Appendix A
Incidental Take Permit

Lugo-Victorville 500-kV Transmission Line Remedial Action Scheme Project

California Endangered Species Act Incidental Take Permit Application

prepared for

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Acronyms and Abbreviations

ADSS	all-dielectric self-supporting
AMM	avoidance, minimization, and mitigation measure
BLM	Bureau of Land Management
BMP	best management practices
Caltrans	California Department of Transportation
CCH	Consortium of California Herbaria
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CPUC	California Public Utilities Commission
DOD	Department of Defense
EI	Environmental Intelligence, LLC
FCR	Field Contact Representative
FESA	federal Endangered Species Act
FR	Federal Register
FRED	Field Reporting Environmental Database
GIS	geographic information system
GPS	global positioning system
HRRP	Habitat Restoration and Revegetation Plan
I-40	Interstate 40
IPaC	Information for Planning and Consultation
ITP	Incidental Take Permit
IWMP	Integrated Weed Management Plan
kV	kilovolt
LADWP	Los Angeles Department of Water and Power
LST	lattice steel tower
LVRAS	Lugo-Victorville 500-kV Transmission Line Remedial Action Scheme
MNP	Mojave National Preserve

NEPA	National Environmental Policy Act
NERC	North American Electric Reliability Corporation
NPS	National Park Service
OFNR	optical fiber nonconducting riser
OHGW	overhead ground wire
O&M	operations and maintenance
OPGW	optical ground wire
PBF	physical or biological features
ROW	right-of-way
SCE	Southern California Edison
SLC	California State Lands Commission
SWPPP	Stormwater Pollution Prevention Plan
USFWS	United States Fish and Wildlife Service
WEAP	Worker Environmental Awareness Program

1 Introduction

Southern California Edison (SCE or Permittee) has prepared this application for an Incidental Take Permit (ITP) pursuant to California Fish and Game Code (CFGC) Section 2081(b) and 2081(c) and the California Code of Regulations (Title 14, Division 1, Subdivision 3, Chapter 6, Article 1, commencing with Section 783) for the Lugo-Victorville 500-Kilovolt (kV) Transmission Line Remedial Action Scheme (LVRAS) Project (Project or Covered Activities) in San Bernardino County, California (Figure 1). The Covered Species addressed in this application are the desert tortoise (*Gopherus agassizii*) and the gilded flicker (*Colaptes chrysoides*).

2 Covered Species

2.1 Desert Tortoise

2.1.1 Listing Status

The California Fish and Game Commission listed the desert tortoise as threatened under the California Endangered Species Act (CESA) in 1989 (CFGC - 670.1) and is currently under consideration for uplisting to endangered under CESA.

The desert tortoise was listed as an endangered species by the United States Fish and Wildlife Service (USFWS) in an emergency listing in August 1989 (54 Federal Register [FR] 32326-32331) and subsequently listed as threatened on April 2, 1990 (55 FR 12178-12191).

2.1.2 Species Description

The desert tortoise is a species of terrestrial turtle native to the Mojave and Sonoran deserts of the southwestern United States and northwestern Mexico. The desert tortoise has a high-domed carapace (upper shell) that is greenish-tan to dark brown and a plastron (lower shell) that is unhinged, relatively flat, and yellowish in color. The head is small, round, and reddish-tan. The front and hind limbs are of similar size, with the front legs flattened for digging and the hind legs more elephantine in shape. Adult desert tortoises typically reach a length of between eight and 15 inches and a weight of up to 15 pounds. Desert tortoises require 13 to 20 years to reach sexual maturity and may life as long as 80 years (USFWS 2011, USFWS 2022a, USFWS 2022b).

2.1.3 Habitat Description

Desert tortoises occur in areas that receive between two and eight inches of annual precipitation at elevations from below sea level to approximately 5,500 feet above sea level. They are most often found on gently sloping terrain in valleys, foothills, and alluvial fans. Occupied habitats are typically characterized as creosote bush scrub, dominated by either creosote bush (*Larrea tridentata*) or white bursage (*Ambrosia dumosa*), and support high productivity of annual and perennial herbaceous plants. Because desert tortoises must be able to dig burrows, they require soils that are soft enough to allow excavation but firm enough to prevent collapse. Occupied areas typically have sandy-gravel substrates (USFWS 2011).

2.1.4 Activity

Desert tortoises may hibernate underground for up to nine months of the year. Their activity is seasonally variable, with periods of relatively high levels of activity from March through June and September through October. Individuals typically emerge from their burrows in early spring when germinating annual plants provide forage. Although less active during the summer, they may reemerge when conditions are favorable, such as following summer rains. During active periods, desert tortoises feed on a wide variety of herbaceous plants including cactus, grasses, and annual flowers. Desert tortoise will drink surface water when it is available, but by reducing activity during droughts they are able survive for more than a year without access to any free water (USFWS 2011).

Male desert tortoises have home ranges of 200 acres or more. The home ranges of females are roughly half that size (USFWS 2011). Individual desert tortoises use multiple burrows over the course of the year, and multiple individuals may occupy the same burrow. Mating occurs from spring through fall. Females bury eggs in nests that are often dug near a burrow entrance or underneath a shrub. Mojave Desert tortoises lay up to three clutches of eggs per year. The incubation period is between 90 and 120 days, with eggs typically hatching between August and October (U.S. Forest Service 2008).

2.1.5 Threats

The desert tortoise was listed in response to loss and degradation of habitat caused by numerous human activities, including urbanization, agricultural development, military training, recreation, mining, and livestock grazing (USFWS 1990). The loss of individual desert tortoises to increased predation by common ravens (*Corvus corax*) and other predators, collection by humans, collisions with vehicles on paved and unpaved roads, and mortality resulting from diseases (specifically upper respiratory tract disease, shell necrosis, and cutaneous dyskeratosis) also contributed to the listing and persist as threats. Desert tortoises are also subject to other detrimental factors, including increased likelihood of wildfire caused by the spread of invasive plant species, and loss of suitable habitat due to climate change (USFWS 2011).

2.1.6 Population Trends

For over 30 years, researchers have documented population declines throughout much of the range of the desert tortoise in California. In 1994, the USFWS-prepared Recovery Plan for the Desert Tortoise presented data indicating that desert tortoise populations in the western portion of the species' range (i.e., the western Mojave Desert of California) were declining significantly (USFWS 1994). In 2011, the USFWS released a Revised Recovery Plan for the Mojave Population of the Desert Tortoise. Desert tortoise populations in the western Mojave Desert continue to decline, and a downward trend has also been documented for populations in the eastern Mojave Desert (USFWS 2011).

Desert tortoise population densities in the region have been declining since at least 1980. The Mojave National Preserve (MNP) includes the Goffs Permanent Study Plot (a 1-square-mile plot in southeastern MNP), established in 1977 and sampled for desert tortoises through 2000 (Berry 2000). Population density estimates across all size classes declined from approximately 440 desert tortoises per square mile in 1980 to approximately 88 per square mile in 2000; sub-adult and adult size class declined from approximately 195 desert tortoises per square mile to approximately 18 per square mile in 2000 (USFWS 2011). The 2011 Recovery Plan estimated adult/sub-adult densities (per square mile) based on research from 2007 (McLuckie et al. 2007). The Recovery Plan estimated 12.2 desert tortoises per square mile in the Western Mojave Recovery Unit and 12.9 per square mile in the Eastern Mojave Recovery Unit.

2.1.7 Critical Habitat

A final critical habitat rule was published for the Mojave population of the desert tortoise (i.e., desert tortoise) in 1994 (59 FR 5820–5866). Critical habitat is defined as "the specific areas within the geographic area occupied by a species on which are found those physical or biological features (PBF; formerly commonly referred to as the "Primary Constituent Elements") essential to the conservation of the species and which may require special management considerations or

protection." The PBFs for the desert tortoise include sufficient space for individual and population growth and normal behavior, which can range anywhere from 100 to 200 acres; food, water, or other nutritional or physiological requirements; cover or shelter; sites for breeding, reproducing, and rearing of offspring; and habitats that are protected from disturbance or representative of the historical, geographical, and ecological distribution of a species (55 FR 12178-12191).

Designated critical habitat for the desert tortoise encompasses more than 6,000,000 acres (2,428,114 hectares) in portions of the Mojave and Colorado deserts and consists of six recovery units (USFWS 1994). The project is located in the Eastern Mojave and Western Mojave recovery units for the desert tortoise (USFWS 2011) and in the Ivanpah and Ord-Rodman units of critical habitat for the species (USFWS 2022c) (Figure 2).

2.2 Gilded Flicker

2.2.1 Listing Status

The California Fish and Game Commission listed the gilded flicker as endangered under the CESA in 1988 (CFGC – 670.1). The species is not listed under the federal Endangered Species Act (FESA).

2.2.2 Species Description

The gilded flicker is a large species of woodpecker (approximately 11 to 12 inches in length). Individuals of both sexes are primarily beige or light brown in color with a black-spotted breast, black-barred back, white rump, and rufus-yellow crown. The undersides of the wings and tail are yellow. Males have a red cheek stripe.

2.2.3 Habitat Description

The gilded flicker is primarily a resident of the Sonoran Desert in Arizona and northwestern Mexico. Its range extends into southeastern California in the lower Colorado River valley. Although associated with saguaro (*Carnegiea gigantea*) and other giant cacti throughout most of its range, in California the gilded flicker is primarily found in desert riparian, desert wash, and Joshua tree woodland habitats (Kucera 1997). The species nests in cavities in giant cacti, Joshua trees (*Yucca brevifoli*a), cottonwood (*Populus* sp.) and willow (*Salix* sp.) trees and forages for insects in open habitats (Kucera 1997).

2.2.4 Activity

The gilded flicker is a year-round resident of the areas where it occurs and is not known to be migratory. Nesting typically begins in March and is complete by early July (Lower Colorado River Multi-Species Conservation Program 2022). The species' diet consists mainly of ants and beetles, for which it forages on the ground.

2.2.5 Threats

The species is threatened by the loss and degradation of habitat, particularly in riparian areas, as a result of development, recreation, water management, and invasion of non-native plants (Kucera 1997). Wildfires fueled by non-native plants are also a serious threat to gilded flicker habitat as they often kill giant cacti and Joshua trees (Moore et al. 2022). Models suggest that the range of suitable habitat for the gilded flicker may expand as a result of climate change, but this may threaten the

persistence of the species by promoting increased hybridization with the closely related northern flicker (*Colaptes auratus*) (National Audubon Society 2019)

2.2.6 Population Trends

The population of the gilded flicker has declined in recent decades (Kucera 1997), but its current status and trend are not well known.

2.2.7 Critical Habitat

The gilded flicker is not federally listed; therefore, no critical habitat has been designated for the species.

3 Applicant Information

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4 Project Description

4.1 Project Location

The LVRAS Project is located within an existing utility corridor starting at SCE's Gale Substation in unincorporated San Bernardino County, California (approximately 1 mile east of Daggett), through SCE's Pisgah Substation (immediately north of Interstate 40 [I-40], approximately 13 miles northwest of Ludlow, California), and ending near Nipton Road (Nevada State Route 164) in Clark County, Nevada at transmission tower M152-T2 on the Eldorado-Lugo 500-kV line. The proposed Project includes two segments: Segment 1 (Gale to Pisgah), which extends for approximately 29 miles between SCE's Gale Substation and SCE's Pisgah Substation, and Segment 2 (Pisgah to Nipton), which continues from SCE's Pisgah Substation for approximately 85 miles to transmission tower M152-T2; approximately 1.8 miles of Segment 2 is located in Nevada. An overview map showing both Segment 1 and Segment 2 is provided in Figure 1.

4.1.1 Segment 1: Gale to Pisgah

Segment 1 crosses approximately 29 miles of public and private lands within SCE's existing right-of-way (ROW). The proposed Project will utilize existing structures on the Baroid 33-kV and Hector 12-kV distribution circuits. Approximately 5.7 miles of Segment 1 is located on Bureau of Land Management (BLM) lands, 1 mile on Department of Defense (DOD) lands, and 22 miles on private lands, of which 0.85 mile is adjacent to or near state lands. Approximately 1.3 miles of cable would be placed underground in five discrete sections along Segment 1, of which 0.45 mile is located on BLM lands and 0.85 mile on private lands. A map book showing all the project areas within Segment 1 is provided in Appendix A-1.

4.1.2 Segment 2: Pisgah to Nipton

Segment 2 crosses approximately 85 miles of public and private lands within SCE's existing ROW. The proposed Project will utilize existing structures on the Hector 12-kV Distribution Line and the Eldorado-Lugo 500-kV Transmission Line, which is jointly owned and a major power transfer path between SCE and the Los Angeles Department of Water and Power (LADWP). Approximately 26 miles of Segment 2 is located on BLM lands, 51 miles on National Park Service (NPS) –MNP lands, and 7 miles on California State Lands Commission (SLC) and private lands. A map book showing all of the project areas within Segment 2 is provided in Appendix A-2

4.2 Covered Activities

4.2.1 Project Overview

The proposed Project is required to reliably interconnect and integrate multiple renewable generation projects in the Eastern California and Southern Nevada area onto the California Independent System Operator controlled grid. The primary function of the proposed Project is to prevent thermal overloading of the existing Lugo-Victorville 500-kV Transmission Line, which is a major power transfer path between SCE and the LADWP. Thermal overloading results when the

ampacity[1] of the transmission line exceeds the rating it was designed to operate at. As current increases across a transmission line, the temperature of the transmission line will increase such that it can exceed its thermal capability. Operating a transmission line beyond its thermal capability can result in ground clearance infractions, damage to the conductor, disruption of electrical service, and safety and reliability issues.

Thermal overloading of the Lugo-Victorville 500-kV Transmission Line could occur in the event that the existing Eldorado-Lugo 500-kV Transmission Line or both the Eldorado-Lugo 500-kV and Lugo-Mohave 500-kV transmission lines are removed from service as the result of an unplanned outage. During an outage, current that would normally flow through these lines is automatically redirected through the remainder of the transmission system including the Lugo-Victorville 500-kV Transmission Line, potentially exceeding the thermal capability of the Lugo-Victorville 500-kV Transmission Line. As a Transmission Owner, SCE is responsible for mitigating against adverse impacts on the Bulk Electric System in accordance with reliability standards and criteria including those outlined in the North American Electric Reliability Corporation (NERC) Reliability Standard TPL-001-5. The proposed Project would protect the Lugo-Victorville 500-kV Transmission Line by essentially reducing the amount of current that would flow through the transmission system when needed.

The proposed Project includes the installation of a new telecommunication path in the existing utility corridor, including the replacement of overhead ground wire (OHGW), optical fiber nonconducting riser (OFNR) cable, and/or all-dielectric self-supporting (ADSS) fiber-optic cable between the existing Eldorado Substation in Nevada, and Cima, Pisgah, and Gale Substations in California. The proposed Project will provide reliable communication with renewable energy generators so that they can be safely taken off-line in a timely manner to prevent thermal overload.

The Project will provide reliable communication with renewable energy generators so that they can be safely taken off-line in a timely manner to prevent thermal overload. The proposed telecommunication path would support the SCE communication system for the addition of renewable energy generation. This communication system is part of the larger SCE system that provides safe and reliable electrical service consistent with the NERC, Federal Energy Regulatory Commission, the California Independent System Operators, and SCE's planning design guidelines and criteria. Without the LVRAS Project, renewable generation would be at an increased risk of curtailment, causing potential cascading outages and widespread blackouts, and the delivery of renewable power into the load servicing areas could be reduced. As California moves toward increasing its renewable energy goals, the Project is required to safely and reliability integrate these renewable energy resources.

The telecommunication path would be designed consistent with the *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006* (Avian Power Line Interaction Committee [APLIC] 2006). The telecommunication path would also be evaluated for potential collision reduction devices in accordance with *Reducing Avian Collisions with Power Lines: The State of Art in 2012* (APLIC 2012).

The proposed Project is divided into two segments, as generally described below.

[1] The maximum current that a conductor can carry continuously without exceeding its temperature rating.

Segment 1: Gale to Pisgah

Segment 1 includes the installation of approximately 29 miles of telecommunication ADSS cable line[2] on existing distribution poles located within SCE's existing ROW or within franchise, from SCE's Gale Substation (near the unincorporated community of Daggett) to SCE's Pisgah Substation (approximately 13 miles northwest of the unincorporated community of Ludlow) in San Bernardino County, California. The ADSS cable would be attached overhead on existing and new wood poles, with approximately 1.2 miles placed in underground conduit.

Segment 2: Pisgah to Nipton

Segment 2 includes the removal of one of two existing OHGW and replacement with a new telecommunication path consisting primarily of optical ground wire (OPGW), but also including short lengths of OFNR and ADSS fiber optic cable. The OPGW portion of this path will be installed on approximately 84 miles of existing SCE Eldorado-Lugo 500-kV Transmission line structures between I-40 near Ludlow, California and Nipton Road in Clark County, Nevada, within the existing ROW between the Pisgah Substation in California and the Eldorado Substation in Nevada.

Table 1 provides a breakdown of new/replacement telecommunication fiber types for the existing Segment 1 (Gale to Pisgah) and Segment 2 (Pisgah to Nipton) alignments, based on land ownership.

Table 1 Linear Extent of Telecommunications Improvement

	Land Ownership (linear miles)					
Cable Type	**BLM**	**DOD**	**NPS-MNP**	**SLC**	**Other[1]**	**Total**
Segment 1						
ADSS Overhead	5.4	1	0	0.8	20.5	**27.7**
ADSS Underground	0.4	0	0	0.03	0.8	**1.23**
OFNR	0.1	0	0	0	0.1	**0.2**
Total	**5.9**	**1**	**0**	**0.83**	**21.4**	**29.13**
Segment 2						
OPGW	26.2	0	51.3	3.8	2.6	**83.9**
OFNR	0.7	0	0	0	0.1	**0.8**
ADSS Overhead	0.5	0	0	0	0	**0.5**
Total[2]	27.4	**0**	**51.3**	**3.8**	**2.7**	**85.2**

BLM = Bureau of Land Management, DOD = Department of Defense, NPS = National Park Service, MNP = Mojave National Preserve, SLC = State Lands Commission, ADSS = all-dielectric self-supporting, OPGW = optical ground wire, OFNR = optical fiber nonconducting riser

[1]Includes privately-owned and County-owned land.

[2]Total cable length exceeds ROW length due to routing of OFNR and ADSS within and adjacent to substations.

[2] The ADSS cable is a type of optical fiber cable that is strong enough to support itself between structures without using conductive metals. It is an alternative to OPGW and optical attached cable with a lower installation cost. The ADSS is necessary to ensure adequate communication facilities are available to support multiple projects.

4.2.2 Construction Activities

The sections below describe construction activities associated with Segments 1 and 2 of the proposed Project.

Segment 1: Gale to Pisgah

Route and Activity Description

Segment 1 includes work at approximately 483 existing distribution pole locations. Approximately 5.7 miles of Segment 1 is located on BLM land, 1 mile on DOD land, and 22 miles on private land.

The new ADSS cable will be attached to the existing Baroid 33-kV and Hector 12-kV circuit distribution poles. The cable will be encased in non-reflective black plastic in spans of up to 1,000 feet. The cable will be installed on the existing 50- to 60-foot-tall wood poles, primarily 24 to 26 feet above ground level, depending on the terrain. The existing circuits are located approximately 40 feet above ground. Although most of the existing distribution poles are sufficiently strong and tall enough to withstand the extra load exerted by the additional fiber optic cable, some poles would require the installation span guy wire, or down guys to existing or new anchors. Riser poles would be required where underground conduit transitions to overhead fiber optic cable.

The new fiber optic cable associated with Segment 1 will begin at the Mechanical Electrical Equipment Room building located within Gale Substation. Fiber optic cable will proceed south out of Gale Substation, then east immediately adjacent to the National Trails Highway for approximately 3,515 feet within new underground conduit and manholes. At pole 429667S, a new riser will be installed, and the fiber optic cable will go up the riser and continue east adjacent to National Trails Highway approximately 4,200 feet as overhead fiber cable on existing overhead structures, to pole 1847675E. At pole 1847675E, the fiber optic cable will descend inside a new riser and will continue east for approximately 1,850 feet within new underground conduit and manholes.

At pole 1847686E, a new riser will be installed, and the fiber optic cable will go up and continue east adjacent to the National Trails Highway for approximately 7,705 feet as overhead fiber optic cable on existing overhead structures. At pole 1847710E the fiber optic cable continues south for approximately 90 feet on existing overhead distribution poles, crossing to pole 4045427E on the south side of National Trails Highway, before continuing east adjacent to the highway for approximately 34,678 feet on existing distribution poles.

At 27 locations along the alignment, existing distribution poles will be removed and replaced. At eight additional pole locations, existing distribution poles will be removed and replaced, and span guy wires to existing distribution poles and down guys to existing or new anchors will be required. At three locations, additional pole support is required, consisting of span guy wires to existing distribution poles and down guys to existing or new anchors. The affected poles are shown in Table 2 below.

Table 2 Distribution Poles Requiring Additional Support

Distribution Pole Number	Corresponding Pole with Anchor (across National Trails Highway)
Distribution Pole Requiring Removal/Replacement Only	
1847662E	–
1847686E	–
1847690E	–
4488301E	–
1847705E	–
1847707E	–
2347270E	–
4185402E	–
2361387E	–
2361372E	–
2347458E	–
4186054E	–
4185448E	–
4185421E	–
4185419E	–
229657S	–
4293688E	–
24151CIT	–
1730267E	–
228309S	–
2177368E	–
30657S	–
1729970E	–
1729961E	–
30690S	–
1700599E	–
429142S	–
Distribution Pole Requiring Both Removal/Replacement and Additional Support	
2313467E	2347262E
2313465E	2347260E
2361373E	4014497E
2344309E	2347452E
2347451E	2347550E

Distribution Pole Number	Corresponding Pole with Anchor (across National Trails Highway)
2347549E	2347548E
2347547E	2347546E
4169402E	2347263E
Distribution Pole Requiring Additional Support Only	
2347261E	2313466E
2361374E	4014498E
2347545E	2344308E

West of Minneola Road, at poles 4792803E, 4792802E, 2361377E, and 2361376E, secondary voltage (i.e., 120 volt [V]/240V) conductor attachments require repositioning at a higher point on the poles to accommodate the new fiber optic cable installation and maintain proper clearances.

At pole 2347538E, the telecommunication path will cross northward over National Trails Highway approximately 110 feet to pole 2347539E and will continue east adjacent to Pioneer Road approximately 10,935 feet to existing distribution pole 4185401E on the east side of Newberry Road.

Fiber optic cable will diverge from Pioneer Road at pole 4185401E and continue south adjacent to Newberry Road approximately 1,800 feet, crossing I-40 on existing overhead distribution poles to pole 1730293E, and continuing east on existing overhead structures adjacent to National Trails Highway approximately 21,682 feet to pole 30607S.

Approximately 1.4 miles east of Newberry Road, at pole 228302S, secondary voltage conductor attachments will require repositioning at a higher point on the pole to accommodate the new fiber optic cable installation and maintain clearances.

At pole 30607S, the fiber optic cable will descend inside a new riser and will continue east within new underground conduit and a manhole adjacent to National Trails Highway for approximately 650 feet. At the end of the underground conduit, the ADSS cable would transition to overhead beginning with new pole Telecom-1.

A new riser would be installed along with new wood pole Telecom-1. A total of 18 new wood poles would be installed for approximately 5,100 feet between existing wood poles on the Hector circuit and National Trails Highway to carry overhead fiber optic cable. The overhead fiber optic cable would transition from new wood pole Telecom-18 to pole 30618S on the Hector circuit near the intersection of Utah Drive and National Trails Highway, then continue east approximately 10.6 miles on existing overhead distribution poles adjacent to National Trails Highway to pole 1700568E.

At pole 1700568E, the fiber optic cable will descend inside a new riser and continue east within new underground conduit and a manhole adjacent to National Trails Highway for approximately 655 feet to pole 1700565E. At pole 1700565E, a new riser will be installed, and the fiber optic cable will go up the riser and continue north, crossing I-40, for approximately 2,390-feet to pole 429143S. At pole 429143S, the fiber optic cable will descend inside a new riser and will travel east for approximately 410 feet, bringing new conduit and fiber optic cable into Pisgah Substation Mechanical Electrical Equipment Room Building.

Appendix A-1 provides a detailed representation of the telecommunication features included in Segment 1, including construction areas and land ownership.

Land Ownership

Table 3 provides a breakdown of the number of Segment 1 project components by land ownership and Table 4 provides a breakdown of temporary and permanent ground disturbance by project component and land ownership.

Table 3 Segment 1 Project Components

Project Component Types	Project Components Quantity by Land Ownership				Total
	BLM	DOD	SLC	Other[1]	
Existing Distribution Poles	71	20	0	392	**483**
Remove and Replace Distribution Poles	5	0	1	29	**35**
New Telecommunications Poles	0	1	0	16	**17**
New Pole Risers	0	0	0	1	**1**
New Anchors	5	2	0	16	**23**
Existing Manholes	1	0	0	0	**1**
New Manholes	2	0	0	7	**9**
Underground Conduit	2,400 ft	0	0	6,115 ft	**8,515 ft**
Pulling, Stringing, Tensioning Sites[2]	13	0	1	19	**30**
Structure Work Areas/General Work Areas[2]	76	21	16	296	**398**

BLM = Bureau of Land Management, DOD = Department of Defense, SLC = State Lands Commission; ft = linear feet (all other values are quantities)

[1] Located within the jurisdictions of San Bernardino County, Burlington Northern Santa Fe (BNSF) Railway, or private lands.

[2] Total is less than sum of quantity for each landowner because some project features span multiple landowners.

Table 4 Segment 1 Ground Disturbance by Component and Land Ownership

Impact Type/Project Component	Impacts by Land Ownership (acres)				Total
	BLM	DOD	SLC	Other[1]	
Permanent Impact Project Component					
New Anchor	0.00	0.00	0.00	0.00	**0.00**
New Pole	0.00	0.00	0.00	0.00	**0.00**
Remove and Replace Pole	0.00	0.00	0.00	0.00	**0.00**
New Manhole	0.00	0.00	0.00	0.00	**0.00**
Permanent Impact Subtotal	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Temporary Impact Project Component					
Pulling/Stringing/Tensioning Site	2.30	0.00	0.14	2.64	**5.08**
Structure Work Area	16.25	1.65	0.56	31.87	**50.33**
Underground Conduit Disturbance Area[2]	2.12	0.00	0.17	4.15	**6.44**
Temporary Impact Subtotal	**20.67**	**1.65**	**0.87**	**38.66**	**61.85**
Total[3]	**20.67**	**1.65**	**0.87**	**38.66**	**61.85**

BLM = Bureau of Land Management, DOD = Department of Defense, NPS = National Park Service, MNP = Mojave National Preserve, SLC = State Lands Commission

[1] Includes privately-owned and County-owned land.

[2] Work areas for underground conduit installation.

[3] Total impacts add permanent impacts to temporary disturbance, but permanent disturbances are included within temporary work areas.

Values of 0.00 are areas less than 0.005 acre; no values indicate no impacts

Activities and Disturbance

Construction activities and disturbance associated with Segment 1 include the following:

ACCESS

Access to work areas will be provided from existing surface streets and unimproved dirt and/or gravel roads to the greatest extent possible. In locations where access roads are not available, trucks would travel overland in designated work areas from existing roads to reach the poles as shown in Appendix A-1. At the conclusion of construction, all overland routes used for construction purposes where impacts occurred would be returned to preconstruction conditions. No new permanent roads are required for Segment 1.

TRAFFIC MANAGEMENT

SCE will obtain California Department of Transportation (Caltrans) Encroachment Permits for road crossings and a San Bernardino County Road Excavation Permit for installation of the underground conduit, manholes, and poles. Traffic breaks will be limited to no more than 5 or 10 minutes in accordance with Caltrans permits and would be provided by the California Highway Patrol. Work hour restrictions would be at the discretion of the local jurisdiction. The majority of the truck traffic would use major streets and would be scheduled for off-peak traffic hours.

ADSS INSTALLATION ON POLES

Overhead ADSS stringing would include all activities associated with the installation of cables onto cross arms on existing wood pole structures. Vibration dampeners and suspension and dead-end hardware assemblies would be installed. Light disturbance (primarily overland vehicle travel and equipment staging) would occur within an approximately 40-foot radius around each pole, depending upon topography and location.

CABLE STRINGING AND SPLICING

ADSS stringing includes all activities associated with the installation of fiber optic cables onto the overhead wood pole structures. Although stringing fiber is typically accomplished from trucks and equipment parked on existing access roads and work areas, some pulling site locations may be required in previously undisturbed areas. Typically, fiber optic cable pulling sites occur every 6,000 feet to 10,000 feet and at each line direction change. Fiber optic cable splices are required at the beginning and end of each cable pull. The dimensions of the area needed for stringing set-ups varies depending upon the terrain; however, a typical stringing set-up is 40 feet by 60 feet. Where necessary due to suitable space limitations, crews can work from within a substantially smaller area. SCE anticipates being able to complete most pulling and splicing from existing roads.

ADSS INSTALLATION AND CROSSING DRY WASHES

A standard fiber optic cable installation for crossing of a dry wash would include pole framing[3] on the existing poles adjacent to either side of the dry wash; the installation of vibration dampeners, suspension, and dead-end hardware assemblies; stringing sheaves (rollers or travelers); and attachment of 3/8-inch nylon rope. At the wood pole adjacent to the dry wash, the rope is placed through the roller which is attached to the wood cable arm and down the pole, a crew person walks

[3] Pole framing is a suspension support block that is oriented vertically and attached to the wood cable arm to facilitate stringing new fiber optic cable or conductor.

through the existing dry wash with the rope to the other adjacent pole across the wash and installs this rope through the roller on the pole. This rope would be connected to the existing rope which has been placed during the framing process. Crew members stage themselves at the selected points on either end of the pulling site and communicate with each other via two-way radios to start pulling fiber optic cable with the installed 3/8-inch rope which is installed on cable pulling equipment at the designated staged areas.

If there is an existing bridge spanning a dry wash where the fiber optic cable is proposed to be installed underground, the cable would instead be attached to the bridge over the wash and no ground disturbance would occur within the wash itself in these areas.

ADSS Installation in Underground Systems

ADSS installation in new underground conduit and underground structures uses a high-density polyethylene smoothwall innerduct which provides protection and identification for the fiber optic cable. The fiber optic cable would be installed in and throughout the length of the underground conduit structure (5-inch polyvinyl chloride) and underground manhole structures (4-foot width by 4-foot length by 6-foot depth). Nine new manhole structures would be installed within the road shoulder of National Trails Highway to provide access to the underground fiber optic cable. The trench for the underground conduit would be approximately 18 inches wide and 36 inches deep. The disturbance area for the trench would be repaved and/or restored following construction with the exception of the new manhole covers.

Wood Pole Installation

Existing wood distribution line poles would be replaced with new wood poles where the pole does not meet wind load or ground clearance requirements with the addition of fiber optic cable and 17 new telecom poles (poles that carry only ADSS) will be installed. The dimensions of the area needed for pole replacement vary depending upon the terrain; however, an approximate 100-foot by 60-foot work area is required for the distribution pole replacements. A hole about 8 feet in depth would be drilled next to the existing pole, and a new pole would be erected. The conductor would be transferred from the existing pole to the new pole and the old pole would be cut below the ground level and removed. The waste materials may be used to backfill the existing holes or would be properly disposed of at an off-site facility. Installation of the 17 telecom poles will occur adjacent to the roadway shoulder in a connected disturbance area approximately 5,100 feet long and 40 feet wide. Telecom poles will be installed similar to the distribution poles. To the extent feasible, equipment will be positioned in areas of existing disturbance. Where equipment must be positioned in native vegetation, drive and crush and/or cut and mow methods will be used to the extent feasible.

Construction Yards

The existing developed Daggett Construction Yard (181 acres) and Gale and Pisgah Substations (1 and 1.6 acres, respectively) will be used as construction storage areas for all material and equipment associated with Segment 1 fiber optic cable installation. The construction yards will be used as reporting locations for workers, vehicle and equipment parking, and material storage. The yards may also have construction trailers for supervisory and clerical personnel. Existing night/security lighting at the Daggett Construction Yard and substations will be used as required. Normal maintenance and refueling of construction equipment will take place in these yards. All

refueling and storage of fuels will be implemented in accordance with the existing Stormwater Pollution Prevention Plan (SWPPP) for each location.

Material will be stored inside the perimeter of the fenced substations and Daggett Yard in designated areas during construction. All construction debris will be placed in appropriate on-site containers and regularly disposed of in accordance with all applicable local jurisdiction regulations.

Materials commonly stored in the yards will include construction trailers, construction equipment, portable sanitation facilities, steel bundles, wood poles, ADSS cable reels, hardware, signage, consumables (such as fuel), waste materials for salvaging, recycling, or disposal, and best management practices (BMP) materials (straw wattles, gravel, and silt fences). Most materials associated with the construction efforts will be delivered by truck to these designated yards, while some materials may be delivered directly to the temporary telecommunications construction areas.

During the peak construction period, up to 37 private commuting vehicles and the construction vehicles/equipment will be parked at the construction yards. Crews will load materials onto work trucks and drive to the current construction location. At the end of each day, crews will return to the yard in their work vehicles and depart in their private vehicles.

Property and Easement Acquisitions

Updated ROW grants from BLM and DOD, acquiring permanent rights, and temporary rights from private property owners would be obtained, as needed.

Segment 2: Pisgah to Nipton

Route and Activity Description

Segment 2 involves the removal of one of the existing OHGWs and replacement with OPGW (and limited OFNR and ADSS) along approximately 84 miles of existing SCE ROW between transmission tower M68-T3 near SCE's Pisgah Substation in San Bernardino County, California (near Ludlow, California) and transmission tower M152-T2 near Nipton Road (Joshua Tree Highway), in Clark County, Nevada.

Segment 2 includes work at approximately 383 existing single-circuit 500-kV lattice steel towers (LST), 38 OPGW pulling/stringing/tensioning sites with LST work areas, structure work areas at all LSTs that aren't also pulling/stringing/tensioning sites, 11 distribution pole locations, 15 guard structures, 38 helicopter landing zones, two existing substations (Pisgah and Cima), and mobilization, marshalling, and storage activities at the existing Daggett Training and Storage Yard and Nipton Construction Yard. Construction of Segment 2 would occur primarily by helicopter using all disturbance areas except those as identified as structure work areas. However, structure work areas (approximately 100 feet by 100 feet) surrounding 354 (including 348 in California and six in Nevada) LSTs on the Eldorado-Lugo 500-kV Transmission Line ("structure work areas"), are included in the event that helicopter construction is occasionally infeasible due to weather, mechanical issues, presence of sensitive biological resources (e.g., bighorn sheep lambs), or other unforeseen conditions. These structure work areas would be utilized for ground-based construction during OPGW stringing, if required. Table 5 shows a breakdown of the Project components and work areas by land ownership.

Table 5 Project Components and Work Areas by Land Ownership

Project Component Types	BLM	MNP	SLC	Private	Total
California					
Existing LST	141	208	20	14	**383**
OPGW Pulling, Stringing, Tensioning Site/LST Work Area	17	16	2	3	**38**
Structure Work Area[1]	130	186	23	11	**348**
Existing Distribution Pole[2]	9	0	0	0	**9**
New Distribution Pole[2]/Work Area	2	0	0	0	**2**
Replace and/or Remove Existing Distribution Pole/Work Area	4	0	0	0	**4**
Existing Manhole[2]/Work Area	2	0	0	0	**2**
New Manhole[2]/Work Area	4	0	0	2	**6**
Guard Structure[4]	5	7	0	2	**14**
Helicopter Landing Zone[3]	11	23	0	5	**38**
Underground Conduit[4]	2	0	0	1	**3**
Pisgah Substation	1	0	0	0	**1**
Cima Substation	0	0	0	1	**1**
Daggett Training and Storage Yard	0	0	0	1	**1**
Nipton Construction Yard	0	0	0	1	**1**
Nevada					
OPGW Pulling, Stringing, Tensioning Site/LST Work Area	1	0	0	0	**1**
Structure Work Area	6	0	0	0	**6**
Guard Structure	1	0	0	0	**1**

BLM = Bureau of Land Management, MNP = Mojave National Preserve (National Park Service); SLC = State Lands Commission; OPGW = optical ground wire; ft = linear feet (all other numerical values are quantities)

[1] Total is less than sum of quantity for each landowner because two structure work areas span BLM, SLC, and/or private land.

[2] Distribution poles and manholes are associated with the locations where the telecommunications lines tie into substations and adjacent distribution lines.

[3] Total is less than sum of quantity for each landowner because one helicopter landing zone is sited within the jurisdictions of both BLM and private land. For the purposes of displaying helicopter landing zones by jurisdiction, the helicopter landing zone which crosses both BLM and private land is counted as one for each jurisdiction rather than one-half.

[4] Reflects disturbance for conduit placement inside and outside of existing access roads, and outside all substation fence lines.

Appendix A-2 provides a detailed representation of the telecommunication features included in Segment 2, including construction areas and land ownership.

The ADSS/OFNR fiber optic cable will run underground from Pisgah Substation to reach the existing Hector 12-kV distribution line, where it will rise above ground and attach to new distribution pole 429811S (approximately 100-feet northwest of Pisgah Substation) and travel north on new and existing distribution poles. The ADSS/OFNR fiber optic cable will cross the BNSF ROW and reach new interset pole 4845502E. From the new interset pole, the fiber optic cable will run underground in new conduit for approximately 100 feet to LST M68-T3, where it will transition from ADSS/OFNR to OPGW. Four new distribution poles will be installed, and two will be removed (poles 429812S and 429148S).

For approximately 83.5 miles, the fiber optic cable will continue overhead as OPGW along the Eldorado-Lugo 500-kV Transmission Line route until it ends at M152-T2 near Nipton Road (Joshua

Table 6 lists 26 LSTs that require ground wire peak and/or body modification. To maintain structural integrity, seven of these LSTs will require steel member reinforcement at locations on the tower in addition to the ground wire peak. For these seven structures, existing steel sections will be reinforced to support the loading associated with the additional OPGW installation. The appearance of existing LSTs will not change significantly, as the reinforcement sections will be manufactured with dulled galvanized steel, similar in color to the existing single-circuit LSTs. Structural body modifications are not expected to change the heights of the existing structures. Structure body modification is required at LST M141-T3, where no splice is required. OPGW splices will also occur at towers M94-T6 and M152-T2, where no tower modifications are required.

Table 6 Segment 2 Structure Modifications and Splicing Locations

Modification Location	Structure Type	Ground Wire Peak Modification	Body Modification[1]	Splicing Locations
M68-T3	ELT-1	X	–	X
M71-T3	ELT-1	X	–	X
M74-T4	ELT-1	X	–	X
M78-T1	ELT-1	X	–	X
M81-T3	ELT-2	X	–	X
M84-T6	ELT-1	X	–	X
M88-T2	ELT-1	X	–	X
M91-T4	ELT-3	X	–	X
M98-T2	ELA-2	X	–	X
M101-T5	ELT-2	X	–	X
M105-T1	ELT-2	X	–	X
M108-T2	EMT-1	X	X	X
M111-T5	ELT-1	X	–	X
M115-T1	ELT-2	X	–	X
M118-T1	EHT-1	X	–	X
M121-T1	ELT-2	X	–	X
M124-T3	ELT-2	X	–	X
M127-T6	ELT-1	X	–	X
M131-T1	EMT-3	X	X	X
M134-T2	EMT-2	X	X	X
M137-T3	EMT-3	X	–	X
M141-T1	EMT-3	X	–	X
M141-T3[2]	EMT-3	–	X	–
M144-T2	EMT-3	X	X	X
M147-T4	EMT-2	X	X	X
M150-T1	EMT-3	X	X	X

[1] Body modifications include reinforcement of existing steel beams to support the loading associated with the additional OPGW installation.

All portions of Segment 2 located within California would be designed to meet at minimum General Order 95 standards. All portions of Segment 2 located within Nevada would be designed to meet at minimum National Electric Safety Code standards.

Land Ownership

Table 7 provides a breakdown of temporary and permanent ground disturbance by project component and land ownership.

Table 7 Segment 2 Ground Disturbance by Component and Land Ownership

Project Feature	Approximate Disturbance Size (Length by Width)	Acres Disturbed During Construction	Acres to be Restored	Acres Permanently Disturbed
BLM Lands				
OPGW Pulling, Stringing, Tensioning Site/LST Work Area[1]	500’ x 150’	15.88	15.88	0
Structure Work Area[2]	100’ x 100’	29.25	29.25	0
Distribution Pole Work Area	40’ diameter circle	0.33	0.33	0
Guard Structure	50’ x 150’	1.70	1.70	0
Helicopter Landing Zone	Varies	1.48	1.48	0
Underground Conduit[3]	120’-136’ x 60’	0.33	0.33	0
Sub-Total Estimated	**N/A**	**48.97**	**48.97**	**0**
Mojave National Preserve				
OPGW Pulling, Stringing, Tensioning Site/LST Work Area[1]	500’ x 150’	35.65	35.65	0
Structure Work Area[2]	100’ x 100’	42.93	42.93	0
Distribution Pole Work Area	40’ diameter circle	0.23	0.23	0
Guard Structure	50’ x 150’	3.80	3.80	0
Helicopter Landing Zone	Varies	2.77	2.77	0
Access Spur	Varies	0.12	0.12	0
Sub-Total Estimated		**85.50**	**85.50**	**0**
State Land Commission				
Structure LST Work Area[2]	100’ x 100’	4.64	4.64	0
Sub-Total Estimated		**4.64**	**4.64**	**0**
Private Lands				
OPGW Pulling, Stringing, Tensioning Site/LST Work Area[1]	500’ x 150’	5.78	5.78	0
Structure Work Area[2]	100’ x 100’	2.69	2.69	0
Guard Structure	50’ x 150’	1.03	1.03	0
Helicopter Landing Zone	Varies	0.57	0.57	0
Cima Substation Work Area	Varies	1.43	1.43	0
Cima Underground Conduit	85’ x 300’	0.55	0.55	0

Project Feature	Approximate Disturbance Size (Length by Width)	Acres Disturbed During Construction	Acres to be Restored	Acres Permanently Disturbed
Sub-Total Estimated		**12.**05	12**.05**	**0**
Total Disturbed Area (acres)[4]		**154.32 (Temporary)**	**154.32 (Restored)**	**0 (Permanent)**

[1] Number and spacing of disturbance areas based on approximate 19,000' reel lengths, number of circuits, and route design; this area includes stringing sites, work areas for splicing, and work areas for tower modifications.

[2] It is SCE's intent to construct Segment 2 solely by helicopter; however, based on experience on other similar projects, up to 20-percent of the structure work areas may be utilized for ground-based construction in the event helicopter construction is temporarily infeasible.

[3] Reflects disturbance for conduit placement inside and outside of existing access roads, and outside all substation fence lines.

[4] Disturbance table totals have been adjusted to account for overlapping disturbance areas. Any overlap due to disturbance areas that coincide with one another have been accounted for and are not double-counted.

Activities and Disturbance

Construction activities and disturbance areas associated with Segment 2 include the following:

ACCESS

Installation of OPGW on existing transmission line structures will require access to each disturbance area shown in Table 7 for construction crews, materials, and equipment. Access to work locations in the Project area will be achieved through the use of existing access roads designated as open routes by the BLM and/or roads SCE is granted access pursuant to the existing ROW grant (BLM's Grants: CACA 056758 and N-100096 and NPS': ROW Permit No.: RW-MOJA-20-002), or through the Construction SUP to be issued by the NPS. Access road construction (minor repairs) will consist of the following combination of tasks within existing access road areas only. Approved import materials (between 100 to 300 yards) will be placed and compacted in some areas with large washouts and/or ruts. Other locations will be moisture conditioned and compacted. Lastly, a grader will level off the existing road prisms to create a smooth driving surface. Any necessary access road improvements would occur within the existing road footprint and would not result in new permanent access roads or permanent impacts. No major repairs, including installation of new structures such as culverts, would occur. No new access roads are proposed within the LVRAS Project area.

No overland travel is expected for the Project, except where designated work areas have been delineated for the Project where "drive and crush" methods will be used to the extent feasible. "Drive and crush" involves temporary access while driving over existing vegetation, like grass or low shrubs. In some cases, may require trimming shrubs, close to ground level. Upon completion of construction, all roads used for construction will be restored, as needed, and left in a condition similar to or better than the preconstruction condition.

TRAFFIC MANAGEMENT

During construction, traffic control measures such as signage and traffic control personnel would be implemented to maintain traffic flow on Project access roads. Guard sites[4] would be in place

[4] Guard sites are temporary wooden pole structures that are set up on either side of a crossing location (such as a dry wash, flood control channel, road, or other utility) to support a conductor during Project activities and to prevent it from dropping below a conventional stringing height.

adjacent to roadways to protect the safety of workers and the public prior to initiation of wire-stringing activities. Any crossing or encroachment permits would be obtained as necessary and complied with during construction. The proposed Project would comply with goals and policies per the San Bernardino County Policy Plan's Infrastructure and Utilities and Transportation and Mobility Elements.

Wood Pole Replacement or Installation

Distribution line poles would be replaced or interset poles would be installed if the pole does not meet wind load or ground clearance requirements with the addition of fiber optic cable. An approximate 30-foot by 40-foot work area is required for the work. A hole about 8 feet in depth would be drilled next to the existing pole, and a new pole would be erected. A conductor would be transferred from the existing pole to the new pole and the old pole would be cut or removed.

ADSS Installation on Poles

Overhead ADSS cable will be installed by attaching the fiber optic cable components onto cross arms on wood pole distribution structures. This activity includes the installation of vibration dampeners, and suspension and dead-end hardware assemblies. Light disturbance (primarily overland vehicle travel and equipment staging) would occur within an approximately 20-foot radius around each pole, although the shape of each disturbance area is dependent on topography and location.

OPGW Installation on Towers

OPGW will be installed on the existing transmission LSTs. OPGW is typically installed in segments of up to 19,000 feet or less depending upon various factors including structure type, splice locations, line direction, inclination, and accessibility. Following installation of the OPGW, the strands in each segment are spliced together to form a continuous length from one end of the OPGW span line to the other. At a splice structure, the fiber cables are routed down a structure leg where splicing occurs. The splices are housed in a splice box (typically an approximate 3-foot by 3-foot by 1-foot metal enclosure) that is mounted to one of the structure legs some distance above the ground. At the towers at each end of the section of transmission line in Segment 2 as well as at the tower near Cima Substation, the overhead fiber will be spliced to another section of fiber optic cable that runs from the splice box to underground conduit leading into the communication room inside the adjacent substation. To support OPGW installation, tower modifications would be required, including tower retrofitting at M141-T3 (refer to Table 6).

Cable Pulling and Splicing

Stringing includes all activities associated with the installation of the OPGW onto the existing LSTs, including the installation of suspension and dead-end hardware assemblies. The dimensions of the area needed for the stringing setups associated with conductor installation will vary depending on structure height and terrain but should not extend beyond the limits of the SCE ROW and approved temporary construction areas. Vegetation may be removed where necessary to safely access the site and position the stringing equipment. To the extent possible, stringing setup sites will be located on level ground.

The following five steps describe the OPGW installation activities proposed by SCE:

1) **Setup.** Develop a wire stringing plan to determine the sequence of wire pulls and the set-up locations for the pulling and tensioning equipment.

2) **Unclipping.** A helicopter would fly personnel to each structure where they would unclip the existing wire from its hardware assembly and hang it in a wire traveler. Alternatively, if a helicopter couldn't be used, personnel would utilize bucket trucks or cranes with a man basket to unclip the existing wire from its hardware assembly and hang it in a wire traveler.
3) **Pulling.** The existing wire would be utilized to pull in a rope which in turn would be used to pull in the pulling cable. The OPGW would be attached to the pulling cable using a specialized swivel to prevent damage to the wire and to allow the wire to rotate freely to prevent complications from twisting as the OPGW unwinds off the reel. Once the OPGW has been pulled in, it will be secured and prepped for dead-ending and the pulling and tensioning equipment can be staged for the next wire pull.
4) **Dead-ending and Sagging.** Once the OPGW has been pulled in, a helicopter will fly personnel and their tools to the tower and commence the dead-ending process (making up the connections to secure the OPGW in place). When one end of the OPGW has been completed, a sag cat will be used to make the near final wire adjustments on the OPGW. Personnel will make the final adjustments to ensure the proper tensions were achieved, mark the wire where it will be clipped in, and makeup the other dead-end connection. Alternatively, if a helicopter could not be used, personnel would utilize bucket trucks or cranes with a man basket to conduct this process.
5) **Clipping-in.** After the OPGW has been securely dead-ended, the wire would be secured to all tangent structures. A helicopter will fly personnel and their tools to each structure where they would remove the traveler and place the OPGW into its shoe and secured. Alternatively, if a helicopter could not be used, personnel would utilize bucket trucks or cranes with a man basket to conduct this process at each structure. Once clipped in, OPGW "tails" would be run down the tower leg and coiled up on a bracket for future splicing.

Stringing will be conducted in accordance with SCE's specifications, which are similar to process methods detailed in the Institute of Electrical and Electronic Engineers Standard 524-2003, Guide to the Installation of Overhead Transmission Line Conductors. To protect the safety of workers and the public, safety devices such as grounding, guard structures, and radio-equipped construction vehicles and equipment will be in place prior to initiation of wire-stringing activities.

OFNR Installation in Conduit

At locations where the OPGW connects to an underground fiber path, splices will be housed in a splice box (typically a 3-foot by 3-foot by 1-foot metal enclosure). The OPGW will be spliced to the OFNR cable in a splice case placed inside the box. The OFNR cable will be installed between both ends of the tower structure splice box via riser conduit, manholes, and underground conduits. The 500-kV towers at both sides of the crossing will have a 5-inch riser conduit installed from the splice box to an underground manhole (4 feet by 4 feet by 6 feet) adjacent to the tower. Underground conduit will be installed within a trench roughly 4 feet deep and 2 feet wide to connect both tower and manholes. Two 5-inch conduits will be placed inside the trench. A layer of slurry will be poured over the conduit for additional protection, and the excavated soils will be used to backfill the trench. Additional manholes will be installed if the underground path is longer than 1,000 feet or the underground path has angled section that would cause damage to fiber optic cable if directly pulled through. To install a precast manhole, a hole of approximately 5 feet by 5 feet by 8 feet would be excavated, the manhole would be lowered into place then be connected to the conduits. A ground wire would be installed outside of the conduits within the slurry mix and connected to the structure's tower leg at both ends of crossing. An approximate 40-foot by 60-foot (2,400-square-

foot) work area will be required for pull and splice equipment, and a four-person crew will be required for the underground fiber optic cable installation.

Structure Work Areas

It is SCE's intent to construct Segment 2 solely by helicopter. However, based on SCE's experience on other similar projects, there are occasionally times when helicopters cannot be used as planned for construction, such as during times of high wind, high temperature, or unexpected maintenance issues. During these times, SCE would switch from helicopter construction for the cable stringing component of the Project to ground-based construction, at which time they would use the structure work areas. SCE estimates that up to 20 percent of the structure work areas may be utilized for ground-based construction during cable stringing in the event helicopter construction is temporarily infeasible.

Cable Pulling and Splicing, above, describes how ground-based construction would replace helicopter construction for Steps 2, 4, and 5 (unclipping, dead-ending and sagging, and clipping in) of the cable stringing activity. Because ground-based construction equipment for Step 3 (pulling) would already be present on the ROW, the same equipment could be used for Steps 2, 4, and 5. Consequently, no additional equipment or personnel beyond that needed for helicopter construction would be required to use the structure work areas.

Construction Yards and Helicopter Staging Locations

The construction yards will be used as a reporting location for workers, vehicle and equipment parking, and material storage. The construction yards will have offices for supervisory and administrative personnel. Maintenance of construction equipment will be conducted at these yards. Construction yards will range between 1 and 17 acres, depending on land availability and intended use. Construction yards serving Segment 2 include Nipton Construction Yard (approximately 3.6 acres) and two substations: Pisgah (approximately 1.6 acres) and Cima (approximately 1.2 acres).

Preparation of the construction yards for material delivery may include temporary perimeter fencing and depending on existing ground conditions at the site, include the application of gravel or crushed rock. The Nipton Construction Yard consists of hardscape/compacted soil with an asphalt helicopter pad. Temporary electrical and telephone connections at the construction yards would be arranged with local electrical and communication service providers, if available. Water would be provided by local vendors.

Materials commonly stored at the transmission and/or telecommunications construction staging yards would include, but not be limited to, construction trailers, construction equipment, portable sanitation facilities, steel bundles, wood poles, overhead OPGW reels, hardware, signage, consumables (such as fuel), waste materials for salvaging, recycling, or disposal, and BMP materials (straw wattles, gravel, and silt fences). A majority of materials associated with the construction efforts would be delivered by truck to designated staging yards, while some materials may be delivered directly to the temporary transmission and telecommunications construction areas. Transmission construction areas will serve as temporary working areas for crews and where Project-related equipment and/or materials will be staged at or near each structure location, within SCE ROW or franchise.

Helicopters will take off and land at all construction yards to move materials and crew members to multiple helicopter landing zones along the proposed Project ROW. At night and during non-working days the helicopter(s) would be based at Hesperia Airport, Barstow-Daggett Airport, Baker Airport,

and Jean Airport and staged at the construction yards (including the Daggett Construction Yard in Segment 1). Helicopter fueling will occur at staging areas, local airports, or landing zones determined during final engineering. Fueling will use the helicopter contractor's fuel truck and will be supervised by the helicopter fuel service provider.

Final locations of helicopter landing zones for Segment 2 will be determined with the input from the helicopter contractor and affected private landowners and land management agencies. During stringing activities, preliminary helicopter operations/staging will located be at construction yards, and on previously disturbed areas adjacent to construction areas (including existing SCE ROW and spur roads). Any land that may be disturbed in staging areas will be restored to preconstruction conditions or to the landowner's requirements following the completion of construction.

During the peak construction period, up to 87 construction personnel's commuting vehicles and construction vehicles/equipment will be parked at the construction yards. Crews will load materials onto work trucks and drive to the current construction location. At the end of each day, crews will return to the yard in their work vehicles and depart in their private vehicles.

PISGAH AND CIMA SUBSTATION WORK

The existing Pisgah Substation is located on BLM land approximately 13 miles northwest of Ludlow, California. New telecommunication equipment will be routed to and installed in the existing communication room within Pisgah Substation. The existing Cima Substation is located on SCE-owned land approximately 15 miles south of Interstate 15, in the town of Cima, California. New telecommunication equipment will be routed to and installed in the existing communication room at Cima Substation.

Connecting the OPGW with the substations will require several steps. About 25 feet of 4-inch vertical riser conduit would be installed from the transmission structure closest to the substation, to reach the splice box from the ground. A trench would be dug from the structure to the substation fence line. The trench would be approximately 3-feet deep and 1.5-feet wide. A 5-inch conduit would be placed inside the trench from the structure to the substation fence line. A layer of slurry would be poured over the conduit for additional protection. The spoils would be used to backfill the trench. At the substation fence line, the conduit would be connected to the conduit/trench inside the substation. OFNR cable would be pulled from the substation communication room through the substation trench/conduit to the last structure interface buried conduit, riser conduit, to the splice box on the structure.

PROPERTY AND EASEMENT ACQUISITIONS

No additional property would be acquired. The project will occur within an existing BLM ROW; Notice to Proceed from BLM is required. A new Construction Special Use Permit for the portion of Segment 2 located in the MNP would be obtained. Updated ROW Grants from BLM, authorization from SLC, and temporary rights from private property owners would be obtained, as needed.

Construction Schedule and Personnel

Segment 1 would be constructed over the course of approximately 115 working days, while Segment 2 would take approximately 262 working days, including approximately 7 days of survey activities, to complete. Segment 1 and Segment 2 construction activities would overlap, with total Project construction lasting approximately one year; however, specific construction activities along each segment that may occur simultaneously are not known at this time.

Construction crews would generally work Monday through Saturday for approximately 10 hours per day. Project construction activities would generally occur during daylight hours (approximately 5:00 a.m. to 7:30 p.m., depending on time of year, including travel time). Nighttime construction work is not anticipated for this project. However, crews may travel to and setup at sites before sunrise or clean up and travel from sites after sunset. The Project team will submit a request to the applicable local authority having jurisdiction to travel to the work areas before official sunrise under the direction of the Authorized Biologist during periods of sufficient sunlight. Vehicle escorts will be provided as necessary as determined by the Authorized Biologist in accordance with required desert tortoise mitigation measures. If it becomes necessary, the Project will also submit a request to travel from the sites after sunset during periods of sufficient sunlight. Noise-generating construction activities on private land will occur between 7:00 a.m. and 7:00 p.m., consistent with the San Bernardino County Development Code. Nighttime construction work is not anticipated for the proposed Project. However, if temporary lighting is required, portable light standards would be placed along the perimeter of the work area, as necessary. The light standards would be shielded, resulting in light being directed downward and inward (toward the work).

