APPENDIX D

BIOLOGICAL RESOURCES TECHNICAL REPORTS

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BIOLOGICAL TECHNICAL REPORT

FALCON RIDGE SUBSTATION PROJECT, CITY OF FONTANA, SAN BERNARDINO COUNTY, CALIFORNIA

Prepared for

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August 23, 2010

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B	Special Status Plant Survey Report
C	Coastal California Gnatcatcher Survey Report
D	Burrowing Owl Survey Report
E	Special Status Mammal Trapping Report
F	Delhi Sands Flower-loving Fly Survey Report
G	Jurisdictional Delineation Report

1.0 INTRODUCTION

This Biological Technical Report has been prepared to support California Environmental Quality Act (CEQA) documentation for the proposed Falcon Ridge Substation Project (hereafter referred to as "the Proposed Project"). This information has been reported in accordance with accepted scientific and technical standards that are consistent with the requirements of the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG).

1.1 PROJECT LOCATION AND DESCRIPTION

The Proposed Project is located in the southwestern portion of the County of San Bernardino in the City of Fontana and in unincorporated San Bernardino County northwest of the City (Exhibit 1). The survey area for the Proposed Project is approximately 100 feet in diameter where new powerlines are proposed, and also includes alternative sites for a substation. The approximate 412-acre survey area is located on the U.S. Geological Survey (USGS) Devore, Guasti, and Fontana 7.5-minute quadrangle maps (Exhibit 2). The survey area is located east of Interstate 15 (I-15), south of Riverside Avenue, north of San Bernardino Avenue, and west of Locust Avenue (north of State Route 210 [SR-210]) and Cherry Avenue (south of SR-210) (Exhibit 3). Land uses in the immediate vicinity include industrial, commercial, residential, and open space. Existing easements for the Southern California Edison (SCE) powerlines occur within the survey area; the primary SCE powerline parallels I-15. The Proposed Project design has changed since the initiation of focused surveys in spring 2010 and preparation of this technical report. The survey area shown in this technical report is larger than the area of the Project that is currently proposed, but it reflects all areas surveyed for biological resources. The survey area in this technical report does not include the Alder Substation, six potential staging areas discussed in the Proponent's Environmental Assessment (PEA), and only includes a portion of the Preferred Substation Site and the Alternative Substation Site.

One named blueline stream, Etiwanda Creek, and an unnamed blueline stream are located in the survey area; Lytle Creek is located just east of the survey area. Topography in the survey area is relatively flat with elevations ranging from approximately 1,090 to 1,930 feet above mean sea level (msl). Soil types in the survey area include Hanford coarse sandy loam, Psamments and fluvents (frequently flooded), Soboba gravelly loamy sand, Soboba stony loamy sand, Tujunga loamy sand, and Tujunga gravelly loamy sand (USDA NRCS 2007) (Exhibit 4).

1.2 PROJECT DESCRIPTION

1.2.1 Proposed Project

The Proposed Project is construction of a new substation to meet forecasted electrical demands in the cities of Rancho Cucamonga, Fontana, Rialto, and the surrounding areas of unincorporated San Bernardino County. The preferred Project alternative would include the construction of a new 66/12 kilovolt (kV) distribution substation (Falcon Ridge Substation),

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Regional Location

Exhibit 1

Falcon Ridge Substation Project

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Etiwanda Substation

Not Surveyed
Survey Area
Etiwanda Substation
Alder Substation

Exhibit 2a
Exhibit 2b
Lytle Creek
Etiwanda Ave
Cherry Ave
Citrus Ave
Sierra Ave
Locust Street
Baseline Rd
Foothill Blvd
Merrill Ave
San Bernardino Ave
210
15

Local Vicinity

Exhibit 2a

Falcon Ridge Substation Project

N W E S

2,000 1,000 0 2,000 Feet

BonTerra CONSULTING

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Not Surveyed
Survey Area
Etiwanda Substation
Alder Substation

Exhibit 2b
Exhibit 2a
Lytle Creek
210
15
Baseline Rd
Foothill Blvd
Merrill Ave
San Bernardino Ave
Etiwanda Ave
Cherry Ave
Citrus Ave
Sierra Ave
Locust Street

Local Vicinity

Exhibit 2b

Falcon Ridge Substation Project

N W E S

2,000 1,000 0 2,000 Feet

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Map Book Key
Survey Area
Not Surveyed
Alder Substation
Etiwanda Substation

San Bernardino National Forest

A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
S

Sierra
Lytle Creek
North Locust Ave
East Etiwanda Creek
East Ave
Cherry Ave
Citrus Ave
Sierra Ave
Locust Ave
North Etiwanda Ave
Baseline Rd
Foothill Blvd
Merrill Ave
San Bernardino Ave
Valley Blvd
15
210
10

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Project Location

Exhibit 3

Falcon Ridge Substation Project

N W E S

4,000 2,000 0 4,000 Feet

BonTerra CONSULTING

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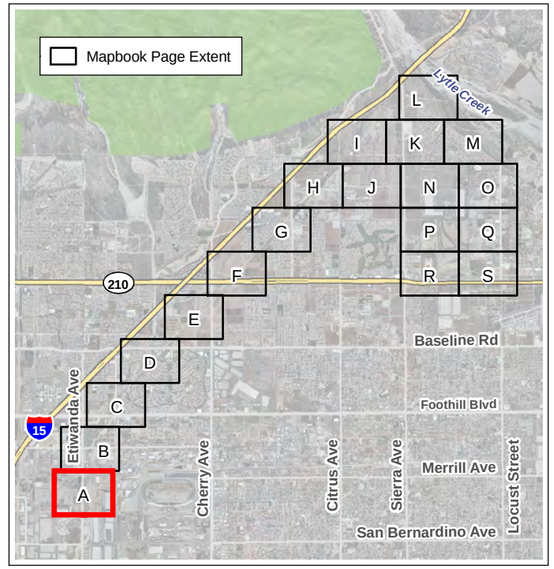
Survey Area

Soil Types

- HaC, Hanford Coarse Sandy Loam 2 to 9 Percent Slopes
- Ps - Psamments and Fluvents Frequently Flooded
- SoC - Soboba Gravelly Loamy Sand 0 to 9 Percent Slopes
- SpC - Soboba Stony Loamy Sand 2 to 9 Percent Slopes
- TuB - Tujunga Loamy Sand 0 to 5 Percent Slopes
- TvC - Tujunga Gravelly Loamy Sand 0 to 9 Percent Slopes
- W - Water



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Soils

Exhibit 4A

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

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Soils

Exhibit 4B

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

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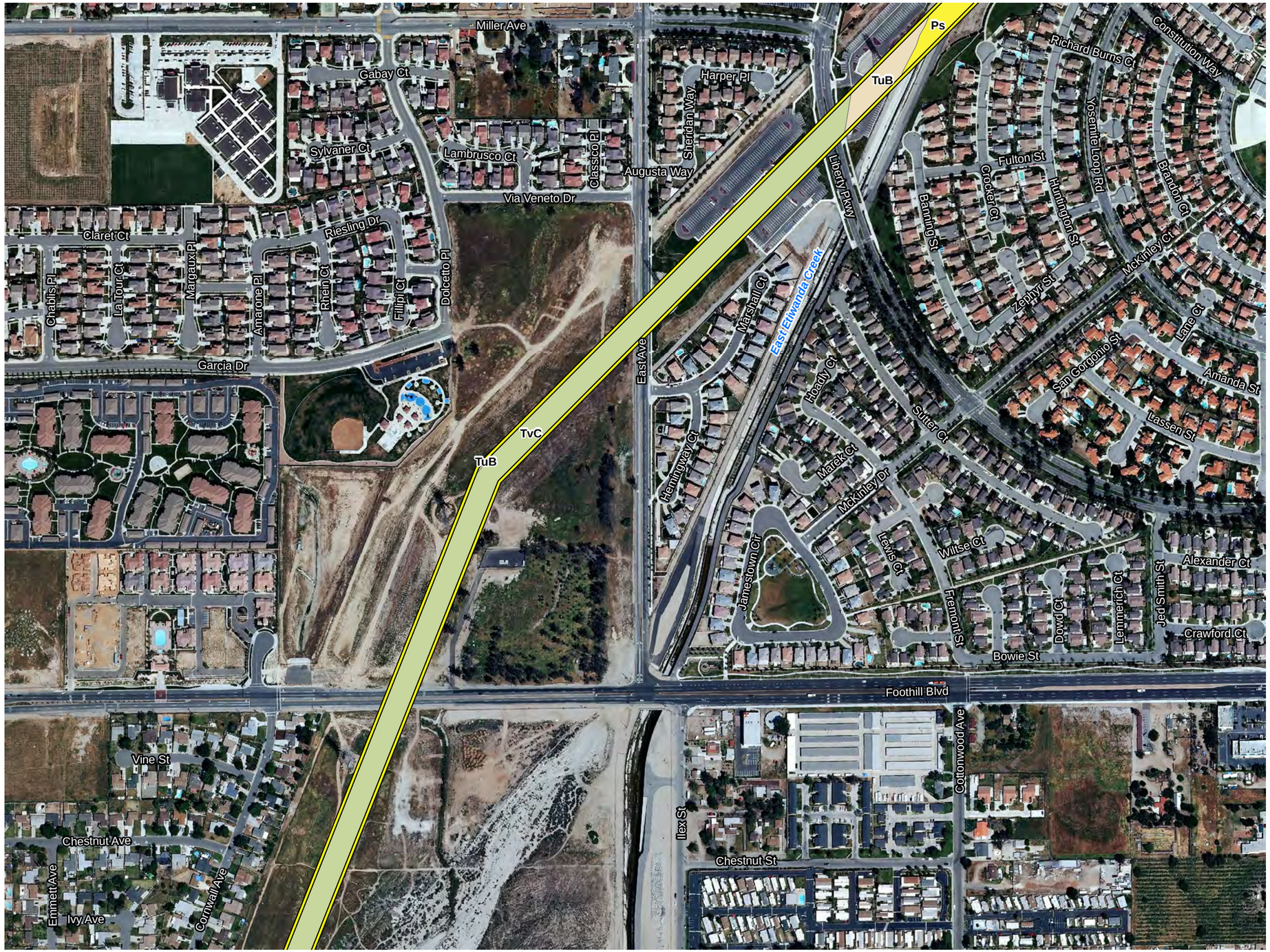
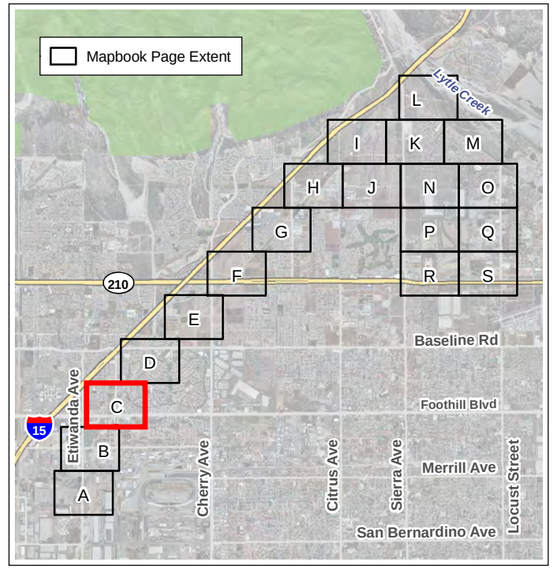


Survey Area

Soil Types

- HaC, Hanford Coarse Sandy Loam 2 to 9 Percent Slopes
- Ps - Psamments and Fluvents Frequently Flooded
- SoC - Soboba Gravelly Loamy Sand 0 to 9 Percent Slopes
- SpC - Soboba Stony Loamy Sand 2 to 9 Percent Slopes
- TuB - Tujunga Loamy Sand 0 to 5 Percent Slopes
- TvC - Tujunga Gravelly Loamy Sand 0 to 9 Percent Slopes
- W - Water



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Soils

Exhibit 4C

Falcon Ridge Substation Project

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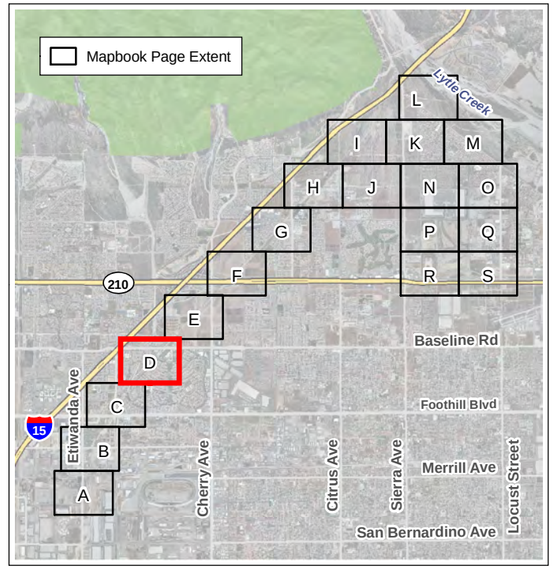
Survey Area

Soil Types

- HaC, Hanford Coarse Sandy Loam 2 to 9 Percent Slopes
- Ps - Psamments and Fluvents Frequently Flooded
- SoC - Soboba Gravelly Loamy Sand 0 to 9 Percent Slopes
- SpC - Soboba Stony Loamy Sand 2 to 9 Percent Slopes
- TuB - Tujunga Loamy Sand 0 to 5 Percent Slopes
- TvC - Tujunga Gravelly Loamy Sand 0 to 9 Percent Slopes
- W - Water



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Soils

Exhibit 4D

Falcon Ridge Substation Project

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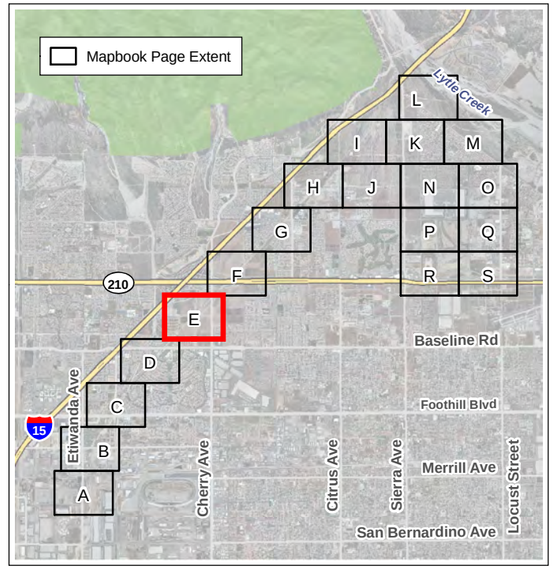
Survey Area

Soil Types

- HaC, Hanford Coarse Sandy Loam 2 to 9 Percent Slopes
- Ps - Psamments and Fluvents Frequently Flooded
- SoC - Soboba Gravelly Loamy Sand 0 to 9 Percent Slopes
- SpC - Soboba Stony Loamy Sand 2 to 9 Percent Slopes
- TuB - Tujunga Loamy Sand 0 to 5 Percent Slopes
- TvC - Tujunga Gravelly Loamy Sand 0 to 9 Percent Slopes
- W - Water



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Soils

Exhibit 4E

Falcon Ridge Substation Project

N W E S

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Feet

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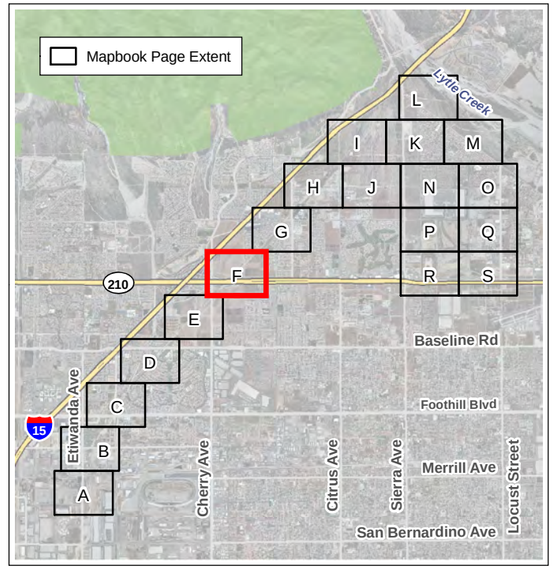
Survey Area

Soil Types

- HaC, Hanford Coarse Sandy Loam 2 to 9 Percent Slopes
- Ps - Psamments and Fluvents Frequently Flooded
- SoC - Soboba Gravelly Loamy Sand 0 to 9 Percent Slopes
- SpC - Soboba Stony Loamy Sand 2 to 9 Percent Slopes
- TuB - Tujunga Loamy Sand 0 to 5 Percent Slopes
- TvC - Tujunga Gravelly Loamy Sand 0 to 9 Percent Slopes
- W - Water



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Soils

Falcon Ridge Substation Project

Exhibit 4F

N W E S

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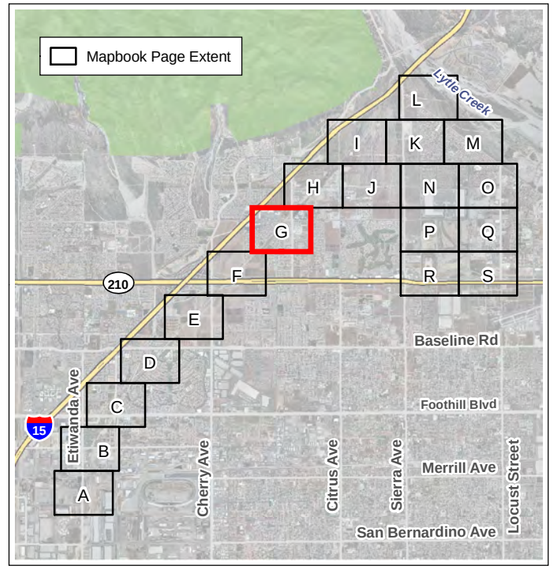
Survey Area

Soil Types

- HaC, Hanford Coarse Sandy Loam 2 to 9 Percent Slopes
- Ps - Psamments and Fluvents Frequently Flooded
- SoC - Soboba Gravelly Loamy Sand 0 to 9 Percent Slopes
- SpC - Soboba Stony Loamy Sand 2 to 9 Percent Slopes
- TuB - Tujunga Loamy Sand 0 to 5 Percent Slopes
- TvC - Tujunga Gravelly Loamy Sand 0 to 9 Percent Slopes
- W - Water



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Soils

Exhibit 4G

Falcon Ridge Substation Project

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Feet

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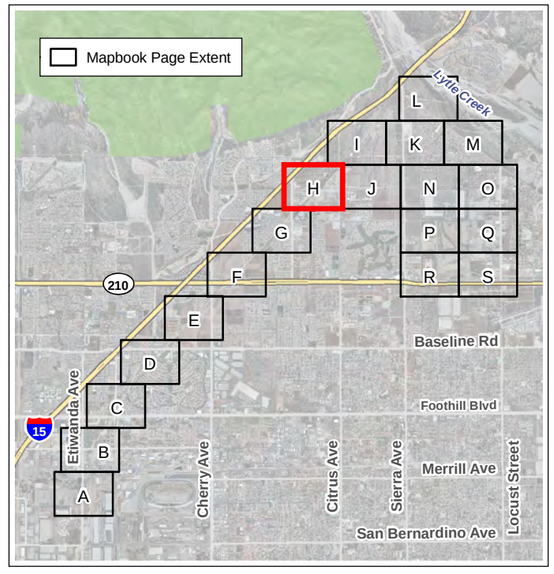
Survey Area

Soil Types

- HaC, Hanford Coarse Sandy Loam 2 to 9 Percent Slopes
- Ps - Psamments and Fluvents Frequently Flooded
- SoC - Soboba Gravelly Loamy Sand 0 to 9 Percent Slopes
- SpC - Soboba Stony Loamy Sand 2 to 9 Percent Slopes
- TuB - Tujunga Loamy Sand 0 to 5 Percent Slopes
- TvC - Tujunga Gravelly Loamy Sand 0 to 9 Percent Slopes
- W - Water



