

AGENCY DRAFT VERSION 2

# Special-status Plant Salvage and Relocation Plan

West of Devers Upgrade Project  
Riverside and San Bernardino Counties, California

*Prepared for*

Southern California Edison

June 2017

*Prepared by*

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# Special-status Plant Salvage and Relocation Plan Checklist

## Applicable Agencies:

- |  |   |
|--|---|
| <input type="checkbox"/> Bureau of Indian Affairs                          | <input type="checkbox"/> Coachella Valley Conservation Commission         |
| <input checked="" type="checkbox"/> Bureau of Land Management              | <input type="checkbox"/> Morongo Band of Mission Indians                  |
| <input type="checkbox"/> California Department of Fish and Wildlife        | <input type="checkbox"/> Riverside County Regional Conservation Authority |
| <input checked="" type="checkbox"/> California Public Utilities Commission | <input type="checkbox"/> U.S. Fish and Wildlife Service                   |

## Applies in the Following Areas:

- |   |                                   |
|---|-----------------------------------|
| <input checked="" type="checkbox"/> BLM Lands             | <input type="checkbox"/> CV-MSHCP |
| <input type="checkbox"/> Morongo Reservation              | <input type="checkbox"/> WR-MSHCP |
| <input checked="" type="checkbox"/> San Bernardino County |                                   |

## Applies to the Following Project Components (if special-status plants occur):

- |  |   |   |
|--|---|---|
| <input checked="" type="checkbox"/> Transmission Line  | <input checked="" type="checkbox"/> Subtransmission | <input checked="" type="checkbox"/> Telecom |
| <input checked="" type="checkbox"/> Substations        | <input checked="" type="checkbox"/> Distribution    |   |
| <input checked="" type="checkbox"/> Construction Yards |   |   |

## Addresses the Following Measures:

FEIR/FEIS VEG-4a      Minimize and Mitigate Impacts to Special-status Plants

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# Acronyms and Abbreviations

°F	degrees Fahrenheit
APM	applicant proposed measure
BLM	Bureau of Land Management
BO	Biological Opinion
BRC	BioResource Consultants, Inc.
CAISO	California Independent System Operator
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CH2M	CH2M HILL Engineers, Inc.
CM	conservation measure
CNPS	California Native Plant Society
COI	certificate of inclusion
CPCN	Certificate of Public Convenience and Necessity
CPUC	California Public Utilities Commission
CRPR	California Rare Plant Rank
CVCC	Coachella Valley Conservation Commission
CV-MSHCP	Coachella Valley Multiple Species Habitat Conservation Plan
EO	Executive Order
ESA	Environmentally Sensitive Area
FEIR	Final Environmental Impact Report
FEIS	Final Environmental Impact Statement
FESA	federal Endangered Species Act
FGC	Fish and Game Code
GANDA	Garcia and Associates
GPS	global positioning system
kV	kilovolts
MM	mitigation measure
Morongo Reservation	Reservation Trust Lands of the Morongo Band of Mission Indians
MW	megawatts
MSHCP	Multiple Species Habitat Conservation Plan

ACRONYMS AND ABBREVIATIONS

NEPA	National Environmental Policy Act
PEA	Proponent's Environmental Assessment
Plan	Special-status Plant Salvage and Relocation Plan
Project	West of Devers Upgrade Project
PSE	Participating Special Entity
RSABG	Rancho Santa Ana Botanic Garden
RCA	Riverside County Regional Conservation Authority
ROD	Record of Decision
ROW	right-of-way
SCE	Southern California Edison
SR	State Route
U.S.C	United States Code
USFWS	U.S. Fish and Wildlife Service
Wildlife Agencies	U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife
WOD	West of Devers
WR-MSHCP	Western Riverside Multiple Species Habitat Conservation Plan

# Introduction

Southern California Edison (SCE) proposes to construct the West of Devers (WOD) Upgrade Project (Project) to increase the power transfer capability of the WOD 220-kilovolt (kV) transmission lines between Devers, El Casco, Vista, and San Bernardino substations. The Project is needed to facilitate the full deliverability of new electric generation resources being developed in eastern Riverside County, in an area designated by the California Independent System Operator (CAISO) for planning purposes as the Blythe and Desert Center areas. The Project, planned to be operational by 2021, would upgrade the existing WOD transmission line system by replacing the existing WOD 220-kV transmission lines and associated structures with higher-capacity transmission lines and structures, and making telecommunication improvements.

The purpose of this Special-status Plant Salvage and Relocation Plan (Plan) is to comply with mitigation measure (MM) VEG-4a from the Final Environmental Impact Report<sup>1</sup> (FEIR) and Final Environmental Impact Statement (FEIS) (Bureau of Land Management [BLM], 2016a), as presented in the Certificate of Public Convenience and Necessity (CPCN) (CPUC, 2016b) and Record of Decision (ROD) (BLM, 2016b), respectively. This Plan describes measures for special-status plant impact avoidance and minimization, and salvage and relocation methods for the specific locations of the Project described in Section 1.7.

## 1.1 Project Overview

The Project would upgrade the existing WOD system by replacing existing 220-kV transmission lines and associated structures with new, higher-capacity 220-kV transmission lines and structures, modifying existing substation facilities, removing and relocating existing subtransmission (66-kV) lines, removing and relocating existing distribution (12-kV) lines, and making various telecommunication improvements. In particular, the Project would:

- Upgrade substation equipment within SCE's existing Devers, El Casco, Etiwanda, San Bernardino, and Vista substations in order to accommodate continuous and emergency power on the upgraded WOD 220-kV transmission lines. Activities related to substation upgrades will take place within the existing, disturbed fence lines of the substations and are not addressed further in this Plan.
- Remove and upgrade the existing 220-kV transmission lines and structures primarily within the existing WOD corridor as follows:
  - Segment 1 would be approximately 3.5 miles long and extend south from San Bernardino Substation to the San Bernardino Junction. It would include the following existing 220-kV transmission lines: Devers–San Bernardino, Etiwanda–San Bernardino, San Bernardino–Vista, and El Casco–San Bernardino.
  - Segment 2 would be approximately 5 miles long and extend west from the San Bernardino Junction to Vista Substation. It would include the following existing 220-kV transmission lines: Devers–Vista No. 1 and Devers–Vista No. 2.
  - Segment 3 would be approximately 10 miles long and extend east from the San Bernardino Junction to El Casco Substation. It would include the following existing 220-kV transmission lines: Devers–Vista No. 1, Devers–Vista No. 2, El Casco–San Bernardino, and Devers–San Bernardino.

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<sup>1</sup> For the purpose of this Plan, "FEIR" refers to the FEIR (California Public Utilities Commission [CPUC], 2015) and Addendum to the FEIR Addendum (CPUC, 2016a).

- Segment 4 would be approximately 12 miles long and extend east from El Casco Substation to San Gorgonio Avenue in the City of Banning. It would include the following existing 220-kV transmission lines: Devers–Vista No. 1, Devers–Vista No. 2, Devers–El Casco, and Devers–San Bernardino.
- Segment 5 would be approximately 9 miles long and extend east from San Gorgonio Avenue in the City of Banning to the eastern limit of the Reservation Trust Lands of the Morongo Band of Mission Indians (Morongo Reservation) at Rushmore Avenue. It would include the following existing 220-kV transmission lines: Devers–Vista No. 1, Devers–Vista No. 2, Devers–El Casco, and Devers–San Bernardino.
- Segment 6 would be approximately 8 miles long and extend east from the eastern boundary of the Morongo Reservation to Devers Substation. It would include the following existing 220-kV transmission lines: Devers–Vista No. 1, Devers–Vista No. 2, Devers–El Casco, and Devers–San Bernardino.
- Remove a portion (approximately 2 miles) of the existing San Bernardino–Redlands–Timoteo and San Bernardino–Redlands–Tennessee 66-kV Subtransmission Lines from within the existing WOD right-of-way (ROW) and reconstruct as follows:
  - The relocated San Bernardino–Redlands–Timoteo 66-kV Subtransmission Line would be approximately 2 miles long and would reconnect to the San Bernardino–Redlands–Timoteo 66-kV Subtransmission Line inside Timoteo Substation.
  - The relocated San Bernardino–Redlands–Tennessee 66-kV Subtransmission Line would be approximately 3.5 miles long and would reconnect to the San Bernardino–Redlands–Tennessee 66-kV Subtransmission Line at Barton Road.
- Remove a portion of the existing Dental and Intern 12-kV distribution circuits within the WOD ROW and relocate the circuits as follows:
  - The relocated Dental 12-kV Distribution Circuit would be approximately 1.5 miles long and would reconnect to the existing Dental 12-kV circuit.
  - The relocated Intern 12-kV Distribution Circuit would be approximately 2.25 miles long and would reconnect to the Intern 12-kV circuit.
- Install telecommunication lines and equipment for the protection, monitoring, and control of transmission lines and substation equipment.

## 1.2 Project Location

The Project crosses the cities of Banning, Beaumont, Calimesa, Colton, Grand Terrace, Loma Linda, Palm Springs, Rancho Cucamonga, Redlands, San Bernardino, and Yucaipa, as well as unincorporated areas of Riverside and San Bernardino counties. The transmission corridor passes over Interstate 215 in San Bernardino County, as well as State Route (SR)-60, SR-79, SR-243, and SR-62 in Riverside County, and runs approximately parallel to the majority of the Interstate 10 corridor in both San Bernardino and Riverside counties. Figure 1-1 shows an overview of the Project and Study area.

The Project is located largely within an existing utility corridor in incorporated and unincorporated areas of Riverside and San Bernardino counties, within the San Bernardino Valley. The San Bernardino Valley region is bounded by the San Gabriel and San Bernardino Mountains to the north, San Jacinto Mountains to the east, and the Santa Ana Mountains and Pomona Valley to the south and west, respectively. The terrain of the Project area varies between gently sloping plains to steep ridges and drainages in the foothills. Elevations within the Project area range from approximately 1,050 to 3,000 feet above mean sea level with mountainous topography, lowlands and foothills, and relatively flat urban areas.

The Project is located in the South Coast Subregion and San Bernardino Mountains District of the Southwestern California Region of the California Floristic Province, as well as in the Sonoran Desert Region of the Desert Province, as described in *The Jepson Manual* (Baldwin et al., 2012). The South Coast Subregion extends along the Pacific Coast and expands inland to the San Geronio Pass at Banning. The region was dominated by coastal sage scrub and chaparral vegetation prior to urbanization. The San Bernardino Mountains District is characterized by a topographically well-defined mountain range. The Sonoran Desert Region occupies the southern one-third of the Desert Province and is known for being lower in elevation, warmer, and floristically distinct from the Mojave Desert Region.

The Project, which is divided into six segments for ease of discussion, traverses areas of various land uses and is subject to several federal, state, and local jurisdictions. Segment 1, Segment 2, and the western portion of Segment 3 are located in incorporated and unincorporated portions of San Bernardino County. The eastern portion of Segment 3, all of Segment 4, and very small areas of Segment 5 are located in the Western Riverside Multiple Species Habitat Conservation Plan (WR-MSHCP) area. Portions of Segment 5, excluding lands held in trust by the Bureau of Indian Affairs for the Morongo Band of Mission Indians (Morongo Reservation), and most of Segment 6, excluding small parcels of lands administered by the Bureau of Land Management (BLM), are located in the Coachella Valley Multiple Species Habitat Conservation Plan (CV-MSHCP) area. Figure 1-1 shows an overview of the Project and Study area.

## 1.3 Relevant Laws, Regulations, and Management Policies

The regulations and permits applicable to the Plan are summarized in this section. The federal and state regulations, along with the Project-specific requirements, provide the regulatory framework within which the Project must comply.

### 1.3.1 Federal Laws and Regulations

#### **National Environmental Policy Act**

BLM prepared the FEIS (BLM, 2016a) in accordance with the requirements of NEPA, 42 *United States Code* (U.S.C) Sections 4321 to 4370d as implemented by the Council on Environmental Quality Regulations, Title 40 of the Code of Federal Regulations (CFR) Parts 1500 to 1508, and BLM's NEPA guidance handbook (H-1790-1) (BLM, 2008). MMs to be implemented during the Project for the protection of environmental resources were presented in the FEIS.

### 1.3.2 State and Local Laws and Regulations

#### **California Environmental Quality Act**

CPUC prepared the FEIR (CPUC, 2015) pursuant to CEQA guidelines outlined in Title 14 *California Code of Regulations* section 15000 et seq. as amended. MMs to be implemented during the Project for the protection of environmental resources were also presented in the FEIR.

#### **California Native Plant Protection Act**

The Native Plant Protection Act of 1977 (California Fish and Game Code [FGC] Sections 1900–1913) gave the California Fish and Wildlife Commission the authority to designate native plants as endangered or rare and to protect these plants from take. Species that are considered by the California Native Plant Society (CNPS) to qualify for this status and meet the definitions of Section 1901, Chapter 10 (Native Plant Protection Act) or Sections 2062 and 2067 (California Endangered Species Act [CESA]) of the FGC are included on the California Rare Plant Ranks (CRPR) 1A, 1B, and 2. Plants with CRPRs of 3 and 4 do not automatically qualify for legal protection, but can be addressed in CEQA documents depending on specific site conditions. CRPR definitions are as follows (CNPS, 2006):

- 1A: Plants presumed to be extinct because they have not been seen or collected in the wild in California for many years. This rank includes plants that are both presumed extinct in California, as well as those plants that are presumed extirpated in California. A plant is extinct in California if it no longer occurs in or outside of California. A plant that is extirpated from California has been eliminated from California, but may still occur elsewhere in its range.
- 1B: Plants that are rare throughout their range with the majority of them endemic to California. Most of the plants of CRPR 1B have declined significantly over the last century.
- 2: Plants that are rare throughout their range in California, but are common beyond the boundaries of California. CRPR 2 recognizes the importance of protecting the geographic range of widespread species.
- 3: A review list for plants for which there is inadequate information to assign them to one of the other lists or to reject them.
- 4: A watch list for plants that are of limited distribution or infrequent throughout a broader area in California and their vulnerability or susceptibility to threat appears relatively low at this time.

### 1.3.3 Regional Habitat Conservation Plans

The Western Riverside Multiple Species Habitat Conservation Plan (WR-MSHCP) and Coachella Valley Multiple Species Habitat Conservation Plan (CV-MSHCP) serve as comprehensive, multijurisdictional habitat conservation plans pursuant to both Section 10(a)(1)(B) of FESA and the California Natural Communities Conservation Planning Act, which focuses on the conservation of species and their associated habitats in their respective plan areas. According to their respective Implementing Agreements, any regional public facility provider (e.g., a utility company or a public district or agency) that operates and/or owns land within the plan areas, such as SCE, may request to participate in the MSHCP as a Participating Special Entity (PSE). The MSHCPs allows PSEs to obtain authorization for “take” of both federal and/or state-listed species for activities covered by the plans.

PSE activities must comply with the terms and requirements of each MSHCP and its Implementing agreement and permits. The PSE application is reviewed by the Riverside County Regional Conservation Authority (RCA) for the WR-MSHCP and the Coachella Valley Conservation Commission (CVCC) for the CV-MSHCP followed by a concurrence review by the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW), the latter two agencies collectively referred to as the “Wildlife Agencies.” For regional utility projects, PSEs will pay a fee or take such other actions as may be agreed to by RCA/CVCC and the Wildlife Agencies.

SCE applied for PSE status for each MSHCP. In doing so, documents demonstrating consistency with the MSHCPs were prepared for review by RCA and CVCC. The application materials included avoidance, minimization, and mitigation measures intended to ensure biologically equivalent or superior preservation of the MSHCP resources. Those measures were included in the PSE application materials, and additional conditions are included in the certificates of inclusion (COIs) issued December 2016 for the WR-MSHCP, and May 2017 for the CV-MSHCP.

