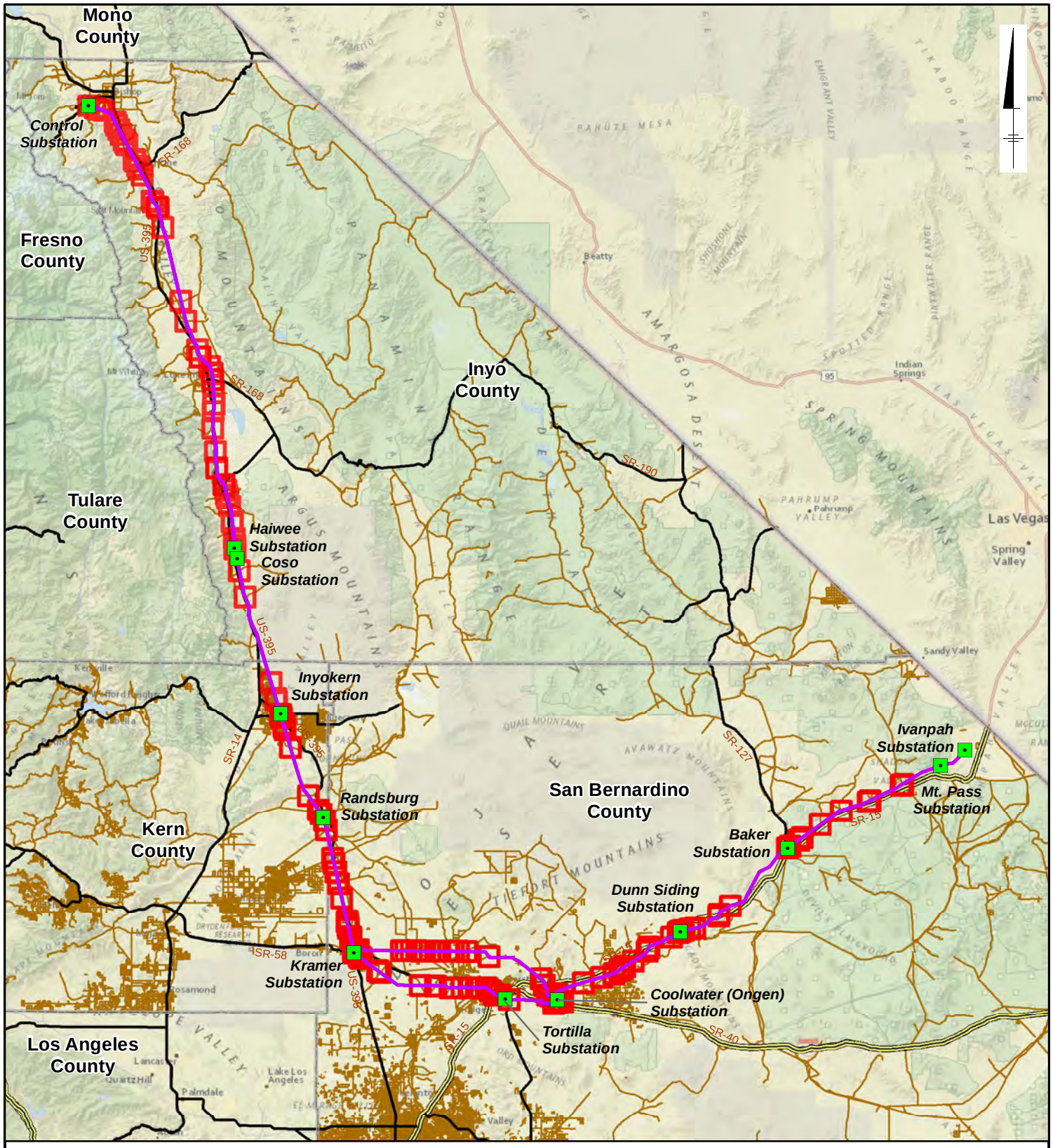

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NOTES:
(1) Road crossings determined by intersection of IC alignment and public roads.
(2) Potential lane closures determined by areas where IC alignment runs parallel to and within 20 ft of public road.

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POTENTIAL LANE CLOSURES AND ROAD CROSSINGS

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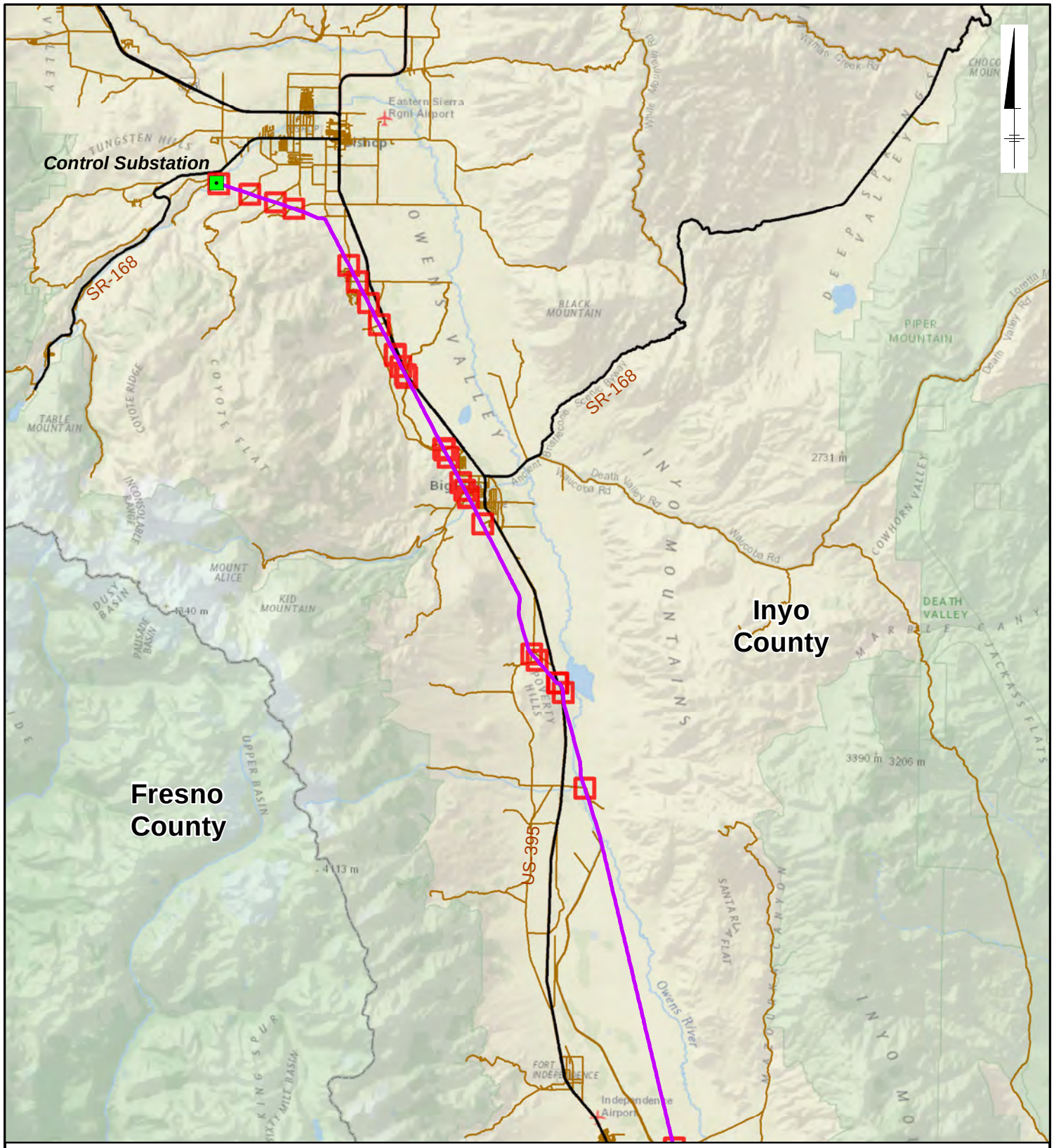

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POTENTIAL LANE CLOSURES AND ROAD CROSSINGS

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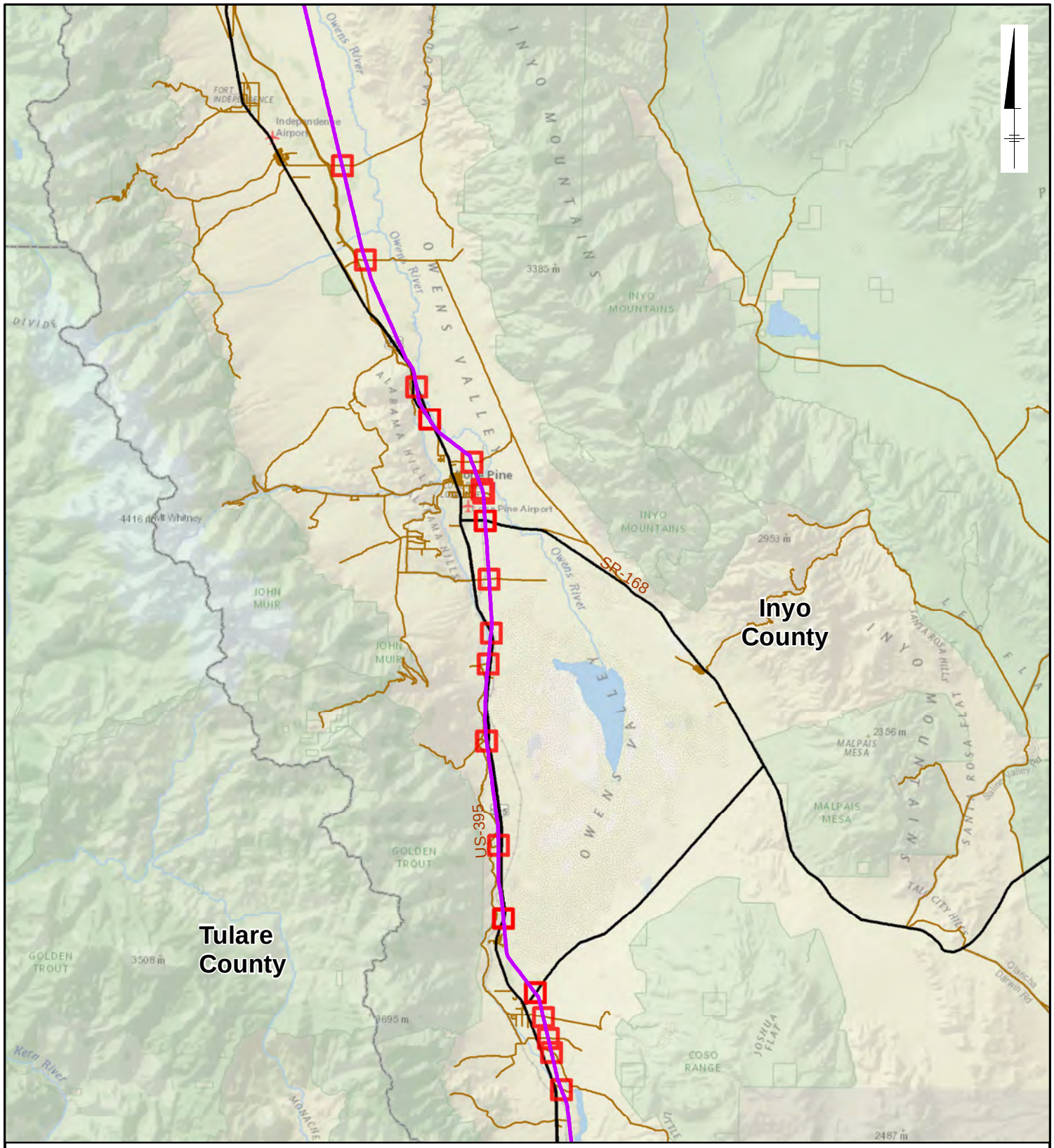