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Soils

Exhibit 4H

Falcon Ridge Substation Project

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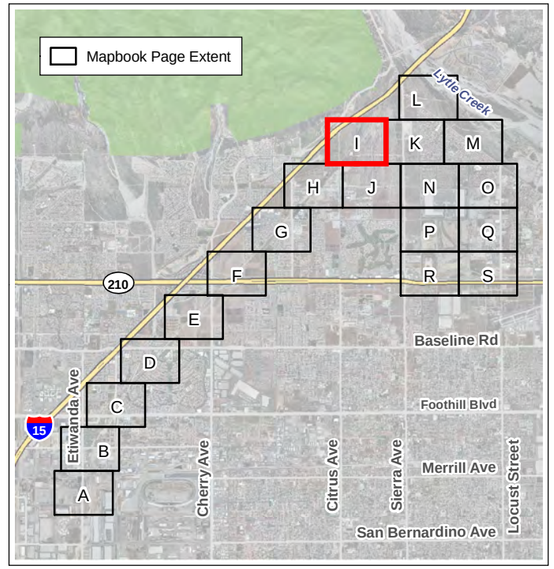
Survey Area

Soil Types

- HaC, Hanford Coarse Sandy Loam 2 to 9 Percent Slopes
- Ps - Psamments and Fluvents Frequently Flooded
- SoC - Soboba Gravelly Loamy Sand 0 to 9 Percent Slopes
- SpC - Soboba Stony Loamy Sand 2 to 9 Percent Slopes
- TuB - Tujunga Loamy Sand 0 to 5 Percent Slopes
- TvC - Tujunga Gravelly Loamy Sand 0 to 9 Percent Slopes
- W - Water



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Soils

Exhibit 4I

Falcon Ridge Substation Project

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Survey Area

Soil Types

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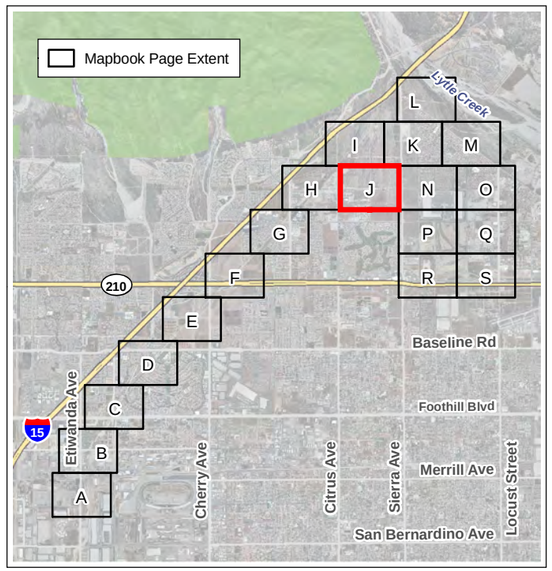
- TuB - Tujunga Loamy Sand 0 to 5 Percent Slopes
- TvC - Tujunga Gravelly Loamy Sand 0 to 9 Percent Slopes
- W - Water



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Soils

Exhibit 4J

Falcon Ridge Substation Project

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Survey Area

Soil Types

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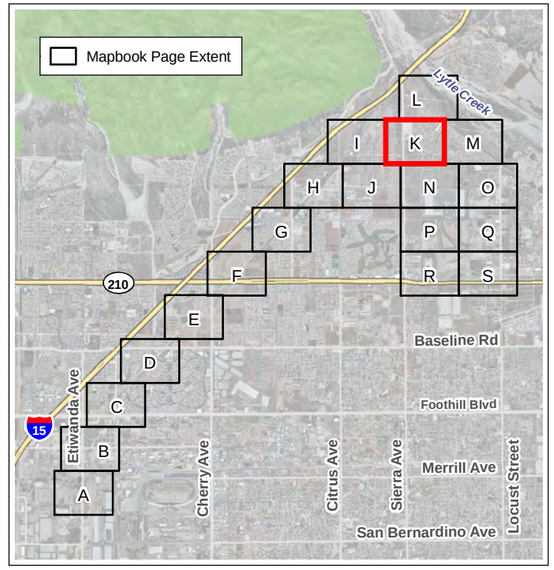
- TuB - Tujunga Loamy Sand 0 to 5 Percent Slopes
- TvC - Tujunga Gravelly Loamy Sand 0 to 9 Percent Slopes
- W - Water



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Soils

Falcon Ridge Substation Project

N W E S

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Feet

Exhibit 4K

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Soils

Exhibit 4L

Falcon Ridge Substation Project

N W E S

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Feet

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Survey Area

Soil Types

- HaC, Hanford Coarse Sandy Loam 2 to 9 Percent Slopes
- Ps - Psamments and Fluvents Frequently Flooded
- SoC - Soboba Gravelly Loamy Sand 0 to 9 Percent Slopes
- SpC - Soboba Stony Loamy Sand 2 to 9 Percent Slopes
- TuB - Tujunga Loamy Sand 0 to 5 Percent Slopes
- TvC - Tujunga Gravelly Loamy Sand 0 to 9 Percent Slopes
- W - Water

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Soils

Exhibit 4M

Falcon Ridge Substation Project

N W E S

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Feet

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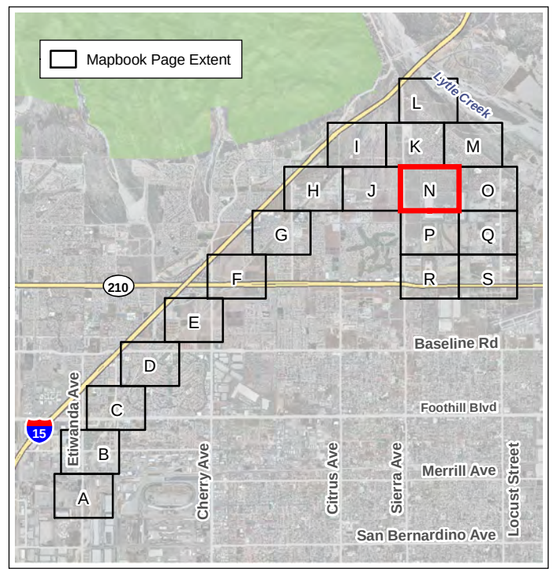
Survey Area

Soil Types

- HaC, Hanford Coarse Sandy Loam 2 to 9 Percent Slopes
- Ps - Psamments and Fluvents Frequently Flooded
- SoC - Soboba Gravelly Loamy Sand 0 to 9 Percent Slopes
- SpC - Soboba Stony Loamy Sand 2 to 9 Percent Slopes
- TuB - Tujunga Loamy Sand 0 to 5 Percent Slopes
- TvC - Tujunga Gravelly Loamy Sand 0 to 9 Percent Slopes
- W - Water



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Soils

Exhibit 4N

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

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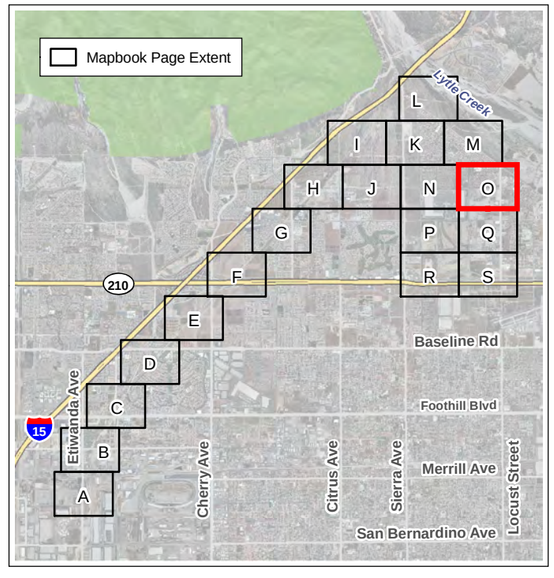
Survey Area

Soil Types

- HaC, Hanford Coarse Sandy Loam 2 to 9 Percent Slopes
- Ps - Psamments and Fluvents Frequently Flooded
- SoC - Soboba Gravelly Loamy Sand 0 to 9 Percent Slopes
- SpC - Soboba Stony Loamy Sand 2 to 9 Percent Slopes
- TuB - Tujunga Loamy Sand 0 to 5 Percent Slopes
- TvC - Tujunga Gravelly Loamy Sand 0 to 9 Percent Slopes
- W - Water



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Soils

Exhibit 4O

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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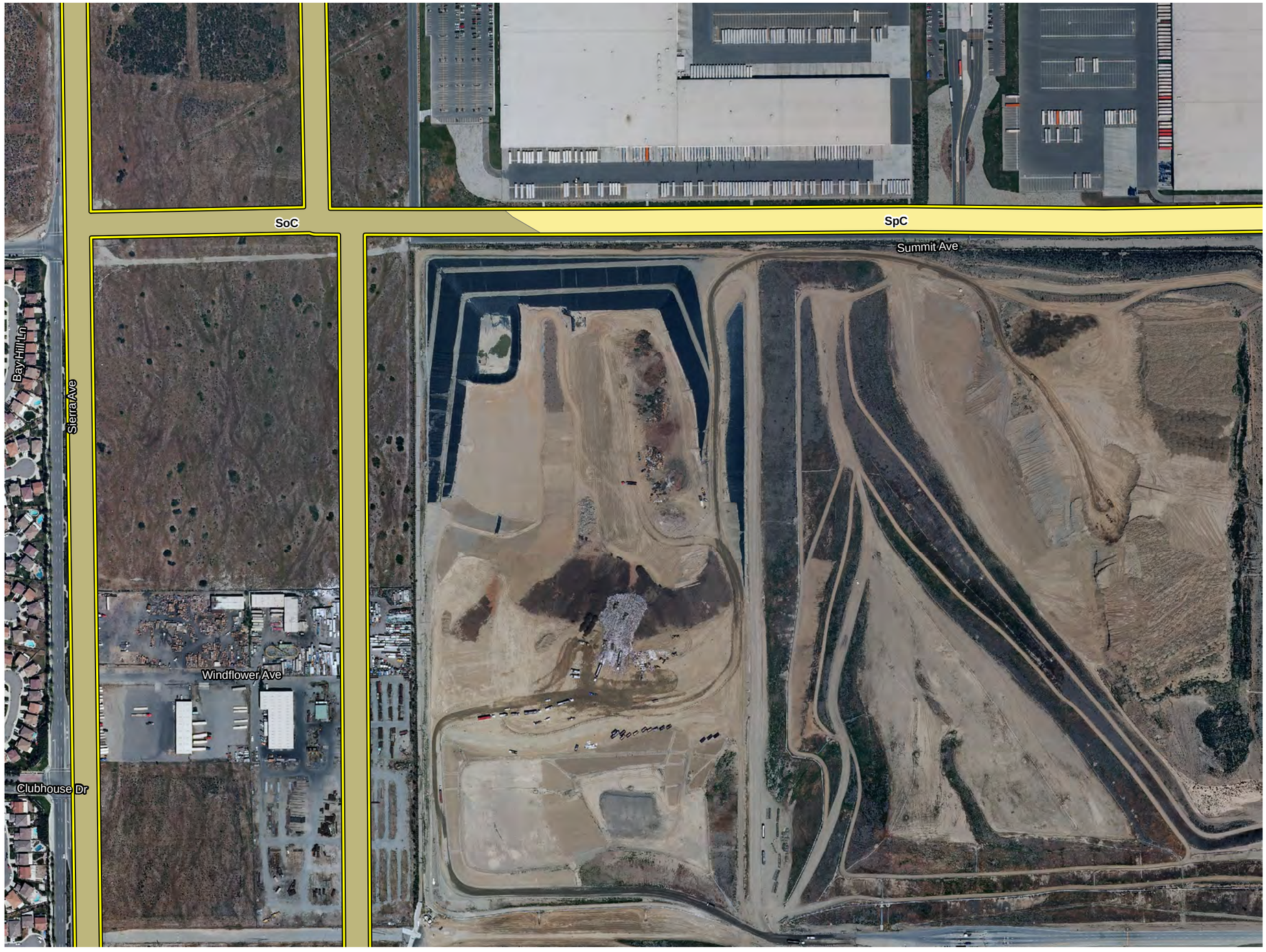
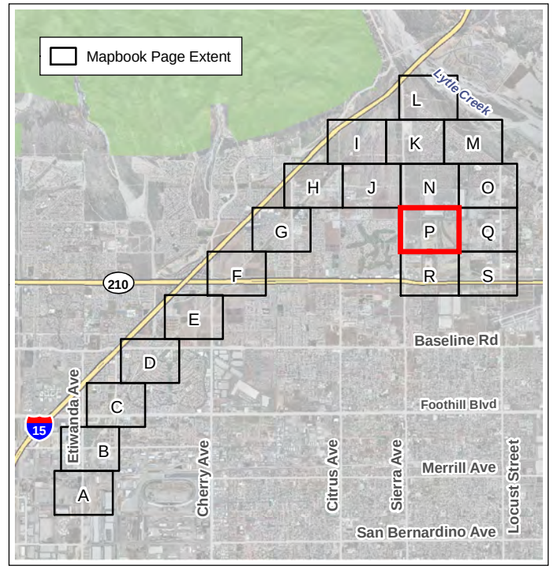


Survey Area

Soil Types

- HaC, Hanford Coarse Sandy Loam 2 to 9 Percent Slopes
- Ps - Psamments and Fluvents Frequently Flooded
- SoC - Soboba Gravelly Loamy Sand 0 to 9 Percent Slopes
- SpC - Soboba Stony Loamy Sand 2 to 9 Percent Slopes
- TuB - Tujunga Loamy Sand 0 to 5 Percent Slopes
- TvC - Tujunga Gravelly Loamy Sand 0 to 9 Percent Slopes
- W - Water



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Soils

Exhibit 4P

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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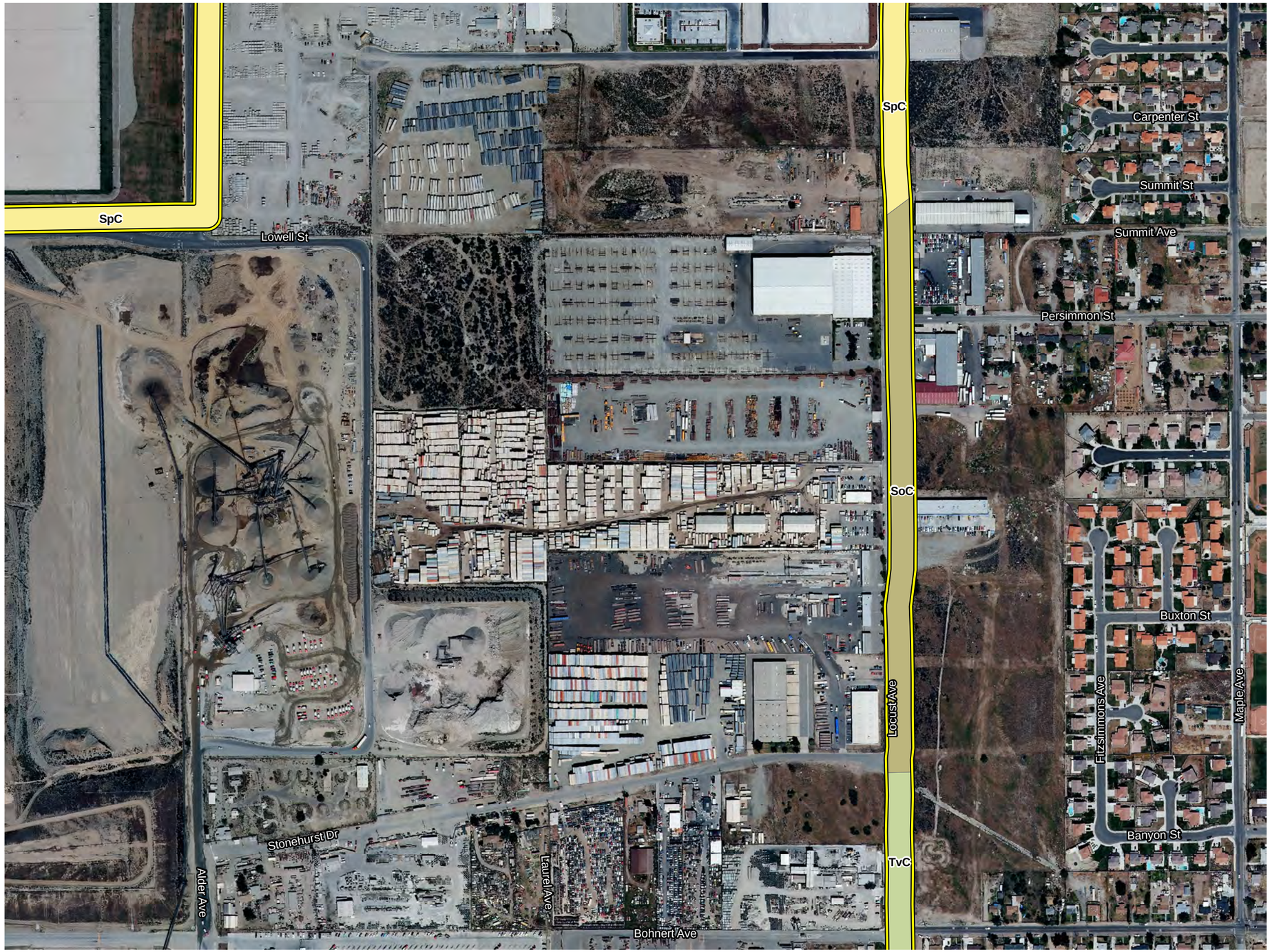
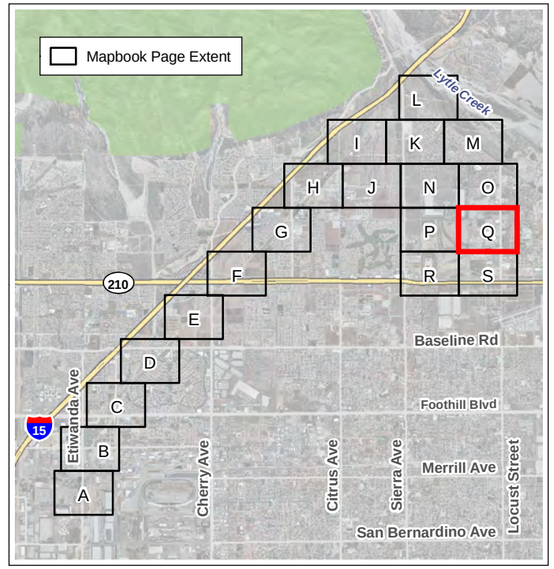


Survey Area

Soil Types

- HaC, Hanford Coarse Sandy Loam 2 to 9 Percent Slopes
- Ps - Psamments and Fluvents Frequently Flooded
- SoC - Soboba Gravelly Loamy Sand 0 to 9 Percent Slopes
- SpC - Soboba Stony Loamy Sand 2 to 9 Percent Slopes
- TuB - Tujunga Loamy Sand 0 to 5 Percent Slopes
- TvC - Tujunga Gravelly Loamy Sand 0 to 9 Percent Slopes
- W - Water