The start of construction is dependent on approved California Independent System Operator outages, with a target start of construction in Spring 2023. Up to 121 construction personnel may be present at any given time over the 1-year construction period between Segment 1 and Segment 2 combined.

4.3 Operations and Maintenance

Following construction, operations and maintenance (O&M) activities would be necessary to ensure reliable service, as well as the safety of utility workers and the general public. Maintenance activities would include repairing existing facilities, restringing lines, routine access road maintenance, periodic insulator washing, telecommunications equipment maintenance, and as-needed emergency repairs. These O&M activities are all currently implemented by SCE within the Lugo-Victorville Project ROW on the existing infrastructure, which would continue to be maintained on a similar schedule following implementation of the proposed Project. SCE is not seeking incidental take coverage for O&M activities.

5 Biological Baseline

This section summarizes the methods and results of biological studies conducted to acquire baseline biological data specific to this project, to determine if any CESA-listed species have potential to occur in the project area, and to provide data essential to evaluating the potential for take of species listed under the CESA and related habitat impacts.

5.1 Desktop Analysis

5.1.1 Methods

Database Queries

Prior to conducting the initial biological surveys and analyses, a list of special-status plant and wildlife species potentially occurring within the project area (i.e., species list) was generated. As the value of available data (e.g., database queries) may have diminished since the initial list was made and initial biological surveys were conducted, and to account for changes in species' listing status, efforts have been made to update the data periodically to support subsequent survey efforts and to facilitate accurate analysis. The following sources were queried (most recent query dates are referenced):

- **California Natural Diversity Database (CNDDB) RareFind5.** Queries of the CNDDB included the ROW plus a 5-mile buffer (California Department of Fish and Wildlife [CDFW] 2022a).
- **California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants.** Queries of the CNPS Online Inventory included the USGS quadrangles that encompass the project (CNPS 2022).
- **Consortium of California Herbaria (CCH).** The CCH was queried for all records of rare plants within the geographic area bounded by the following points (northwest: 33.89901, -115.539; northeast: 33.89901, -114.585; southwest: 33.51944, -115.539; southeast: 33.51944, -114.585), which encompasses the project (CCH 2022).
- **USFWS Information for Planning and Consultation (IPaC).** An unofficial IpaC report was generated for the project, which included the Eagle Mountain-Blythe alignment plus an approximately 500-foot buffer to determine what federal-listed species, critical habitat, migratory birds, or other natural resources might be impacted by the project (USFWS 2021).
- **CDFW Special Animals List.** The list was cross-referenced with CDFW's Special Animals List to determine the current conservation status of each species identified (CDFW 2022b).

Literature Review

Reports and geographic information system (GIS) data for adjacent and/or overlapping SCE projects were also reviewed. The projects from which the reviewed data were incorporated into the analysis for the Project include:

- Calcite Substation Project
- Eldorado-Lugo-Mohave Series Capacitor Project

Vegetation Mapping and Habitat Assessment

Vegetation communities in Segment 2 were mapped during the project's Habitat and Resource Assessment (Environmental Intelligence, Inc. [EI] 2016a) within 250 feet of the centerline of the existing SCE ROW and within 200 feet of proposed disturbance areas. Vegetation communities in Segment 1 were initially characterized using data collected for the Calcite Substation Project (BioResource Consultants, Inc. 2016). The survey area for that project included all of Segment 1, and the vegetation mapping effort covered an area within 500 feet of the ROW centerline. The vegetation mapping data in both segments were refined through subsequent surveys and desktop analysis.

Vegetation communities in both segments were described to the alliance level in accordance with *A Manual of California Vegetation* (Sawyer et al. 2009). The sensitivity of vegetation communities is ranked based on the NatureServe Conservation Status Assessments: Methodology for Assigning Ranks (Faber-Langendoen et al. 2012). Vegetation communities with state (S) ranks of S1 (very rare to threatened) to S3 (vulnerable) are considered sensitive and are to be addressed in the environmental review processes of California Environmental Quality Act (CEQA) and its equivalents.

Figure 4 displays the vegetation communities in the project area. The vegetation mapping data served to inform the assessment of potential habitat for the covered species in the project area.

Desktop Analysis

A preliminary analysis was conducted to determine which special-status species have the potential to occur in the project area. Aerial imagery and GIS data representing suitable habitat, historic occurrences, and geophysical conditions that would support the species were reviewed to determine which species may occur in the project area. As field surveys have been completed and/or additional queries/analysis conducted, the table has been updated to reflect current knowledge and, ultimately, document conclusions regarding the probability for special-status species to occur.

Plant and animal taxa were considered to be special-status species if they met several broad definitions including listing under the CESA or FESA or designation as California Species of Special Concern, BLM Sensitive, etc. For the purpose of this ITP application, however, the list was refined to include only CESA-listed species.

The potential for a species to be present was evaluated based on the following criteria: (1) the species' range; (2) habitat requirements of the species versus the major plant communities/habitats available; and (3) previous records and/or observations during field surveys. The CESA-listed species evaluated for this project are provided in Appendix B, which also includes the evaluation criteria as a footnote.

5.1.2 Results

Based on the database queries, six CESA-listed species were identified and evaluated for potential to occur in the project area. Based on the desktop analysis and subsequent surveys, including a habitat assessment, it was determined that the following species do not occur or are unlikely to be impacted by the project:

- Crotch bumble bee (*Brombus crotchii*)
- Mohave tui chub (*Siphateles bicolor mohavensis*)

- Tricolored blackbird (*Agelaius tricolor*)
- Mojave ground squirrel (*Xerospermophilus mohavensis*)

It was determined that the desert tortoise and the gilded flicker occur or are likely to occur in the Project area, and if they occur impacts are possible. Therefore, the desert tortoise and the gilded flicker are the Covered Species addressed in this application. Appendix B includes additional information supporting these conclusions.

5.2 Focused Desert Tortoise Surveys

5.2.1 Methods

Focused USFWS-protocol surveys for desert tortoises were conducted by qualified biologists (Appendices C, D, and E; EI 2016b, 2017, 2019). Surveys were conducted for Segment 1 in 2017 on May 18, 19, and 22-24. Surveys were conducted for Segment 2 in 2016 on October 10-15 and 17-22 and in 2019 on May 4-5. The surveys were conducted in accordance with the 2010 Field Season Survey Protocol (USFWS 2010a). Species observations, burrows, and sign were all recorded and classified using the 2010 Field Season Survey Protocol. Ten-meter belt transects were utilized to survey 100 percent of the proposed disturbance areas as well as a 100-foot buffer in Segment 1 and a 200-foot buffer in Segment 2 (EI 2016b, 2017, 2019).

5.2.2 Results

No desert tortoises or sign were identified in Segment 1 during the 2017 protocol surveys. Thirteen live desert tortoises were observed in Segment 2 during the 2016 and 2019 protocol surveys (Appendix D, Figure 3). The 13 live desert tortoises observed in Segment 2 included 10 adult/sub-adult tortoises with a maximum carapace length greater than 6.3 inches (160 millimeters) and one juvenile tortoise with a MCL less than or equal to 6.3 inches. Two desert tortoises found deep in burrows that could not be measured were assumed to be adult/sub-adult for the purpose of population calculations. Eleven of the 13 live desert tortoises observed were associated with a burrow (found in burrow or at entrance). Two desert tortoises were observed in the open, one of which was an adult with an identification tag (#N92043). In addition to live desert tortoises, other signs observed in Segment 2 included 215 desert tortoise burrows, 28 burrows with desert tortoise tracks, 185 pallet burrows, seven pallet burrows with desert tortoise tracks, 140 desert tortoise scat, 35 desert tortoise carcasses, and five locations with desert tortoise eggshell fragments.

Suitable habitat for the desert tortoise is present throughout most of the Study Area, both in and outside of designated critical habitat. All mapped vegetation communities and land cover types are considered to be potentially suitable habitat with the exception of developed areas and open water. While Segment 1 overlaps designated critical habitat (Ord-Rodman Unit) and suitable habitat is present, the habitat quality is degraded as a result of development. High-quality suitable habitat, including areas of mature desert scrub communities supported by ephemeral washes, is present in Segment 2 on private land, BLM land, and in the MNP. Segment 2 also intersects designated critical habitat (Ivanpah Unit).

5.2.3 Limitations

Focused desert tortoise surveys were conducted prior to addition of the structure work areas in Segment 2 to provide flexibility if helicopter construction is not feasible in all areas. The

pulling/stringing/tension sites, guard structures, and Helicopter Landing Zones that were included in the design at that time are positioned at regular intervals along the alignment and desert tortoise habitat is relatively homogenous throughout Segment 2. The sites that were surveyed provide a representative sampling of desert tortoise habitat in the project area. SCE assumes desert tortoises may occur wherever suitable habitat is present.

5.3 Focused Gilded Flicker Surveys and Habitat Assessment

5.3.1 Methods

A habitat assessment and focused survey for the gilded flicker were conducted between November 17, 2021, and December 8, 2021. The survey area included all project disturbance areas containing potential gilded flicker habitat plus a 300-foot buffer. The purpose of the survey was to characterize and map suitable habitat, evaluate gilded flicker presence in the project area, and support impact analysis. The following sections summarize the methods and results; detailed methods and results can be found in Appendix F (Artemis Environmental Services, Inc. 2021).

A desktop analysis was conducted prior to the field surveys to create a preliminary map of suitable habitat for the gilded flicker in the project area. Queries of publicly available datasets, such as the CNDDB and eBird, were conducted to identify historical observations of the species. This location data and GIS polygons representing eastern Joshua tree woodland were the basis for determining where suitable habitat may be present.

The surveyors also made visits to the locations of historical observations of gilded flickers prior to initiating surveys. Habitat at these locations included dense, mature Joshua tree woodland. It is presumed that these areas represent high-quality breeding habitat for the species in California. Therefore, the surveyors used habitat in these areas as the baseline for assessing the quality of habitat throughout the survey area. During surveys, observations were made of factors including the presence, density, size, and condition of Joshua trees, which were used to assign habitat in the survey area to the following categories of quality:

- **High:** Suitable vegetation present and in good health; Joshua trees diverse in age and size with potential flicker cavities observed; rock outcrops may be present;
- **Medium:** Suitable vegetation/Joshua trees present but at relatively lower density and with less age and size diversity; some potential flicker cavities observed;
- **Low:** Minimal suitable vegetation and cover and no potential flicker cavities; poor habitat quality, but not discountable

The presence/absence survey for the gilded flicker was conducted by four biologists in teams of two over the course of 6 days. Both active and passive survey techniques were utilized to maximize chance of detecting gilded flickers. Active techniques involved field teams walking meandering transects through the survey area while looking for avian activity and potential roosting/nesting cavities and pausing occasionally to listen for vocalizations, as well as driving slowly along the access roads to observe birds that flush from nearby vegetation. Passive techniques involved conducting observations and listening for vocalizations from a fixed position with a clear view for approximately 15 minutes. Recorded gilded flicker vocalizations were broadcast occasionally during both active and passive survey efforts. Sites with known gilded flicker occurrences and High quality habitat were revisited every survey day during the effort, at varying times of day.

Cavities of a size appropriate to be used by flicker species for nesting or roosting were inspected and their locations recorded with a global positioning system (GPS) unit. These generally included any cavities with entrances greater than 1.5 inches in diameter (Baicich and Harrison 2005). The activity status of cavities was assessed based on evidence of recent avian usage, such as down feathers at the entrance or avian scat in the immediate vicinity.

5.3.2 Results

Twenty-seven disturbance areas are located in suitable habitat for the gilded flicker. Of the 27 disturbance areas, 18 (62 percent) are located in habitat categorized as High quality. Four disturbance areas (14 percent) are located, at least in part, in habitat categorized as Medium quality. Seven disturbance areas (24 percent) were located, at least in part, in habitat categorized as Low quality. Two disturbance areas contained both Medium and Low quality habitat. One gilded flicker was observed in a work area near the Cima Substation (Figure 5-M). This work area is located in a polygon associated with a 2012 CNDDB occurrence of gilded flicker and is close to the site of numerous recent (2019-2020) eBird reports of the species. All habitat in this work area is categorized as High quality. Three potentially suitable nesting cavities were observed in Joshua trees in project work areas. Numerous other cavities were observed in Joshua trees in the survey area adjacent to work areas.

5.3.3 Limitations

Due to project schedule, the habitat assessment and focused survey were conducted during the winter, when the species is likely to be less active and, therefore, not as detectable. In addition, northern flickers (*Colaptes auratus*) are a common year-round resident of the MNP, and their vocalizations are virtually indistinguishable from those of gilded flickers.

6 Take Analysis

Section 86 of the CFGC defines "take" as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill" an individual of a species listed under the CESA. CESA allows for take incidental to otherwise lawful development projects. Incidental take in the Project area may result from direct and indirect impacts to individuals of the covered species or their habitat. Direct impacts are those that are caused by the Project construction and occur at the same time and place as the construction activities. Indirect impacts are those that are reasonably certain to occur as a result of the Project but occur later in time. Indirect impacts can be both spatial and/or temporal in nature. They are typically more subtle than direct impacts and may affect populations and habitat quality well after construction activities have been completed. Indirect impacts are of particular concern for long-lived species such as the desert tortoise because they may not become evident in individuals or populations until years later.

6.1 Desert Tortoise

6.1.1 Presence in the Project Area

The project is located within the range of the desert tortoise. While Segment 1 intersects designated critical habitat for the desert tortoise and suitable habitat for the species occurs in Segment 1, the habitat is relatively degraded due to human development and fragmentation. Therefore, the species is not expected to occur in Segment 1. Segment 2 crosses large areas of high-quality suitable habitat on private lands, BLM lands, and in the MNP. Within the MNP, Segment 2 also intersects critical habitat. Based on historical records and project survey data, the desert tortoise is assumed to be present in suitable habitat in Segment 2.

Based on the population density estimates provided in Section 5.4 of the project's Biological Assessment (EI 2019), which are derived from the number of live desert tortoises observed during the focused surveys, the estimated density of adult/sub-adult desert tortoises per square mile in areas traversed by Segment 2 ranges between 17.5 in the Eastern Mojave Recovery Unit to 20.6 in the Western Mojave Recovery Unit. These density estimates translate to an estimated total of between four and five adult/sub-adult desert tortoises occurring in project work areas in Segment 2.

6.1.2 Impact Analysis

Direct Impacts to Individual Desert Tortoises

Where present during construction, individual desert tortoises may be directly impacted by construction of the project. Potential direct impacts may include the following:

- Desert tortoises could be injured or killed if struck by Project vehicles or equipment traveling on roadways. This impact is most likely to occur along paved roads where vehicle frequency and speed are greatest.
- Desert tortoises could be injured or killed during clearing and grubbing of vegetation, trenching, wire stringing, and other construction activities.
- Desert tortoises could be crushed or entombed in their burrows during construction.

- Desert tortoises could become trapped in open trenches or pipes, where they could be injured or become more vulnerable to predators.
- Materials and equipment left behind following construction and maintenance activities could entrap or entangle desert tortoises.
- Desert tortoises may take shelter in materials or equipment and be injured or displaced when is the materials are removed.
- Desert tortoises could be collected or vandalized by Project personnel.
- Desert tortoises could be injured or killed by the pets or Project personnel.
- Desert tortoises could be disturbed by Project activities (e.g., by noise and vibration), disrupting their normal behavior (e.g., foraging, mating).
- Desert tortoises may experience stress if relocated from active work areas.

The risk of impacts to desert tortoise individuals is increased during the species' most active seasons, which are typically March 1 through June 15 and August 1 through October 15. Neonatal and juvenile desert tortoises are at greater risk of injury or mortality due to their small size. Juvenile and neonatal desert tortoises (i.e., measuring less than 6.3 inches [160 millimeters]) are less likely than adults to be detected during a pre-Project clearance survey and are nearly impossible to detect when they are below ground. In addition, smaller desert tortoises use abandoned rodent burrows which are typically more fragile than the larger burrows constructed by adult desert tortoise, making them more susceptible to injury and mortality when inside burrows (USFWS 2009, 2011).

Female desert tortoises' home ranges are generally between 22.2 to 44.4 acres (9 and 18 hectares) and male desert tortoises' home ranges are typically significantly larger (EI 2019, Nussear et al. 2009, USFWS 2010b). Impacts to each tortoise's home range will be limited due to the linear nature and small disturbance footprint of the Project. Each proposed disturbance area will only represent a small portion of the home range of a given tortoise (EI 2019). Due to the small area of disturbance at each location, adverse impacts to individual desert tortoises may be avoided through implementation of the take avoidance and minimization measures described in Section 7 below. Direct impacts will be avoided and minimized to the greatest extent possible. Vehicle and equipment strikes, entrapment, damage of potentially occupied burrows, and other similar direct impacts can be avoided through proposed measures such as environmental training, reduced speed limits, monitoring by Qualified Biologists, limiting the size and extent of the work area, fencing open trenches, and flagging all potentially active burrows.

Indirect Impacts to Individual Desert Tortoises

The following are potential causes of indirect impacts to the desert tortoise that may result from project implementation. However, the project design and approach, as well as the measures presented in Section 7, are intended to minimize the potential for indirect impacts to the desert tortoise.

- **Weeds.** Construction equipment and vehicles may spread non-native and invasive plant species into or within the project area. Non-native grasses, especially, can outcompete native vegetation, reducing the quality of desert tortoise habitat and altering wildfire regimes.
- **Dust.** Fugitive dust generated during construction can coat nearby vegetation, interrupting photosynthesis and interfering with the growth and persistence of native vegetation. This result, combined with infestation by weed species, can cause considerable long-term habitat impacts.

- **Hazardous Waste.** Leaked fuel from equipment and vehicles and spills of hazardous materials used or generated during construction can seep into the soil, damaging nearby native vegetation and contaminating ground water. Habitat quality may then be degraded, resulting in impacts to desert tortoises in the area.
- **Predators.** Human presence in otherwise isolated areas of the desert may attract opportunistic predators, such as ravens (*Corvus corax*), coyotes (*Canis latrans*), and feral dogs (*Canis familiaris*), which may prey on desert tortoises.

Through implementation of the take avoidance and minimization measures discussed in Section 7 below, potential indirect impacts to the desert tortoise may be avoided or minimized. For example, appropriate containment and daily removal of trash and food items will serve to avoid attracting opportunistic predators.

Direct Impacts to Desert Tortoise Habitat

Desert tortoise habitat may be directly impacted through ground or vegetation disturbance. Based on the current design, which assumes that helicopters will be used for wire stringing to the maximum extent feasible, the project is expected to result in impacts to a total of 113.49 acres of desert tortoise habitat in California, including 37.46 acres of designated critical habitat (Table 8). Less than 0.0001 acre of impacts to desert tortoise habitat will be permanent and no permanent impacts will occur in designated critical habitat.

Table 8 Potential Impacts to Desert Tortoise Critical and Suitable Habitat (Helicopter Construction Scenario [Best-Case Scenario])

Habitat	Temporary Impacts (acres)	Permanent Impacts (acres)	Total
Critical Habitat[1]	37.46	0	**37.46**
Suitable Habitat[2]	76.03	Less than 0.001	**76.03**
Total	**113.49**	Less than 0.001	**113.49**

[1] Excludes areas of unsuitable habitat (e.g., developed land)

[2] Habitat suitable for the desert tortoise outside of USFWS-designated critical habitat.

In the unlikely event that all structure work areas are used for ground-based wire stringing, impacts may occur to a maximum of 173.86 acres of desert tortoise habitat, including 64.66 acres of designated critical habitat (Table 9). All impacts associated with structure work areas would be temporary.

Table 9 Impacts to Desert Tortoise Critical and Suitable Habitat (Ground-Based Construction Scenario [Worst-Case Scenario])

Habitat	Temporary Impacts (acres)	Permanent Impacts (acres)	Total
Critical Habitat[1]	64.66	0	**64.66**
Suitable Habitat[2]	109.20	Less than 0.001	**109.20**
Total	**173.86**	Less than 0.001	**173.86**

[1] Excludes areas of unsuitable habitat (e.g., developed land)

[2] Habitat suitable for the desert tortoise outside of USFWS-designated critical habitat.

The take avoidance and minimization measures presented in Section 7 are intended to avoid and minimize impacts to suitable and critical habitat. For example, at the limits of all work areas will be clearly demarcated and construction workers will limit activities to within those defined boundaries. Where disturbance must occur, drive and crush methods will be implemented to the extent feasible to minimize impacts to native vegetation. Temporarily impacted areas will be restored in accordance with the project's Habitat Restoration and Revegetation Plan (HRRP), to be prepared in coordination with the applicable agencies. In addition, SCE would mitigate permanent impacts to desert tortoise habitat at a ratio of 5:1 and temporary impacts at a ratio of 3:1, or as agreed upon in consultation with the CDFW (see Section 7.4). The mitigation responsibility for permanent impacts would be satisfied through compensation. For temporary impacts, on-site restoration would satisfy the responsibility at a ratio of 1:1 and compensation would be applied to the remainder.

Indirect Impacts to Habitat

Indirect impacts to desert tortoise habitat may occur as a result of the Project. Surface-disturbing activities may increase the opportunities for the introduction of invasive, non-native plant species that may compete with or replace forage species for the desert tortoise (i.e., grasses and the flowers of annual plants). An increase in invasive plants may also facilitate fires in the area, especially when cars and construction vehicles are present. Fires can further alter vegetation communities or cause harm to desert tortoises. SCE will implement an Integrated Weed Management Plan (IWMP) in coordination with the applicable agencies, which will minimize the spread of noxious and invasive weeds during and after construction.

6.1.3 Cumulative Impacts

The Project may contribute to cumulative impacts to the desert tortoise in conjunction with other projects in the vicinity that have occurred in the recent past, occur concurrently with the Project, or occur in the immediate future following the Project. Cumulative impacts may result from projects or activities that cause direct impacts to desert tortoises, such as the impacts discussed in the preceding sections, and projects or activities that result in the permanent or temporary removal of desert tortoise habitat, such as utility projects, transportation projects, renewable energy projects, mining, and residential, commercial, and industrial development. In addition, land uses occurring on public lands, such as livestock grazing, and off-highway vehicle use may contribute cumulative impacts.

A query of publicly available resources available through the BLM, San Bernardino County, and the California Public Utilities Commission (CPUC), and SCE internal resources was conducted to identify activities in the vicinity of the Project that may contribute cumulative impacts. The query focused on projects of a similar nature potentially located within two miles of the Project and occurring within two years prior, during, or within two years following construction of the Project. The results are presented in Table 10.

The Project involves upgrade of existing facilities. Previously disturbed areas are incorporated into the design to the extent feasible and "drive and crush" methods will be used to the extent feasible. Following completion of construction, disturbance areas will be restored to preconstruction conditions. These practices will limit impacts to desert tortoise habitat. Take avoidance and minimization measures that will be implemented during construction are described in Section 7. These measures are well-practiced and effective at preventing take. In the past 10 years, SCE has executed transmission projects involving greater levels of impact than LVRAS without direct take of desert tortoises. The Project is not expected to result in significant cumulative impacts.

Table 10 Projects and Activities Potentially Contributing Cumulative Impacts

Project Name	Environmental Review	Project Type	Project Status
Eldorado-Lugo-Mohave Series Capacitor Project	NEPA, CEQA	Electrical Utility	In Construction
Ivanpah Control Project	NEPA, CEQA	Electrical Utility	Preparation and Planning
Solar 33, National Trails Solar Facility	CEQA	Solar	Preparation and Planning
Daggett Solar	CEQA	Solar	Preparation and Planning
Solar 66	CEQA	Solar	CEQA Complete, unknown start date
Rebelle Rally 2020	Categorical Exclusions	Recreation	Complete
Minor Pavement Rehabilitation (CAPM) On I-40 Between Interstate 15/Interstate 40 Separation and 0.4 Mile East of Lava Wash Bridge	CEQA	Transportation	Unknown
Newberry Wine Rock Quarry Mine	CEQA	Mining	Unknown
TD1515478 Daggett Deteriorated Pole Replacement Project (Notification of Streambed Alteration, EPIMS Notification No. EPIMS-SBR-20803-R6	CEQA	Electrical Utility	Unknown
Interstate 40 Median Regrading, Post Mile R25 to Post Mile R50	Notice of Exemption	Transportation	Unknown

6.1.4 Jeopardy Analysis

As described in Section 7, take avoidance and minimization measures will be implemented during construction to avoid and minimize impacts to individual desert tortoises and suitable habitat for the species. These measures are consistent with the conservation measures for the desert tortoise included in three Programmatic Biological Opinions issued by USFWS that address transmission/utility work and other projects occurring in the MNP (USFWS 2019), BLM lands under jurisdiction of the Southern District Nevada Office (USFWS 2020), and lands covered by BLM's California Desert Conservation Area Plan (USFWS 2017). Implementation of the measures is expected to adequately protect desert tortoises and their habitat occurring in the Project area.

The Project involves the upgrade of existing transmission line facilities. Once built, the infrastructure of transmission line has a relatively small footprint and does not substantially impede wildlife movement or ecological processes. To the extent feasible, the Project was designed to utilize existing disturbed areas that lack the physical and biological features essential to the recovery of the desert tortoise, as defined in the Recovery Plan published by USFWS (USFWS 2011). Assuming the maximum potential impacts (i.e., all ground-based construction), the project will result in impacts to less than 0.003 percent of the 6.4 million acres of critical habitat designated for the species. Nearly all proposed Project impacts would be temporary. Upon completion of construction, SCE will restore temporarily disturbed areas to preconstruction conditions and provide compensatory mitigation to offset permanent and temporary habitat impacts.

Construction of the Project will not create permanent barriers to movement or dispersal of desert tortoises because the majority of the Project activities will occur within small, discontinuous areas

and not result in new, permanent infrastructure. Because there are no specialized breeding habitats for the desert tortoise, the proposed activities will not affect the survival or reproduction of the species through impacts to such habitat.

Although desert tortoise populations may be declining due to threats (e.g., habitat loss, development, disease, and predation), and implementation of the project may result in take of desert tortoises and temporary impacts to habitat, the Project will not the jeopardize the continued existence of the desert tortoise.

6.2 Gilded Flicker

6.2.1 Presence in the Project Area

The gilded flicker is primarily a resident of the Sonoran Desert in Arizona and northwestern Mexico and is typically associated with saguaro and other giant cacti. In California, the gilded flicker is primarily found in the Lower Colorado River valley, where it nests in cavities of cottonwood and willow trees (Kucera 1997). Two extant occurrences of the species documented in CNDDB (CDFW 2022) overlap the alignment, and numerous recent (2019-2020) observations in the Project area have been reported in eBird (eBird 2022) in the Cima Dome area. This area likely represents the northern edge of the species' range.

If present in the project area, gilded flickers are likely to nest in cavities in mature Joshua trees. Joshua tree woodland has been mapped along approximately 24 miles of the Segment 2 alignment. The Joshua trees in the Project area are inside MNP and are part of the Cima Dome Joshua tree woodland, which is among the largest and densest in the world (Los Angeles Times 2020). The habitat assessment confirmed that suitable habitat is present in project disturbance areas, including habitat that was categorized as High quality based on the condition and density of Joshua trees and presence of potentially suitable nesting cavities.

One gilded flicker was observed in the Project area during the focused surveys. Due to project schedule, the surveys were conducted in the winter. Despite being a resident species, gilded flickers may have been less active or conspicuous at the time of the surveys than they would be during the nesting season (March through July). It is assumed that the gilded flicker occurs year-round in suitable habitat in the Project area and may nest there during the breeding season.

6.2.2 Impact Analysis

Direct Impacts to Individual Gilded Flickers

If project implementation occurs in habitat occupied by the gilded flicker during its nesting season (typically March through July), activities such as vegetation clearing, or the positioning of equipment could potentially impact the species by crushing active nests and destroying eggs or chicks. Nesting gilded flickers may also be disturbed by the noise of project activities (e.g., helicopter operation, vegetation trimming, human presence). Project noise could cause nest abandonment in and adjacent to project disturbance areas. Non-nesting individuals that may occur in disturbance areas are not expected to be directly impacted because they would have the mobility to avoid impacts by leaving the area when disturbed.

The species may not be present in suitable habitat in all disturbance areas, and where suitable resources for nesting or roosting (e.g., mature Joshua trees) are present they may be avoidable. In

addition, due to seasonal restrictions built into the project schedule, construction activities in gilded flicker habitat may occur largely outside the nesting season. The potential for direct impacts will be further reduced through implementation of the take avoidance and minimization measures described in Section 7 below, which include avoiding work in gilded flicker habitat during the nesting season to the extent feasible, conducting preconstruction nesting bird surveys during the nesting season, and establishing avoidance buffers around any active nests.

Indirect Impacts to Individual Gilded Flickers

The Project may result in indirect impacts to individual gilded flickers if predators are attracted to the Project area by standing water or uncontained trash or food. Common ravens specifically are a noted predator of nests. The potential for indirect impacts due to predation will be minimized through implementations of the trash abatement take avoidance and minimization measure described in Section 7 below.

Direct Impacts to Gilded Flicker Habitat

Regardless of the time of year, direct impacts to habitats that support the gilded flicker may result from project activities such as clearing, grubbing, and trimming of vegetation for equipment placement, helicopter landing zones, and/or material laydown yards. Such activities may decrease the quality of habitat for nesting or foraging through reduction of vegetative cover or disturbance of the ground.

Assuming helicopters will be used for wire stringing to the extent feasible (i.e., best-case scenario), the project is expected to result in impacts to a total of 21.64 acres of gilded flicker habitat, as identified during the focused surveys and habitat assessment for the species (Table 11).

Table 11 Impacts to Gilded Flicker Habitat (Helicopter Construction Scenario [Best-Case Scenario])

Habitat	Temporary Impacts (acres)	Permanent Impacts (acres)	Total
Low Quality	7.94	0	**7.94**
Medium Quality	4.20	Less than 0.001	**4.20**
High Quality	9.50	Less than 0.001	**9.50**
Total	**21.64**	Less than 0.001	**21.64**

In the unlikely event that all structure work areas are used for ground-based wire stringing (i.e., worst-case scenario), impacts may occur to a maximum of 22.42 acres of gilded flicker habitat. In either scenario all impacts would be temporary (Table 12).

Table 12 Impacts to Gilded Flicker Habitat (Ground-Based Construction Scenario [Worst-Case Scenario])

Habitat	Temporary Impacts (acres)	Permanent Impacts (acres)	Total
Low Quality	8.13	0	8.13
Medium Quality	4.38	0	4.38
High Quality	9.91	0	9.91
Total	**22.42**	0	**22.42**

As described in the take avoidance and minimization measures in Section 7.1 below, impacts will be minimized at all construction sites by clearly demarcating work areas and flagging resources to be avoided. Where disturbance must occur, drive and crush methods will be implemented to the extent feasible to minimize impacts to native vegetation. SCE proposes to mitigate the temporary impacts to gilded flicker habitat at a ratio of 1:1, to be satisfied through on-site restoration, or as agreed upon in consultation with the CDFW (see Section 7.4). Restoration will be conducted in accordance with the HRRP.

Indirect Impacts to Gilded Flicker Habitat

Project activities may result in temporary indirect impacts to habitats used by the gilded flicker. Indirect impacts are likely to include fugitive dust generated by road grading, which can accumulate on surrounding vegetation and degrade the quality of nesting and foraging habitats. The introduction or spread of invasive plants, increased risk of wildfire, and spills of hazardous materials can also indirectly impact habitat for the gilded flicker. Indirect impacts will be minimized through implementation of the take avoidance and minimization measures included in Section 7 below.

6.2.3 Cumulative Impacts

The proposed Project could contribute to cumulative impacts to the gilded flicker and its habitat in conjunction with other projects occurring in the vicinity. The potential for cumulative impacts to the species is similar to that discussed for the desert tortoise in Section 6.1.3 and the other project that may contribute to cumulative impacts are the same (Table 10). However, given that suitable habitat for the gilded flicker is less widely distributed than desert tortoise habitat, it is likely that a relatively small subset of other projects in the vicinity will result in impacts to the gilded flicker.

As previously discussed, the Project would upgrade existing facilities and has been designed to utilize previously disturbed areas are to the extent feasible. Impacts to native vegetation will be minimized and disturbance areas will be restored to preconstruction conditions. In addition, take avoidance and minimization measures will be implemented during construction as described in Section 7. With implementation of these measures, the Project is not expected to contribute to cumulative impacts to the gilded flicker.

6.2.4 Jeopardy Analysis

Gilded flickers have potential to occur in suitable habitat in the project area and to nest in suitable substrates. As a result, direct impacts to gilded flickers may occur as a result of the Project. However, the take avoidance and minimization measures in Section 7 will be implemented to avoid and minimize impacts to individual gilded flickers, gilded flicker nests, and suitable habitat for the species.

Assuming the maximum potential impacts (i.e., worst-case scenario; all ground-based construction), the project would result in impacts to 22.42 percent of the approximately 173,000 acres of contiguous Joshua tree woodland in the Cima Dome area. Relative to the full range of the species, which extends into Arizona and Mexico, Project impacts would occur to an even smaller percentage of the habitat providing long-term conservation value for the species. Because the use of helicopters will be prioritized for wire stringing, it is expected that that the actual Project impacts will be consistent with the impacts provided in Table 11.

The calculations presented in Table 11 and Table 12 assume that all habitat resources in work areas will be impacted equally. However, to the greatest extent feasible, equipment will be positioned to avoid impacts to the specific elements of habitat most important to the gilded flicker (i.e., mature Joshua trees and other vegetation that may support nesting cavities). Therefore, where work areas are used during construction, the actual impacts are likely to be less than what is presented in this application.

All potential impacts to gilded flicker habitat will be temporary, and temporarily disturbed areas will be restored upon completion of construction. In addition, SCE will provide compensatory mitigation for impacts to gilded flicker habitat. For these reasons, Project activities in gilded flicker habitat would not appreciably diminish the value of the habitat.

With successful implementation of the various Project design features and take avoidance and minimization measures described herein, direct and indirect impacts to individual gilded flickers will be avoided and direct and indirect impacts to gilded flicker habitat will be minimized and/or mitigated. Issuance of an ITP for the Project would result in the take of one or fewer individuals, negligible relative to local populations. Therefore, this ITP application concludes that the Project will not create the potential to jeopardize the gilded flicker.

7 Take Avoidance, Minimization, and Mitigation Measures

SCE proposes the following take avoidance, minimization, and mitigation measures (AMM) to fully mitigate potential direct and indirect impacts to the desert tortoise and the gilded flicker that may result from the Covered Activities. ITPs executed for SCE's West of Devers Upgrade Project (No. 2081-2017-057-06) and the Devers–Palo Verde No. 1 Re-conductor Project (No. 2081-2017-058-06) were used as references in developing the general and desert tortoise measures. The measures will be implemented during the preconstruction, construction, and post-construction phases of the Project.

7.1 General Measures

The following administrative measures and measures addressing general impacts will be implemented during the preconstruction, construction, and post-construction/restoration phases of the Project:

- **Field Contact Representative.** No less than 30 days prior to the initiation of Covered Activities, the Permittee will designate one or more Field Contact Representatives (FCR(s)) responsible for communications with CDFW and overseeing compliance with the take AMMs. Prior to the initiation of Covered Activities, The Permittee will provide CDFW in writing the FCR's name, business address, and contact information, and will notify CDFW in writing if the Permittee selects or identifies a substitute FCR at any time during the term of the project. The FCR will retain a copy of all take AMMs readily available at the project field office while conducting work onsite and oversee coordination between project personnel, Biological Monitor(s), Qualified Biologist(s), and Authorized Biologist(s) (see definitions and roles/responsibilities in the following measures). The FCR(s) will be present for all ground-disturbing activities within Covered Species habitat and will have the authority to halt all work activities that are not in compliance with the take AMMs. The FCR(s) will be responsible for ensuring that the Permittee immediately corrects any activities found to be out of compliance and documenting the corrective action. The FCR(s) will be responsible for monitoring implementation of the take AMMs herein and making recommendations to ensure the effectiveness thereof.
- **Biological Monitor(s).** No less than 30 days prior to the initiation of Covered Activities, the Permittee will submit to CDFW in writing the name, qualifications, business address, and contact information of each Biological Monitor proposed to conduct biological surveys or monitoring for Covered Species under the supervision of the Authorized Biologist(s) or Qualified Biologist(s) (see below). The Permittee will ensure that the Biological Monitor(s) is/are knowledgeable and experienced in the biology, natural history, and identification of the Covered Species and signs of Covered Species presence. The Biological Monitor(s) will be responsible for monitoring Covered Activities to help minimize and fully mitigate or avoid the incidental take of Covered Species and to minimize disturbance of Covered Species' habitat. The Permittee will obtain CDFW approval of the Biological Monitor(s) in writing before starting Covered Activities and will also obtain approval in advance in writing if the Biological Monitor(s) must be changed.

- **Worker Environmental Awareness Program (WEAP).** The Permittee will prepare and implement a WEAP program for all persons employed or otherwise working in the Project area (Project personnel) before performing any work. The program will consist of a presentation from the Biological Monitor(s), Authorized Biologist(s), or Qualified Biologist(s) that includes a discussion of the biology and general behavior of the Covered Species; information about the distribution of the Covered Species; sensitivity of the Covered Species to human activities; the species' status pursuant to CESA, including legal protection and penalties for violations; the take AMMs; and reporting requirements for sighting or incidents involving the Covered Species. The Permittee will inform all project personnel that the FCR(s), Biological Monitor(s), Qualified Biologist(s), and Authorized Biologist(s) have the authority to halt all work activities that are not in compliance with the measures. The Permittee will provide interpretation for non-English speaking project personnel, as needed, and provide the same instruction to any new project personnel before they are authorized to perform work in the project area. The Permittee will prepare and distribute wallet-sized cards or a fact sheet handout containing this information for project personnel to carry in the Project area. Upon completion of the program, employees will sign a form stating they attended the program and understand all protection measures. Project personnel will be required to attend morning tailboard meetings each day prior to the start of work during which Authorized Biologist(s), Qualified Biologist(s) and Biological Monitor(s) will be allowed to provide supplemental repeat training throughout the duration of the Project.
- **Delineation of Project Areas.** Before starting Covered Activities, the Permittee will clearly delineate the boundaries of the project area with fencing, stakes, or flags. The Permittee will restrict all Covered Activities to within the fenced, staked, or flagged areas. The Permittee will maintain all fencing, stakes, and flags until the completion of Covered Activities in that area.
- **Ongoing Monitoring.** Biological Monitor(s) will be present at all times while Covered Activities are occurring in suitable habitat for the Covered Species. Biological Monitor(s), Authorized Biologist(s), or Qualified Biologist(s) will continually monitor the perimeter of work areas to ensure any Covered Species nearing the project area can move through unharmed and unimpeded.
- **Construction Monitoring Notebook.** The FCR(s), Authorized Biologist(s), or Qualified Biologist(s) will maintain a construction monitoring notebook on site throughout the construction period, which will include a copy of the take AMMs and a list of signatures of all personnel who have successfully completed the education program. The Permittee will ensure a copy of the construction-monitoring notebook is available for review at the project site upon request by CDFW. Alternatively, the Permittee may use an electronic reporting and document archive database, such as SCE's Field Reporting Environmental Database (FRED) to which CDFW will be provided access.
- **Integrated Weed Management Plan.** The Permittee will prepare and implement an IWMP to prevent the introduction and spread of weeds during the construction and revegetation phases of the project. The IWMP will provide an inventory of existing weed species within and adjacent to the project footprint; evaluate the project's potential to introduce or spread weeds; identify specific prevention and treatment strategies; and propose a monitoring, treatment, and reporting schedule. The IWMP will be provided to CDFW for review no fewer than 30 days prior to the initiation of project activities.
- **Vehicular Traffic Restrictions.** The Permittee will restrict project-related vehicle traffic to the established project area, including existing roads, staging and parking areas, and established construction areas. The Permittee will not cross Covered Species' habitat outside of or in route to the project areas. The Permittee will ensure vehicle speed along Project routes and existing

access roads does not exceed 15 miles per hour when in Covered Species habitat. The Permittee will clearly mark speed limits and inform all project personnel of these limits. Consistent with project safety and security protocols, landowner preferences, and any other applicable regulations or requirements, Project personnel will close and secure existing gates on project access roads when entering or leaving an area.

- **Covered Species Injury.** If project-related activities injure a Covered Species, the Authorized Biologist(s) or Qualified Biologist(s) will immediately transport it to a CDFW-approved wildlife rehabilitation or veterinary facility. The Permittee will identify the facility prior to the start of Covered Activities. The Permittee will bear any costs associated with the care or treatment of the injured individual(s). The Permittee, Biological Monitor(s), Authorized Biologist(s), Qualified Biologist(s), and/or FCR(s) will notify CDFW of any Covered Species found injured or dead immediately by telephone and email followed by a written incident report to CDFW. Notification will also include the name of the facility where the animal was taken.
- **Trash Abatement.** The Permittee will initiate a trash abatement program before starting Covered Activities and will continue the program for the duration of the project. The Permittee will ensure that trash and food items are properly disposed of in self-closing, sealable containers with lids that latch. The Permittee will inspect, empty, and remove all trash receptacles from the Project area daily to avoid attracting opportunistic predators such as ravens, coyotes, and feral dogs.
- **Dust Control.** The Permittee will implement dust control measures during Covered Activities to facilitate visibility for monitoring of the Covered Species by the Authorized Biologist(s) or Qualified Biologist(s), and Biological Monitor(s). If utilizing water for dust control, the Permittee will keep the amount of water used to the minimum amount needed and will not allow water to form puddles. If the Permittee proposes to use chemical dust suppressants or soil stabilizers within the Project area, the Permittee will limit their use to highly disturbed areas (i.e., material yards). The Permittee will not use dust suppressants or soil stabilizers potentially harmful to fish and wildlife.
- **Erosion Control Materials.** The Permittee will prohibit use of erosion control materials potentially harmful to fish and wildlife species, such as monofilament netting (erosion control matting) or similar material, in potential Covered Species' habitat. Fiber rolls and erosion control mesh will be made of loose weave mesh that is not fused at the intersections of the weave, such as jute, coconut (coir) fiber, or other products without welded weaves, and will be free of nonnative plant materials.
- **General Habitat and Species Avoidance.** The Permittee will, to the greatest extent feasible, avoid impacts/disturbances to sensitive plants, plant communities, and animals within the project area. In addition, the Permittee will avoid, to the maximum extent practicable, impacts/disturbance to perennial, native vegetation within the Project area. To the maximum extent practicable, the Permittee will limit access-related Covered Activities to “drive and crush” rather than vegetation removal or grubbing.
- **Hazardous Waste.** Permittee will immediately stop and, pursuant to pertinent state and federal statutes and regulations, arrange for repair and cleanup by qualified individuals of any fuel or hazardous waste leaks or spills at the time of occurrence, or as soon as it is safe to do so. The Permittee will exclude the storage and handling of hazardous materials from the Project area and will properly contain and dispose of any unused or leftover hazardous products off-site.

- **CDFW Access.** The Permittee will provide CDFW staff with reasonable access to the project and mitigation lands under the Permittee control and will otherwise fully cooperate with CDFW efforts to verify compliance with or effectiveness of the take AMMs.
- **Refuse Removal.** Upon completion of Covered Activities within each work area, the Permittee will remove and properly dispose of all construction refuse, including but not limited to packaging and wrapping material (cords, cables, wire, rope, strapping, twine), delineation materials (fencing, stakes, flagging), erosion control materials (straw wattles, sandbags, silt fencing), buckets, metal or plastic containers, and boxes.
- **Firearms and Dogs.** The Permittee will prohibit firearms from the project area during Covered Activities, except those in the possession of authorized security personnel or local, State, or federal law enforcement officials. The Permittee will prohibit Project personnel from bringing domestic dogs into the project area, except for persons with disabilities.

7.2 Desert Tortoise Measures

In addition to the applicable general measures in Section 7.1, the following measures focused specifically on the desert tortoise will be implemented during the preconstruction, construction, and post-construction/restoration phases of the project:

- **Authorized Biologist(s).** No less than 30 days prior to the initiation of Covered Activities, the Permittee will submit to CDFW for review and approval the name, qualifications, business address, and contact information of each Authorized Biologist proposed to conduct any of the following tasks: supervise biological surveys for desert tortoises; handle desert tortoises; relocate desert tortoises, including eggs; excavate or supervise the excavation of desert tortoise burrows; or construct or supervise the construction of artificial burrows. The Permittee will clearly describe the qualifications and experience that each proposed Authorized Biologist possesses to support the assignment, including detailed examples of projects for which any of the above tasks were completed. The Authorized Biologist(s) will have experience with excavating burrows, handling and temporarily holding desert tortoises, relocating/translocating desert tortoises, reconstructing desert tortoise burrows, unearthing and relocating desert tortoise eggs, conducting protocol level surveys, and will be able to locate, identify, and record all forms of desert tortoise sign. The Permittee must receive CDFW's written approval of the Authorized Biologist(s) prior to the commencement of Covered Activities, including site preparation and staging. Authorized Biologists may serve as Biological Monitors.
- **Authorized Biologist(s) and Biological Monitor(s) Authority.** Only the Authorized Biologist(s) (or Biological Monitor(s) under direct supervision of an Authorized Biologist) will handle desert tortoises. To ensure compliance with the take AMMs, the Biological Monitor(s) and Authorized Biologist(s) will have authority to immediately stop any activity that does not comply, and to order any reasonable measures to avoid the unauthorized take of desert tortoises.
- **Preconstruction Sweep/Clearance Survey.** Immediately prior to start of ground disturbance activities within each Project work area, the Biological Monitor(s) and/or Authorized Biologist(s) will conduct preconstruction clearance surveys for desert tortoises, using the methods described in the USFWS Field Manual. The Biological Monitor(s) an/or Authorized Biologist(s) will survey the entirety of each Project work area, and its associated access routes, and will inspect all suitable burrows for habitation. If burrow excavation or handling of desert tortoises is required, only the Authorized Biologist(s) will excavate burrows, handle, and relocate the Covered Species. If occupied burrows are identified, Permittee will follow all excavation,

handling, relocation, monitoring, and reporting measures described herein. The surveys will cover 100 percent of the project work area and a 50-foot buffer zone. The Biological Monitor(s) and/or Authorized Biologist(s) will record all potential desert tortoise burrows in the preconstruction clearance survey area. The Biological Monitor(s) and/or Authorized Biologist(s) will provide the results of the preconstruction clearance survey (including data consistent with the USFWS Protocol data sheet) to CDFW within 5 calendar days of completing the surveys. Alternatively, the Permittee may use an electronic reporting and document archive database, such as SCE's FRED to which CDFW will be provided access. The Authorized Biologist(s) may need to use specialized equipment (e.g., fiber optics) to thoroughly inspect all burrows in preparation for collapsing them.

- **Raven Management.** Upon completion of construction, SCE will work with the BLM and USFWS to incorporate the Project into the SCE Programmatic Raven Management Plan by providing additional funding to the annual budget based on current Plan per mile (plus 2 percent annual increase to adjust for inflation) at completion of construction of Project line and components within desert tortoise habitat. No later than 30 days prior to the start of construction, SCE will contribute to USFWS's Regional Raven Management Program by making a one-time payment of $105 per acre ($18,255.30 for 173.86 acres) of long term or permanent Project disturbance within desert tortoise habitat to the National Fish and Wildlife Federation Renewable Energy Action Team raven control account.
- **Water Containment.** The Permittee will cover or otherwise secure all water containment structures including tanks, ponds, and pipes. Permittee will ensure that all water sources (e.g., hydrants, tanks, etc.) are free from leaks.
- **Road Berms.** The Permittee will ensure that all project-specific access roads within the project area are free of berms that could impede desert tortoise movement. If road berms currently exist within the Project area, Permittee will ensure the berms are less than 12 inches high and have slopes of less than 30 degrees.
- **Excavation Areas.** To prevent injury, mortality, or inadvertent entrapment of desert tortoises, the Permittee will ensure all excavated areas (e.g., trenches, bore holes, pits, etc.) are covered, backfilled, fenced, or monitored while not actively in use. Short-term (one week or less) excavated areas could be fenced using un-trenched barrier fencing or L-shaped fencing. The bottom of the L-shaped fence would be covered with soil or sandbags to prevent entry. If excavated areas will remain overnight, or for extended periods (e.g., weekends, holidays, etc.), the Biological Monitor(s) will ensure the excavated area is securely covered and free of any gaps or opening that could allow wildlife to enter and become trapped. The Biological Monitor(s) will inspect all open holes and trenches for trapped animals at the beginning, middle, and end of each day, and before holes or trenches are filled.
- **Vehicle Inspection.** Project personnel will inspect for desert tortoises under vehicles and equipment before the vehicles and equipment are moved. If a desert tortoise is present, Project personnel will contact the Biological Monitor(s) and wait for the tortoise to move unimpeded to a safe location or the Authorized Biologist(s) will relocate the tortoise as described in Relocation of Desert Tortoises below before moving vehicles and equipment.
- **Desert Tortoise Observations.** If project personnel encounter a desert tortoise in or within 50 feet of the active construction work area, the Permittee will stop all work in the area as soon as it is safe to do so and contact a Biological Monitor. The Biological Monitor will allow the desert tortoise to escape unimpeded, or an Authorized Biologist may relocate the desert tortoise as described in Relocation of Desert Tortoises below. The Permittee will not resume work until an

Authorized Biologist has relocated the animal or allowed it to move outside the Project area on its own. If the desert tortoise requires handling, the Biological Monitor will halt Project related activities and immediately notify an Authorized Biologist. Project activities may not resume until the desert tortoise has moved on its own accord out of harm's way, or until the Authorized Biologist has relocated the desert tortoise following handling procedures set forth in in Relocation of Desert Tortoises below.

- **Excavating Burrows.** Only the Authorized Biologist(s) (or Biological Monitor(s) under direct supervision of an Authorized Biologist) may excavate burrows and handle desert tortoises and their eggs. During preconstruction clearance surveys the Authorized Biologist(s) will excavate all burrows by hand that cannot be avoided, including burrows not recently used that are considered by the Authorized Biologist(s) to be potentially suitable. The Authorized Biologist(s) will excavate and then block, collapse, or fence potentially suitable burrows at the time of survey to prevent re-entry by desert tortoises. The Authorized Biologist(s) will only collapse burrows where Covered Activities would directly impact the burrow. Otherwise, the Authorized Biologist(s) will leave burrows intact, and temporarily block the entrance to prevent re-entry using appropriate methods. The Authorized Biologist(s) will complete all burrow excavations in accordance with the USFWS Field Manual. If burrow excavation results in the handling and relocation of desert tortoises, the Authorized Biologist(s) will document and provide a report to CDFW as specified in Desert Tortoise Handling Records below.
- **Desert Tortoise Handling.** In the event that desert tortoises, including their eggs, must be handled and/or relocated, the Authorized Biologist(s) (or Biological Monitor(s) under direct supervision of an Authorized Biologist) will follow all procedures/guidelines in the USFWS Field Manual, including, but not limited to, procedures to avoid transmission of diseases and parasites, guidelines for addressing temperature extremes, data collection requirements, and general measures to protect the well-being of the individuals. The Authorized Biologist(s) will document all instances of handling and relocation and provide the documentation to CDFW as specified in Desert Tortoise Handling Records below.
- **Relocation of Desert Tortoises.** To the maximum extent practicable, the Permittee will avoid disturbance to, and relocation of, desert tortoises. If any desert tortoises are at risk of harm as a result of Covered Activities, the Authorized Biologist(s) (or Biological Monitor(s) under direct supervision of an Authorized Biologist) will move the individual(s) out of harm's way and release the individual(s) no more than 1,000 feet from the point of collection for adults and 300 feet for juveniles. The Authorized Biologist(s) will not relocate the desert tortoise to adjacent private property unless the Permittee obtains written permission from the property owner. Desert tortoises found above ground will be allowed reasonable time to move out of harm's way on their own accord, and if relocated by the Authorized Biologist(s) will be released above ground in suitable habitat and conditions. Desert tortoises found in burrows, especially during the species' less active period, will be avoided to the extent practicable as determined by the Authorized Biologist(s). If desert tortoises (including eggs) are found during burrow excavation, the Authorized Biologist(s) will relocate them to an artificial or unoccupied natural burrow and monitor them until Covered Activities in the area are complete. The Authorized Biologist(s) will follow all excavation, capture, handling, identification and data collection, relocation, and burrow construction procedures described in the USFWS Field Manual. The Authorized Biologist(s) will document any relocation efforts and provide a report to CDFW as specified in Desert Tortoise Handling Records below.
- **Ambient Air Temperature.** The Authorized Biologist(s) and/or Biological Monitor(s) will not capture, move, transport, release, or purposefully cause a desert tortoise to leave its burrow for

any reason when the ambient air temperature is above 95 degrees Fahrenheit (35 degrees Celsius). The Authorized Biologist(s) and/or Biological Monitor(s) will not capture the desert tortoise if the ambient air temperature is anticipated to exceed 95 degrees Fahrenheit before handling or processing can be completed. If the ambient air temperature exceeds 95 degrees Fahrenheit during handling or processing, the Authorized Biologist(s) and/or Biological Monitor(s) will ensure the desert tortoise is kept in a shaded environment with a temperature that does not exceed 95 degrees Fahrenheit, and that the animal is not released until ambient air temperature declines to below 95 degrees Fahrenheit.

- **Desert Tortoise Rehydration.** If an individual voids its bladder as a result of being handled, the Authorized Biologist(s) (or Biological Monitor(s) under direct supervision of an Authorized Biologist) will rehydrate the animal at the location where the animal was captured, or the location where the animal is or will be released by placing it in a tub with a clean plastic disposable liner. The Authorized Biologist(s) and/or Biological Monitor(s) will add water to the lined tub while ensuring that the water level is not higher than the lower jaw. If multiple individuals require rehydration, each will be rehydrated individually for a minimum of 10 to 20 minutes. The tub will be placed in a quiet, protected area during rehydration.
- **Desert Tortoise Handling Records.** The Authorized Biologist(s) will maintain a record of all desert tortoises handled. This information will include for each individual: (1) the locations (narrative and maps) and dates of observation, including whether the individual(s) was/were found above ground or in a burrow; (2) ambient temperature when handled and released; (3) general condition and health of the individual(s), including injuries, state of healing, and whether the individual(s) voided its bladders; (4) identified diagnostic markings (i.e., identification numbers or marked lateral scutes); (5) location moved from and location moved to (using GPS technology), including information on any burrow (natural or artificial) utilized; (6) whether any eggs were discovered and relocated; (7) digital photographs of any individuals and eggs handled; and (8) results of ongoing monitoring following the relocation and/or release. The Authorized Biologist(s) will provide CDFW a written summary of the handling/relocation event, including the information listed above, within 24 hours.

7.3 Gilded Flicker Measures

In addition to the applicable general measures in Section 7.1, the following measures focused specifically on the gilded flicker will be implemented during the preconstruction, construction, and post-construction/restoration phases of the project:

- **Qualified Biologists (Avian Biologists).** No less than 30 days prior to the initiation of Covered Activities, the Permittee will submit to CDFW for review and approval the name, qualifications, business address, and contact information of each Qualified Biologist (consistent with “Avian Biologist” in SCE’s Nesting Bird Management Plan) proposed to conduct surveys, monitoring, and gilded flicker nest management activities. A Qualified Biologist is expected to have worked on three or more substantial multi-season bird projects or the equivalent, performing surveys, habitat assessments, and monitoring in the field. Of these, at least two must be in the Southwest, preferably in California. The Permittee must receive CDFW’s written approval of the Qualified Biologist(s) prior to the commencement of Covered Activities, including site preparation and staging. Qualified Biologists may serve as Biological Monitors.

- **Seasonal Restriction.** To the extent feasible, the permittee will schedule construction activities located within 500 feet of suitable nesting habitat for the gilded flicker to occur outside the breeding season of the species (March 1 through July 31).
- **Preconstruction Nesting Bird Surveys/Sweeps.** If Covered Activities must occur during the bird breeding season (February 1-August 31), the Qualified Biologist(s) will conduct preconstruction surveys for nesting birds, including the gilded flicker, no more than seven days prior to initiating Covered Activities within 500 feet of work areas in suitable habitat.