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POTENTIAL LANE CLOSURES AND ROAD CROSSINGS

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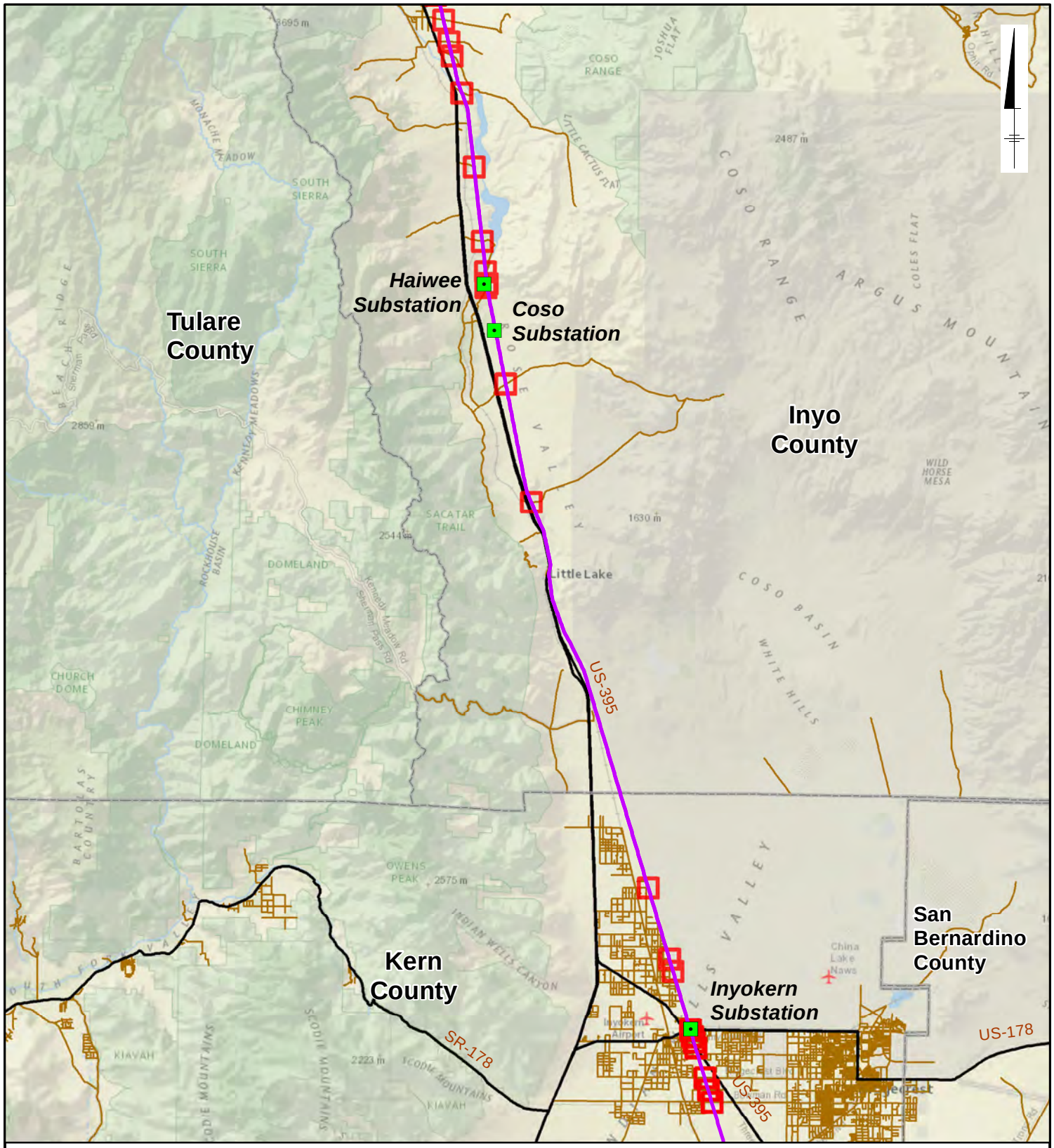

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POTENTIAL LANE CLOSURES AND ROAD CROSSINGS

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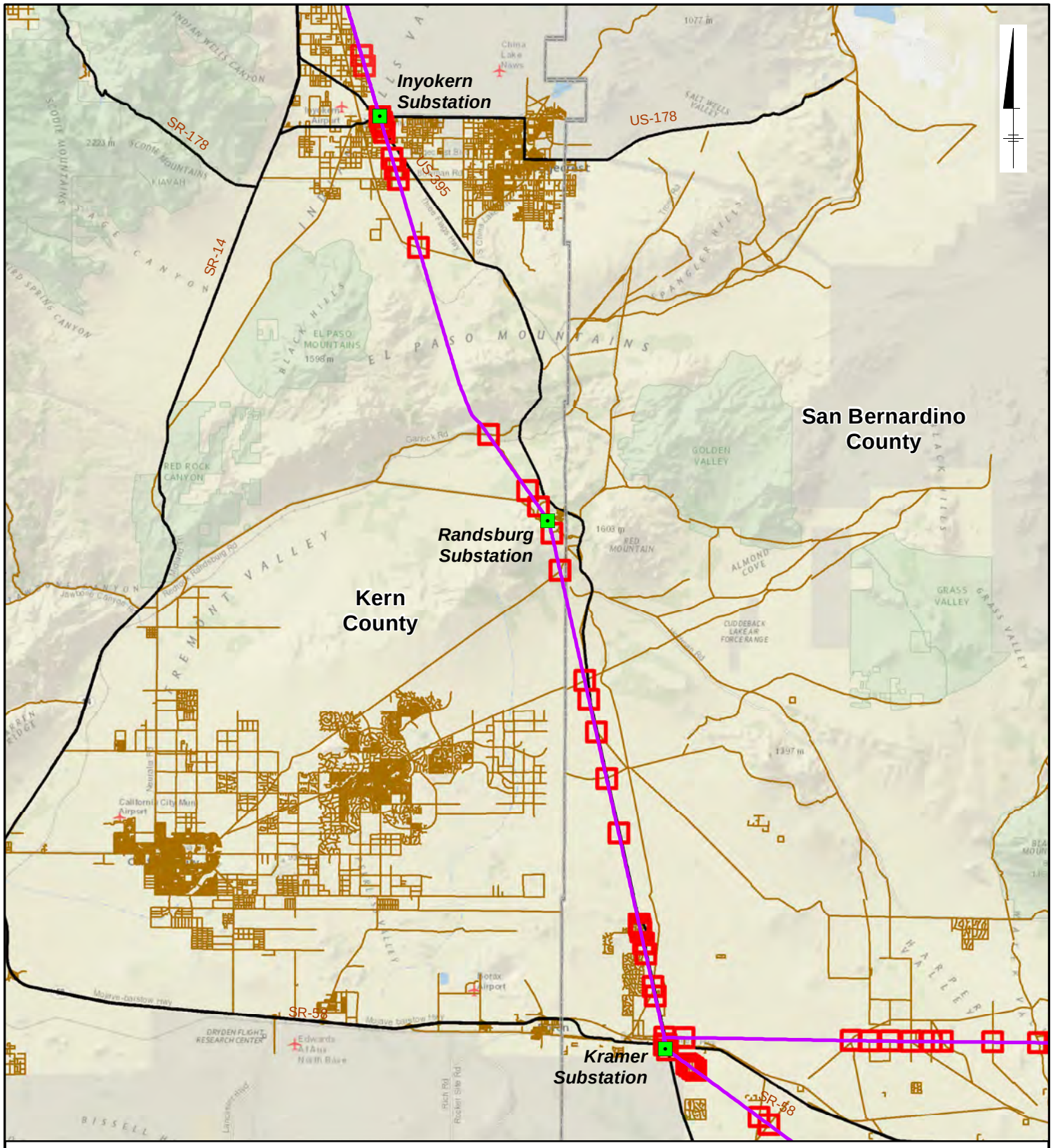

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POTENTIAL LANE CLOSURES AND ROAD CROSSINGS

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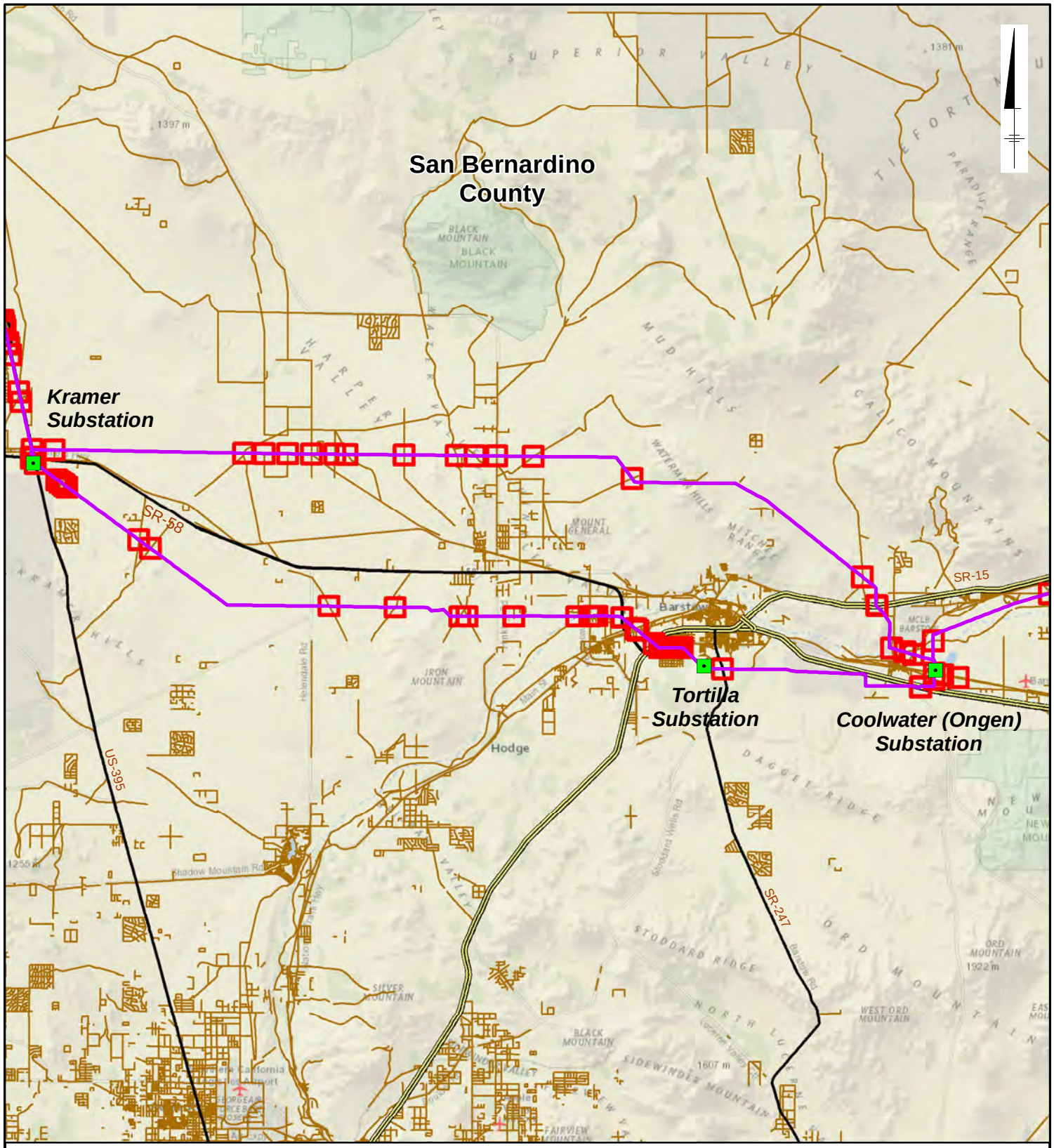

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POTENTIAL LANE CLOSURES AND ROAD CROSSINGS

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POTENTIAL LANE CLOSURES AND ROAD CROSSINGS

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4.18 Tribal Cultural Resources

This section discusses tribal cultural resources or other resources potentially of importance to California Native American tribes along the IC Project Alignment, identifies applicable significance thresholds, assesses the Full-Rebuild Concept's impacts to these resources and their significance, and recommends measures to avoid or substantially reduce any effects found to be potentially significant. Assembly Bill (AB) 52 (Gatto 2014, Chapter 532), which was enacted in September 2014, sets forth both procedural and substantive requirements for analysis of tribal cultural resources as defined in Public Resources Code (PRC) section 21074, and consultation with California Native American tribes.

The environmental setting is based on information obtained from the Full-Rebuild Concept description, recent technical studies, and information gathered during outreach conducted by the Southern California Edison Company (SCE). See Section 4.5, Cultural and Paleontological Resources, for a discussion of cultural resources more broadly, including archaeological, built environment, and paleontological resources.

4.18.1 Environmental Setting

The IC Project Alignment area of potential effect (APE) is situated along approximately 358 miles (576 kilometers) of subtransmission lines in Inyo, Kern, and San Bernardino counties. Three geographical regions of California are included within the APE: eastern Sierra Nevada, southwestern Great Basin/Mojave Desert, and eastern California High Desert region. These regions are discussed in detail in Section 4.5.1.1, Cultural Resources Environmental Setting—Physical Setting.

4.18.1.1 Prehistoric Background

The prehistoric cultural setting of the APE is relevant to the Great Basin and Mojave Desert cultural area. The prehistory of the region encompasses a period of more than 12,000 years before present (BP), from the Late Pleistocene through the Late Holocene prior to European contact. A discussion of the chronology and key characteristics of this cultural area is presented in Section 4.5.1.2, Cultural Resources Environmental Setting—Prehistoric Background.

4.18.1.2 Ethnographic Background

Five ethnographically distinct Native American groups—the Owens Valley Paiute, Western Shoshone, Kawaiisu, Serrano/Vanyume, and Southern Paiute—are traditionally associated with areas included in the APE. For a discussion of each group, please refer to Section 4.5.1.3, Cultural Resources—Ethnographic Background. The following content provides an ethnographic overview and considers locations that are important to these indigenous groups.

4.18.1.2.1 Overview

By the time of Spanish colonization in AD 1769, California was already the home of approximately 300,000 indigenous people, comprising a complex of cultures that encompassed 74 languages and perhaps 500 distinct ethnic groups (Mithun 2006; Moratto 1984). Population density among California Native American groups varied according to the availability and dependability of local resources. The effect of Spanish settlement and missionization in California marks the beginning of a devastating disruption of native culture and lifeways, with forced population movements, loss of land and territory (including seasonal locations like traditional hunting and gathering locales), enslavement, and decline in population numbers from disease, malnutrition, starvation, and violence.

Early accounts of indigenous cultures in California come from the pioneers, explorers, and missionaries who wrote about native cultures and lifeways during Spanish settlement and missionization period. These so-called "Mission ethnographies," although very descriptive and detailed, still followed a colonial agenda, failing to report on the relationship of native Californians to their traditional territories. Not until the late 1800s and early 1900s did anthropologists began to conduct ethnographic research in the region, mainly attracted by the environmental conditions of the California portion of the southwestern Great Basin, which includes the Mojave Desert, which provided ample research opportunity on human–environment relationship. Ethnographic works from this earlier time, such as that of Alfred L. Kroeber, Robert F. Heizer, and John P. Harrington, focused on salvaging information from surviving native Californian elders who remembered traditional life (Vane 1992:336).