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Soils

Exhibit 4Q

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

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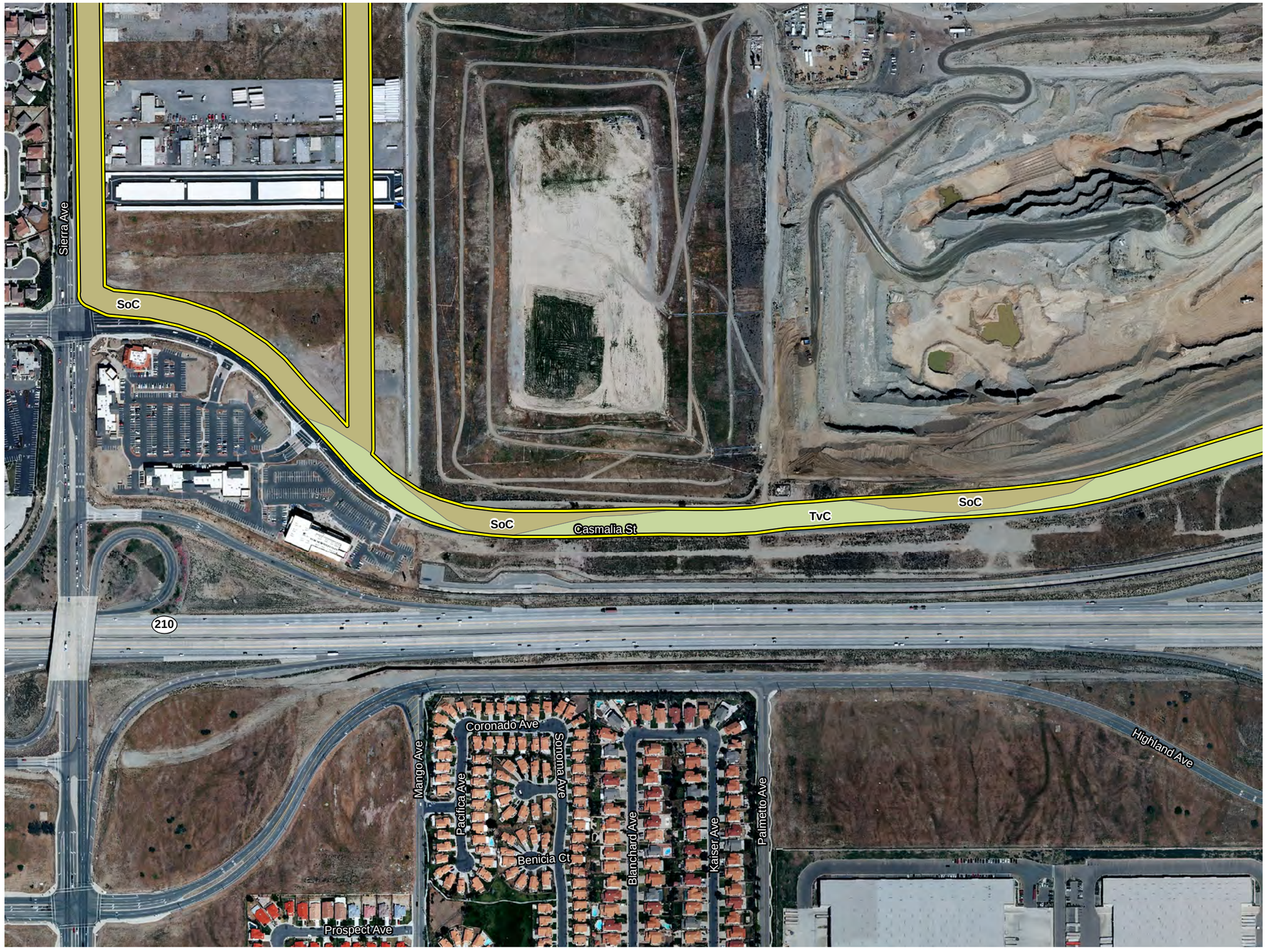
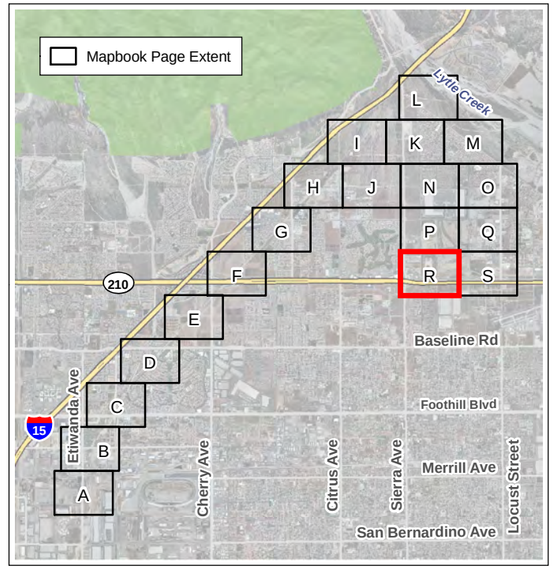


Survey Area

Soil Types

- HaC, Hanford Coarse Sandy Loam 2 to 9 Percent Slopes
- Ps - Psamments and Fluvents Frequently Flooded
- SoC - Soboba Gravelly Loamy Sand 0 to 9 Percent Slopes
- SpC - Soboba Stony Loamy Sand 2 to 9 Percent Slopes
- TuB - Tujunga Loamy Sand 0 to 5 Percent Slopes
- TvC - Tujunga Gravelly Loamy Sand 0 to 9 Percent Slopes
- W - Water



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Soils

Exhibit 4R

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

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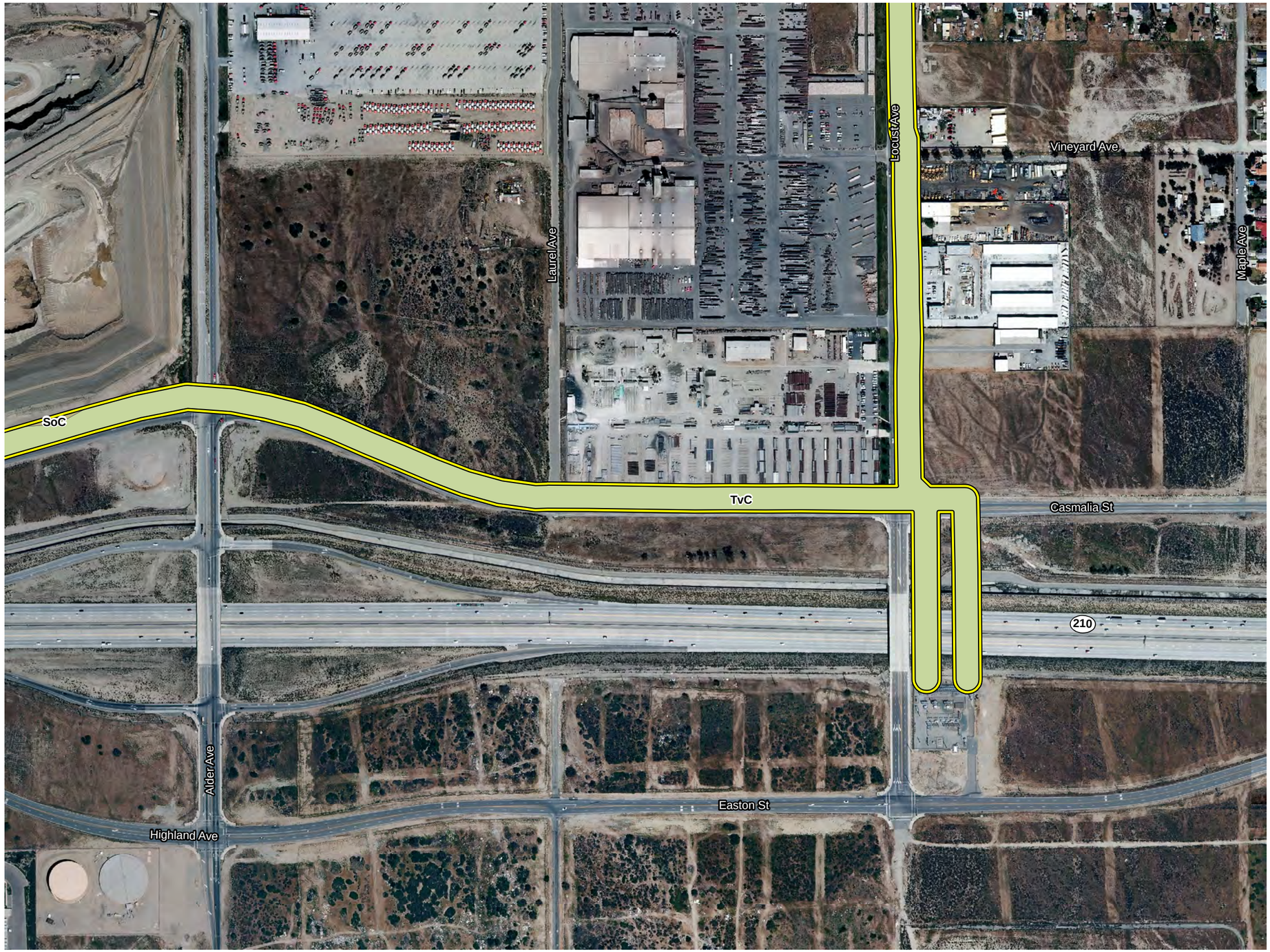
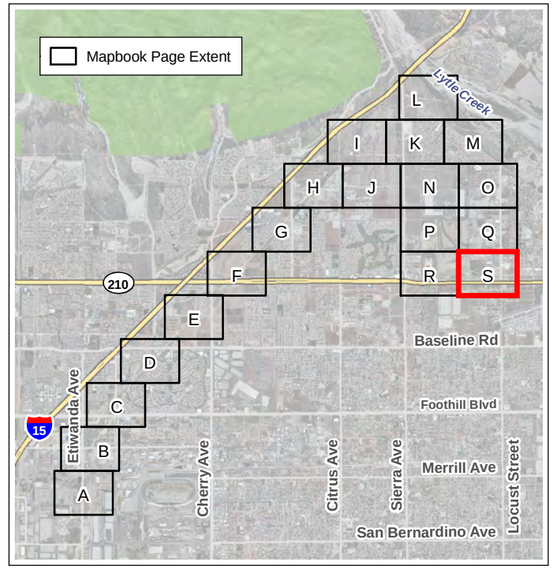


Survey Area

Soil Types

- HaC, Hanford Coarse Sandy Loam 2 to 9 Percent Slopes
- Ps - Psamments and Fluvents Frequently Flooded
- SoC - Soboba Gravelly Loamy Sand 0 to 9 Percent Slopes
- SpC - Soboba Stony Loamy Sand 2 to 9 Percent Slopes
- TuB - Tujunga Loamy Sand 0 to 5 Percent Slopes
- TvC - Tujunga Gravelly Loamy Sand 0 to 9 Percent Slopes
- W - Water



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Soils

Exhibit 4S

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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installation of two new 66 kV subtransmission source lines to connect the proposed Falcon Ridge Substation to the existing Etiwanda 220/66 kV Substation and Alder 66/12kV Substation. In order to accommodate the connection of the subtransmission source line, a 66 kV switchrack position at Alder Substation would need to be equipped and the operating and transfer bus would need to be extended. The Proposed Project would also include the construction of three new underground 12 kV distribution getaways, the installation of new telecommunications facilities at the proposed Falcon Ridge Substation, installation of telecommunications fiber optic cable on the proposed 66 kV subtransmission source lines, and modification of the existing telecommunications facilities at Etiwanda and Alder Substations to connect the proposed substation to the SCE telecommunications network. The two Project alternatives considered in the PEA (excluding the "no Project" alternative) are described in more detail below.

Project Alternative 1: Falcon Ridge 66/12 kV Substation Project

The preferred alternative proposes a new 66/12 kV, unattended, automated, low-profile 56 mega-volt ampere (MVA) substation that would require a parcel of land approximately 3 acres in size. This Project alternative would include the following elements:

- Installation of a 66 kV switchrack, two 66/12 kV 28 MVA transformers, a 12 kV switchrack, and two 12 kV 4.8 Megavolt Amperes Reactive (MVAR) capacitor banks.
- Installation of two new 66 kV subtransmission source lines to connect the proposed Falcon Ridge Substation to the existing Etiwanda 220/66 kV Substation and Alder 66/12 kV Substation.
- One new 66 kV subtransmission source line that would be approximately 9 miles in length and that would connect to the existing Etiwanda 220/66 kV Substation.
- One new 66 kV subtransmission source line that would be approximately 3 miles in length and that would connect to the existing Alder 66/12 kV Substation.
- Construction of three new underground 12 kV distribution getaways.
- Replacement of an estimated four existing subtransmission poles with three new subtransmission wood poles and one new Light Weight Steel (LWS) pole.
- Approximately six new wood poles, 244 new LWS poles, and 50 new Tubular Steel Poles (TSPs), which would be installed to accommodate the two new 66 kV subtransmission source lines that would serve the proposed Falcon Ridge Substation from the existing Alder 66/12 kV and Etiwanda 220/66 kV Substations.
- A 66 kV switchrack position at Etiwanda Substation that would need to be equipped, a 66 kV switchrack position at Alder Substation that would need to be equipped, and an extension of the operating and transfer bus.

- Installation of new telecommunications facilities at the Falcon Ridge Substation, installation of telecommunications fiber optic cable on the proposed 66 kV subtransmission source lines, and modifications of the existing telecommunications facilities at the Etiwanda 220/66 kV and Alder 66/12 kV Substations to connect the proposed substation to the SCE telecommunications network.

This Project alternative would provide the following benefits:

- Initially provide 56 MVA of additional transformer capacity to serve the Electrical Needs Area[1];

- Improve distribution system operational flexibility and increase reliability by providing the ability to transfer electrical demand between distribution substations within the Electrical Needs Area;

- Serve future electrical demand through the construction of a substation that could be increased to 112 MVA of capacity; and

- Improve subtransmission system operational flexibility and increase reliability within the Electrical Needs Area by creating two new 66 kV subtransmission lines that would connect to the existing Etiwanda 220/66 kV and Alder 66/12 kV Substations.

Project Alternative 2: A New 115/12 kV Substation Project

Project Alternative 2 proposes a new 115/12 kV unattended, automated, low-profile 56 MVA substation. This alternative would include the following elements:

- Installation of a 115 kV switchrack, two 115/12 kV 28 MVA transformers, a 12 kV switchrack, and two 12 kV 4.8 MVAR capacitor banks.

- Installation of two new 115 kV subtransmission source lines to connect the proposed substation to the Shandin 115/12 kV Substation and the Pepper 115/12 kV Substation.

- One new 115 kV subtransmission line, approximately 11 miles in length, that would connect to the existing Shandin 115/12 kV Substation.

- One new 115 kV subtransmission line, approximately 9 miles in length, that would connect to the existing Pepper 115/12 kV Substation.

- Construction of three new 12 kV underground distribution getaways.

[1] The Electrical Needs Area for the Proposed Project encompasses portions of the cities of Rancho Cucamonga, Fontana, Rialto, and the surrounding areas of unincorporated San Bernardino County.

- Installation of telecommunications facilities at the proposed substation and telecommunications cable to and modification of the existing telecommunications facilities at Shandin 115/12 kV and Pepper 115/12 kV Substations that would connect the proposed substation to the SCE telecommunications network.

This Project alternative would provide the following benefits:

- Initially provide 56 MVA of additional transformer capacity to serve the Electrical Needs Area;

- Serve future electrical demand through the construction of a substation that could be increased to 112 MVA of capacity; and

- Improve subtransmission system operational flexibility and increase reliability within the Electrical Needs Area by creating two new 115 kV subtransmission lines that would connect to the existing Shandin 115/12 kV and Pepper 115/12 kV Substations.

1.2.2 Project Components

Two potential substation location alternatives and potential subtransmission source line routes that would connect to the new substation from the existing Alder Substation and Etiwanda Substation were considered. These alternative sites and routes are discussed below.

The Proposed Project is planned to be operational in June 2014 to ensure that safe and reliable electric service is available to serve customer electrical demand.

Substation Site Alternatives Considered

Preferred Substation Site

The Preferred Substation Site is located on an approximate 7.5-acre vacant parcel currently owned by SCE. The parcel is located south of Casa Grande Avenue, east of Sierra Avenue, north of Summit Avenue, and adjacent to SCE's existing transmission right-of-way in the City of Fontana. The parcel is triangular in shape and is bound by SCE's existing transmission right-of-way to the north and west; an industrial distribution center to the east; and vacant land to the south. SCE would establish vehicular access to the Preferred Substation Site from Sierra Avenue by construction of a paved driveway.

Alternative Substation Site

The Alternative Substation Site is located on a 9.6-acre privately owned vacant parcel. The parcel is located on the southeastern corner of Casa Grande Avenue and Sierra Avenue in the City of Fontana. The parcel is bound by Casa Grande Avenue to the north, Sierra Avenue to the west, a vacant parcel owned by SCE to the south, and SCE's existing transmission right-of-way

to the east. SCE would establish vehicular access to the Alternative Substation Site from Sierra Avenue by construction of a paved driveway.

Subtransmission Line Route Alternatives Considered

The Alder 66/12 kV Substation and Etiwanda 220/66 kV Substation are the nearest existing substations to both the Preferred and Alternative Substation Sites; both have sufficient capacity to serve as source-line substations for the Project. The Proposed Project would include two new subtransmission source lines to connect the new substation with these two existing substations to help ensure maximum reliability and system operational flexibility under various system conditions.

Preferred Subtransmission Source Line Route

This 12-mile long alternative combines the Alder Source Line Route A with the Etiwanda Source Line Route A. The Alder Source Line Route A would travel approximately 600 feet west of the Alder Substation on existing structures and then go north on new structures, spanning the SR-210 and paralleling Locust Avenue. At the intersection of Locust Avenue and West Casmalia Street, the line would extend west along West Casmalia Street until it intersects with Mango Avenue. It would then extend north along the future extension of Mango Avenue to the substation site. Etiwanda Source Line Route A would exit the Etiwanda Substation to the east, travel underground for approximately 1,300 feet, and then extend above ground to the northeast until it intersects with South Highland Avenue. The route would be diverted around the I-15/SR-210 interchange before continuing northeast to Summit Avenue. Approximately ¼-mile north of Summit Avenue, it would then extend east to the substation site.

Alternative Subtransmission Source Line Route

This 13-mile long alternative combines the Alder Source Line Route B with the Etiwanda Source Line Route A. The Alder Source Line Route B would travel north of the Alder Substation, spanning the SR-210 and paralleling Locust Avenue. At the intersection of Locust Avenue and Casa Grande Drive, the line would extend west along Casa Grande Drive until it intersects with North Alder Avenue. It would then extend south along Alder Avenue until it intersects with Summit Avenue. It would move west along Summit Avenue to the end of the street. Then, it would extend north along the future extension of Mango Avenue to the substation site.

Proposed Telecommunications Route

The Proposed Telecommunications Route would connect the substation to both the Alder and Etiwanda Substations. The proposed fiber optic cable route would generally follow the path of the Alder Source Line Route A and the Etiwanda Source Line Route A, with portions above ground and portions underground.

Etiwanda and Alder Substations Associated Work

To accommodate the 66 kV subtransmission source line connection at the Etiwanda Substation, a position of the 66 kV switchback will be equipped with two 66 kV circuit breakers, four 66 kV group-operated disconnect switches, a 66 kV underground getaway, and two protection relays.

To accommodate the 66 kV subtransmission source line connection at the Alder Substation, one position of the 66 kV operating and transfer bus will be extended to the east. The new 66 kV position will be equipped with one 66 kV circuit breaker, three 66 kV group-operated disconnect switches, an overhead 66 kV getaway, and three protection relays.

Staging Areas

One or more temporary staging areas would be established for the Proposed Project. Six potential staging areas, ranging in size from 100 square feet to 5 acres, are considered in the PEA.

1.3 REGIONAL ENVIRONMENTAL SETTING

The survey area is located on the floor of the San Bernardino Valley at the base of the San Gabriel and San Bernardino Mountains; Cajon Canyon separates these two mountain ranges and is located north of the survey area. The Angeles National Forest is located to the northwest of the survey area (west of Cajon Canyon), while the San Bernardino National Forest is located northeast of the survey area (east of Cajon Canyon). Cajon Wash and Lytle Creek are large watercourses that extend from these mountains and merge east of the survey area. Lytle Creek is located approximately 0.5 mile east of Riverside Avenue, the confluence of Lytle Creek and Cajon Wash is located approximately 1.5 mile east of Riverside Avenue and Locust Avenue. Lytle Creek continues to the Santa Ana River, which is approximately 9.5 miles southeast of the survey area. Etiwanda Creek, a blueline stream in the southwestern portion of the survey area, is an unchannelized stream (though bound by development) that extends from Foothill Boulevard south to Interstate 10 (I-10); Etiwanda Creek is channelized both upstream and downstream of this creek segment, and there is a segment of the channel that is parallel to this natural creek segment.