## 1.4 Project-specific Requirements

This Plan was prepared to address FEIR and FEIS MM VEG-4a. A Special-status Plant Salvage and Relocation Plan is listed as a submittal requirement for MM VEG-4a. MM VEG-4a states:

***Minimize and mitigate impacts to special-status plants.***

***Pre-construction survey.*** SCE shall conduct focused surveys for federal- and state-listed and other special-status plants. All special-status plant species (including listed threatened or

*endangered species, and all CRPR 1A, 1B, 2, 3, and 4 ranked species) impacted by project activities shall be documented in pre-construction survey reports. Surveys shall be conducted during the appropriate season (i.e., when flowering) in all suitable habitat located within the project disturbance areas and access roads and within 100 feet of disturbance areas and access roads, and any additional area where direct or indirect effects to soils or vegetation could affect special-status plants (if present). Surveys shall be conducted by a qualified botanist. The field surveys and reporting must conform to current CDFW botanical field survey protocol (CDFG, 2009) or more recent updates, if available. The reports will describe any conditions that may have prevented previously reported or previously undocumented target species from being located or identified (e.g., poor rainfall, recent grazing, or wildfire). In some cases, follow-up surveys may be necessary to adequately evaluate impacts. Prior to construction, SCE shall submit pre-construction field survey reports along with maps showing locations of survey areas and special-status plants to the CPUC and BLM for review and approval in consultation with CDFW and USFWS.*

*If federally- or state-listed plants would be affected, SCE shall notify BLM, USFWS, and CDFW to obtain the appropriate permits from CDFW and USFWS and comply with permit requirements. Additional conservation measures to protect or restore listed plant species or their habitat may be required by BLM, CDFW, or USFWS before impacts are authorized.*

**Native cactus and Yucca.** *Most native cactus and shrubby Yucca species (Joshua tree and Mohave yucca) can be successfully salvaged and transplanted, and yuccas often provide an important vertical component to wildlife habitat. Therefore, native cactus (excluding chollas in the genus *Cylindropuntia*) and yuccas (excluding chaparral yucca, *Y. whipplei*), shall be avoided or salvaged according to the strategies described below.*

**Mitigation.** *SCE shall mitigate impacts to any state or federally listed plants or CRPR 1 or 2 ranked plants that may be located on the project disturbance areas or surrounding buffer areas through one or a combination of the following strategies.*

*Avoidance of special-status plants will be the preferred strategy wherever feasible. Where avoidance is not feasible, and the project would directly or indirectly affect more than 10 percent of a local occurrence<sup>2</sup> by either number of plants or extent of occupied habitat, SCE shall prepare and implement a mitigation plan to consist of offsite compensation. If offsite compensation is infeasible (e.g., if suitable occupied habitat is not available), then salvage, horticultural propagation, and offsite introduction may be implemented to mitigate the impact.*

**Avoidance.** *Where feasible, towers, access roads, and other project work areas shall be located to avoid impacts to special-status plants. Effective avoidance through project design shall include a buffer area surrounding each avoided occurrence, where no project activities will take place. The buffer area will be clearly staked, flagged, and signed for avoidance prior to the beginning of ground-disturbing activities, and maintained through-out the construction phase. The buffer zone shall be of sufficient size to prevent direct or indirect disturbance to the plants from construction activities, erosion, inundation, or dust. The size of the buffer will depend upon the proposed use of the immediately adjacent lands and the plant's ecological requirements (e.g., sunlight, moisture, shade tolerance, water availability, edaphic physical and chemical characteristics), to be specified by a qualified botanist. At minimum, the buffer for trees or shrubs species shall be equal to twice the drip line (i.e., two times the distance from the trunk to the canopy edge) to protect and preserve the root systems. The buffer for herbaceous species shall be a minimum of 50 feet from the perimeter of the occupied habitat or the individual. If a*

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<sup>2</sup> An occurrence for a plant is defined as any population or group of nearby populations located more than 0.25 mile from any other population.

*smaller buffer is necessary due to other project constraints, SCE will develop and implement site-specific monitoring and put other measures in place to avoid the take of the species, with the approval of the CPUC and BLM, in consultation with USFWS and CDFW.*

**Offsite compensation.** *SCE shall provide compensation lands consisting of habitat occupied by the impacted CRPR 1 or 2 ranked plants at a 1:1 ratio of acreage and number of plants for any occupied habitat affected by the project. Occupied habitat will be calculated on the project site and on the compensation lands as including each special-status plant occurrence and a surrounding 100-foot buffer area. Offsite compensation shall be incorporated into the project's Habitat Compensation Plan (under Mitigation Measure VEG-1e), for review and approval by the CPUC and BLM in consultation with CDFW and USFWS.*

**Salvage.** *SCE shall consult with horticultural experts at regional institutions such as Rancho Santa Ana Botanic Garden (RSABG) regarding the feasibility and likely success of salvage and relocation efforts for each species to be salvaged. If salvage is deemed to be feasible, based on prior success with the species, then SCE shall prepare and implement a Special-status Plant Salvage and Relocation Plan, to be reviewed and approved by the CPUC and BLM, in consultation with CDFW, USFWS, and the horticultural expert, prior to direct or indirect disturbance of any occupied habitat. For special-status plants, the goal shall be establishment of a new viable occurrence, equal or greater in extent and numbers to the affected occurrence. For cacti and yuccas, the goal shall be maximum practicable survivorship of salvaged plants. The Plan will include at minimum: (a) species and locations of plants identified for salvage; (b) criteria for determining whether an individual plant is appropriate for salvage and relocation; (c) the appropriate season for salvage; (d) equipment and methods for collection, transport, and re-planting plants or recreating seed banks, to retain intact soil conditions and maximize success; (e) for shrubs, cacti, and yucca, a requirement to mark each plant to identify the north-facing side prior to transport, and replant it in the same orientation; (f) details regarding storage of plants or seed banks for each species; (g) location of the proposed recipient site, and detailed site preparation and plant introduction techniques for top soil storage, as applicable; (h) a description of the irrigation, weed control, and other maintenance activities; (i) success criteria, including specific timeframe for survivorship and reproduction of each species; and (j) a detailed monitoring program, commensurate with the Plan's goals.*

*Annual monitoring reports<sup>3</sup> shall be submitted to CPUC and BLM. Reports shall include, but not be limited to, details of plants salvaged, stored, and transplanted (salvage and transplanting locations, species, number, size, condition, etc.); adaptive management efforts implemented (date, location, type of treatment, results, etc.); and evaluation of success of transplantation.*

**Horticultural propagation and offsite introduction.** *If salvage and relocation is not believed to be feasible for special-status plants, then SCE shall consult with RSABG, or another qualified entity, to develop an appropriate experimental propagation and relocation strategy, based on the life history of the species affected. The Plan will include at minimum: (a) collection and salvage measures for plant materials (e.g., cuttings), seed, or seed banks, to maximize success likelihood; (b) details regarding storage of plant, plant materials, or seed banks; (c) location of the proposed propagation facility, and proposed methods; (d); time of year that the salvage and other practices will occur; (e) success criteria; and (f) a detailed monitoring program, commensurate with the Plan's goals.*

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<sup>3</sup> FEIS language calls for quarterly and annual monitoring reports. (BLM, 2016)

**Implementation locations outside of MSCHPs:** This mitigation measure shall apply to all lands in San Bernardino County, on all BLM lands, and they are recommended for implementation on Morongo Tribal Lands.

**Implementation locations for WR-MSHCP and CV-MSHCP:** If SCE does not obtain PSE status under the WR-MSHCP or CV-MSHCP, this mitigation measure shall apply in its entirety within the relevant MSHCP area. The Pre-construction Survey and Native Cactus and Yucca portions of this mitigation measure shall apply within both MSHCP areas regardless of SCE’s PSE status. If SCE obtains PSE status under either MSHCP, mitigation for the project’s impacts to special-status plants covered under the Plan may be implemented according to the requirements of the MSHCP, and the remainder of this mitigation measure will not apply within the MSHCP area for species covered under the Plan. For potential impacts to special-status plants not covered under the Plan, this measure will apply in full.

## 1.5 Lead Agencies

Lead agencies have discretionary approval over the Project and are responsible for reviewing aspects of the measures documented in this Plan. CPUC is the state lead agency responsible for compliance with CEQA. BLM is the federal lead agency responsible for compliance with NEPA. In addition to CPUC and BLM, consultation with CDFW, USFWS, and a horticultural expert at a regional institution such as Rancho Santa Ana Botanic Garden (RSABG) is required.

## 1.6 Plan Goals and Objectives

The purpose of this Plan is to outline methods for the salvage and relocation of special-status plants when Project impacts are unavoidable. The primary goal of this Plan is to offset Project impacts to special-status plant species. Because some mitigation actions fall under the jurisdiction of other Project resource management plans, this Plan will refer to other plans when appropriate.

## 1.7 Implementation Locations

In accordance with MM VEG-4a, the measures addressing special-status plant salvage apply for the Project components in San Bernardino County, on BLM Lands, and within MSHCP areas for special-status plant species not covered by the MSHCP(s). Within MSHCP areas, avoidance, minimization, and mitigation for special-status plants covered under the MSHCP will be addressed in accordance with the conditions associated with the Participating Special Entity COIs issued by the RCA and CVCC for the WR-MSHCP and CV-MSHCP, respectively. Timing

The measures described in this Plan are applicable during the pre-construction, construction, and post-construction/restoration phases of the Project, as shown in Table 1-2.

**Table 1-2. Timing Applicability**  
*Special-status Plant Salvage and Relocation Plan*

Measure	Period		
	Pre-construction	Construction	Post-construction/ Restoration
FEIR/FEIS VEG-4a	☒	☒	☒

# Focused Special-status Plant Surveys

Focused botanical surveys were conducted for the Project in 2011, 2012, 2013, 2015, 2016, and are ongoing in 2017. Surveys that targeted identification of special-status plant species include the following:

- Garcia and Associates, Inc. (GANDA). 2011. *West of Devers Project Habitat Assessment Report*. November 23.
- BioResource Consultants, Inc. (BRC) 2013. *Botanical Resources of the West of Devers Upgrade Project, Riverside and San Bernardino Counties, California*. September.
- CH2M HILL Engineers, Inc. (CH2M). 2016a. *2015 Special-status Plant Survey Results, West of Devers Upgrade Project, San Bernardino and Riverside Counties, California*. April.
- CH2M HILL Engineers, Inc. (CH2M). 2017. *2016 Special-status Plant Survey Results, West of Devers Upgrade Project, San Bernardino and Riverside Counties, California*. March.

Surveys are ongoing in 2017, and the consolidated results of those surveys will be provided to CPUC and BLM as they become available after surveys for late-blooming plants are completed.

## 2.1 Summary of Methods

The Project Study Area is generally defined as the locations where work may be performed, plus the maximum survey buffer for any given area of the Project. Survey buffers for special-status plant surveys conducted in 2012 were 500 feet from the existing transmission line ROW. For botanical surveys conducted in 2013, surveys were initiated from the edge of the 500-foot buffer used in the 2012 surveys to cover additional disturbance areas associated with external Project elements that extended beyond the existing WOD corridor. In 2015, 2016, and 2017, botanical surveys included a 100-foot buffer around disturbance areas and a 50-foot buffer around access roads.

Botanical surveys of the WOD Project were conducted during the typical blooming periods for target species, generally during the spring and summer months in 2012, 2013, 2015, 2016, and 2017. Literature and database searches were conducted prior to starting botanical field surveys. CDFW's California Natural Diversity Database and the CNPS Inventory of Rare and Endangered Plants were queried to identify occurrences of special-status plant species previously reported within the WOD Project area. The Consortium of California Herbaria and Calflora online databases were also consulted to determine which species have been reported from within or adjacent to the WOD Project Study Area. In addition, reconnaissance surveys were conducted prior to starting surveys during each period, and/or local experts were consulted to determine blooming status of target plants.

The 2012 and 2013 surveys were conducted in the course of preparing the PEA (SCE, 2013). Surveys were conducted in March, April, and May, and included the entire transmission corridor plus a 500-foot buffer on either side of the existing ROW. In 2013, follow-up surveys were conducted in April and May and covered features (i.e., telecommunication lines, access roads, and staging yards) extending outside the 500-foot ROW buffer used in the 2012 surveys plus 200- to 250-foot buffers.

In 2015, botanical surveys incorporated changes in engineering design and surveyed areas included a 100-foot buffer around potential disturbance areas and a 50-foot buffer around existing and proposed access roads. Phase 1 surveys were conducted in April 2015 using March 2015 engineering design, and Phase 2 surveys were conducted June through July 2015 and adjusted to incorporate May 2015 engineering design.

The 2016 surveys were limited to habitats of previously observed special-status species and species with potential to occur along subtransmission, distribution, and telecommunications routes, plus transmission elements in Coachella Valley milk-vetch (*Astragalus lentiginosus* var. *cochellae*) modeled habitat.

In 2017, comprehensive special-status plant surveys were initiated. The survey area included disturbance areas based on January 31, 2017, engineering design, plus a 100-foot buffer and 50-foot buffer for access roads. Phase 1 was completed in March, and a follow-up survey to address species not found in an identifiable condition was conducted in April. Surveys for summer and fall blooming species are ongoing. The results of those surveys will be provided to CPUC and BLM as they become available.

Pedestrian surveys for special-status plants were conducted by walking parallel line transects spaced approximately 5 to 10 meters apart in suitable habitats. Transect spacing was adjusted depending on topography and habitat to ensure visual coverage of suitable habitat areas, where access was permitted. Points and polygons representing the locations of special-status plants and populations of special-status plants were collected using the handheld GPS units loaded with predetermined data dictionaries developed to collect all pertinent information associated with each occurrence. Each surveyor collected field notes, including representative photographs of special-status species.

Representative specimens of plants that could not be identified to species level in the field were collected and identified using taxonomic keys, descriptions, and illustrations in reference manuals such as *The Jepson Manual: Vascular Plants of California* (Baldwin et al., 2012), *The Jepson Manual: Higher Plants of California* (Hickman, 1993), and *A Flora of California* (Munz, 1974). Scientific papers and online resources such as Calflora (2015), eflora edition of *The Jepson Manual* (Costea and Reveal, 2012; McNeal, 2012; Murdock, 2012), and CalPhotos (2012) were also referenced as required.

## 2.2 Summary of Results

In accordance with MM VEG-4a, special-status plants requiring mitigation include state- or federally listed plants or CRPR 1 or 2 plants. Table 2-1 presents special-status plant species meeting these criteria observed within 100 feet of Project disturbance areas in San Bernardino County, on BLM lands, and as applicable in the MSHCP. The locations of the observed plants are shown on Figure 2-1.

Table 2-1. Special-status Plants Known to Occur in San Bernardino County, on BLM Lands, and/or in the MSHCP Areas (if not Covered Species)

*Special-status Plant Salvage and Relocation Plan*

<b>Scientific Name</b>	<b>Common Name</b>	<b>Status</b>	<b>Habitat and Distribution</b>	<b>Bloom Period</b>	<b>Occurrence Information</b>
<i>Abronia villosa</i> var. <i>aurita</i>	<b>Chaparral sand-verbena</b>	CRPR: 1B.1 BLM: S	Sandy areas in chaparral and coastal sage scrub and improbably in desert dunes or other sandy areas, below 5,300 feet elevation. In California, reported from Riverside, San Diego, Imperial, Los Angeles, and Ventura counties. Believed extirpated from Orange County. Also reported from Arizona and Mexico (Baja California). Plants reported from desert communities are likely misidentified.	Blooms mostly March through August (annual or perennial herb)	Observed during all surveys conducted for the Project along the transmission from approximately Windhaven Road to Whitewater Canyon. See Figure 2-1, pages 13-17.

Table 2-1. Special-status Plants Known to Occur in San Bernardino County, on BLM Lands, and/or in the MSHCP Areas (if not Covered Species)

*Special-status Plant Salvage and Relocation Plan*

<b>Scientific Name</b>	<b>Common Name</b>	<b>Status</b>	<b>Habitat and Distribution</b>	<b>Bloom Period</b>	<b>Occurrence Information</b>
<i>Mentzelia tricuspis</i>	<b>Spiny-hair blazing star</b>	CRPR: 1B.2 BLM: S	Inhabits sandy, gravelly slopes and washes, and around Mojavean desert scrub, from 500 to 4,200 feet. Known from fewer than 20 extant occurrences. Occurrences from Riverside County need quads and verification. Possibly threatened by renewable energy development.	March–May (annual herb)	Observed in 2012 in Segment 6 along an existing access road north of structures 6N29 and 6N30 on BLM land, but was not observed during 2015 or 2017 surveys. See Figure 2-1, page 11. Due to location along an existing access road, avoidance is likely feasible.
<i>Selaginella eremophila</i>	<b>Desert spike-moss</b>	CRPR: 2B.2 BLM: —	Shaded sites in gravelly soils and among rocks or in crevices from 700 to 3,000 feet elevation in Sonoran desert scrub.	Reproductive mostly in June (perennial herb)	Observed in 2012 along an existing access road near structure 6N31 area), but was not observed during the April 2015 or 2017 surveys. See Figure 2-1, page 10. Due to location along an existing access road, avoidance is likely feasible.
<i>Chorizanthe xanti</i> var. <i>leucotheca</i>	<b>White-bracted spineflower</b>	CRPR: 1B.1 BLM: S	Sandy to gravelly places, generally in Mojave desert scrub and pinyon and juniper woodland at 900 to 4,000 feet elevation. Reported from Los Angeles, Riverside, and San Bernardino counties ( Roberts et al., 2004). Mostly localized in the eastern San Bernardino Mountains of San Bernardino County and on the eastern slopes of the San Jacinto Mountains in Riverside County.	April–June (annual herb)	Observed within and surrounding the San Gorgonio river within the Morongo reservation, as well as another population adjacent to Bluff Street in the city of Banning, within the MSHCP area. See Figure 2-1, page 1. The populations are located in the wash adjacent to work areas and an existing access road. Therefore, avoidance is likely feasible. Not expected to occur in San Bernardino County.
<i>Chorizanthe parryi</i> var. <i>parryi</i>	<b>Parry's spineflower</b>	CRPR: 1B.2 BLM: S WR-MSHCP	Sandy or rocky soils in chaparral, coastal scrub, or woodlands at 100 to 5,600 feet elevation. Known only from Los Angeles, Riverside, and San Bernardino counties.	April–June (annual herb)	Observed during all surveys within and surrounding the San Gorgonio river within the Morongo reservation, as well as near Millard Canyon Road in the CV-MSHCP. See Figure 2-1, page 2. The locations within the CV-MSHCP are along the edges of existing access roads. Avoidance may be feasible.