Ethnographic boundaries in the region of the IC Project Alignment are loosely defined because of the highly mobile nature of desert settlement strategies and the variety of alternatives presented by previous researchers. According to available ethnographic maps (Bean and Smith 1978:570; Kroeber 1925; Sutton et al. 2007:232), the project area falls within the traditional territory of the following groups (from north to south): Owens Valley Paiute, Western Shoshone, Kawaiisu, Vanyume subgroup of the Serrano people, and Southern Paiute or Chemehuevi.

4.18.1.2.2 Locations Important to the Owens Valley Paiute

Two linguistically distinct groups, the Paiute and the Shoshone, formed the native population of the Owens Valley. Occasional hunting forays extended into the Sierra Nevada and White Mountains or open areas east of Owens River. In his ethnography of the Owens Valley Paiute, Steward (1933) worked with his informants to map known place names for camps and villages, irrigated fields, gathering locations, hunting territories, trails, springs, other resource locations, geographic landmarks, and places where mythological events occurred (Steward 1933). The APE intersects with five Owens Valley Paiute territorial districts: pitanapa·ti (near Bishop Creek), iti ' itiwi·ti (between Bishop and Big Pine), tobowahamati (around Big Pine), panati (south of Big Pine), and tinihu·wi·ti (stretching from north of Fort Independence to the northwest side of Owens Lake; Liljeblad and Fowler 1986).

Supported by the streams from the snow-capped Sierra Nevada, the Owens Valley had ample marshes and grasslands. The Sierra Nevada ranges provided junipers, piñon, and pines at altitudes greater than 1,828 m (6,000 feet). Along these mountain ranges, there are pinecone processing areas significant to the ethnographic history of the Paiute and other Native American groups. Steward (1933) identified some of these pinecone processing areas worth noting for their proximity to the APE: 1) a village near Lone Pine called paha'awitu or "mortar place," 2) the village of tupu'si witu or "seed plant," and 3) the village of tonova witu or "salt brush," both located northeast of the Alabama Hills (Steward 1933). Other locations mapped by Steward are a camp and irrigated area near Freeman Creek and the Keough Hot Springs, and numerous plant-gathering localities with irrigated plots south of Bishop Creek north of the villages located in Bishop at the time (Lawton et al. 1976). Significant locations from oral legends recorded by Steward (1933) include a cave near Fish Spring where a mythological giant lived, a fishing locale near Hines Spring where bad spirits known as "water babies" dwelled, and a large plateau referred to as To'ni near Big Gulch where Coyote lived in his house, or to'ni, comprising a large round hole in the ground (Steward 1933).

4.18.1.2.3 Locations Important to the Western Shoshone

The ancestral lands of the Western Shoshone extended from Death Valley across central Nevada, and into northwestern Utah and southern Idaho. Several archaeological sites associated with Western Shoshone ancestral lands have been documented, including a few significant ones that intersect or are near the APE.

Located on the North Range of the China Lake Naval Air Weapons Station (CLNAWS), the Coso Hot Springs site has religious significance to the Western Shoshone (Kaldenberg 2007). On areas surrounding the base, Yohe and Garfinkel (2012) summarize the importance of the Rose Spring Site (CA-INY-372) for its religious and ceremonial significance associated with bighorn sheep. The Rose Spring site is also significant for its regional and chronological pattern defining the Rose Spring period. Yohe (1998) summarized the impact of the introduction of the bow and arrow on obsidian exploitation at the Rose Spring site (Yohe 1998).

The APE intersects Little Lake Village, one of the four villages that make up the Shoshone district of Kuhwiji along with villages located at Olancha, near Darwin, and at Coso Hot Springs (Garfinkel 1976). These villages were loosely connected to each other and were mostly occupied during the winter. Ethnographic accounts in the Little Lake region were originally presented by Kroeber (1925) and Steward (1933). During his fieldwork, Steward identified 10 single families residing around Little Lake; one of his informants believed the village consisted of approximately 60 people in 1870. The Little Lake Village site also contains rock art that has been inundated by water in recent times. The presence of rock art at this site indicates that it likely has cultural significance for the tribe.

Portuguese Bench is a geologic bench nestled into the eastern toeslope of the eastern Sierra Nevada range. Portuguese Bench contains a known village site found to be a major village settlement for the Koso Shoshone, dating back to 3,000 years ago, with higher occupation during the Haiwee period (1,350–600 years BP). Portuguese Bench is located approximately 2.67 km (1.66 miles) west of the APE, overlooking the IC Project Alignment.

4.18.1.2.4 Locations Important to the Kawaiisu

The Kawaiisu occupied the southern Sierra Nevada and Tehachapi Mountains at the core of their territory and branched out into the Mojave to obtain seasonal resources (Zigmond 1986). Their range included the northwestern portion of the North Desert Region of San Bernardino County.

The Kawaiisu practiced a distinctive style of polychromatic (multicolored) rock art that shares many attributes with that of the Chumash (Lee and Hyder 1991). The best-studied Kawaiisu rock art site is Teddy Bear Cave (CA-KER-508), northeast of Tehachapi. Teddy Bear Cave is one site within Nettle Spring, an archaeological complex that also includes a large habitation area (CA-KER-230) along with numerous other localities. CA-KER-230 is characterized by numerous rock rings, more than 400 bedrock mortars, and rock art. Nearby sites include small camps, additional rock art localities, and a cremation site, all of which are potentially related to the Nettle Spring complex. Teddy Bear Cave is important in the oral history of the Kawaiisu people as the place where their people and the world were created (Sutton 2001).

The Kawaiisu were keen to resist European occupation of their traditional lands. As a result, several "skirmishes and atrocities against the [Kawaiisu] Indians began in 1861" (Underwood 2006:181). The location of these skirmishes and atrocities could be reverent for the Kawaiisu. Although the location of these atrocities are not always known or documented, oral histories within the tribe may identify locations that should be respected. In response to these attempts for the Kawaiisu to defend themselves and their territory, the U.S. Army established Camp Independence southwest of Owens Lake (Underwood 2006). This spot may also contain special meaning for the Kawaiisu.

4.18.1.2.5 Locations Important to the Serrano/Vanyume

The Serrano people once occupied the Mountain, North Desert, and East Desert Regions of San Bernardino County. Desert Serrano villages are mentioned in accounts and records dating to the late 1700s and early 1800s along the Mojave River near today's cities of Barstow and Daggett (Coues 1900:Vol. 1:241–248). The APE overlaps the Mojave River in the immediate vicinity of Daggett, and also west of Barstow, in the vicinity of Lenwood; thus, it is possible that Protohistoric Serrano village locations lie within or adjacent to the APE. Beattie (1955) suggests that Desert Serrano settlements were generally spaced at 10-mile (16-km) intervals along the river, indicating that additional village sites could be located within or adjacent to the APE, as it continues to parallel and overlap the Mojave River for approximately 55 km (34 miles) northeast of Daggett.

Specific Serrano villages along the Mojave River identified by Fr. Joaquín Nuez southwest of present-day Barstow include Atongaibit, Topipabit, Cocama, and Sisugenat; the villages of Angayaba, Asambeat, and Guanachique were located east of Barstow; and Angayaba was located east of Daggett (Earle 2003, 2005 in Byerly 2018). Nuez also noted a millingstone quarry at Elephant Mountain, near Forks-of-the-Road or Camp Cady, in the general vicinity of Angayaba (Walker 1986 in Byerly 2018). Earle places the village of Asambeat along the Mojave River east of Angayaba, and Guanachique in the vicinity of Soda Lake (Earle 2003 in Byerly 2018). Sutton and Earle (2017) synthesized multiple ethnographic and historical accounts and mapped the approximate locations of these three villages along the Mojave River, as well as a fourth unnamed village location noted by Garcés, which may possibly be Angayaba.

Other important places to the Serrano in the Daggett area include a salt deposit known to the Mojave as Yava'avi-ath'I, as well as a mountain noted by Nuez as west or south of Daggett called Hamuha or Ahamoha, where Moha, an elderly female Desert Serrano informant Kroeber interviewed in the early twentieth century, was born (Earle 2003 in Byerly 2018; Kroeber 1908, 1925, 1955). The mountains, hills, and valleys along the upper Mojave River, including the Granite, Newberry, and Ord mountains, were collectively referred to as Temtak (Earle 2003 in Byerly 2018).

4.18.1.2.6 Locations Important to the Southern Paiute

The extensive traditional territory of the Southern Paiute ranged from the Colorado Plateau to the Mojave Desert, and including the Colorado River basin and numerous small mountain ranges (Kelley and Fowler 1986). Numerous linear travel routes have been documented for the Southern Paiute/Chemehuevi, including trade routes and sacred trails (Fowler 2009). Several major trade routes and trails developed in the past 5,000 years to facilitate trade between the Pacific Coast and interior locales (Harner 1957 in Fowler 2009; Heizer 1941, 1978), and the Chemehuevi still used this network during the Contact period (1770s; Davis 1961; Sample 1950 in Fowler 2009). Sacred trails, which can overlap with secular trade routes and other pathways, are connected to songs and stories and often contain place names for water sources and other geographic features across the landscape. These songs often recount epic journeys by ancestors and spiritual beings, connecting the ephemeral spiritual world with the physical landscape, and providing an important vehicle for the transmission of information about the landscape and how to move across it (Kelly 1932–1934; Laird 1976 in Fowler 2009).

One specific trail lies within approximately 1.6 km (1 mile) of the APE, between Yermo and Baker in San Bernardino County. This trail, known as The Mojave Road or Old Government Road, extends from Fort Mojave on the Colorado River westward to Camp Cady on the Mojave River. The route follows one of the pre-Contact trade routes (Farmer 1935; Johnston and Johnston 1957 in Fowler 2009) that extended further to the west, to the San Bernardino Mountains, and ultimately to the coast. Although likely modified to accommodate horses and wagons by the U.S. Army and other entities, who used it as a supply

route in the 1860s, this route follows older Mohave/Chemehuevi trails and connects known Chemehuevi water sources (Kelly 1932–1934; Laird 1976 in Fowler 2009). The western portion of this route, along the Mojave River between Alvord Peak and the Cady Mountains, is roughly 1.6 km (1 mile) south of the IC Project Alignment.

Numerous geoglyphs, including anthropomorphic and geometric designs, are found in the vicinity of the Colorado River, within the ethnographic region generally attributed to the Southern Paiute/Chemehuevi. One Chemehuevi informant interviewed in the 1930s stated that these features predated the Chemehuevi's arrival in the area (Kelly 1934 in Fowler 2009). Conversely, other Southern Paiute informants maintain that Numic-speaking peoples have occupied the region since time immemorial (Stoffle and Zedeño 2001).

Other places important to the Chemehuevi include caves, mountains, and mesas to the north, south, and southwest of the IC Project Alignment, well outside of the APE, including locations in Nevada and Arizona (see Byerly 2018).

4.18.1.3 Historic Background

Three specific periods are recognized in California's post-Contact history: the Spanish period (1769–1822), the Mexican period (1822–1848), and the American period (1848–present). For an in-depth discussion of these time frames, please see Section 4.5.1.4, Cultural Resources Environmental Background—Historic Background. The history of these time periods is discussed below in relation to tribes within APE.

Much of eastern California remained unexplored by colonialists throughout the Spanish period due to landscape barriers, such as the Sierra Nevada and Mojave Desert. The rising California population under Spanish rule contributed to the introduction of diseases foreign to Native Americans, causing drastic losses to these communities who had no associated immunity. These introduced diseases traveled through indigenous trade routes via inland migration of coastal groups escaping from Spanish colonialism and missionization, and through the occasional group of Spanish soldiers that chased deserters or fugitive Indians.

European tools and materials were introduced into indigenous tool kits through trade with coastal groups. Inland groups used nails, knives, and other items long before any colonist settled within their territory. As indigenous land was subsumed into the Colonial and Mexican territories, a livestock-raiding complex sprung up. Furthermore, invasive vegetation began to make its way into the area, pushing out local flora that indigenous groups depended upon. Traders on the Old Spanish Trail—following paths taken by Native Americans, the Spanish, Mexicans, and Euro-Americans—took part in the trade of Native Americans as slaves. The Southern Paiute may have been traded to the Southwest, most likely New Mexico, as early as the late 1700s (National Park Service 2001:9). Social and environmental impacts not only increased friction between indigenous groups and colonists, they also affected inter- and intratribal dynamics.

Mexican sovereignty in California was brief. Throughout most of the Mexican period, physical barriers such as the Sierra Nevada shielded eastern California indigenous groups from the effects of expansionism. The state was populated primarily by Californios, Mexican-Indian peoples, and Euro-American settlers. In 1824, the Mexican constitution granted citizenship to all who occupied their territory. Under Mexican rule, indigenous landowners were allowed to vote and were treated as citizens. However, Euro-American customs affected indigenous ways of life, influencing groups such as the Western Shoshone and Southern Paiute.

The Spanish may have brought the slave trade to the Southwest, but the practice escalated after the development of the Old Spanish Trail into California after 1829 (Malouf and Findlay 1986:503; National

Park Service 2001:25). Among those most affected were the Southern Paiute, who were taken as slaves by neighboring tribes such as the Utes. Mexicans engaged in the slave trade, either by taking captives to New Mexico, Utah, and California or by purchasing them (National Park Service 2001:9).

Territorial expansion in the nineteenth century during the American period was largely a result of manifest destiny, the concept that white settlers in the United States were inevitably destined to explore and expand across the country. This mindset affected aboriginal groups across the American West as settlers brought with them a high degree of racial hatred. Federal, state, and local governments, as well as vigilantes, encouraged and took part in the genocide of California native peoples as white populations moved into the state and took over indigenous land.