1.3.1 Climate

The climate of the San Bernardino Valley is Mediterranean with cool wet winters (including frost) and hot dry summers, strong seasonal winds, and clear skies (SBCVB 2009). In the summer months, the average temperature ranges from 50 degrees Fahrenheit (°F) to the high 90s, and in the winter months the average temperature is ranges from the 30s to 60s°F (San Bernardino County 2008). The Santa Ana Winds, warm dry air blowing from the mountains toward the coast, are particularly strong in this area and increase the wildfire danger in the foothill areas during the autumn months. The San Bernardino Valley receives most of its rain, an average of almost 15 inches, between December and February (SBCVB 2009).

2.0 SURVEY METHODOLOGIES

The data provided in this report is derived from general and focused surveys of the survey area conducted by BonTerra Consulting in spring/summer 2010. Due to Project design changes that occurred following Project initiation, the survey area was revised while the focused surveys were in progress. Therefore, surveys were initiated later in some new additional areas and the timing of focused surveys was staggered for different portions of the survey area. However, with the additional surveys, the survey area will be adequately surveyed for each species described below.

BonTerra Consulting conducted a literature search to identify special status plants, wildlife, and habitats known to occur in the vicinity of the survey area. Sources reviewed include the California Native Plant Society's (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPS 2010, Devore, San Bernardino North, San Bernardino South, Cucamonga Peak, Guasti, Fontana, Cajon, Telegraph Peak, and Silverwood Lake quadrangles), the CDFG's California Natural Diversity Database (CNDDB) (CDFG 2010a, same quadrangles), and compendia of special status species published by the USFWS and CDFG.

2.1 VEGETATION MAPPING AND GENERAL PLANT SURVEYS

Vegetation mapping and general plant surveys were conducted on March 9 and June 21, 2010, by BonTerra Consulting Senior Botanist Sandra Leatherman. The purpose of the surveys was to describe the vegetation present in the survey area; the first survey's purpose was to evaluate the habitats' potential to support special status species. All plant species observed were recorded in field notes and are listed in Table A-1 of Appendix A.

Plant species were identified in the field or collected for later identification. Plants were identified using taxonomic keys in Hickman (1993), Munz (1974), Abrams (1923, 1944, 1951), and Abrams and Ferris (1960). Taxonomy follows Hickman (1993) or current scientific journals for scientific and common names. Vegetation was mapped in the field on an aerial photograph at a scale of 1 inch equals 200 feet (1″=200′). Nomenclature for vegetation types generally follows that of *The Vegetation Classification and Mapping Program: List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database* (CDFG 2003), although the most dominant native vegetation type in the survey area is best characterized using *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986).

2.2 GENERAL WILDLIFE SURVEYS

General observations of wildlife were noted during all focused surveys of the survey area in spring/summer 2010, as described below. In addition, a general wildlife survey was conducted concurrent with vegetation mapping on June 21, 2010, by BonTerra Consulting Senior Biologist Amber Oneal. All wildlife species observed were recorded in field notes and are listed in Table A-2 of Appendix A.

During the surveys, each vegetation type was evaluated for its potential to support special status species that are known or expected to occur in the region. Active searches for reptiles and amphibians included lifting, overturning, and carefully replacing rocks and debris. Birds were identified by visual and auditory recognition. Surveys for mammals were conducted during the day and included searching for and identifying diagnostic sign including scat, footprints, scratch-outs, dust bowls, burrows, and trails. Taxonomy and nomenclature for wildlife generally follows Stebbins (2003) for amphibians and reptiles, American Ornithologists' Union (2009) for birds, and Baker et al. (2003) for mammals.

2.3 FOCUSED SURVEYS

2.3.1 Special Status Plant Species

Special status plant surveys were conducted following the *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFG 2009). Due to changes in the Project description after plant surveys had been completed, the special status plant surveys were not conducted on part of the survey area that is shown as "Not Surveyed" (Exhibit 5N). These areas occur in the Preferred and Alternative Substation Sites and will be surveyed next spring.

Prior to conducting the field surveys, reference populations of Plummer's mariposa lily (*Calochortus plummerae*), Parry's spineflower (*Chorizanthe parryi* var. *parryi*), slender-horned spineflower (*Dodecahema leptoceras*), and Santa Ana River woollystar (*Eriastrum densifolium* ssp. *sanctorum*) were monitored to confirm their flowering status and to verify that the surveys were conducted during the appropriate blooming period for these species. Plummer's mariposa lily was monitored in Fontana and observed flowering on May 27, 2010. Parry's spineflower was monitored in Fontana and observed flowering on April 15, 2010. Slender-horned spineflower was monitored at Soledad Canyon and observed flowering on April 22, 2010. Santa Ana River woollystar was monitored in the Santa Ana River wash and was observed flowering on June 5, 2010. According to the National Oceanic and Atmospheric Administration (NOAA), the region (data taken from Ontario International Airport) received 11.94 inches of precipitation, which is 0.70 inch above average, between January 1 and June, 2010 (NOAA 2010). The special status plant species survey area was surveyed on March 31; April 15, 26, 27, 29; May 14, 21, 25, 27, 28; and June 1, 2, and 3, 2010, by BonTerra Consulting Senior Botanists Sandra Leatherman and Jeff Crain; Senior Biologists Amber Oneal, Stacie Tennant, Ann Johnston; Biologists Jennifer Pareti, Allison Rudalevige, Linda Robb, and Richard Lewis; and Consulting Botanist Bob Allen. The total number of person-hours spent was 220 hours. A systematic survey was conducted in all areas of suitable special status plant habitat within the survey area. All plant species observed were recorded in field notes. Plant species were identified in the field or collected for later identification. Plants were identified to the taxonomic level necessary to determine whether or not they are a special status species. Plants were identified using taxonomic keys, descriptions, and illustrations in Hickman (1993), Munz (1974), Abrams (1923, 1944, 1951), and Abrams and Ferris (1960). All voucher specimens collected will be deposited

with the herbarium at Rancho Santa Ana Botanic Gardens in Claremont, California. Taxonomy and nomenclature follows Hickman (1993), CNPS (2010), and current scientific journals for scientific and common names.

Results of the surveys are included in Appendix B.

2.3.2 Coastal California Gnatcatcher

Surveys for the coastal California gnatcatcher (*Polioptila californica californica*) were initiated during the breeding season in spring 2010, but due to Project design changes, surveys in a portion of the survey area were initiated later and therefore continued into the non-breeding season. In accordance with the USFWS survey guidelines (USFWS 1997a), six survey visits conducted every week are required during the breeding season, while nine visits conducted every other week are required during the non-breeding season. The protocol limits the surveys to 80 acres of suitable habitat per day. The surveys were conducted by BonTerra Consulting Biologist Lindsay Messett (Permit# TE-067064-1) on April 15, 23, 30; May 7, 17; and June 3, 2010, for the areas surveyed during the breeding season. Ms. Messett has conducted five surveys to date in the areas surveyed during the non-breeding season on June 18 and 25; July 9 and 23; and August 6, 2010. A total of nine surveys will be conducted every other week through September 2010.

Surveys were generally started before 6:30 AM and concluded before 12:00 PM. Weather conditions met USFWS survey protocol requirements designed to optimize gnatcatcher detections. Weather conditions that were too cold (less than 55°F), too hot (greater than 95°F), or too windy (greater than 15 miles per hour) were avoided. Surveys were conducted by slowly walking through all appropriate habitats while listening and watching for gnatcatcher activity. Taped recordings of gnatcatcher vocalizations were played as an attempt to elicit responses from any gnatcatchers present. The frequency of vocalization playback varied depending on site conditions, such as habitat patch size, topography, vegetation density, and ambient noise levels.

Results of the surveys are provided in Appendix C [in preparation, surveys in progress].

2.3.3 Burrowing Owl

Consulting Biologist Brian Karpman conducted focused burrow surveys on June 9 and July 1–6, 2010. Mr. Karpman and Consulting Biologist Mike Couffer conducted focused burrowing owl (*Athene cunicularia*) surveys on July 5–12, 2010. The surveys followed the Burrowing Owl Survey Protocol and Mitigation Guidelines prepared by the California Burrowing Owl Consortium (1993). The surveys were conducted within suitable habitat in the survey area. Because private property was adjacent to the subject property, surveys beyond property boundaries were sometimes limited to what could be observed with the naked eye unless authorization to access the area was obtained.

Mr. Karpman inspected all natural or man-made cavities large enough to allow for entry of a burrowing owl and for evidence of occupation. Evidence of occupation may include prey remains, cast pellets, white-wash, feathers, and observations of owls adjacent to burrows. Any evidence of owl occupation was described and mapped, and the location of the evidence was recorded using a Global Positioning System (GPS) unit. The burrow survey was conducted by walking transects through potential habitat with spacing that allowed 100 percent coverage of the ground surface. The burrow survey was not conducted within five days of rain, which could have washed away potential sign.

A crepuscular (dawn or dusk) owl survey was conducted because potential burrows were observed during the burrow survey. Morning crepuscular surveys were conducted from one hour before sunrise to two hours after sunrise, and evening crepuscular surveys were conducted from two hours before sunset to one hour after sunset. Crepuscular surveys were conducted only when there was enough light to observe potential flights of burrowing owls. Four crepuscular surveys of each potential burrow were conducted as required by the protocol. Morning surveys began at approximately 5:00 AM and extended to approximately 8:30 AM. Evening surveys began at approximately 5:00 PM and extended to approximately 8:30 PM.

Results of the surveys are included in Appendix D.

2.3.4 San Bernardino Kangaroo Rat/Los Angeles Pocket Mouse

A habitat assessment was conducted in the survey area on April 16, 20, and 21, 2010, by Consulting Biologist Stephen J. Montgomery (Permit # TE-745541-10; CDFG Memorandum of Understanding [MOU]) to evaluate whether the survey area contained suitable habitat for the San Bernardino kangaroo rat (*Dipodomys merriami parvus*) and/or Los Angeles pocket mouse (*Perognathus longimembris brevinasus*), and to identify areas exhibiting the highest potential for these species. In general, preferred conditions for these species include sandy alluvial systems with alluvial fan scrub vegetation and/or disturbed annual grassland habitats, as well as habitats adjacent to or in the vicinity of such habitat types. A second habitat assessment was conducted by Mr. Montgomery on May 22–29, 2010, to assess new areas added after trapping was already in progress.

A trapping program was conducted in a portion of the survey area to determine the presence or absence of the San Bernardino kangaroo rat and Los Angeles pocket mouse. Habitat areas with the highest potential for the two target species plus visible sign of kangaroo rats were trapped; areas with heavily disturbed soils (e.g., disked, graded) and no kangaroo rat sign were not trapped in this field effort. Mr. Montgomery and Consulting Biologist Daniel Grout (a subpermittee to Mr. Montgomery for these species) set Sherman live-traps in lines or groups in suitable habitat sites within this portion of the survey area on May 22–29, 2010. Mr. Montgomery also set traps at locations with potential sign of the target species inside the fenced Etiwanda Substation facility (at the corner of Etiwanda Avenue and 6th Street) on July 17 and 18, 2010. The survey area was revised after the trapping program was initiated and

therefore, the entire current survey area has not been trapped; however, all areas of potential impact were included in the trapping effort. Areas identified in the second habitat assessment that were not included in this trapping effort may have potential for these species and may require trapping at a future date if impact boundaries change.

Mr. Montgomery and Mr. Grout set and baited traps each afternoon-early evening with a mixture of millet and sunflower seeds. Mr. Montgomery and Mr. Grout checked the traps near midnight and again early each morning before air temperatures reached a level that could harm animals. All mammals found in the traps were identified to species and released. All captured target species were released unharmed at the capture site. Traps were closed during daylight hours. A total of 2,763 trap-nights were accrued during the 10 nights of trapping at 34 trap locations.

Results of the survey are included in Appendix E.

2.3.5 Delhi Sands Flower-loving Fly

Delhi soils were not mapped within the survey area. However, because the survey area is within the Delhi sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*) Recovery Area, areas of suitable habitat were considered potentially suitable and were surveyed even if Delhi soils were not confirmed or if other habitat factors were considered potentially suitable.

Focused surveys for this species are currently in progress and are following the USFWS protocol for this species. Focused surveys will be conducted between July 1 and September 20, 2010 by Consulting Biologist Gilbert Goodlett (Permit# TE005535-3). All surveys will be conducted between 10:00 AM and 2:00 PM. The survey area will be walked slowly in meandering transects and along land features (i.e., dirt roads). During the field survey, Mr. Goodlett will generally focus on the ground and vegetation in the immediate vicinity in order to increase the likelihood of observing Delhi sands flower-loving fly, a low-flying species that is sometimes associated with vegetation.

Results of the survey will be included in Appendix F [in preparation, surveys in progress].

2.3.6 Jurisdictional Delineation

A jurisdictional delineation was conducted at the Etiwanda Substation by BonTerra Consulting Senior Regulatory Specialist Gary Medeiros and BonTerra Consulting Senior Botanist Jeff Crain on June 10, 2010, to describe and map the extent of resources under the jurisdiction of the U.S. Army Corps of Engineers (USACE), the Regional Water Quality Control Board (RWQCB), and the CDFG. The delineation followed guidelines presented in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region*. This regional supplement is designed for use with the *1987 Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987). Both the 1987 Wetlands Manual and the Arid West Supplement to the manual provide technical methods and guidelines for determining the presence of “Waters of the U.S.” and wetland resources. A three-parameter approach, which

requires evidence of wetland hydrology, hydrophytic vegetation, and hydric soils, was used to identify wetlands on the Project. Wetlands generally include swamps, marshes, bogs, and similar areas. In order to be considered a wetland, an area must exhibit at least minimal hydric characteristics within the three parameters. However, problem areas may periodically or permanently lack certain indicators due to seasonal or annual variability of the nature of the soils or plant species on site. Atypical wetlands lack certain indicators due to recent human activities or natural events. Guidance for determining the presence of wetlands in these situations is presented in the regional supplement. Non-wetland "Waters of the U.S." are delineated based on the limits of the Ordinary High Water Mark (OHWM), which can be determined by a number of factors including erosion, the deposition of vegetation or debris, and changes in vegetation.

It should be noted that the RWQCB shares the USACE jurisdiction unless isolated conditions are present. If isolated waters conditions are present, the RWQCB takes jurisdiction using the USACE's definition of the OHWM and/or the three-parameter wetlands methodology pursuant to the 1987 Wetlands Manual. The CDFG's jurisdiction is defined as the top of the bank of the stream, channel, or basin or the outer limit of riparian vegetation located within or immediately adjacent to the river, stream, creek, pond, or lake.

A jurisdictional determination was conducted by Mr. Medeiros throughout the remainder of the survey area on June 18, 2010. The purpose of the determination was to identify areas that are potentially within the jurisdiction of the USACE, CDFG, and/or RWQCB; however, a full delineation of these areas has not been conducted.

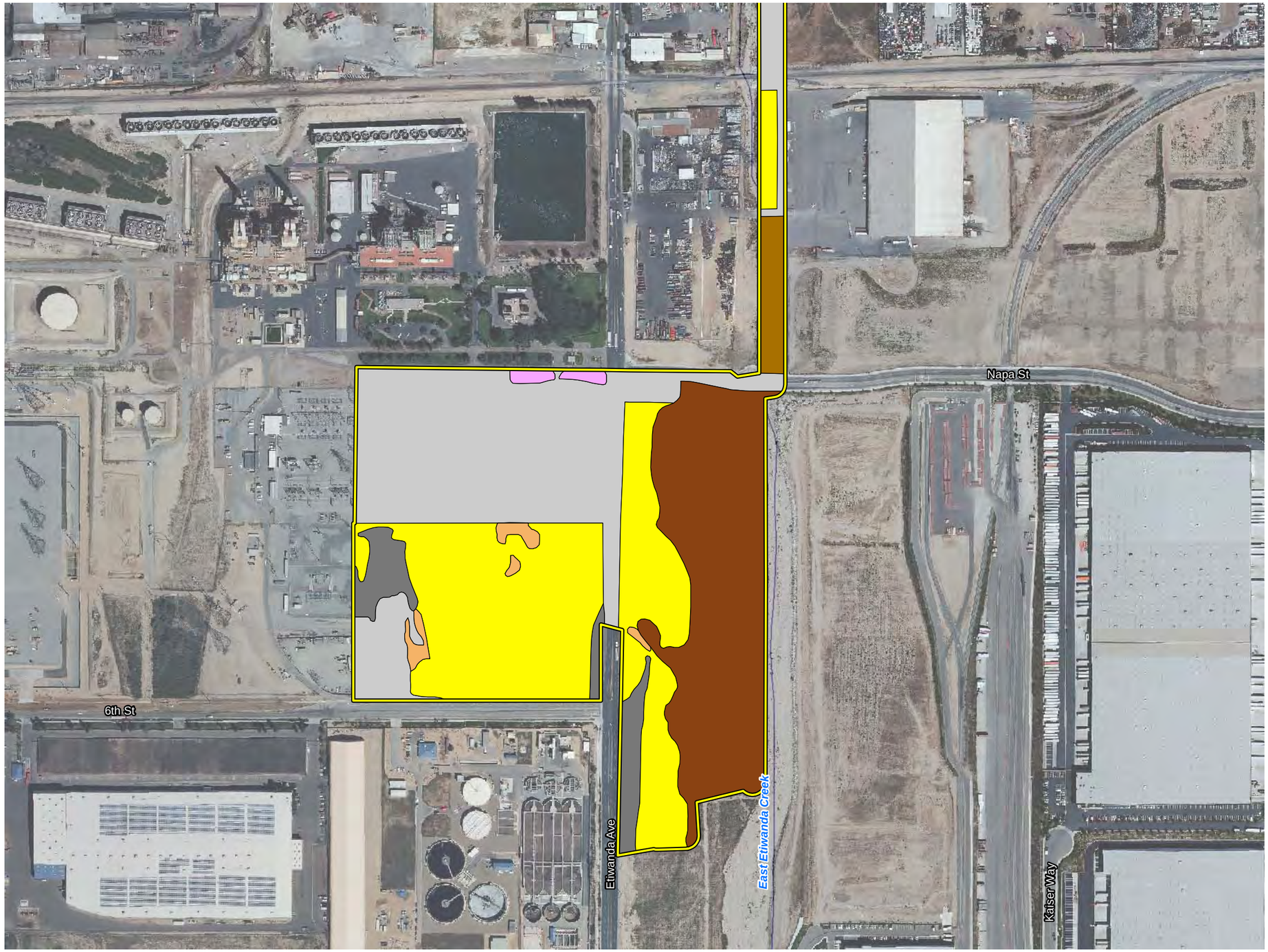
Results of the survey are included in Appendix G.

3.0 EXISTING BIOLOGICAL RESOURCES

This section describes the biological resources that occur or potentially occur in the survey area. Vegetation types, wildlife populations and movement patterns, special status vegetation types, and special status plant and wildlife species, either known to occur or potentially occurring in the survey area, are discussed below.