  A survey will consist of a pedestrian search by the Qualified Biologist(s) for both direct and indirect evidence of bird nesting. Direct evidence would consist of the visual identification of an actual nest location. Indirect evidence may include observations of adult birds carrying nesting materials, food, or fecal sacks; engaging in breeding behavior such as copulation; displaying agitation; or exhibiting other characteristic behaviors that indicate the presence of an active nest. Every effort will be made to avoid exposing nests to potential predation as a result of survey and/or monitoring activities.

  Following the initial preconstruction survey, a Biological Monitor will sweep the work area(s) plus a 500-foot buffer prior to the start of work each day in suitable habitat. Daily clearance sweeps during nesting bird season will follow the same methodology discussed above to ensure that all active nests are located prior to construction occurring in the vicinity. If an active nest is observed, the Biological Monitor will contact a Qualified Biologist. A Qualified Biologist will be responsible for confirming the observation.
- **Avoidance Buffers.** If active gilded flicker nests (i.e., nests with eggs or young) are observed, a 500-foot avoidance buffer (vertical, horizontal, and for helicopters, will be established around the nest. The buffer will be conspicuously marked in the field using staking, fencing, or other means. The nest and buffer will be entered into SCE's FRED as a Nest Event. Following determination of an active nest, a Qualified Biologist will visit the nest periodically to track and document the reproductive status of the nest until the nest has fledged or failed. All nest visits will be conducted by a single Qualified Biologist and will last only as long as necessary to confirm the nesting stage or until circumstances necessitate departure (e.g., potential nest predator detected or sustained indications of stress by any protected bird). Covered Activities will not be permitted inside the buffer until a Qualified Biologist determines that the nest is no longer active.
- **Buffer Reductions.** Buffer reductions may be implemented in coordination with CDFW. Buffer reductions will require development of a site-specific *Buffer Reduction Plan*, which shall be submitted to CDFW at least 7 days prior to implementation of the reduced buffer. The baseline conditions at the nest location and the type, intensity, and duration of the proposed work will be taken into account in developing the *Buffer Reduction Plan*. In addition to monitoring of the nest(s), the *Buffer Reduction Plan* may stipulate other mitigation measures including limited construction activities, limited daily and/or weekly construction periods, noise monitoring, and erection of visual/acoustic barriers.

  During work inside buffer reduction areas, the Qualified Biologist(s) (or Biological Monitor(s) under supervision of a Qualified Biologist) will use binoculars to monitor the nest(s) from the greatest distance feasible to avoid direct disturbance and attracting predators. They will have the authority to stop work and revert the buffer to 500 feet if the gilded flickers are observed to be distressed. The results of buffer reduction and the outcome (e.g., fledged, failed, unknown) of any monitored nests will be reported to CDFW upon completion of Covered Activities in the

buffer reduction area(s). Observations of injury or mortality to the birds or nest failure will be reported to CDFW immediately.

- **Cactus/Yucca Salvage.** Construction activities will avoid impacts to suitable gilded flicker habitat, including Joshua trees, to the extent feasible. SCE will prepare and implement a Cactus and Yucca Salvage Plan addressing the potential salvage of cactus and yucca species impacted by construction. The plan will describe the following: (1) process for identifying the locations of cacti and yucca species; (2) criteria for determining if salvage is feasible; (3) approach for salvage and relocation of cacti and yucca; (4) methods and criteria for pre-transplant and post-transplant health assessments; (5) transplantation site selection criteria; (6) monitoring and maintenance schedule; (7) success criteria; and (8) reporting requirements. The plan will be provided to CDFW for review and approval no more than 30 days prior to impacts to gilded flicker habitat.

7.4 Habitat Restoration and Mitigation

The project has been designed to minimize impacts to biological resources, including the desert tortoise and the gilded flicker, and their habitats, to the extent feasible. The project involves upgrade of existing facilities. Where possible, the construction work areas incorporate areas of existing disturbance (e.g., roads) to minimize additional disturbance of native vegetation. “Drive and crush” methods will be used to the extent feasible to minimize the severity of temporary impacts. Permanent impacts are relatively minimal because the majority of the infrastructure utilized by the Project (e.g., transmission structures, substations) already exists. In addition, the take avoidance and minimization measures described above will be implemented to address potential impacts to the Covered Species.

Upon completion of construction, SCE will restore temporarily disturbed areas to preconstruction conditions. SCE will prepare a HRRP that provides detailed information regarding the revegetation and/or restoration of the temporarily disturbed areas, including: (1) the locations of the restoration areas (using maps and GIS shapefiles); (2) revegetation methods (e.g., natural revegetation, topsoil salvage and redistribution, reseeding, planting); (3) site preparation techniques (e.g., decompaction, recontouring); (4) application and/or installation methods for plant materials; (5) native plant and seed palette; (6) maintenance and monitoring protocol, including schedules, timelines, and data collection methods; (7) species- or community-specific habitat restoration and revegetation goals, objectives, and quantitative success criteria; (8) structure measures to be implemented in the event the success criteria are not being met; and (9) an outline of the data/results to be reported annually to CDFW. The HRRP will be submitted to the CDFW for review and approval no fewer than 30 days prior to the initiation of construction. Implementation of the HRRP shall occur as phased project activities are completed, and within 30 days of the overall project completion.

Based on the current design, the project will result in impacts to an estimated maximum of 173.86 acres of desert tortoise habitat, including less than 0.001 acre of permanent impacts to suitable desert tortoise habitat. Of these impacts, 109.20 acres of temporary impacts to suitable desert tortoise habitat, and 64.66 acres of temporary impacts to designated critical habitat, assuming that the maximum potential ground-disturbance (i.e., no helicopter use) occurs. The project is expected to result in temporary impacts to 22.42 acres of suitable gilded flicker habitat, assuming that maximum impacts occur. No permanent impacts to gilded flicker habitat are proposed. As described above, suitable habitat for gilded flickers in the project area is also suitable habitat for desert tortoises.

SCE proposes to mitigate impacts to desert tortoise habitat at a ratio of 5:1 for permanent impacts and 3:1 for temporary impacts, where on-site restoration satisfies the requirement at a 1:1 ratio and compensatory mitigation satisfies the remainder of the mitigation responsibility at a ratio 2:1 for temporary impacts. SCE will provide compensatory mitigation using a CDFW-approved mitigation bank.

SCE proposes to mitigate temporary impacts to gilded flicker habitat at a ratio of 1:1, to be satisfied by on-site restoration. Because Joshua tree woodland supports both gilded flickers and desert tortoises, SCE proposes that the desert tortoise mitigation approach described above will satisfy the gilded flicker mitigation requirements concurrently.

Table 13 summarizes the maximum potential impacts to desert tortoise and gilded flicker habitats and the resulting mitigation responsibility based on the mitigation plan described above.

Table 13 Compensatory Mitigation Responsibility

Species	Impact Type	Area (acres)[1]	Ratio (x:1)[2]	Mitigation Responsibility (acres) (Area x Ratio)
Desert Tortoise	Temporary	173.86	2	347.72
	Permanent	Less than 0.001	5	0
Gilded Flicker	Temporary	22.42	0	0
	Permanent	0	3	0

[1]Assumes maximum potential grounds disturbance, no use of helicopters

[2] Compensatory mitigation responsibility, excluding 1:1 for onsite restoration of temporary impacts

As discussed above, SCE intends to perform wire stringing using helicopters instead of conventional ground-based equipment to the extent feasible. Section 6 presents impacts for both the best-case scenario (i.e., helicopter) and worst-case scenario (i.e., all ground-based construction). In reality, SCE will likely be able to use helicopters for wire stringing in most locations, needing to use few if any structure areas for ground-based work. For the purpose of discussion, SCE assumes up to 20 percent of the structure work areas will be used during construction. In addition, where ground-based construction does occur, impacts will likely be limited to a portion of each work area. Nevertheless, SCE understands that the compensatory mitigation strategy presented herein must meet CDFW's fully mitigated standard. Therefore, the impacts and mitigation responsibility presented in Table 13 are consistent with the worst-case construction scenario.

SCE proposes to provide compensatory mitigation for 70 percent of the mitigation responsibility in advance of construction. In addition, SCE will provide CDFW a letter of credit demonstrating obligation of a monetary amount commensurate with the value of the compensatory mitigation for the remaining 30 percent prior to the start of construction. Upon completion of construction, SCE will map the limits of the areas disturbed during construction and compare those "as-built" impacts to the designed impacts presented in this application. SCE will work with CDFW to amend the ITP to reflect the actual temporary and permanent impacts and resulting mitigation responsibility. If the impacts and mitigation responsibility are greater than the compensatory mitigation provided prior to construction, SCE will provide additional compensatory mitigation at the ratios described above commensurate with the difference between the actual impacts and the impacts for which mitigation was already provided. If the project results in a smaller area of impacts and, therefore, smaller mitigation responsibility than SCE provided compensatory mitigation for prior to the start of construction, SCE may apply the "credit" to future actions in the project area. In the highly unlikely event that the project results in impacts greater than the estimated maximum potential impacts

presented in Table 13, SCE will be responsible for requesting an amendment to the ITP to document the impacts and resulting mitigation responsibility, and SCE will be responsible for providing compensatory mitigation at the ratios presented above. When SCE has met all compensatory mitigation requirements, CDFW will release SCE from the responsibility documented by the letter of credit.

8 Funding Assurances

SCE is solvent and capable of meeting its financial responsibilities, including fully funding and implementing the take avoidance and minimization measures; compliance monitoring; and compensatory mitigation measures described in this ITP application.

9 California Environmental Quality Act Compliance

CDFW's issuance of an ITP would be subject to review under CEQA (Public Resources Code Sections 21000–21177). Pursuant to Section 15063 of Title 14 of the California Code of Regulations, if the Lead Agency determines that any aspect of the project, individually or cumulatively, may cause a significant environmental impact, an Environmental Impact Report must be prepared. However, if the Lead Agency finds the project would not result in significant environmental impacts, either as proposed or modified to include mitigation measures identified in the Initial Study, a Negative Declaration or Mitigated Negative Declaration, as appropriate, will be prepared instead.

The project has been in the planning stages for several years. It has been determined that the project is exempt from CPUC licensing, and that there would be no other nexus for review under CEQA. SCE submitted a CEQA Initial Study on November 18, 2022, titled *Lugo-Victorville Remedial Action Scheme Project, Initial* Study, to CDFW as the Lead Agency for the project. As the Lead Agency, CDFW will then review and approve and/or certify the document. As required under CEQA, the environmental document and any supporting analyses are subject to a public review period. During this period, comments regarding environmental issues discussed in the document can be provided to the Lead Agency. The Lead Agency will consider and respond to these comments as part of the environmental review process.

10 Certification

I certify that the information submitted in this application is complete and accurate to the best of my knowledge and belief. I understand that any false statement herein may subject me to the suspension or revocation of this permit and to civil and criminal penalties under the laws of the State of California.

Name: _____

Signature: _____

Date: _____

11 References

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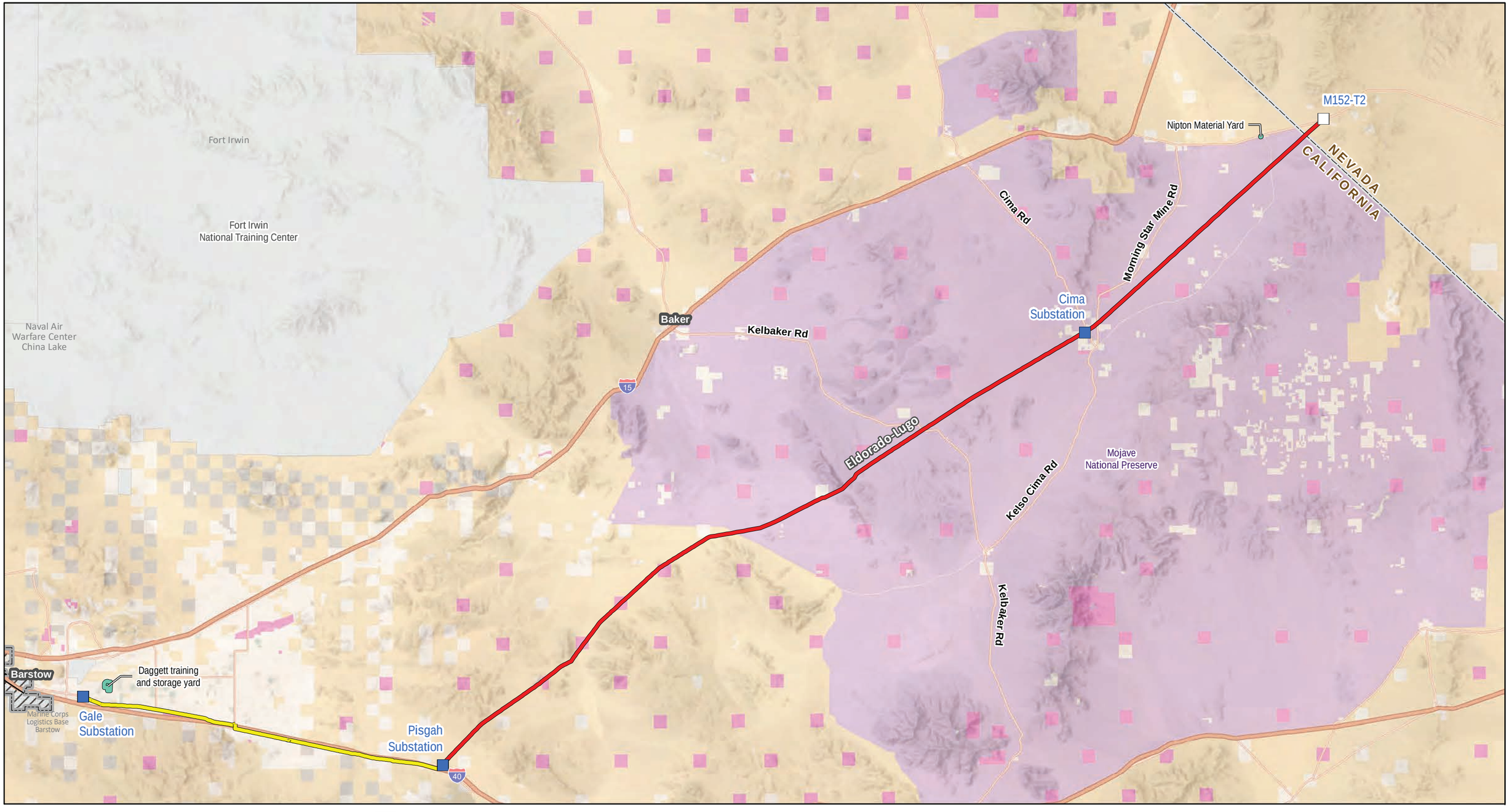
Figures



Proposed Project
- Existing Substation
- Project Endpoint/Existing Structure
- Segment 1
- Segment 2
- Construction Material Yard
- Incorporated City

Land Ownership*
- Bureau of Land Management
- CA State Lands
- Department of Defense
- Mojave National Preserve (NPS)

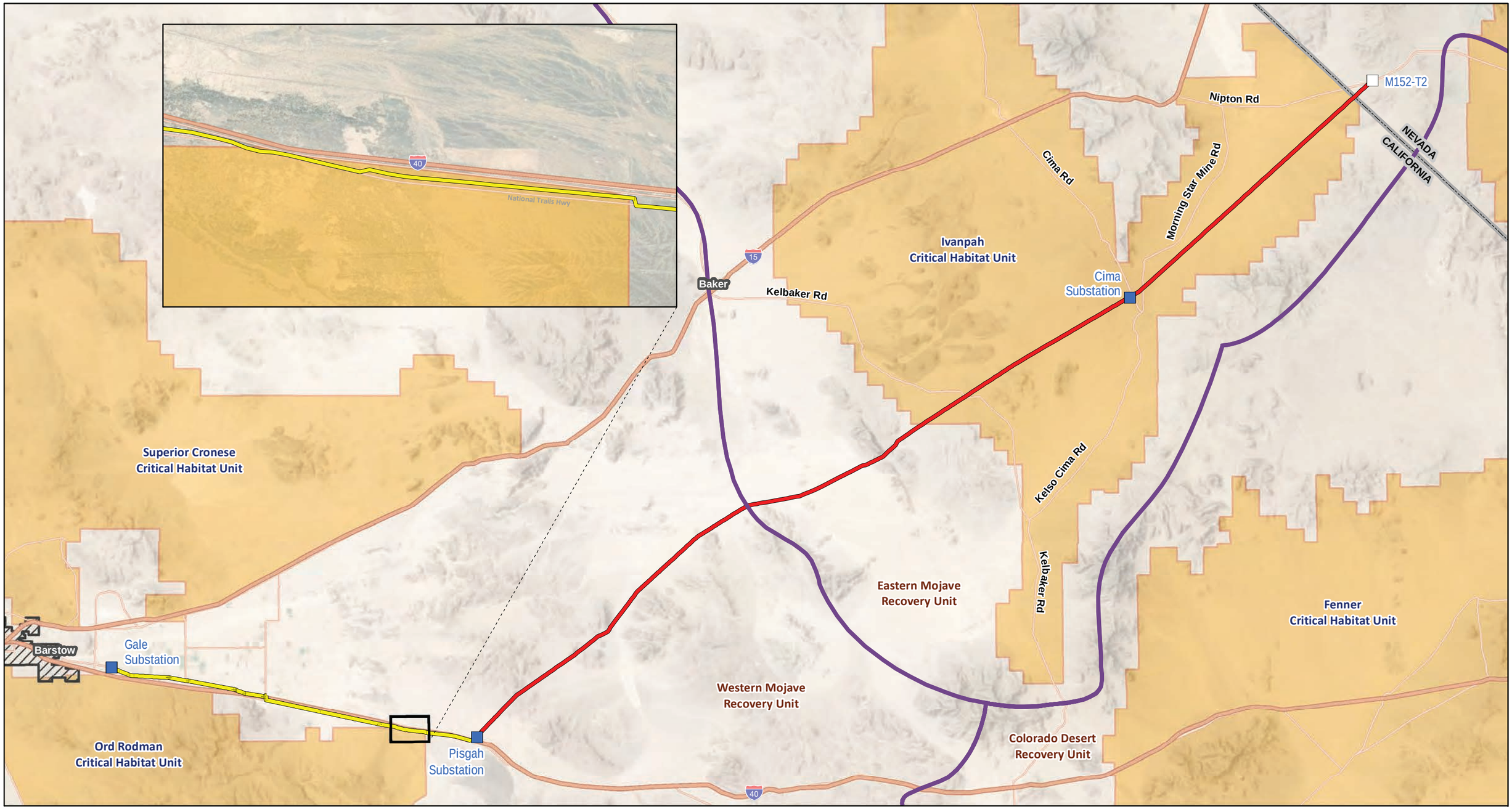
* Areas with no color fill are private land.

0 3 6
Miles

Source: SCE, ESRI World Street Map

FIGURE 1
Project Overview

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Proposed Project
- Substation
- Project Endpoint
- Segment 1: Gale-Pisgah
- Segment 2: Pisgah-Nipton

- Incorporated City
- Recovery Unit Boundary
- Designated Critical Habitat: Desert tortoise

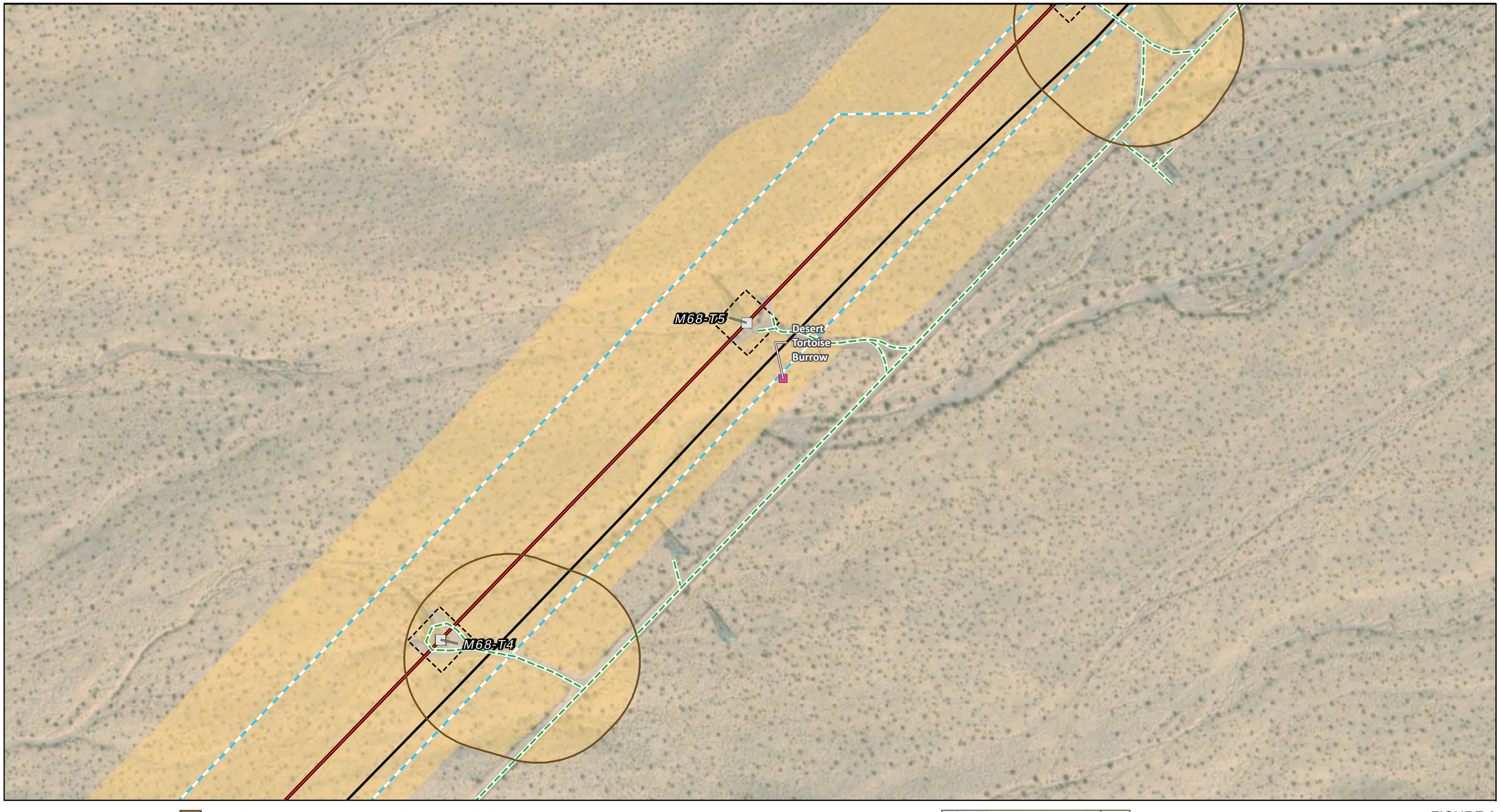
0 3.5 7
Miles

N

Source: SCE, BLM, ESRI World Street Map

FIGURE 2
Desert Tortoise Critical Habitat

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Survey Area
Desert Tortoise Suitable Habitat

Desert Tortoise Occurrence
Active Burrow

Transmission Structures
Existing Transmission Towers

Existing Access Roads
Access Road

Transmission Line
New Optical Ground Wire

Distribution Circuit
Overhead
Right of Way

0 75 150
Feet

Source: SCE, BLM, ESRI, CDFW 2021

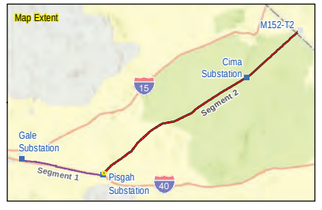
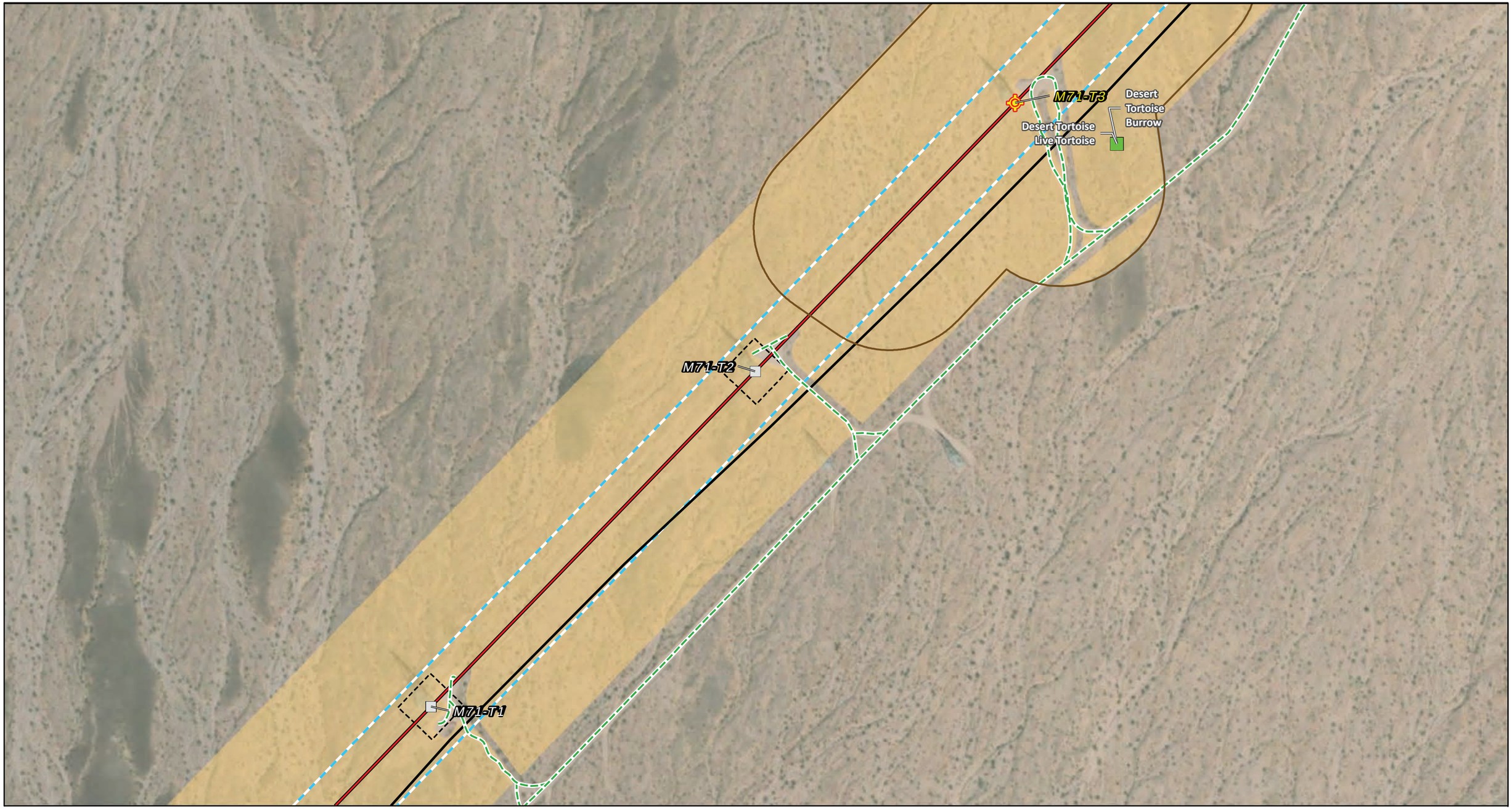


FIGURE 3
Desert Tortoise Survey Results

Sheet 1 of 20

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Survey Area
Desert Tortoise Suitable Habitat

Desert Tortoise Occurrence
Active Burrow
Live Tortoise

Transmission Structures
Splicing Tower Locations
Existing Transmission Towers

Existing Access Roads
Access Road

Transmission Line
New Optical Ground Wire

Distribution Circuit
Overhead
Right of Way

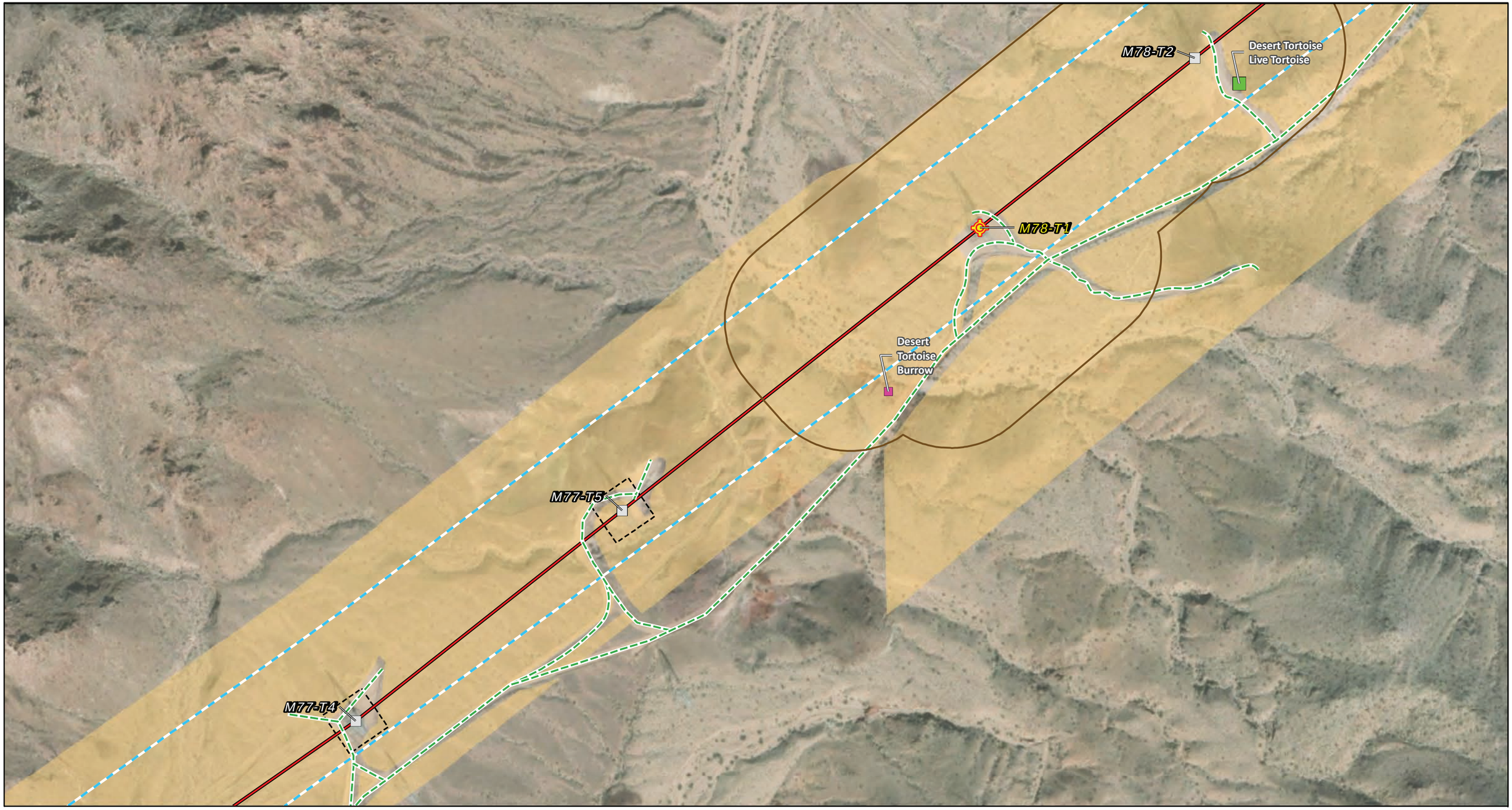
0 75 150
Feet

Source: SCE, BLM, ESRI, CDFW 2021

FIGURE 3
Desert Tortoise Survey Results

Sheet 2 of 20

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Survey Area
Desert Tortoise Suitable Habitat

Desert Tortoise Occurrence
Active Burrow
Live Tortoise

Transmission Structures
Splicing Tower Locations
Existing Transmission Towers

Existing Access Roads
Access Road

Transmission Line
New Optical Ground Wire
Right of Way

0 75 150
Feet

N

Source: SCE, BLM, ESRI, CDFW 2021

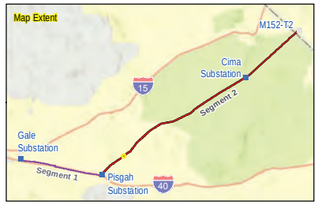


FIGURE 3
Desert Tortoise Survey Results

Sheet 3 of 20

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Survey Area
Desert Tortoise Suitable Habitat

Desert Tortoise Occurrence
Active Burrow
Live Tortoise

Transmission Structures
Existing Transmission Towers

Existing Access Roads
Access Road

Transmission Line
New Optical Ground Wire
Right of Way

0 75 150
Feet

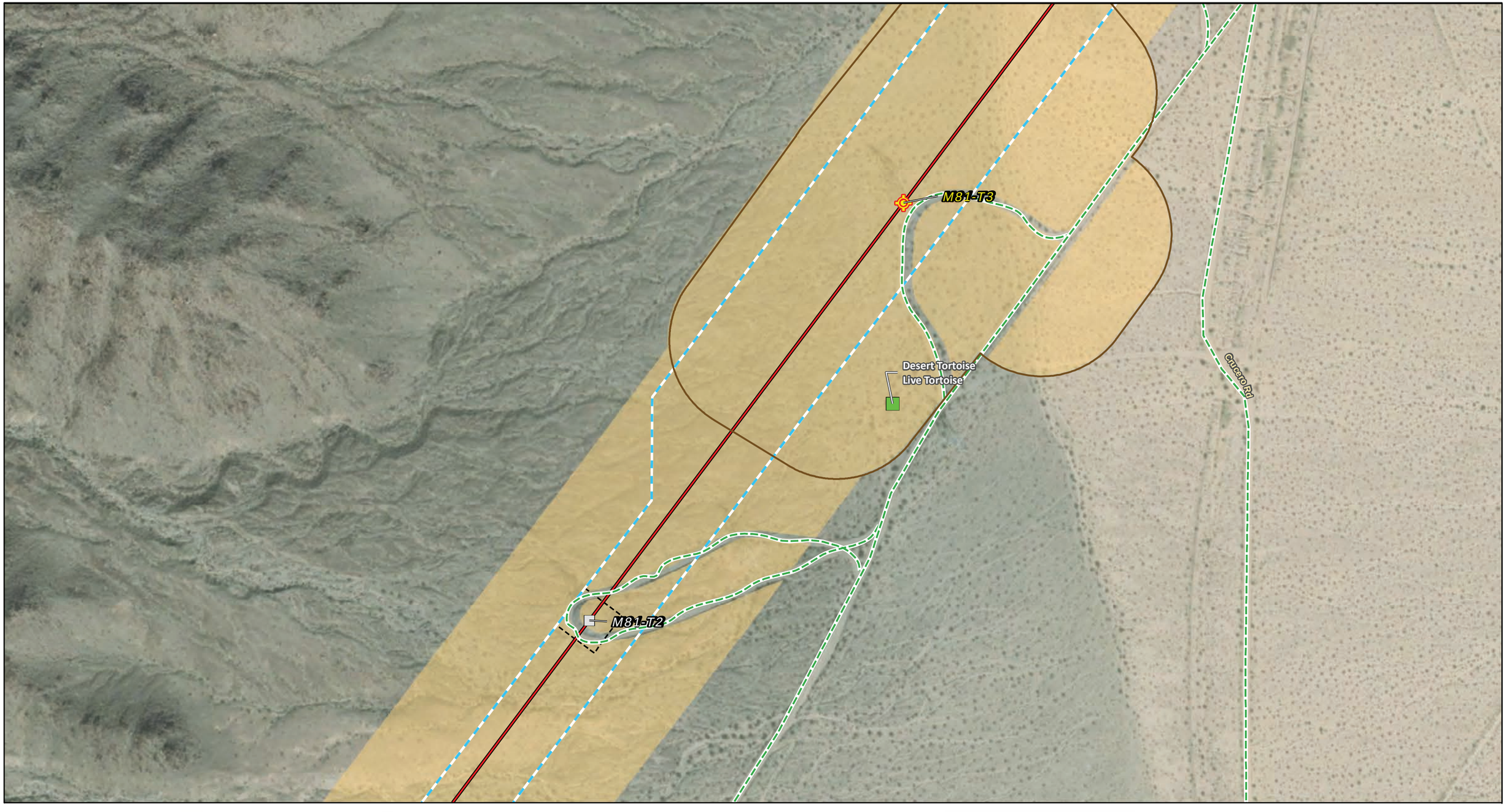
N

Source: SCE, BLM, ESRI, CDFW 2021

FIGURE 3
Desert Tortoise Survey Results

Sheet 4 of 20

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Survey Area
Desert Tortoise Suitable Habitat
Desert Tortoise Occurrence
Live Tortoise
Transmission Structures
Splicing Tower Locations
Existing Transmission Towers
Existing Access Roads
Access Road
Transmission Line
New Optical Ground Wire
Right of Way

0 75 150
Feet

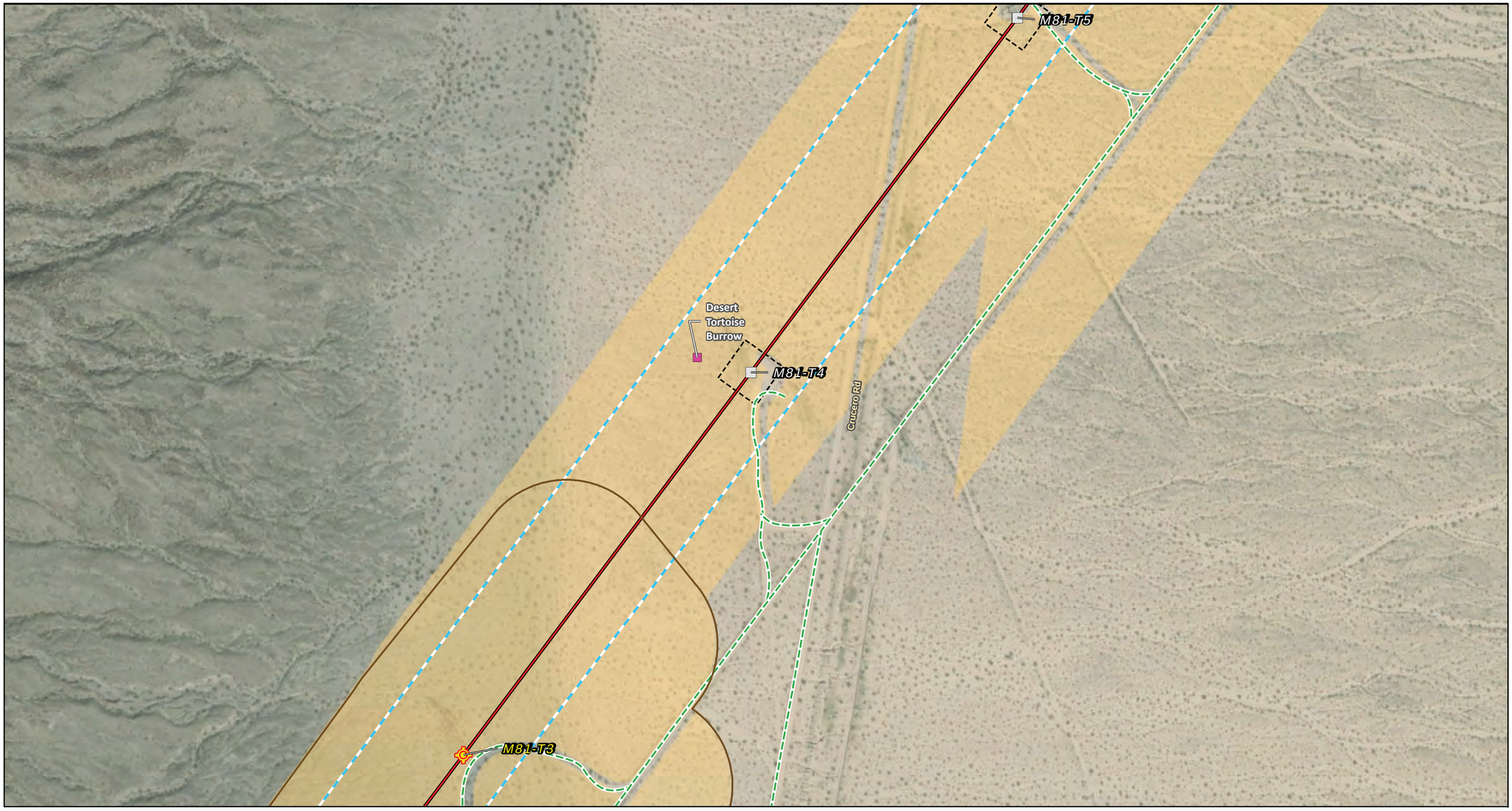
N

Source: SCE, BLM, ESRI, CDFW 2021

FIGURE 3
Desert Tortoise Survey Results

Sheet 5 of 20

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Survey Area
Desert Tortoise Suitable Habitat

Desert Tortoise Occurrence
Active Burrow

Transmission Structures
Splicing Tower Locations
Existing Transmission Towers

Existing Access Roads
Access Road

Transmission Line
New Optical Ground Wire
Right of Way

0 75 150
Feet

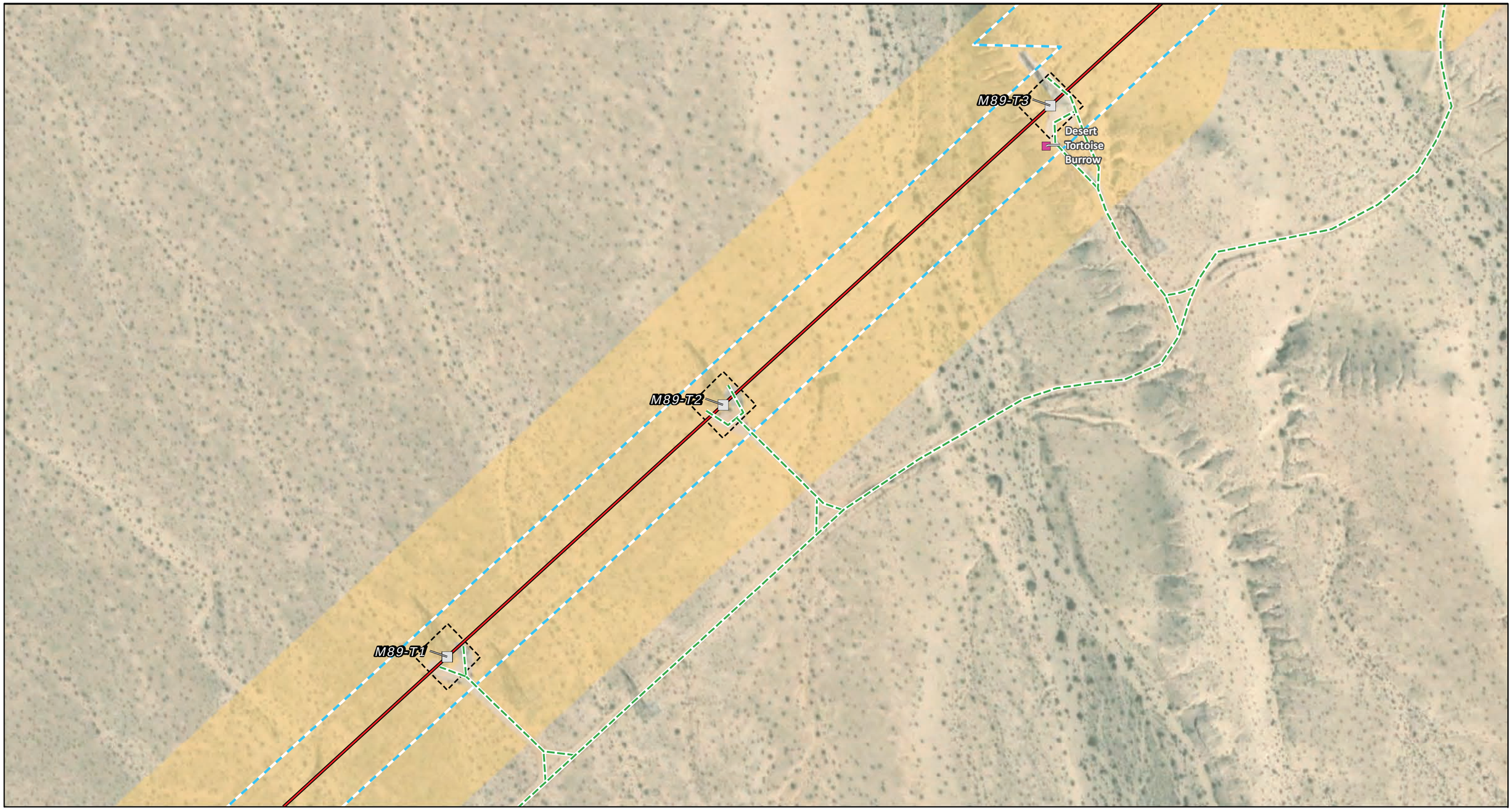
N

Source: SCE, BLM, ESRI, CDFW 2021

FIGURE 3
Desert Tortoise Survey Results

Sheet 6 of 20

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Desert Tortoise Suitable Habitat

Desert Tortoise Occurrence
- Active Burrow

Transmission Structures
- Existing Transmission Towers

Existing Access Roads
- Access Road

Transmission Line
- New Optical Ground Wire
- Right of Way

0 75 150
Feet

Source: SCE, BLM, ESRI, CDFW 2021

FIGURE 3
Desert Tortoise Survey Results

Sheet 7 of 20

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

M109-T1

M108-T5

M108-T4

Desert Tortoise
Live Tortoise

M108-T3

Survey Area
Desert Tortoise Suitable Habitat

Desert Tortoise Occurrence
Live Tortoise

Transmission Structures
Existing Transmission Towers

Existing Access Roads
Access Road

Transmission Line
New Optical Ground Wire
Right of Way

0 75 150
Feet

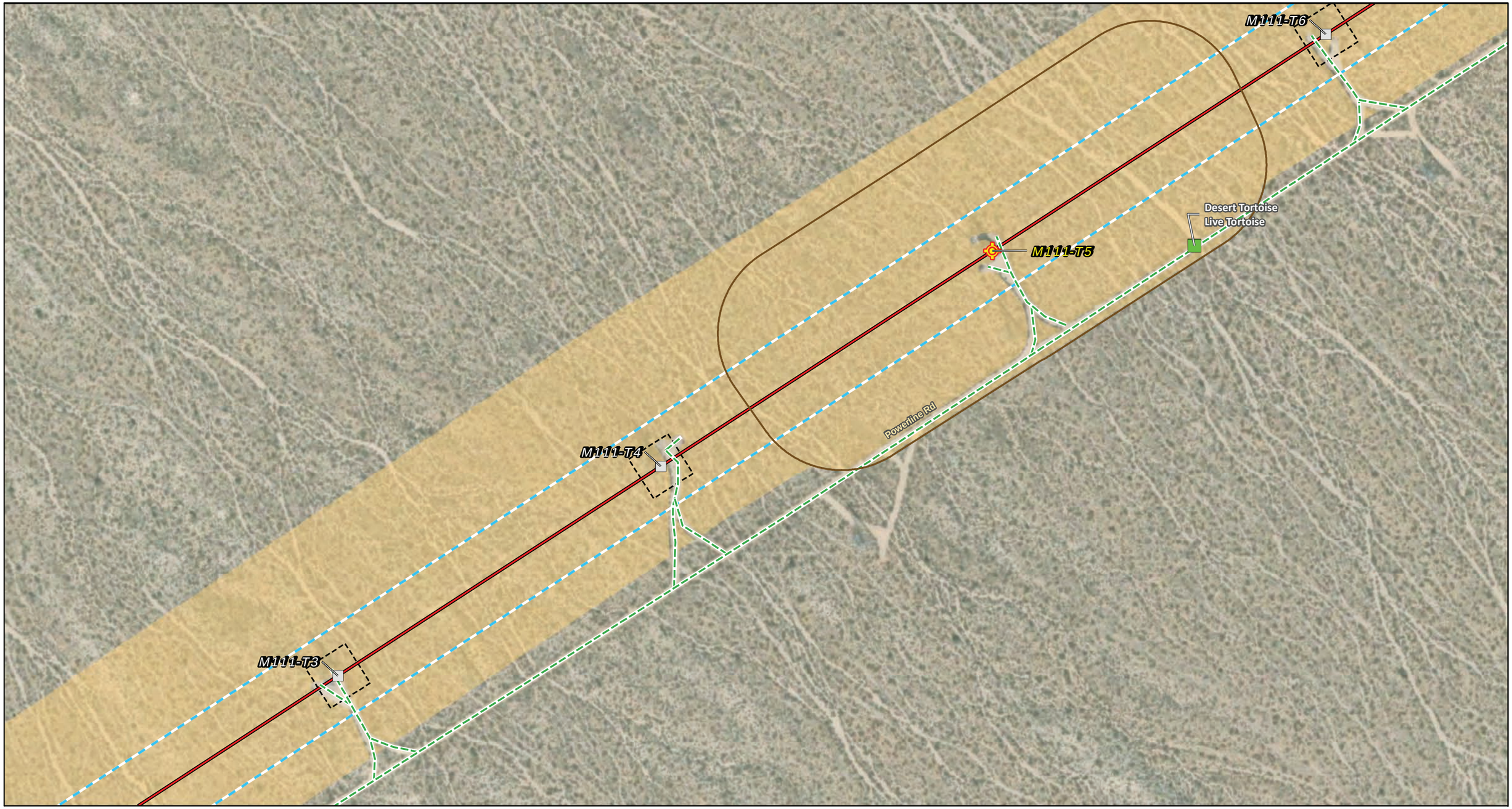
N

Source: SCE, BLM, ESRI, CDFW 2021

FIGURE 3
Desert Tortoise Survey Results

Sheet 8 of 20

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Survey Area
Desert Tortoise Suitable Habitat

Desert Tortoise Occurrence
Live Tortoise

Transmission Structures
Splicing Tower Locations

Existing Transmission Towers

Existing Access Roads
Access Road

Transmission Line
New Optical Ground Wire
Right of Way

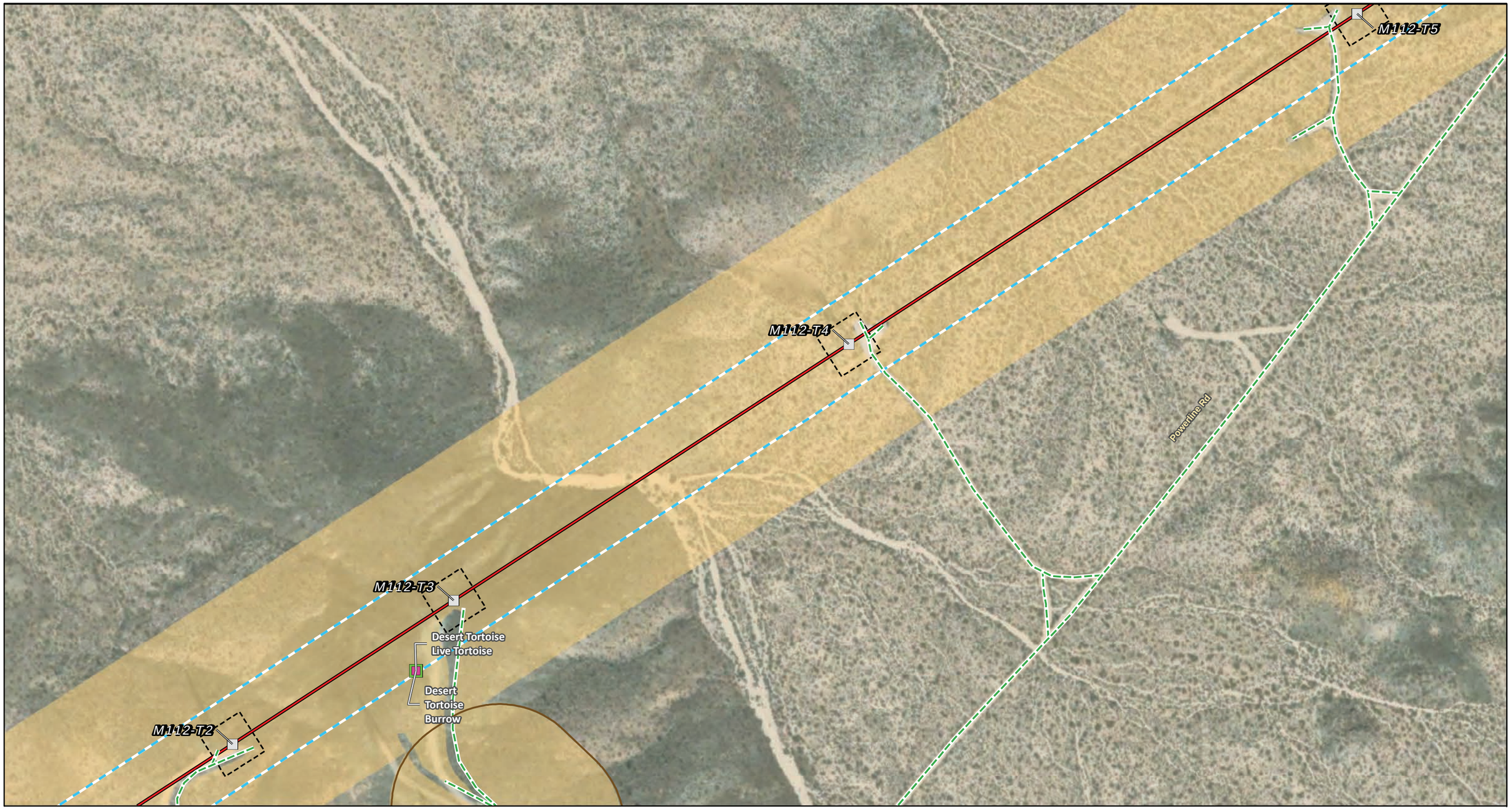
0 75 150
Feet

Source: SCE, BLM, ESRI, CDFW 2021

FIGURE 3
Desert Tortoise Survey Results

Sheet 9 of 20

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Survey Area
Desert Tortoise Suitable Habitat

Desert Tortoise Occurrence
Active Burrow
Live Tortoise

Transmission Structures
Existing Transmission Towers

Existing Access Roads
Access Road

Transmission Line
New Optical Ground Wire
Right of Way

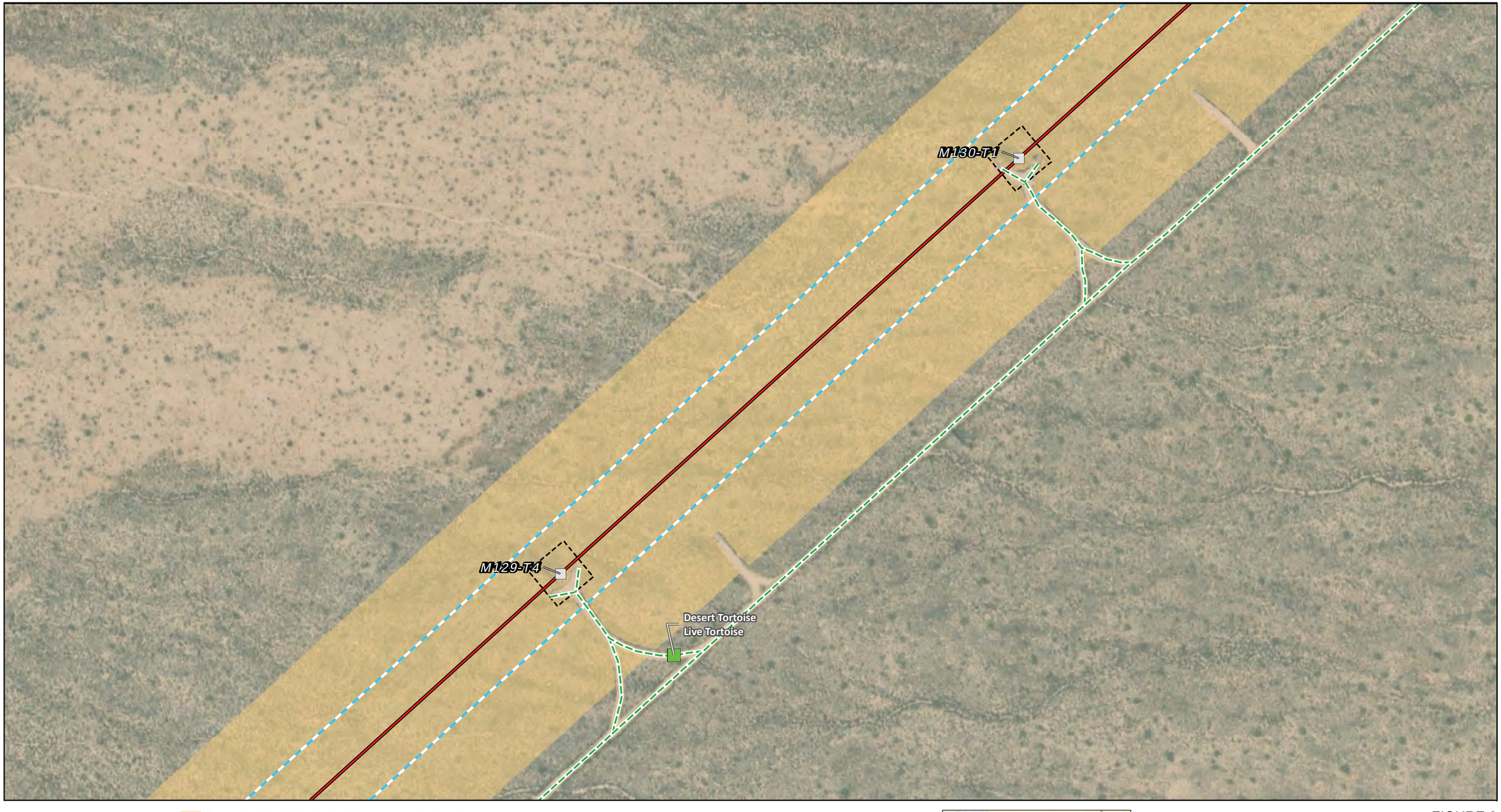
0 75 150
Feet

Source: SCE, BLM, ESRI, CDFW 2021

FIGURE 3
Desert Tortoise Survey Results

Sheet 10 of 20

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Desert Tortoise Suitable Habitat