During California's first legislative convention of 1850, the legislation banned indigenous people from voting, from giving evidence for or against Americans in criminal cases, and from serving as jurors or attorneys (Madley 2016). This provided Euro-Americans impunity to attack, kill, and kidnap indigenous people. This same year, the state legislature legalized indigenous slavery of minors and through prisoner leasing, and a decade later extended that to the indentured status of any Indigenous person (Lindsay 2012; Madley 2016). Killing indigenous people was not only accepted, it resulted in financial gain. According to an informant of Fenelon and Trafzer (2014:20), "…there were mercenaries chasing them [the Chemehuevi], they got money for killing Indians, they got money for taking down Indians, paid by the scalp." In 1856 California legislation allowed for the payment of 25 cents for any Indian scalp, and by 1860 the bounty was increased to 5 dollars (Madley 2016).

At the start of the American period, the Owens Valley provided a travel corridor for traders, trappers, settlers, miners, and the military. The sudden influx of white colonists took advantage of the existing indigenous water systems. Cattle brought into the valley by ranchers foraged on native plants that made up the diet of the indigenous Paiute. Faced with starvation, the Paiute began to kill ranchers' livestock. This sparked conflict between the settlers and the Native Americans, known as the Owens Valley Indian War, resulting in the establishment of Fort Independence in 1862 (Macko 1986). In 1863, settlers and soldiers chased a group of Paiute into Owens Lake, where they were gunned down (Sahagun 2013).

Late nineteenth-century maps by people such as Wheeler (Wheeler et al. 1869) and reports by researchers such as Isabel T. Kelly (1934) marginalized Native American groups such as the Pahrump Band of Paiutes. Kelly's 1934 publication delineated space to groups in the Southern Paiute nation through a list of tribal names and territories. The accompanying map was used by the U.S. government as a guide to settlement of land claims in the mid-twentieth century (Kelly 1964; Kelly et al. 1976). "This particular map is significant in that it closes a frontier, and creates an image in which all is known about the Southern Paiute band divisions and their locations in the early 20th century" (Chmara-Huff 2006:13).

In the context of manifest destiny, U.S. government policy has wavered between assimilation policies to exclusionary acts and granting autonomy to indigenous groups versus their treatment as wards of the state. For example, in 1871, Native Americans became wards of the government rather than sovereign nations, and groups without recognized treaties were classed as unaffiliated (Chmara-Huff 2006:18). Citizenship for all Native Americans was only granted in 1924 with the Citizenship Act.

Today, the United States recognizes 573 Indian nations. Included among them are several tribes within the IC Project area: the Big Pine Paiute Tribe of the Owens Valley, the Bishop Paiute Tribe, Fort Independence Indian Community of Paiute Indians of the Fort Independence Reservation, the Lone Pine Paiute-Shoshone Tribe, San Manuel Band of Mission Indians, Death Valley Timbi-sha Shoshone Tribe, and the Chemehuevi Indian Tribe of the Chemehuevi Reservation. Unaffiliated groups in the project area include the Kern Valley Indian Community (Kawaiisu and Tubatulabal), the Kitanemuk & Yowlumne

Tejon Indians (Yowlumne and Kitanemuk), and the Twenty-Nine Palms Band of Mission Indians (Chemehuevi).

4.18.1.4 Tribal Coordination

Coordination with California Native American groups potentially affected by the IC Project is mandated at both the state and federal levels. The California Public Utilities Commission (CPUC) is the lead state agency for the IC Project and coordinated with Native American tribes and bands pursuant to their responsibilities under Assembly Bill 52 (AB 52). The Bureau of Land Management (BLM) is the lead federal agency for the IC Project and they will conduct their own tribal consultation efforts pursuant to their responsibilities under Section 106 of the National Historic Preservation Act (NHPA).

The Native American Heritage Commission (NAHC) maintains two databases to assist cultural resources specialists in identifying cultural resources of concern to California Native Americans. On December 7, 2018, SWCA contacted the NAHC to obtain information about known cultural and tribal cultural resources and to request a list of Native American tribal representatives who may have a cultural affiliation with the IC Project area. The NAHC responded on December 28, 2018, stating that the Sacred Lands File (SLF) database includes previously identified sacred sites in the vicinity of the IC Project. In consideration of these culturally significant sacred sites, SWCA was directed to contact two Native American tribes for more information. The NAHC also forwarded a list of 12 Native American groups or individuals that are culturally affiliated with the project area. SCE would reference the lists for outreach and coordination.

Pursuant to AB 52, initial tribal outreach letters were sent by the CPUC to 39 tribal contacts on December 14, 2018, with a fact sheet summarizing the Full-Rebuild Concept. Follow-up email messages were sent on December 16 and 24, 2018. The purpose of this outreach was to ensure that potentially affected California Native American groups would have an opportunity to provide meaningful input on the potential for tribal cultural resources to be found in the Full-Rebuild Concept area, as well as to consult on the treatment of and mitigation of project impacts to any such resources.

4.18.1.5 Tribal Cultural Resources

As described in Section 4.5, Cultural and Paleontological Resources, 2,508 cultural resources have been previously recorded within 0.5 mile (0.8 km) of the IC Project Alignment; 582 are within the Full-Rebuild Concept area of potential effects/area of potential impacts (APE/API). Of the 582 previously recorded cultural resources located within the Full-Rebuild Concept APE, 339 are considered to be prehistoric or multicomponent resources. Some of these resources may meet the definition of a tribal cultural resource. No other potential tribal cultural resources have been identified to date within the Full-Rebuild Concept APE/API, although continuing tribal coordination would likely provide additional information on sites, features, places, cultural landscapes, sacred places, or objects with cultural value to a tribe in the Full-Rebuild Concept APE/API, as well as on the sacred lands identified by the NAHC as within the vicinity of the Full-Rebuild Concept.

4.18.2 Regulatory Setting

The primary federal and state laws, regulations, and policies that pertain to the IC Project are summarized in Section 4.5, Cultural and Paleontological Resources. Section 4.5.4, Cultural Resources–Regulatory Setting, summarizes regulatory ordinances and other local policies that concern cultural resources, which may also be relevant to tribal cultural resources if tribal cultural resources are determined to also be unique archaeological or historical resources. Tribal cultural resources include sites, features, places, cultural landscapes, and sacred places or objects that have cultural value or significance to a tribe. A tribal

cultural resource is one that is either: (1) listed on, or eligible for listing on the California Register of Historical Resources (CRHR) or local register of historical resources (see Section 4.5, Cultural and Paleontological Resources, for more information about the CRHR); or (2) a resource that the CEQA lead agency, at its discretion and supported by substantial evidence, determines is significant pursuant to the criteria in PRC Section 5024.1, subdivision (c) (see PRC Section 21074). Further, because tribes traditionally and culturally affiliated with a geographic area may have specific expertise concerning their tribal cultural resources, AB 52 sets forth requirements for notification and invitation to government to government consultation between the CEQA lead agency and geographically affiliated tribes (PRC Section 21080.3.1[a]). Under AB 52, lead agencies must avoid damaging effects to tribal cultural resources, when feasible, regardless of whether consultation occurred or is required.

Tribal cultural resources per PRC Section 21074 (a)(1)(A)–(B) are defined as either of the following:

1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

a) Included or determined to be eligible for inclusion in the California Register of Historical Resources.

b) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

a) A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.

b) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

4.18.3 Significance Criteria

The significance criteria for assessing the impacts to tribal cultural resources come from the CEQA Environmental Checklist, which notes that a project causes a potentially significant impact if it would:

> Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
>
> - Listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in Section 5020.1(k), or
> - A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

4.18.4 Impact Analysis

Under AB 52, lead agencies must avoid damaging effects to tribal cultural resources, when feasible, regardless of whether consultation occurred or is required. PRC Section 21084.2 states, "A project with

an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment." Lead agencies are directed to avoid damaging effects to tribal cultural resources when feasible. If measures are not otherwise identified in consultation with affected tribes to mitigate a substantial adverse change to a tribal cultural resource, the examples of measures provided in PRC Section 21084.3 may be considered, if feasible.

Tribal cultural resources are known to be located in the Full-Rebuild Concept APE/API based on the results of the SLF search conducted by the NAHC. As such, the Full-Rebuild Concept has the potential to affect previously unidentified tribal cultural resources that may be inadvertently discovered during construction activities. Relevant material also considered in this impact analysis includes information summarized in Section 4.5.6, Cultural Resources Impact Analysis.

4.18.4.1 Construction

This analysis would be provided under separate cover following completion of pedestrian surveys and approval of technical report(s) by the responsible agency(ies).

4.18.4.2 Operations

Less than Significant Impact. Normal operation of substation, transmission, subtransmission, distribution, and telecommunications lines would be controlled remotely through SCE control systems, and manually in the field as required. Maintenance would occur as needed and could include activities such as repairing conductors, washing or replacing insulators, repairing or replacing other hardware components, replacing poles, tree trimming, brush and weed control, and access road maintenance. Most regular operation and maintenance (O&M) activities of overhead facilities are performed from existing access roads with no surface disturbance. Repairs to facilities, such as repairing or replacing poles and structures, could occur in undisturbed, but previously surveyed areas. Therefore, operation impacts to tribal cultural resources would be less than significant.

4.18.5 Applicant Proposed Measures

SCE has designed and incorporated the following APMs into the Full-Rebuild Concept to avoid or minimize potential impacts to tribal cultural resources:

TCR-1: Conduct Tribal Construction Monitoring. An archaeological monitor and tribal monitor who is culturally affiliated with the project area shall be present for all ground-disturbing activities within or directly adjacent to a previously identified TCR(s). The archaeological and tribal monitors will consult the CRMP (APM CUL-1) to determine other areas that tribal monitoring may occur and to determine when to increase or decrease the monitoring effort should the monitoring results indicate a change is warranted. Copies of monitoring reports shall be submitted to the BLM and CPUC on a monthly basis.

TCR-2: Develop Tribal Engagement Plan. Based on the results of consultation with NAHC-provided tribal contacts, SCE shall prepare a tribal engagement plan for the proposed project, which will outline the process by which Native American tribes will be engaged and informed throughout the proposed project. The tribal engagement plan will be included within the CRMP to be prepared for the proposed project (APM CUL-1).

4.18.6 Alternatives

Alternatives to the Full-Rebuild Concept are addressed in Section 5.2, Description of Project Alternatives and Impact Analysis.

4.18.7 References

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4.19 Utilities and Service Systems

This section describes the utilities and service systems in the area of the IC Project Alignment, as well as the potential impacts that may result during construction and operation of the Full-Rebuild Concept and its Alternatives.

4.19.1 Environmental Setting

This discussion describes the existing utilities and service systems (water, sewage and wastewater treatment, landfills, and other utilities) in the vicinity of the IC Project Alignment.

4.19.1.1 Water

4.19.1.1.1 Segment 1

Segment 1 and the northern portion of Segment 2 in Kern County are located within the Inyo-Mono Integrated Regional Water Management (IRWM) Region. Multiple water districts, large and small, public and private, exist in the IRWM Region and in the vicinity of the IC Project Alignment. The purpose of the IRWM is to identify and implement water management solutions on a regional scale that increase regional self-reliance, reduce conflict, and manage water to concurrently achieve social, environmental, and economic objectives. (Inyo-Mono Regional Water Management Group [IMRWMG] 2014) Water demand along Segment 1 is predominately for agricultural purposes, export to Los Angeles, and for environment mitigation; residential and industrial uses are a very small portion of the approximately 710,000 acre-feet used per year. (IMRWMG 2014)

None of the lands crossed by the IC Project Alignment in Segment 1 or the northern portion of Segment 2 in Kern County are served by a central water supply system. In the vicinity of the IC Project Alignment, the City of Bishop's water system produces and delivers water for consumption, irrigation, and fire suppression from three wells through almost 22 miles of water mains to about 1,100 service accounts, including some outside of the city limits. All the water is ground water produced through two production wells. A third well is held in standby. (City of Bishop 2018) The Sierra Highlands Community Service District provides water to approximately 530 residential customers in the vicinity of Bishop. The water provided is ground water sourced from three wells.

Other water providers in the Bishop area include the Bishop Paiute Tribe, Highland Mobile Home Park, Indian Creek / Westridge Community Services District (CSD), Meadowcreek Mutual Water Company, and Sierra Highlands Community Services District. A large section of west Bishop is served by individual wells. (IMRWMG 2014)

Water is supplied to Big Pine by the Big Pine Community Services District and Rolling Green Utilities, Inc. Inyo County supplies water to the communities of Laws, Independence, and Lone Pine; the Cartago Mutual Water Company is the water supplier for Cartago. The Indian Wells Valley Water District and the Inyokern Community Services District provide water in the vicinity of the community of Inyokern. (IMRWMG 2014)

4.19.1.1.2 Segments 2, 3N, 3S, and 4

Those portions of Segments 2, 3N, 3S, and 4 located in San Bernardino County are located in what is referred to as the Desert Region of the County. The Desert Region is comprised of 41 water purveyors and approximately 120 privately-owned single sources. Most of the single sources in the rural portions of the Desert Region are for commercial businesses or private properties. The Mojave Water Agency is the

primary water basin agency, but there are also water districts and CSDs that provide distribution services for water supplies. (San Bernardino County 2007)

The Mojave Water Agency (MWA) is a regional wholesale provider responsible for managing groundwater resources and for ensuring a reliable water supply within its service area boundaries. Segments 2, 3N, 3S, and 4 are located within the MWA service area boundary. Water supply in the MWA service area comes from numerous sources, which include natural surface water flows, wastewater imports from outside the MWA service area, State Water Project imports, and return flow from pumped groundwater not consumptively used. (MWA 2014) Almost all of the water use within the MWA service area is supplied by pumped groundwater.