Notes:

Status Definitions:

BLM: S = Sensitive

CRPR: List 1 = Rare or Endangered in California and elsewhere

Additional CRPR 1 and 2 special-status plant species were identified as having the potential to occur within the Project ROW in the locations addressed by this Plan. Potential for these plants to occur within the Project ROW is based on each species' known geographical range, habitat requirements, and historical location data. Table 2-2 lists CRPR 1 and 2 special-status plants with potential to occur in the Project areas addressed by this Plan.

**Table 2-2. Special-status Plants with Potential to Occur on BLM Lands, in San Bernardino County, and/or in the MSHCP Areas (if not Covered Species)**

*Special-status Plant Salvage and Relocation Plan*

<b>Scientific Name</b> <b>Common Name</b>	<b>Status</b>	<b>Habitat and Distribution</b>	<b>Bloom Period</b>	<b>Occurrence Probability</b>
<i>Allium marvinii</i> <b>Yucaipa onion</b>	CRPR: 1B.1 BLM: S WR- MSHCP	Openings in clay soils in chaparral. Known only from the Yucaipa and Beaumont areas of the San Bernardino Mountains; 2,500 to 3,500 feet elevation.	April–May (perennial herb, bulb)	<b>Low.</b> Observed during 2012 and 2013 surveys (BRC, 2013) and 2015 and 2017 (CH2M) surveys in the WR-MSHCP area. The species has the potential to occur within the San Bernardino County portions of the Project Area, but was not observed. Known occurrences are within the WR-MSHCP, where it is a Covered Species.
<i>Centromadia pungens</i> ssp. <i>laevis</i> <b>Smooth tarplant</b>	CRPR: 2B.2 BLM: – WR- MSHCP	Alkaline areas in chenopod scrub, meadows, playas, riparian woodland, valley and foothill grassland below 1,600 feet elevation. Known from Riverside and San Bernardino counties, extirpated from San Diego County.	April– November (annual herb)	<b>Low.</b> Located within the WR-MSHCP area near the El Casco Substation. However, not observed on BLM lands or the San Bernardino County portions of the Project.
<i>Symphytotrichum defoliatum</i> <b>San Bernardino aster</b>	CRPR: 1B.2 BLM: S	Vernally wet sites (such as ditches, streams, and springs) in many plant communities below 6,700 feet elevation. In California, known from Ventura, Kern, San Bernardino, Los Angeles, Orange, Riverside, and San Diego counties. May also occur in San Luis Obispo County. In the western Riverside County area, this species is scarce, and documented only from Temescal and San Timoteo Canyons ( <i>The Vascular Plants of Western Riverside County, California</i> . Roberts et al., 2004).	July– November (perennial herb)	<b>Low.</b> Not observed during focused surveys, but documented from “El Casco, San Timoteo Canyon” in 1951 (CNDDDB #24).

Notes:

Status Definitions:

BLM: S = Sensitive

California Rare Plant Rank (CRPR):

1B = plants rare, threatened or endangered in California and elsewhere

2 B= plants rare, threatened, or endangered in California, but more common elsewhere

No federally or state-listed or CRPR 1 or 2 cactus or yucca species are known or expected to occur in the Project area. Therefore, cactus and yucca species are not discussed further.

# Mitigation Approach

This Plan summarizes the mitigation approach for special-status plants, including a framework for salvage efforts that will begin prior to ground-disturbing activities, if appropriate.

## 3.1 Focused Surveys

In accordance with MM VEG-4a, SCE will conduct focused surveys for special-status plant species, including listed species and all CRPR 1A, 1B, 2, 3, and 4 species, during the appropriate blooming periods prior to the initial start of ground-disturbing activities. Focused surveys will confirm a full inventory of the number of plants or extent of occupied habitat for each affected species. This baseline data will be used for impact analysis and, ultimately, to determine if salvage efforts are required and the success criteria for each occurrence if salvage is executed. The survey areas will include suitable habitat located within the Project disturbance areas and access roads, plus a 100-foot buffer and any additional areas where direct or indirect effects to soils or vegetation could affect special-status plants (if present). The surveys will be conducted by qualified botanists using the current CDFW botanical field survey protocol (CDFG, 2009) or more recent updates, if available. The surveys will be conducted for the entirety of the Project. However, salvage efforts for special-status plants pursuant to MM VEG-4a will only be conducted for the portions of the Project in San Bernardino County, and on BLM lands. The locations of each special-status plant will be recorded using a GPS-enabled handheld data collector. Special-status plants determined to be unavoidable will be designated for salvage.

SCE will prepare survey reports and mapping of the locations of special-status plants found for review by CPUC and BLM, in cooperation with the USFWS and CDFW, as appropriate. The reports will describe any limitations of results (i.e., conditions that may have prevented target species from being located or identified).

## 3.2 Pre-Construction Clearance Surveys

In addition to focused surveys conducted as described in Section 3.1, SCE will conduct pre-construction clearance surveys within 10 days prior to the start of construction (consistent with MM WIL-1a). Surveys will be conducted by qualified botanists familiar with the flora in the Project area. Pre-construction clearance surveys for special-status plant species will be conducted in suitable habitats within 100 feet of Project disturbance areas and access roads. The purpose of the surveys will be to identify plants that may have germinated since the focused surveys, if possible, and to identify the locations of individual plants and the extent of populations for the purpose of avoidance, to the extent feasible. Surveyors will record the locations using GPS and mark each population, as appropriate (Section 3.3), for avoidance. SCE will submit pre-construction survey reports and updated mapping showing the locations of special-status plants and other sensitive resources to CPUC and BLM for review.

## 3.3 Avoidance Buffers

Prior to the start of ground- or vegetation-disturbing activities, buffers will be established around each avoidable special-status plant/population by a qualified biologist. This includes special-status plant occurrences identified during focused botanical surveys and pre-construction clearance surveys. The purpose is to facilitate avoidance of special-status plants and adjacent suitable soils and presumed seed bank. The buffer area will be clearly staked, flagged, and signed for avoidance and maintained throughout the construction phase. The buffer zone shall be of sufficient size to prevent direct or indirect disturbance to the plants from construction activities, erosion, inundation, or dust. The size of

the buffer will depend upon the proposed use of the immediately adjacent lands and the plant's ecological requirements (e.g., sunlight, moisture, shade tolerance, water availability, edaphic physical, and chemical characteristics), to be specified by a qualified biologist. At minimum, the buffer for trees or shrubs species shall be equal to twice the drip line (i.e., two times the distance from the trunk to the canopy edge) to protect and preserve the root systems. The buffer for herbaceous species shall be a minimum of 50 feet from the perimeter of the occupied habitat or the individual. If a smaller buffer is necessary due to other project constraints, SCE will develop and implement site-specific monitoring and put other measures in place to avoid the take of the species, with the approval of CPUC and BLM, in consultation with USFWS and CDFW. No Project activities will be permitted within buffer zones.

### 3.4 Offsite Compensation

Avoidance is the first course of action. However, where avoidance is not feasible, and where the project would directly or indirectly affect more than 10 percent of a local occurrence by either number of plants or extent of occupied habitat, SCE will provide compensation lands consisting of habitat occupied by the impacted CRPR 1 or 2 ranked plants at a 1:1 ratio of acreage and number of plants for any occupied habitat affected by the project. Occupied habitat will be calculated on the project site and on the compensation lands as including each special-status plant occurrence and a surrounding 100-foot buffer area. Occupied habitat will be determined based on the cumulative results of plant surveys conducted for the Project prior to the initiation of ground-disturbing activities. Individual plants or groups of plants observed during 2012 and 2013 surveys, but not observed during subsequent surveys leading up to and during construction, will be considered absent. Offsite compensation will be incorporated into the project's Habitat Compensation Plan (under MM VEG-1e), for review and approval by CPUC and BLM in consultation with CDFW and USFWS.

### 3.5 Salvage and Relocation Procedures

In the event that any state- or federally listed plants or CRPR 1 or 2 plants cannot be avoided, if the Project would directly or indirectly affect more than 10 percent of a local occurrence, and if offsite compensation is not feasible, salvage activities will be implemented for plant occurrences within direct-impact areas.

Salvage of target plant species will consist of collecting seed and/or root stock, topsoil salvage, bulb salvage, seed and root storage at an appropriate facility, reseeding, post-construction monitoring, and maintenance. Salvaged plant stock will be replanted into appropriate receptor sites near the disturbance areas from which they were salvaged. Where feasible, salvaged plant stock may be replanted directly into temporary disturbance areas in conjunction with post-construction restoration. Receptor sites will be identified during the preconstruction surveys. To increase survival probability and overall plant success, salvaged plants are not proposed to be harvested a second time for replacement onto the Project site during post-construction restoration.

The following salvage methods will be adapted to site-specific conditions based on observations during the preconstruction field surveys:

- Salvage of seed and root stock will be conducted under the direction of a SCE-designated Restoration Specialist and in coordination with a qualified plant conservation institution or native nursery.
- To the extent possible, salvage activities will be scheduled to maximize seed production. If sufficient seed is not available at the time of salvage (if salvage occurs in a drought year and fruit production is low), collected seed may be bulked by a qualified native plant nursery to produce a larger quantity of seed.

- If possible, seed will be collected from plants in the Project area that cannot be avoided during construction.
- Root stock may be salvaged as a potential propagation technique for some species (i.e., bulbs or spike moss). To ensure availability of material for mitigation and adaptive management, vegetatively reproducing species may be held at a qualified plant conservation institution or native nursery where materials shall be increased through division or other propagation methods prior to onsite mitigation. Seeds, bulbs, or divisions resulting from nursery propagation may be used as backup for additional mitigation if success criteria are not met and to allow for “over planting” during the initial mitigation attempt to increase the probability of success.
- Seed may be planted or broadcast directly in the temporary disturbance areas when construction activities have been completed or in a nearby area.
- Ecological and microhabitat information will be collected from each salvage location at the time of salvage to assist in transplanting success.
- To ensure adequate availability of materials for mitigation, germination tests will be conducted on seed materials. Salvaged seeds and bulbs may be used to bulk additional seeds or bulbs where needed. Ultimately, mitigation planting quantities will be determined by material availability and expected germination success. If replanting or reseeded is required, additional bulking may occur to ensure backup materials will continue to be available.

Through consultation with horticultural experts at RSABG (Sale and Fraga, 2016, pers. comm.), each species in Table 3-1 was assessed for salvage suitability and for the appropriate salvage method. Salvage techniques are described in the sections that follow.

**Table 3-1. Preferred Salvage Techniques for Special-status Plant Species Occurring or Potentially Occurring within the Study Area**

*Special-status Plant Salvage and Relocation Plan*

<b>Scientific Name</b> <b>Common Name</b>	<b>Lifeform</b>	<b>Preferred Salvage Technique and Rationale<sup>a</sup></b>
<i>Abronia villosa</i> var. <i>aurita</i> Chaparral sand-verbena	Annual or perennial herb	<b>Seed Collection and Seeding, Topsoil Salvage.</b> Large size and accessibility of seed conducive to collection; <i>Abronia</i> is a difficult species to propagate. Success is unknown for this species; however, germination trials are showing some success for related species of <i>Abronia</i> . Topsoil within impact areas should be salvaged and re-spread within temporary impact areas during restoration.
<i>Allium marvinii</i> Yucaipa onion	Perennial herb	<b>Bulb Salvage and Seed Collection and Replanting.</b> Successful transplantation is unknown for the species, but found suitable for other <i>Allium</i> species. Bulbs can be directly transplanted or stored successfully in a nursery until replanting sites have been restored.
<i>Centromadia pungens</i> ssp. <i>laevis</i> Smooth tarplant	Annual herb	<b>Seed Collection and Seeding, Topsoil Salvage.</b> This is an easy species to propagate and bulk seed in a nursery setting. Seed should be collected and then broadcast seeded (if low seed available, seed will be bulked by a qualified nursery). Topsoil within impact areas should be salvaged and re-spread within temporary impact areas during restoration.
<i>Chorizanthe parryi</i> var. <i>parryi</i> Parry's spineflower	Annual herb	<b>Seed Collection and Seeding, Topsoil Salvage.</b> Small seeds directly collected or may be potential seed bank in soil. Seed bulking possible. Success is unknown for this species. Weed control imperative.

**Table 3-1. Preferred Salvage Techniques for Special-status Plant Species Occurring or Potentially Occurring within the Study Area***Special-status Plant Salvage and Relocation Plan*

<b>Scientific Name</b> <b>Common Name</b>	<b>Lifeform</b>	<b>Preferred Salvage Technique and Rationale<sup>a</sup></b>
<i>Chorizanthe xanti</i> var. <i>leucotheca</i> White-bracted spineflower	Annual herb	<b>Seed Collection and Seeding, Topsoil Salvage.</b> Small seeds directly collected by harvesting whole plant. Seed bulking potential. Success is unknown for this species. Weed control imperative.
<i>Mentzelia tricuspis</i> Spiny-hair blazing star	Annual herb	<b>Seed Collection and Seeding, Topsoil Salvage.</b> Success is unknown for this species
<i>Selaginella eremophila</i> Desert spike-moss	Perennial rhizomatous herb	<b>Root Stock Collection and Replanting.</b> Successful transplantation is unknown for the species. Whole plants (with as much root mass as possible) will be collected in the field and transferred to a qualified native plant nursery to divide and propagate.
<i>Symphyotrichum defoliatum</i> ( <i>Aster defoliatum</i> ) San Bernardino aster	Perennial rhizomatous herb	<b>Seed Collection and Replanting, Topsoil Salvage.</b> Small seeds directly collected. Seed likely to be easily bulked.

<sup>a</sup>Salvage techniques assessed through consultation with horticultural experts at Rancho Santa Ana Botanic Garden (Sale and Fraga, 2016, pers. comm.)

### 3.5.1 Receptor Site Selection

Where permanent impacts will occur, individual plants and/or plant propagules will be collected and used in adjacent suitable areas to avoid net reduction of population size or species viability. Plant relocation will include planting in temporary disturbance areas within the Project boundaries where work is complete, or within the surrounding buffer area between 100 and 500 feet from the boundary for special-status plant species. The transplant location for any individual plant shall be the closest area that supports suitable conditions for the species, outside of permanent impact areas, but within the Project ROW or 500-foot buffer. Relocation site selection will attempt to match microhabitat conditions of the site of origin as closely as possible in regard to slope, aspect, soil characteristics, plant community, and other microhabitat characteristics.

### 3.5.2 Bulb Salvage

Bulb-producing species will be marked in the field during special-status plant surveys. Following initial marking, the bulbs directly within the impact areas will be moved by excavating the individual plants and a small volume of soil by hand or with a mini-excavator (Bobcat or similar). Relocation will occur in the late spring or early summer when the plants are in seed (so seed can be collected at the same time). For clusters of bulbs or bulbs located in hard, consolidated soils heavy equipment will be used to remove large blocks of soil 8 to 12 inches deep (depending on depth of underground plant material containing the bulbs). Smaller plant populations may be translocated by hand. If suitable recipient sites exist directly adjacent to the source site, outside of the construction zone, bulbs may be immediately transplanted into receiving sites. If suitable adjacent planting sites do not exist, bulbs will be placed in the care of a qualified nursery to maintain until they can be planted back into the restored temporary impact areas. Receiving sites will be excavated to accommodate the soil blocks. The soil blocks will be placed in well-watered receiving holes. The following criteria will be considered to determine replanting locations:

- Appropriateness of soil type
- Similarity of vegetation composition to that of the donor site
- Similar aspect and slope as donor site

- Presence of other special-status species
- Accessibility for replanting equipment and monitoring staff

### 3.5.3 Seed Collection and Supply

Many of the special-status plants covered under this Plan are better suited for restoration using seed collected from source plants. Production of native seeds is highly variable in both quantity and quality, depending largely on the timing and amount of annual precipitation as well as the effects of other factors, such as untimely storms during pollination (Bainbridge, 2007). Timing of seed collection is imperative to the quality of seed and is influenced by the maturity of the fruit at the time of collection. A plant conservation institution or native nursery will be contracted for seed collection and storage services. Fruit maturity will be monitored ahead of and throughout the collection season by the selected native plant nursery to ensure collection timing is optimized and seeds are processed and stored appropriately prior to seeding.