Desert Tortoise Occurrence

Live Tortoise

Transmission Structures

Existing Transmission Towers

Existing Access Roads

Access Road

Transmission Line

New Optical Ground Wire

Right of Way

0 75 150

Feet

Source: SCE, BLM, ESRI, CDFW 2021

FIGURE 3

Desert Tortoise Survey Results

Sheet 11 of 20

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

M131-T1

Desert Tortoise Burrow

Desert Tortoise Live Tortoise

Survey Area

Desert Tortoise Suitable Habitat

Desert Tortoise Occurrence

Active Burrow

Live Tortoise

Transmission Structures

Splicing Tower Locations

Existing Access Roads

Access Road

Transmission Line

New Optical Ground Wire

Right of Way

0 75 150

Feet

N

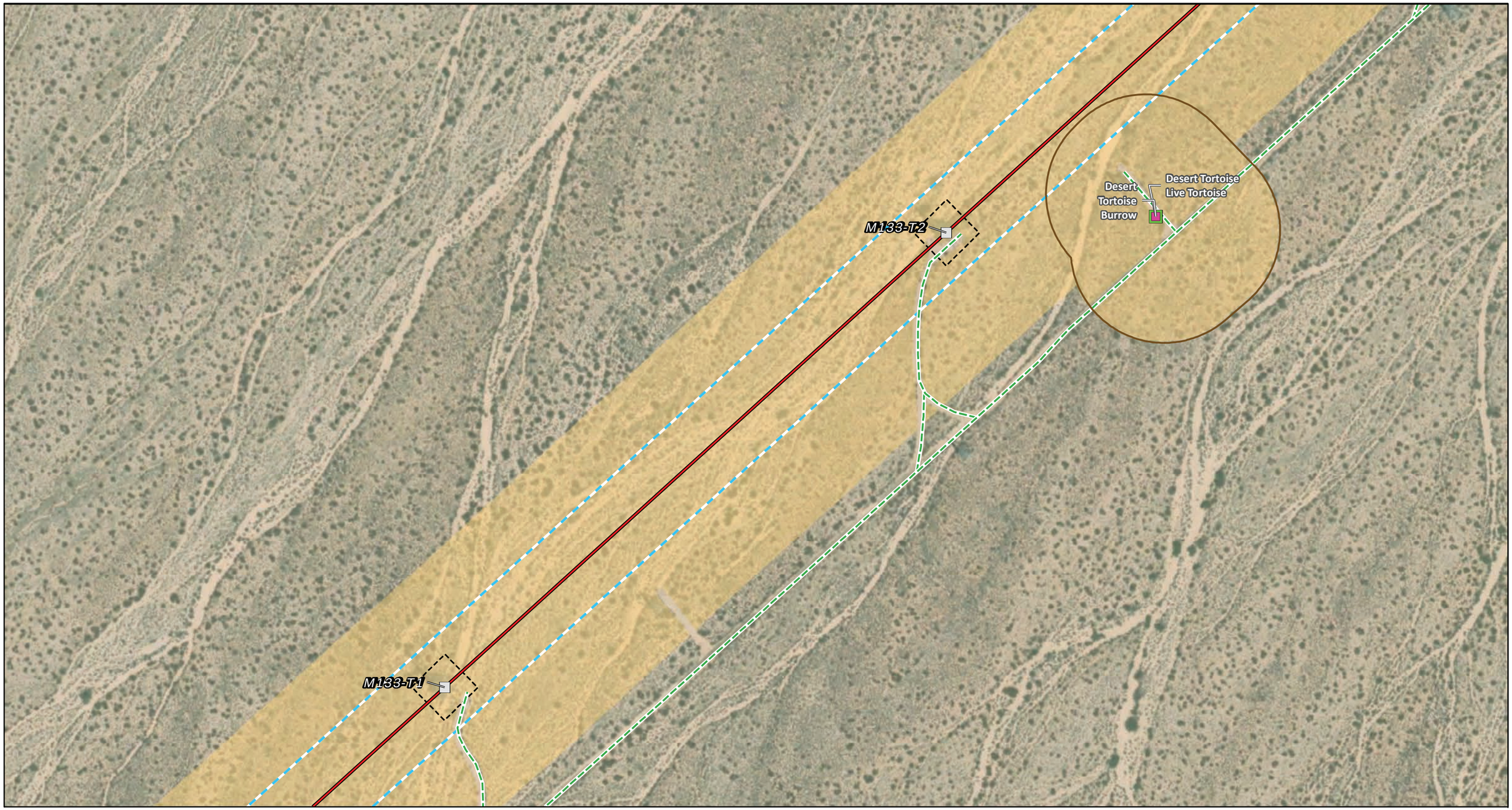
Source: SCE, BLM, ESRI, CDFW 2021

FIGURE 3

Desert Tortoise Survey Results

Sheet 12 of 20

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Survey Area
Desert Tortoise Suitable Habitat

Desert Tortoise Occurrence
Active Burrow
Live Tortoise

Transmission Structures
Existing Transmission Towers

Existing Access Roads
Access Road

Transmission Line
New Optical Ground Wire
Right of Way

0 75 150
Feet

N

Source: SCE, BLM, ESRI, CDFW 2021

FIGURE 3
Desert Tortoise Survey Results

Sheet 13 of 20

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Desert Tortoise Live Tortoise
Desert Tortoise Burrow
Desert Tortoise Burrow
Desert Tortoise Other
Desert Tortoise Live Tortoise
M134-T2
Desert Tortoise Carcass
Powerline Rd
Desert Tortoise Burrow
M134-T1

Survey Area
Desert Tortoise Suitable Habitat

Desert Tortoise Occurrence
- Active Burrow
- Carcass
- Live Tortoise
- Tracks

Transmission Structures
- Splicing Tower Locations
- Existing Transmission Towers

Existing Access Roads
- Access Road

Transmission Line
- New Optical Ground Wire
- Right of Way

0 75 150
Feet

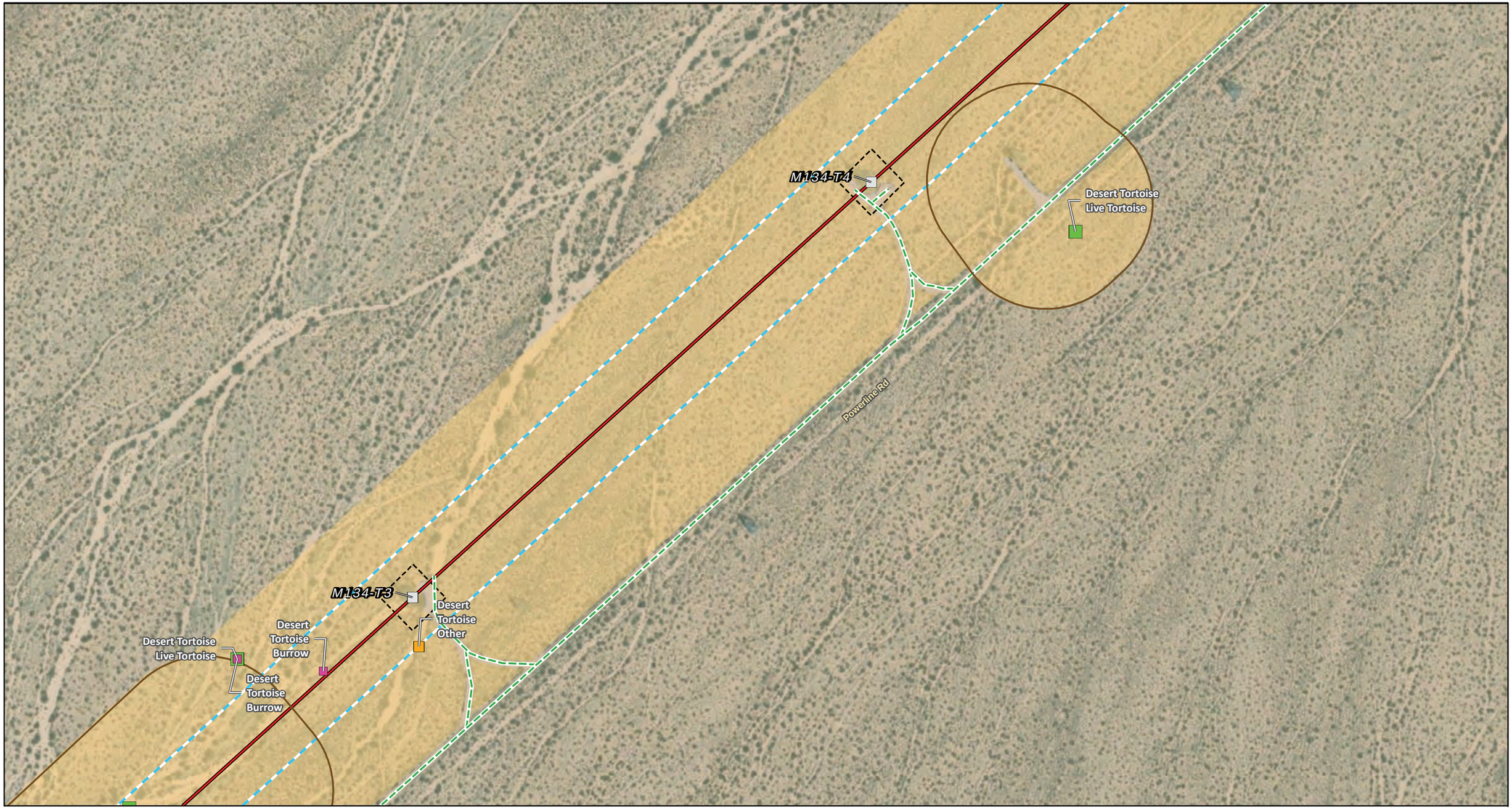
N

Source: SCE, BLM, ESRI, CDFW 2021

FIGURE 3
Desert Tortoise Survey Results

Sheet 14 of 20

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Survey Area
Desert Tortoise Suitable Habitat

Desert Tortoise Occurrence
- Active Burrow
- Live Tortoise
- Tracks

Transmission Structures
- Existing Transmission Towers

Existing Access Roads
- Access Road

Transmission Line
- New Optical Ground Wire
- Right of Way

0 75 150
Feet

Source: SCE, BLM, ESRI, CDFW 2021

FIGURE 3
Desert Tortoise Survey Results

Sheet 15 of 20

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Desert Tortoise Suitable Habitat

Desert Tortoise Occurrence

Live Tortoise

Transmission Structures

Existing Transmission Towers

Existing Access Roads

Access Road

Transmission Line

New Optical Ground Wire

Right of Way

0 75 150

Feet

N

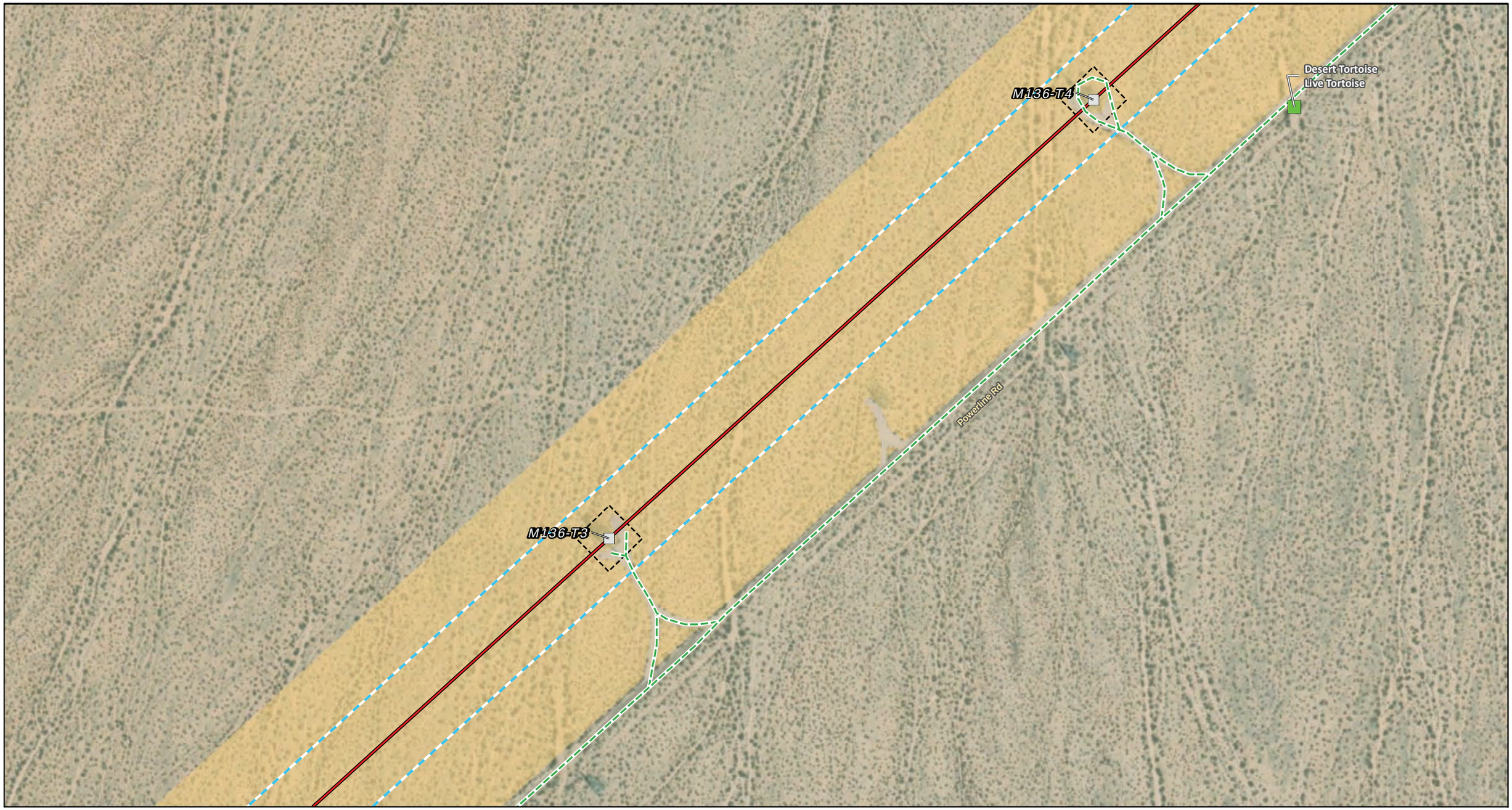
Source: SCE, BLM, ESRI, CDFW 2021

FIGURE 3

Desert Tortoise Survey Results

Sheet 16 of 20

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Desert Tortoise Suitable Habitat

Desert Tortoise Occurrence

Live Tortoise

Transmission Structures

Existing Transmission Towers

Existing Access Roads

Access Road

Transmission Line

New Optical Ground Wire

Right of Way

0 75 150

Feet

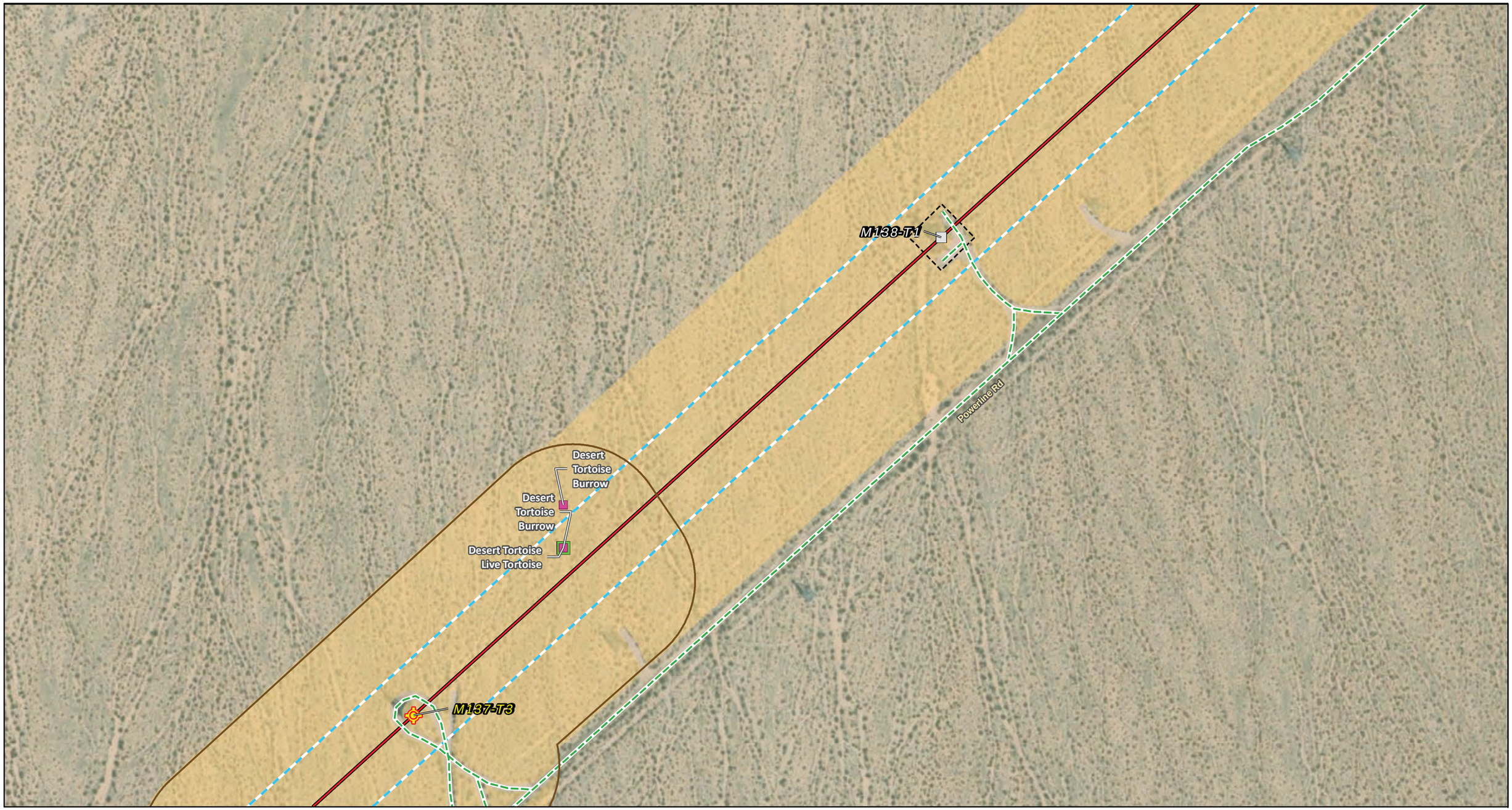
Source: SCE, BLM, ESRI, CDFW 2021

FIGURE 3

Desert Tortoise Survey Results

Sheet 17 of 20

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Survey Area
Desert Tortoise Suitable Habitat

Desert Tortoise Occurrence
Active Burrow
Live Tortoise

Transmission Structures
Splicing Tower Locations
Existing Transmission Towers

Existing Access Roads
Access Road

Transmission Line
New Optical Ground Wire
Right of Way

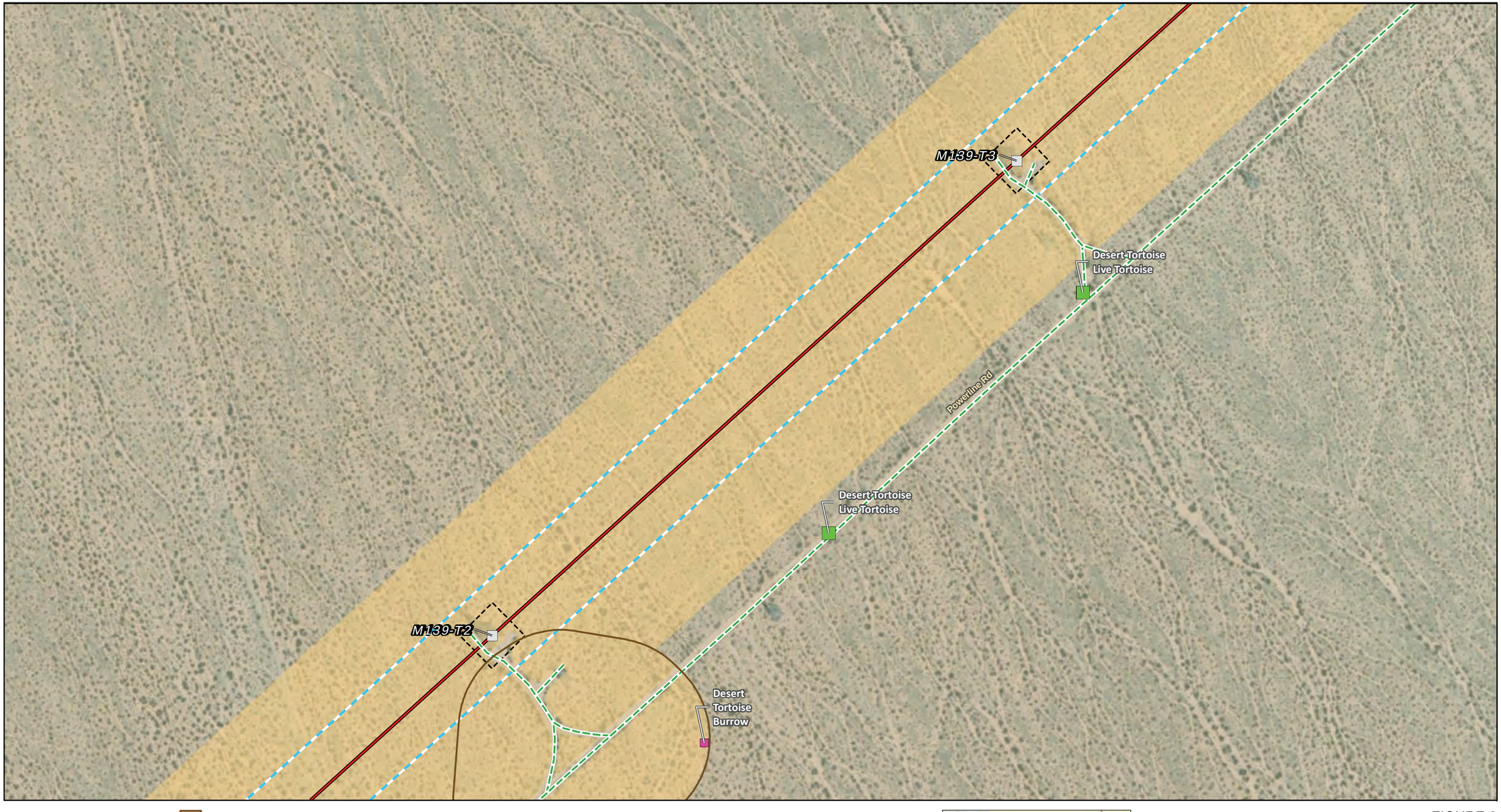
0 75 150
Feet

Source: SCE, BLM, ESRI, CDFW 2021

FIGURE 3
Desert Tortoise Survey Results

Sheet 18 of 20

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Survey Area
Desert Tortoise Suitable Habitat

Desert Tortoise Occurrence
Active Burrow
Live Tortoise

Transmission Structures
Existing Transmission Towers

Existing Access Roads
Access Road

Transmission Line
New Optical Ground Wire
Right of Way

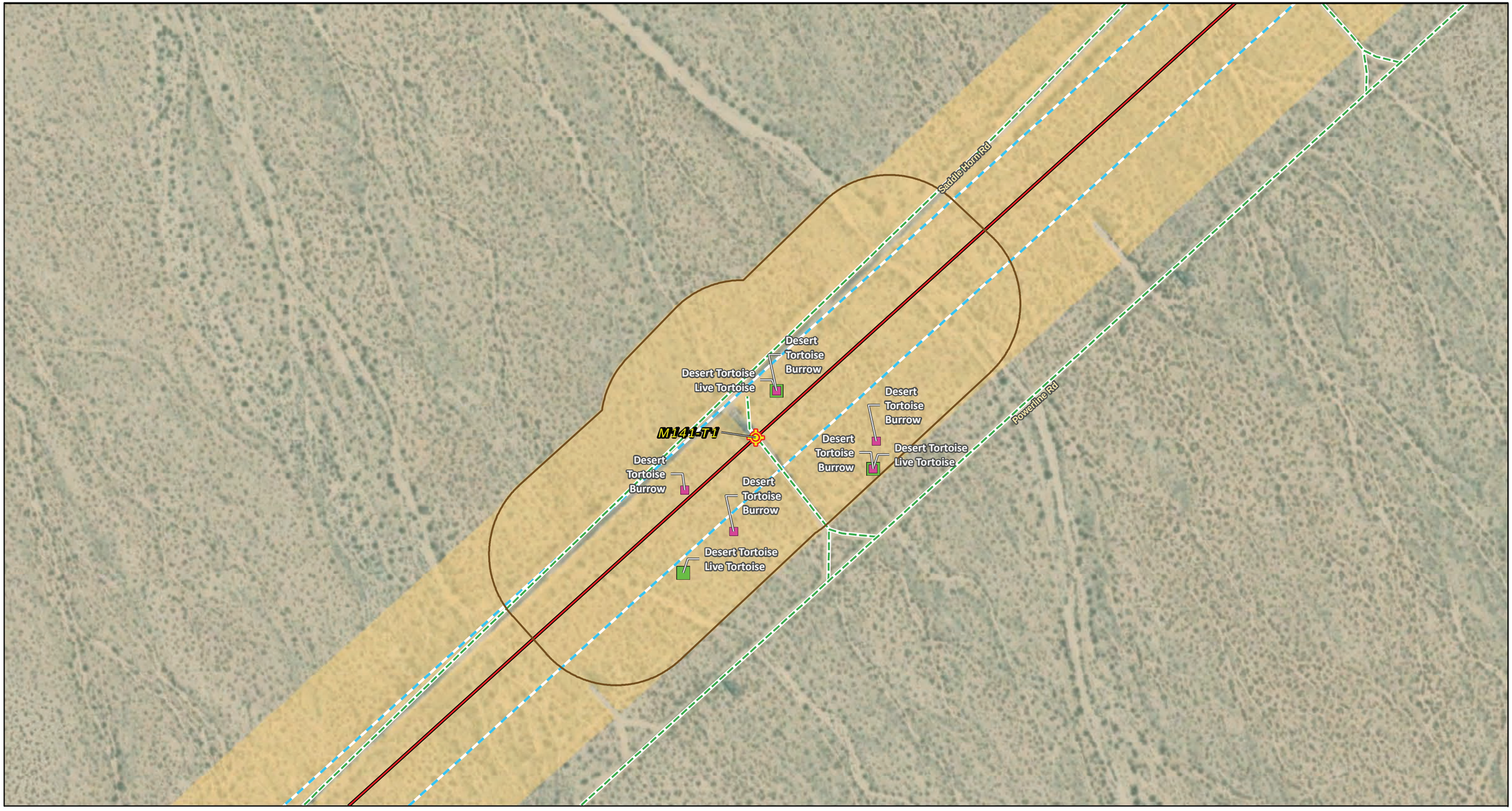
0 75 150
Feet

Source: SCE, BLM, ESRI, CDFW 2021

FIGURE 3
Desert Tortoise Survey Results

Sheet 19 of 20

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Survey Area
Desert Tortoise Suitable Habitat

Desert Tortoise Occurrence
Active Burrow
Live Tortoise

Transmission Structures
Splicing Tower Locations

Existing Access Roads
Access Road

Transmission Line
New Optical Ground Wire

Right of Way

0 75 150
Feet

Source: SCE, BLM, ESRI, CDFW 2021

FIGURE 3
Desert Tortoise Survey Results

Sheet 20 of 20

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Material/Laydown Yards

Land Cover Type

Developed

Land Ownership

Bureau of Land Management

Public Land Survey System

Township, Range and Section

* Areas with no color fill are private land.

0 150 300

Feet

N

Source: SCE, BLM, CDFW, ESRI

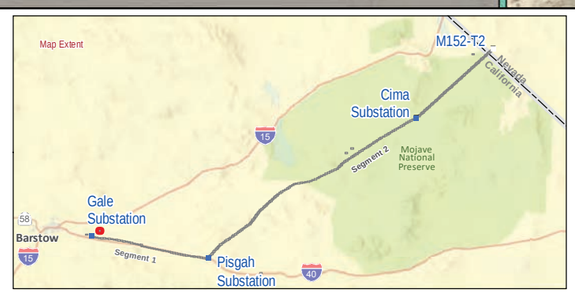


FIGURE 4

Vegetation and Land Cover

Segment 1

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Material/Laydown Yards

Land Cover Type

Developed

Public Land Survey System

Township, Range and Section

* Areas with no color fill are private land.

0 150 300

Feet

N

Source: SCE, BLM, CDFW, ESRI

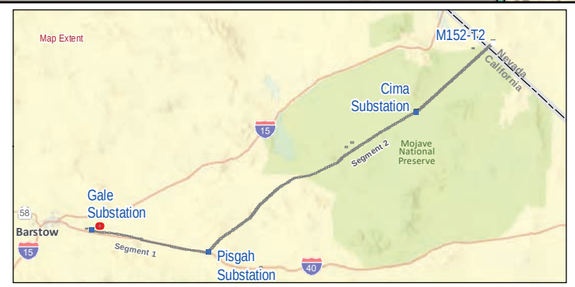
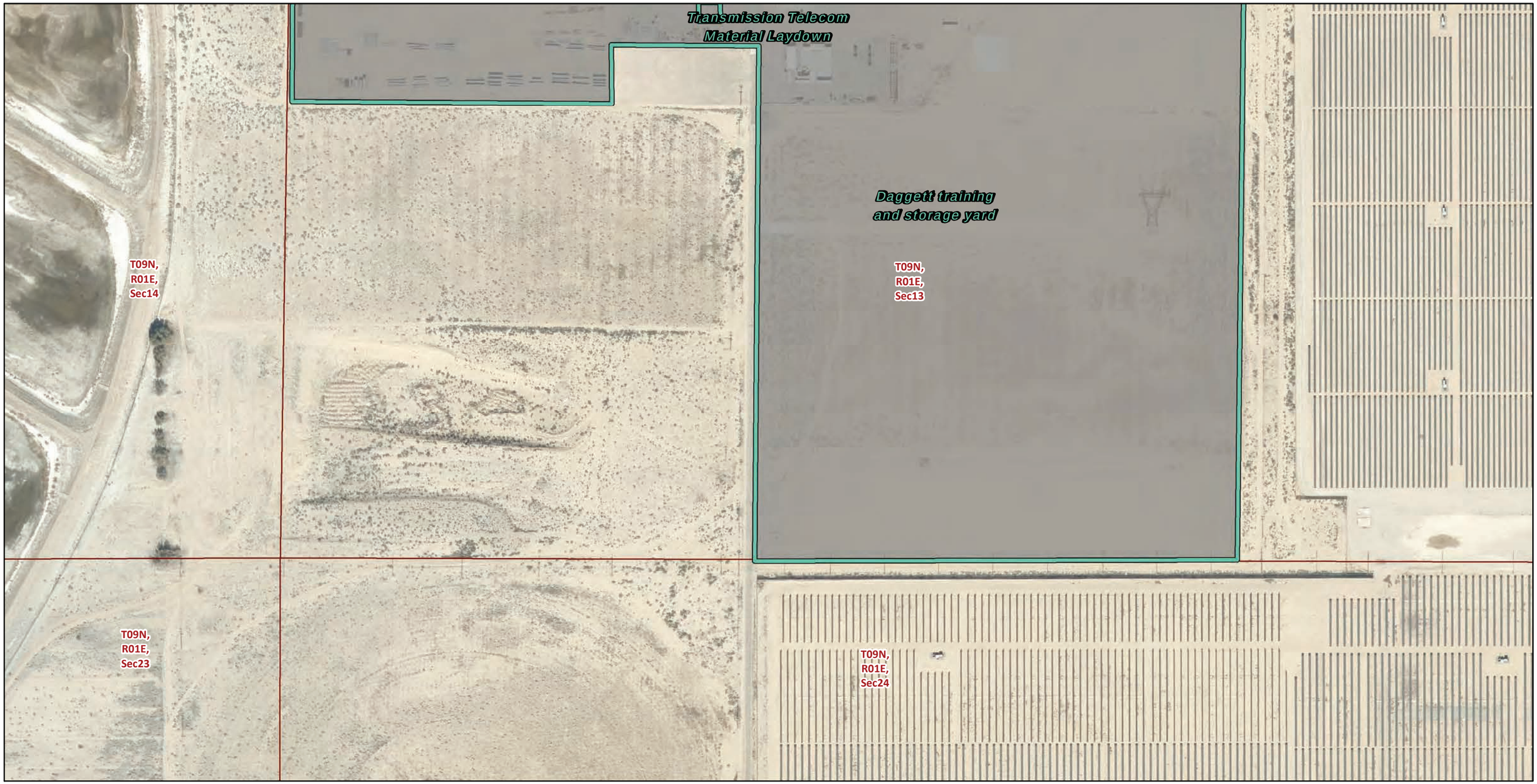


FIGURE 4

Vegetation and Land Cover

Segment 1

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Material/Laydown Yards

Land Cover Type

Developed

Public Land Survey System

Township, Range and Section

* Areas with no color fill are private land.

0 150 300

Feet

Source: SCE, BLM, CDFW, ESRI

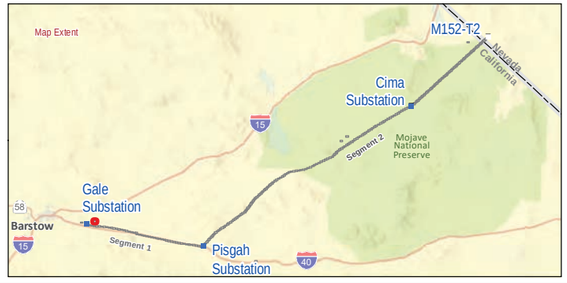


FIGURE 4

Vegetation and Land Cover

Segment 1

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Construction Areas

Water Source

Land Cover Type

Developed

* Areas with no color fill are private land.

0 150 300

Feet

Source: SCE, BLM, CDFW, ESRI

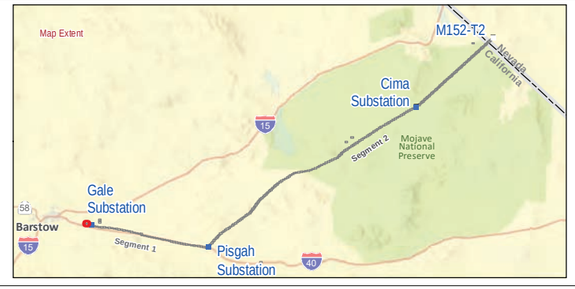
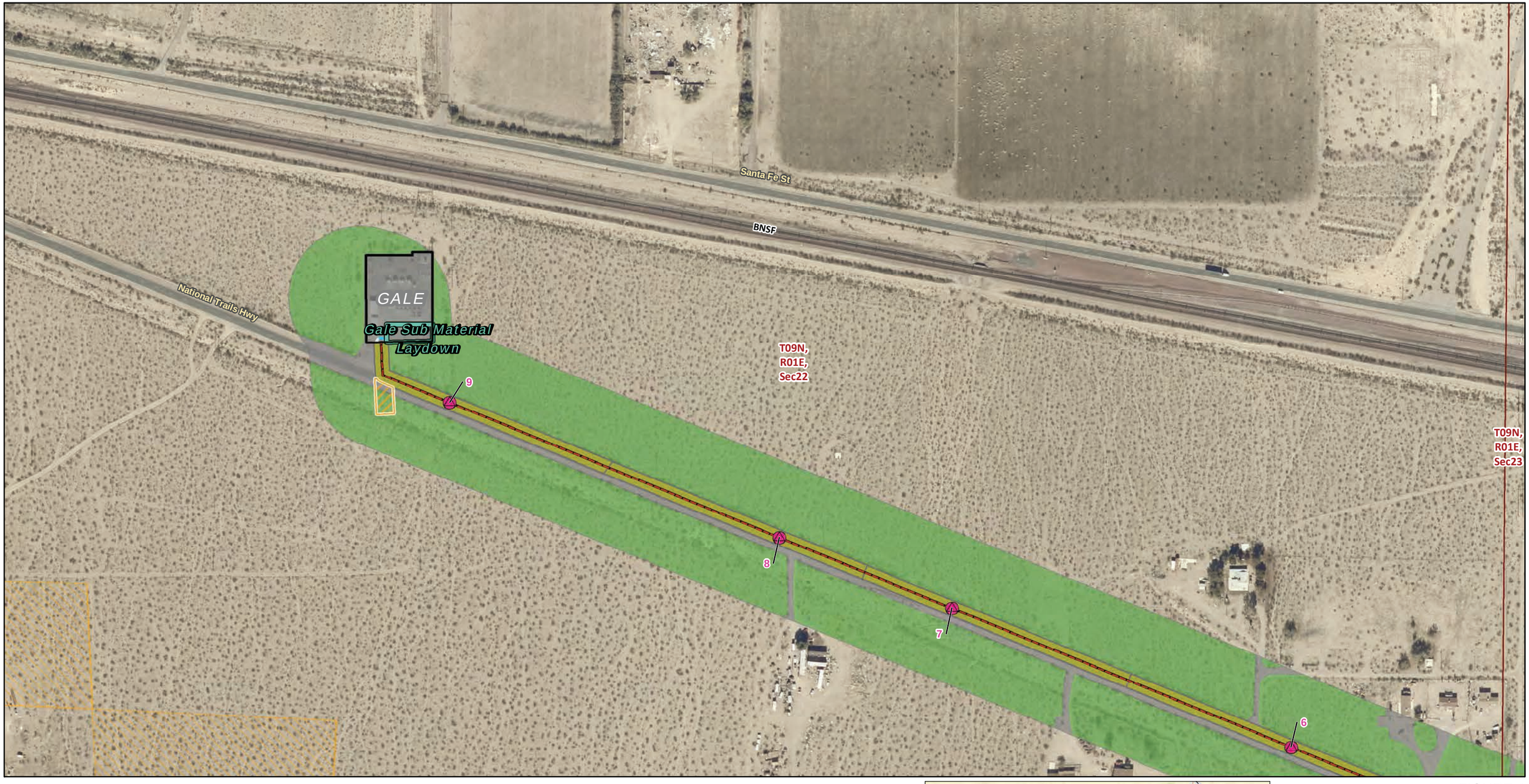


FIGURE 4

Vegetation and Land Cover
Segment 1

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Existing Substations Boundary
Material/Laydown Yards

Telecom Structures
New, Manhole

Telecommunication Lines
New, Underground

Construction Areas
Pulling, Stringing, Tensioning Site/Structure Work Area

Underground Disturbance
Right of Way

Land Cover Type
Creosote bush - white bursage scrub
Developed

Land Ownership
Bureau of Land Management

Public Land Survey System
Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

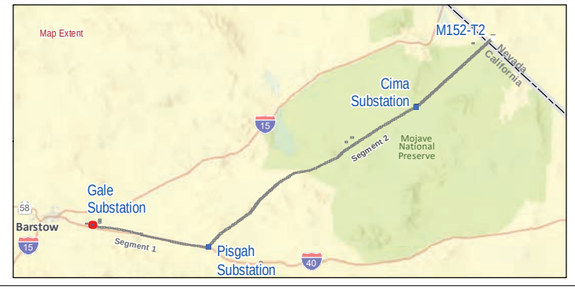
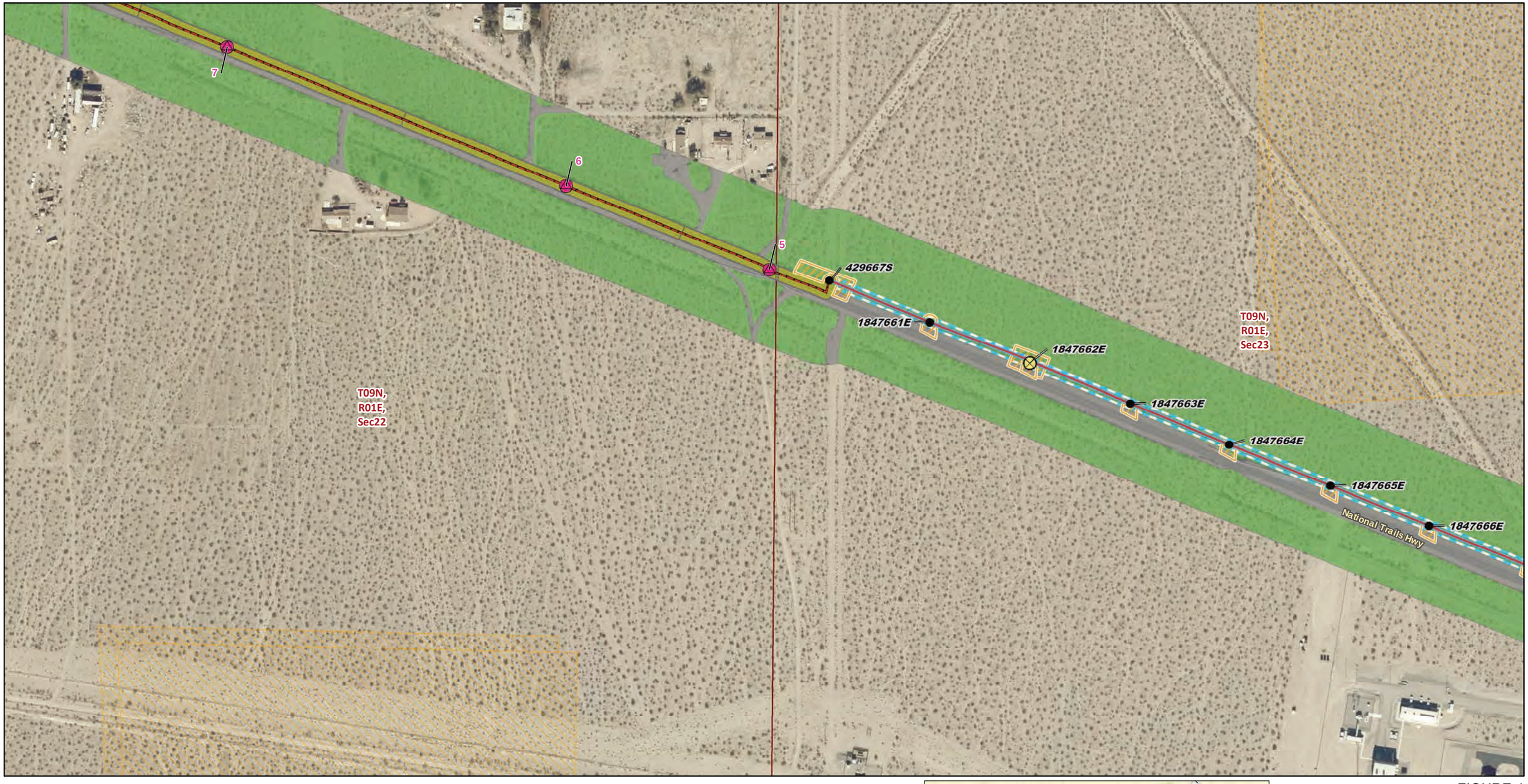


FIGURE 4
Vegetation and Land Cover
Segment 1
Page 5 of 244

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Telecom Structures
- New, Manhole

Distribution Poles
- Existing
- Remove/Replace

Telecommunication Lines
- New, Overhead
- New, Underground

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Underground Disturbance
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

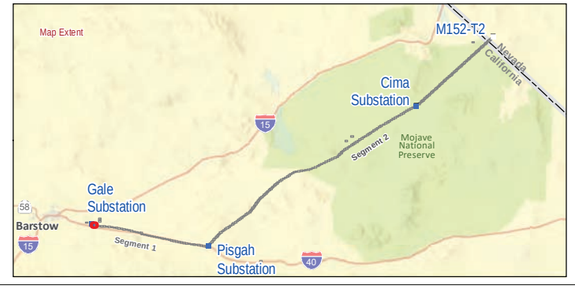
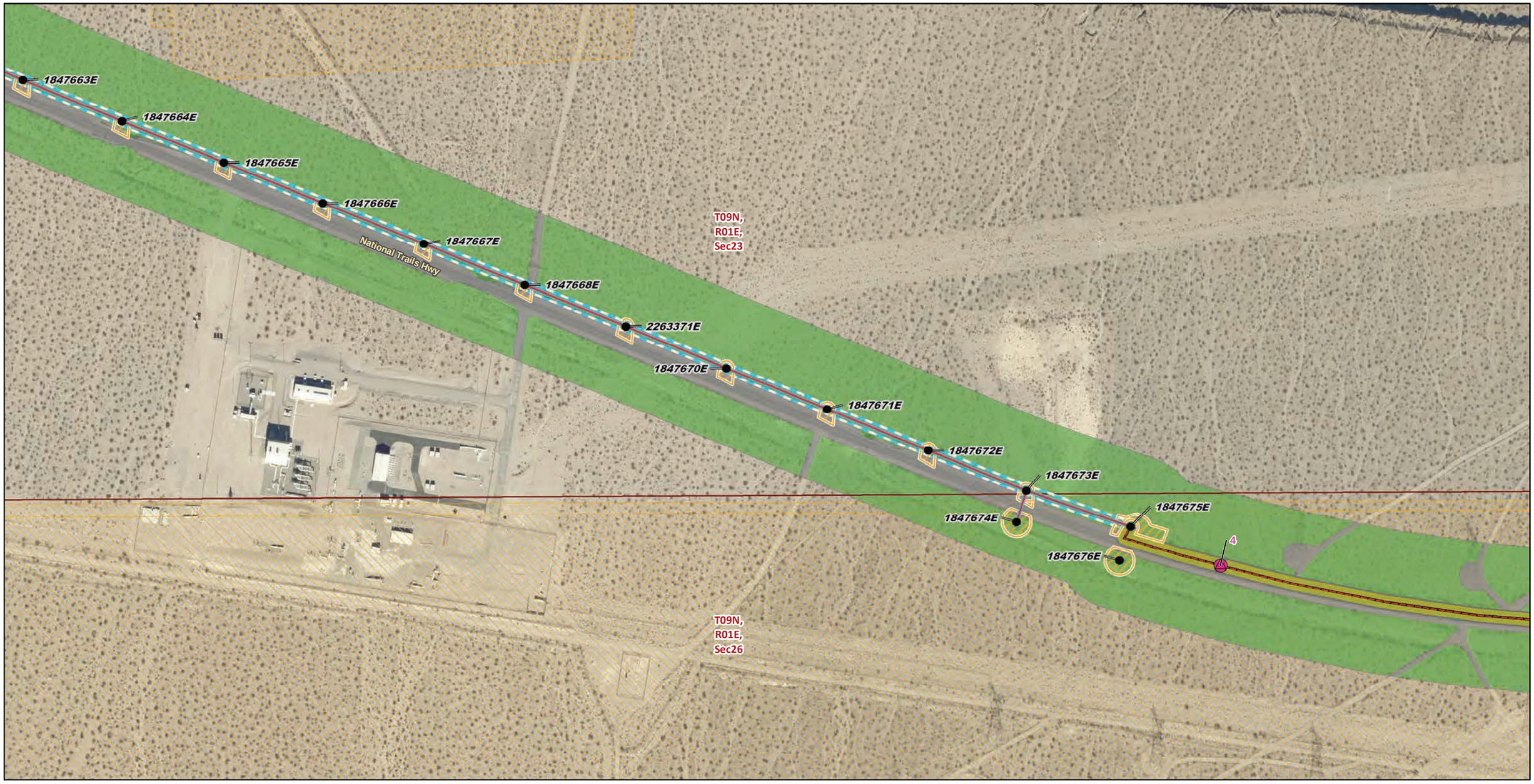


FIGURE 4
Vegetation and Land Cover
Segment 1

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Telecom Structures
- New, Manhole

Distribution Poles
- Existing

Telecommunication Lines
- New, Overhead
- New, Underground

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Underground Disturbance
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

N

Source: SCE, BLM, CDFW, ESRI

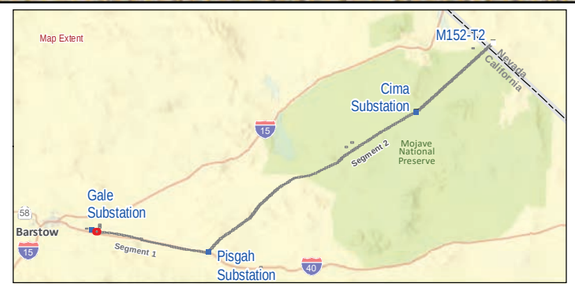


FIGURE 4
Vegetation and Land Cover
Segment 1
Page 7 of 244

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Telecom Structures
- New, Manhole

Distribution Poles
- Existing
- Remove/Replace

Telecommunication Lines
- New, Overhead
- New, Underground

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Underground Disturbance
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

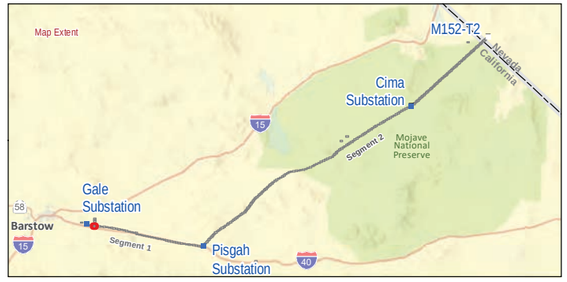


FIGURE 4
Vegetation and Land Cover
Segment 1
Page 8 of 244

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Distribution Poles
- Existing
- Remove/Replace

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

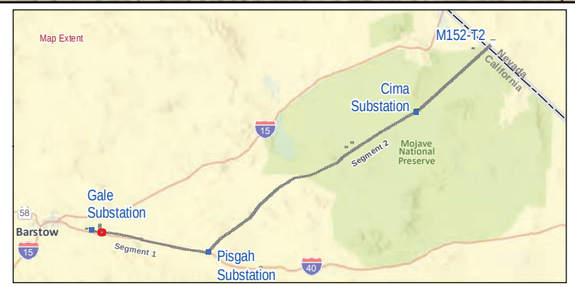
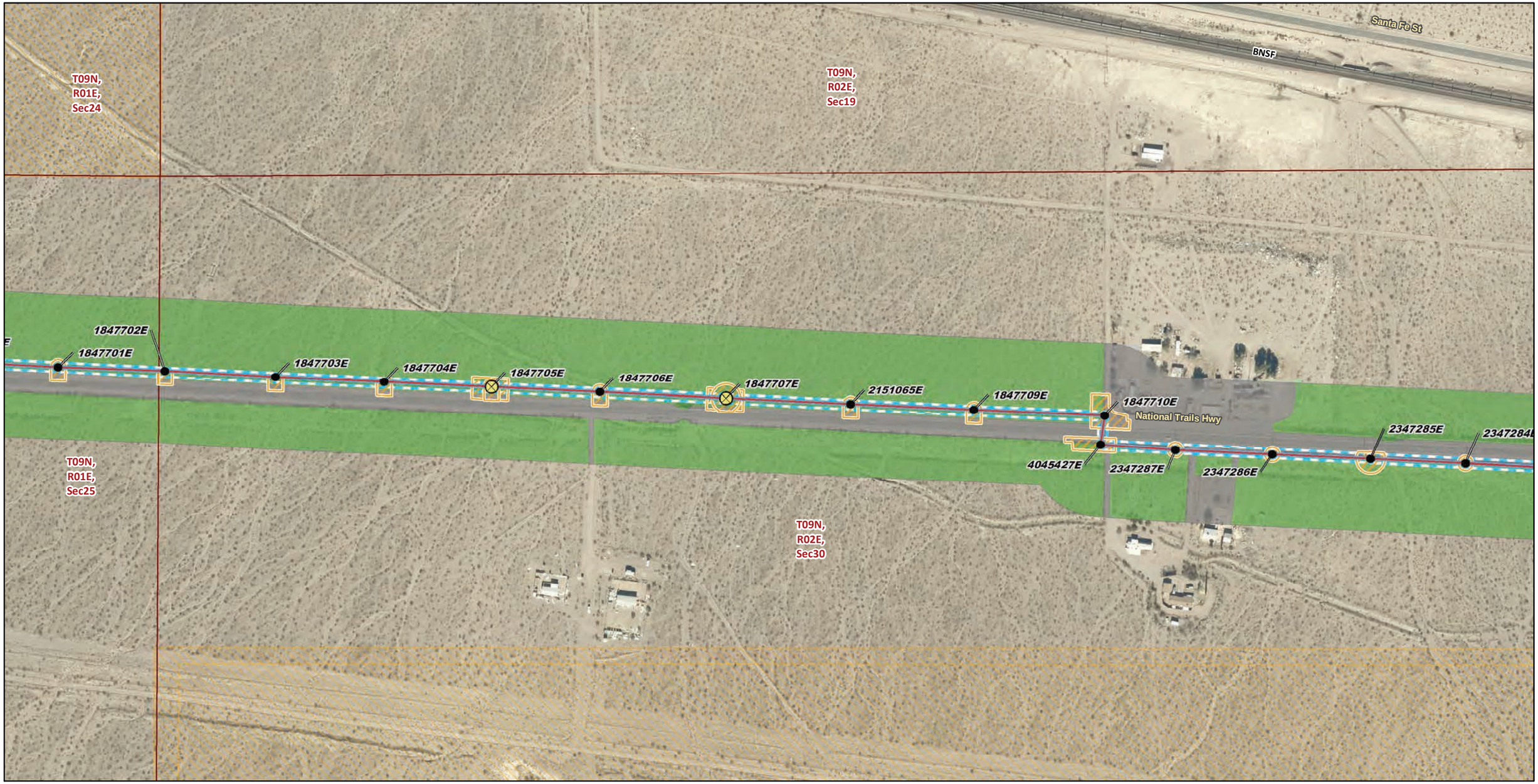


FIGURE 4
Vegetation and Land Cover
Segment 1

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Distribution Poles
- Existing
- Remove/Replace

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

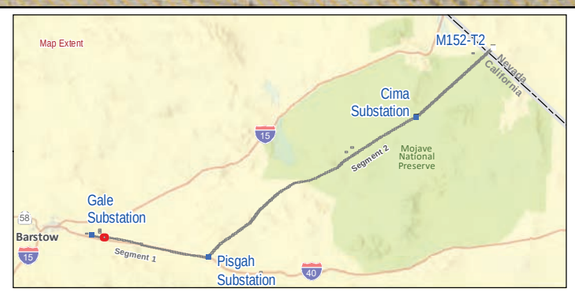


FIGURE 4
Vegetation and Land Cover
Segment 1

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Distribution Poles
- Existing