3.1 VEGETATION TYPES

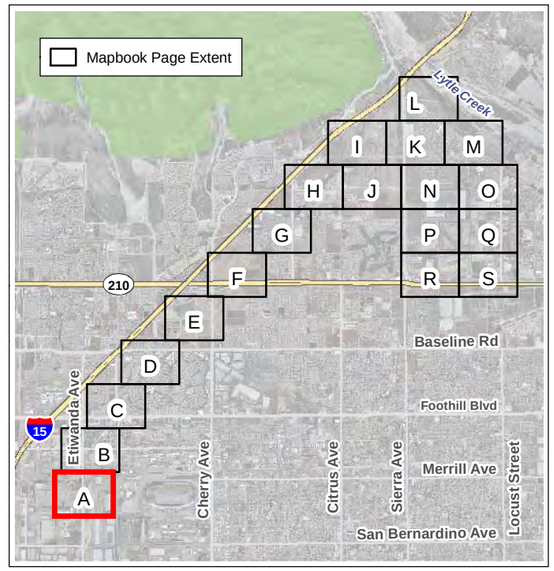
Fourteen vegetation types and other areas occur in the survey area (Table 1, Exhibit 5). Vegetation types and other areas mapped in the survey area consist of Riversidean alluvial fan sage scrub, disturbed Riversidean alluvial fan sage scrub, disturbed Riversidean sage scrub, disturbed mule fat scrub, annual grassland, annual grassland/disturbed Riversidean alluvial fan sage scrub, vineyards, ruderal, ornamental, disturbed, developed, developed/ornamental, developed/ruderal, and flood-control channel. Where vegetation overlaps another type of mapping unit (e.g., a tree canopy over water or roads), the area was mapped according to the uppermost layer of vegetation. Due to changes in the Project description after surveys had been



Survey Area

Vegetation Types and Other Areas

- Not Surveyed
- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Biological Resources

Exhibit 5A

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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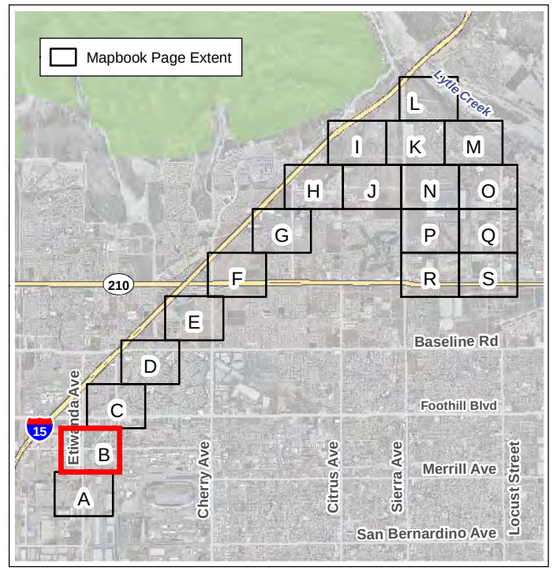
Survey Area

Vegetation Types and Other Areas

- Not Surveyed
- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Biological Resources

Exhibit 5B

Falcon Ridge Substation Project

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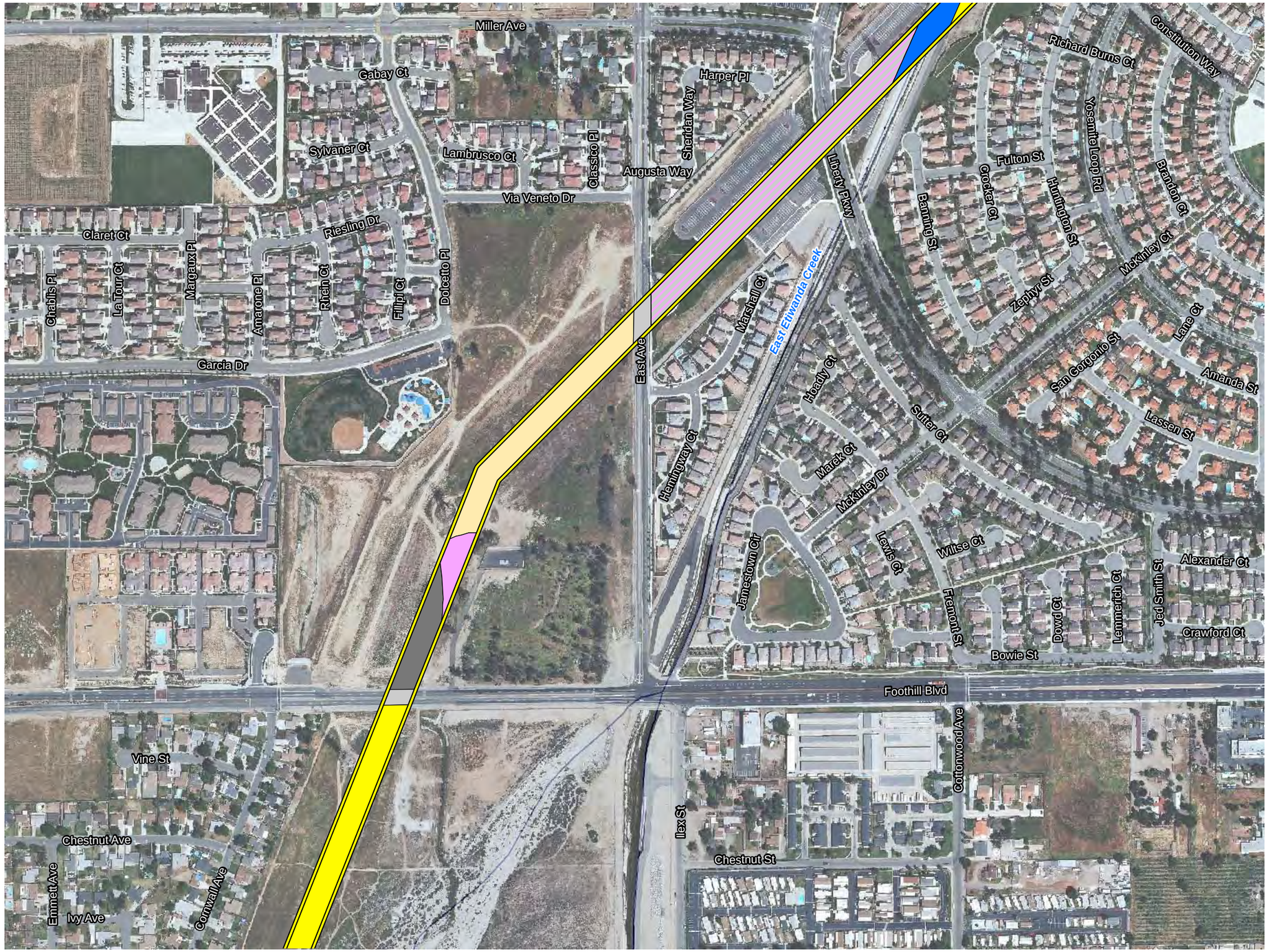
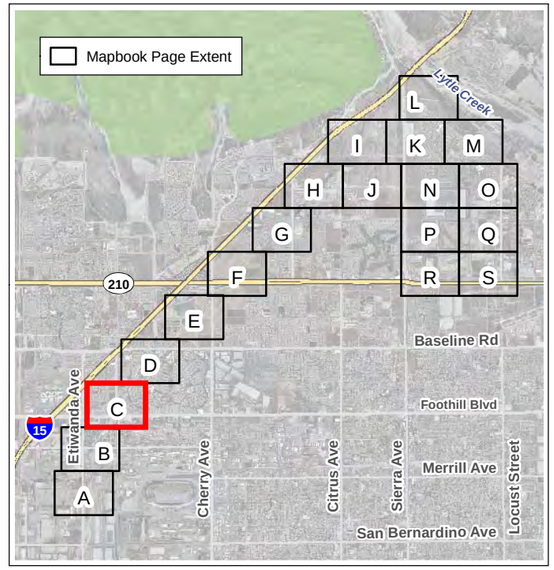


Survey Area

Vegetation Types and Other Areas

- Not Surveyed
- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Biological Resources

Exhibit 5C

Falcon Ridge Substation Project

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BonTerra CONSULTING

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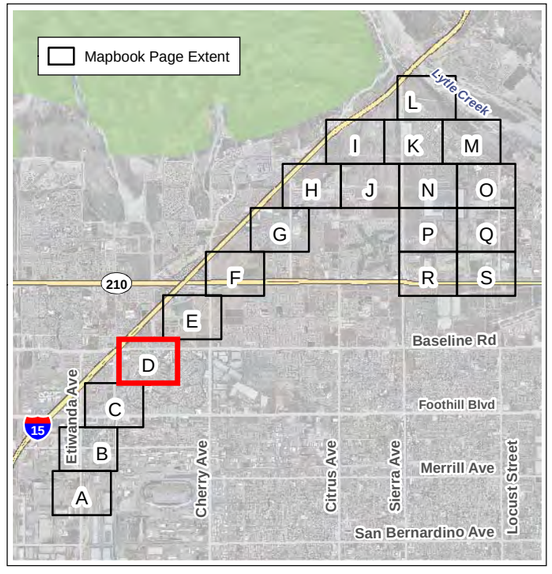
Survey Area

Vegetation Types and Other Areas

- Not Surveyed
- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Biological Resources

Exhibit 5D

Falcon Ridge Substation Project

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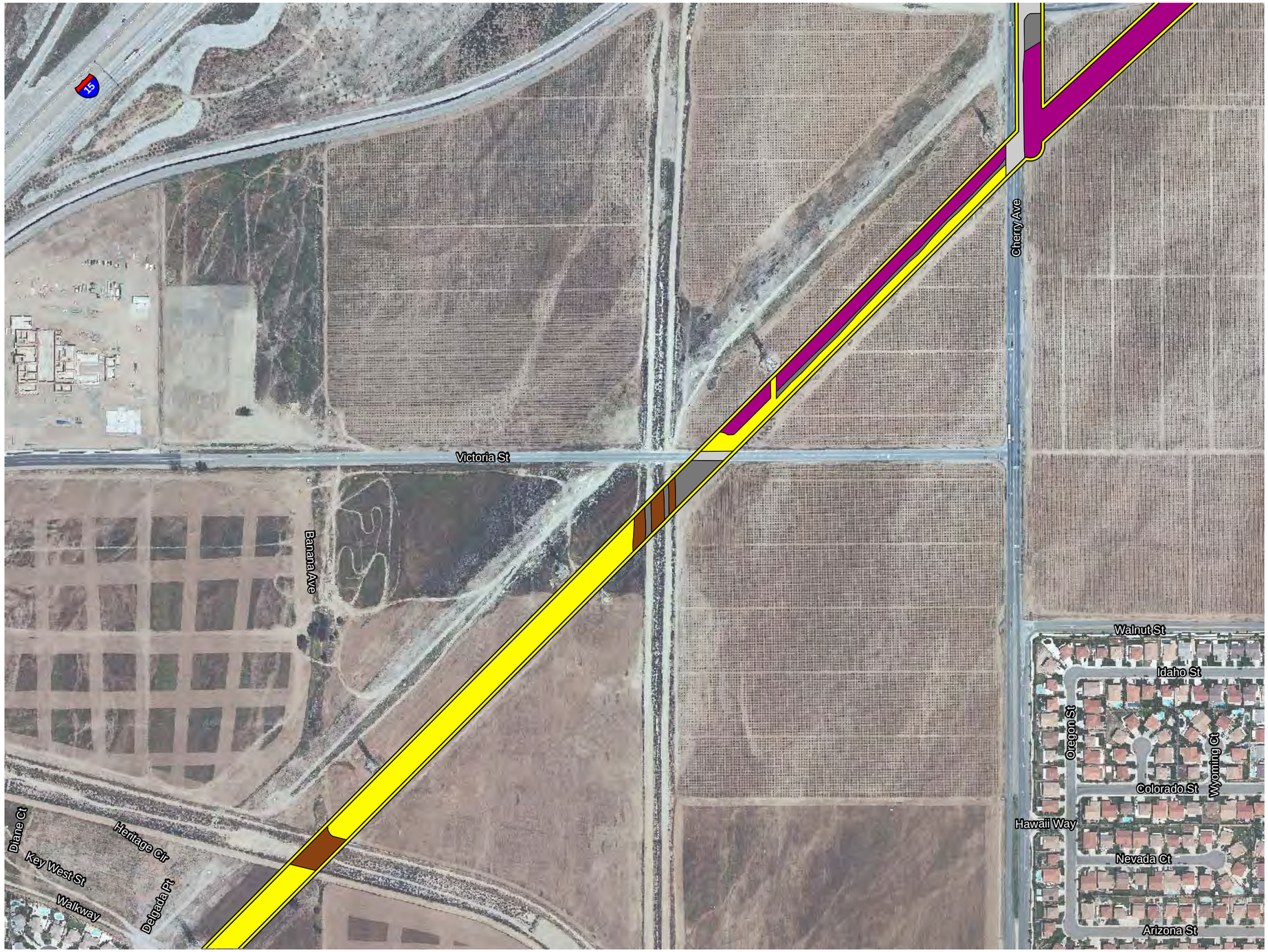
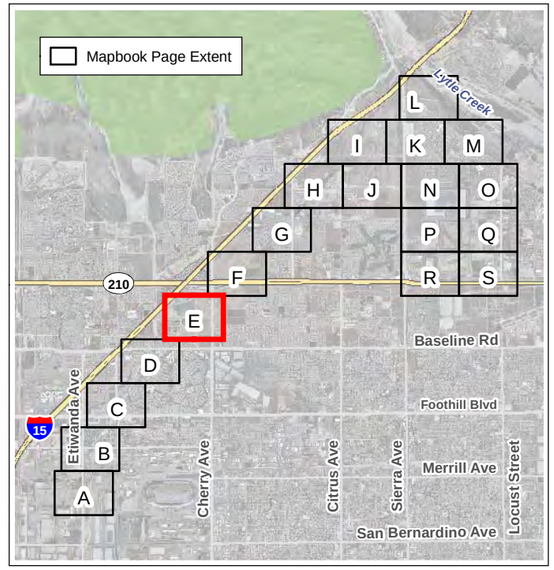


Survey Area

Vegetation Types and Other Areas

- Not Surveyed
- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Biological Resources

Exhibit 5E

Falcon Ridge Substation Project

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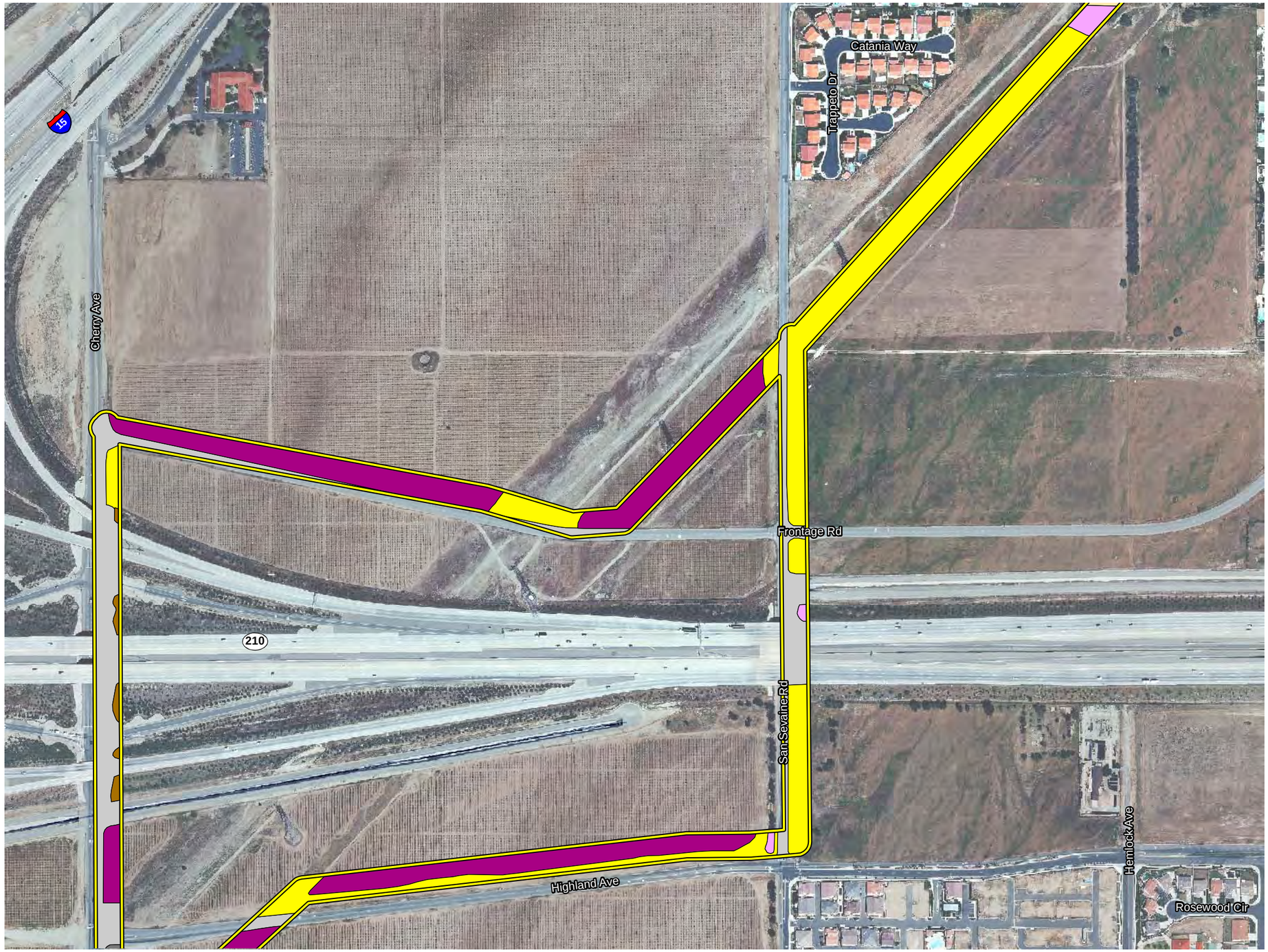
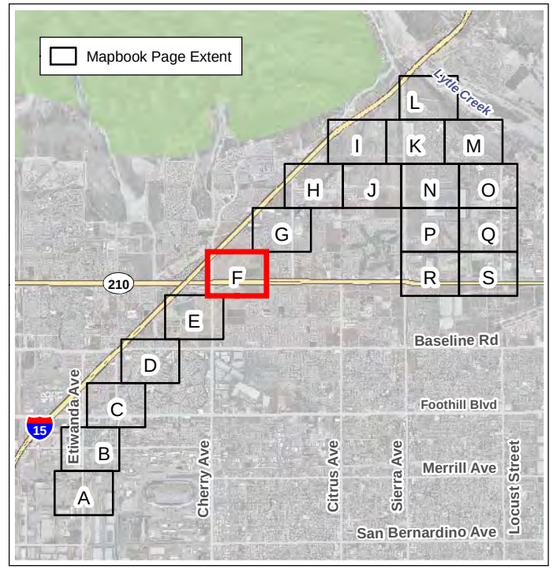


- Survey Area

Vegetation Types and Other Areas

- Not Surveyed
- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Biological Resources

Exhibit 5F

Falcon Ridge Substation Project

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Feet

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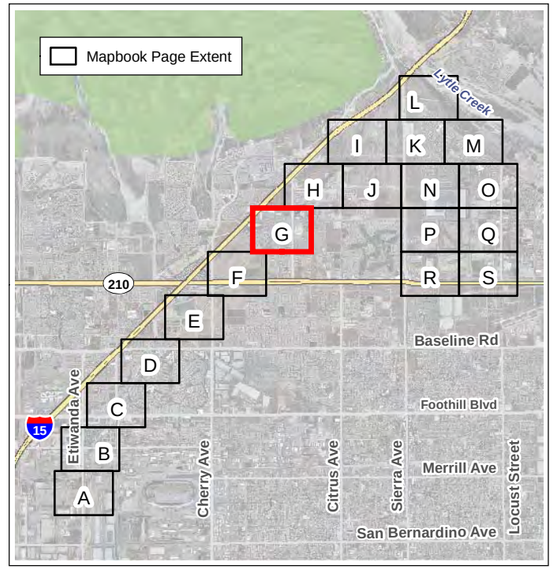
Survey Area

Vegetation Types and Other Areas

- Not Surveyed
- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Biological Resources