Where a plant population or portion of a population is to be extirpated, up to 100 percent of the seeds will be collected. Seed will be collected in such a manner as to not damage the parent plants of perennial/shrub species and may be harvested from annual species within impacted areas by collecting the whole plant. Only seeds (or fruit) that are ripe and readily detach from the plant will be collected. Depending on the year and the individuals identified for seed collection, seed may need to be collected from individuals in avoidance areas as well as from those individuals that cannot be avoided. A qualified botanist, familiar with local flora and seed collection techniques, will assess the amount of seed collected from the impacted individuals and determine if additional seed should be harvested from avoided individuals to supplement the seed supply. If additional seed is needed from non-impacted areas, no more than 5 percent of seed produced from each individual will be collected (RSABG, 2011). Additionally, if low quantities of seed are obtained, seed may be bulked at a plant conservation institution or native nursery for reintroduction activities.

The quantity of seed collected will be determined by many factors, including the following:

- The size, rarity, and biological health of the plant population
- Collection timing, inherent dormancy mechanisms, and germination response of the species
- The quantity and quality of seeds that each plant produces in any given year

If a plant species is very rare (in nature or in the local area), if the population size is small, or if seed production is limited, seed collections will only be undertaken on a very limited level. To conserve the local seed bank, soil salvage techniques in addition to seed collection may be implemented in temporary and permanent impact areas.

When seed is collected, information on the collection date, collection location, elevation, and associated dominant species will be recorded. Representative photographs will also be taken at each collection location.

Native seed collected in the field requires cleaning. Removing detritus and chaff from seed helps maintain seed vigor and health, and will reduce seed bulk during storage. A sieve screen will facilitate separating litter from fruits in the field. The contracted native plant nursery will sample and perform laboratory tests on each seed collection to document seed weight, purity, and germination. All results will be documented and reported. **Seed Storage.** The seeds of many native plants can lose their viability quickly if they are not stored under controlled conditions. Because seeds are hygroscopic (that is, they absorb and hold moisture from the air), their moisture content can increase to a point where they are vulnerable to fungi or mold. Seed moisture content of 10 percent or less is preferred (Elias et al., 2002), and can be achieved by drying seed and maintaining low storage temperatures and relative humidity.

To ensure proper storage, all seeds collected will be stored at a plant conservation institution or native nursery with experience in seed storage requirements. Seeds will be stored until the appropriate time in

the Project schedule and/or appropriate seasonal conditions are present to allow for reseeding within the Project area. Some seed may be held in storage for a longer period to provide additional propagules in the event initial reseeding efforts are unsuccessful.

**Dormancy and Germination.** Seed germination is the most vulnerable phase in plant development, representing the risky transition from seeds, which are the most resistant to drought and temperature extremes, to seedlings, which are the most sensitive. Hence, complex adaptations have developed in plants to regulate germination in arid environments (Kigel, 1995). This ensures that when germination occurs, there is likely ample soil moisture to support the developing plant, and that temperatures will be favorable to plant growth. In desert annuals, a successful germination strategy will lead to rapid flower and seed production.

Moisture availability is often an important factor in determining germination of seeds in arid areas. Physical barriers can also be imposed by the seed coat or dispersal mechanisms that prevent embryo growth or root elongation, are impermeable to water or gases, or release chemical inhibitors. Daily temperature fluctuations are reported as an important requirement for breaking dormancy in arid and semiarid species of hard-seeded annuals (Kigel, 1995).

Because multiple dormancy mechanisms are often present, methods for breaking dormancy can be complex. Chemical inhibition to germination can often be broken by repeated leaching (Bainbridge et al., 1995; Kigel, 1995). However, this could also be affected by seed age, which plays a role in breaking physical dormancy. Changes in the physical environment, such as temperature or photoperiod changes (termed stratification), or physical alteration of the seed coat (scarification), can play a critical role in releasing dormancy in some desert plants. Rinsing seeds prior to seeding to remove inhibiting chemicals is particularly effective (Kigel, 1995). Scarification can be achieved by physically roughening seed coats by tumbling with sand, or chemically attacking seed coats. Capon and Van Asdall (1967) found that annuals native to the Mojave Desert reached maximum germination when subjected to up to 5 weeks of higher temperatures (122 degrees Fahrenheit [°F]) prior to planting. Due to the complex nature of dormancy mechanisms in desert plants, it is especially imperative that experts in native plant propagation and seed storage be involved early in the seed salvage process.

### 3.5.4 Root Stock Salvage

Although little information exists on the success of propagating many desert plants through root stocks, this salvage technique may be used for species that cannot be salvaged using traditional seed collection techniques. When feasible, individual plants suitable for root stock salvage will be salvaged by hand by gently excavating around the base of the plant with hand tools and finding and following the root system, keeping as much of the entire root system intact as possible.

If additional sections of root are found, they will be collected, bagged, and planted either in appropriate recipient sites or transported to a native plant nursery for storage/care until they can be returned to the restored temporary impact areas. The salvaged individuals will be labeled with a unique code that corresponds to its original environment in order to track individual microhabitat preferences.

The salvaged plants and roots transported to a nursery for experimental propagation will be propagated and grown in containers at a plant conservation institution or native nursery. The plants will be maintained outdoors in a climate similar to the site conditions. Once the nursery grown plants are in a state suitable for out-planting and the sites are ready, they will be transplanted to restored Project areas by a qualified native plant nursery. The same criteria as defined in Section 3.3.1.1 will be used to determine appropriate replanting sites for species propagated from root stock salvage.

### 3.5.5 Topsoil Salvage

In some areas, topsoil salvage may be appropriate and feasible to preserve the existing seed bank for special-status plants. This seed has advantages over subsequently sown seed in that it is preconditioned

to the existing soil environment. However, topsoil salvage will be used in addition to seed collection, bulb salvage, and/or rootstock salvage, but not as the primary salvage technique, and topsoil salvage may not be feasible at many sites.

The following are the criteria for identifying potentially suitable sites for topsoil salvage:

- Location is a previously undisturbed area
- Construction activities include underground trenching, heavy grading, or other excavation activities where natural soil horizons are substantially disrupted
- Salvage activities can be executed safely and feasibly (topographic limitations)
- Stockpile locations can be identified in safe locations within existing approved disturbance areas and in compliance with other environmental and visual restrictions
- No post-construction disturbance activities such as O&M activities that would cause future disturbance to the site are anticipated

Topsoil salvage will not occur under the following circumstances:

- Slopes greater than 25 percent
- Locations where ground disturbing activities are limited due to environmental resources (e.g., sensitive habitats, cultural resources)
- Locations with high densities of non-native or invasive plant species
- Locations with low availability of substrate material (thin soils or rocky)
- Topographical or geographical constraints that preclude safe execution of construction activities

The top 2 inches of desert soils generally contain the majority of seeds, nutrients, cryptogamic organisms, and organic matter (Scoles-Sciulla and DeFalco, 2009). However, the ideal depth of topsoil to be salvaged may vary based on site-specific conditions. For occupied special-status plant habitats, the Restoration Specialist will determine the appropriate amount of topsoil to be removed and stockpiled, then returned to the surface when earthwork is complete.

Topsoil will be carefully removed by an experienced operator using a dragline, excavator, scraper, or dozer and will be stockpiled in uncompacted piles less than 4 feet tall. Stockpiled soils will be placed within temporary disturbance areas. Topsoil stockpiles will be stabilized by spraying with a tackifier (soil stabilizer) or covered with a permeable natural material, such as jute or coconut fiber blankets, as consistent with SWPPP requirements. To minimize compaction, no equipment will be allowed to travel over or park on the salvaged soil stockpiles.

Care will be taken to limit potentially adverse effects of stockpiling topsoil. For example, stockpiling has been shown to reduce organic carbon (especially at the surface), and reduce microbial activity and mycorrhizal inoculum potential for vesicular-arbuscular mycorrhizae (Bainbridge, 2007). Wet stockpiles show a greater reduction of vesicular arbuscular mycorrhizae propagules than dry stockpiles (Bainbridge, 2007). Therefore, topsoil stockpiles will be maintained in a dry condition as much as possible. Nutrients, organic matter, and the seed bank will be diluted if topsoil is mixed with subsoil material, so care will be taken to ensure a minimum thickness of topsoil is removed and stockpiled, and that topsoil remains segregated from subsoil.

# Success Criteria and Monitoring, Maintenance, and Reporting Requirements for Salvaged Plants

A monitoring program will be established to track the success of salvaged and relocated plants. The following sections describe the success criteria, monitoring, maintenance, and reporting requirements. SCE and a designated Restoration Specialist will implement the monitoring, maintenance, and reporting program to record implementation efforts and to evaluate progress of the salvage efforts towards meeting the success criteria set forth in this Plan. Monitoring the status and progress of this effort will allow for timely adaptive or remedial measures to increase the probability of success.

Monitoring and maintenance will begin at the completion of the reseeding and replanting efforts, and will continue through the end of each season (October 1) for up to 5 years, or until the success criteria are met or otherwise noted by CPUC and BLM. When the success criteria are met for annual species that have successfully set seed, no further maintenance, monitoring, or remedial measures will be required for those species. For perennial species, maintenance and monitoring will continue until the success criteria are met or until the plants have become established and persist without irrigation for 2 years.

## 4.1 Success Criteria and Remedial Measures

The purpose of the salvage effort is to mitigate unavoidable impacts to special-status plant species not addressed through offsite compensation. The methods outlined in this Plan (i.e., seed collection, seed bulking, weed management, and irrigation), would all theoretically increase the reproductive success compared to natural recruitment without any intervention.

The success criteria for salvaged special-status plants will include establishment of a new viable occurrence, equal or greater in extent and numbers to the affected occurrence. If individual plants are impacted, the goal would be establishment of new viable occurrences equal to or greater in number than the number of plants impacted. For rhizomatous species, it may be difficult to distinguish individual plants. Therefore, the area of clumps will be used to track impacts and subsequent area of restoration (for example, if 1 square foot is impacted, 1 square foot will need to be replaced). For large populations of annual plants (e.g., *Chorizanthe spp.*), it is not feasible to count all individual plants. For impacts to large populations of annuals such as these, the impacted population would be sampled using quadrats to estimate plant density. Density per unit area would be extrapolated to the impacted acreage to determine an estimate of the population impacted. For large populations of annual plants, the goal would be establishment of a new viable population equal or greater than the estimated population impacted. Populations within mitigation areas would be sampled by quadrats to determine estimates of the population reestablished through restoration. When these criteria are met, no further maintenance, monitoring, or remedial measures will be required, with the exception of monitoring the sites for control of invasive and noxious weeds. Success criteria and remedial actions are summarized in Table 4-1.

**Table 4-1. Success Criteria and Remedial Actions***Special-status Plant Salvage and Relocation Plan*

<b>Salvaged Material</b>	<b>Success Criteria</b>	<b>Remedial Actions</b>
Seeds	Seed planting, germination, and successful seed production of reseeded plants equal to or greater in number than the number of plants impacted.	Supplemental seeding, planting, and watering to meet the success criteria.
Bulbs	Replanting, establishment (survival of at least 2 years without irrigation), and production of seeds (in any monitoring year following replanting) equal to or greater in number than the number of plants impacted.	Supplemental planting and watering to meet the success criteria.
Root Stock (spike moss)	Replanting and establishment (survival of at least 2 years without irrigation) or equal to or greater in number than the number of plants impacted.	Supplemental planting and watering to meet the success criteria.

If a success criterion is not met for special-status species and remedial action is required, the number of plants lost will be replaced with additional plants propagated from seed or by direct seeding. Remedial measures may include supplemental planting, seeding, erosion control, supplemental watering, weeding (control of weed species will be imperative in special-status plant mitigation areas), constructing herbivore exclosures, or other measures to promote survivorship.

Any sites not meeting success criteria within 5 years will be evaluated, and SCE will discuss options with CPUC and BLM.

## 4.2 Monitoring and Maintenance

### 4.2.1 Monitoring

Salvaged special-status plant populations will be monitored and maintained by SCE's Restoration Specialist and SCE's Restoration Contractor throughout the first year to increase the rate of re-establishment and reproductive success. If additional maintenance or remedial actions are required, the Restoration Specialist will relate those needs and corrective measures to the Restoration Contractor. Monitoring fieldwork will be timed to allow a growing season following the completion of replanting. Monitoring will continue for up to 5 years, until the success criteria are met, or otherwise noted by CPUC and BLM.

### 4.2.2 Watering

Whether salvaged plants require watering and the method and quantity of irrigation, if any, will be determined by the Restoration Specialist on a site- and species-specific basis. Watering often encourages weed proliferation in disturbed or restored areas. Therefore, when irrigation is deemed necessary, applications of irrigation water will not be widely broadcast (for example, overhead spray) but will be restricted to individual plants as much as possible (for example, manually directed spray from a watering can or hose).

### 4.2.3 Control of Invasive Species

Manual removal may be the optimal means of controlling weeds on small discrete sites such as planting locations. With manual removal, it is essential that it be timed prior to the production of seed. Grasses

can be controlled by simply removing the flower heads. However, species such as mustards must be removed entirely, along with the roots, if possible. Methods for weed control will be implemented in accordance with guidelines and specifications provided in the *West of Devers Upgrade Project Integrated Weed Management Plan* (CH2M, 2016b). However, the frequency of weed abatement activities may need to be increased in areas of special-status plant reintroduction.

#### 4.2.4 Supplemental Techniques

Supplemental techniques may be necessary to ensure the health of restored special-status plant populations. A qualified botanist will determine if herbivore protection is necessary, based on signs of herbivore damage during monitoring events. The Restoration Contractor is responsible for reporting any observed indications of herbivory to the Restoration Specialist, designated as the point of contact for the Restoration Contractor by SCE.

### 4.3 Reporting

#### 4.3.1 Monitoring Reports

The Restoration Contractor shall submit monthly maintenance reports to SCE through the first-year maintenance period. Reports will be submitted at the end of each month. Maintenance reports will include information on all maintenance activities conducted during the reporting period. This will include a record of irrigation frequency and approximate water volumes (if necessary), a report of the apparent status of each plant or population (live, dead, stressed, traumatized, vandalized, and so forth), condition and maintenance of any supporting structures (for example, exclusionary fencing), weeding or chemical treatments, and any problems discovered and remedial actions taken in response.

#### 4.3.2 Quarterly and Annual Monitoring Reports

The Restoration Specialist will prepare quarterly and annual monitoring reports for review by CPUC and BLM. The reports will include, but not be limited to, details of plants salvaged, stored, and transplanted (salvage and transplanting locations, species, number, size, condition, etc.); adaptive management efforts implemented (date, location, type of treatment, results, etc.); and evaluation of success of salvage. The quarterly and annual reports will include an assessment of progress toward meeting the final success criteria. The reports will also provide site managers with the information necessary to implement remedial measures and recommendations, as needed.

Quarterly reports will be submitted according to the schedule in Table 4-2. Each quarterly report will address monitoring and maintenance activities that occur in the quarter for which the report is prepared. Quarterly reports are due on or before the end of the month following the quarterly monitoring period to allow time to integrate information obtained late in the quarter. For example, if salvage activities are completed on December 31, the first quarterly report will cover monitoring activities conducted in January through March, and the report for that quarter will be due at the end of May.

Annual reports will be submitted on or before the end of January starting the first year following the start of the monitoring periods, or as approved by CPUC and BLM if monitoring begins late in the year.

**Table 4-2. Reporting Schedule***Special-status Plant Salvage and Relocation Plan*

<b>Report</b>	<b>Monitoring Period</b>	<b>Report Due</b>	<b>Monitoring Period</b>	<b>Report Due</b>	<b>Monitoring Period</b>	<b>Report Due</b>	<b>Monitoring Period</b>	<b>Report Due</b>
Quarterly Reports	January–March	End of April	April–June	End of July	July–September	End of October	October–December	End of January
Annual Report	Will summarize each quarterly report							End of January

### 4.3.3 Recommendations

The SCE-designated Restoration Specialist will make recommendations for remedial actions if unexpected events or developments are observed. Recommendations shall be included in the quarterly and annual monitoring reports.. SCE will be responsible for timely communication of adverse developments to the appropriate agencies to avert damages or losses due to delays. The Restoration Specialist will be responsible for reporting observed adverse developments to the Restoration Contractor when observed.