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

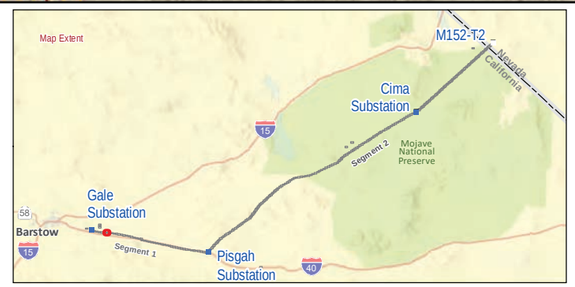


FIGURE 4
Vegetation and Land Cover
Segment 1

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Distribution Poles
- Existing
- Remove/Replace

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Creosote bush scrub
- Developed

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

FIGURE 4
Vegetation and Land Cover
Segment 1
Page 12 of 244

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Distribution Poles
- Existing
- Remove/Replace

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Creosote bush scrub
- Developed

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

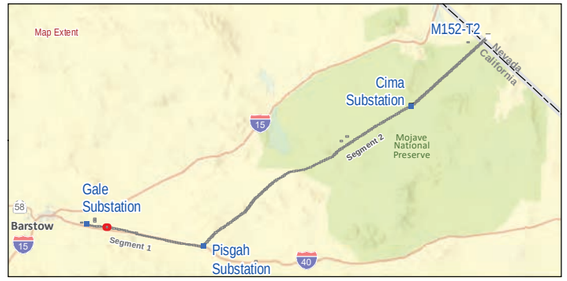


FIGURE 4
Vegetation and Land Cover
Segment 1
Page 13 of 244

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Distribution Poles
- Existing
- Remove/Replace

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush scrub
- Developed

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

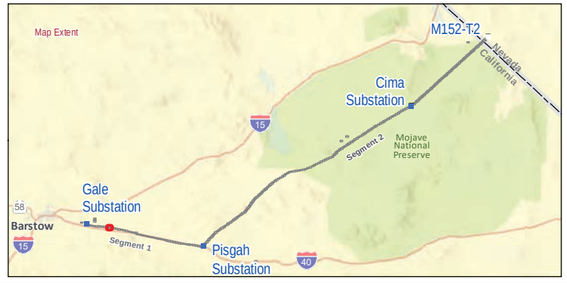


FIGURE 4
Vegetation and Land Cover
Segment 1
Page 14 of 244

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Distribution Poles
- Existing
- Remove/Replace

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush scrub
- Developed

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

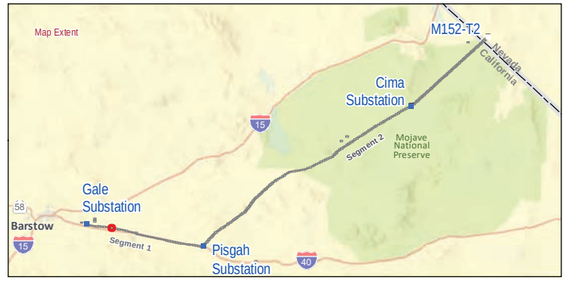
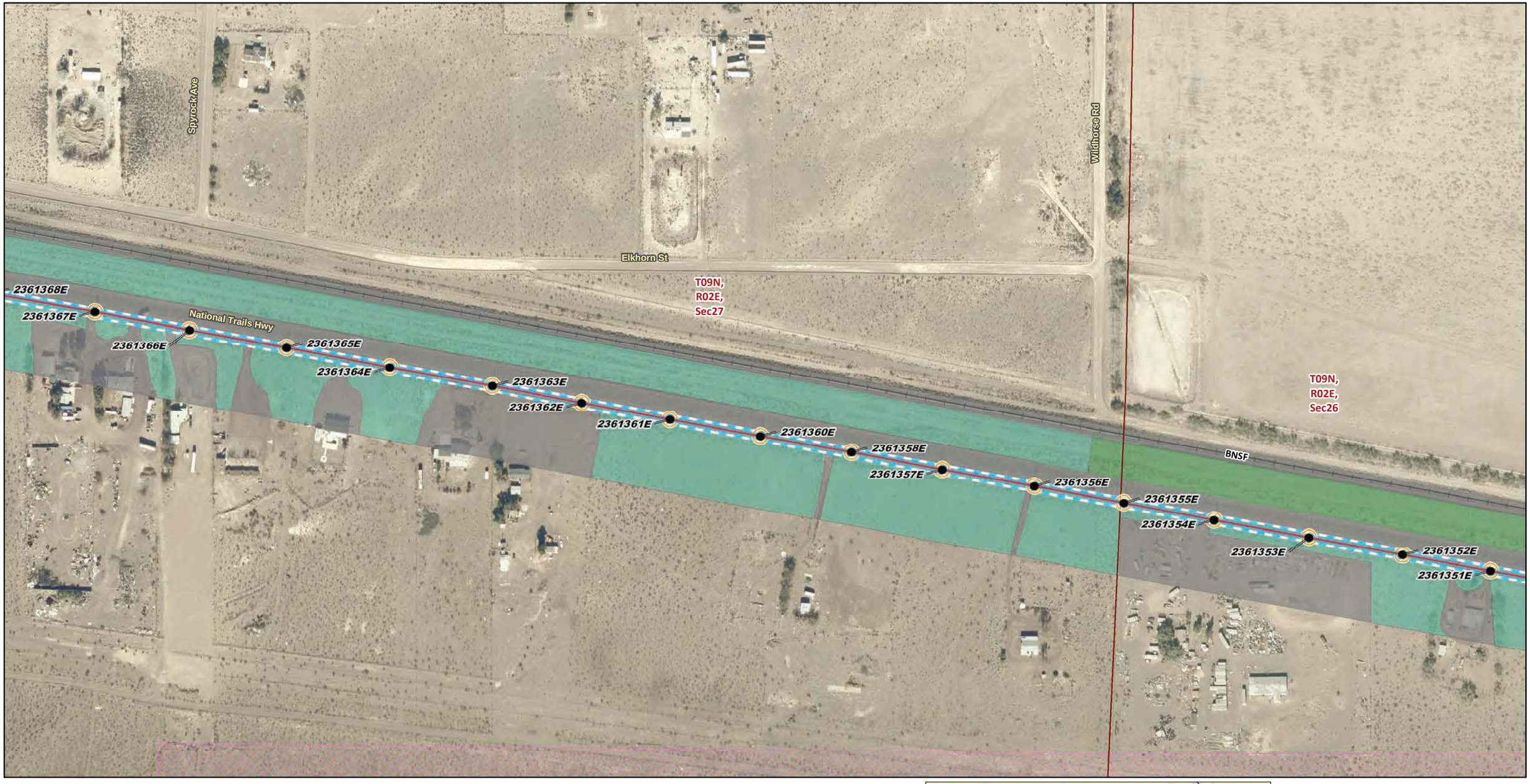


FIGURE 4
Vegetation and Land Cover
Segment 1
Page 15 of 244

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Distribution Poles
- Existing

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush scrub
- Developed
- Tamarisk thickets

Land Ownership
- CA State Lands

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

FIGURE 4
Vegetation and Land Cover
Segment 1
Page 16 of 244

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Distribution Poles
- Existing

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Allscale scrub
- Creosote bush scrub
- Developed
- Tamarisk thickets

Land Ownership
- CA State Lands

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

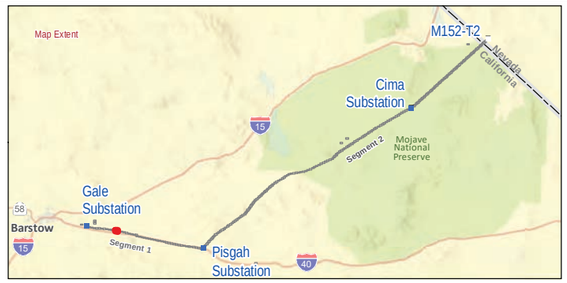


FIGURE 4
Vegetation and Land Cover
Segment 1
Page 17 of 244

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Distribution Poles
- Existing

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Allscale scrub
- Creosote bush scrub
- Developed

Land Ownership
- CA State Lands

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

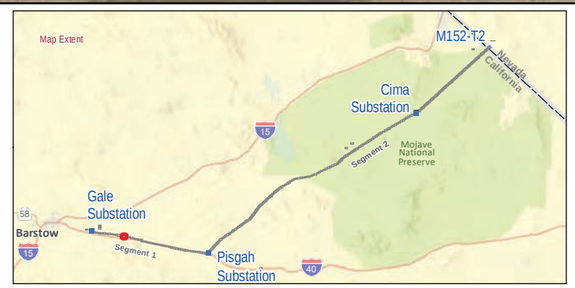
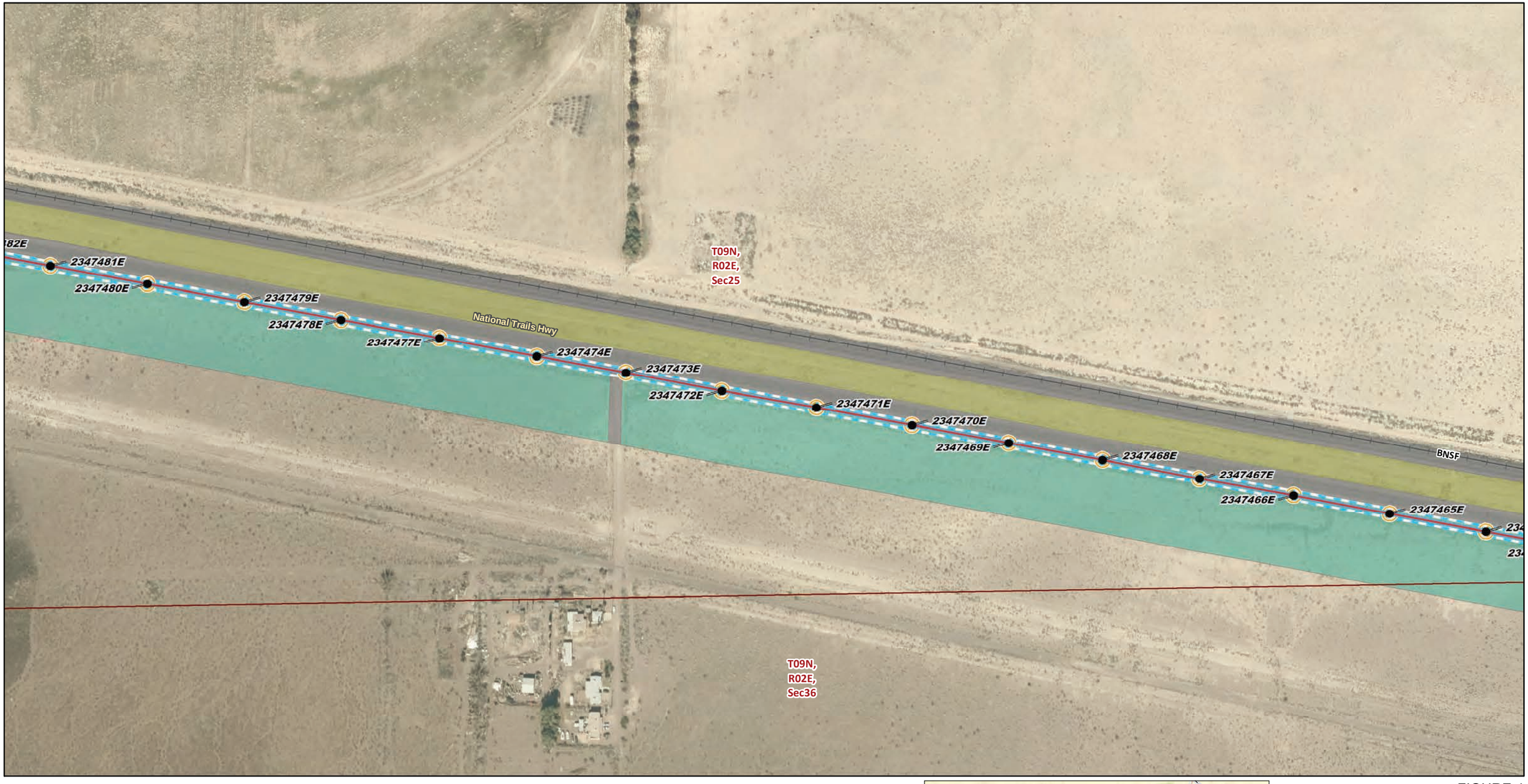


FIGURE 4
Vegetation and Land Cover
Segment 1

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Distribution Poles
- Existing

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Allscale scrub
- Creosote bush scrub
- Developed

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

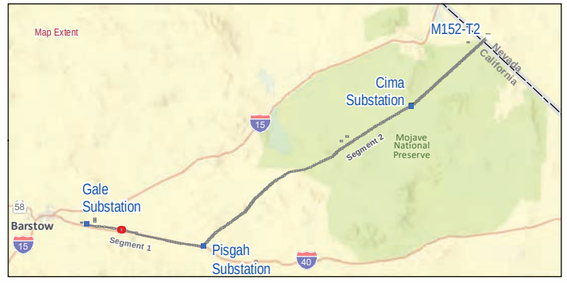
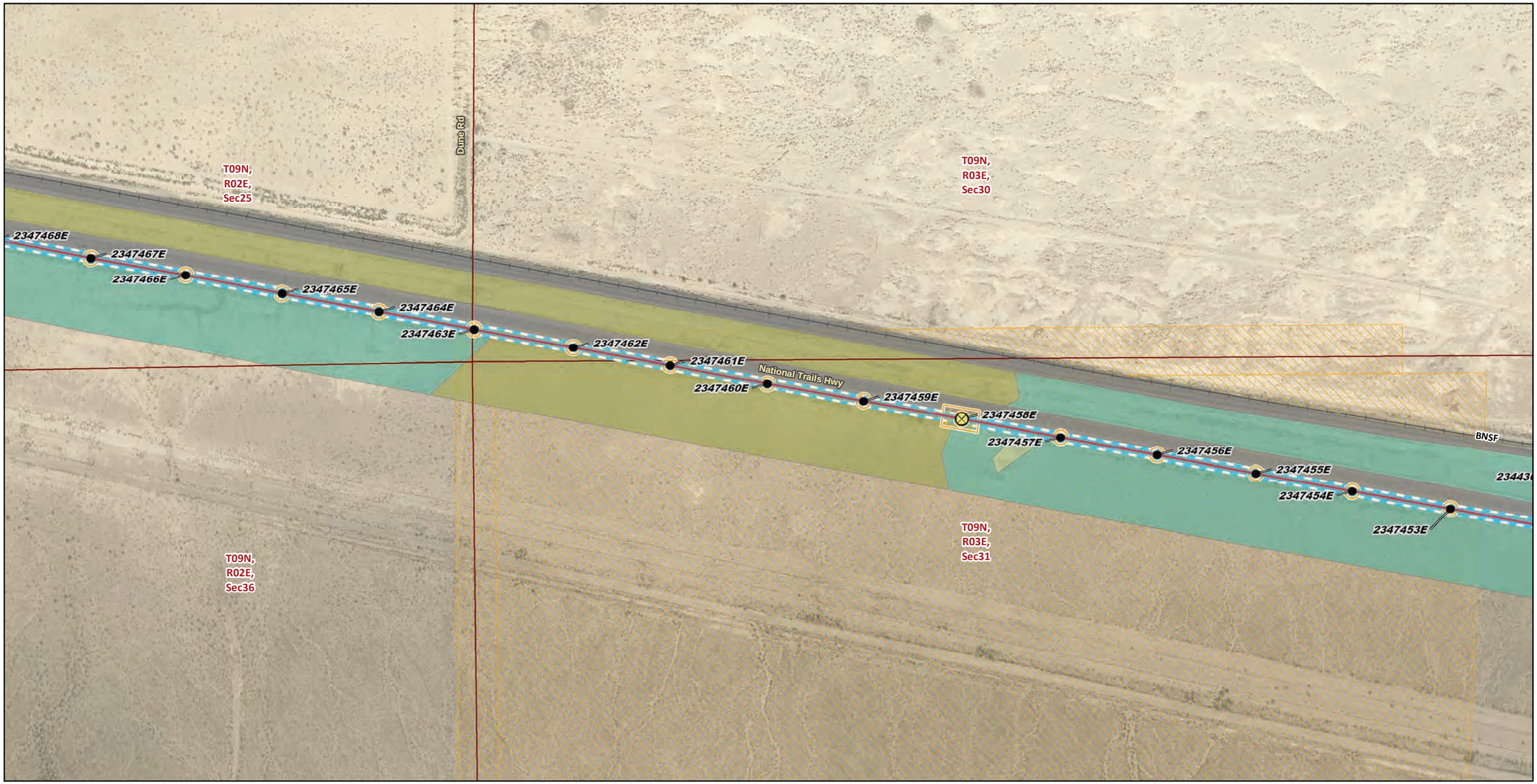


FIGURE 4
Vegetation and Land Cover
Segment 1

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Distribution Poles
- Existing
- Remove/Replace

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Allscale scrub
- Creosote bush scrub
- Developed
- Mesquite thickets

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

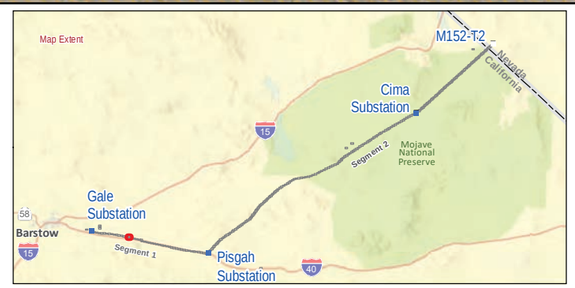
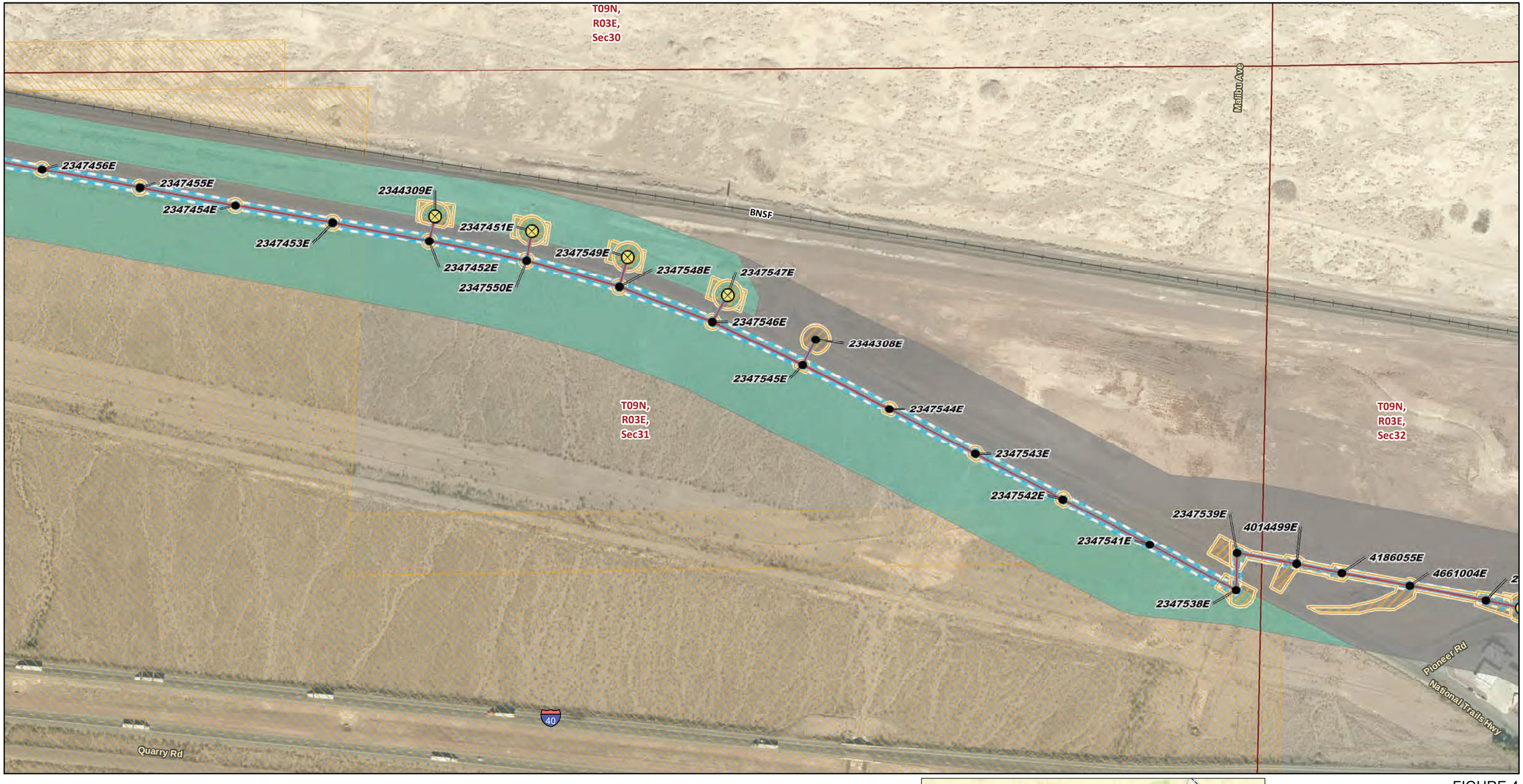


FIGURE 4
Vegetation and Land Cover
Segment 1
Page 20 of 244

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Distribution Poles
- Existing
- Remove/Replace

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

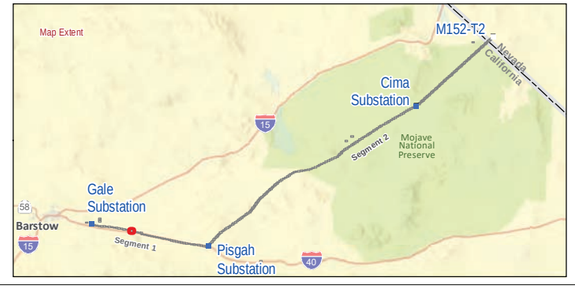


FIGURE 4
Vegetation and Land Cover
Segment 1
Page 21 of 244

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Distribution Poles
- Existing
- Remove/Replace

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Allscale scrub
- Creosote bush scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

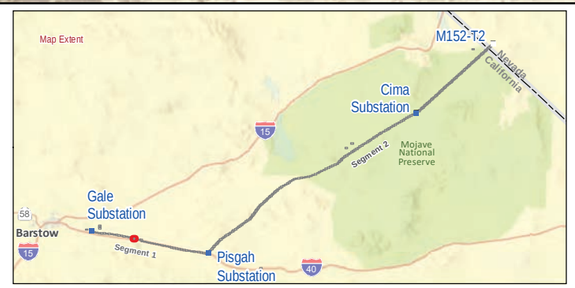


FIGURE 4
Vegetation and Land Cover
Segment 1

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Distribution Poles
- Existing

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Allscale scrub
- Developed

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

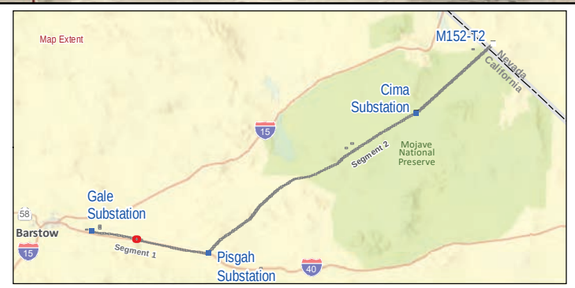


FIGURE 4
Vegetation and Land Cover
Segment 1

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Distribution Poles
- Existing
- Remove/Replace

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Allscale scrub
- Developed

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

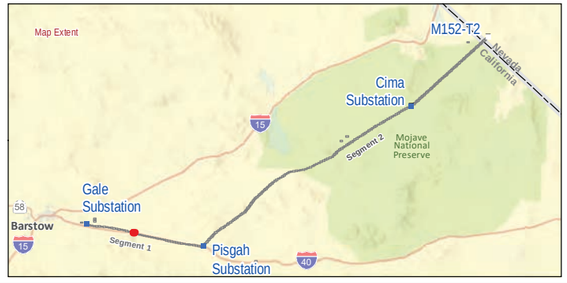


FIGURE 4
Vegetation and Land Cover
Segment 1
Page 24 of 244

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Distribution Poles
- Existing
- Remove/Replace

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Allscale scrub
- Developed

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

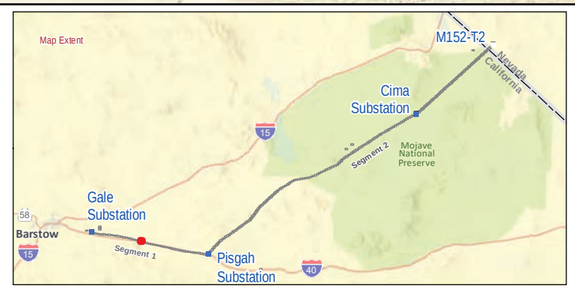
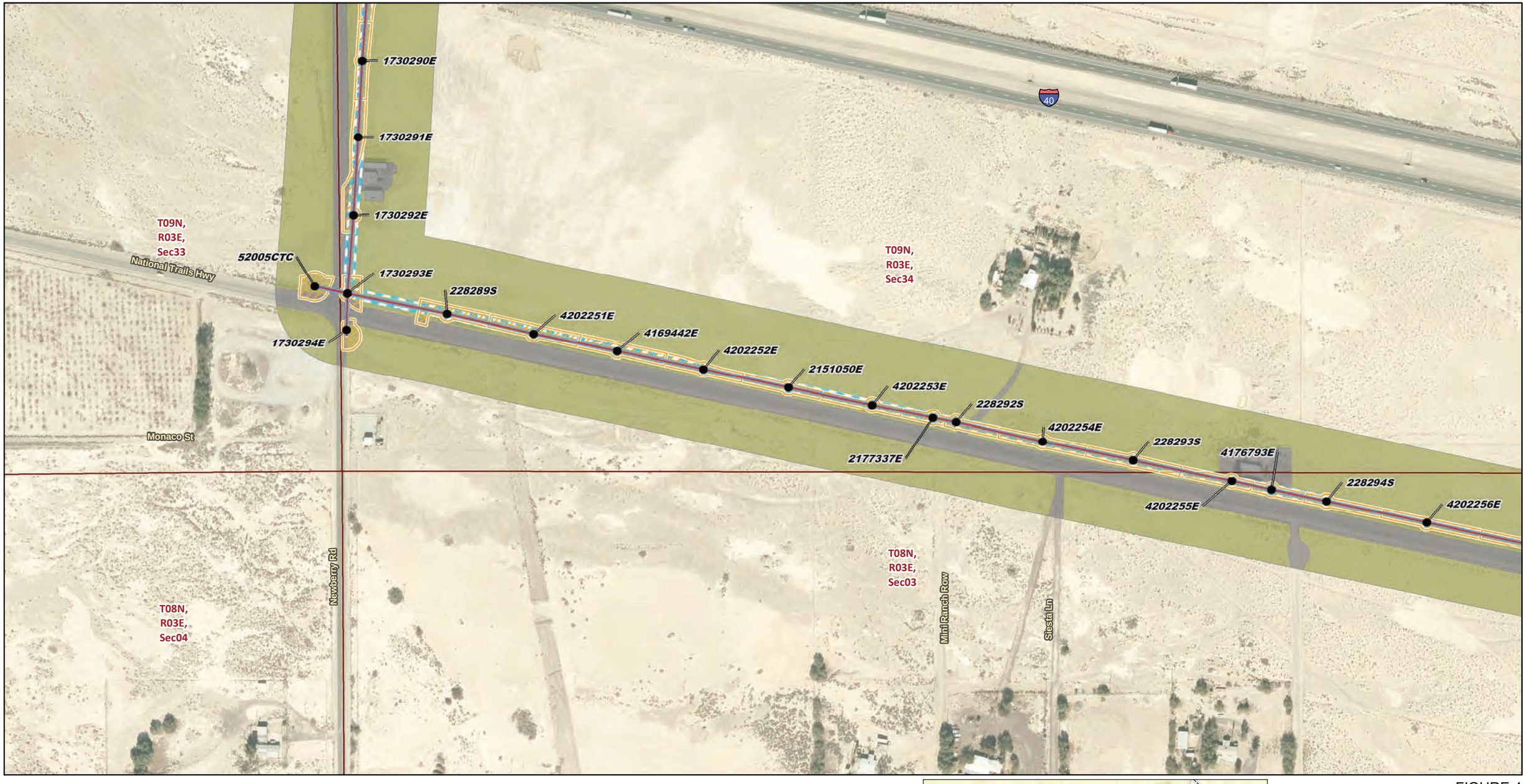


FIGURE 4
Vegetation and Land Cover
Segment 1

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Distribution Poles
- Existing

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Allscale scrub
- Developed

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

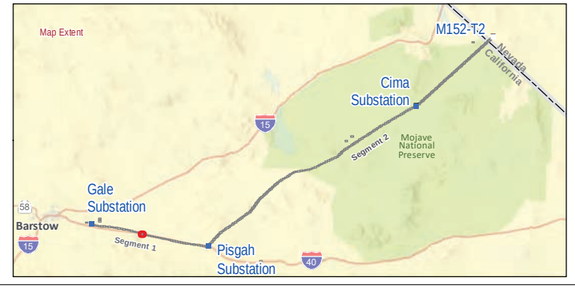
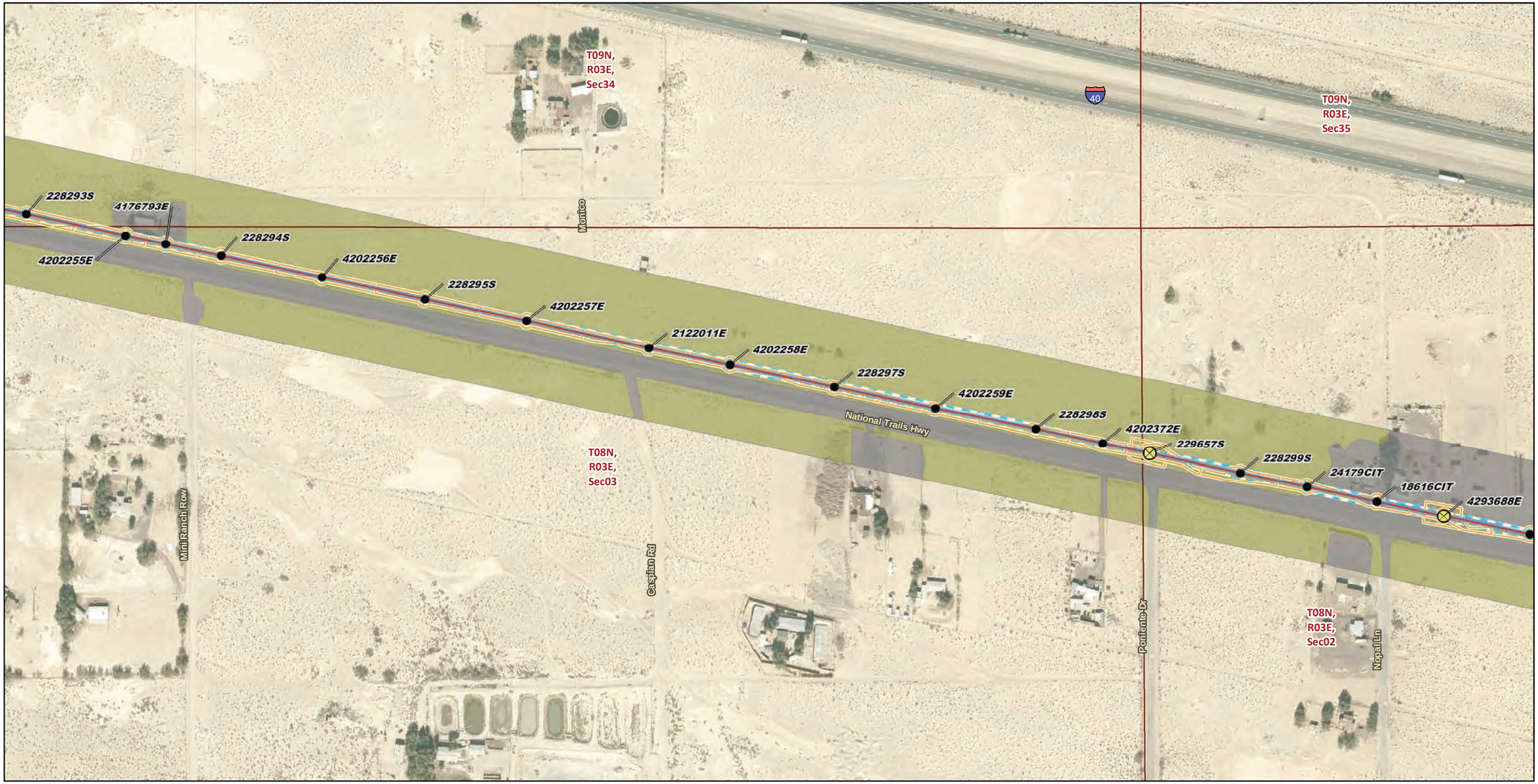


FIGURE 4
Vegetation and Land Cover
Segment 1

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Distribution Poles
- Existing
- Remove/Replace

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Allscale scrub
- Developed

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

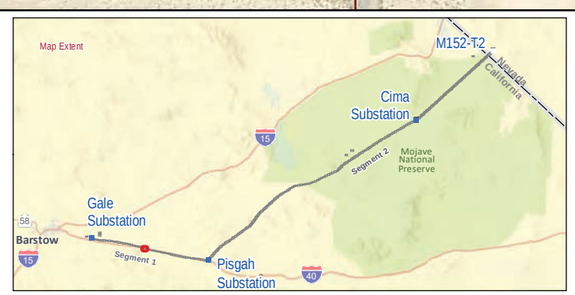


FIGURE 4
Vegetation and Land Cover
Segment 1

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Distribution Poles
- Existing
- Remove/Replace

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Allscale scrub
- Developed

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

FIGURE 4
Vegetation and Land Cover
Segment 1
Page 28 of 244

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Distribution Poles
- Existing
- Remove/Replace

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Allscale scrub
- Developed

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

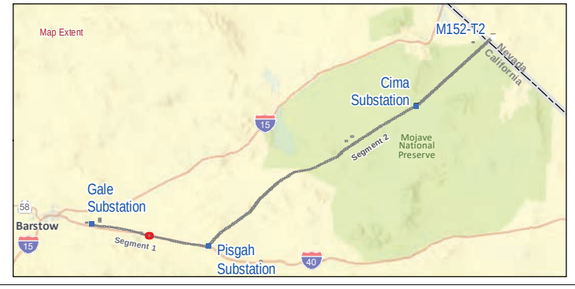


FIGURE 4
Vegetation and Land Cover
Segment 1
Page 29 of 244

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Distribution Poles
- Existing

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Allscale scrub
- Developed
- Tamarisk thickets

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

N

Source: SCE, BLM, CDFW, ESRI

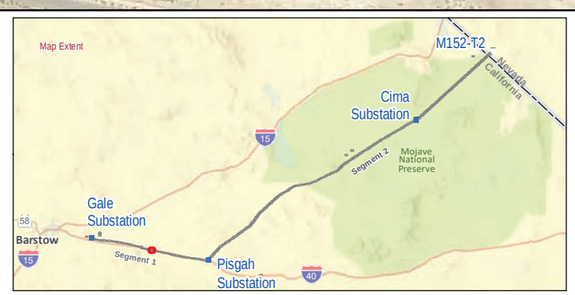
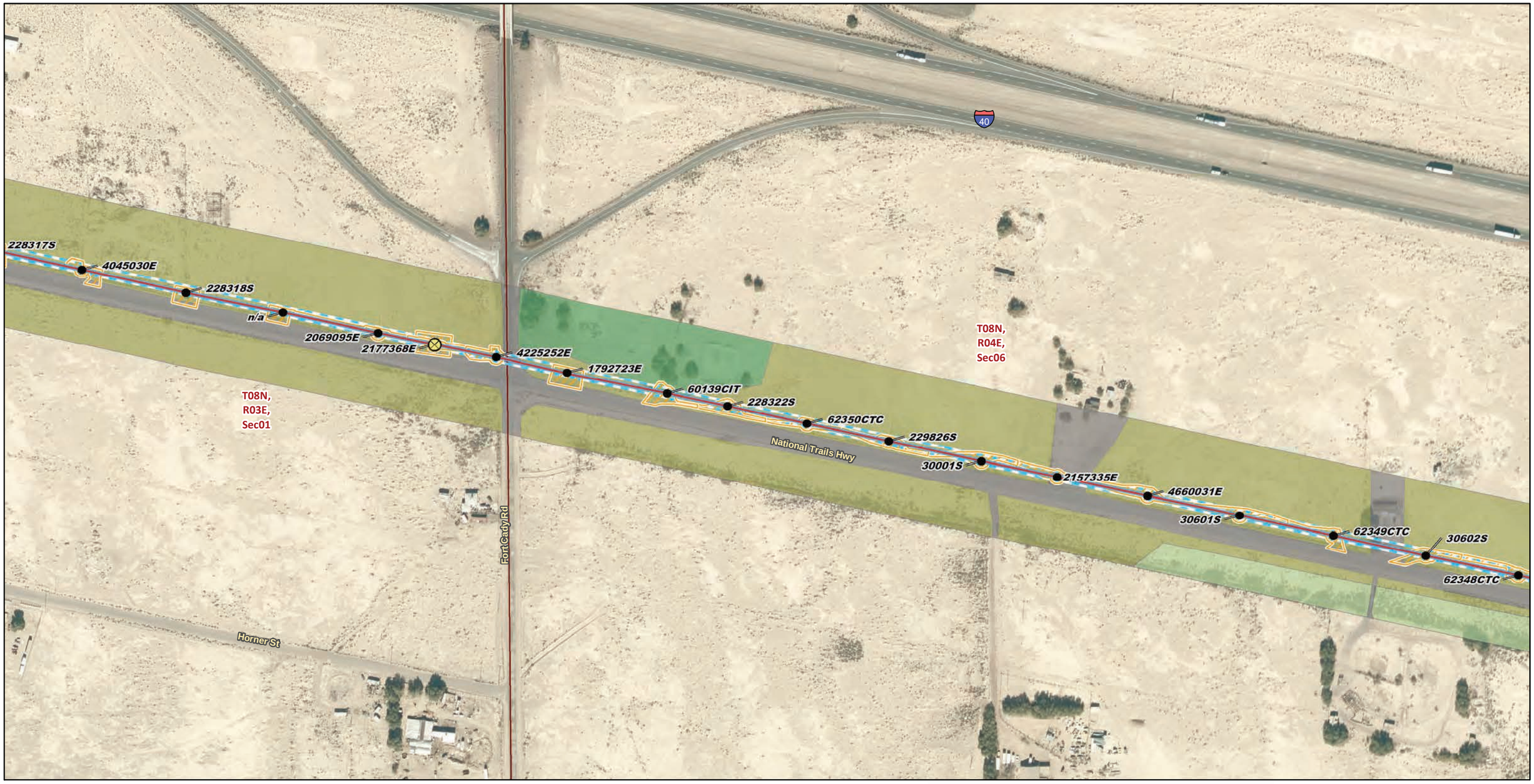


FIGURE 4
Vegetation and Land Cover
Segment 1
Page 30 of 244

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Distribution Poles
- Existing
- Remove/Replace

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Allscale scrub
- Developed
- Mesquite thickets
- Tamarisk thickets

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

FIGURE 4
Vegetation and Land Cover
Segment 1

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Telecom Structures
- New, Manhole
- New, Pole Riser

Distribution Poles
- Existing

Telecommunication Lines
- New, Overhead
- New, Underground

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Underground Disturbance
- Right of Way

Land Cover Type
- Allscale scrub
- Developed
- Mesquite thickets
- Tamarisk thickets

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

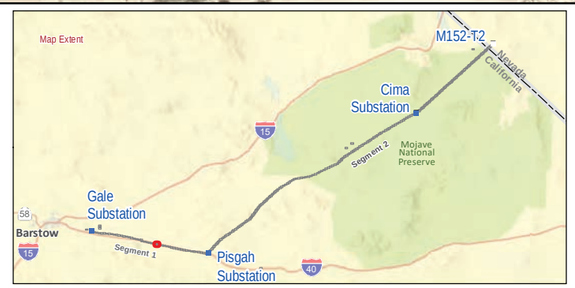
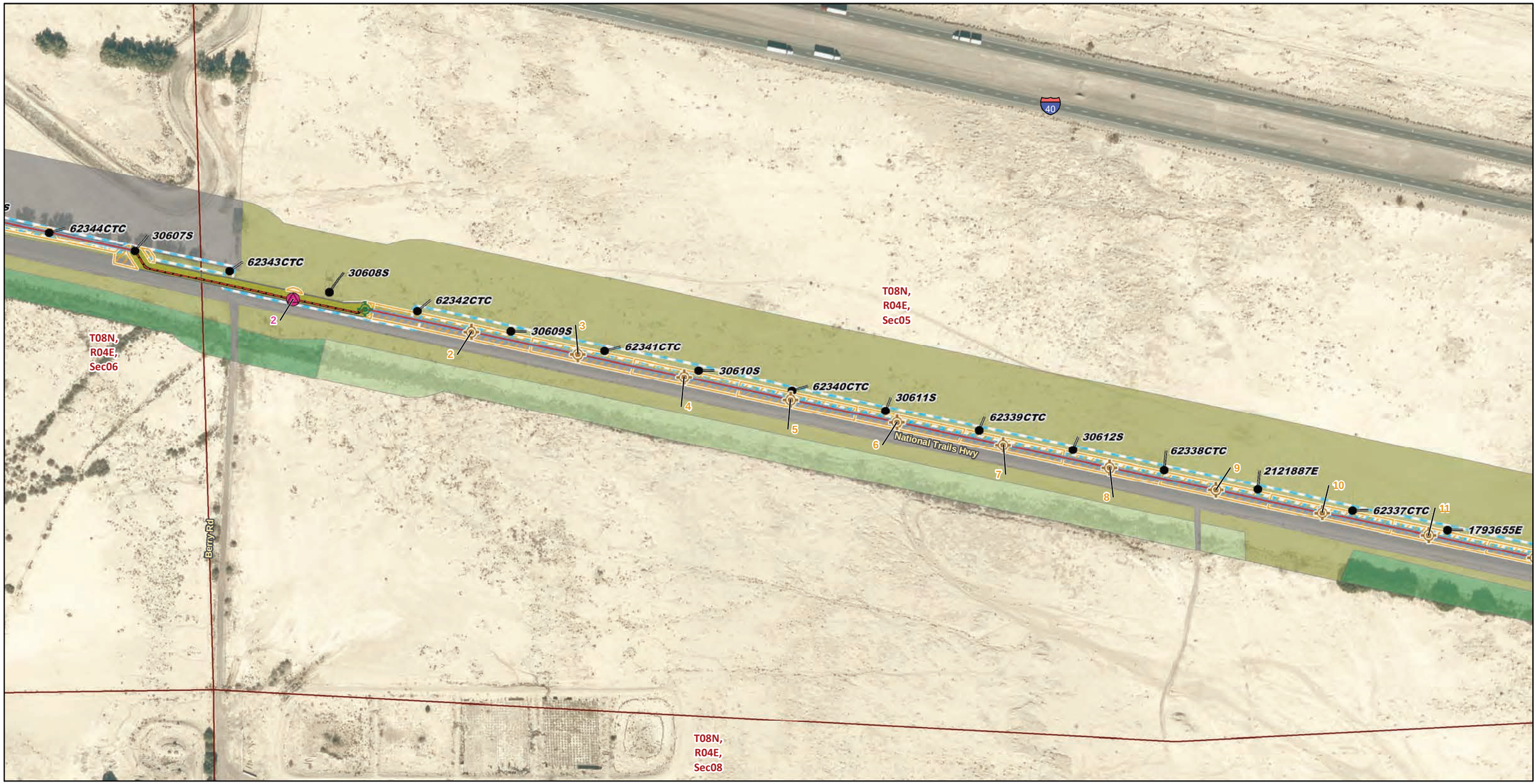


FIGURE 4
Vegetation and Land Cover
Segment 1

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Telecom Structures
- New, Manhole
- New, Pole Riser
- New, Wood Pole

Distribution Poles
- Existing

Telecommunication Lines
- New, Overhead
- New, Underground

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Underground Disturbance
- Right of Way

Land Cover Type
- Allscale scrub
- Developed
- Mesquite thickets
- Tamarisk thickets

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

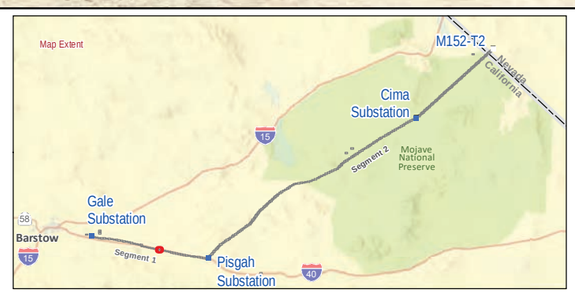
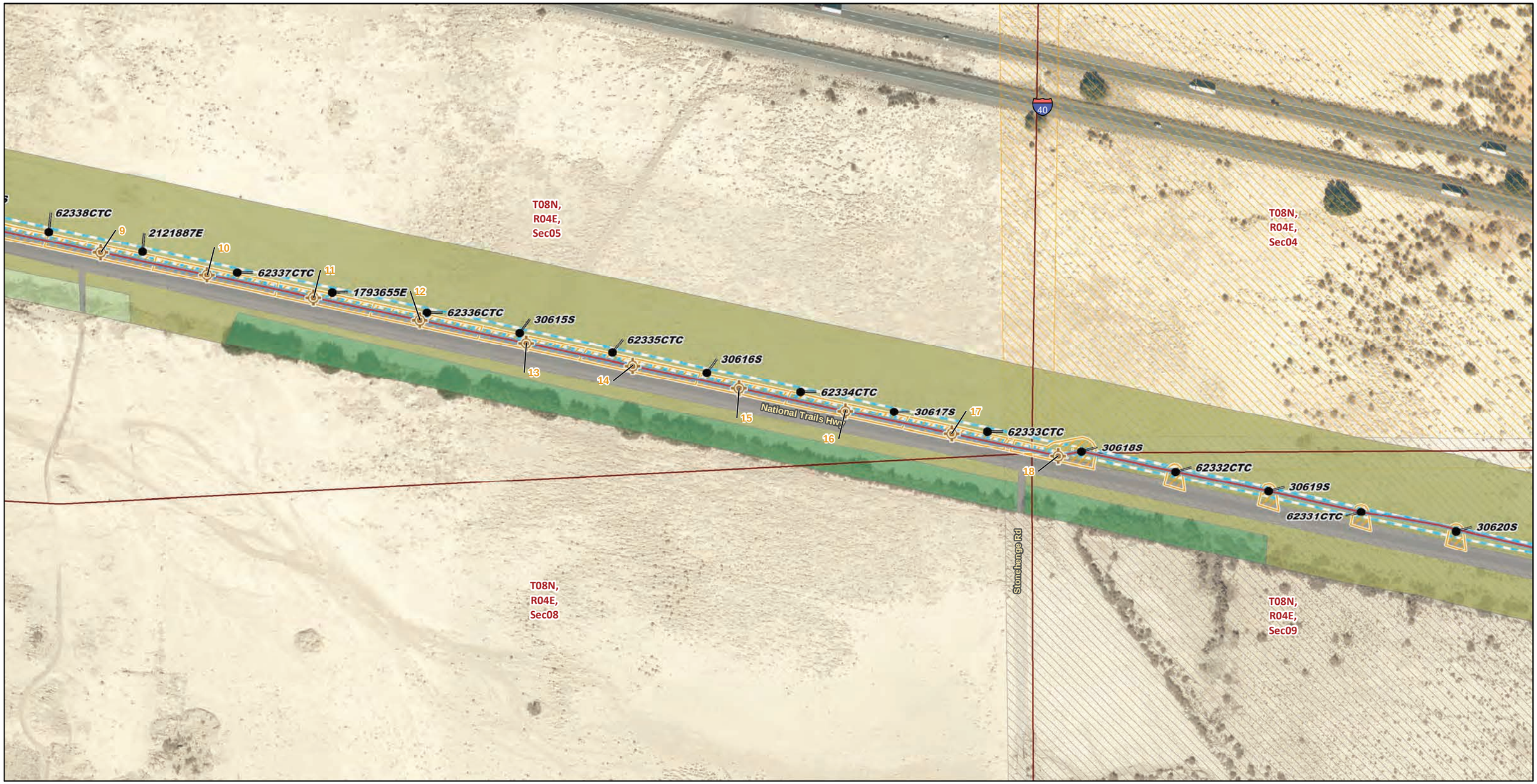


FIGURE 4
Vegetation and Land Cover
Segment 1

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Telecom Structures
- New, Wood Pole

Distribution Poles
- Existing

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Allscale scrub
- Developed
- Mesquite thickets
- Tamarisk thickets

Land Ownership
- Bureau of Land Management
- Department of Defense

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

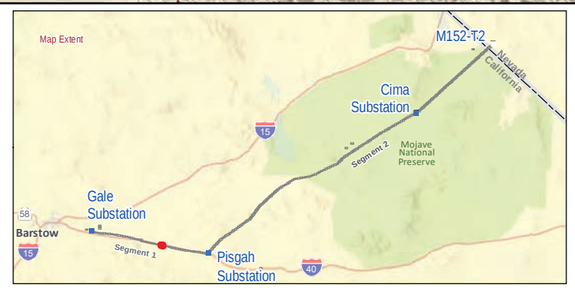


FIGURE 4
Vegetation and Land Cover
Segment 1

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Distribution Poles
- Existing

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Allscale scrub
- Bush seepweed scrub
- Developed
- Dry lake
- Tamarisk thickets

Land Ownership
- Bureau of Land Management
- Department of Defense

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

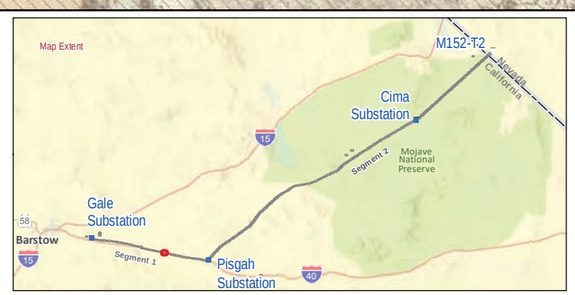


FIGURE 4
Vegetation and Land Cover
Segment 1

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Distribution Poles
- Existing

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Allscale scrub
- Bush seepweed scrub
- Developed
- Dry lake
- Fourwing saltbush scrub
- Tamarisk thickets

Land Ownership
- Bureau of Land Management
- Department of Defense

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

N

Source: SCE, BLM, CDFW, ESRI

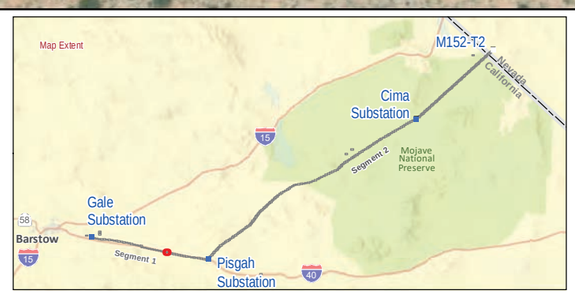


FIGURE 4
Vegetation and Land Cover
Segment 1

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Distribution Poles
- Existing

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Allscale scrub
- Developed
- Dry lake
- Fourwing saltbush scrub
- Mesquite thickets
- Shadscale scrub
- Tamarisk thickets

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

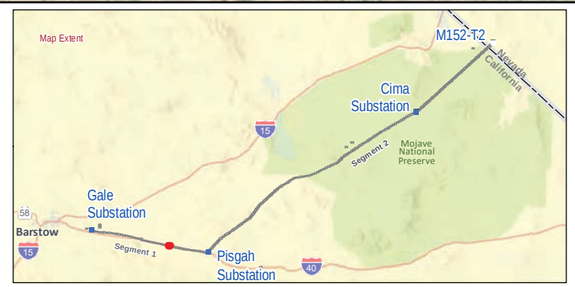


FIGURE 4
Vegetation and Land Cover
Segment 1

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Distribution Poles
- Existing

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Allscale scrub
- Developed
- Mesquite thickets
- Shadscale scrub
- Tamarisk thickets

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

N

Source: SCE, BLM, CDFW, ESRI

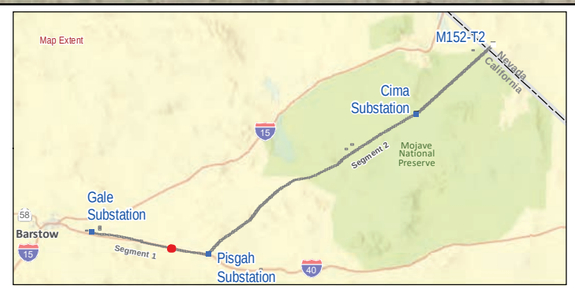


FIGURE 4
Vegetation and Land Cover
Segment 1
Page 38 of 244

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Distribution Poles
- Existing

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Allscale scrub
- Developed
- Shadscale scrub
- Tamarisk thickets

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

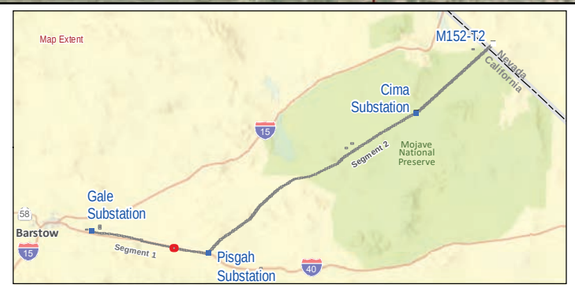


FIGURE 4
Vegetation and Land Cover
Segment 1

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Distribution Poles
- Existing
- Remove/Replace

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Allscale scrub
- Developed
- Tamarisk thickets

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

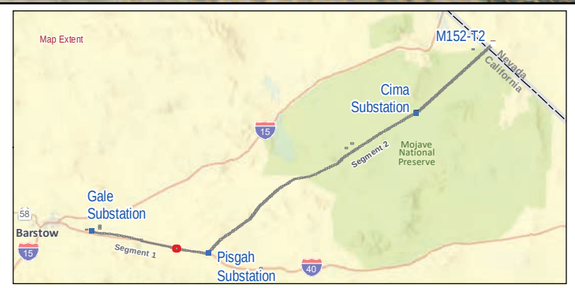


FIGURE 4
Vegetation and Land Cover
Segment 1

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Distribution Poles
- Existing
- Remove/Replace

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Allscale scrub
- Creosote bush - white bursage scrub
- Developed

Land Ownership
- Bureau of Land Management
- Department of Defense

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

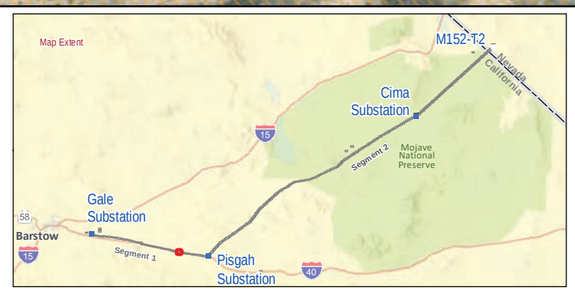


FIGURE 4
Vegetation and Land Cover
Segment 1

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Distribution Poles
- Existing
- Remove/Replace

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Allscale scrub
- Creosote bush - white bursage scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

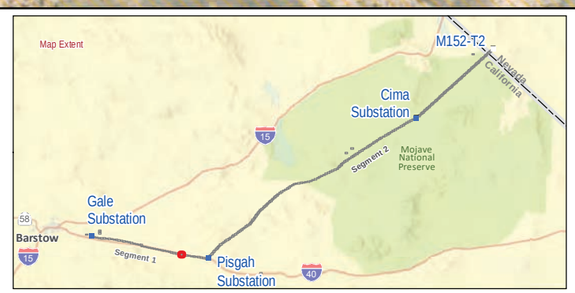


FIGURE 4
Vegetation and Land Cover
Segment 1

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Distribution Poles
- Existing
- Remove/Replace

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

N

Source: SCE, BLM, CDFW, ESRI

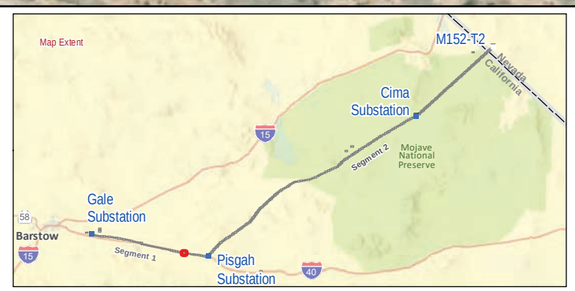


FIGURE 4
Vegetation and Land Cover
Segment 1

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Distribution Poles
- Existing
- Remove/Replace