Exhibit 5G

Falcon Ridge Substation Project

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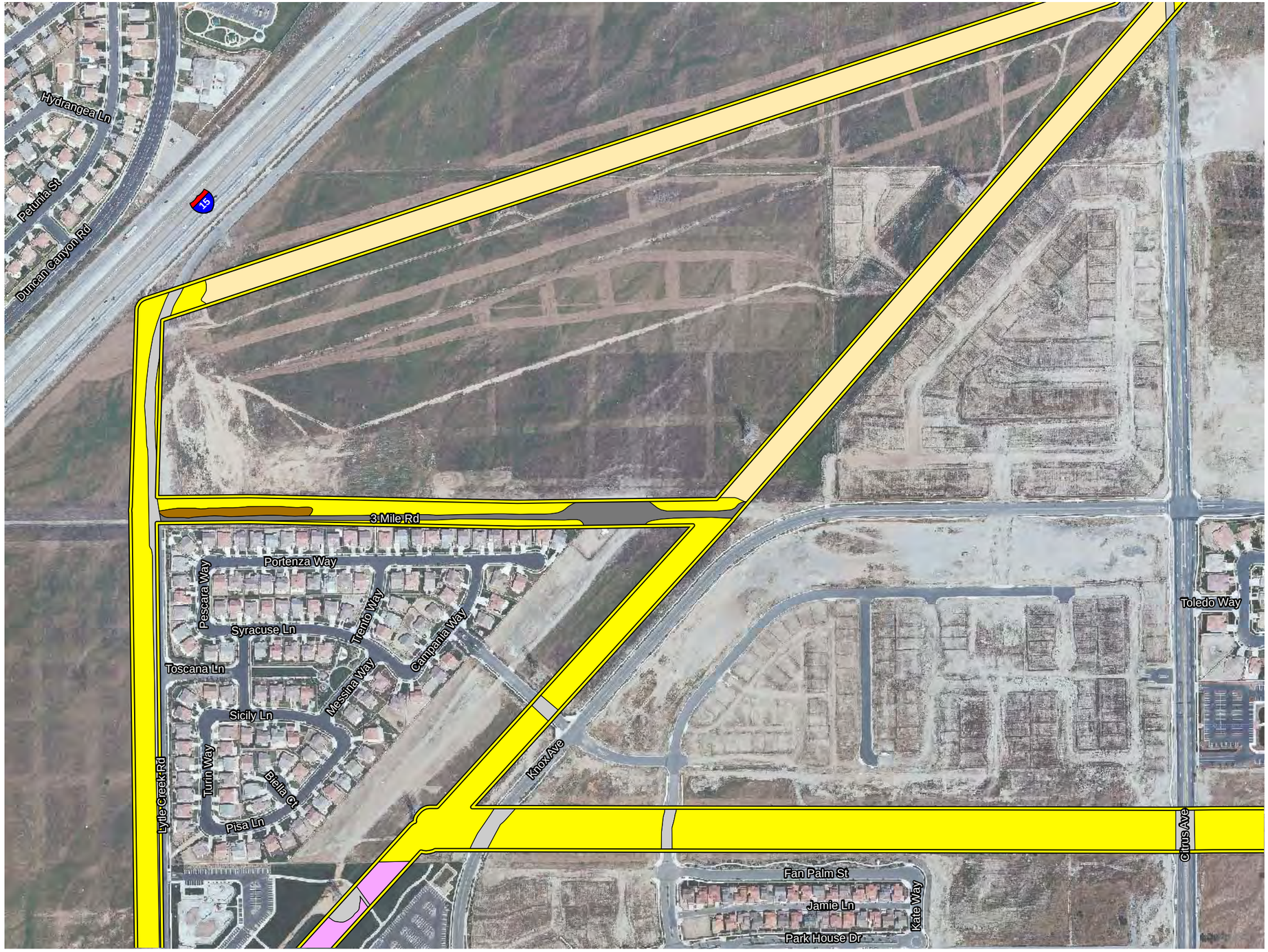
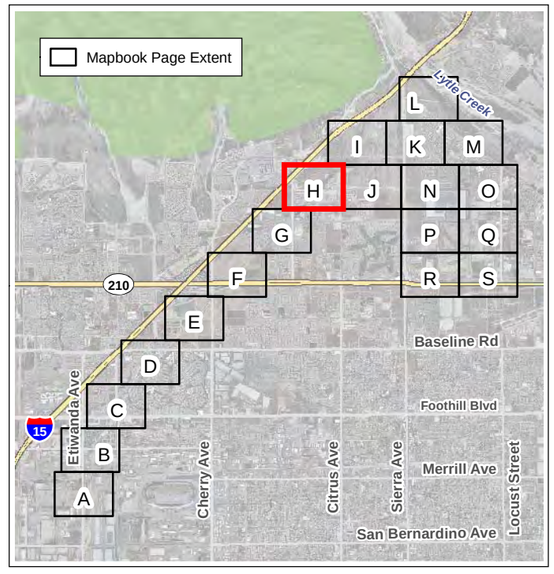


Survey Area

Vegetation Types and Other Areas

- Not Surveyed
- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Biological Resources

Exhibit 5H

Falcon Ridge Substation Project

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400 200 0 400 Feet

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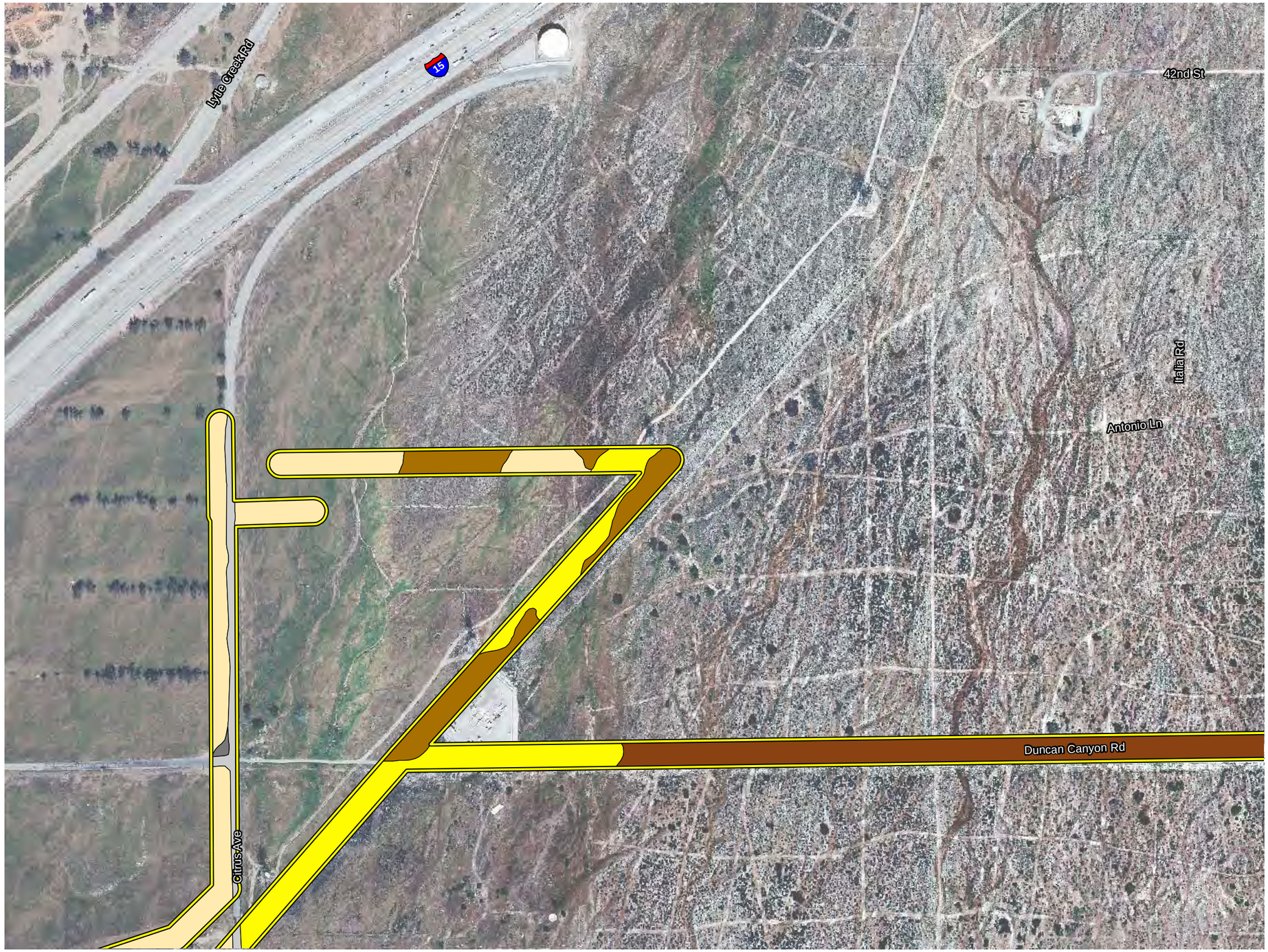
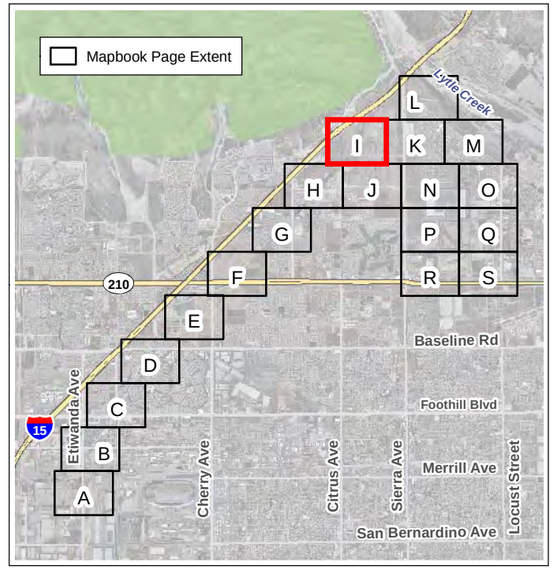


Survey Area

Vegetation Types and Other Areas

- Not Surveyed
- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Biological Resources

Exhibit 5I

Falcon Ridge Substation Project

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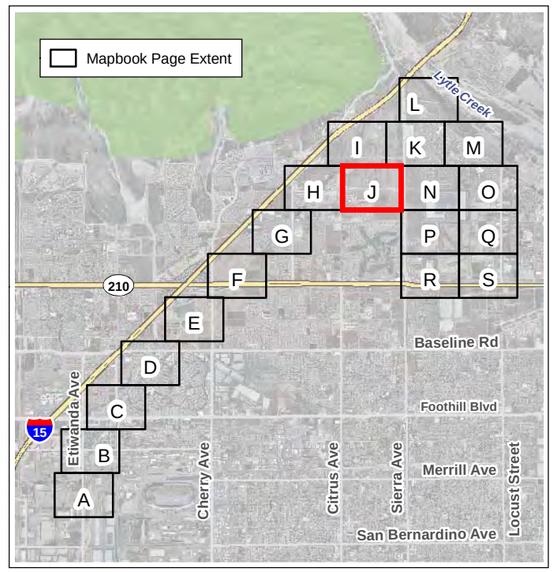
Survey Area

Vegetation Types and Other Areas

- Not Surveyed
- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Biological Resources

Exhibit 5J

Falcon Ridge Substation Project

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- Survey Area

Vegetation Types and Other Areas

- Not Surveyed
- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
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- Ruderal
- Ornamental
- Disturbed
- Developed
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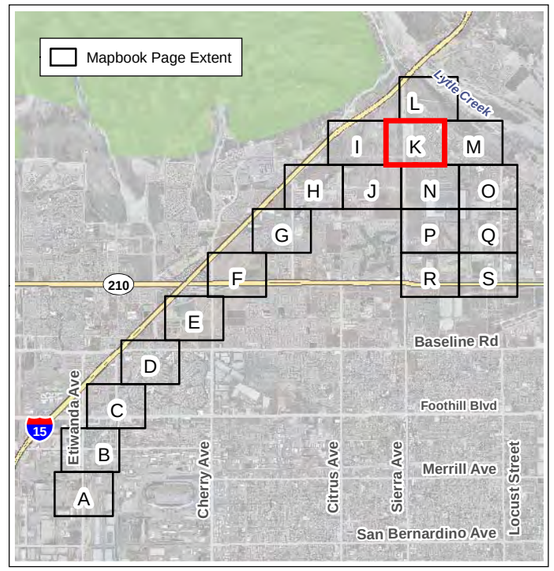
- Flood-control Channel



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Biological Resources

Exhibit 5K

Falcon Ridge Substation Project

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Feet

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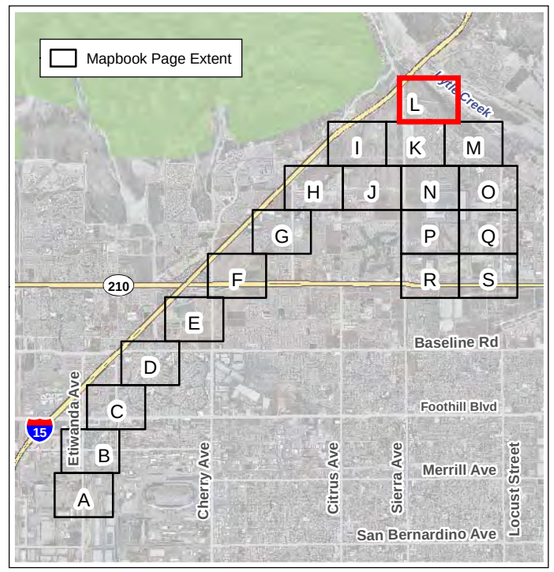
Survey Area

Vegetation Types and Other Areas

- Not Surveyed
- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Biological Resources

Exhibit 5L

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

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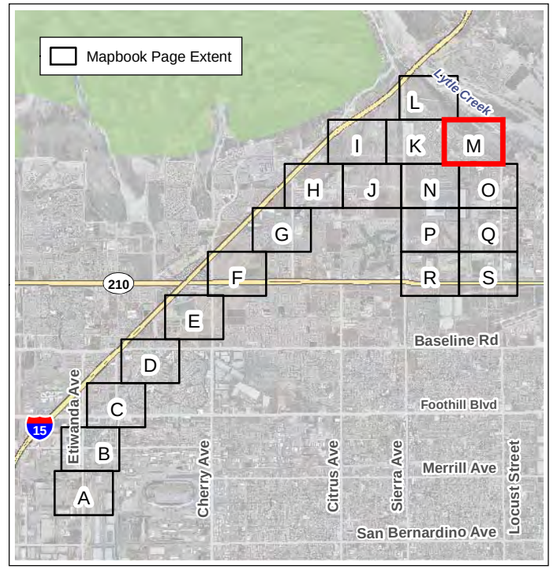
Survey Area

Vegetation Types and Other Areas

- Not Surveyed
- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Biological Resources

Exhibit 5M

Falcon Ridge Substation Project

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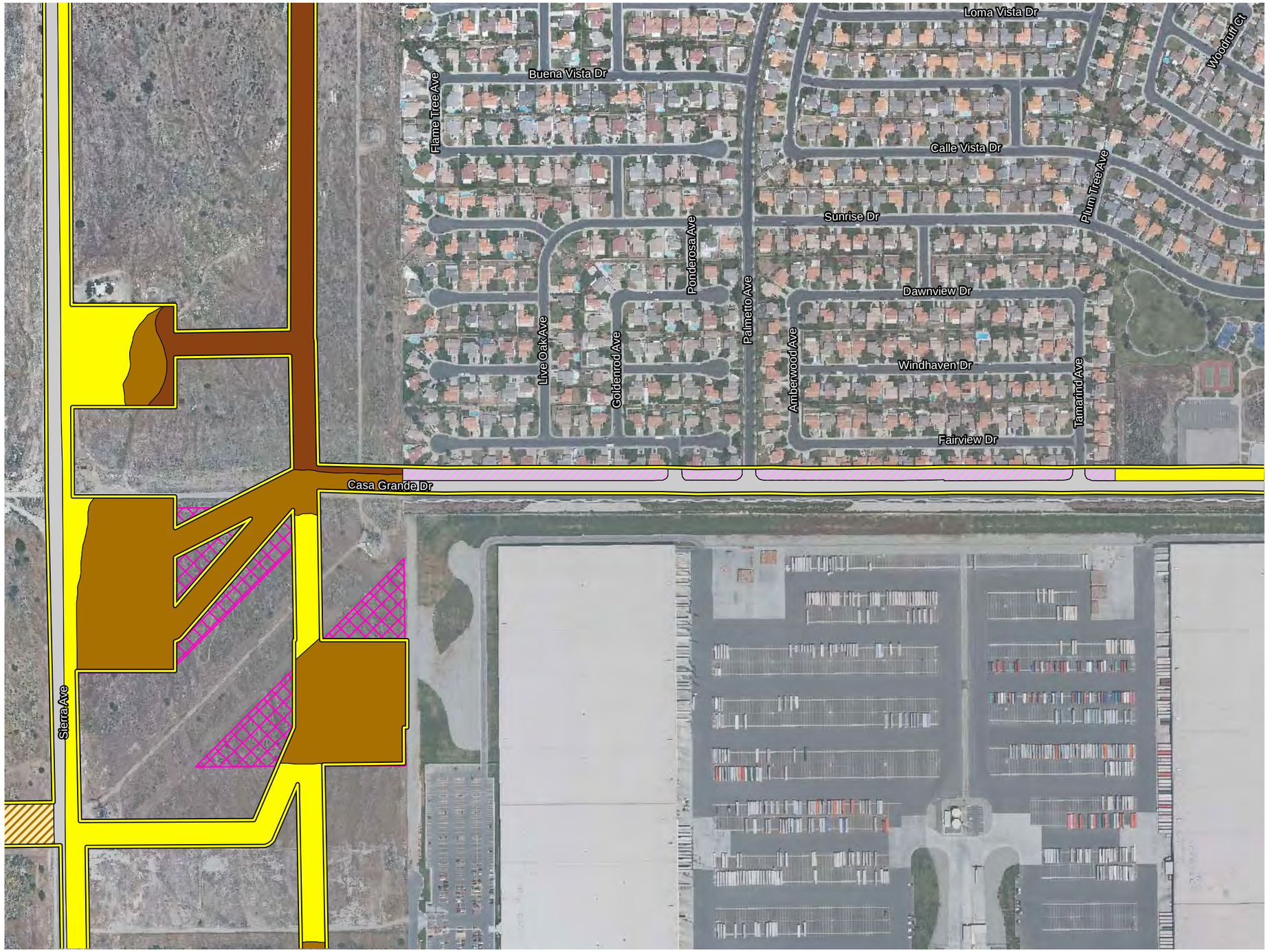
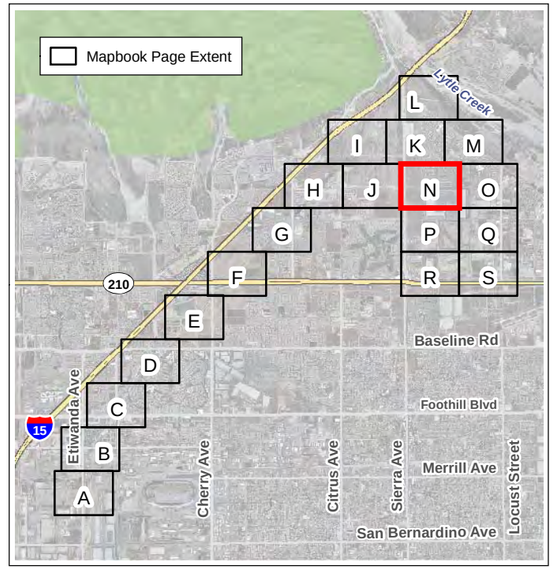


Survey Area

Vegetation Types and Other Areas

- Not Surveyed
- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Biological Resources