The adaptive management process will be used in collaboration with appropriate agencies to address unexpected outcomes and to develop and approve remedial actions.

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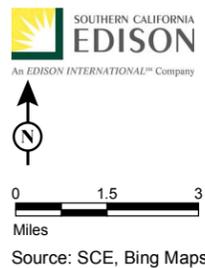
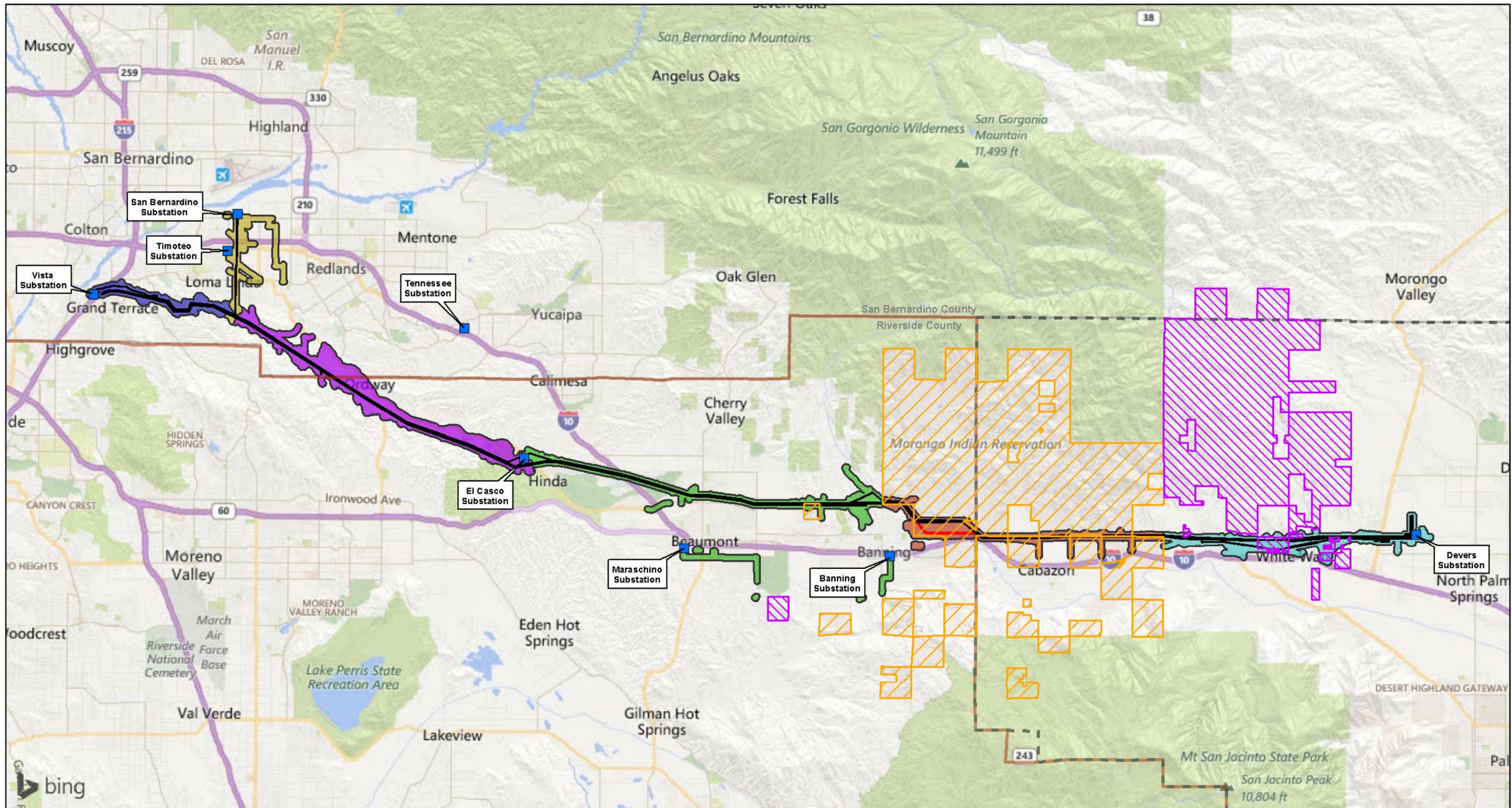
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# Revisions

Revisions made to standard text (black ink) should be noted below to document changes in requirements or SCE's approach to this Special-status Plant Salvage and Relocation Plan.

Date	Description of Revision	Contact

Figures



**LEGEND**

- Project Study Area
- Existing Transmission Line Right of Way
- Proposed Right of Way
- Substation
- Segment 1
- Segment 2
- Segment 3
- Segment 4
- Segment 5
- Segment 6
- U.S. Bureau of Land Management
- Morongo Reservation
- Western Riverside County MSHCP
- Coachella Valley MSHCP



FIGURE 1-1

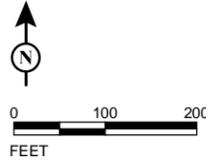
**DRAFT**

Southern California Edison  
West of Devers Upgrade Project  
**Project Overview and Study Area**  
Special-status Plant Locations

Source: SCE, Bing Maps

\\galt\proj\SoCal\EDISON\493461\MapFiles\Plans\SS\_Plant\_Salvage\_Relocation\_Plan\_2017-04-26\Fig1-1\_WOD\_Special-status\_Plants\_Overview\_2017-06-08.mxd (6/20/2017)





SCE, Bing Imagery, World Transportation

**LEGEND**

- |                              |                         |                                  |
|------------------------------|-------------------------|----------------------------------|
| ● Proposed Telecom           | — Proposed Telecom Line | ▭ Morongo Reservation            |
| <b>Major Trans Structure</b> | — Proposed 220kV C/L    | ▭ U.S. Bureau of Land Management |
| ■ Proposed 220 kV            | — Civil Access Roads    | ▭ 100-foot Buffer Area           |
| ● Modify                     | ▭ Proposed Telecom Area |                                  |
| ● Remove                     | ▭ WRC-MSHCP Boundary    |                                  |
| ■ Existing                   | ▭ Permanent             |                                  |
|                              | ▭ Temporary             |                                  |

**Special-status Plants**

- |                             |
|-----------------------------|
| ⊠ White-bracted spineflower |
| ▭ White-bracted spineflower |

*Notes:*  
Plant data are cumulative data from surveys conducted from 2012 through 2017. Only plants with CRPR 1 or 2 are addressed in this Plan.

*Temporary and permanent impact areas are based on May 25, 2017 engineering design data.*

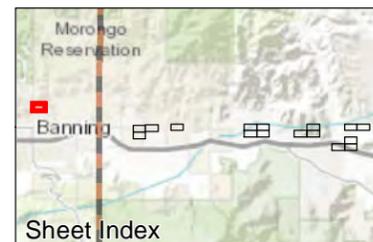
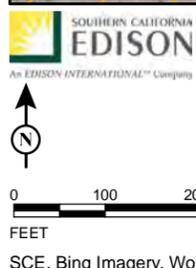
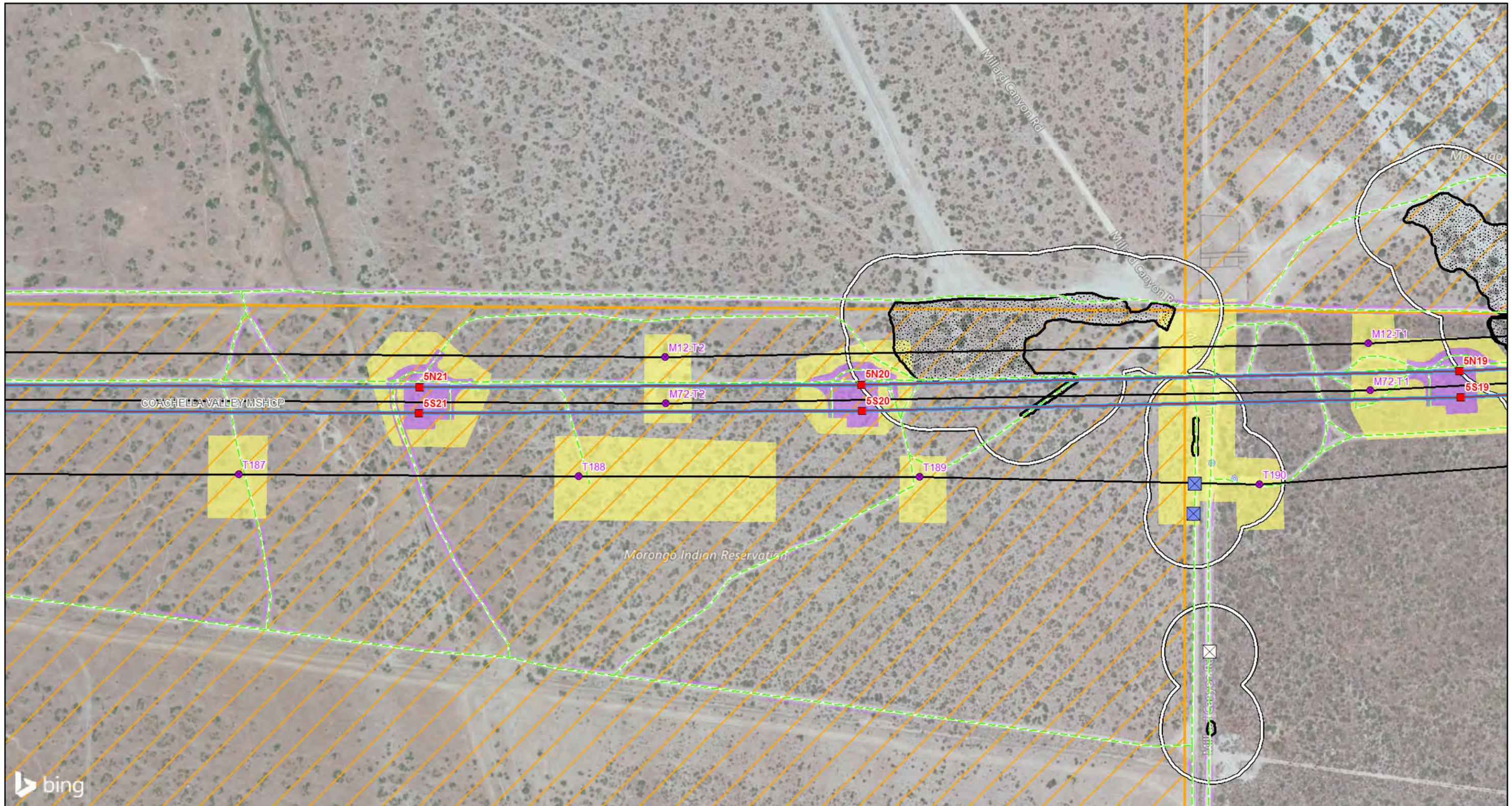


FIGURE 2-1





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| ● Proposed Telecom           | — Proposed Telecom Line | ▭ Morongo Reservation            |
| <b>Major Trans Structure</b> | — Proposed 220kV C/L    | ▭ U.S. Bureau of Land Management |
| ■ Proposed 220 kV            | — Civil Access Roads    | ▭ 100-foot Buffer Area           |
| ● Modify                     | ▭ Proposed Telecom Area |                                  |
| ● Remove                     | ▭ CV-MSHCP Boundary     |                                  |
| ■ Existing                   | ▭ Permanent             |                                  |
|                              | ▭ Temporary             |                                  |

- Special-status Plants**
- ▭ Parry's spineflower
  - ▭ White-bracted spineflower
  - ▭ Parry's spineflower
  - ▭ White-bracted spineflower

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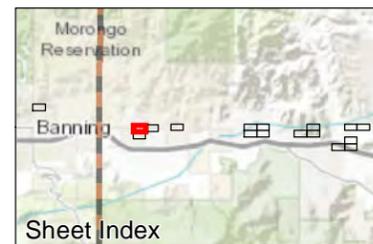
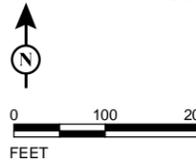
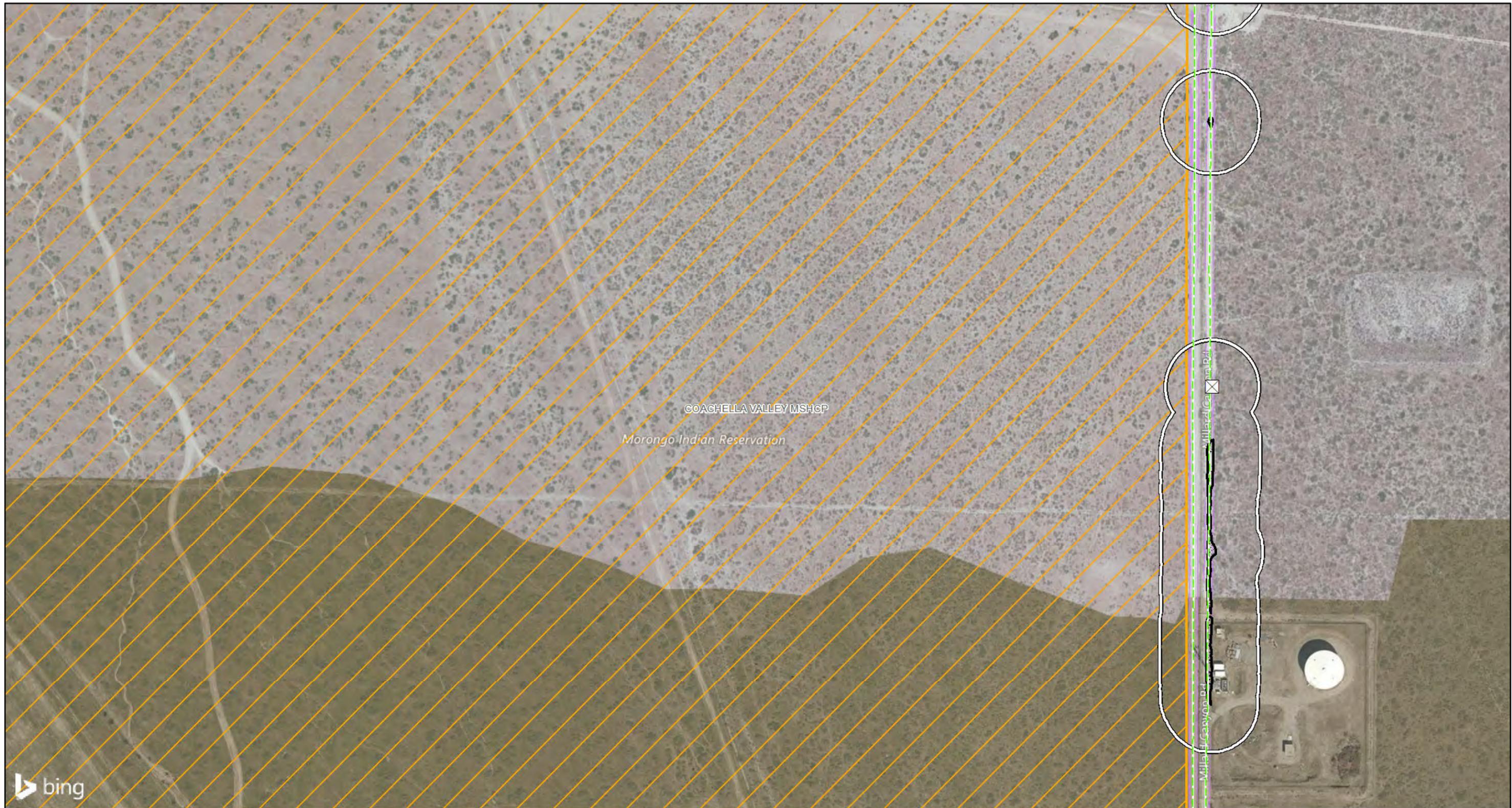


FIGURE 2-1



SCE, Bing Imagery, World Transportation

**LEGEND**

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| ● Proposed Telecom           | — Proposed Telecom Line | ▭ Morongo Reservation            |
| <b>Major Trans Structure</b> | — Proposed 220kV C/L    | ▭ U.S. Bureau of Land Management |
| ■ Proposed 220 kV            | — Civil Access Roads    | ▭ 100-foot Buffer Area           |
| ⊙ Modify                     | ▭ Proposed Telecom Area |                                  |
| ● Remove                     | ▭ CV-MSHCP Boundary     |                                  |
| □ Existing                   | ▭ Permanent             |                                  |
|                              | ▭ Temporary             |                                  |

**Special-status Plants**

- |                             |
|-----------------------------|
| ⊠ White-bracted spineflower |
| ⊠ White-bracted spineflower |