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

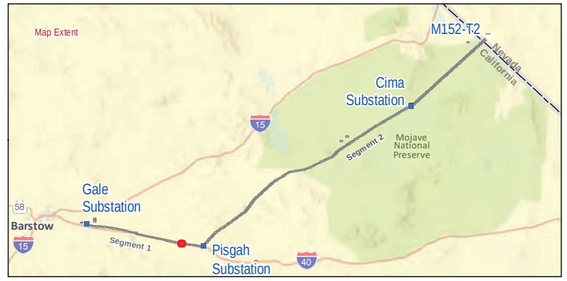


FIGURE 4
Vegetation and Land Cover
Segment 1

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Distribution Poles
- Existing

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Developed

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

FIGURE 4
Vegetation and Land Cover
Segment 1

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Distribution Poles
- Existing
- Remove/Replace

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Developed
- Tamarisk thickets

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

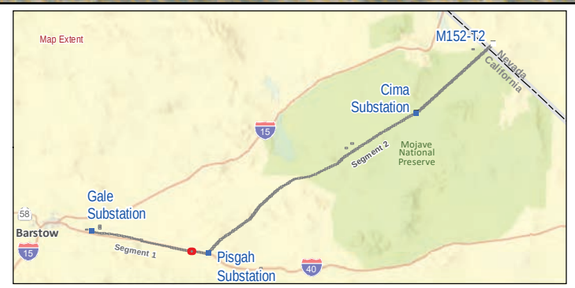


FIGURE 4
Vegetation and Land Cover
Segment 1
Page 46 of 244

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Distribution Poles
- Existing
- Remove/Replace

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

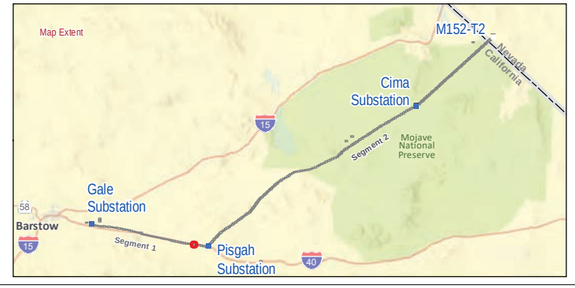


FIGURE 4
Vegetation and Land Cover
Segment 1
Page 47 of 244

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Distribution Poles
- Existing
- Remove/Replace

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

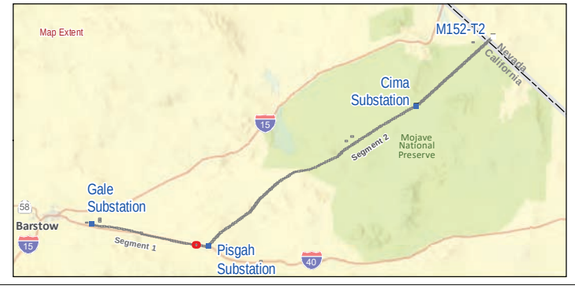


FIGURE 4
Vegetation and Land Cover
Segment 1
Page 48 of 244

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Distribution Poles
- Existing

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

N

Source: SCE, BLM, CDFW, ESRI

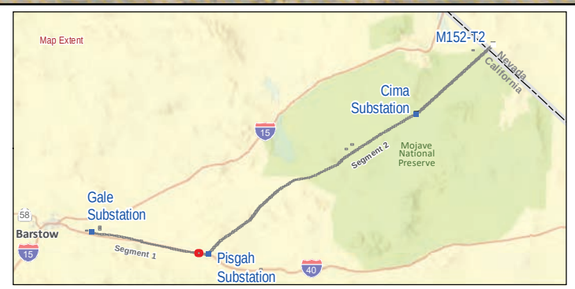


FIGURE 4
Vegetation and Land Cover
Segment 1

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Distribution Poles
- Existing

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

FIGURE 4
Vegetation and Land Cover
Segment 1

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Distribution Poles
- Existing

Telecommunication Lines
- New, Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

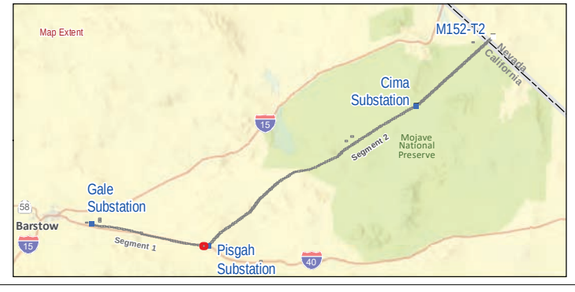
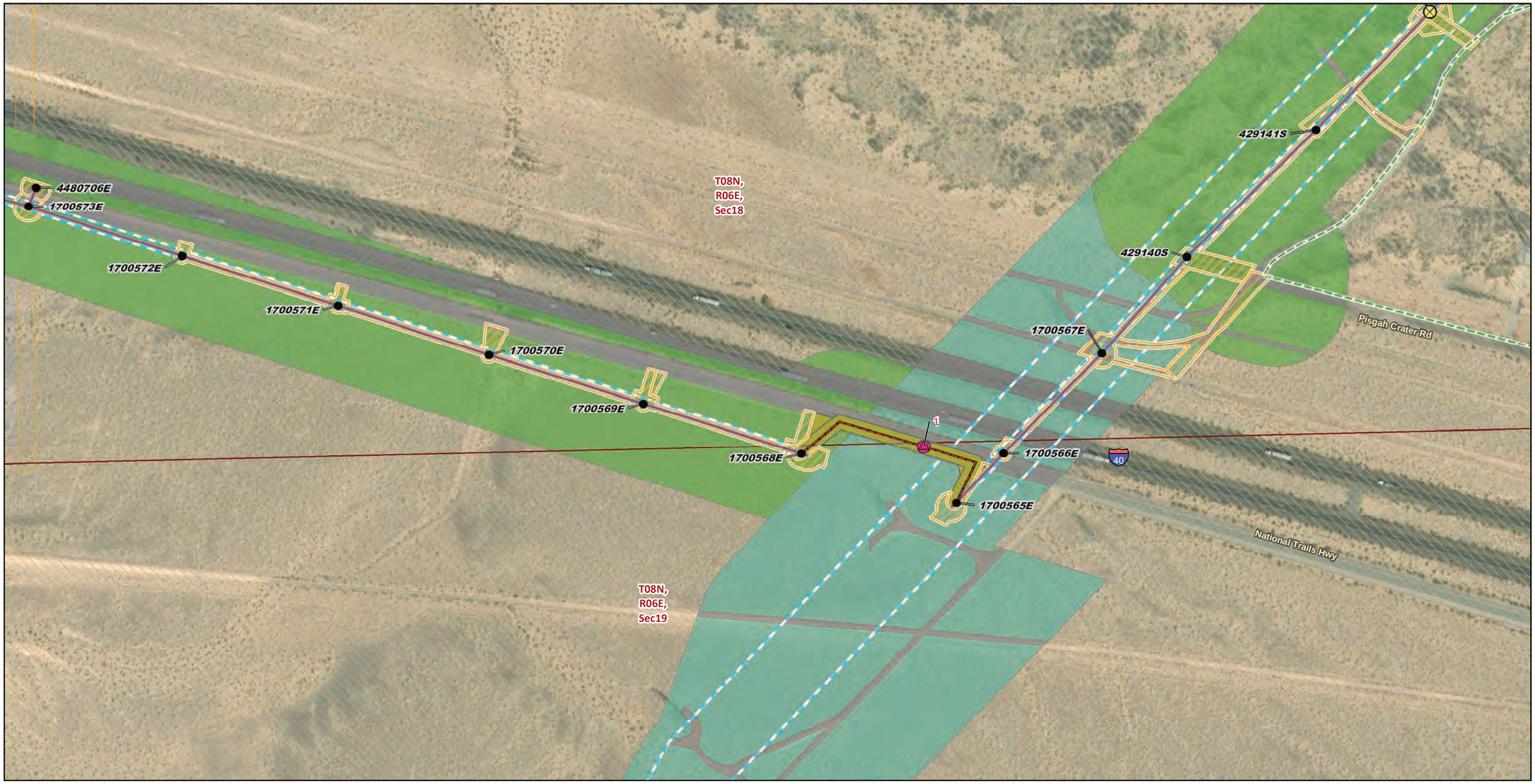


FIGURE 4
Vegetation and Land Cover
Segment 1

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Telecom Structures
- New, Manhole

Distribution Poles
- Existing
- Remove/Replace

Existing Access Roads
- Access Road

Telecommunication Lines
- New, Overhead
- New, Underground

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Underground Disturbance
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Creosote bush scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

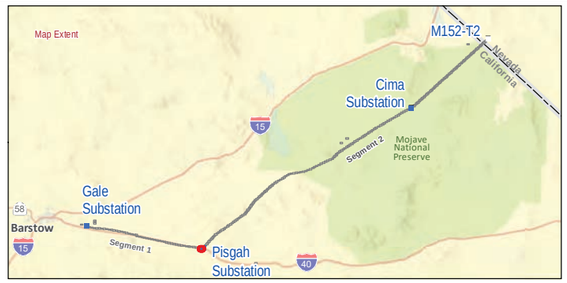


FIGURE 4
Vegetation and Land Cover
Segment 2
Page 52 of 244

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Existing Substations Boundary

Transmission Structures
- Existing Transmission Towers

Telecom Structures
- Existing, Manhole
- New, Manhole

Distribution Poles
- Existing
- Remove/Replace
- Remove

Existing Access Roads
- Access Road

Distribution Circuit
- Overhead

Telecommunication Lines
- Existing, Underground
- New, Overhead
- New, Underground

Construction Areas
- Helicopter Landing Zone
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Underground Disturbance
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Creosote bush scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

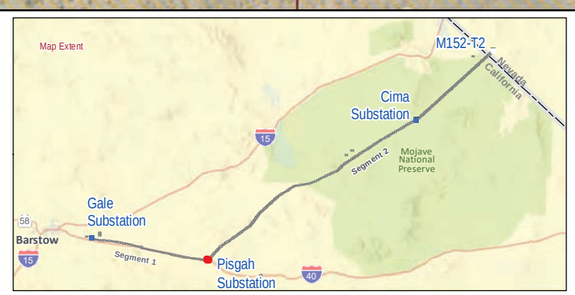
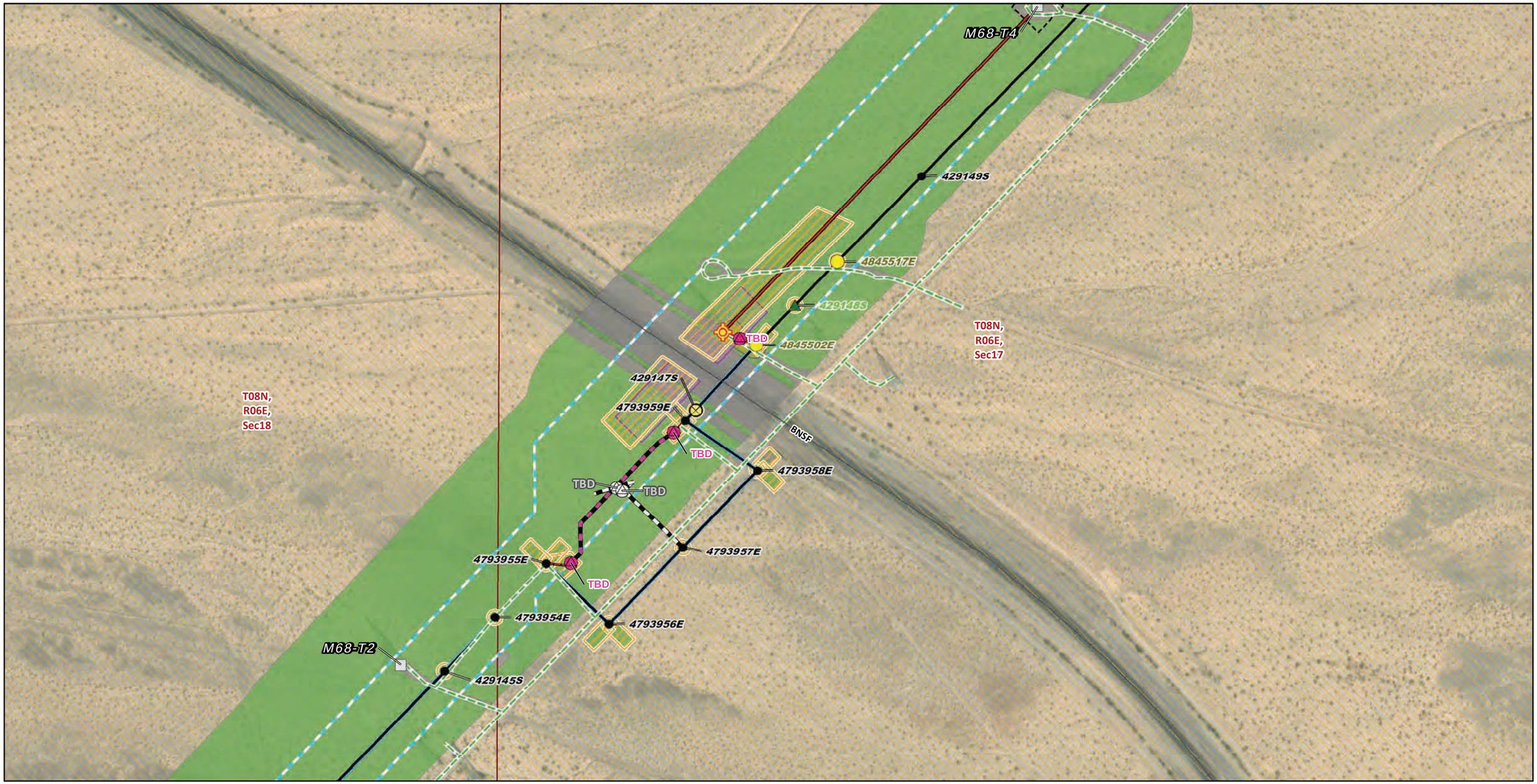


FIGURE 4
Vegetation and Land Cover
Segment 2

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Transmission Structures
- Splicing Tower Locations
- Existing Transmission Towers

Telecom Structures
- Existing, Manhole
- New, Manhole

Distribution Poles
- Existing
- New
- Remove/Replace
- Remove

Existing Access Roads
- Access Road

Transmission New Optical Ground Wire
- Overhead

Distribution Circuit
- Overhead
- Underground

Telecommunication Lines
- Existing, Underground
- New, Overhead
- New, Underground

Construction Areas
- Guard Structure
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Underground Disturbance
- Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

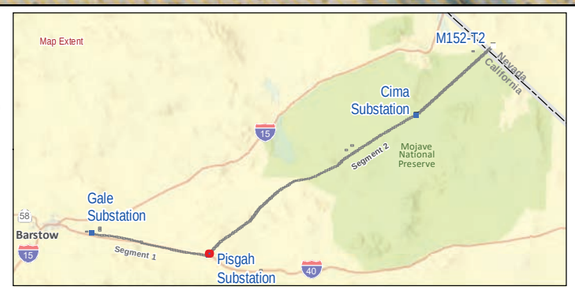
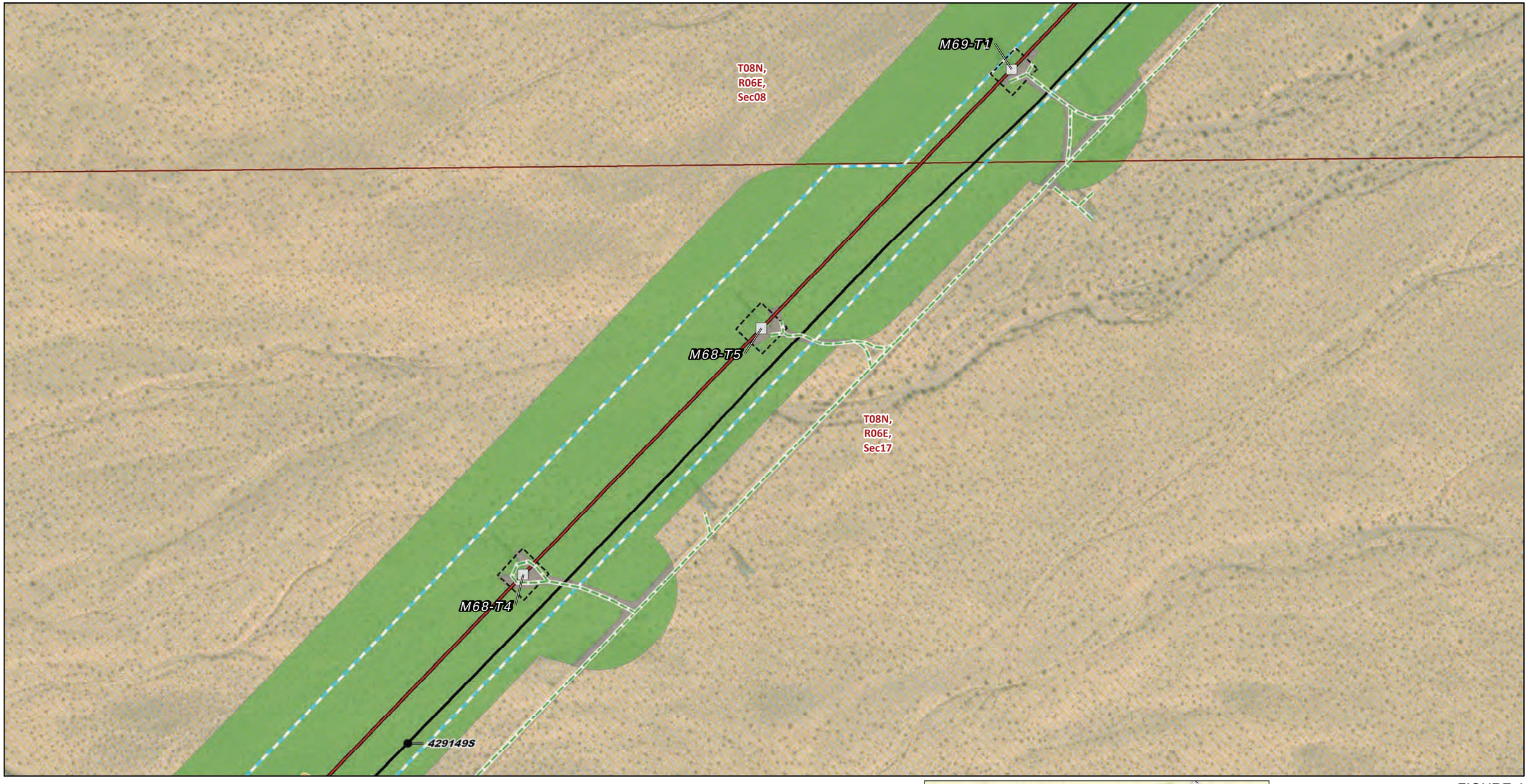


FIGURE 4
Vegetation and Land Cover
Segment 2

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Transmission Structures
Existing Transmission Towers
Distribution Poles
Existing
Existing Access Roads
Access Road
Transmission New Optical Ground Wire
Overhead

Distribution Circuit
Overhead
Construction Areas
Pulling, Stringing, Tensioning Site/Structure Work Area
Structure Work Area
Right of Way
Land Cover Type
Creosote bush - white bursage scrub

Developed
Land Ownership
Bureau of Land Management
Public Land Survey System
Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

N

Source: SCE, BLM, CDFW, ESRI

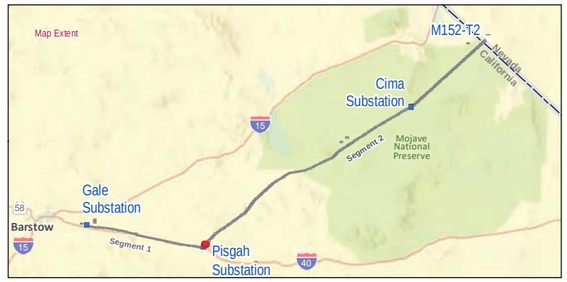
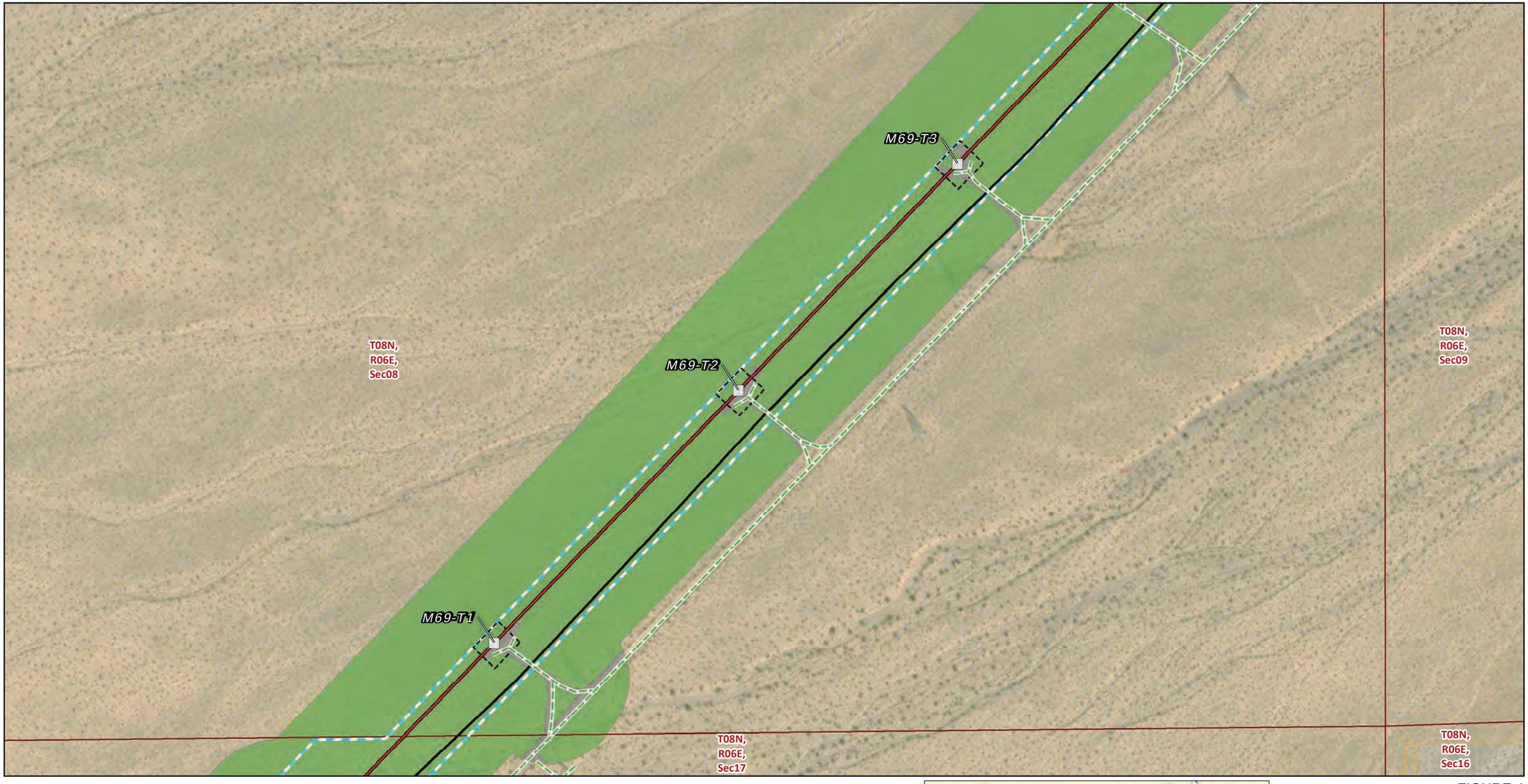


FIGURE 4
Vegetation and Land Cover
Segment 2
Page 55 of 244

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Transmission Structures
- Existing Transmission Towers

Existing Access Roads
- Access Road

Transmission New Optical Ground Wire
- Overhead

Distribution Circuit
- Overhead

Construction Areas
- Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

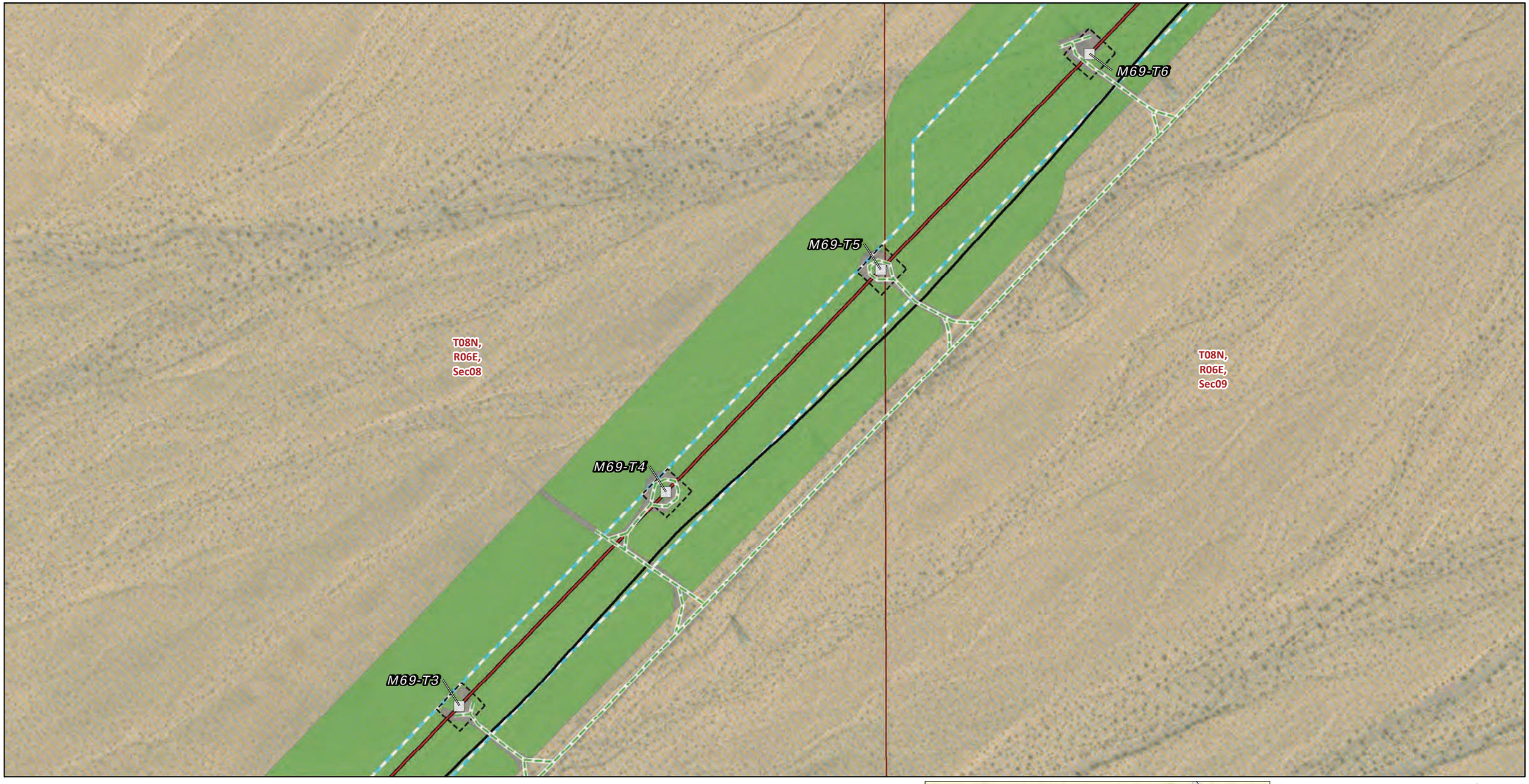
* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

FIGURE 4
Vegetation and Land Cover
Segment 2

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Transmission Structures
- Existing Transmission Towers

Existing Access Roads
- Access Road

Transmission New Optical Ground Wire
- Overhead

Distribution Circuit
- Overhead

Construction Areas
- Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

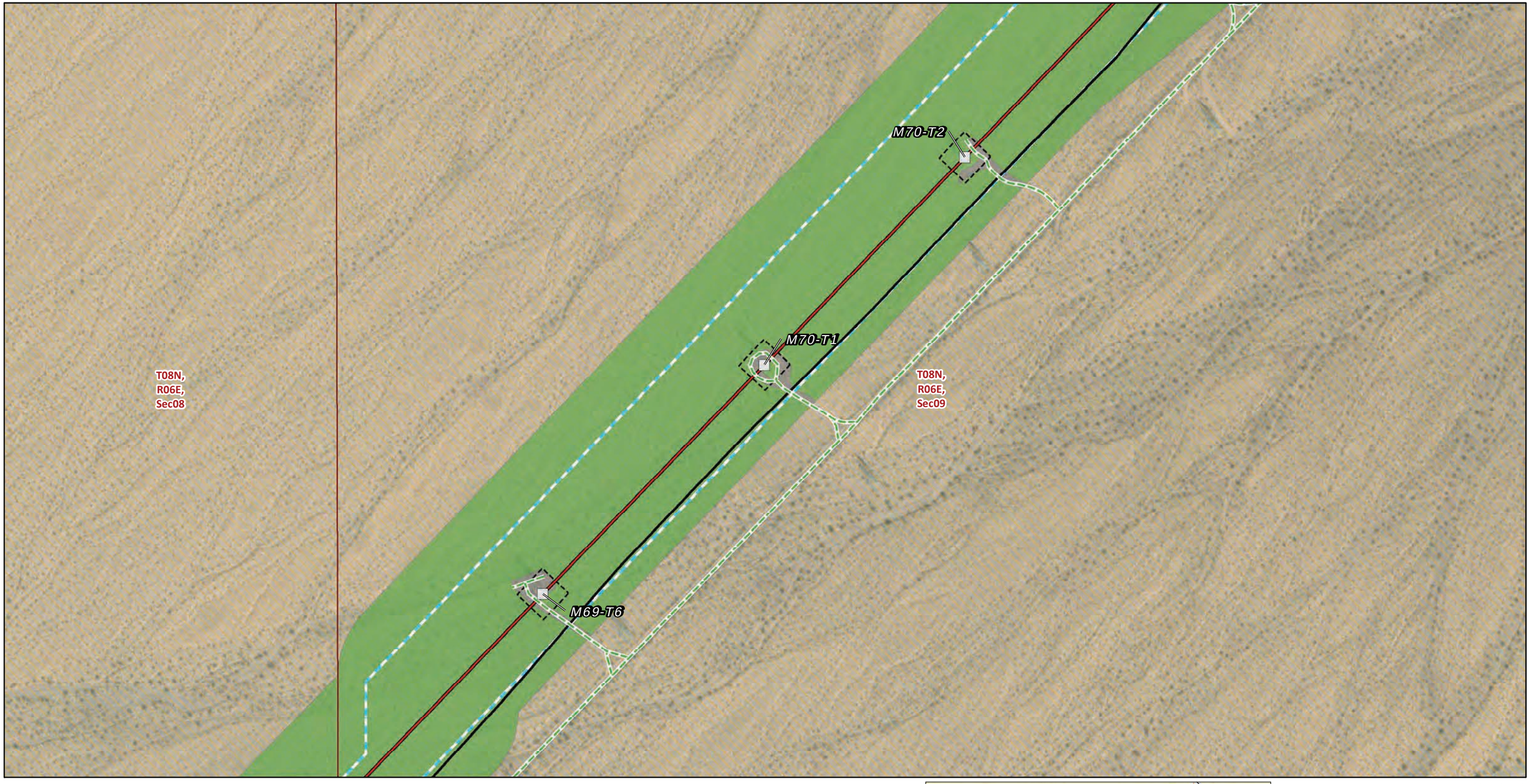
* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

FIGURE 4
Vegetation and Land Cover
Segment 2

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Transmission Structures
- Existing Transmission Towers

Existing Access Roads
- Access Road

Transmission New Optical Ground Wire
- Overhead

Distribution Circuit
- Overhead

Construction Areas
- Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

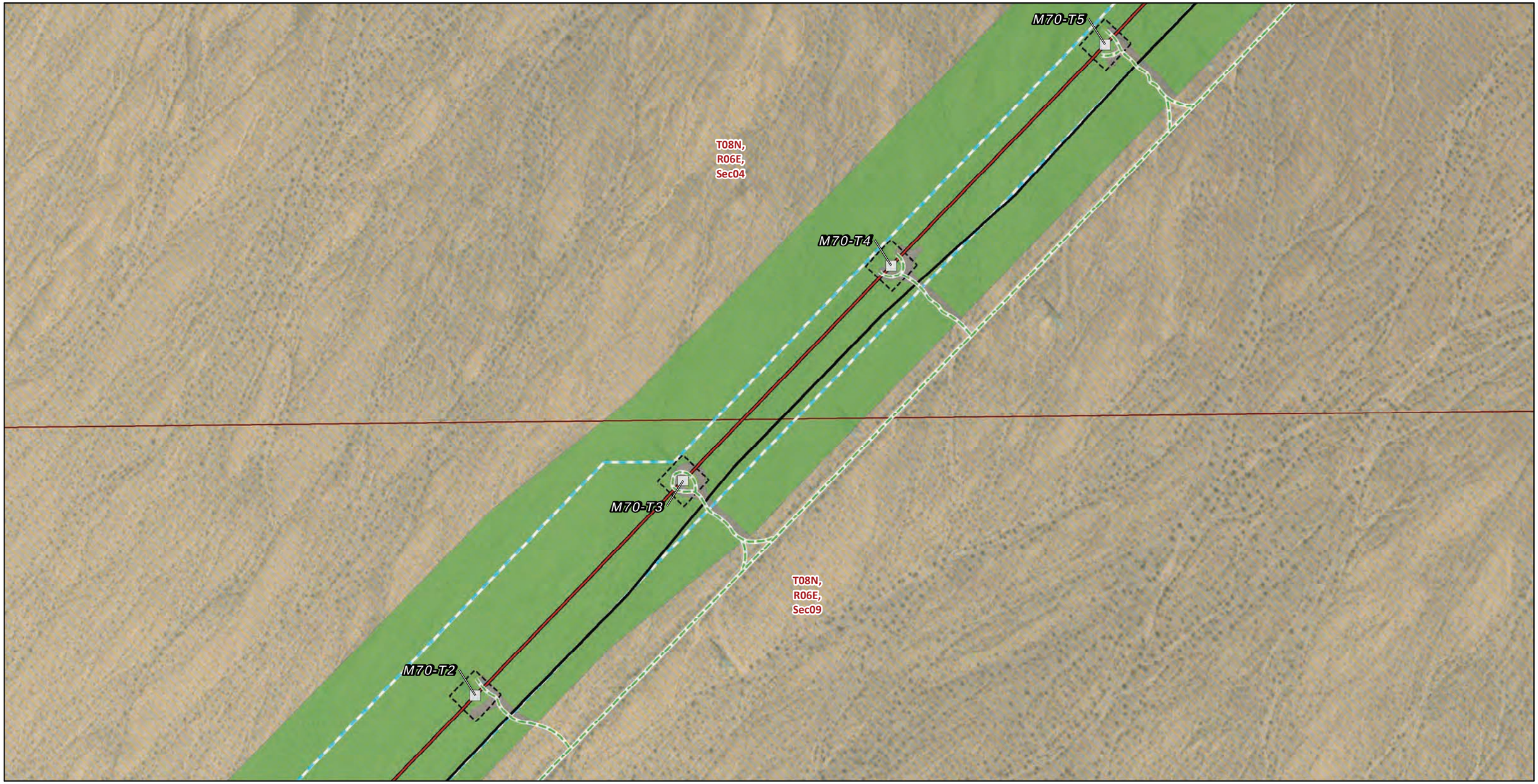
0 150 300
Feet

N

Source: SCE, BLM, CDFW, ESRI

FIGURE 4
Vegetation and Land Cover
Segment 2

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Transmission Structures
- Existing Transmission Towers

Existing Access Roads
- Access Road

Transmission New Optical Ground Wire
- Overhead

Distribution Circuit
- Overhead

Construction Areas
- Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

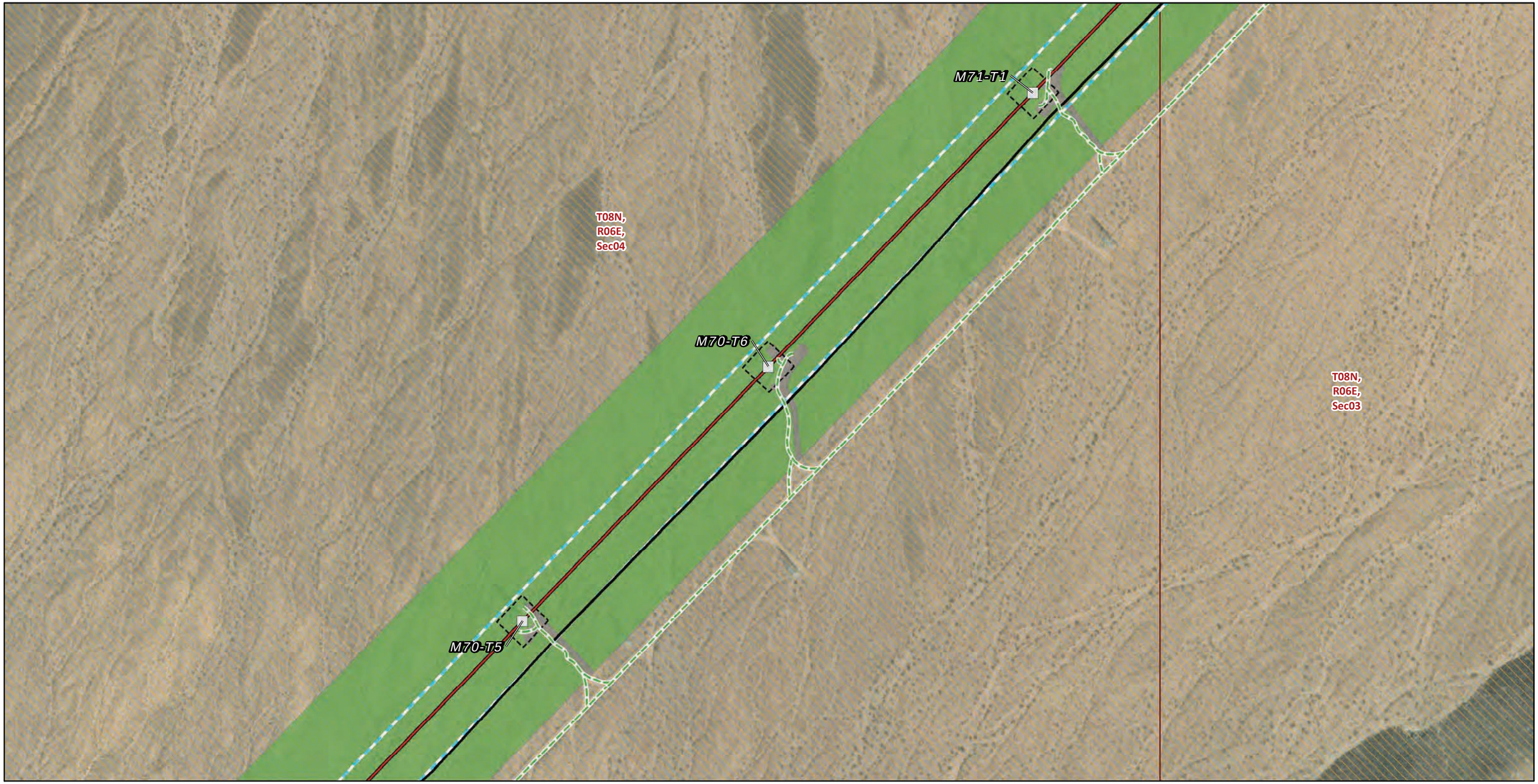
0 150 300
Feet

N

Source: SCE, BLM, CDFW, ESRI

FIGURE 4
Vegetation and Land Cover
Segment 2

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Transmission Structures
- Existing Transmission Towers

Existing Access Roads
- Access Road

Transmission New Optical Ground Wire
- Overhead

Distribution Circuit
- Overhead

Construction Areas
- Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

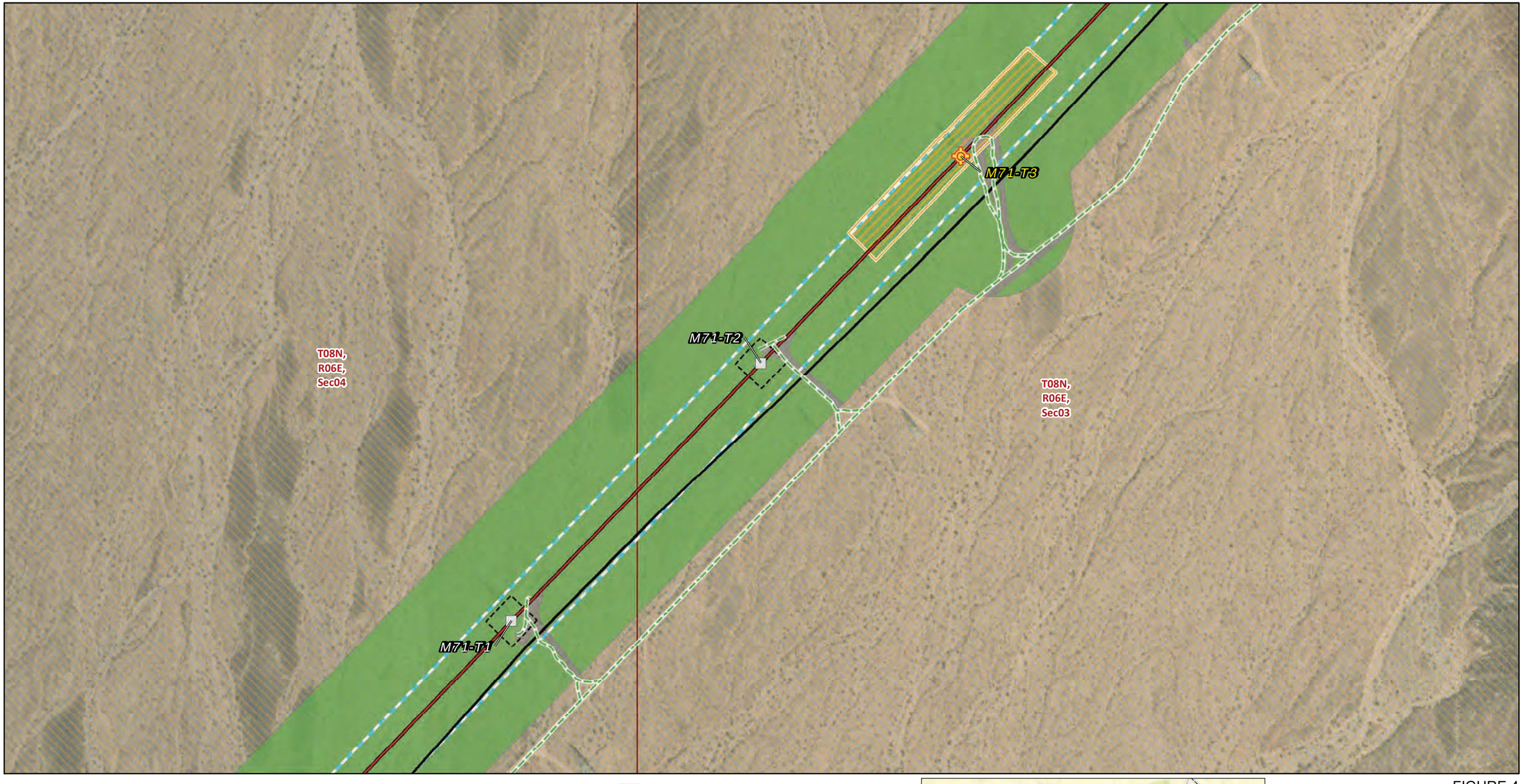
* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

FIGURE 4
Vegetation and Land Cover
Segment 2
Page 60 of 244

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Transmission Structures
- Splicing Tower Locations
- Existing Transmission Towers

Existing Access Roads
- Access Road

Transmission New Optical Ground Wire
- Overhead

Distribution Circuit
- Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

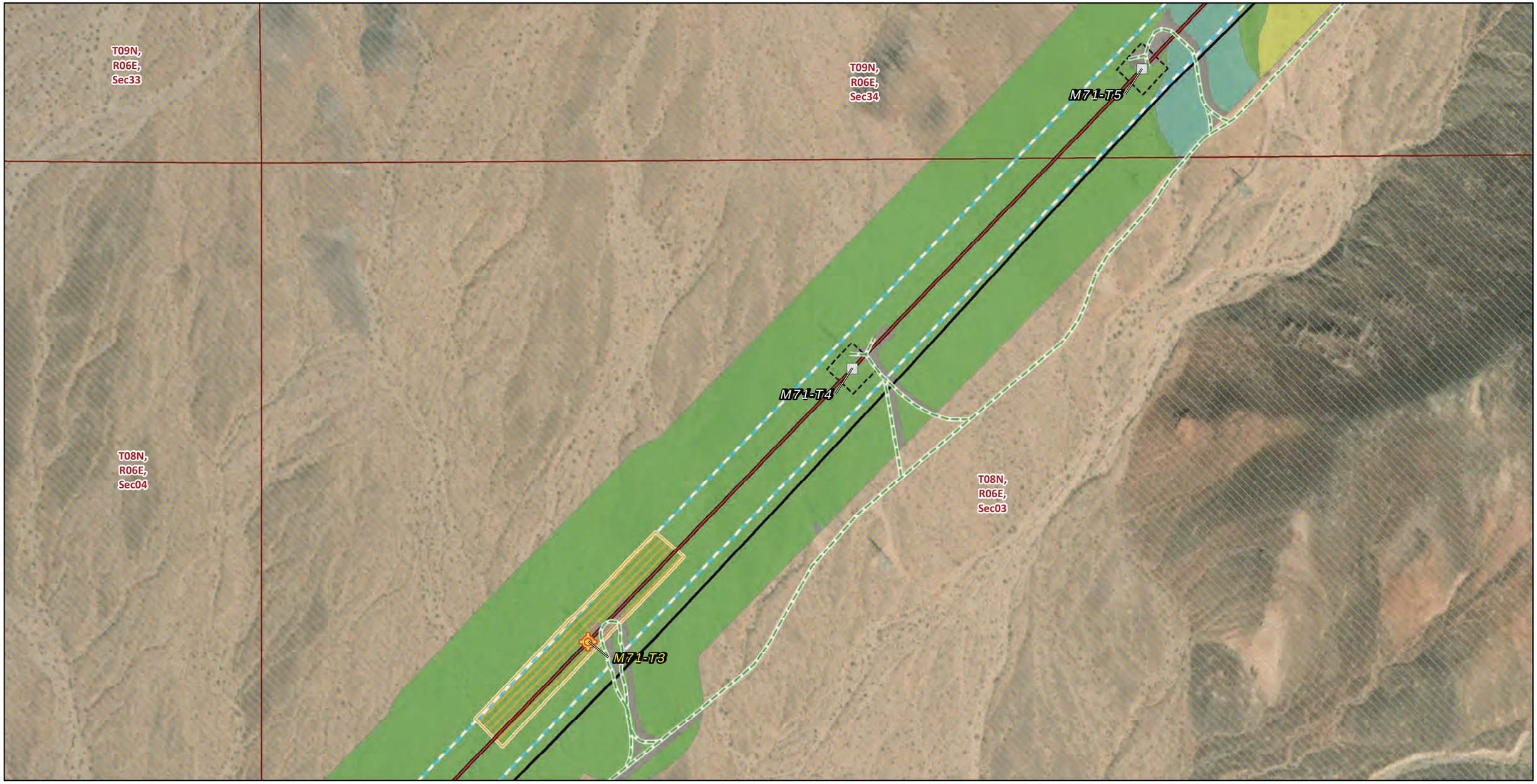
* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

FIGURE 4
Vegetation and Land Cover
Segment 2

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Transmission Structures
- Splicing Tower Locations
- Existing Transmission Towers

Existing Access Roads
- Access Road

Transmission New Optical Ground Wire
- Overhead

Distribution Circuit
- Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Structure Work Area
- Right of Way

Land Cover Type
- Cheesebush - sweetbush scrub
- Creosote bush - white bursage scrub
- Creosote bush scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

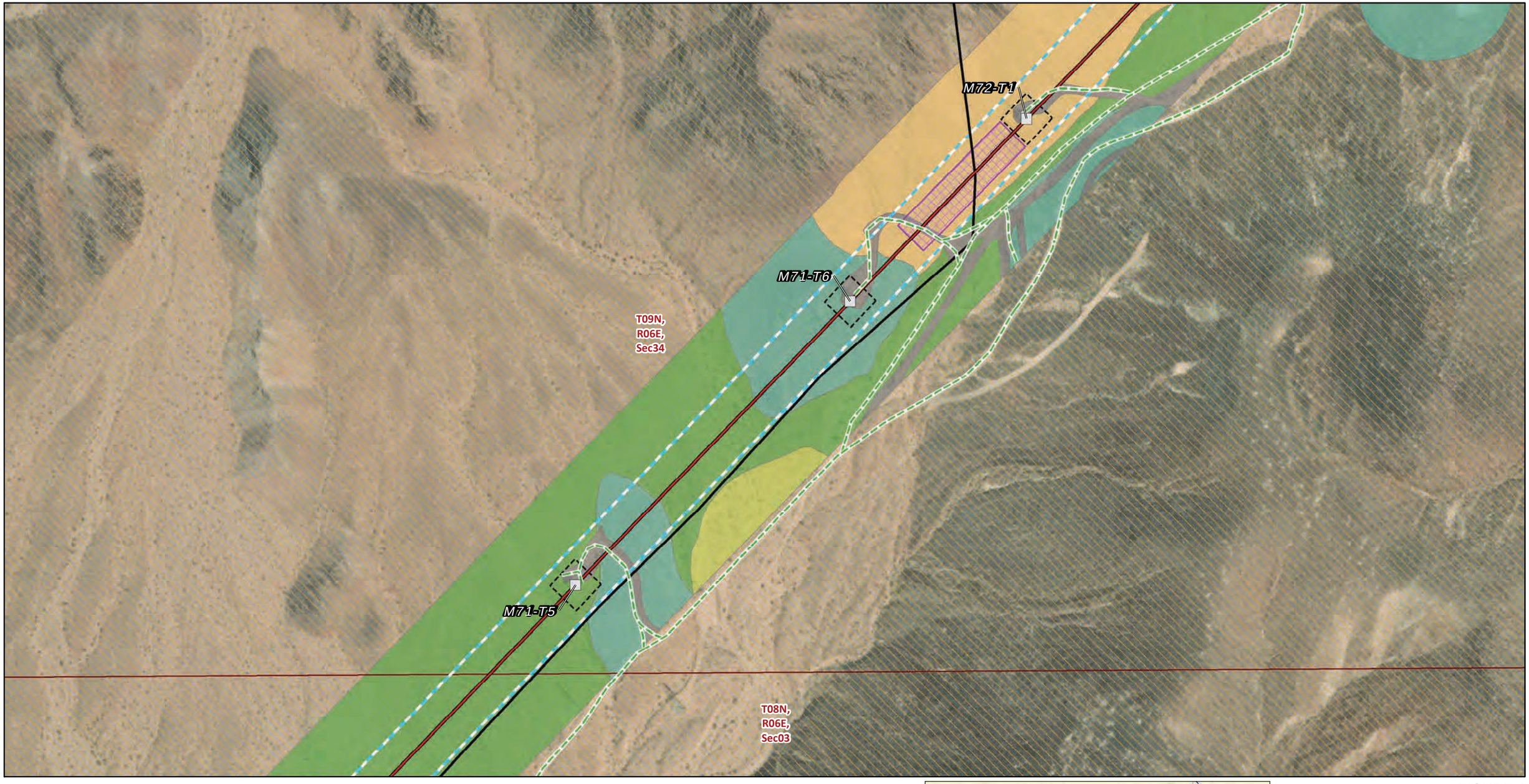
0 150 300
Feet

N

Source: SCE, BLM, CDFW, ESRI

FIGURE 4
Vegetation and Land Cover
Segment 2
Page 62 of 244

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Transmission Structures
- Existing Transmission Towers

Existing Access Roads
- Access Road

Transmission New Optical Ground Wire
- Overhead

Distribution Circuit
- Overhead

Construction Areas
- Guard Structure
- Structure Work Area
- Right of Way

Land Cover Type
- Brittle bush scrub
- Cheesebush - sweetbush scrub
- Creosote bush - white bursage scrub
- Creosote bush scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

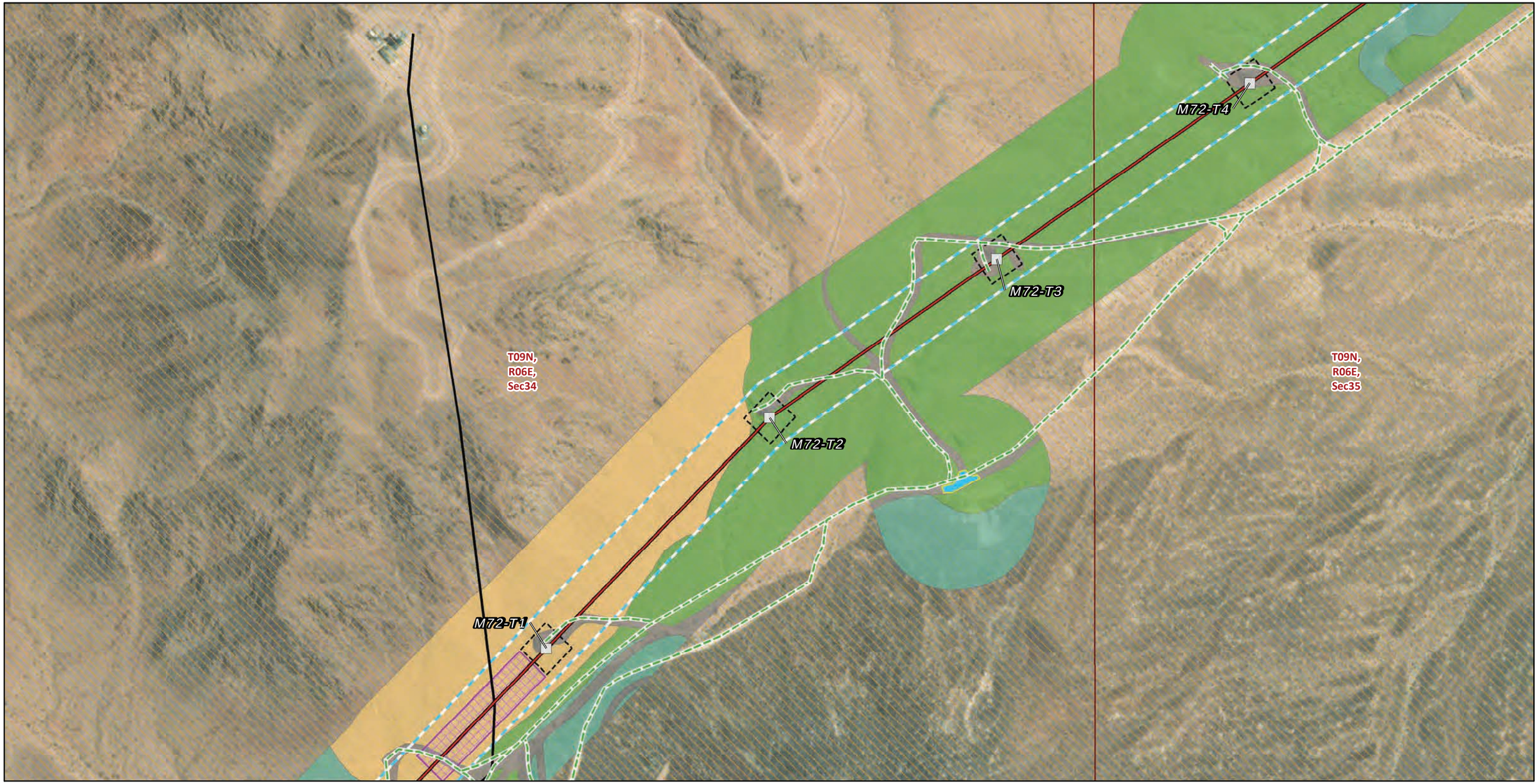
* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

FIGURE 4
Vegetation and Land Cover
Segment 2

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Transmission Structures
- Existing Transmission Towers

Existing Access Roads
- Access Road

Transmission New Optical Ground Wire
- Overhead

Distribution Circuit
- Overhead

Construction Areas
- Guard Structure
- Helicopter Landing Zone
- Structure Work Area
- Right of Way