Falcon Ridge Substation Project

Exhibit 5N

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BonTerra CONSULTING

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Loma Vista Dr
Orangewood Ave
Alder Ave
Via Bello Dr
Silverberry Dr
Laurel Ave
Sunnyview Dr
Buena Vista Dr
Riverside Ave
Calle Vista Dr
Daisy Dr
Poppy Dr
Carnation Dr
Morning Glory Dr
Sunrise Dr
Dawnview Dr
Almond Dr
Windhaven Dr
Verbena Dr
Fairview Dr
Casa Grande Dr
Coast Blvd
Tudor St
Locust Ave
Via Verde Dr
Maple Ave
Townsend St
Candlewood Ave
Alder Ave

Survey Area

Vegetation Types and Other Areas

- Not Surveyed
- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel

Mapbook Page Extent
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E
Baseline Rd
D
Etiwanda Ave
C
Foothill Blvd
15
B
Cherry Ave
Citrus Ave
Sierra Ave
Merrill Ave
Locust Street
A
San Bernardino Ave

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Biological Resources

Exhibit 5O

Falcon Ridge Substation Project

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Feet

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Survey Area

Vegetation Types and Other Areas

- Not Surveyed
- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
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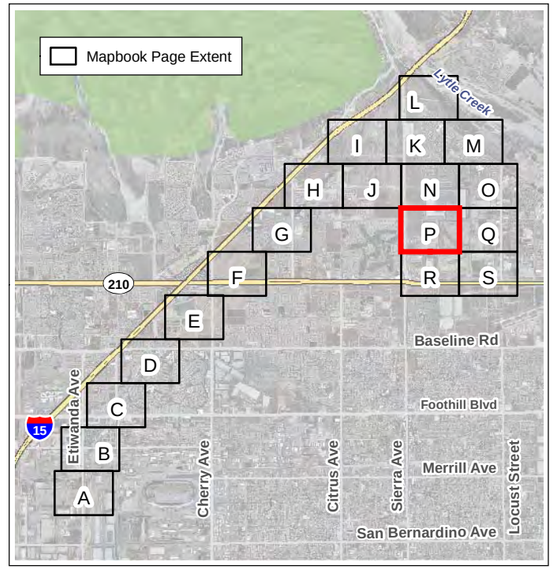
- Developed/Ruderal
- Flood-control Channel



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Biological Resources

Exhibit 5P

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

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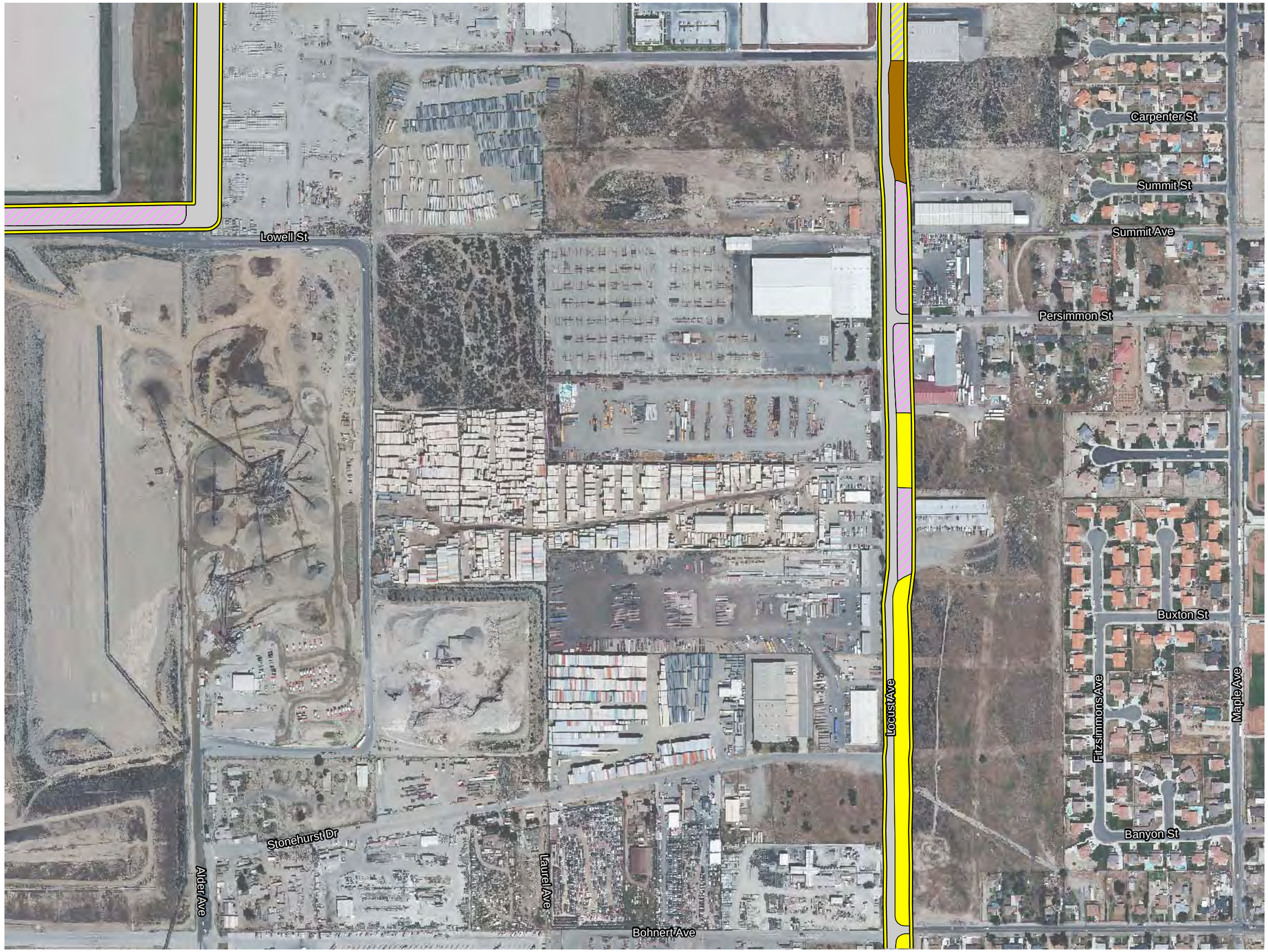
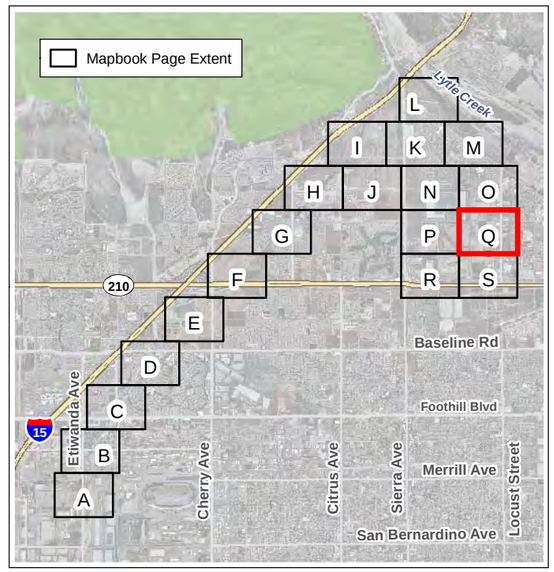


Survey Area

Vegetation Types and Other Areas

- Not Surveyed
- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Biological Resources

Exhibit 5Q

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

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Survey Area

Vegetation Types and Other Areas

- Not Surveyed
- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
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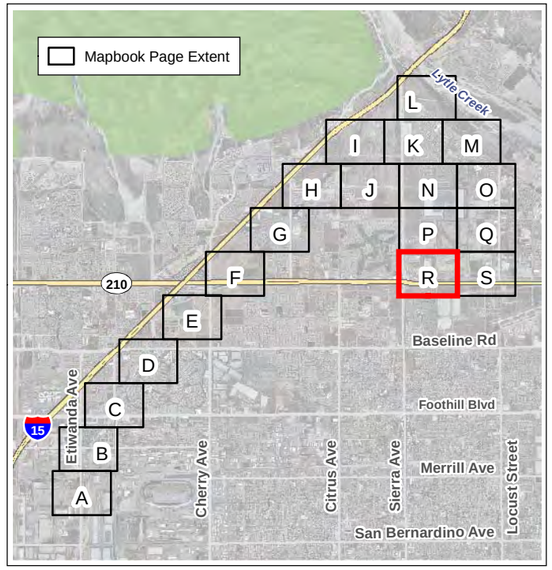

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Biological Resources

Exhibit 5R

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

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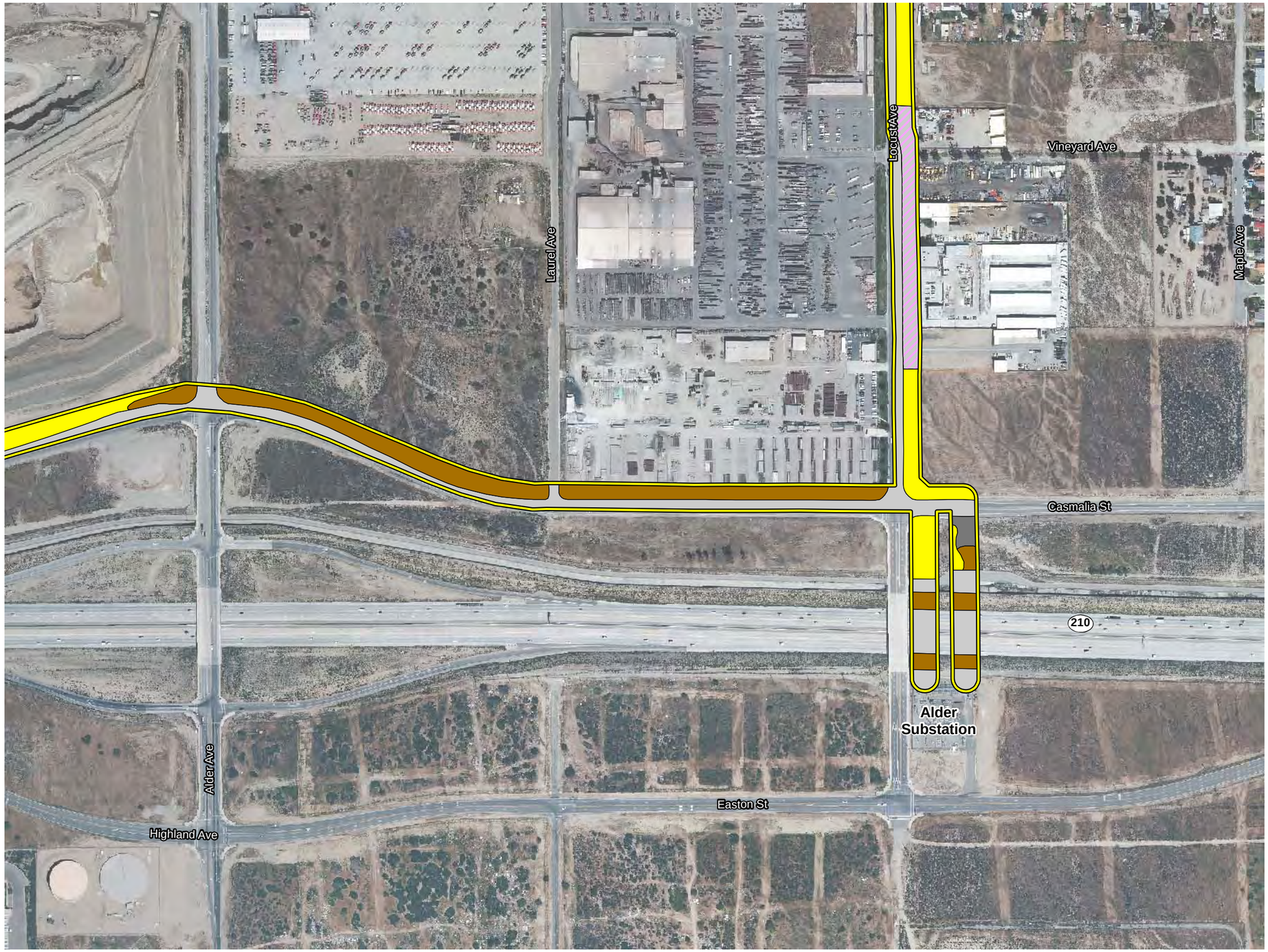
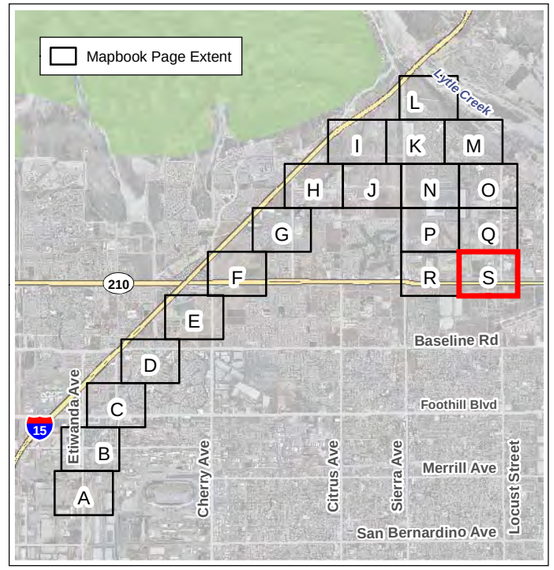


Survey Area

Vegetation Types and Other Areas

- Not Surveyed
- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Biological Resources

Exhibit 5S

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

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completed, the vegetation was not mapped on part of the survey area and is shown on Table 1 and Exhibit 5N as "Not Surveyed". These areas will be mapped prior to construction.

TABLE 1
VEGETATION TYPES AND OTHER AREAS WITHIN THE SURVEY AREA

Vegetation Type or Other Area	Acres
Not Surveyed	4.74
Riversidean Alluvial Fan Sage Scrub	67.85
Disturbed Riversidean Alluvial Fan Sage Scrub	33.92
Disturbed Riversidean Sage Scrub	1.37
Disturbed Mule Fat Scrub	0.94
Annual Grassland	28.84
Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub	9.98
Vineyards	12.30
Ruderal	133.01
Ornamental	4.13
Disturbed	9.81
Developed	77.39
Developed/Ornamental	21.75
Developed/Ruderal	6.22
Flood-Control Channel	0.72
Total Acreage	***412.97***

3.1.1 Riversidean Alluvial Fan Sage Scrub

Riversidean alluvial fan sage scrub primarily occurs in the northern portion of the survey area along Riverside Avenue, along Sierra Avenue between Riverside Avenue and Casa Grande Drive, and east of Duncan Canyon Road. It also occurs in the southernmost portion of the survey area along East Etiwanda Creek. These areas are isolated sections of the Lytle-Cajon Floodplain, the Etiwanda Creek Floodplain, and the alluvial fans at the base of the San Gabriel Mountains. These areas could also be referred to as a type of inland sage scrub (Barbour et al. 2007). Riversidean alluvial fan sage scrub in the survey area is dominated by chamise (*Adenostoma fasciculatum*), California buckwheat (*Eriogonum fasciculatum*), black sage (*Salvia mellifera*), and white sage (*Salvia apiana*) with our Lord's candle (*Yucca whipplei*), cane cholla (*Opuntia parryi*), and California sagebrush (*Artemisia californica*) also occurring. Within this vegetation type, there are areas that are old service roads that have not been cleared and have grown back with species from this vegetation type. These roads have not been delineated separately because of the native plant growth and density of the vegetation within the old roads, such as along an old road paralleling Riverside Avenue.

3.1.2 Disturbed Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean alluvial fan sage scrub occurs along Riverside Avenue in the northern portion of the survey area, in areas between Sierra Avenue and Casa Grande Drive, northwest

of Duncan Canyon Road, along Casmalia Street, and along 3 Mile Road. It also occurs in the southern portion of the survey area along East Etiwanda Creek. These areas as mentioned above are isolated sections of the Lytle-Cajon Floodplain, the Etiwanda Creek Floodplain, and alluvial fans at the base of the San Gabriel Mountains. These areas could also be referred to as a type of inland sage scrub (Barbour et al. 2007). Disturbed Riversidean alluvial fan sage scrub has the same dominant species as Riversidean alluvial fan sage scrub but these areas have a higher density of non-native grasses including wild oats (*Avena* spp.), foxtail chess (*Bromus madritensis* ssp. *rubens*), soft chess (*Bromus hordeaceus*), foxtail fescue (*Vulpia myuros*), Mediterranean grass (*Schismus barbatus*), and goldentop grass (*Lamarckia aurea*). Within this vegetation type, there are also areas that are old service roads that have not been cleared and have grown back with native plant species from this vegetation type. These roads have not been delineated separately due to the density of plant growth within the roads, such as along an old road paralleling Riverside Avenue.

3.1.3 Disturbed Riversidean Sage Scrub

Disturbed Riversidean sage scrub, which can also be referred to as inland sage scrub in this area (Barbour et al. 2007), occurs in a few small areas along Casa Grande Drive just west of Locust Avenue and along SR-210. Disturbed Riversidean sage scrub is composed of hydroseeded areas or areas that have only a few sage scrub species scattered in vacant lots. The plant species that dominate these areas include deerweed (*Lotus scoparius*), California buckwheat, black mustard (*Brassica nigra*), and foxtail chess.

3.1.4 Disturbed Mule Fat Scrub

Disturbed mule fat scrub occurs in the southern portion of the survey area at Etiwanda Avenue and Arrow Boulevard in the existing Etiwanda substation, and east of Etiwanda Avenue in the southernmost portion of the survey area. These areas receive some type of runoff from the surrounding development. They occur in depressions and species consist mainly of mule fat (*Baccharis salicifolia*) with scattered non-native grasses and Douglas' nightshade (*Solanum douglasii*).

3.1.5 Annual Grassland

Annual grassland occurs in the northwestern portion of the survey area east of I-15 and north of 3 Mile Road to Citrus Avenue. Annual grassland also occurs east of I-15 near Beech Avenue and in the southern portion of the survey area east of I-15 near the intersection of Foothill Boulevard and East Avenue. This vegetation type is dominated by foxtail chess, California buckwheat, vinegar weed (*Trichostema lanceolatum*), rancher's fiddleneck (*Amsinckia menziesii*), ripgut brome (*Bromus diandrus*), and long-beaked filaree (*Erodium botrys*).

3.1.6 Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub

Annual grassland/disturbed Riversidean alluvial fan sage scrub vegetation occurs in the northwestern portion of the survey area north of Summit Avenue and west of Sierra Avenue. This vegetation type is composed of the non-native grasses which comprise the annual grassland vegetation type with scattered disturbed Riversidean alluvial fan sage scrub species including California buckwheat, deerweed, foxtail chess, wild oats, ripgut brome with scattered mule fat as well as some non-native species including broad-leaved peppergrass (*Lepidium latifolium*), castor bean (*Ricinus communis*), and tree tobacco (*Nicotiana glauca*).

3.1.7 Vineyards

Vineyards occur in the western portion of the survey area near SR-210. The vineyards are abandoned but contain remnant grape vines (*Vitis* sp.). Due to the heavy rain season of 2009–2010, the grape vines have sprouted and non-native grasses and some native herbaceous species have grown in areas between the rows of vines.

3.1.8 Ruderal

Ruderal vegetation occurs throughout the survey area. Ruderal vegetation is dominated by wild oats, western sunflower (*Helianthus annuus*), long-beaked filaree, black locust (*Robinia psuedoacacia*), ripgut brome, prickly lettuce (*Lactuca serriola*), lamb's quarters (*Chenopodium album*), common eucrypta (*Eucrypta chrysanthemifolia*), and Peruvian pepper tree (*Schinus molle*). Ruderal vegetation also contained areas with scattered California buckwheat, rancher's fiddleneck, and deerweed.

3.1.9 Ornamental

Ornamental vegetation occurs in the southwestern portion of the survey area north of Summit Avenue at Lytle Creek Road, at Heritage Circle, north of Foothill Boulevard, west of East Avenue, and in the southernmost portion of the survey area near Napa Street. Ornamental vegetation is planted for aesthetic purposes and consists of, but is not limited to, the following species: gum trees (*Eucalyptus* sp.), myoporum (*Myoporum laetum*), lantana (*Lantana* sp.), day lily (*Hemerocallis* spp.), crape myrtle (*Lagerstoemia indica*), rose (*Rosa* spp.), and turf grass.