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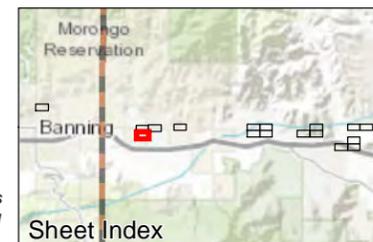
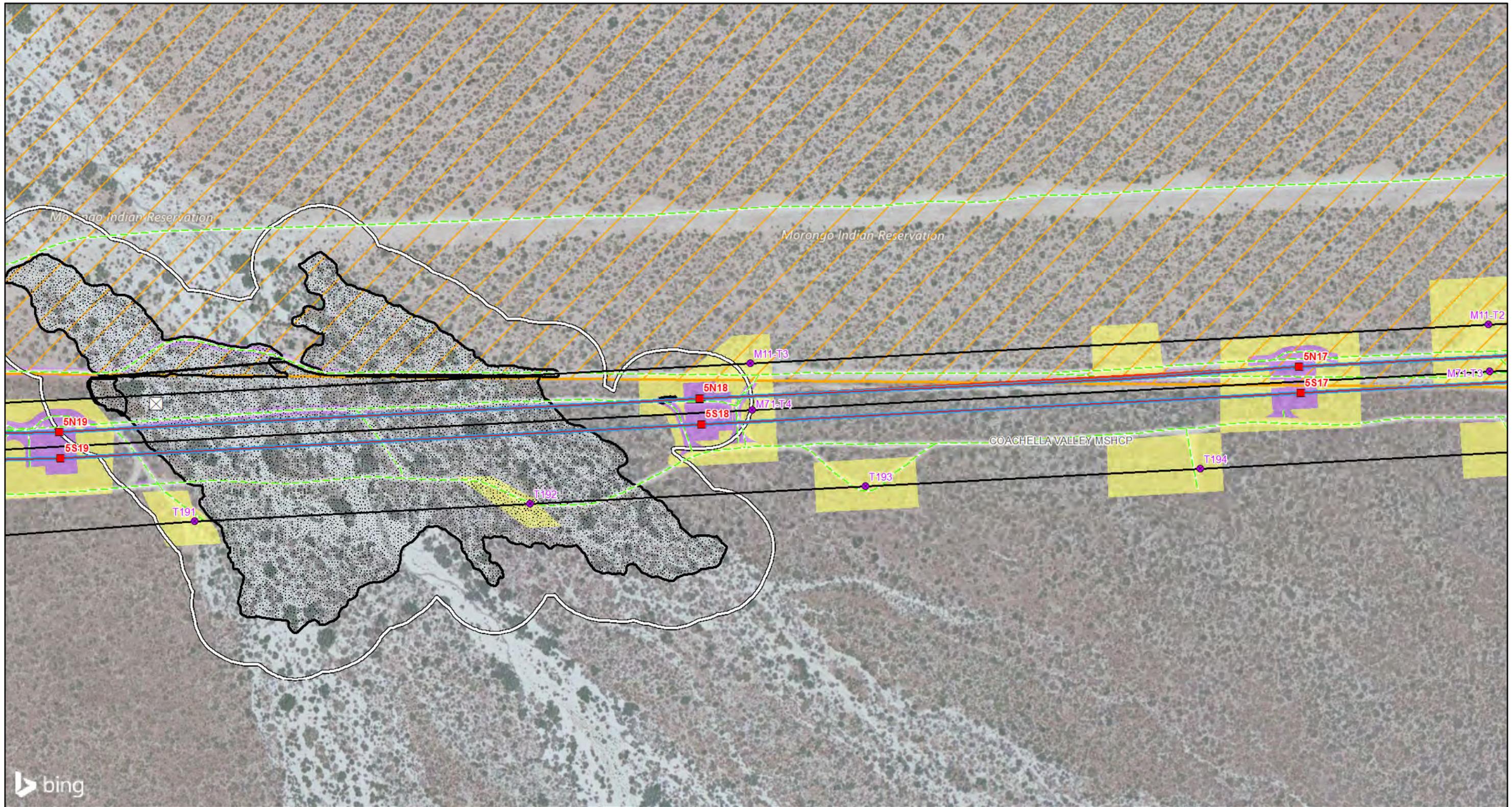


FIGURE 2-1





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SCE, Bing Imagery, World Transportation

**LEGEND**

● Proposed Telecom	— Proposed Telecom Line	▭ Morongo Reservation
■ Major Trans Structure	— Proposed 220kV C/L	▭ U.S. Bureau of Land Management
■ Proposed 220 kV	— Civil Access Roads	▭ 100-foot Buffer Area
● Modify	▭ Proposed Telecom Area	
● Remove	▭ CV-MSHCP Boundary	
■ Existing	▭ Permanent	
	▭ Temporary	

**Special-status Plants**

▭ White-bracted spineflower

▭ White-bracted spineflower

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Temporary and permanent impact areas are based on May 25, 2017 engineering design data.



FIGURE 2-1



**SOUTHERN CALIFORNIA EDISON**  
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**LEGEND**

● Proposed Telecom	— Proposed Telecom Line	▭ Morongo Reservation	⊠ Special-status Plants
■ Major Trans Structure	— Proposed 220kV C/L	▭ U.S. Bureau of Land Management	⊠ White-bracted spineflower
● Modify	— Civil Access Roads	▭ 100-foot Buffer Area	⊠ White-bracted spineflower
● Remove	▭ Proposed Telecom Area		
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	▭ Temporary		

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Temporary and permanent impact areas are based on May 25, 2017 engineering design data.

Sheet Index

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FIGURE 2-1



**SOUTHERN CALIFORNIA EDISON**  
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**LEGEND**

● Proposed Telecom	— Proposed Telecom Line	▭ Morongo Reservation
■ Major Trans Structure	— Proposed 220kV C/L	▭ U.S. Bureau of Land Management
● Modify	— Civil Access Roads	▭ 100-foot Buffer Area
● Remove	▭ Proposed Telecom Area	
□ Existing	▭ CV-MSHCP Boundary	
	▭ Permanent	
	▭ Temporary	

**Special-status Plants**

⊠ White-bracted spineflower
⊠ White-bracted spineflower

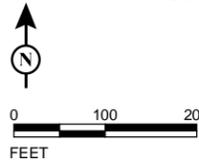
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Temporary and permanent impact areas are based on May 25, 2017 engineering design data.

Sheet Index

FIGURE 2-1



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**LEGEND**

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|------------------------------|-------------------------|----------------------------------|
| ● Proposed Telecom           | — Proposed Telecom Line | ▭ Morongo Reservation            |
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|                              | ▭ Temporary             |                                  |

**Special-status Plants**

- |                             |
|-----------------------------|
| ⊠ White-bracted spineflower |
| ⊠ White-bracted spineflower |

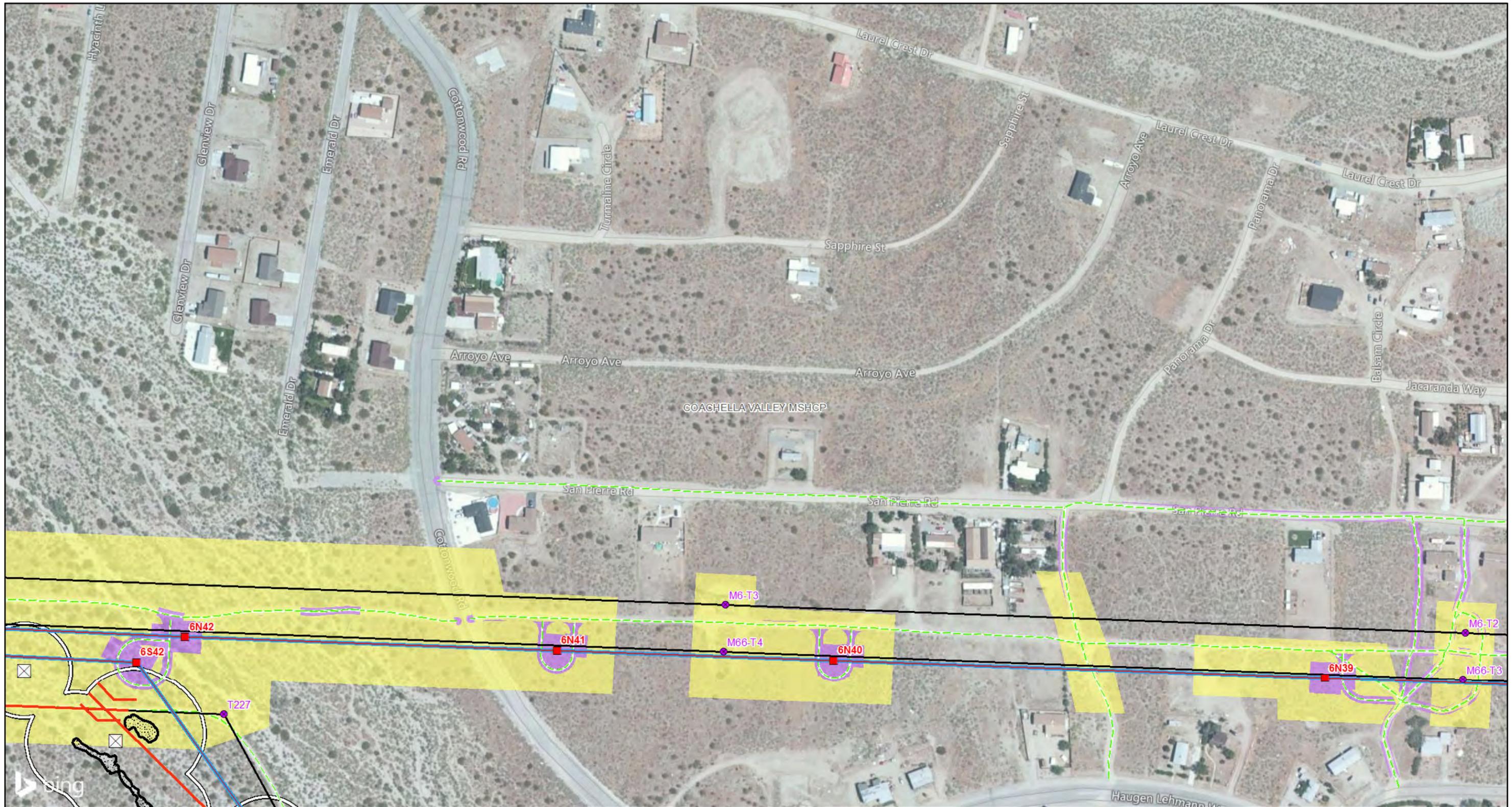
*Notes:*  
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FIGURE 2-1





**SOUTHERN CALIFORNIA EDISON**  
An EDISON INTERNATIONAL Company

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SCE, Bing Imagery, World Transportation

**LEGEND**

● Proposed Telecom	— Proposed Telecom Line	▭ Morongo Reservation
■ Major Trans Structure	— Proposed 220kV C/L	▭ U.S. Bureau of Land Management
● Proposed 220 kV	— Civil Access Roads	▭ 100-foot Buffer Area
● Modify	▭ Proposed Telecom Area	
● Remove	▭ CV-MSHCP Boundary	
■ Existing	▭ Permanent	
	▭ Temporary	

**Special-status Plants**

⊠ White-bracted spineflower
⊠ White-bracted spineflower

*Notes:*  
Plant data are cumulative data from surveys conducted from 2012 through 2017. Only plants with CRPR 1 or 2 are addressed in this Plan.  
Temporary and permanent impact areas are based on May 25, 2017 engineering design data.

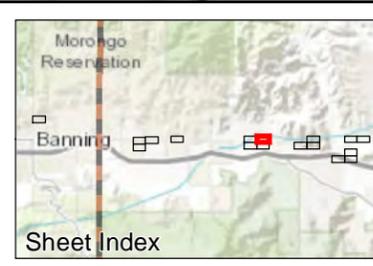
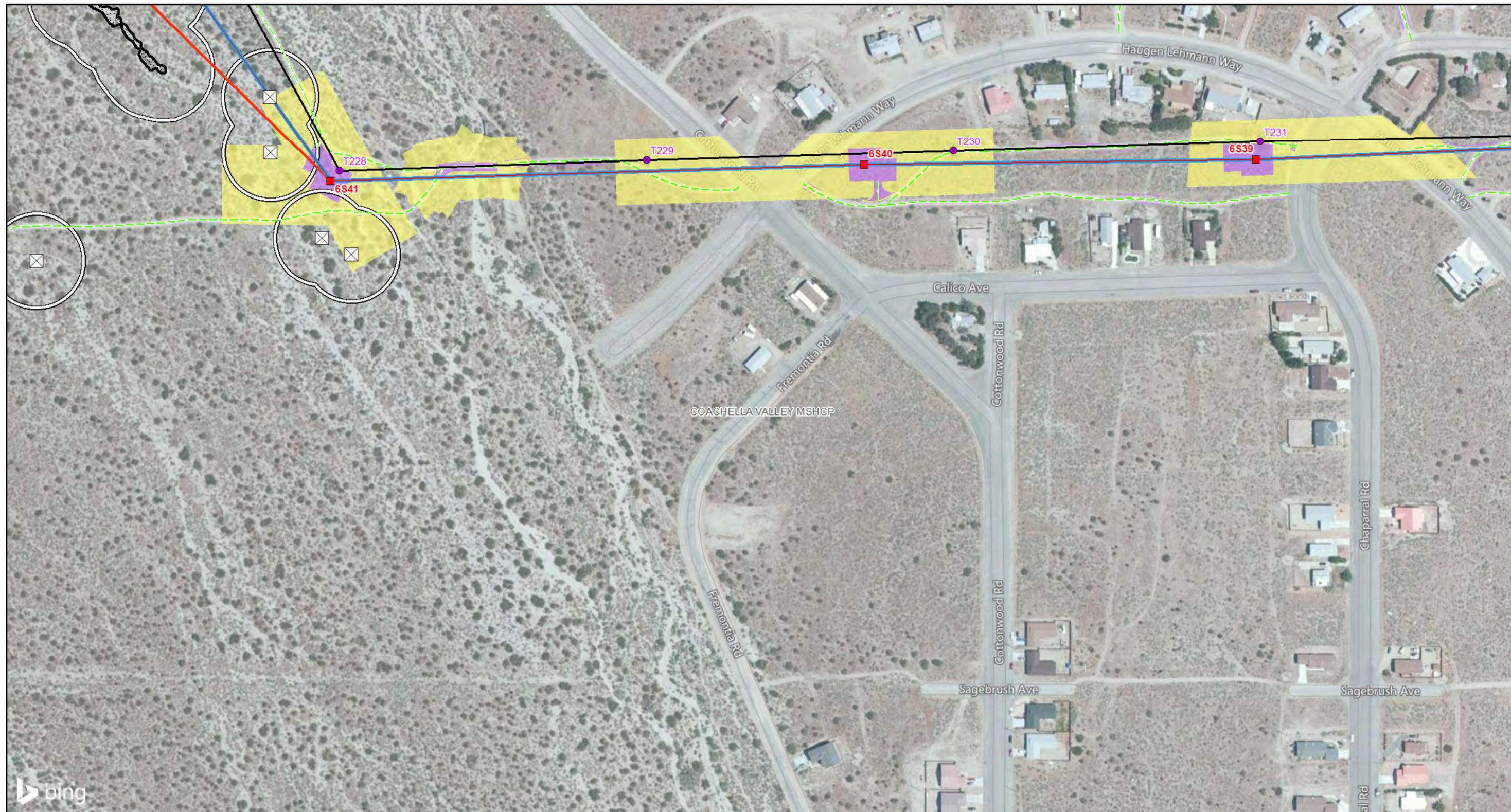