Land Cover Type
- Brittle bush scrub
- Creosote bush - white bursage scrub
- Creosote bush scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

FIGURE 4
Vegetation and Land Cover
Segment 2

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Transmission Structures
- Existing Transmission Towers

Existing Access Roads
- Access Road

Transmission New Optical Ground Wire
- Overhead

Construction Areas
- Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Creosote bush scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

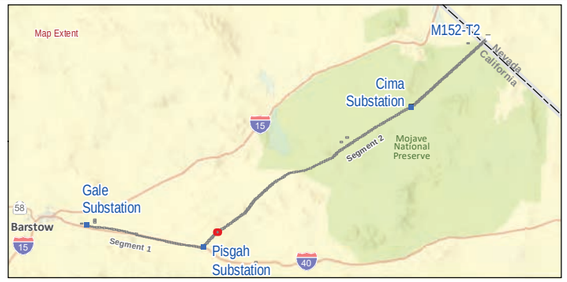
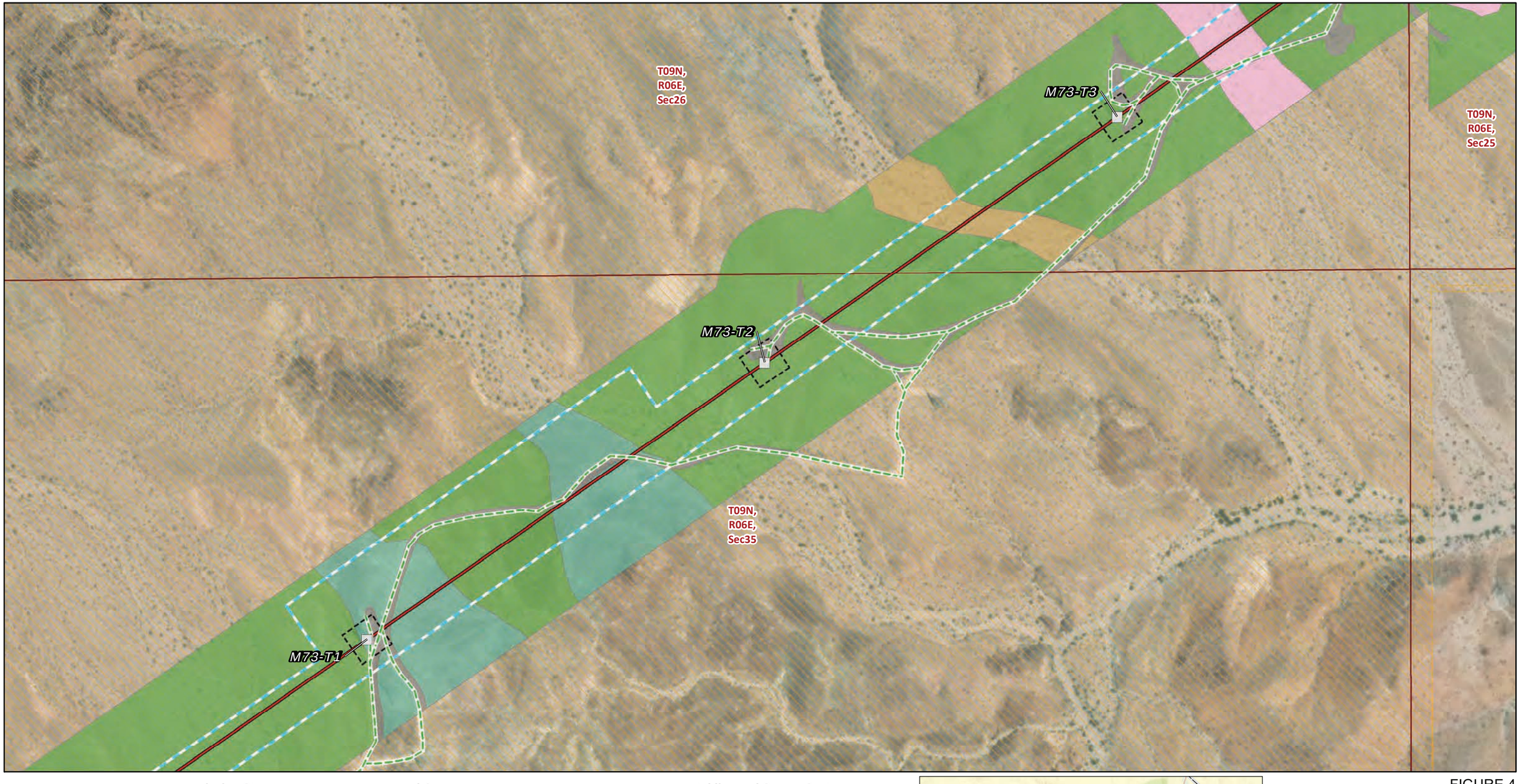


FIGURE 4
Vegetation and Land Cover
Segment 2

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Transmission Structures
- Existing Transmission Towers

Existing Access Roads
- Access Road

Transmission New Optical Ground Wire
- Overhead

Construction Areas
- Structure Work Area
- Right of Way

Land Cover Type
- Catclaw acacia - desert lavender - chuparosa scrub
- Creosote bush - white bursage scrub
- Creosote bush scrub
- Desert willow - smoke tree wash woodland
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

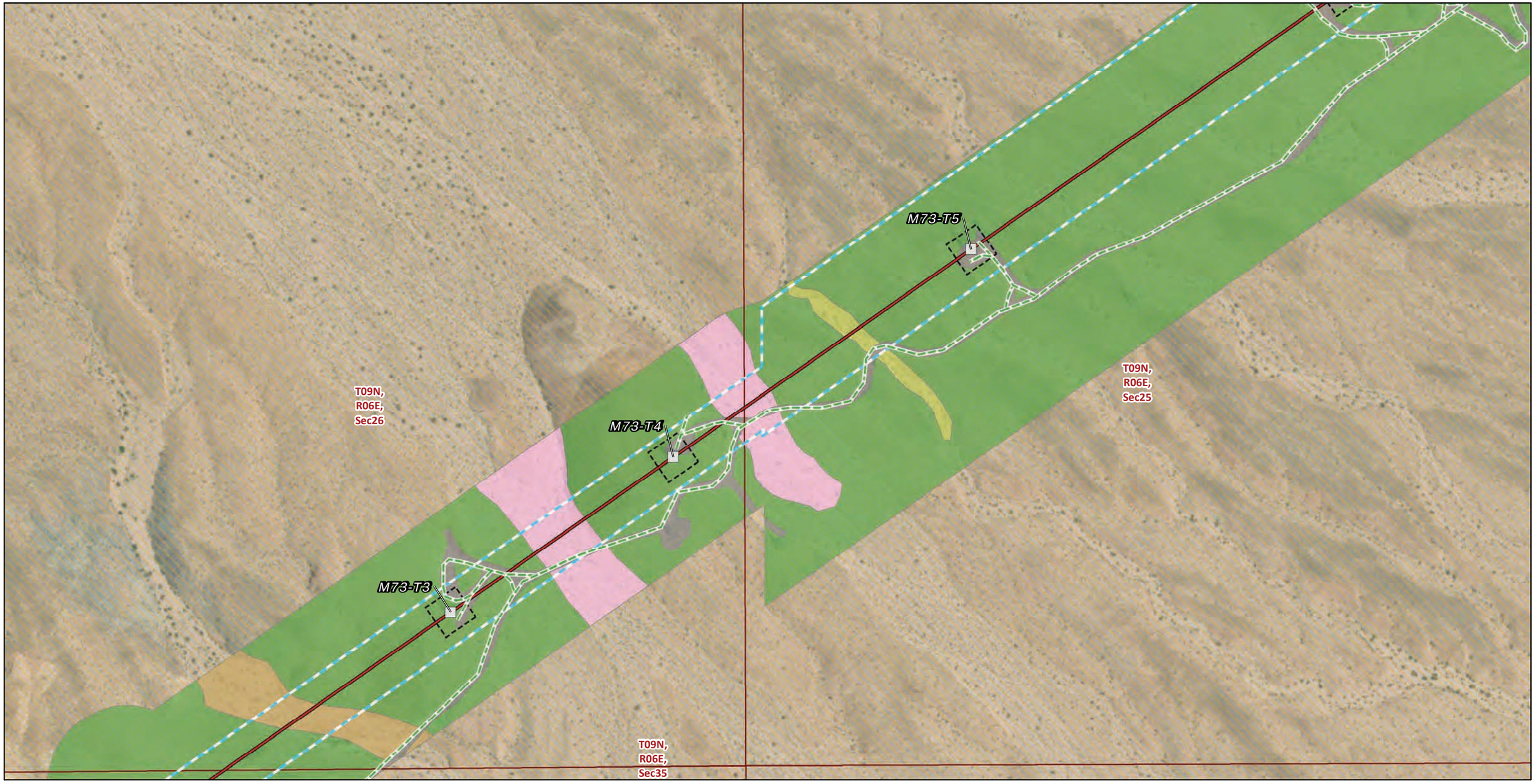
* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

FIGURE 4
Vegetation and Land Cover
Segment 2

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Transmission Structures
- Existing Transmission Towers

Existing Access Roads
- Access Road

Transmission New Optical Ground Wire
- Overhead

Construction Areas
- Structure Work Area
- Right of Way

Land Cover Type
- Catclaw acacia - desert lavender - chuparosa scrub
- Cheesebush - sweetbush scrub
- Creosote bush - white bursage scrub
- Desert willow - smoke tree wash woodland
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

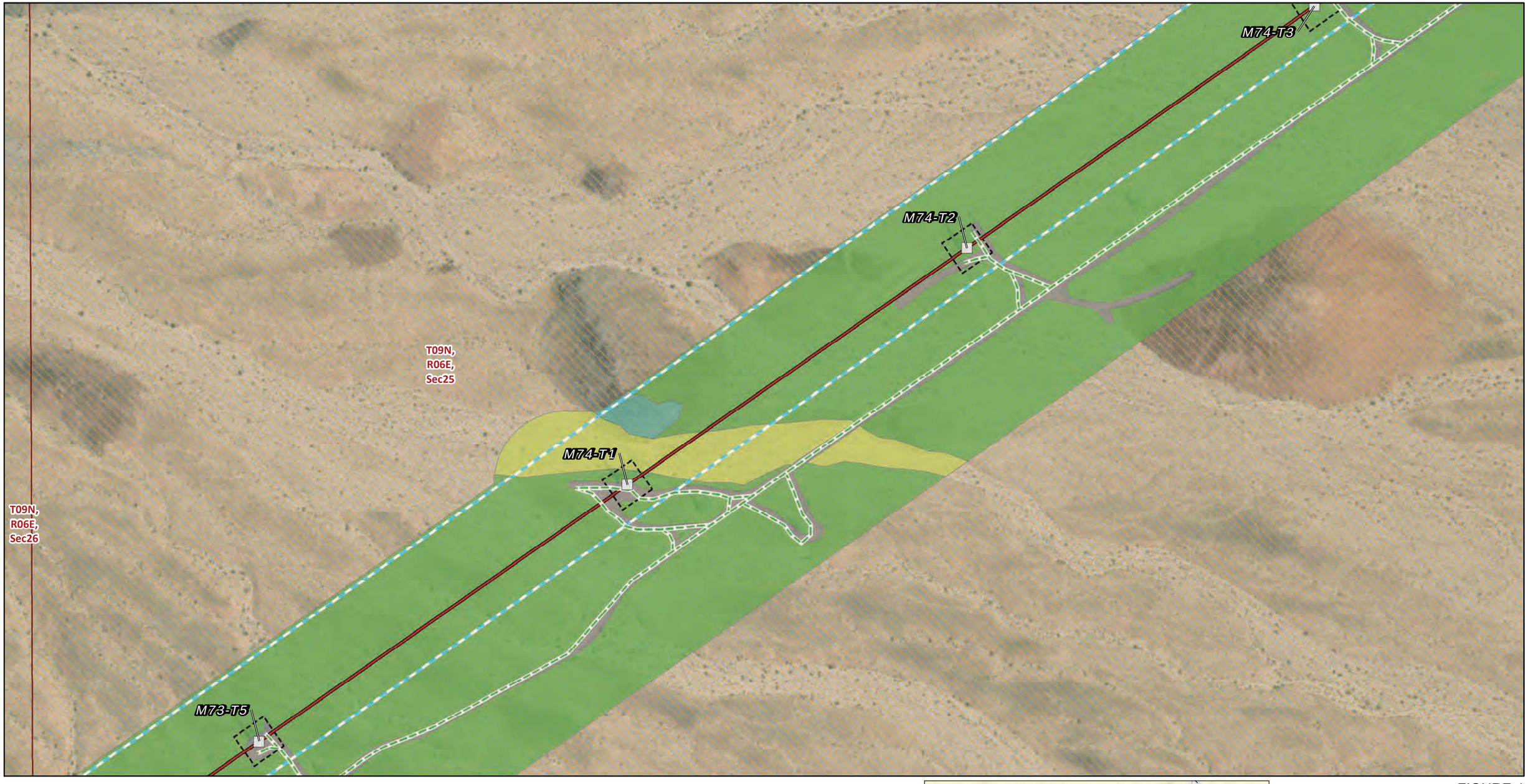
* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

FIGURE 4
Vegetation and Land Cover
Segment 2
Page 67 of 244

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Transmission Structures
- Existing Transmission Towers

Existing Access Roads
- Access Road

Transmission New Optical Ground Wire
- Overhead

Construction Areas
- Structure Work Area
- Right of Way

Land Cover Type
- Cheesebush - sweetbush scrub
- Creosote bush - white bursage scrub
- Creosote bush scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

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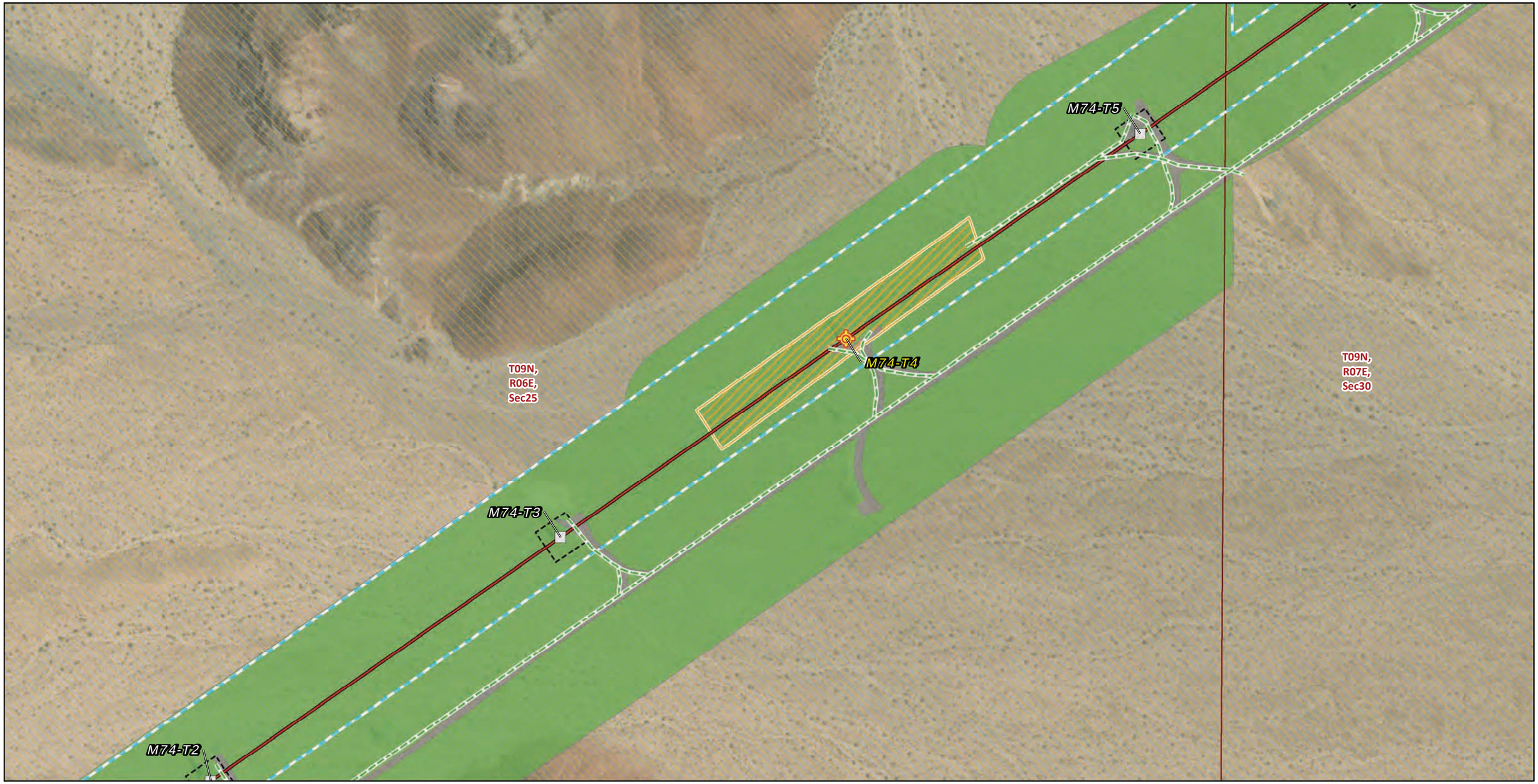
0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

FIGURE 4
Vegetation and Land Cover
Segment 2

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Transmission Structures
- Splicing Tower Locations
- Existing Transmission Towers

Existing Access Roads
- Access Road

Transmission New Optical Ground Wire
- Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

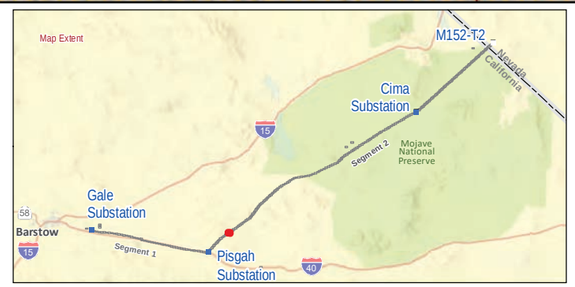
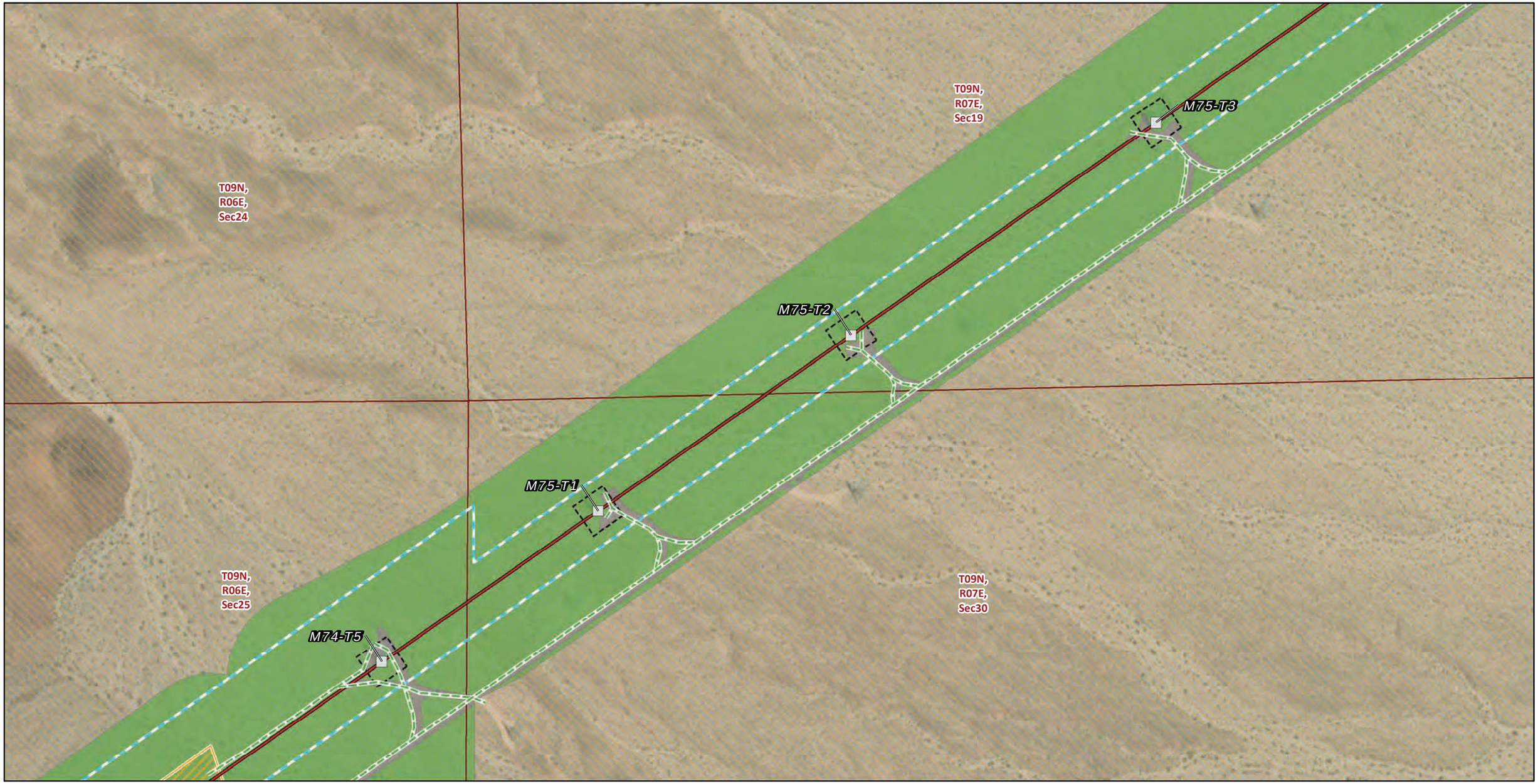


FIGURE 4
Vegetation and Land Cover
Segment 2

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Transmission Structures
- Existing Transmission Towers

Existing Access Roads
- Access Road

Transmission New Optical Ground Wire
- Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

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0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

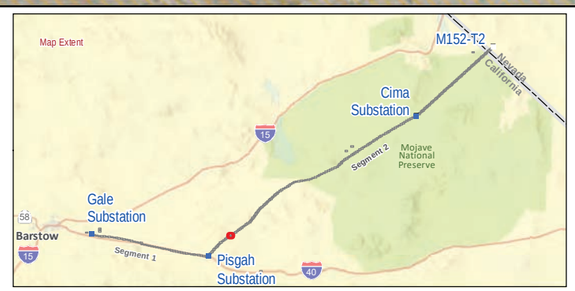

FIGURE 4
Vegetation and Land Cover
Segment 2

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Transmission Structures
- Existing Transmission Towers

Existing Access Roads
- Access Road

Transmission New Optical Ground Wire
- Overhead

Construction Areas
- Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

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0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

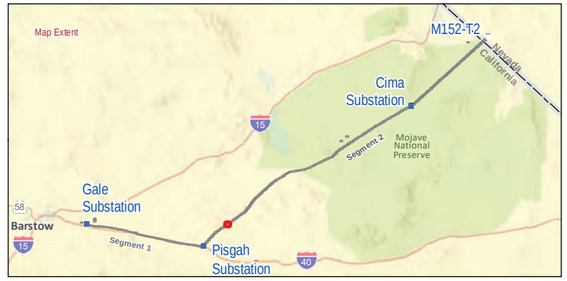
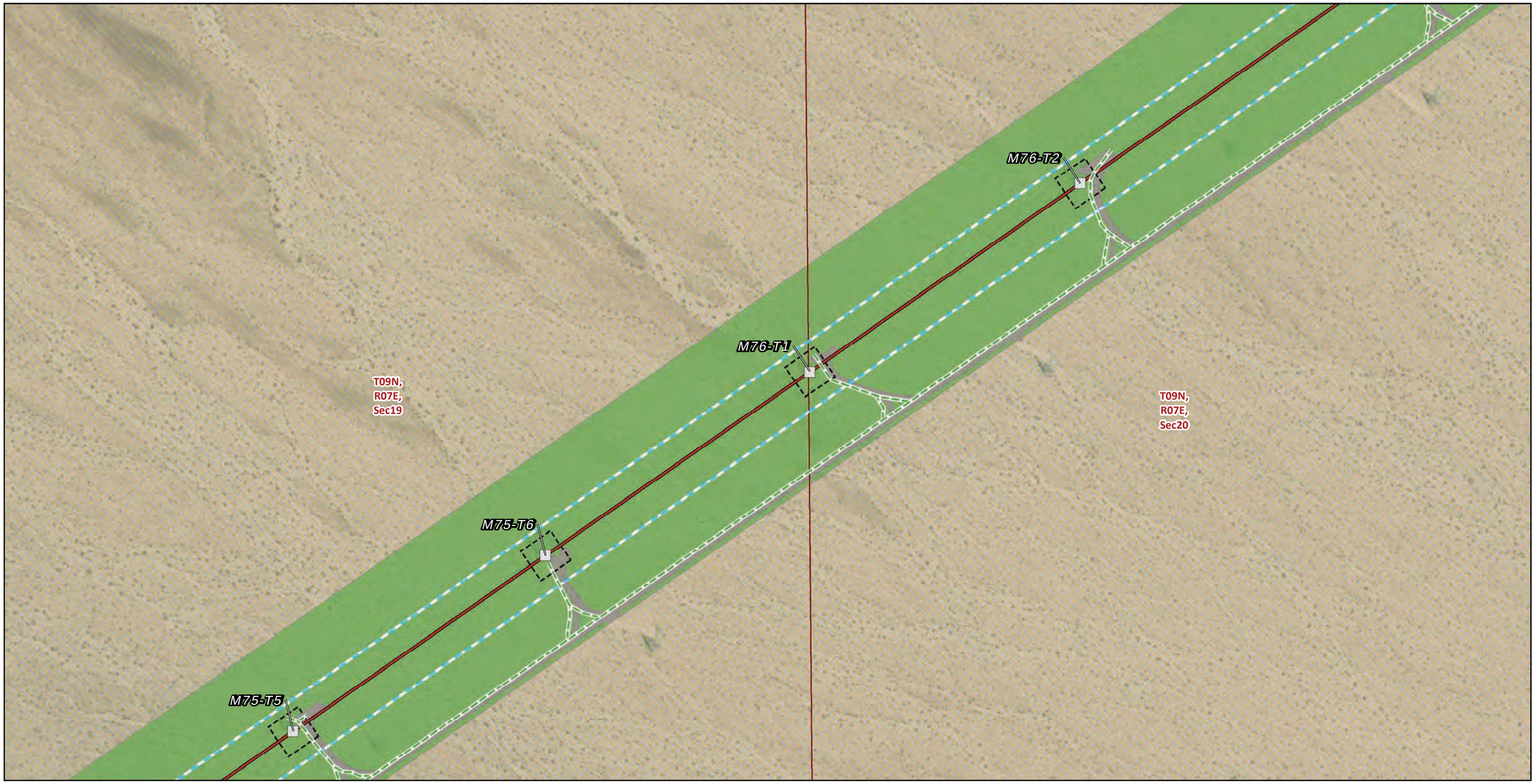


FIGURE 4
Vegetation and Land Cover
Segment 2

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Transmission Structures
- Existing Transmission Towers

Existing Access Roads
- Access Road

Transmission New Optical Ground Wire
- Overhead

Construction Areas
- Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

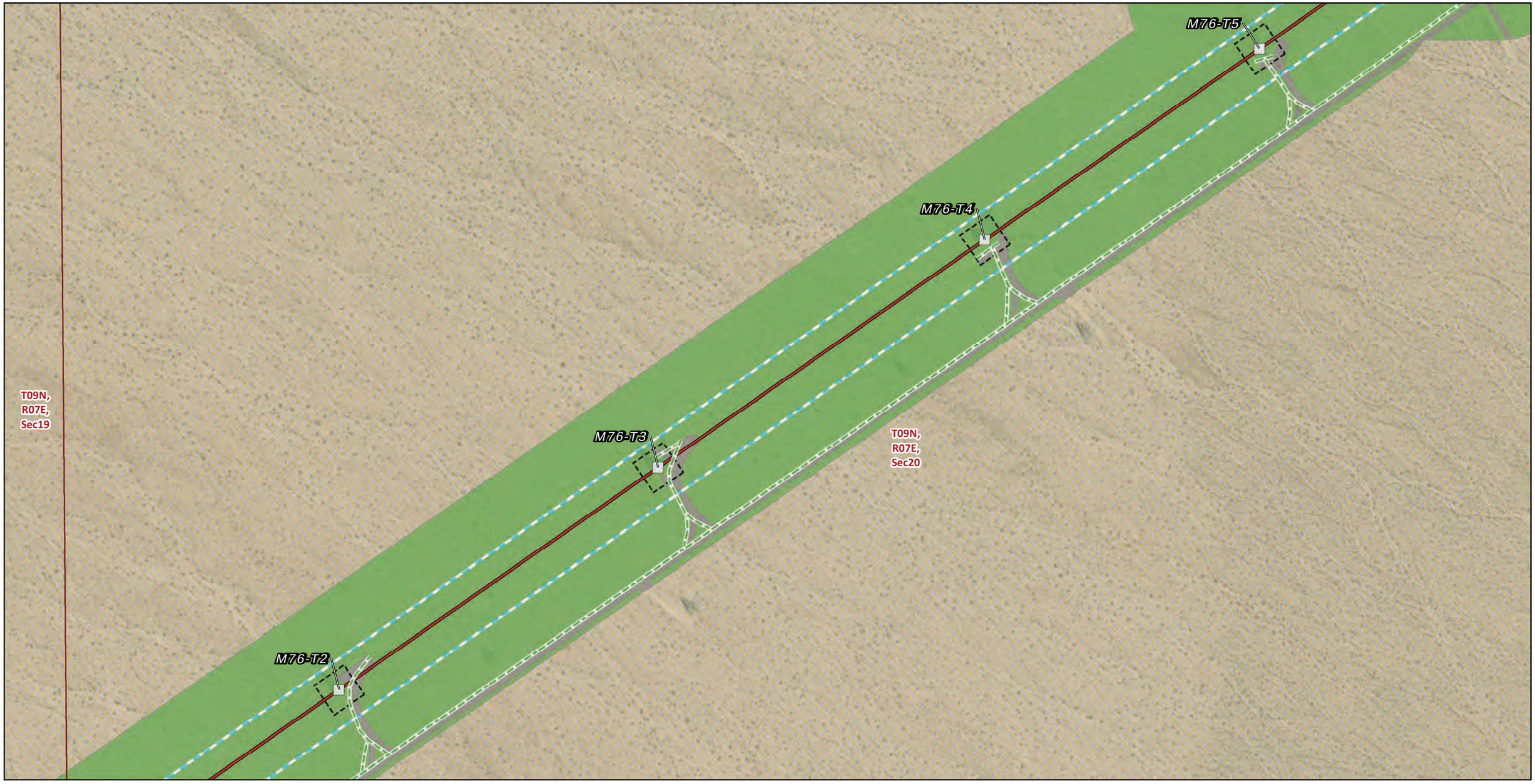
* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

FIGURE 4
Vegetation and Land Cover
Segment 2
Page 72 of 244

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Transmission Structures
- Existing Transmission Towers

Existing Access Roads
- Access Road

Transmission New Optical Ground Wire
- Overhead

Construction Areas
- Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

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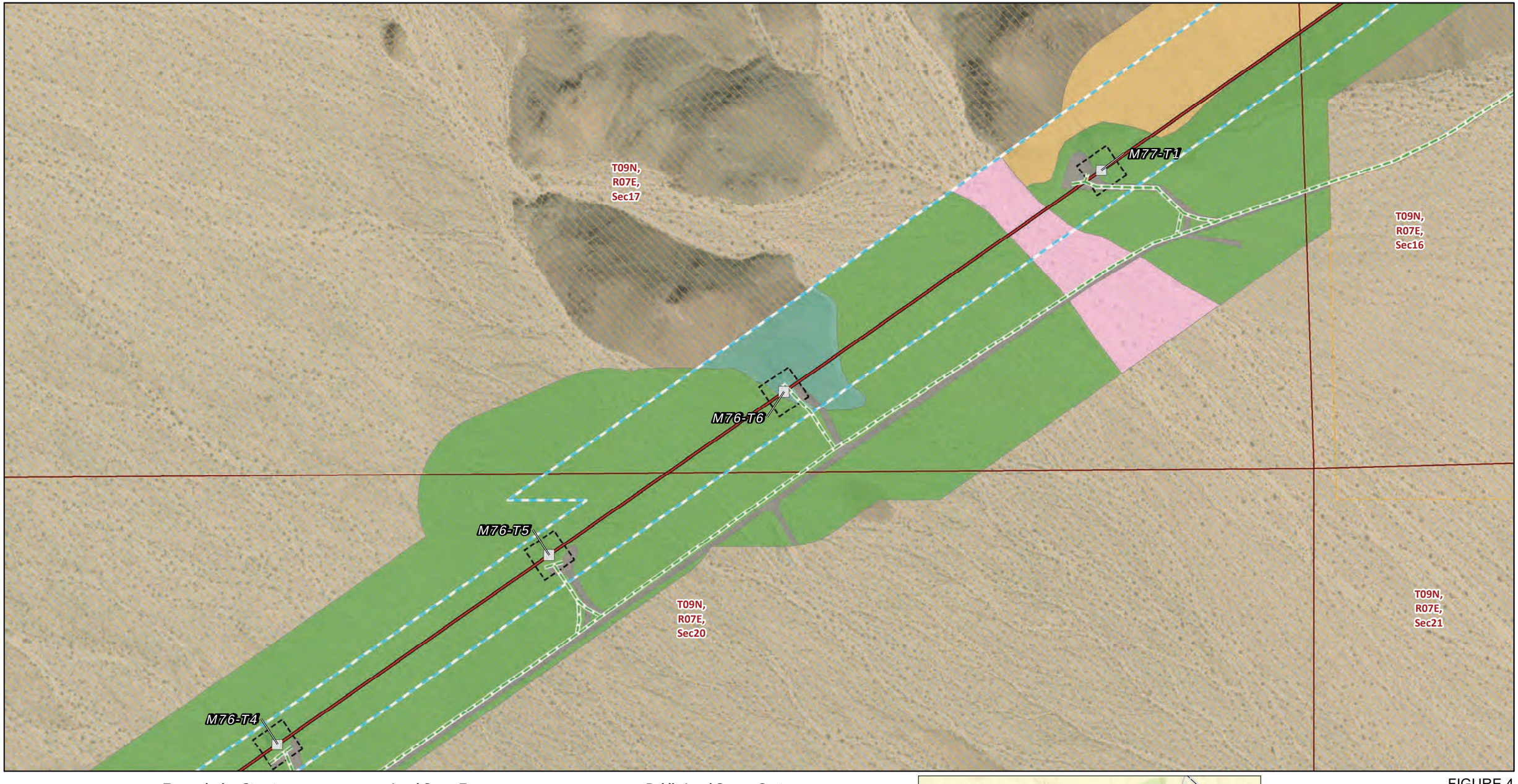
0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

FIGURE 4
Vegetation and Land Cover
Segment 2

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Transmission Structures
- Existing Transmission Towers

Existing Access Roads
- Access Road

Transmission New Optical Ground Wire
- Overhead

Construction Areas
- Structure Work Area
- Right of Way

Land Cover Type
- Brittle bush scrub
- Creosote bush - white bursage scrub
- Creosote bush scrub
- Desert willow - smoke tree wash woodland
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

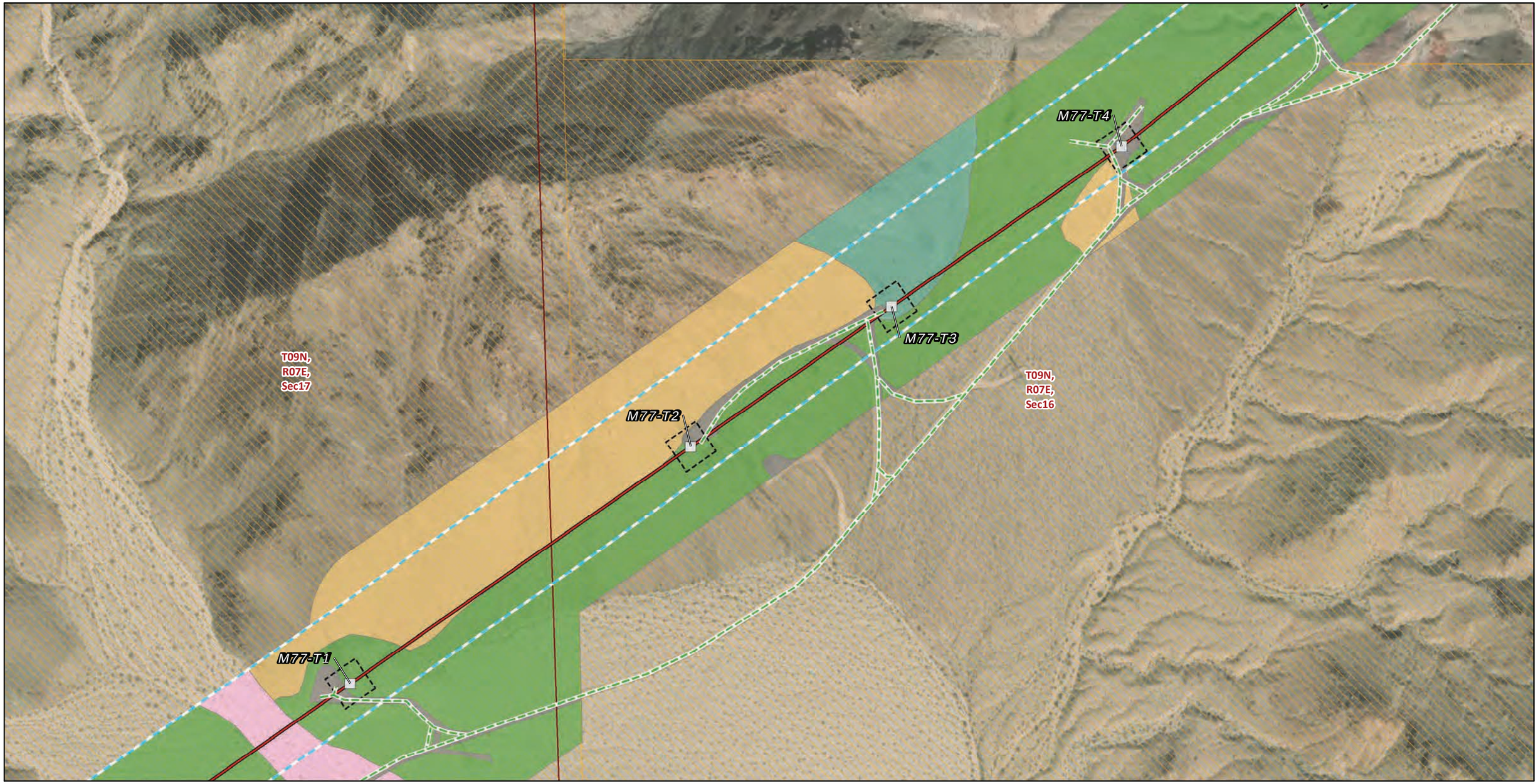
* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

FIGURE 4
Vegetation and Land Cover
Segment 2
Page 74 of 244

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Transmission Structures
- Existing Transmission Towers

Existing Access Roads
- Access Road

Transmission New Optical Ground Wire
- Overhead

Construction Areas
- Structure Work Area
- Right of Way

Land Cover Type
- Brittle bush scrub
- Creosote bush - white bursage scrub
- Creosote bush scrub
- Desert willow - smoke tree wash woodland
- Developed

Land Ownership
- Bureau of Land Management
- CA State Lands

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

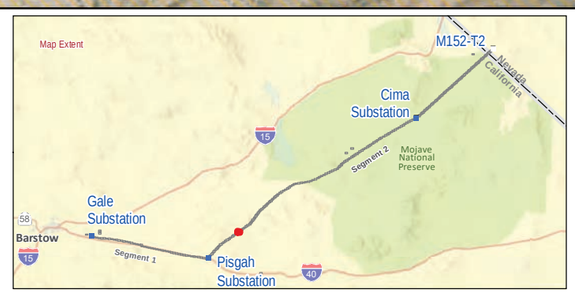
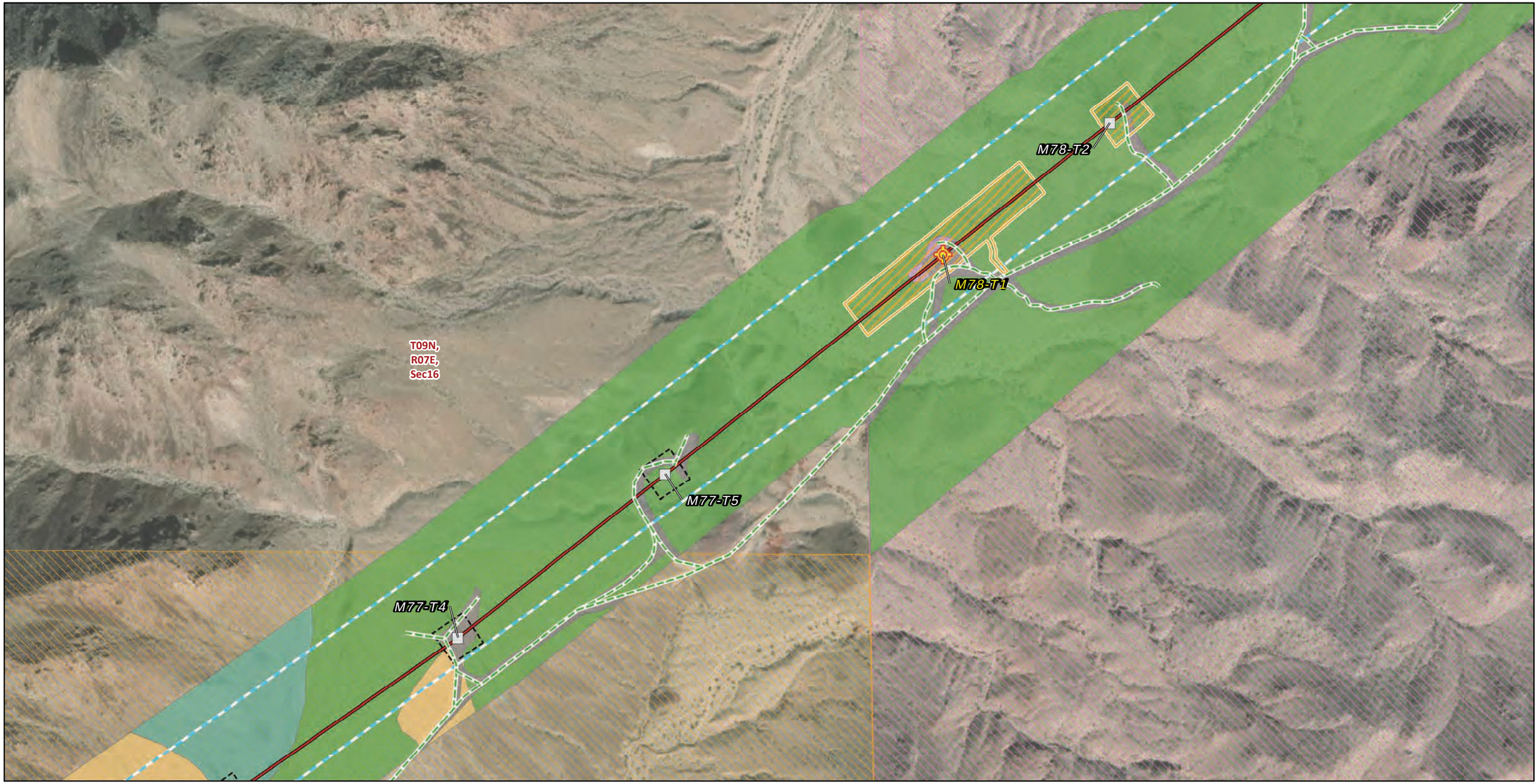


FIGURE 4
Vegetation and Land Cover
Segment 2

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Transmission Structures
- Splicing Tower Locations
- Existing Transmission Towers

Existing Access Roads
- Access Road

Transmission New Optical Ground Wire
- Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Structure Work Area
- Right of Way

Land Cover Type
- Brittle bush scrub
- Creosote bush - white bursage scrub
- Creosote bush scrub
- Developed
- White bursage scrub

Land Ownership
- Bureau of Land Management
- CA State Lands

Public Land Survey System
- Township, Range and Section

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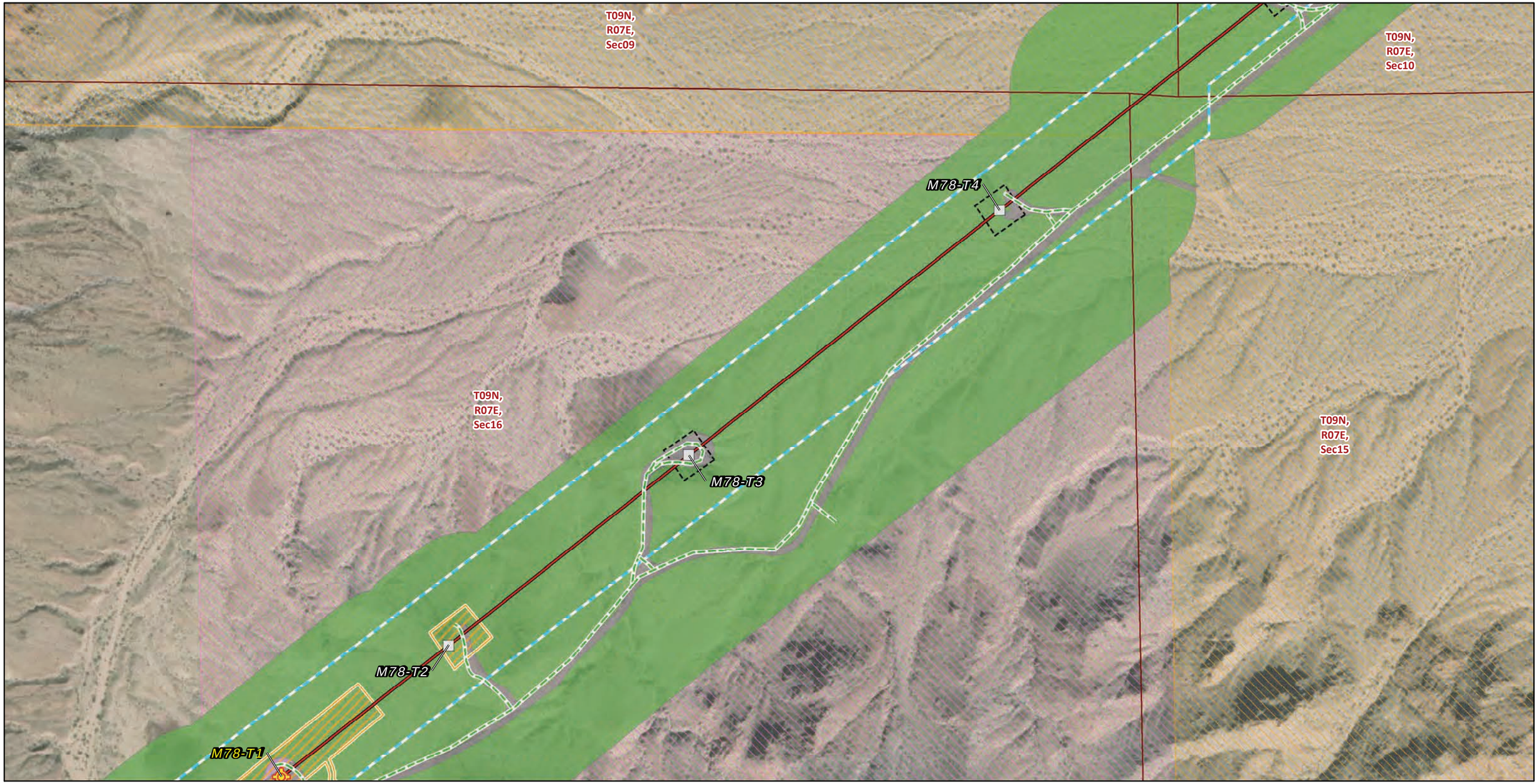
0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

FIGURE 4
Vegetation and Land Cover
Segment 2

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Transmission Structures
- Splicing Tower Locations
- Existing Transmission Towers

Existing Access Roads
- Access Road

Transmission New Optical Ground Wire
- Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Developed
- White bursage scrub

Land Ownership
- Bureau of Land Management
- CA State Lands

Public Land Survey System
- Township, Range and Section

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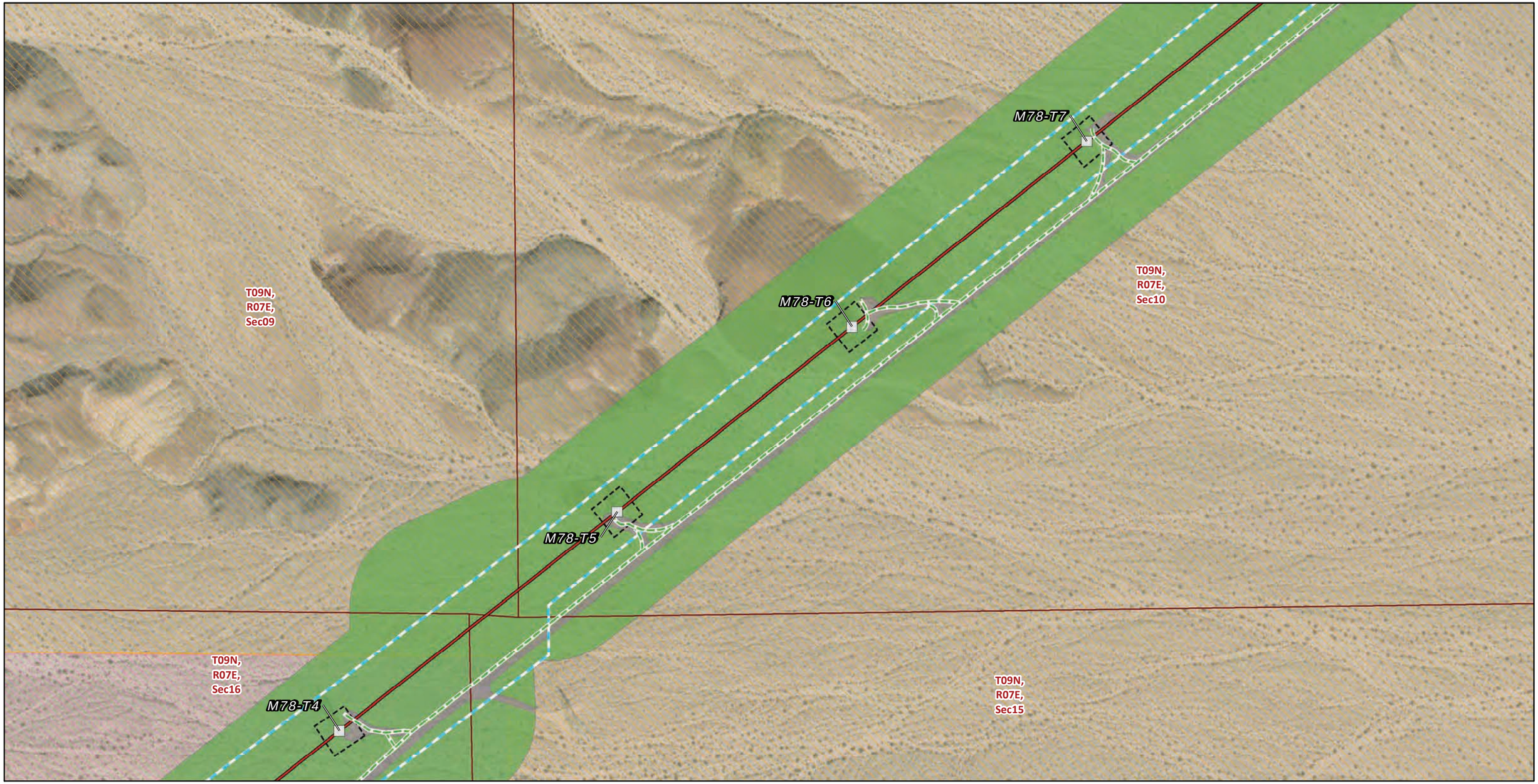
0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

FIGURE 4
Vegetation and Land Cover
Segment 2

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Transmission Structures
- Existing Transmission Towers

Existing Access Roads
- Access Road

Transmission New Optical Ground Wire
- Overhead

Construction Areas
- Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Developed

Land Ownership
- Bureau of Land Management
- CA State Lands

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

N

Source: SCE, BLM, CDFW, ESRI

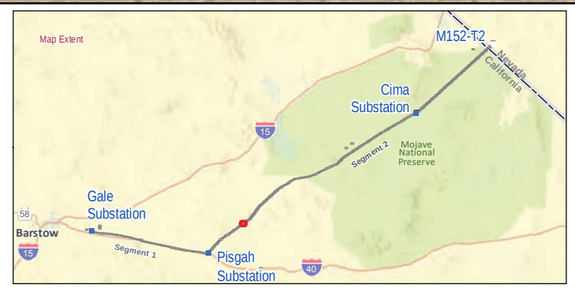
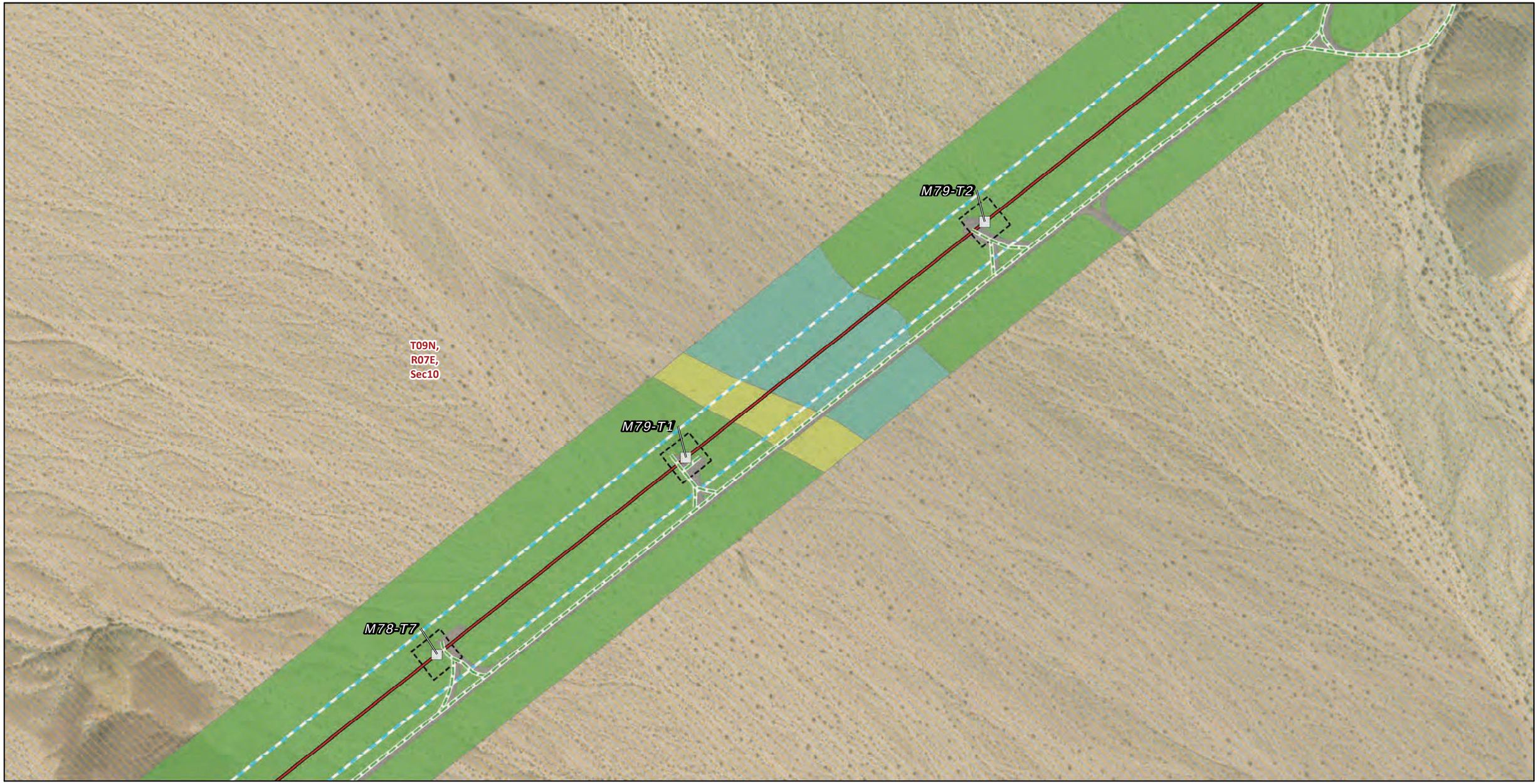