Annual water supply in 2010 was 179,438 acre-feet; demand was 145,875 acre-feet. Forecast supply in 2020 is 192,339 acre-feet, with demand estimated to be 159,544 acre-feet. Similar surpluses are projected through at least 2035. (MWA 2014)

4.19.1.2 Sewage/Wastewater Treatment

4.19.1.2.1 Segment 1

The cities, towns, and larger communities within the Inyo-Mono IRWM Region have wastewater collection and treatment systems, while smaller communities and isolated homes do not and rely on septic tanks and leach fields for sewage disposal. (IMRWMG 2014) The City of Bishop and Eastern Sierra CSD provide wastewater services to the City. The City's sewer system collects, treats, and disposes of wastewater for most of the city. The ESCSD treatment plant and the city's treatment plant are adjacent to one another. Flow to the city plant averages about 800,000 gallons per day which is about half of the 1.6 million gallon per day capacity. (City of Bishop 2018)

Other agencies that provide wastewater collection, treatment, and disposal services in Inyo County include Big Pine Community Services District, East Independence Sanitary District, Lone Pine Community Services District, and Inyo County. The Inyokern CSD provides sewer services in the vicinity of the community of Inyokern. (IMRWMG 2014)

4.19.1.2.2 Segments 2, 3N, 3S, and 4

Most residential properties in the Desert Region are on private sewage treatment systems (septic tanks). In and around Barstow, the City of Barstow and the Barstow Heights Community Service District provide wastewater services. (San Bernardino County 2007)

4.19.1.3 Landfills

4.19.1.3.1 Segment 1

The Inyo County Integrated Waste Management Department operates three landfills within Inyo County; each are proximate to the IC Project Alignment and are listed below:

- Bishop-Sunland Landfill (Class III). Located south of the City of Bishop, and approximately 0.5 miles from the IC Project Alignment. The Bishop-Sunland Landfill has a permitted capacity of 4.0 million cubic yards, and a remaining capacity of 3.3 million cubic yards. (CalRecycle 2018)
- Independence Landfill (Class III). Located southeast of the Town of Independence, and approximately 1.6 miles from the IC Project Alignment. The Independence Landfill has a permitted capacity of 0.32 million cubic yards, and a remaining capacity of 0.13 million cubic yards. (CalRecycle 2018)

- Lone Pine Landfill (Class III). Located southeast of the Town of Lone Pine, and approximately 0.2 miles from the IC Project Alignment. (Inyo County 2017) The Lone Pine Landfill has a permitted capacity of 1.0 million cubic yards, and a remaining capacity of 0.99 million cubic yards (CalRecycle 2018).

More than 40,000 tons of annual disposal capacity is available at landfills in Inyo County (CalRecycle 2018).

The Kern County Public Works Department regulates seven landfills (Kern County 2017). The nearest landfill in Kern County to the IC Project Alignment is the Class III Ridgecrest Landfill approximately 4.4 miles southeast of the Inyokern Substation and west of the City of Ridgecrest. The Ridgecrest Landfill has a permitted capacity of 10.5 million cubic yards, and a remaining capacity of 5.0 million cubic yards (CalRecycle 2018). More than 2.5 million tons of annual disposal capacity is available at landfills in Kern County (CalRecycle 2018).

4.19.1.3.2 Segments 2, 3N, 3S, and 4

The County of San Bernardino Solid Waste Management Division (SWMD) is responsible for the operation and management of the solid waste disposal system in the county. The disposal system consists in part of five regional landfills; of these, one is located in the vicinity of the IC Project Alignment: the Class III Barstow Landfill, located approximately 1.7 miles south of Segment 3S. The Barstow Landfill has a permitted capacity of 80.4 million cubic yards, and a remaining capacity of 71.5 million cubic yards (CalRecycle 2018).

4.19.2 Regulatory Setting

Federal, state, and local regulations were reviewed for applicability to the IC Project. Section 4.10, Hydrology and Water Quality, provides a detailed discussion of regulations related to water quality and stormwater discharge.

4.19.2.1 Federal

4.19.2.1.1 Clean Water Act

The CWA was originally enacted in 1948 and has been amended numerous times, with significant expansions in 1972 and 1977. The CWA's main objectives are to maintain and restore the chemical, physical, and biological integrity of waters through the authorization of standards. Authority for the implementation and enforcement of the CWA lies primarily with the USEPA and its delegated state and local agencies, namely the State Water Resources Control Board (SWRCB), and along the IC Project Alignment, the Lahontan RWQCB.

4.19.2.2 State

4.19.2.2.1 California Health and Safety Code § 25150.7(d)(1)

If treated wood is developed as a waste product, the California Health and Safety Code requires treated wood to be disposed of in either a Class I hazardous waste landfill or in a composite-lined portion of a solid waste landfill that meets RWQCB-specified requirements.

4.19.2.2.2 Integrated Waste Management Act of 1989

The Integrated Waste Management Act of 1989, also known as Assembly Bill (AB) 939, mandates that California's jurisdictions divert 50 percent of their solid waste from landfills. CalRecycle is under the umbrella of the California EPA and is responsible for the implementation of AB939.

4.19.2.2.3 California Code of Regulations (Title 27)

Title 27 (Environmental Protection) of the California Code of Regulations defines regulations for the treatment, storage, processing, and disposal of solid waste. The SWRCB maintains and regulates compliance with Title 27 (Environmental Protection) of the California Code of Regulations. The compliance of the IC Project would be enforced by the Lahontan (Region 6) RWQCB.

4.19.2.3 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 is 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 discussions of local land use regulations is provided for informational purposes only.

4.19.2.3.1 Inyo County General Plan, Public Services and Utilities Element

Inyo County General Plan (Inyo County 2013) identifies goals, policies, and implementation measures designed to encourage and allow appropriate development with the adequate provision of public services and utilities. Inyo County will work with utility companies to design and locate appropriate expansion of electric systems, while minimizing impact to agriculture and minimizing noise, electromagnetic, visual, and other impacts on existing and future residents. The Inyo County General Plan's Public Services and Utilities Element contains the following:

> GOALS: PUBLIC FACILITIES AND UTILITIES
>
> PSU-1. To ensure the timely development of public facilities and the maintenance of adequate service levels for these facilities to meet the needs of existing and future County residents.
>
> PSU-3. To ensure that there will be a safe and reliable water supply sufficient to meet the future needs of the County.
>
> PSU-4. To ensure adequate wastewater collection, treatment, and disposal.
>
> PSU-5. To collect and dispose of stormwater in a matter that minimizes inconvenience to the public, minimizes potential water-related damage, and enhances the environment.
>
> PSU-6. To ensure the safe and efficient disposal or recycling of solid waste generated in Inyo County.
>
> PSU-10. To provide efficient and cost-effective utilities that serves the existing and future needs of people in the unincorporated areas of the County.

4.19.2.3.2 Kern County General Plan, Land Use, Open Space, and Conservation Element

Kern County recognizes the importance of environmental and public health and has developed goals and policies to protect the public from health and safety hazards in the Kern County General Plan (Kern County 2009). The Kern County General Plan's Land Use, Open Space, and Conservation Element contains the following:

GOALS: PUBLIC FACILITIES AND SERVICES

5. Ensure that adequate supplies of quality (appropriate for intended use) water are available to residential, industrial, and agricultural users within Kern County.

6. Provide a healthful and sanitary means of collecting, treating, and disposing of sewage and refuse for the residents and industries of Kern County.

7. Facilitate the provision of reliable and cost effective utility services to residents of Kern County.

10. Ensure landfill capacity for Kern County residents and industries.

4.19.2.3.3 San Bernardino County General Plan, Circulation and Infrastructure Element

The Circulation and Infrastructure Element of the County of San Bernardino 2007 General Plan contains objectives and policies related to the provision of utilities, including the following:

- Promote the implementation of low-impact design principles to help control the quantity and improve the quality of urban runoff.
- Coordinate with SCE and other utility suppliers to make certain that adequate capacity and supply exist for current and planned development in the county.

4.19.2.3.4 City of Barstow General Plan, Resource Conservation and Open Space Element

The Resource Conservation and Open Space Element of the City of Barstow General Plan contains a number of goals, policies, and strategies related to utilities and service systems, including:

GOAL 1: Ensure protection of water quality and quantity for the community by working in cooperation with all water purveyors in the area to preserve, augment, capture and purify all waters in the Mojave River system.

POLICY 1 A: Ensure a water supply system capable of meeting normal and emergency demand through cooperation between the City and water purveyors.

POLICY 1 C: Strive to ensure that adequate water remains available to the community in order to maintain continued growth.

POLICY 1 E: Maintain a storm drainage system adequate to protect the lives and property of Barstow residents.

4.19.3 Significance Criteria

The significance criteria for assessing the impacts to public services are derived from the California Environmental Quality Act (CEQA) Environmental Checklist. According to the CEQA Checklist, a project would cause a potentially significant impact if it:

- Exceeds wastewater treatment requirements of the applicable Regional Water Quality Control Board (RWQCB)
- Requires or results in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects
- Requires or results in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects

- Does not have sufficient water supplies available to serve the Proposed Project from existing entitlements and resources, or new or expanded entitlements are needed
- Results in the determination by the wastewater treatment provider which serves or may serve the Proposed Project that it does not have adequate capacity to serve the Proposed Projected demand in addition to the provider's existing commitments
- Is served by a landfill with insufficient permitted capacity to accommodate the Proposed Project's solid waste disposal needs
- Does not comply with federal, state, and local statutes and regulations related to solid waste

4.19.4 Impact Analysis

4.19.4.1 Would the Project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

4.19.4.1.1 Construction

No Impact. The Full-Rebuild Concept would not exceed wastewater treatment requirements of the few wastewater treatment plants serving the Full-Rebuild Concept area. Domestic wastewater is the only wastewater that would be generated during construction of the Full-Rebuild Concept. Portable toilets would be provided on-site for workers during the construction phase according to California Occupational Safety and Health Act requirements; the portable toilets would be serviced by a licensed contractor who would dispose of the waste off-site and in compliance with all applicable laws and regulations. Thus, no exceedances of wastewater treatment requirements would be realized, and no impacts would occur under this criterion.

4.19.4.1.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing operation and maintenance (O&M) activities, including inspections, along the subtransmission lines that would be rebuilt under the Full-Rebuild Concept. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the Full-Rebuild Concept, and therefore no impacts would be realized under this criterion during operations and maintenance.

4.19.4.2 Would the Project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

4.19.4.2.1 Construction

No Impact. The Full-Rebuild Concept would not require or result in the construction of new, or expansion of existing, water or wastewater treatment facilities. Water would be used during construction of the Full-Rebuild Concept to control dust on access roads and at work areas, in the construction of concrete foundations, for washing equipment, and during restoration purposes, among others. The large majority by volume of water would be dispersed on-site and would either evaporate or be absorbed into the ground or would be incorporated into the foundations. Because only small volumes of wastewater would be generated, the Full-Rebuild Concept would not require or result in the construction of new, or expansion of existing, water or wastewater treatment facilities, and no impacts would occur under this criterion.

4.19.4.2.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing operation and maintenance (O&M) activities, including inspections, along the subtransmission lines that would be rebuilt under the Full-

Rebuild Concept. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the Full-Rebuild Concept, and therefore no impacts would be realized under this criterion during operations and maintenance.

4.19.4.3 Would the Project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

4.19.4.3.1 Construction

No Impact. The Full-Rebuild Concept would not require or result in the construction of new, or expansion of existing, storm water drainage facilities. The Full-Rebuild Concept includes the reconstruction of existing subtransmission infrastructure, with replacement structures to be placed proximate to existing structures. The Full-Rebuild Concept does not require the development of large areas of impermeable surfaces that would increase the amount of stormwater discharge from the site that would require construction of new storm water drainage facilities or expansion of existing facilities. Therefore, no impacts would occur under this criterion.

4.19.4.3.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing operation and maintenance (O&M) activities, including inspections, along the subtransmission lines that would be rebuilt under the Full-Rebuild Concept. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the Full-Rebuild Concept, and therefore no impacts would be realized under this criterion during operations and maintenance.

4.19.4.4 Would the Project have sufficient water supplies available to serve the Proposed Project from existing entitlements and resources, or are new or expanded entitlements needed?

4.19.4.4.1 Construction

No Impact. Water would be used during construction of the Full-Rebuild Concept to control dust on access roads and at work areas, in the construction of concrete foundations, for washing equipment, and during restoration purposes, among others. This water would be supplied through existing entitlements and resources located along the Full-Rebuild Concept alignment. Water supplies exceed current local demand along the Full-Rebuild Concept alignment, and thus project water use would not require new or expanded water supply entitlements. Therefore, no impacts would occur under this criterion.

4.19.4.4.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing operation and maintenance (O&M) activities, including inspections, along the subtransmission lines that would be rebuilt under the Full-Rebuild Concept. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the Full-Rebuild Concept, and therefore no impacts would be realized under this criterion during operations and maintenance.

4.19.4.5 Would the Project result in a determination by the wastewater treatment provider which serves or may serve the Proposed Project that it has adequate capacity to serve the Proposed Project's projected demand in addition to the provider's existing commitments?

4.19.4.5.1 Construction

No Impact. As previously discussed, construction of the Full-Rebuild Concept would not generate significant amounts of wastewater. Portable toilets would be provided for on-site use by construction workers and would be maintained by a licensed sanitation contractor. Minimal wastewater would be generated, and constructing the Full-Rebuild Concept would not result in discharge of concentrated wastewater or large volumes of wastewater to a wastewater treatment provider. SCE would work with SCE-approved vendors and subcontractors for the handling of wastewater. Because of the excess capacity available at existing wastewater treatment plants, and because of the small volumes of wastewater that would be transported for treatment, no wastewater treatment provider along the Full-Rebuild Concept alignment would be asked or would need to make a determination regarding adequate capacity, and therefore, no impact would occur under this criterion.