FIGURE 2-1



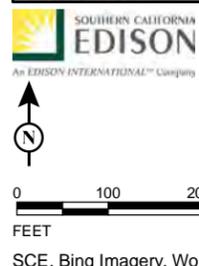
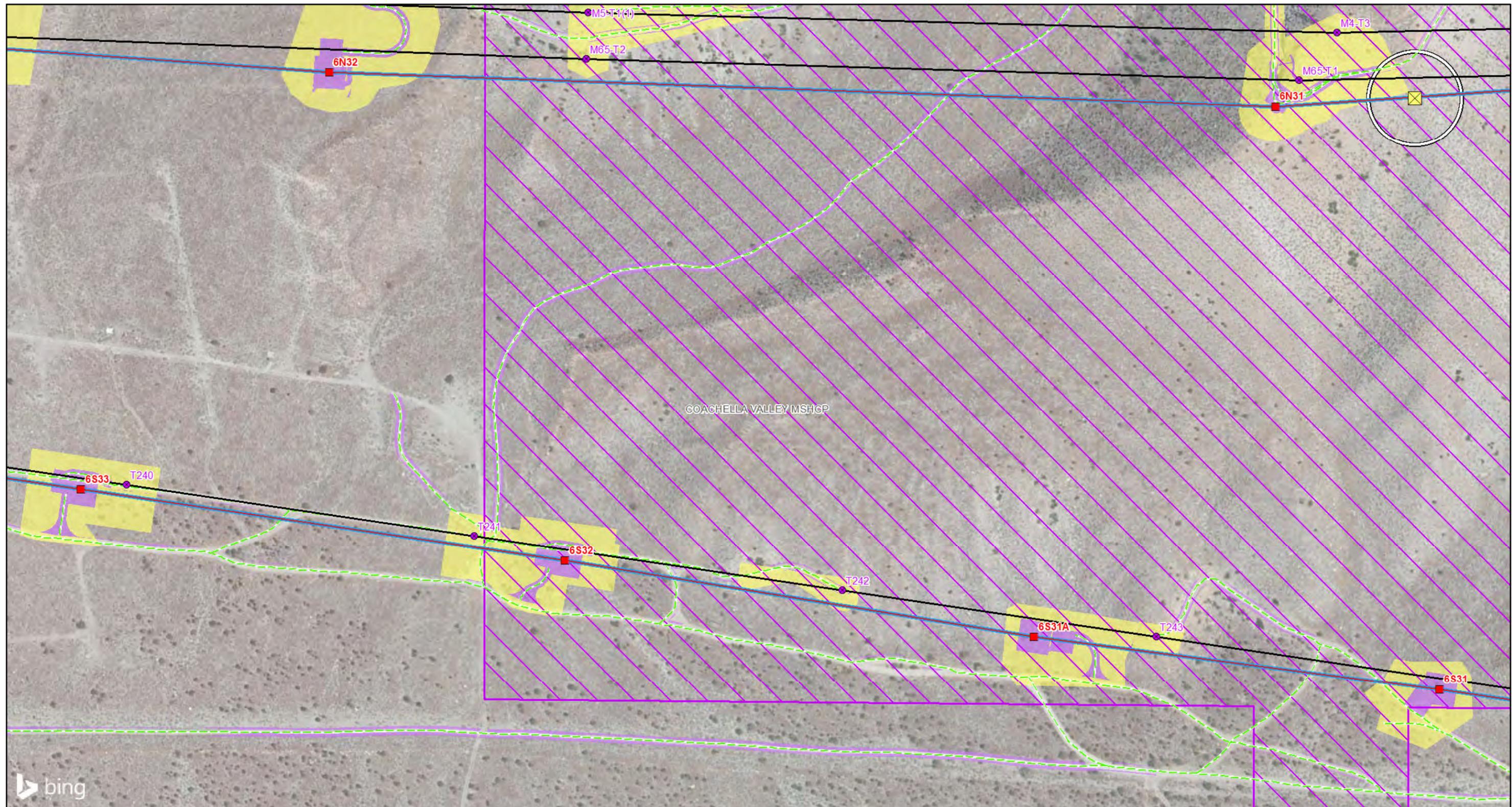
**LEGEND**

Proposed Telecom	Proposed Telecom Line	Morongo Reservation	<b>Special-status Plants</b>
<b>Major Trans Structure</b>	Proposed 220kV C/L	U.S. Bureau of Land Management	White-bracted spineflower
Proposed 220 kV	Civil Access Roads	100-foot Buffer Area	White-bracted spineflower
Modify	Proposed Telecom Area	CV-MSHCP Boundary	
Remove	Permanent		
Existing	Temporary		

**Notes:**  
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FIGURE 2-1

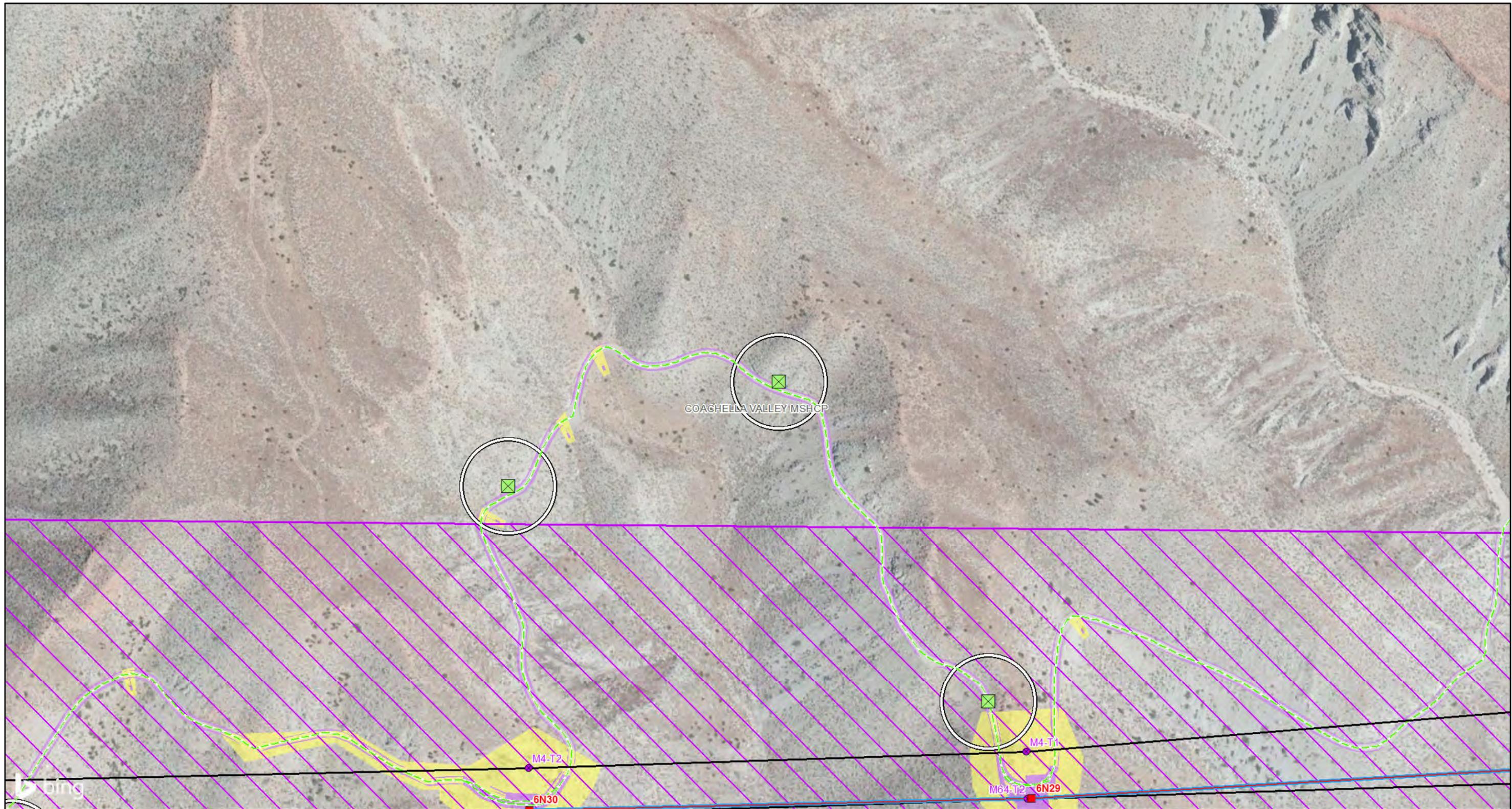


LEGEND		Special-status Plants	
	Proposed Telecom		Desert spike-moss
	Proposed 220 kV		U.S. Bureau of Land Management
	Modify		100-foot Buffer Area
	Remove		Civil Access Roads
	Existing		Proposed Telecom Area
	Proposed Telecom Line		CV-MSHCP Boundary
	Proposed 220kV C/L		Permanent
	Morongo Reservation		Temporary

Notes:  
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FIGURE 2-1



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<b>LEGEND</b>			
Proposed Telecom	Proposed Telecom Line	Morongo Reservation	<b>Special-status Plants</b>
<b>Major Trans Structure</b>	Proposed 220kV C/L	U.S. Bureau of Land Management	Spiny-hair blazing star
Proposed 220 kV	Civil Access Roads	100-foot Buffer Area	
Modify	Proposed Telecom Area		
Remove	CV-MSHCP Boundary		
Existing	Permanent		
	Temporary		

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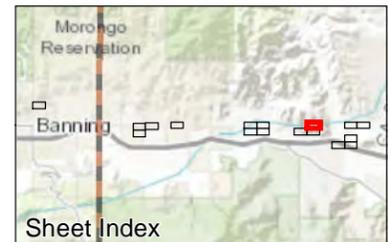
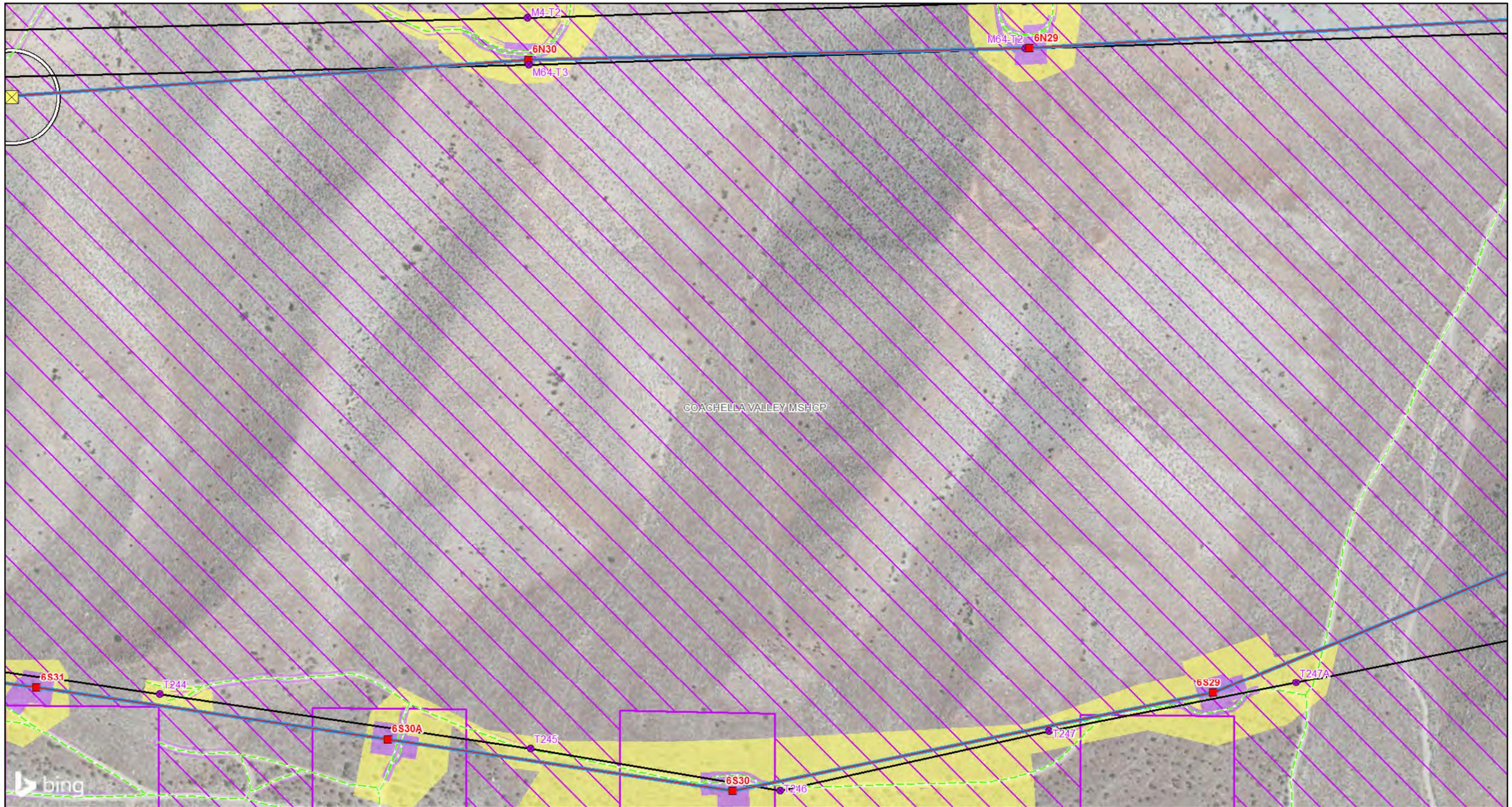


FIGURE 2-1



<p>SOUTHERN CALIFORNIA <b>EDISON</b> An EDISON INTERNATIONAL™ Company</p>	<p><b>LEGEND</b></p>		<p><b>Special-status Plants</b></p> <ul style="list-style-type: none"> <li> Desert spike-moss</li> </ul>	<p><i>Notes:</i> Plant data are cumulative data from surveys conducted from 2012 through 2017. Only plants with CRPR 1 or 2 are addressed in this Plan.  Temporary and permanent impact areas are based on May 25, 2017 engineering design data.</p>	<p>Sheet Index</p>
	<p><b>Major Trans Structure</b></p> <ul style="list-style-type: none"> <li> Proposed 220 kV</li> <li> Modify</li> <li> Remove</li> <li> Existing</li> </ul>	<ul style="list-style-type: none"> <li> Proposed Telecom Line</li> <li> Proposed 220kV C/L</li> <li> Civil Access Roads</li> <li> Proposed Telecom Area</li> <li> CV-MSHCP Boundary</li> <li> Permanent</li> <li> Temporary</li> </ul>			

FIGURE 2-1

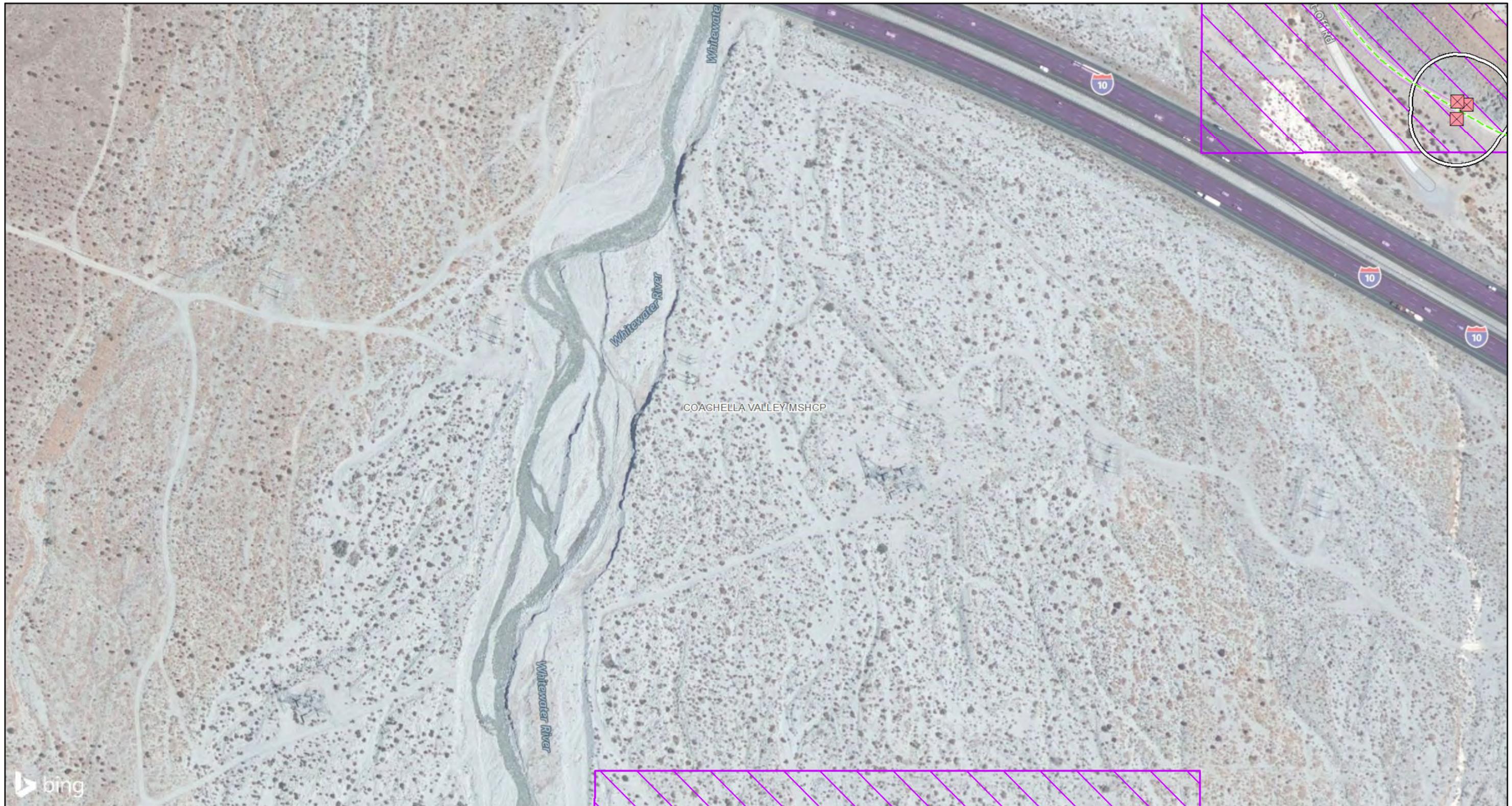
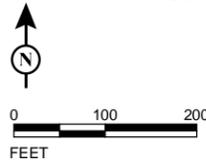