FIGURE 4
Vegetation and Land Cover
Segment 2

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Transmission Structures
- Existing Transmission Towers

Existing Access Roads
- Access Road

Transmission New Optical Ground Wire
- Overhead

Construction Areas
- Structure Work Area
- Right of Way

Land Cover Type
- Cheesebush - sweetbush scrub
- Creosote bush - white bursage scrub
- Creosote bush scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

N

Source: SCE, BLM, CDFW, ESRI

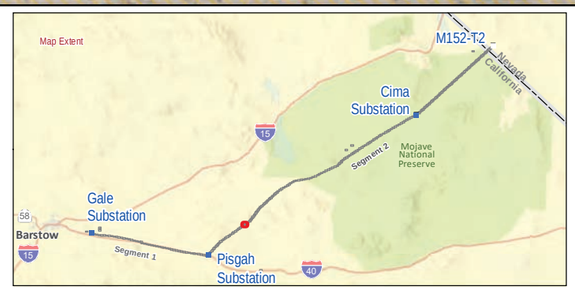
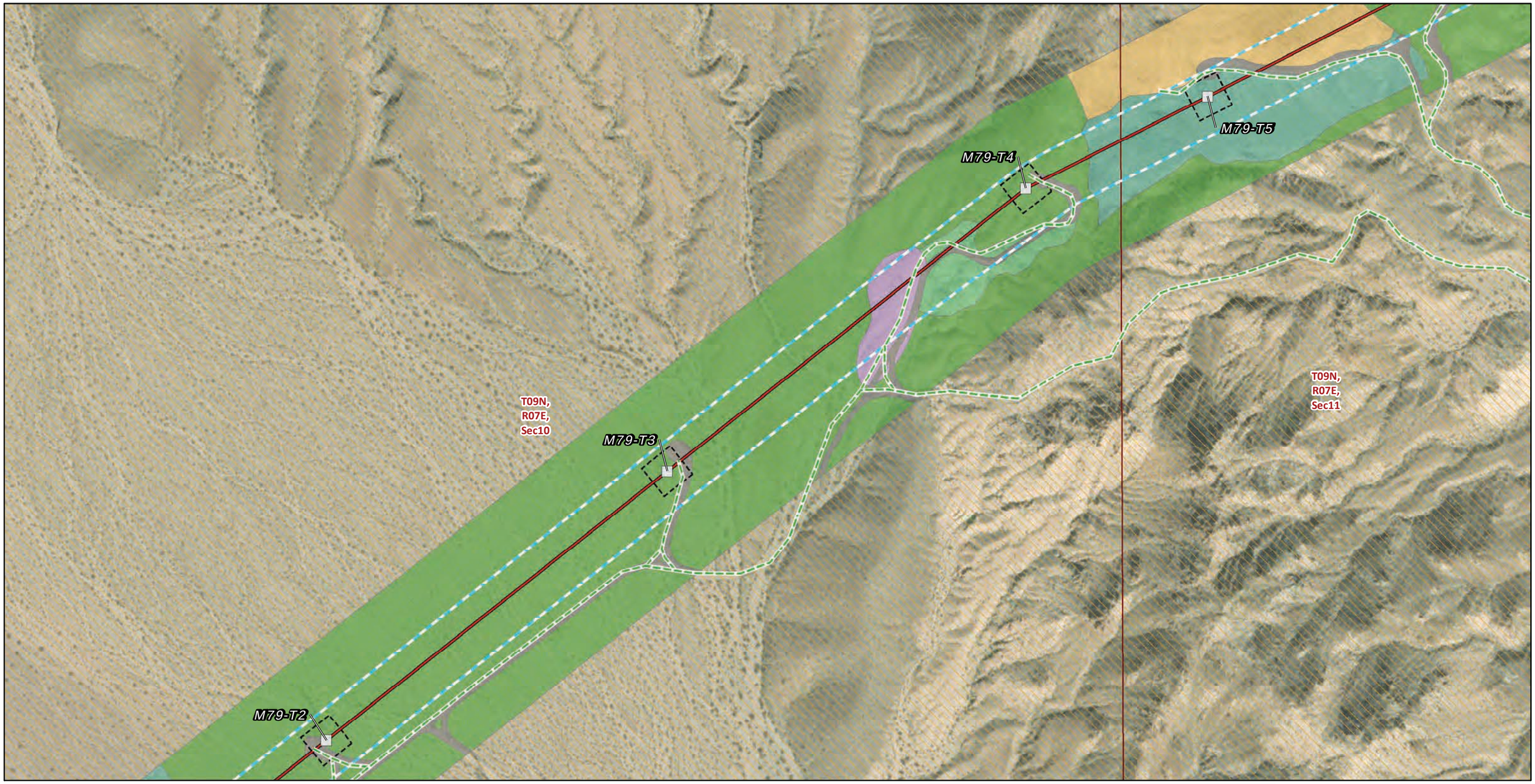


FIGURE 4
Vegetation and Land Cover
Segment 2

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Transmission Structures
- Existing Transmission Towers

Existing Access Roads
- Access Road

Transmission New Optical Ground Wire
- Overhead

Construction Areas
- Structure Work Area
- Right of Way

Land Cover Type
- Brittle bush scrub
- Creosote bush - white bursage scrub
- Creosote bush scrub
- Desert holly scrub
- Developed
- White bursage scrub

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

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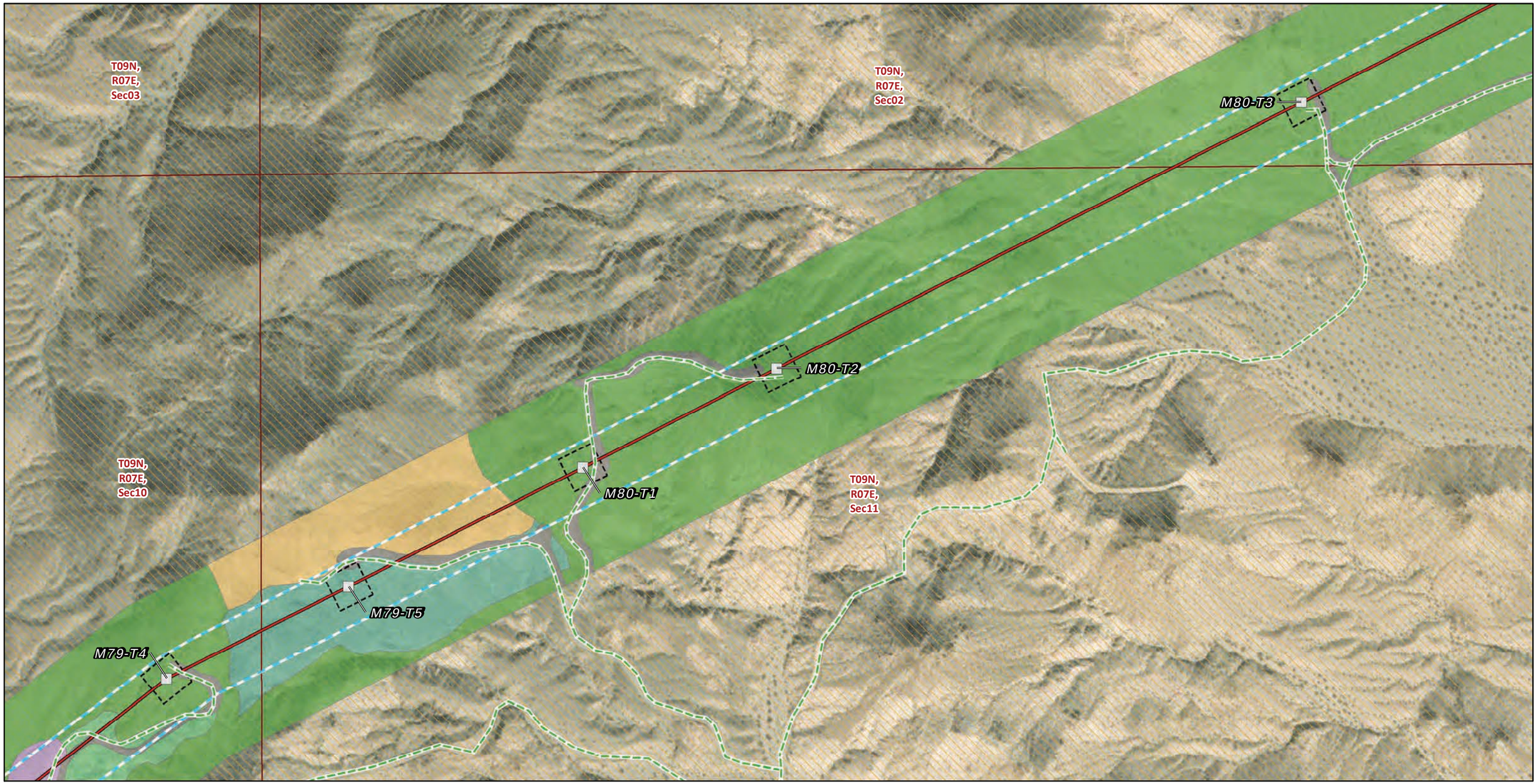
0 150 300
Feet

N

Source: SCE, BLM, CDFW, ESRI

FIGURE 4
Vegetation and Land Cover
Segment 2

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Transmission Structures
- Existing Transmission Towers

Existing Access Roads
- Access Road

Transmission New Optical Ground Wire
- Overhead

Construction Areas
- Structure Work Area
- Right of Way

Land Cover Type
- Brittle bush scrub
- Creosote bush - white bursage scrub
- Creosote bush scrub
- Desert holly scrub
- Developed
- White bursage scrub

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

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0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

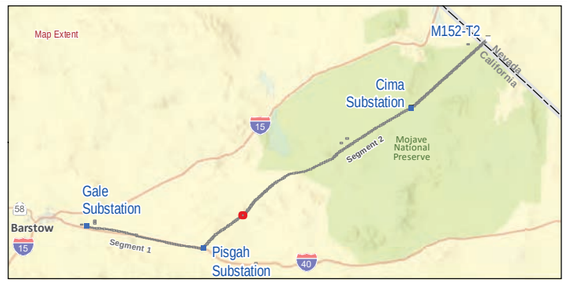
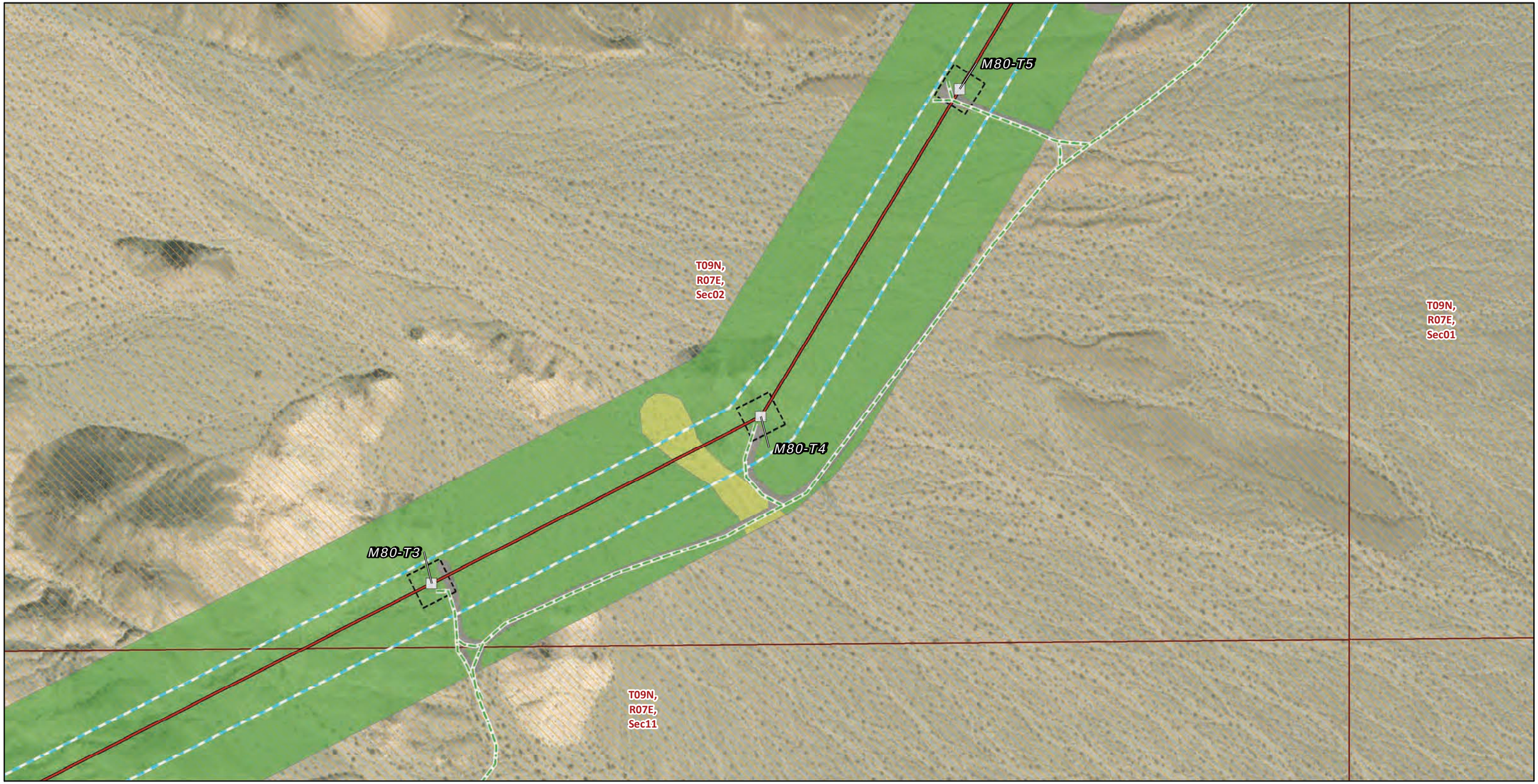


FIGURE 4
Vegetation and Land Cover
Segment 2

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Transmission Structures
- Existing Transmission Towers

Existing Access Roads
- Access Road

Transmission New Optical Ground Wire
- Overhead

Construction Areas
- Structure Work Area
- Right of Way

Land Cover Type
- Cheesebush - sweetbush scrub
- Creosote bush - white bursage scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

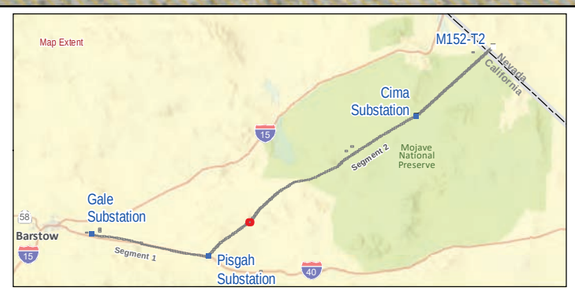
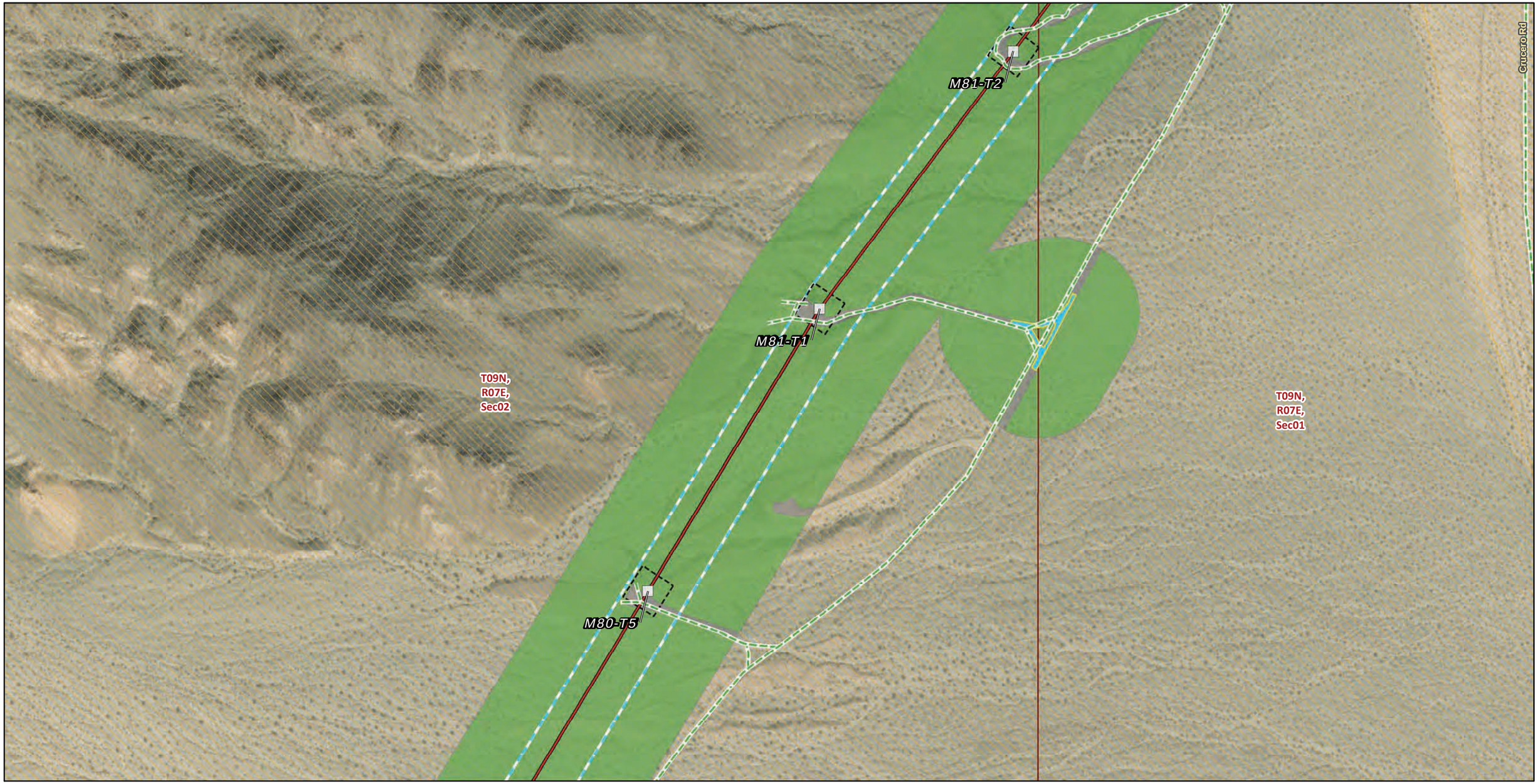


FIGURE 4
Vegetation and Land Cover
Segment 2

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Transmission Structures
- Existing Transmission Towers

Existing Access Roads
- Access Road

Transmission New Optical Ground Wire
- Overhead

Construction Areas
- Helicopter Landing Zone
- Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

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0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

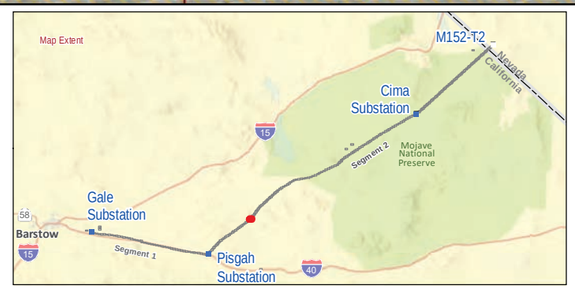
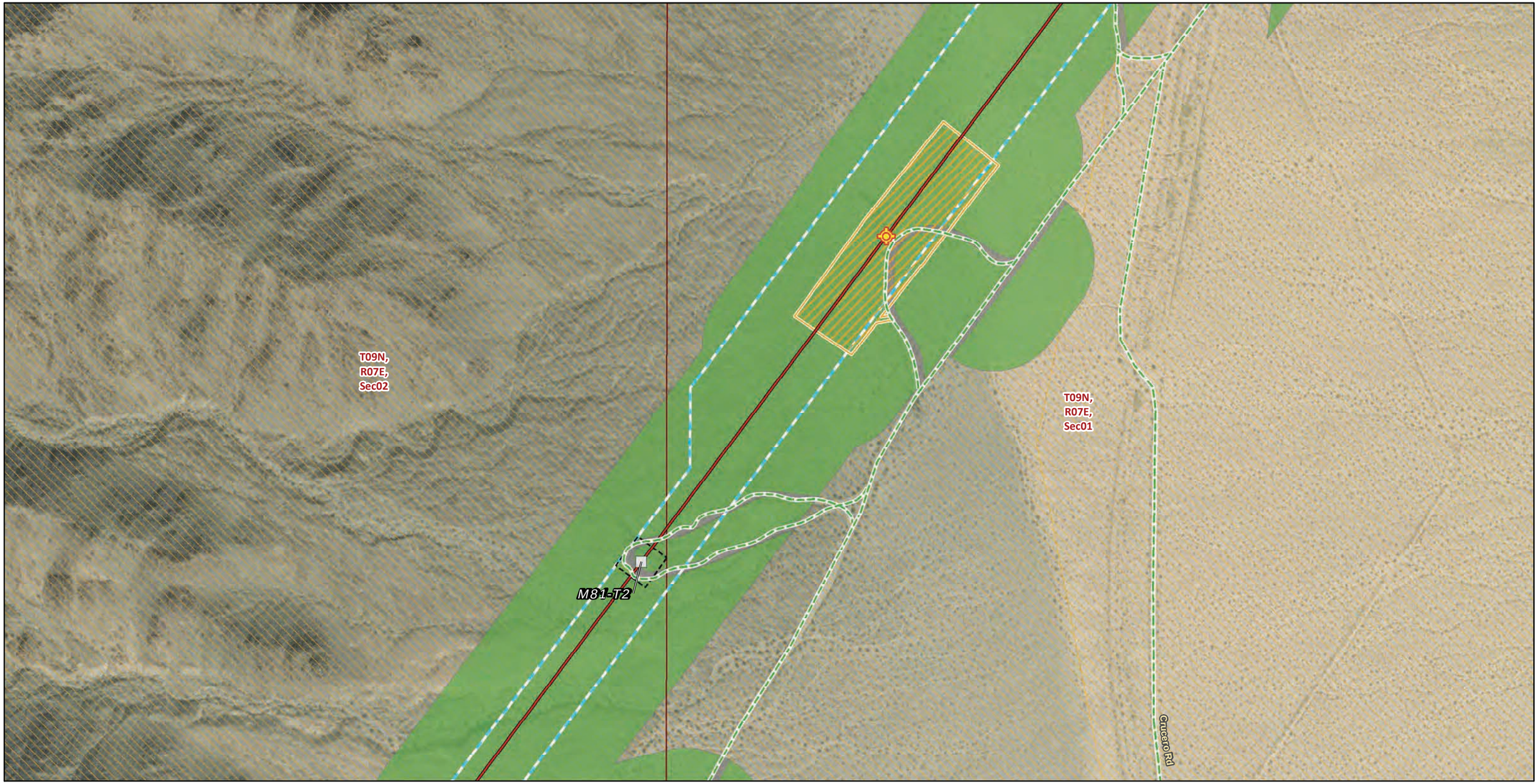


FIGURE 4
Vegetation and Land Cover
Segment 2

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Transmission Structures
- Splicing Tower Locations
- Existing Transmission Towers

Existing Access Roads
- Access Road

Transmission New Optical Ground Wire
- Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Developed

Land Ownership
- Bureau of Land Management

Public Land Survey System
- Township, Range and Section

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0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

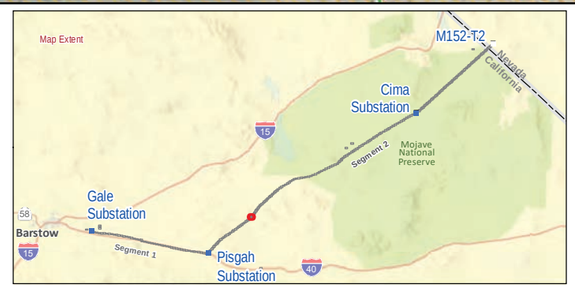
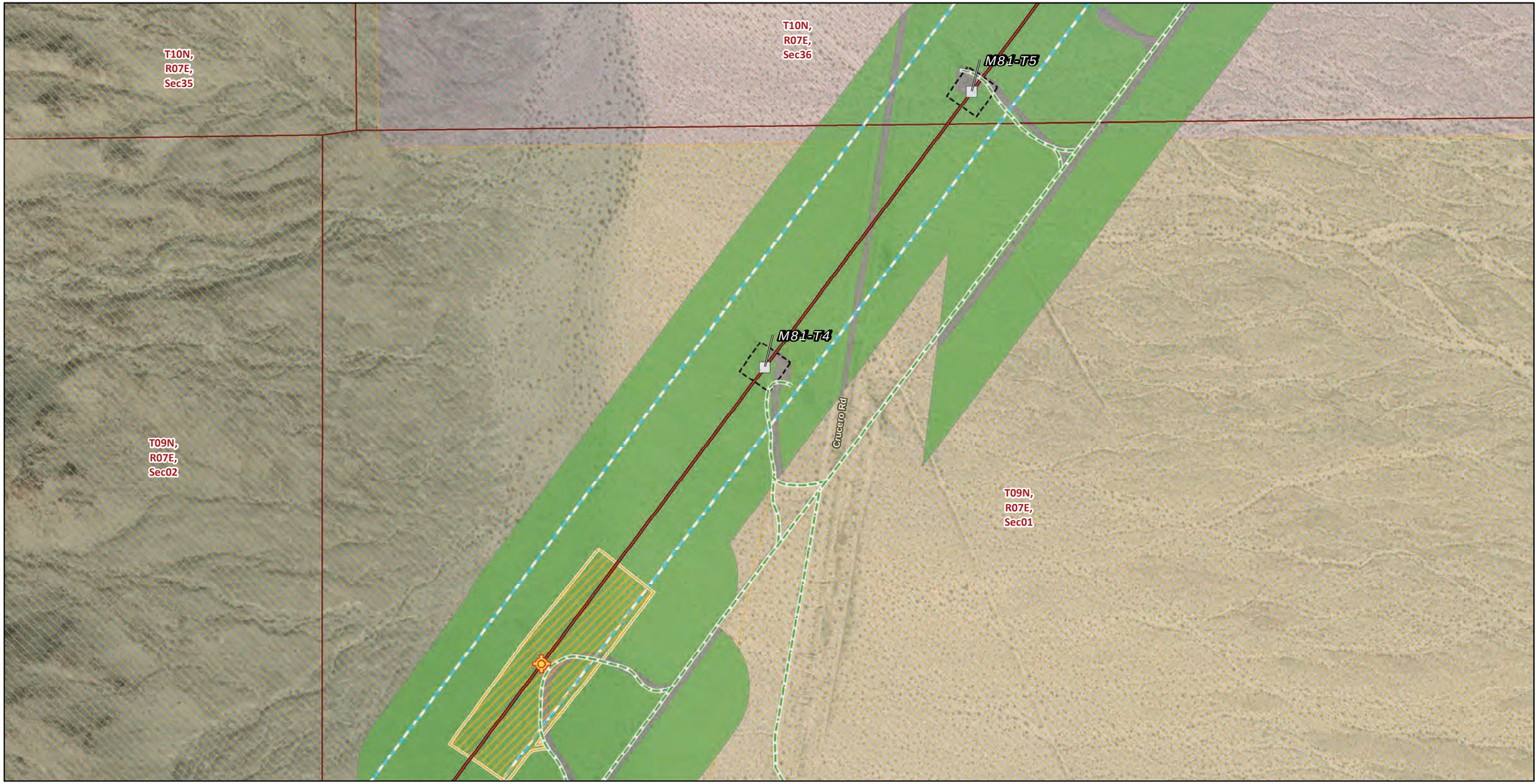


FIGURE 4
Vegetation and Land Cover
Segment 2

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Transmission Structures
- Splicing Tower Locations
- Existing Transmission Towers

Existing Access Roads
- Access Road

Transmission New Optical Ground Wire
- Overhead

Construction Areas
- Pulling, Stringing, Tensioning Site/Structure Work Area
- Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Developed

Land Ownership
- Bureau of Land Management
- CA State Lands

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

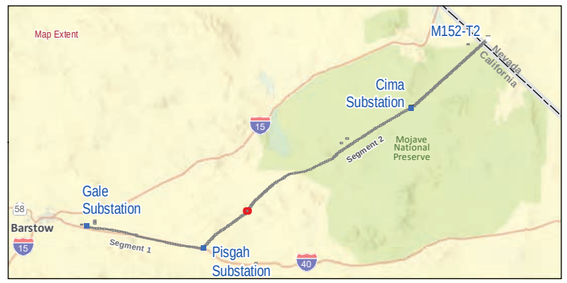


FIGURE 4
Vegetation and Land Cover
Segment 2

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project

Transmission Structures
- Existing Transmission Towers

Existing Access Roads
- Access Road

Transmission New Optical Ground Wire
- Overhead

Construction Areas
- Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Developed

Land Ownership
- Bureau of Land Management
- CA State Lands

Public Land Survey System
- Township, Range and Section

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0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

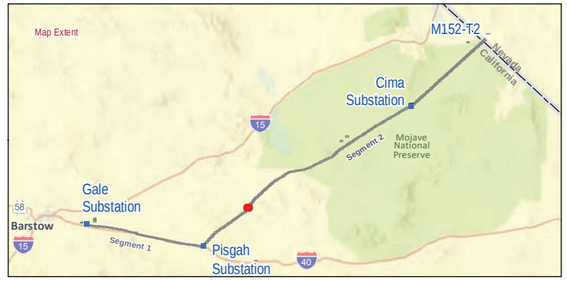
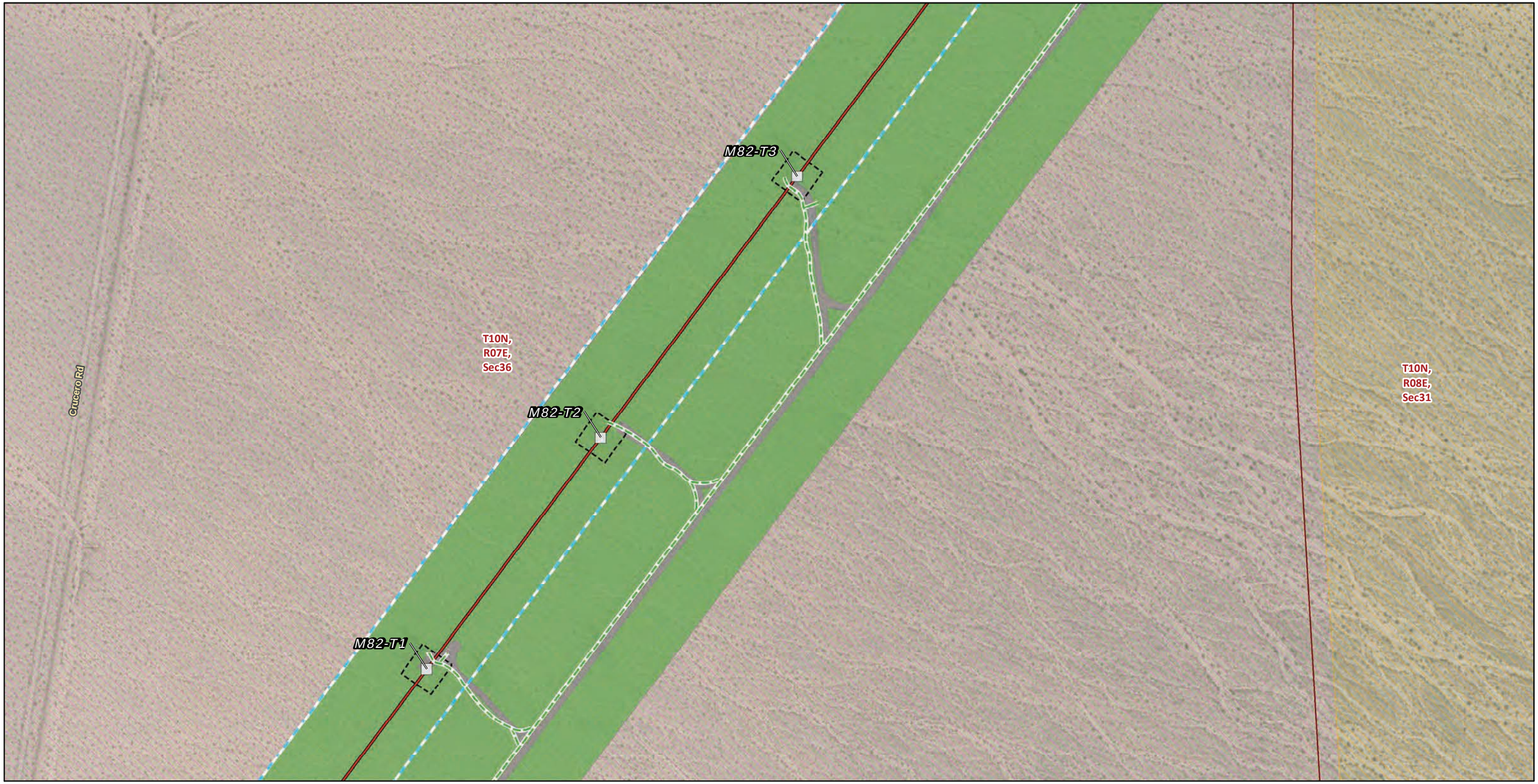


FIGURE 4
Vegetation and Land Cover
Segment 2

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Transmission Structures
- Existing Transmission Towers

Existing Access Roads
- Access Road

Transmission New Optical Ground Wire
- Overhead

Construction Areas
- Structure Work Area
- Right of Way

Land Cover Type
- Creosote bush - white bursage scrub
- Developed

Land Ownership
- Bureau of Land Management
- CA State Lands

Public Land Survey System
- Township, Range and Section

* Areas with no color fill are private land.

0 150 300
Feet

Source: SCE, BLM, CDFW, ESRI

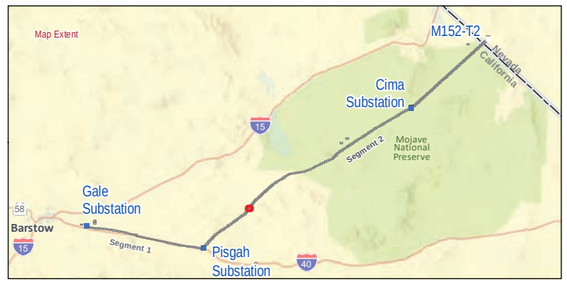
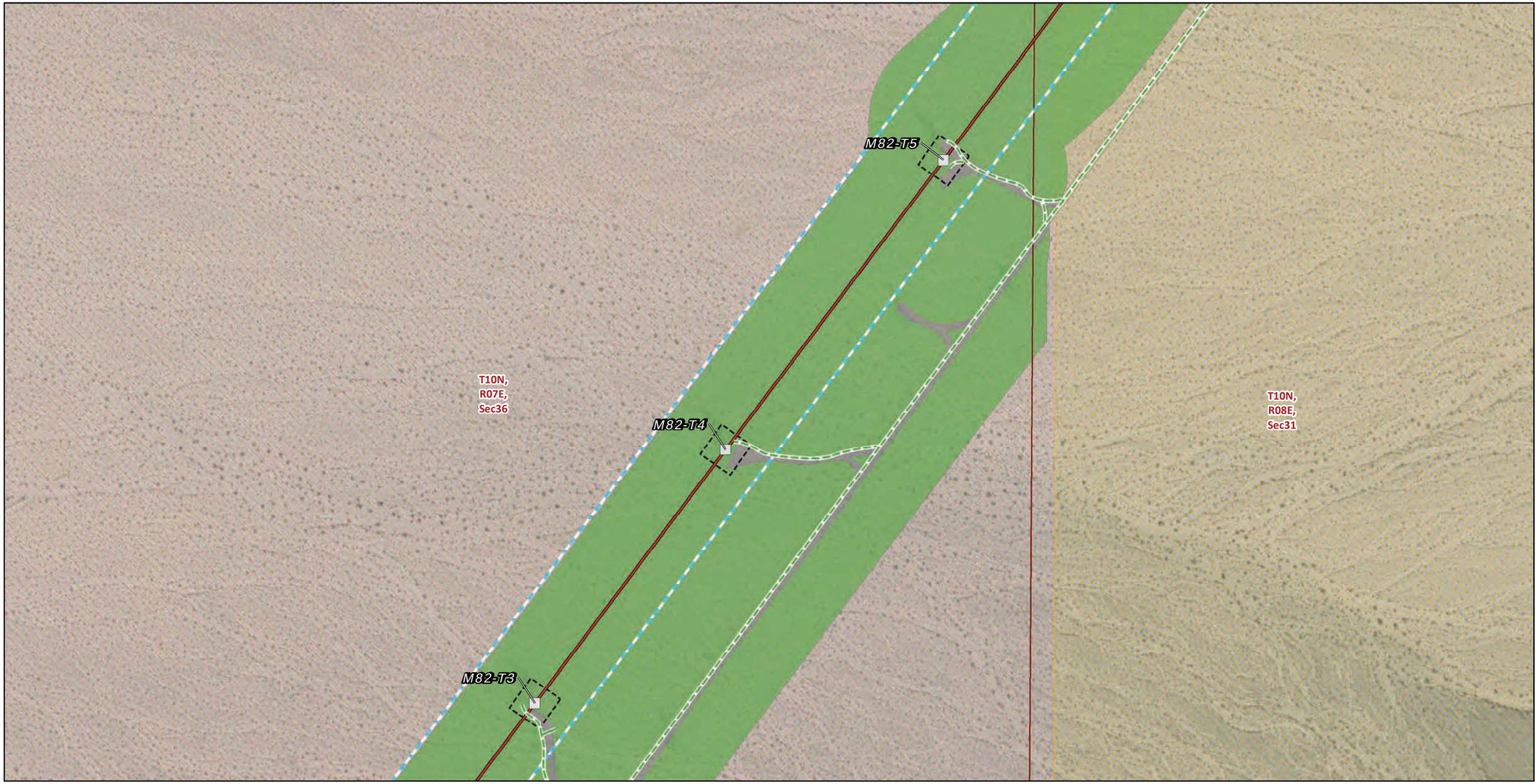


FIGURE 4
Vegetation and Land Cover
Segment 2

Southern California Edison
Lugo-Victorville 500 kV Transmission Line
Remedial Action Scheme Project



Transmission Structures
- Existing Transmission Towers

Existing Access Roads
- Access Road

Transmission New Optical Ground Wire
- Overhead

Construction Areas
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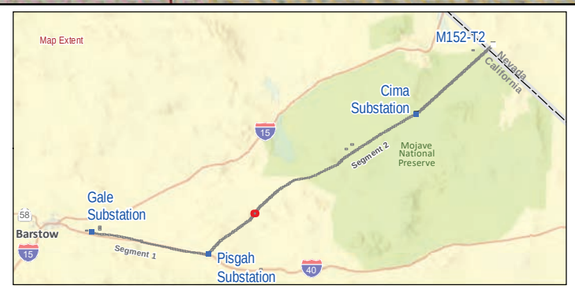
N

Source: SCE, BLM, CDFW, ESRI



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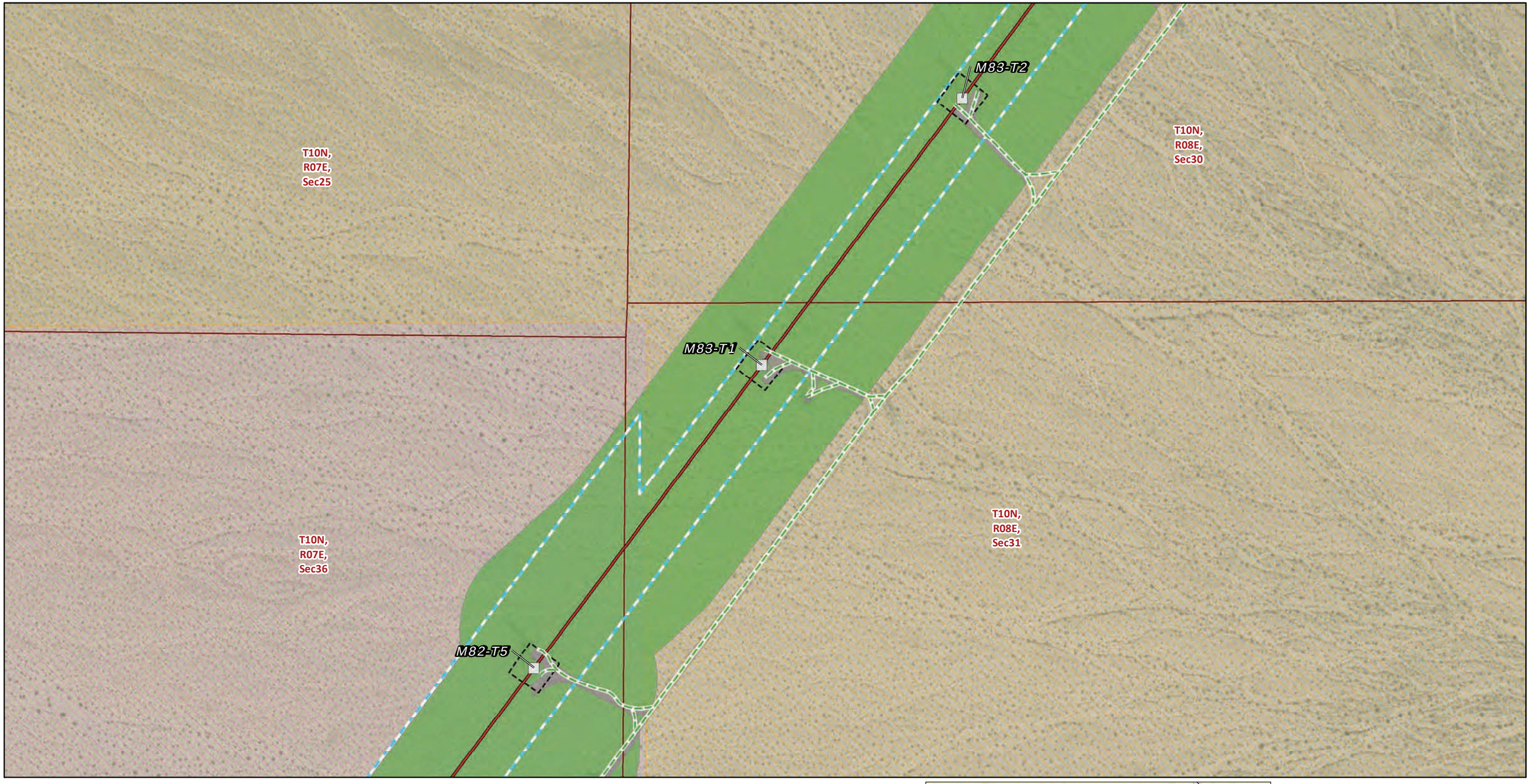
Remedial Action Scheme Project



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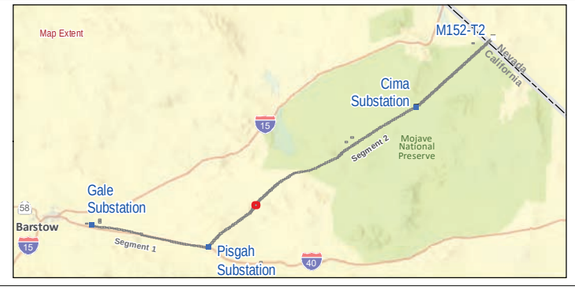

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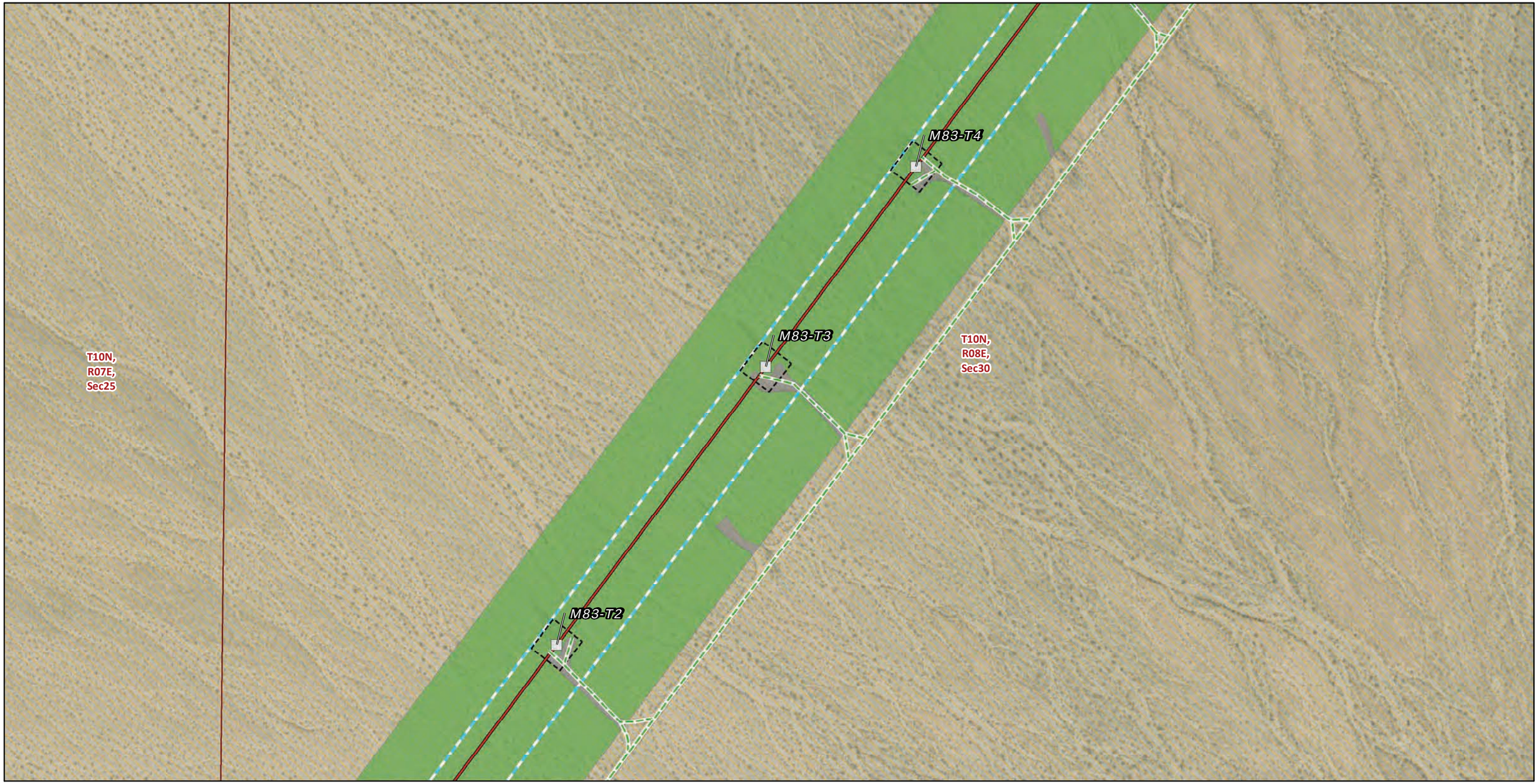

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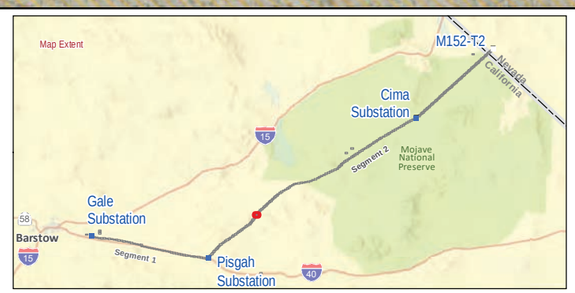

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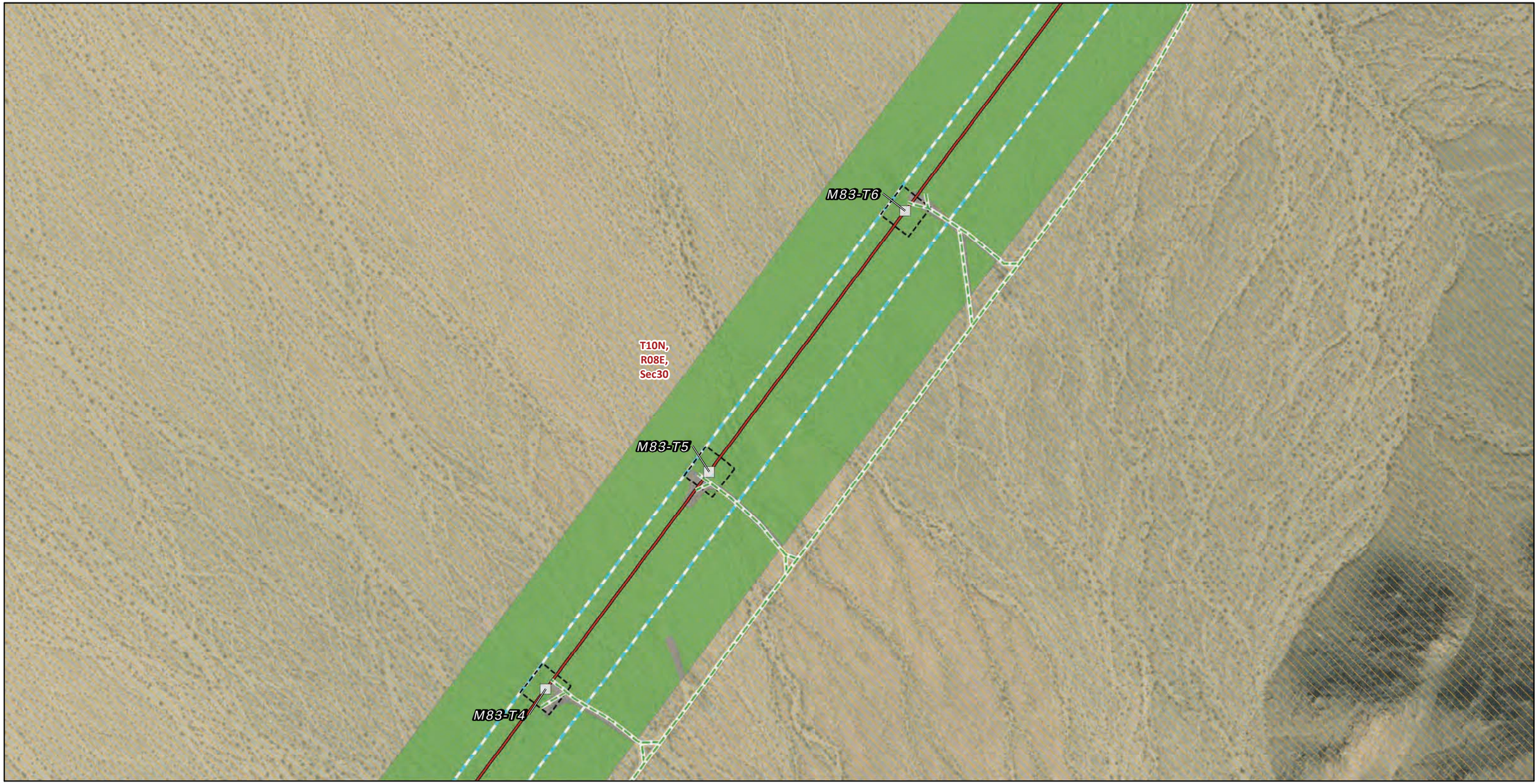

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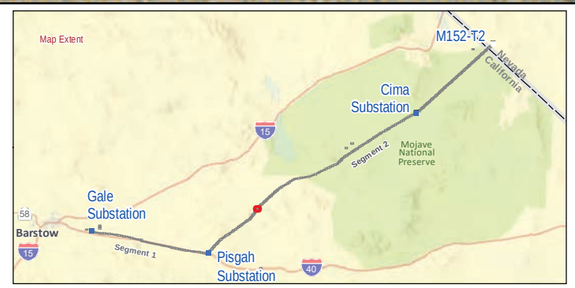

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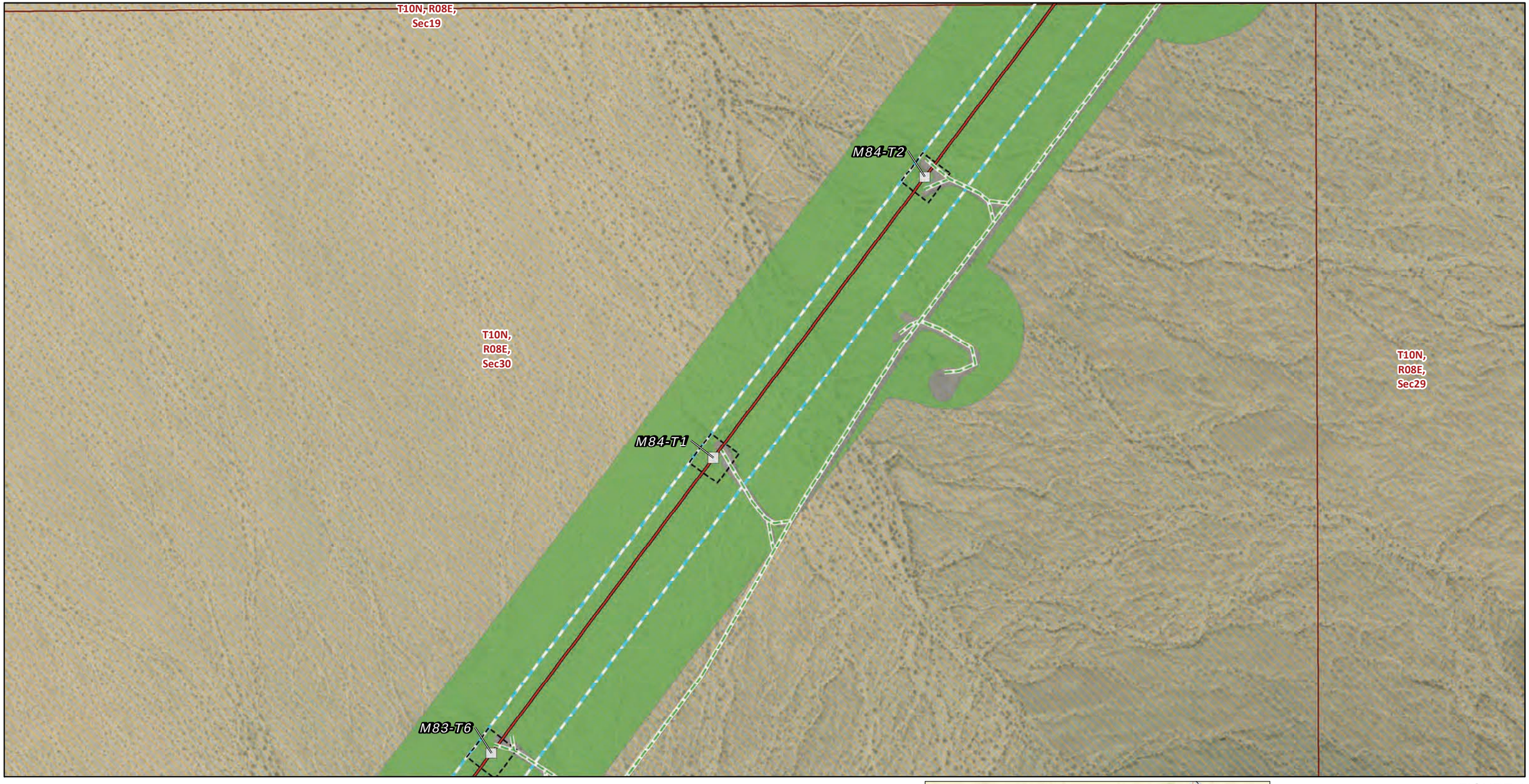

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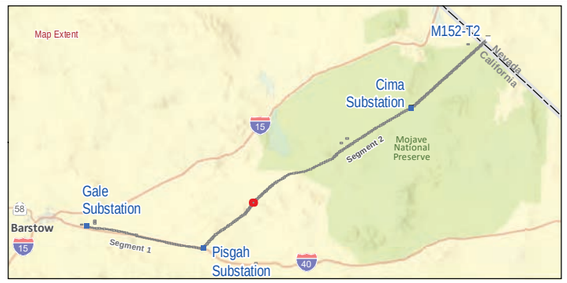

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