4.19.4.5.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing operation and maintenance (O&M) activities, including inspections, along the subtransmission lines that would be rebuilt under the Full-Rebuild Concept. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the Full-Rebuild Concept, and therefore no impacts would be realized under this criterion during operations and maintenance.

4.19.4.6 Would the Project be served by a landfill with sufficient permitted capacity to accommodate the Proposed Project's solid waste disposal needs?

4.19.4.6.1 Construction

No Impact. The landfill(s) at which the Full-Rebuild Concept's solid waste and excavated materials may be disposed are not known at this time. However, landfills in Inyo County and Kern County combined have more than 2.5 million tons of surplus annual disposal capacity available, and the Barstow Landfill has more than 71.5 million cubic yards of capacity remaining. Much of the material generated during the rebuilding of the subtransmission lines would be diverted from landfill disposal through recycling of steel, aluminum, copper, and other materials. Wood poles would be disposed of as described in Section 3.7.1.9, Reusable, Recyclable, and Waste Material Management. Because of the large volume of material that would be recycled, and the large surplus annual disposal capacity available at landfills along the Full-Rebuild Concept alignment, the Full-Rebuild Concept would be served by landfills with sufficient permitted capacity to accommodate the Full-Rebuild Concept's solid waste disposal needs, and therefore no impacts would occur under this criterion.

4.19.4.6.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing operation and maintenance (O&M) activities, including inspections, along the subtransmission lines that would be rebuilt under the Full-Rebuild Concept. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the Full-Rebuild Concept, and therefore no impacts would be realized under this criterion during operations and maintenance.

4.19.4.7 Would the Project comply with federal, state, and local statutes and regulations related to solid waste?

4.19.4.7.1 Construction

No Impact. As previously discussed, solid waste produced during construction would be disposed in one or more licensed landfill(s). Management and disposal of solid waste would comply with all applicable federal, state, and local statutes and regulations. Thus, the Full-Rebuild Concept would not violate any solid waste statutes or regulations. Therefore, no impact is anticipated during construction of the Full-Rebuild Concept.

4.19.4.7.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing operation and maintenance (O&M) activities, including inspections, along the subtransmission lines that would be rebuilt under the Full-Rebuild Concept. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the Full-Rebuild Concept, and therefore no impacts would be realized under this criterion during operations and maintenance.

4.19.5 Applicant Proposed Measures

Because no potentially significant impacts to utilities and service systems would occur as a result of the Full-Rebuild Concept, no avoidance or minimization measures are proposed.

4.19.6 Alternatives

Alternatives to the Full-Rebuild Concept are addressed in Section 5.2, Description of Project Alternatives and Impact Analysis.

4.19.7 References

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4.20 Wildfire

This section of the PEA describes the wildfire-related attributes along the IC Project Alignment, as well as an assessment of impacts that have the potential to occur during construction and operation of the Full-Rebuild Concept and its Alternatives.

4.20.1 Environmental Setting

Emergency response plans and evacuation plans are addressed in Section 4.9, Hazards and Hazardous Materials. Section 4.10, Hydrology and Water Quality, addresses topics related to flooding, runoff, and drainage.

4.20.2 Regulatory Setting

4.20.2.1 Federal

Please see Sections 4.9.2 and 4.10.2.

4.20.2.2 State

Senate Bill 901, enacted in 2018, adopted new provisions of Public Utilities Code Section 8386 requiring all electric utilities to prepare, submit and implement annual wildfire mitigation plans that describe the utilities' plans to construct, operate and maintain their electrical lines and equipment in a manner that will help minimize the risk of catastrophic wildfires associated with those electrical lines and equipment.

4.20.2.3 Local

Please see Sections 4.9.2 and 4.10.2.

4.20.3 Significance Criteria

The significance criteria for assessing the impacts to public services are derived from the California Environmental Quality Act (CEQA) Environmental Checklist. According to the CEQA Checklist, a project would cause a potentially significant impact if, located in or near state responsibility areas or lands classified as very high fire hazard severity zones, the Project would:

- Substantially impair an adopted emergency response plan or emergency evacuation plan?
- Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?
- Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?
- Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

4.20.4 Impact Analysis

4.20.4.1 Would the Project substantially impair an adopted emergency response plan or emergency evacuation plan?

4.20.4.1.1 Construction

Less than Significant Impact. As discussed in Section 4.17, the Full-Rebuild Concept would not be expected to significantly impact traffic circulation or increase demands on existing emergency response services during temporary construction activities, and would not significantly impact emergency access in

the area or increase the demand for existing emergency response services. Although it is not anticipated that construction activities would result in the blockage of any roadways that could be used in the case of an emergency, in the event that any construction-related activity may result in such a blockage or closure, SCE would implement APM TRA-1, which calls for coordination with local authorities including emergency responders regarding appropriate procedures. As directed in APM TRA-1, construction activities completed within public street rights-of-way would require the use of a traffic control service, and all lane closures would be conducted in accordance with APM TRA-1. Therefore, the impacts associated with construction activities would be less than significant under this criterion.

4.20.4.1.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing operation and maintenance (O&M) activities, including inspections, along the subtransmission lines that would be rebuilt under the Full-Rebuild Concept. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the Full-Rebuild Concept, and therefore no impacts would be realized under this criterion during operations and maintenance.

4.20.4.2 Would the Project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

4.20.4.2.1 Construction

No Impact. No components of the Full-Rebuild Concept are designed for human occupancy, therefore no impacts would occur under this criterion.

4.20.4.2.2 Operations

No Impact. No components of the Full-Rebuild Concept are designed for human occupancy, therefore no impacts would occur under this criterion.

4.20.4.3 Would the Project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

4.20.4.3.1 Construction

No Impact. The Full-Rebuild Concept, as described in Chapter 3, is designed to remediate GO 95 clearance discrepancies by rebuilding existing infrastructure. The associated impacts of constructing and maintaining the Full-Rebuild Concept are analyzed throughout the PEA, including the analysis in the Hazards and Hazardous Materials section outlining SCE's development and implementation of a Fire Prevention and Emergency Response Plan per APM HAZ-3, implementation of standard fire prevention protocols during construction activities, compliance with applicable laws and regulations, implementation of additional measures in the event of a Red Flag Warning during construction, and participation with CAL FIRE and other city and county fire agencies in the Red Flag Fire Prevention Program (in compliance with PRC Section 4292 and 4293 relating to vegetation management in subtransmission line corridors). For these reasons, construction of the Full-Rebuild Concept's infrastructure would have no impact under this criterion.

4.20.4.3.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing operation and maintenance (O&M) activities, including inspections, along the subtransmission lines that would be rebuilt under the Full-Rebuild Concept. No material changes in O&M activities or the locations of these activities are anticipated with implementation of the Full-Rebuild Concept. As currently performed, SCE would continue to: implement its standard fire prevention protocols during O&M activities; comply with applicable laws and regulations; implement additional measures in the event of a Red Flag Warning during construction; and participate with CAL FIRE and other city and county fire agencies in the Red Flag Fire Prevention Program (in compliance with PRC Section 4292 and 4293 relating to vegetation management in subtransmission line corridors). Further, SCE's 2019 Wildfire Mitigation Plan describes strategies, programs and activities that are in place, being implemented or are under development by SCE to proactively address and mitigate the threat of electrical infrastructure associated ignitions that could lead to wildfires. These strategies include hardening of the electric system (including the installation of covered conductor on overhead distribution primary circuits in high fire risk areas), increasing situational awareness capabilities, and enhancing operational practices. The Full-Rebuild Concept would be constructed consistent with the Wildfire Mitigation Plan. Therefore, no impacts would be realized under this criterion during operations and maintenance.

4.20.4.4 Would the Project expose people or structures to significant risks, including downslope or downstream flooding or landslisdes, as a result of runoff, post-fire slope instability, or drainage changes?

4.20.4.4.1 Construction

Less than Significant Impact. As discussed in the Hydrology and Water Quality impact analyses in Section 4.10.4, the Full-Rebuild Concept SWPPP would include measures to control stormwater runoff rates which would minimize the potential for significant alteration of drainage patterns that would result in downslope or downstream flooding. Further, improvements to existing access roads and spur roads and construction of new spur roads would include design considerations to maintain or improve drainage patterns within the Full-Rebuild Concept alignment. Therefore, through drainage design and SWPPP implementation, the Full-Rebuild Concept would not substantially alter the existing drainage pattern of the site or area, or increase the rate or amount of surface runoff in a manner which would result in downstream or downslope flooding.

As discussed in the Geology and Soils impact analyses in Section 4.7.4 and displayed on Figureset 4.7-7, much of the Full-Rebuild Concept is located in valley areas that would not be susceptible to post-fire slope instability. Localized areas of relatively steep slopes and increased landslide hazards occur where the components of the Full-Rebuild Concept runs along the edges of hills and mountains. These localized areas may be susceptible to post-fire slope instability. However, these areas are generally indicated to have a moderate fire hazard severity rating, indicating that the vegetation in the area is less susceptible to fire or is sparser than in other areas, or that few structures susceptible to fire (and thus inhabitants) are present. Given this, impacts from post-fire slope instability would be less than significant.

4.20.4.4.2 Operations

No Impacts. As presented in Chapter 3, SCE is currently performing operation and maintenance (O&M) activities, including inspections, along the subtransmission lines that would be rebuilt under the Full-Rebuild Concept. No material changes in O&M activities or the locations of these activities are

anticipated with implementation of the Full-Rebuild Concept, and therefore no impacts would be realized under this criterion during operations and maintenance.

4.20.5 Applicant Proposed Measures

Because no potentially significant impacts would occur as a result of the Full-Rebuild Concept, no avoidance or minimization measures are proposed.

4.20.6 Alternatives

Alternatives to the Full-Rebuild Concept are addressed in Section 5.2, Description of Project Alternatives and Impact Analysis.

4.20.7 References

City of Barstow. 2015. Emergency Operations Plan. Available at http://www.barstowca.org/home/showdocument?id=4112

Inyo County and City of Bishop (ICCB). 2016. Multi-Jurisdictional Hazard Mitigation Plan. Public Draft. Available at http://www.inyoplanning.org/documents/InyoCountyMJHMPPublicDraft_Public_2016.07.26.pdf

Kern County Fire Department. 2012. Multi Jurisdiction Hazard Mitigation Plan Comprehensive Update 2012. Available online at http://www.kerncountyfire.org/operations/divisions/office-of-emergency-services/emergency-plans/hazard-mitigation-plan.html

Kern County Fire Department. 2008. Emergency Operations Plan. Available online at http://www.kerncountyfire.org/operations/divisions/office-of-emergency-services/emergency-plans/emergency-operations-plan.html

San Bernardino County. 2017. Multi-Jurisdictional Hazard Mitigation Plan Update. Available at http://cms.sbcounty.gov/portals/58/Documents/Emergency_Services/Hazard-Mitigation-Plan.pdf

San Bernardino County Fire Department. 2013. San Bernardino County Emergency Operations Plan. Available online at http://cms.sbcounty.gov/portals/58/Documents/Emergency_Services/Emergency-Operations-Plan.pdf

4.21 Cumulative Impacts

This section analyzes the potential cumulative impacts related to the Full-Rebuild Concept.

The California Environmental Quality Act (CEQA) requires lead agencies to consider the cumulative impacts of proposals under their review. Section 15355 of the CEQA Guidelines defines cumulative impacts as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." According to Section 15130(a)(1), a cumulative impact "is the impact on the environment which results from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions." The cumulative impacts analysis "would examine reasonable, feasible options for mitigating or avoiding the Full-Rebuild Concept's contribution to any significant cumulative effects" (Section 15130(b)(3)).

Section 15130(a)(3) also states that an environmental document may determine that a project's contribution to a significant cumulative impact would be rendered less than cumulatively considerable, and thus not significant, if a project is required to implement or fund its fair share of mitigation measure(s) designed to alleviate the cumulative impact.

In conducting a cumulative impacts analysis, the proper frame of reference is the temporal span and spatial areas in which the Full-Rebuild Concept would cause impacts. In addition, a discussion of cumulative impacts must include either:

- a list of past, present, and probable future projects, including, if necessary, those outside the lead agency's control; or
- a summary of projections contained in an adopted general plan or related planning document, or in a previously certified Environmental Impact Report (EIR), which described or evaluated regional or area-wide conditions contributing to the cumulative impact, provided that such documents are referenced and made available for public inspection at a specified location (Section 15130(b)(1)).

The term "probable future projects" includes: approved projects that have not yet been constructed; projects that are currently under construction; projects requiring an agency approval for an application that has been received at the time a Notice of Preparation (NOP) is released; and projects that have been budgeted, planned, or included as a later phase of a previously approved project (Section 15130(b)(1)(B)(2)). A listing of projects meeting these criteria within approximately 1 mile of the IC Project Alignment are listed in Table 4.21-1: Cumulative Projects within 1 Mile, along with an identification number, a brief description, the jurisdiction in which it is located, distance from the IC Project Alignment, status, and anticipated construction schedule. These projects are also depicted in Figure 4.21-1, Cumulative Projects.[14]

[14] SCE's Transmission Infrastructure Replacement Program is an ongoing effort focused on identifying and replacing aged and/or deteriorated subtransmission poles across SCE's service territory to address safety and/or reliability risk. Deteriorated poles have been identified along the subtransmission lines included in the IC Project. To date, approximately four poles have been identified along Segment 1, approximately 140 poles are identified along Segment 3N, and approximately 100 are identified along Segment 3S. Because SCE has determined these poles must be replaced on an emergency basis, these deteriorated poles will be replaced regardless of whether a PTC is issued for the IC Project, and separate from any work related to the IC Project.