FIGURE 2-1



**LEGEND**

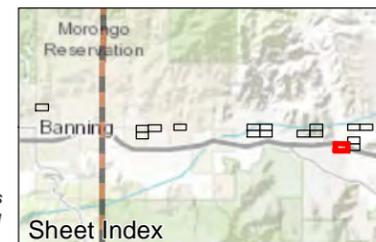
- |  |   |   |  |
|--|---|---|--|
| <ul style="list-style-type: none"> <li>● Proposed Telecom</li> <li>■ Major Trans Structure</li> <li>■ Proposed 220 kV</li> <li>● Modify</li> <li>● Remove</li> <li>■ Existing</li> </ul> | <ul style="list-style-type: none"> <li>— Proposed Telecom Line</li> <li>— Proposed 220kV C/L</li> <li>— Civil Access Roads</li> <li>■ Proposed Telecom Area</li> <li>■ CV-MSHCP Boundary</li> <li>■ Permanent</li> <li>■ Temporary</li> </ul> | <ul style="list-style-type: none"> <li>■ Morongo Reservation</li> <li>■ U.S. Bureau of Land Management</li> <li>■ 100-foot Buffer Area</li> </ul> | <p><b>Special-status Plants</b></p> <ul style="list-style-type: none"> <li>■ Chaparral sand verbena</li> </ul> |
|--|---|---|--|

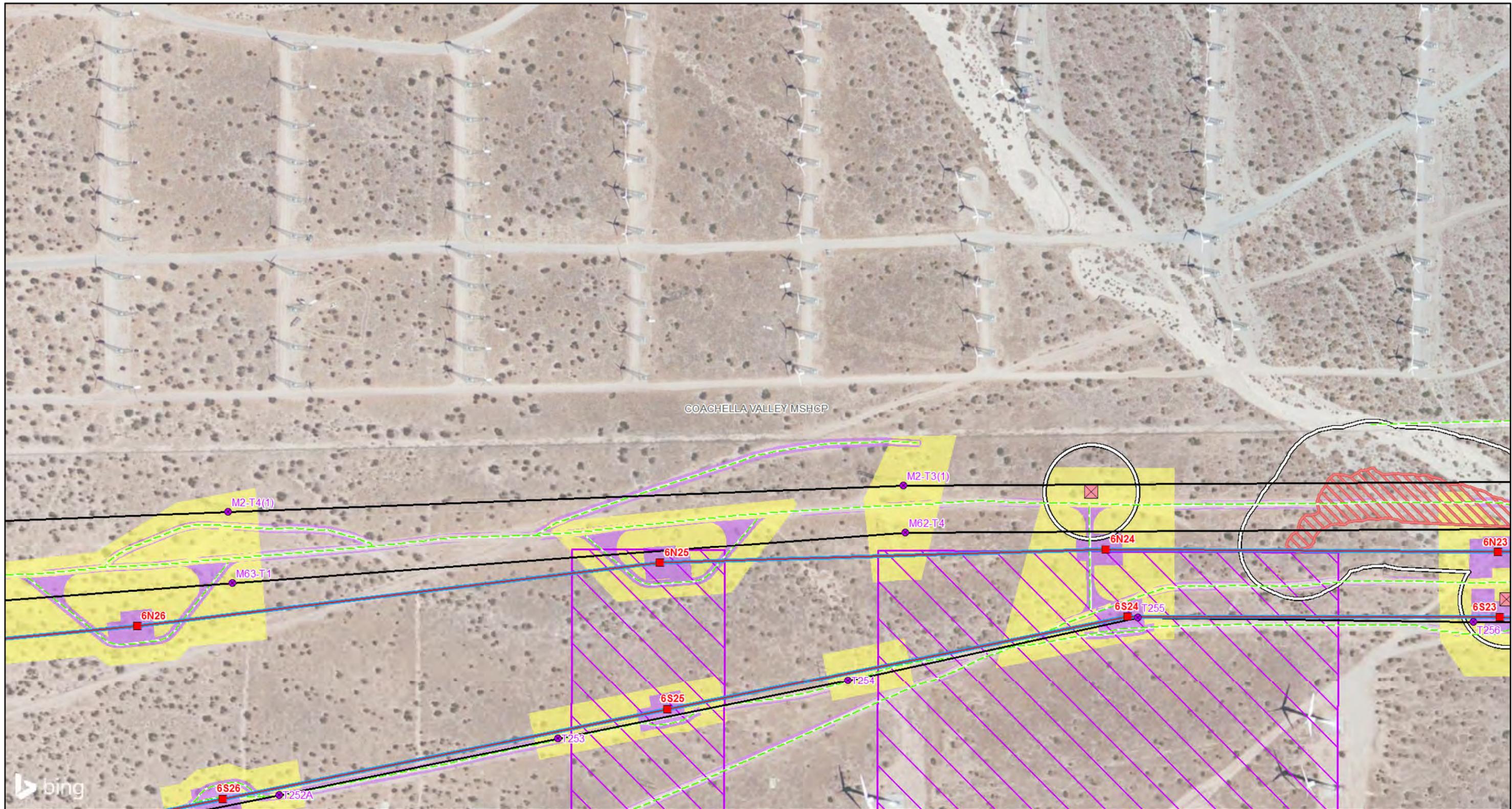


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**LEGEND**

● Proposed Telecom	— Proposed Telecom Line	▭ Morongo Reservation	⊠ Special-status Plants
■ Major Trans Structure	— Proposed 220kV C/L	▭ U.S. Bureau of Land Management	⊠ Chaparral sand verbena
● Modify	— Civil Access Roads	▭ 100-foot Buffer Area	▨ Chaparral sand verbena
● Remove	▭ Proposed Telecom Area	▭ CV-MSHCP Boundary	
■ Existing	▭ Permanent		
	▭ Temporary		

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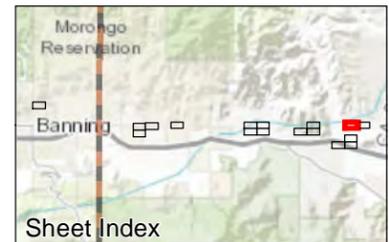
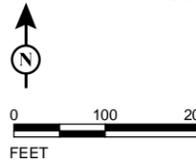
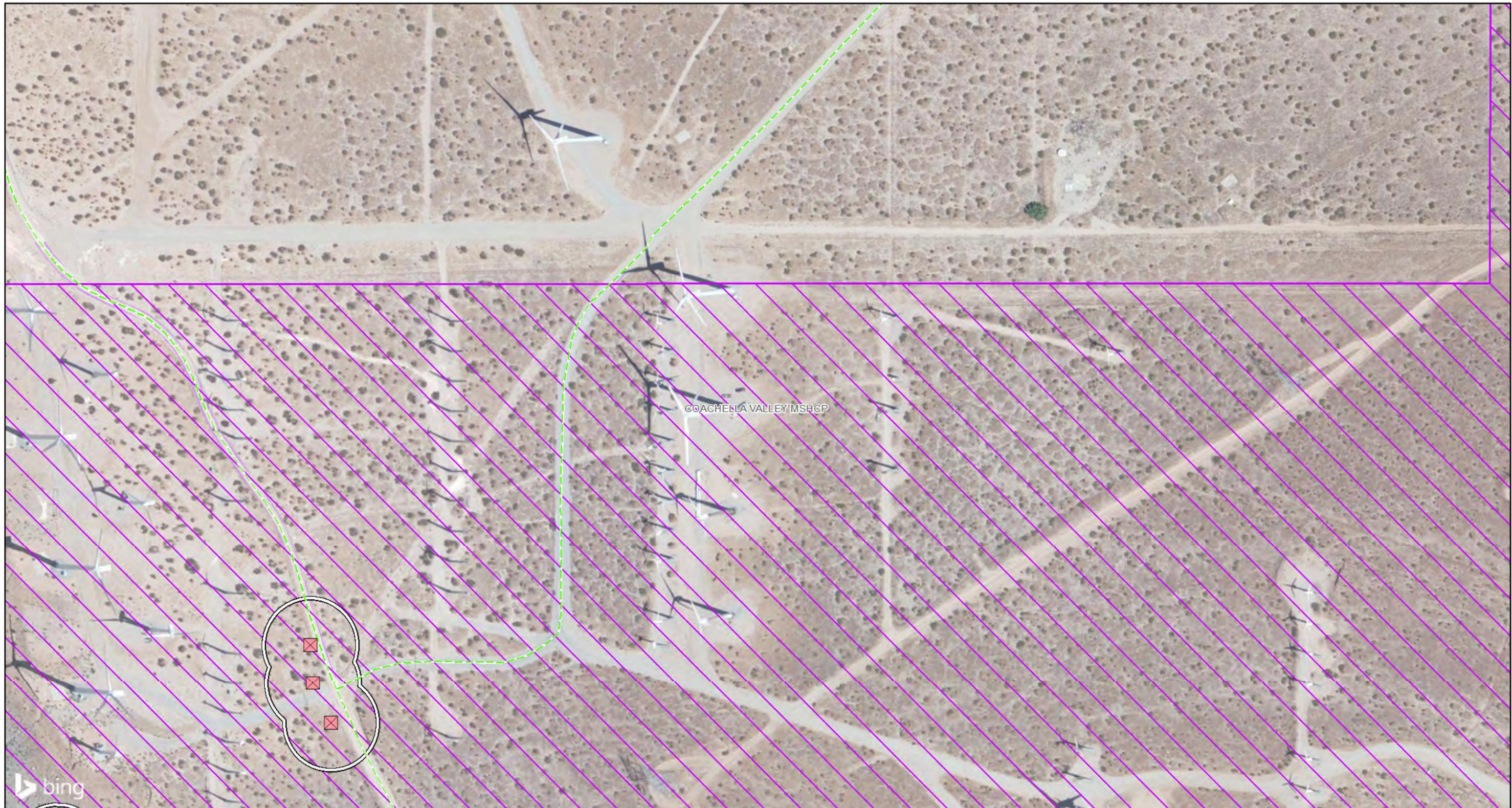


FIGURE 2-1



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**LEGEND**

- |                              |                         |                                  |                              |
|------------------------------|-------------------------|----------------------------------|------------------------------|
| ● Proposed Telecom           | — Proposed Telecom Line | ▭ Morongo Reservation            | <b>Special-status Plants</b> |
| <b>Major Trans Structure</b> | — Proposed 220kV C/L    | ▭ U.S. Bureau of Land Management | ⊠ Chaparral sand verbena     |
| ■ Proposed 220 kV            | — Civil Access Roads    | ▭ 100-foot Buffer Area           |                              |
| ● Modify                     | ▭ Proposed Telecom Area |                                  |                              |
| ● Remove                     | ▭ CV-MSHCP Boundary     |                                  |                              |
| ■ Existing                   | ▭ Permanent             |                                  |                              |
|                              | ▭ Temporary             |                                  |                              |

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FIGURE 2-1





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<b>LEGEND</b>			
Proposed Telecom	Proposed Telecom Line	Morongo Reservation	<b>Special-status Plants</b>
<b>Major Trans Structure</b>	Proposed 220kV C/L	U.S. Bureau of Land Management	Chaparral sand verbena
Proposed 220 kV	Civil Access Roads	100-foot Buffer Area	
Modify	Proposed Telecom Area		
Remove	CV-MSHCP Boundary		
Existing	Permanent		
	Temporary		

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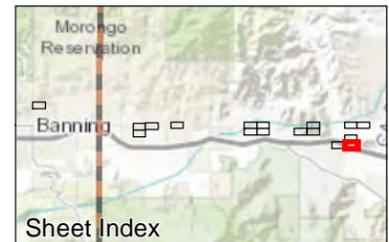
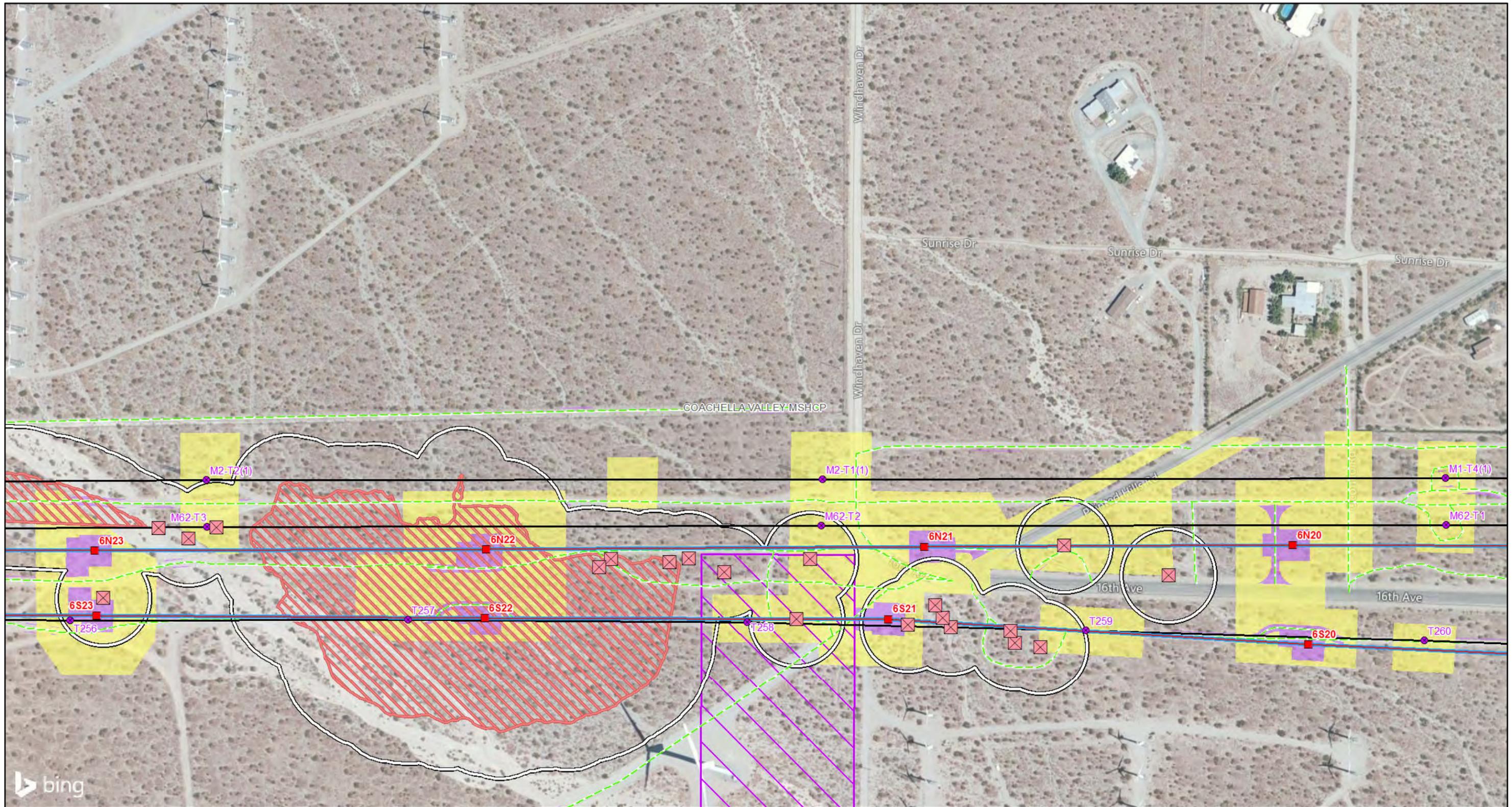


FIGURE 2-1



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**LEGEND**

● Proposed Telecom	— Proposed Telecom Line	▭ Morongo Reservation	⊠ Special-status Plants
■ Major Trans Structure	— Proposed 220kV C/L	▭ U.S. Bureau of Land Management	⊠ Chaparral sand verbena
● Modify	— Civil Access Roads	▭ 100-foot Buffer Area	▨ Chaparral sand verbena
● Remove	▭ Proposed Telecom Area	▭ CV-MSHCP Boundary	
■ Existing	▭ Permanent		
	▭ Temporary		

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FIGURE 2-1