The following subsections discuss whether—when combined with past, present, planned, and probable future projects in the area—the Full-Rebuild Concept could result in significant short-term or long-term environmental impacts. Short-term impacts are generally associated with construction of the Full-Rebuild Concept and cumulative projects, while long-term impacts are those that result from permanent Full-Rebuild Concept features or operation and maintenance of the cumulative projects. No material changes in operation and maintenance activities are anticipated with implementation of the Full-Rebuild Concept, and therefore with the exception of aesthetics, there would be no cumulative long-term impacts generated by the Full-Rebuild Concept.

Table 4.21-1: Cumulative Projects within 1 Mile

Project	Description	Jurisdiction	Distance	Status	Anticipated Schedule
IC 1-1: Olancha Cartago 4 Lane Project	Convert approximately 12.6 miles of US 395 from a two-lane conventional highway into a four-lane expressway from post mile 29.2 to post mile 41.8 in Inyo County. The controlled-access four-lane divided expressway will pass west of Olancha and the Los Angeles Aqueduct. Once the alignment crosses Olancha Creek, the proposed project will cross the Los Angeles Aqueduct and continue north through Cartago along the existing highway to meet up with the four-lane section of U.S. Highway 395 to the north of Cartago. The northbound and southbound lanes would be separated by a 100-foot-wide unpaved median	Inyo County / Caltrans	<1 mile	In design	2020-2022
IC 1-2: Cartago Area Wildlife project	The Cartago Area Wildlife project (post mile 37.7) is located along the western fringe of the Owens Lake bed and directly east of Cartago. California Fish and Wildlife with assistance from Caltrans is proposing to develop the site to support future biological mitigation needs. This would be accomplished by improving the 31.9-acre parcel through stream restoration, levee repair, dredging of existing ponds and wetlands to increase their areas, installation of plantings, and other modifications to improve the riparian, wetland, and desert scrub habitats on the site.	CDFW / Caltrans	<1 mile	Planning	Post-2022
IC 1-3: RB Inyokern Solar Project Phase 1 and 2	Construction and operation of a solar facility and associate infrastructure to generate a combined 32 MW or renewable electrical energy and/or energy storage capacity.	Kern County	<1 mile	NOP	Unknown
IC 1-4: Haiwee Geothermal Leasing Area	Evaluate the feasibility and potential environmental impacts of opening for lease approximately 22,805 acres of federal mineral estate for geothermal energy exploration and development.	BLM	0	DEIS	Unknown
IC 1-5: North Haiwee Dam No. 2	Construction of North Haiwee Dam No. 2 (new Dam or NHD2) to the north of the existing Dam to improve the seismic reliability of North Haiwee Reservoir in the event NHD is damaged by an earthquake event.	BLM	<1 mile	DEIR/EA	Unknown

Table 4.21-1: Cumulative Projects within 1 Mile

Project	Description	Jurisdiction	Distance	Status	Anticipated Schedule
IC 1-6: Owens River Water Trail Project	The proposed project would provide recreational access to a 6.3-mile section of the newly rewatered, 62-mile Lower Owens River. The goal of the proposed project is to develop facilities for recreational users to enter and exit the river and allow unimpeded navigation for non-motorized watercrafts, such as kayaks, standup paddle boards, and canoes. Currently, sections of the ORWT corridor are non-navigable due to the channel being partially or fully obstructed by vegetation and other occlusions that emerged during a 90 year dry period. In order to establish the ORWT for non-motorized water craft, the proposed project would remove these occlusions by manual and machine methods.	Inyo County	0	In preparation	Unknown
IC 1-7: Control Substation Project	Modernization and upgrading of SCE's Control Substation.	Inyo County	0	In Planning	2020-2021
IC 2-1: SR-58 Kramer Junction Expressway	This project proposes to widen the roadway to accommodate 4 lanes of Expressway on State Route 58 (SR-58), in the County of San Bernardino, near the Kern County line to 7.5 miles east of (E/O) US Highway 395. This project involves the realignment of the roadway and will provide a grade separation for the railroad (RR) crossing.	San Bernardino County / Caltrans	0	In construction	2017-2020
IC 2-2: Kramer Storage Area	To provide storage area for materials excavated during SR-58 Kramer Junction Expressway project.	San Bernardino County /	0	In use	2017-2020
IC 3N-1: Lynx Cat Mountain Quarry	The Lynx Cat Mountain quarry is an existing and vested surface mining operation. Purpose of project is to re-establish use of the quarry as a borrow pit to support construction of the SR-58 Hinkley Expressway Project.	San Bernardino County	<1 mile	Active	2017-2020
IC 3S-1: US Hwy 395 Widen Median & Shoulder and Install Rumble Strips	Caltrans is proposing to improve a portion of US 395, from one mile south of Kramer Hills to the intersection of US 395 and SR-58 by widening the existing roadbed to provide a 4-foot median buffer and 8-foot shoulders, and install rumble strips on the centerline and shoulders.	San Bernardino County / Caltrans	0	In construction	Unknown

Table 4.21-1: Cumulative Projects within 1 Mile

Project	Description	Jurisdiction	Distance	Status	Anticipated Schedule
	The proposed project, in a portion of unincorporated San Bernardino County, California, would also restore the passing lanes on the northbound side of US 395 within the proposed project limits, and eliminate all existing passing zones within the proposed project limits that are not consistent with current design standards. The purpose of the proposed project is to improve safety, reducing the number and severity of cross centerline collisions.				
IC 3S-2: Kelly Cutover	Upgrade existing 4 kV distribution line to 12 or 16 kV	BLM	<1 mile	Permitting	Unknown
IC 4-1: Daggett Solar Power Facility	Project includes construction and operation of a solar energy generation and storage Project on approximately 3,500 acres east of Daggett, CA in San Bernardino County. The proposed project would be a photovoltaic solar (PV) energy facility with associated on-site substations, inverters, fencing, roads and supervisory control and data acquisition (SCADA) system of up to 650 Megawatts (MW). The Project would also include up to 450 MW of energy storage and an overhead power line, referred to as a generation tie line (gen-tie line).	San Bernardino County	<1 mile	Permitting	Unknown
IC 4-2: Halloran Springs Communication Site Lease	Installation of cellular communications tower and site.	BLM	<1 mile	Permitting	Unknown

Sources:
BLM. e-planning website
Caltrans. District 8—San Bernardino Webpage. Available at http://www.dot.ca.gov/d8/
Caltrans. District 9 Projects Webpage. Available at http://www.dot.ca.gov/d9/projmgt/projects.html
Caltrans. 2017. Olancha-Cartago Olancha/Cartago Four-Lane Project FEIR. Available at http://www.dot.ca.gov/d9/projects/olancha/docs/signed_olancha_FEIR.pdf
San Bernardino County. Desert Region Environmental Review Webpage. Available at http://cms.sbcounty.gov/lus/Planning/Environmental/Desert.aspx

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4.21.1 Aesthetics

As discussed in Section 4.1, the Full-Rebuild Concept would have no impact on a scenic vista, and thus would not contribute to a cumulative impact.

The Full-Rebuild Concept would have a less than significant impact on scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway. There are no cumulative projects identified in the vicinity of where the Full-Rebuild Concept alignment crosses SR-168 or along US 395, which are designated State Scenic Highways; therefore, the Full-Rebuild Concept would not contribute to a cumulative impact on scenic resources visible from a State Scenic Highway.

As presented in Section 4.1, the Full-Rebuild Concept would have a less than significant impact to the existing visual character or quality of the site and its surroundings. The Full-Rebuild Concept proposes the replacement of existing electrical infrastructure, and thus represents only an incremental change to an existing viewshed. Numerous cumulative projects are located within 1 mile of the IC Project Alignment; potential cumulative effects on the visual character or quality of a site and its surroundings are most likely where one or more projects may be viewed, as landscape detail is most noticeable and objects generally appear most prominent when seen at this distance or nearer. The cumulative projects within 1 mile of the IC Project Alignment generally include modifications to existing roadways and other infrastructure, environmental restoration/improvement projects, the installation of large new infrastructure such as the new dam at Haiwee Reservoir and the new solar photovoltaic projects proposed in Inyokern and Daggett.

Impacts to the existing visual character or quality of the site and its surroundings have been identified as significant for project IC 2-1; the installation of replacement electrical infrastructure in this area would result in a less than significant impact, and thus would not contribute to a cumulatively significant impact. The impacts from projects IC 1-3 and IC 4-1 have been identified in scoping documents as potentially significant, but have not been fully evaluated. The installation of replacement electrical infrastructure in these areas would result in a less than significant impact, and thus would not be expected to contribute to a cumulatively significant impact. Other cumulative projects within 1 mile of the Full-Rebuild Concept alignment would have either no impacts to the existing visual character, or the impacts have been identified as less than significant. The installation of replacement electrical infrastructure in these areas would result in a less than significant impact, and thus would not contribute to a cumulatively significant impact.

The Full-Rebuild Concept would have a less than significant impact in terms of glare and new sources of light; therefore, no contribution to cumulative glare- or light-related impacts are expected.

4.21.2 Agriculture and Forestry Resources

As presented in Section 4.2, the Full-Rebuild Concept would result in no impacts for all agriculture and forestry-related CEQA criteria; therefore, the Full-Rebuild Concept would not contribute to any cumulative impact.

4.21.3 Air Quality

As presented in Section 4.3, the Full-Rebuild Concept would have a significant and unavoidable impact to air quality. In particular, the Full-Rebuild Concept's annual emissions of NO_x and CO and daily emissions of VOCs, NO_x and CO would exceed established significance thresholds. As further discussed in Section 4.3, the Full-Rebuild Concept is located in air basins that are classified as nonattainment for ozone and PM_{10}. Construction emissions of VOC and NO_x (ozone precursors) and CO emissions would exceed the applicable significance thresholds. Therefore, construction of the Full-Rebuild Concept would

result in a cumulatively considerable net increase of a criteria pollutant; this cumulative impact is significant and unavoidable.

The Full-Rebuild Concept's less than significant impacts in terms of creating objectionable odors and exposing sensitive receptors to substantial pollutant concentrations would not contribute to a cumulative impact: because the odors and pollutant concentrations disperse rapidly with distance, and because few (if any) of the identified cumulative projects would overlap the Full-Rebuild Concept's construction work in time or space and in proximity to a potential receptor, the Full-Rebuild Concept would not contribute to any cumulative impact.

4.21.4 Biological Resources

The geographical area evaluated for cumulative impacts on biological resources includes areas directly affected by construction as well as adjacent habitat potentially affected by construction activities. The geographical extent of the cumulative impact analysis also includes federal and state-regulated jurisdictional wetlands and other waters of the U.S.

Construction could affect plant, amphibian, reptilian, avian, and mammalian species identified as candidate, sensitive, or special-status species, and cumulative projects listed in Table 4.21-1 would have the potential for similar effects where those projects' activities occur in the presence or habitat of these species. As discussed in Section 4.4, all impacts associated with the Full-Rebuild Concept would be reduced to a less-than-significant level with the implementation of APMs. Because impacts to sensitive species and habitats during construction would be temporary and intermittent in nature (lasting only as long as construction work at a given site) and would be limited in their potential geographic scope, and localized, and because few (if any) of the identified cumulative projects would overlap the Full-Rebuild Concept's construction work in time or space, and because the cumulative projects would be expected to adhere to federal and state regulations promulgated for the protection of sensitive species, no cumulative impact to sensitive species or their habitats would be anticipated.

As stated in Section 4.4, approximately 8.1 acres of sensitive natural communities would be permanently impacted; this equates to approximately 1.3 percent of the total of sensitive natural communities mapped along the Project alignment. The small area of sensitive natural communities that would be permanently impacted would not result in a significant contribution to any cumulative impact to these communities and would not reduce the overall availability of these habitats.

The Full-Rebuild Concept would result in both temporary and permanent impacts to wetlands. Compliance with applicable state and federal regulations (including Section 404 and 401 of the Clean Water Act) and compliance with applicable permit conditions would reduce wetland impacts to less than significant. Few (if any) of the projects identified in Table 4.21-1 would result in impacts to wetlands, and thus no cumulative impact to wetlands is anticipated.

No component of the Full-Rebuild Concept would result in permanent interference to the movement of any species. Construction activities would be temporary, transient, and would affect only small, geographically-dispersed areas at any one time; these construction activities would not interfere substantially with the movement of any migratory wildlife species, although construction activities may interfere with the movement of individual animals. The cumulative projects also would have localized footprints and would not be expected to affect species movement within the region. For example, no new highways, levees, or other major infrastructure is planned. Therefore, the Full-Rebuild Concept's contribution to any cumulative impacts would not be cumulatively considerable and would be less than significant.

Full-Rebuild Concept construction and operation would not conflict with any local policies or ordinances protecting biological resources, including trees. Cumulative projects would be expected to comply with local policies, ordinances, and the conditions of applicable permits. Therefore, the Full-Rebuild Concept's contribution to any cumulative impact would not be cumulatively considerable and would be less than significant.

No Habitat Conservation Plans; Natural Community Conservation Plans; or other approved local, regional, or state habitat conservation plans exist for the Full-Rebuild Concept area. Therefore, the Full-Rebuild Concept would not contribute to a cumulative impact involving conflicts with adopted natural resource plans.

4.21.5 Cultural Resources

Text is under development, pending the results of a technical report.

4.21.6 Energy

As presented in Section 4.6, the Full-Rebuild Concept would result in no impacts under all energy-related CEQA criteria; therefore, the Full-Rebuild Concept would not contribute to any cumulative impact.

4.21.7 Geology and Soils

Geological hazards are generally site-specific and depend on localized geologic and soil conditions. The geographic scope of potential cumulative geological and soils impacts is limited to the immediate vicinity around each Full-Rebuild Concept construction and infrastructure site. As a result, they are not typically additive or cumulative in nature. In addition, cumulative projects would be expected to comply with applicable laws, regulations, ordinances, and permits, and would be expected to implement BMPs and SWPPPs where applicable. Therefore, the Full-Rebuild Concept's contribution to any cumulative impacts would not be cumulatively considerable and would be less than significant.

4.21.8 Greenhouse Gas Emissions

The geographical context for GHG and climate change effects includes the earth's atmosphere. GHGs released to the atmosphere generally have no effect locally but are correlated with rising global temperatures.

As presented in Section 4.8, Full-Rebuild Concept construction would result in emissions of GHGs from on-site construction equipment and off-site worker trips. Over the entire construction period of the Full-Rebuild Concept, approximately 71,134 MTCO2e would be emitted. GHG construction emissions from the Full-Rebuild Concept amortized over 30 years is approximately 2,371 MTCO2e. The 2,371 MTCO2e emissions associated with Full-Rebuild Concept construction would be well below the 25,000 MTCO2e threshold of significance established by the EKACPD. Therefore, the Full-Rebuild Concept would not generate, either directly or indirectly, GHG emissions that would have a significant impact on the environment. As a result, the Full-Rebuild Concept's contribution to any cumulative impacts would not be cumulatively considerable and would be less than significant.

As presented in Section 4.8, GHG emissions from construction of the Full-Rebuild Concept would fall well below the established numerical threshold of significance. Therefore, the Full-Rebuild Concept would not conflict with any applicable plan, policy, or regulation and would have a less than significant contribution to cumulative impacts resulting from any cumulative project's conflict with such plans, policies, or regulations.

4.21.9 Hazards and Hazardous Materials

The geographic scope for hazardous materials includes areas near Full-Rebuild Concept sites that could be affected by a release of hazardous materials, including schools within 0.25 miles. Impacts from such releases are usually site-specific and localized. The geographic scope also includes areas affected by the cumulative projects listed in Table 4.21-1 including downgradient air, water bodies, groundwater, and areas subject to wildland fire hazards. Materials delivery routes are also included to account for the potential impacts from a traffic accident-related spill.

There is no existing significant adverse cumulative condition relating to hazards and hazardous materials in the vicinity of the Full-Rebuild Concept, and the incremental and less than significant impacts of the Full-Rebuild Concept would not cause a significant adverse cumulative impact.

The Full-Rebuild Concept would be constructed on a site listed as a hazardous materials site pursuant to Section 65962.5; however, as identified in Section 4.9 impacts would be less than significant, and the less-than-significant impacts would not contribute to any cumulative impact as no cumulative projects are identified to occur proximate to Full-Rebuild Concept activities on this site.

The Full-Rebuild Concept would be constructed within an airport land use plan area, and within the vicinity of, and within 2 miles of, a public airport, public use airport, or private airstrip; however, as identified in Section 4.9 impacts would be less than significant, and the less-than-significant impacts would not contribute to any cumulative impact as no cumulative projects are identified to occur in these locations contemporaneous with the Full-Rebuild Concept.

The Full-Rebuild Concept would not interfere with an adopted emergency response plan or emergency evacuation plan, and therefore would not contribute to a cumulative impact.

Full-Rebuild Concept construction would result in less than significant impacts associated with the transport, use, disposal, or foreseeable upset of, or accidents involving, hazardous materials during construction. Cumulative projects would be expected to implement BMPs and adhere to all applicable laws and regulations to reduce to less than significant the potential impacts from hazards, including impacts associated with emissions or handling of hazardous or acutely hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school.

The potential for igniting vegetation would be minimized through the measures presented in Section 4.9. The cumulative projects would be expected to implement similar measures. Therefore, construction of the Full-Rebuild Concept would have a less than significant impact to risk of loss, injury, or death involving wildland fires, and the Full-Rebuild Concept's contribution to any cumulative impacts would not be cumulatively considerable and would be less than significant.

4.21.10 Hydrology and Water Quality

The geographic context for the cumulative impacts associated with hydrology and water quality consists of the watersheds and groundwater basins presented in Section 4.10. The Full-Rebuild Concept presents no impacts related to risk associated with tsunamis or seiches, and only incremental, less than significant impacts related to groundwater withdrawals, water quality standards, flooding and flood hazards, alteration of drainage patterns, and stormwater drainage systems. Many of these potential incremental impacts are negligible (i.e., impacts to groundwater) or specific to the immediate vicinity of the construction locations (i.e., alteration of drainage patterns). Due to the distance between the cumulative projects and the Full-Rebuild Concept locations, the incremental and less than significant effects that may

result from the Full-Rebuild Concept would not, in combination with effects generated by cumulative projects, result in a cumulatively considerable impact.

4.21.11 Land Use and Planning

As presented in Section 4.11, the Full-Rebuild Concept would result in no impacts under the land use and planning-related CEQA criteria; therefore, the Full-Rebuild Concept would not contribute to any cumulative impact.

4.21.12 Mineral Resources

As presented in Section 4.12, the Full-Rebuild Concept would result in no impacts under all mineral resources-related CEQA criteria; therefore, the Full-Rebuild Concept would not contribute to a cumulative impact.

4.21.13 Noise

Noise and vibration impacts are localized such that the geographic area in which cumulative impacts may occur is limited to the immediate vicinity of construction activities. None of the cumulative projects are expected to be conducted in a similar timeframe in close proximity to the Full-Rebuild Concept, and therefore there would be no cumulative noise- or vibration-related impacts during construction.

4.21.14 Population and Housing

As presented in Section 4.14, the Full-Rebuild Concept would result in no impacts under the population and housing-related CEQA criteria; therefore, the Full-Rebuild Concept would not contribute to any cumulative impact.

4.21.15 Public Services

The geographic scope for potential impacts on public services encompasses the local jurisdictions providing public services including Inyo, Kern, and San Bernardino counties as well as the City of Barstow.

Full-Rebuild Concept construction would not result in an increased demand for police or fire services; an increase in school enrollment; or an increase in the use of libraries, parks or other public facilities. Therefore, the Full-Rebuild Concept would have no contribution to any cumulative impacts.

4.21.16 Recreation

As presented in Section 4.16, the Full-Rebuild Concept would result in no impacts under all recreation-related CEQA criteria; therefore, the Full-Rebuild Concept would not contribute to a cumulative impact.

4.21.17 Transportation and Traffic

The geographic scope for cumulative transportation and traffic impacts includes the regional and local roadways that may be used to access the Full-Rebuild Concept or that could otherwise be impacted by construction of the Full-Rebuild Concept. The geographic scope also includes the bus routes and pedestrian and bike paths in the area.

Based on the number of daily vehicle trips generated during construction, and the implementation of APM TRA-1, the Full-Rebuild Concept would not create any inconsistency or conflict with an applicable plan, ordinance or policy that establishes measures of effectiveness, and therefore would not contribute to a cumulative impact in this regard.

Project construction would not change air traffic patterns or locations. SCE would implement FAA recommendations regarding the installation of marker balls, to the extent feasible. Helicopter operations would be conducted in accordance with FAA regulations per APM TRA-2. Few of the cumulative projects would likely include any air transportation, and therefore the Full-Rebuild Concept would not result in cumulative impacts to air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

The Full-Rebuild Concept would not introduce incompatible uses or design features such as changes to public roads. Therefore, the Full-Rebuild Concept would not contribute to any cumulative impact involving hazards due to a design feature or incompatible uses.

In combination with the fact that construction activities would be of short duration and performed in remote and largely-uninhabited areas, implementation of traffic control measures per APM TRA-1 would ensure that the Full-Rebuild Concept does not result in inadequate emergency access, even considering the effects of cumulative projects. Like SCE, cumulative projects would be expected to implement traffic control measures where feasible. Therefore, the Full-Rebuild Concept would have no contribution to any cumulative impacts.

4.21.18 Tribal Cultural Resources

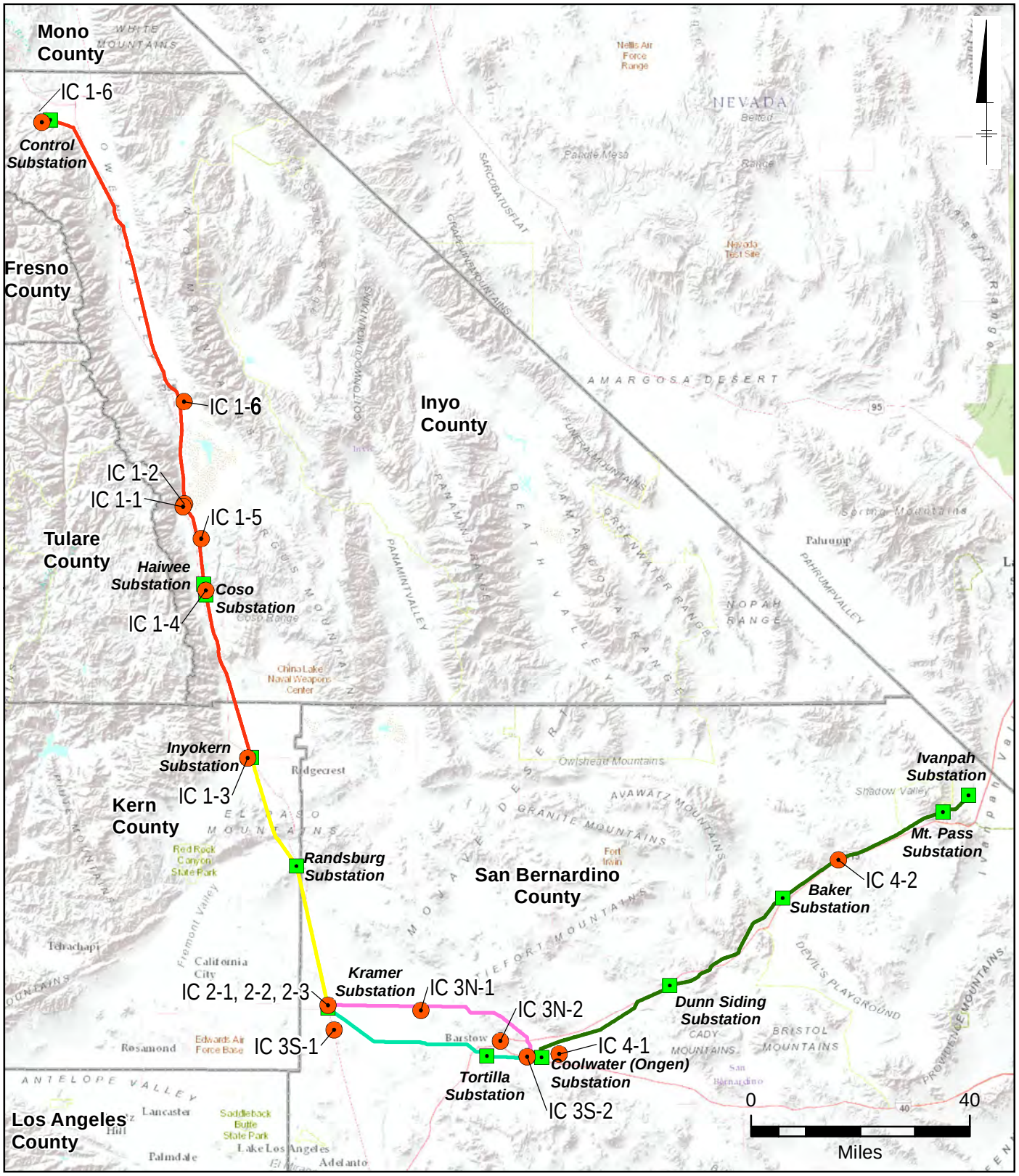
Text is under development, pending the results of a technical report.

4.21.19 Utilities and Service Systems

As presented in Section 4.19, the Full-Rebuild Concept would result in no impacts under all utilities and service systems-related CEQA criteria; therefore, the Full-Rebuild Concept would not contribute to any cumulative impact.

4.21.20 Wildfire

As presented in Section 4.20, the Full-Rebuild Concept would result in no or less than significant impacts under all wildfire-related CEQA criteria. Given that few of the cumulative projects temporally or spatially overlap the Full-Rebuild Concept, and that the less than significant impacts in terms of impairing an adopted emergency response plan or emergency evacuation plan and exposing people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes are inherently site-specific and geographically confined, the Full-Rebuild Concept would not contribute to any cumulative impact.



Legend

- Substation
- Cumulative Projects
- County
- Segment 1
- Segment 2
- Segment 3N
- Segment 3S
- Segment 4

IVANPAH-CONTROL PROJECT

CUMULATIVE PROJECTS

ARCADIS

FIGURE: 4.21-1

City: Div/Group: Created By: Last Saved By: adavis
Project (Project #)
Z:\GISProjects_ENV\SCE\SCE_TLLR\ArcGIS_Desktop\PEA_Figures\IC\Figure4-18-1_Cumulative Projects_IC.mxd 2/11/2019 10:15:00 AM

4.22 Growth-Inducing Impacts

An analysis of growth-inducing impacts was conducted for the Full-Rebuild Concept. This analysis addresses the ways in which the Full-Rebuild Concept could foster economic or population growth; or the construction of additional housing, either directly or indirectly in the surrounding environment in accordance with California Environmental Quality Act Guidelines Section 15126.2(d). Section 5.3, Growth-Inducing Impacts provides information regarding how construction of the Full-Rebuild Concept would not result in any growth-inducing impacts.

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