3.1.10 Disturbed

Disturbed areas occur along 3 Mile Road, north of Foothill Boulevard, near East Avenue and just south of Arrow Boulevard, and east of Etiwanda Avenue. The disturbed areas are primarily roads that lack vegetation except for a few scattered non-native species.

3.1.11 Developed

Developed areas are composed of paved roads that lack vegetation.

3.1.12 Developed Ornamental

Developed/ornamental areas are buildings, roads, and dirt lots with landscaping. They occur along Locust Avenue, Casa Grande Drive, Summit Avenue and near Liberty Parkway and East Etiwanda Creek. Ornamental vegetation in these areas includes Aleppo pine (*Pinus halepensis*), cherry tree (*Prunus* sp.), Indian fig (*Opuntia ficus-indica*), photinia (*Photinia* sp.), fortnight lily (*Dietes iridioides*), false heather (*Cuphea hyssopifolia*), geranium (*Pelargonium* sp.), prickly lettuce, telegraph weed (*Heterotheca grandiflora*), and yucca (*Yucca* sp.).

3.1.13 Developed/Ruderal

Developed/ruderal vegetation areas occur along Locust Avenue and south of Casa Grande Drive. Developed/ruderal vegetation is composed of buildings with ruderal species occurring on the property.

3.1.14 Flood-Control Channel

Flood-control channel occurs north of Liberty Parkway where the survey area crosses the channelized portion of East Etiwanda Creek. The flood-control channel is concrete and lacks vegetation.

3.2 WILDLIFE

Vegetation in the survey area provides potential habitat for a number of wildlife species. Wildlife species observed or expected to occur in the survey area include species associated with Riversidean alluvial fan sage scrub and annual grassland habitats. Additionally, urban-tolerant species would be expected to occur in developed areas.

3.2.1 Fish

In the San Bernardino Valley, most washes are dry during most of the year and flow only after periods of rain. No running water and no naturally occurring temporary surface water were observed in the survey area or in the immediate vicinity. Therefore, no fish species are expected to occur in the survey area.

3.2.2 Amphibians

Most amphibians require moisture for at least a portion of their life cycle and many require standing or flowing water for reproduction. Because of this, amphibian species with potential to occur in the survey area are limited due to the lack of surface water and moist habitats in the survey area. However, the garden slender salamander (*Batrachoseps major*) may occur in the survey area.

3.2.3 Reptiles

Reptiles are well-adapted to life in arid habitats. They have several physiological adaptations that allow them to conserve water. Reptiles can also go into dormancy during the warm months or hibernation during the colder months, allowing them to survive prolonged droughts and a lack of food (Ruben and Hillenius 2005).

Lizard species observed in the survey area included western fence lizard (*Sceloperus occidentalis*), side-blotched lizard (*Uta stansburiana*), and coastal western whiptail (*Aspidoscelis tigris stejnegeri*). Other reptiles with potential to occur in the survey area include western skink (*Eumeces skiltonianus*), southern alligator lizard (*Elgaria multicarinata*), California legless lizard (*Anniella pulchra pulchra*), ring-necked snake (*Diadophis punctatus*), coachwhip (*Masticophis flagellum*), gopher snake (*Pituophis melanoleucus*), and western rattlesnake (*Crotalus oreganus*).

3.2.4 Birds

A variety of bird species are expected to be residents in the survey area, using the habitats throughout the year. Other species are present only during certain seasons. For example, the white-crowned sparrow (*Zonotrichia leucophrys*) occurs in the survey area during the winter season, but would not occur in the survey area in the summer season because it migrates north to its breeding range.

Resident bird species observed in sage scrub and grassland/ruderal vegetation types in the survey area included California quail (*Callipepla californica*), western scrub-jay (*Aphelocoma californica*), common raven (*Corvus corax*), horned lark (*Eremophila alpestris*), bushtit (*Psaltriparus minimus*), Bewick's wren (*Thryomanes bewickii*), California thrasher (*Toxostoma redivivum*), lark sparrow (*Chondestes grammacus*), western meadowlark (*Sturnella neglecta*), spotted towhee (*Pipilo maculatus*), and California towhee (*Pipilo crissalis*). Urban-tolerant species that occurred in both developed and disturbed areas, as well as in natural vegetation types, included killdeer (*Charadrius vociferus*), rock pigeon (*Columba livia*), mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), black phoebe (*Sayornis nigricans*), American crow (*Corvus brachyrhynchos*), northern mockingbird (*Mimus polyglottos*), European starling (*Sturnus vulgaris*), Brewer's blackbird (*Euphagus cyanocephalus*), great-tailed grackle (*Quiscalis mexicanus*), house finch (*Carpodacus mexicanus*), lesser goldfinch (*Spinus* [*Carduelis*] *psaltria*), and house sparrow (*Passer domesticus*).

Wintering birds are those species that generally breed outside the region but migrate to the area for the winter season. Wintering species that were observed included Say's phoebe (*Sayornis saya*), blue-gray gnatcatcher (*Polioptila caerulea*), yellow-rumped warbler (*Dendroica coronata*), and white-crowned sparrow. Summer residents are species that migrate into the region to breed but generally winter south of the region. Summer breeders observed during the surveys included ash-throated flycatcher (*Myiarchus cinerascens*), western kingbird (*Tyrannus*

verticalis), northern rough-winged swallow (*Stelgidopteryx serripennis*), cliff swallow (*Petrochelidon pyrrhonota*), barn swallow (*Hirundo rustica*), black-headed grosbeak (*Pheucticus melanocephalus*), brown-headed cowbird (*Molothrus ater*), hooded oriole (*Icterus cucullatus*), and Bullock's oriole (*Icterus bullockii*). During spring and fall migration, the survey area also provides foraging habitat for a variety of migratory species.

Birds of prey (raptors) observed in the survey area include turkey vulture (*Cathartes aura*) (a scavenger), red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), merlin (*Falco columbarius*), and barn owl (*Tyto alba*). Of these species, the red-tailed hawk, American kestrel, and barn owl have potential to nest in the survey area; the electrical towers and buildings provide potentially suitable nesting substrate.

3.2.5 Mammals

Active burrows are present throughout the survey area and could provide cover for a number of small mammal species. Small ground-dwelling mammals observed or expected to occur in the survey area include California ground squirrel (*Spermophilus beecheyi*), Botta's pocket gopher (*Thomomys bottae*), Dulzura kangaroo rat (*Dipodomys simulans*), California vole (*Microtus californicus*), house mouse (*Mus musculus*), dusky-footed woodrat (*Neotoma fuscipes*), cactus mouse (*Peromyscus eremicus*), deer mouse (*Peromyscus maniculatus*), black rat (*Rattus rattus*), and western harvest mouse (*Reithrodontomys megalotis*).

Medium to large-sized mammals that were observed or are expected to occur in the survey area include Virginia opossum (*Didelphis virginiana*), desert cottontail (*Sylvilagus audubonii*), coyote (*Canis latrans*), common raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), and long-tailed weasel (*Mustela frenata*). Gray fox (*Urocyon cinereoargenteus*) and bobcat (*Lynx rufus*) may also occur in the survey area.

Bats occur throughout most of Southern California and may use any portion of the survey area as foraging habitat. Most of the bats that may occur in the survey area are inactive during the winter and either hibernate or migrate, depending on the species. Bat species that may occur in the survey area include big brown bat (*Eptesicus fuscus*), California myotis (*Myotis californicus*), western pipistrelle (*Pipistrellus hesperus*), and Brazilian free-tailed bat (*Tadarida brasiliensis*). Buildings adjacent to the survey area may be used for roosting by these and other bat species.

3.2.6 Wildlife Movement

Wildlife corridors link together areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated "islands" of wildlife habitat. In the absence of habitat linkages that allow movement to adjoining open space areas, various studies have concluded that some wildlife species, especially the larger and more mobile mammals, will not likely persist over time in fragmented or isolated habitat areas because they prohibit the

infusion of new individuals and genetic information (MacArthur and Wilson 1967; Soule 1987; Harris and Gallagher 1989; Bennett 1990). Corridors mitigate the effects of this fragmentation by (1) allowing animals to move between remaining habitats, thereby permitting depleted populations to be replenished and promoting genetic exchange; (2) providing escape routes from fire, predators and human disturbances, thus reducing the risk that catastrophic events (such as fire or disease) will result in population or local species extinction; and (3) serving as travel routes for individual animals as they move in their home ranges in search of food, water, mates, and other necessary resources (Noss 1983; Farhig and Merriam 1985; Simberloff and Cox 1987; Harris and Gallagher 1989).

Wildlife movement activities usually fall into one of three movement categories: (1) dispersal (e.g., juvenile animals from natal areas or individuals extending range distributions); (2) seasonal migration; and (3) movements related to home range activities (e.g., foraging for food or water, defending territories or searching for mates, breeding areas, or cover). A number of terms such as “wildlife corridor”, “travel route”, “habitat linkage”, and “wildlife crossing” have been used in various wildlife movement studies to refer to areas in which wildlife move from one area to another. To clarify the meaning of these terms and to facilitate the discussion on wildlife movement in this analysis, these terms are defined as follows:

- ***Travel route –*** a landscape feature (such as a ridgeline, drainage, canyon, or riparian strip) within a larger natural habitat area that is used frequently by animals to facilitate movement and to provide access to necessary resources (e.g., water, food, cover, den sites). The travel route is generally preferred because it provides the least amount of topographic resistance in moving from one area to another. It contains adequate food, water, and/or cover while moving between habitat areas and it provides a relatively direct link between target habitat areas.

- ***Wildlife corridor –*** a piece of habitat, usually linear in nature, that connects two or more habitat patches that would otherwise be fragmented or isolated from one another. Wildlife corridors are usually bound by urban land areas or other areas unsuitable for wildlife. The corridor generally contains suitable cover, food, and/or water to support species and to facilitate movement while in the corridor. Larger, landscape-level corridors (often referred to as “habitat or landscape linkages”) can provide both transitory and resident habitat for a variety of species.

- ***Wildlife crossing*** **–** a small, narrow area, relatively short in length and generally constricted in nature that allows wildlife to pass under or through an obstacle or barrier that otherwise hinders or prevents movement. Crossings typically are manmade and include culverts, underpasses, drainage pipes, and tunnels to provide access across or under roads, highways, pipelines, or other physical obstacles. These often represent “choke points” along a movement corridor, which may impede wildlife movement and increase the risk of predation.

It is important to note that in a large open space area where there are few or no man-made or naturally occurring physical constraints to wildlife movement, wildlife corridors (as defined above) may not yet exist. Given an open space area that is both large enough to maintain viable populations of species and to provide a variety of travel routes (e.g., canyons, ridgelines, trails, riverbeds, and others), wildlife will use these "local" routes while searching for food, water, shelter, and mates and will not need to cross into other large open space areas. Based on their size, location, vegetative composition and availability of food, some of these movement areas (e.g., large drainages and canyons) are used for longer lengths of time and serve as source areas for food, water and cover, particularly for small- and medium-sized animals. This is especially true if the travel route is within a larger open space area. However, once open space areas become constrained and/or fragmented as a result of urban development or construction of physical obstacles (such as roads and highways), the remaining landscape features or travel routes that connect the larger open space areas become corridors as long as they provide adequate space, cover, food and water, and do not contain obstacles or distractions (e.g., man-made noise, lighting) that would generally hinder wildlife movement.

The survey area is located along the urban-wildland interface. The northern and northwestern portions of the survey area are relatively open. Although there are no major wildlife corridors within the survey area, natural open space in the survey area is contiguous with off-site habitats and provides connectivity to larger open space areas. Lytle Creek and Cajon Wash are located east of the survey area and provide a connection between the survey area and the Angeles National Forest and San Bernardino National Forest, located just over one mile upstream (north) of the survey area.

The southern portion of the survey area is relatively urbanized and the connection to the Santa Ana River to the south is highly constrained. Lytle Creek is channelized downstream of Foothill Boulevard; therefore, only urban-tolerant wildlife (e.g., coyote, skunk, and raccoon) and some bird species would be expected to traverse the unvegetated channel to the Santa Ana River.

Etiwanda Creek is channelized upstream, within the survey area, and downstream of the survey area. However, there is a portion of Etiwanda Creek between Foothill Boulevard and I-10 where the natural creek parallels the constructed channel; this creek segment is highly constrained by adjacent development. Wildlife may use this creek segment for local wildlife movement, but where the creek becomes channelized (both upstream and downstream of this segment), wildlife would be forced to use patches of undeveloped upland habitat (including agricultural areas) interspersed with developed areas for several miles to make the connection to larger open space areas such as the Angeles National Forest and the Santa Ana River. As described above, only urban-tolerant wildlife and some bird species would be expected to traverse the unvegetated channel and developed areas.

Overall, wildlife would be expected to move between open space habitats in the survey area north to habitat in the Angeles and San Bernardino National Forests, concentrating along Lytle

and Cajon Creeks. Wildlife movement between the survey area and the Santa Ana River would be limited due to the extensive urbanization/channelization; therefore, only urban-tolerant species and some bird species would be expected to move between the survey area and areas downstream.

3.3 SPECIAL STATUS BIOLOGICAL RESOURCES

The following section addresses special status biological resources that were observed, reported, or have the potential to occur in the survey area. These resources include plant and wildlife species that have been afforded special status and/or recognition by federal and State resource agencies, as well as private conservation organizations. In general, the principal reason an individual taxon (i.e., species, subspecies, or variety) is given such recognition is the documented or perceived decline or limitations of its population size, geographic range, and/or distribution resulting in most cases from habitat loss. Tables 2 and 3 provide a summary of special status plant and wildlife species known to occur in the Project region including information on the status, likelihood for occurrence, and definitions for the various status designations. Generally, this list includes species reported by the CNDDB supplemented with species from the author's experience that either occur nearby or could occur based on the presence of suitable habitat. In addition to species, special status biological resources include vegetation types and habitats that are either unique, of relatively limited distribution in the region, or of particularly high wildlife value. These resources have been defined by federal, State, and local government conservation programs. Sources used to determine the special status of biological resources are listed below.

- ***Plants*** – Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPS 2010); the CNDDB (CDFG 2010a); various USFWS *Federal Register* notices regarding listing status of plant species; and the CDFG's *List of Special Vascular Plants, Bryophytes, and Lichens* (CDFG 2010c).

- ***Wildlife*** – California Wildlife Habitat Relationships Database System (CDFG 1991); the CNDDB (CDFG 2010a); various USFWS *Federal Register* notices regarding listing status of wildlife species; and CDFG's *List of Special Animals* (CDFG 2010b).

- ***Habitats*** – CNDDB (CDFG 2010a).

3.3.1 Definitions of Special Status Biological Resources

A **federally Endangered species** is one facing extinction throughout all or a significant portion of its geographic range. A **federally Threatened species** is one likely to become endangered within the foreseeable future throughout all or a significant portion of its range. The presence of any federally Threatened or Endangered species within the Project impact area generally imposes severe constraints on development, particularly if a Project would result in "take" of the species or its habitat. The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill,

trap, capture, collect, or attempt to engage in such conduct. Harm in this sense can include any disturbance of habitats used by the species during any portion of its life history.

Proposed species or **Candidate species** are those officially proposed by the USFWS for addition to the federal Threatened and Endangered species list. Because proposed species may soon be listed as Threatened or Endangered, these species could become listed prior to or during implementation of a Proposed Project.

The State of California considers an **Endangered species** as one whose prospects of survival and reproduction are in immediate jeopardy; a **Threatened species** as one present in such small numbers throughout its range that it is likely to become an Endangered species in the near future in the absence of special protection or management; and a **Rare species** as one present in such small numbers throughout its range that it may become Endangered if its present environment worsens. Rare species applies only to California native plants. State Threatened and Endangered species are fully protected against take unless an incidental take permit is obtained from the wildlife agencies.

California Species of Special Concern is an informal designation used by the CDFG for some declining wildlife species that are not State Candidates. This designation does not provide legal protection but signifies that these species are recognized as special status by the CDFG. Recently, the CDFG down-listed several species from Species of Special Concern to the **Watch List.** Although not considered special status, Watch List species are tracked by the CNDDB. They are not included here because they are not considered to have special status.

Species that are **California Fully Protected** and **Protected** include those protected by special legislation for various reasons, such as the mountain lion (*Puma* [*Felis*] *concolor*) and white-tailed kite (*Elanus leucurus*). Fully Protected species may not be taken or possessed at any time. California Protected species include those species that may not be taken or possessed at any time except under special permit from the department issued pursuant to the *California Code of Regulations* (14 *California Code of Regulations* Sections 650, 670.7), or Section 2081 of the *California Fish and Game Code*.

Species of **Local Concern** are those that have no official status with the resource agencies, but are being watched because there is either a unique population in the region or the species is declining in the region.

The CNPS is a local resource conservation organization that has developed an inventory of California's special status plant species (CNPS 2010). This inventory is a summary of information on the distribution, rarity, and endangerment of California's vascular plants, and is comprised of four lists. CNPS presumes that **List 1A** plant species are extinct in California because they have not been seen in the wild for many years. CNPS considers **List 1B** plants as Rare, Threatened, or Endangered throughout their range. **List 2** plant species are considered Rare, Threatened, or Endangered in California but more common in other states. **List 3** is a

"review" list of plants for which more information is needed, and **List 4** is a "watch" list of plants that have limited distribution. The CNPS also assigns a threat code extension to the List categories (CNPS 2010). An extension of **.1** is assigned to plants that are considered to be "seriously endangered" in California with over 80 percent of the occurrences threatened or with a high degree and immediacy of threat. Extension **.2** indicates the plant is "fairly endangered" in California (between 20 and 80 percent of the occurrences threatened). Extension **.3** is assigned to plants that are considered "not very endangered" in California with less than 20 percent of occurrences threatened. The absence of a threat code extension indicates plants lacking any threat information. The CNPS List categories and threat code extensions are summarized in Table 2.

3.3.2 Vegetation Types

In addition to providing an inventory of special status plant and wildlife species, the CNDDB also provides an inventory of vegetation types that are considered special status by the State and federal resource agencies, academic institutions, and various conservation groups (such as the CNPS). Determination of the sensitivity level is based on the Nature Conservancy Heritage Program Status Ranks that rank both species and vegetation types on a global and statewide basis according to the number and size of remaining occurrences and recognized threats (e.g., proposed developments, habitat degradation, and non-native species invasion).

The CNDDB reports the following high priority special status vegetation types in the Project vicinity: California walnut woodland, coastal and valley freshwater marsh, Riversidean alluvial fan sage scrub, southern cottonwood willow riparian forest, southern riparian forest, southern riparian scrub, and southern sycamore alder riparian woodland. Of these, Riversidean alluvial fan sage scrub is present in the survey area. Special status vegetation types in the survey area are described further below.

Riversidean Sage Scrub

Riversidean sage scrub is a subassociation of coastal sage scrub which, as a whole, has declined approximately 70 to 90 percent in its historic range in California (Noss and Peters 1995). Sage scrub has largely been lost to land use changes in Southern California basins and foothills. The ecological function of Southern California's remaining sage scrub is threatened by habitat fragmentation, invasive non-native species, livestock grazing, off-highway vehicles, altered fire regime, and perhaps air pollution (O'Leary 1995). Riversidean sage scrub is the most xeric (i.e., dry) form of coastal sage scrub that occurs along the base of the Transverse and Peninsular ranges. Riversidean sage scrub vegetation types in the survey area include Riversidean alluvial fan sage scrub, disturbed Riversidean alluvial fan sage scrub, disturbed Riversidean sage scrub, and annual grassland/disturbed Riversidean alluvial fan sage scrub (Exhibit 5).

Jurisdictional Areas

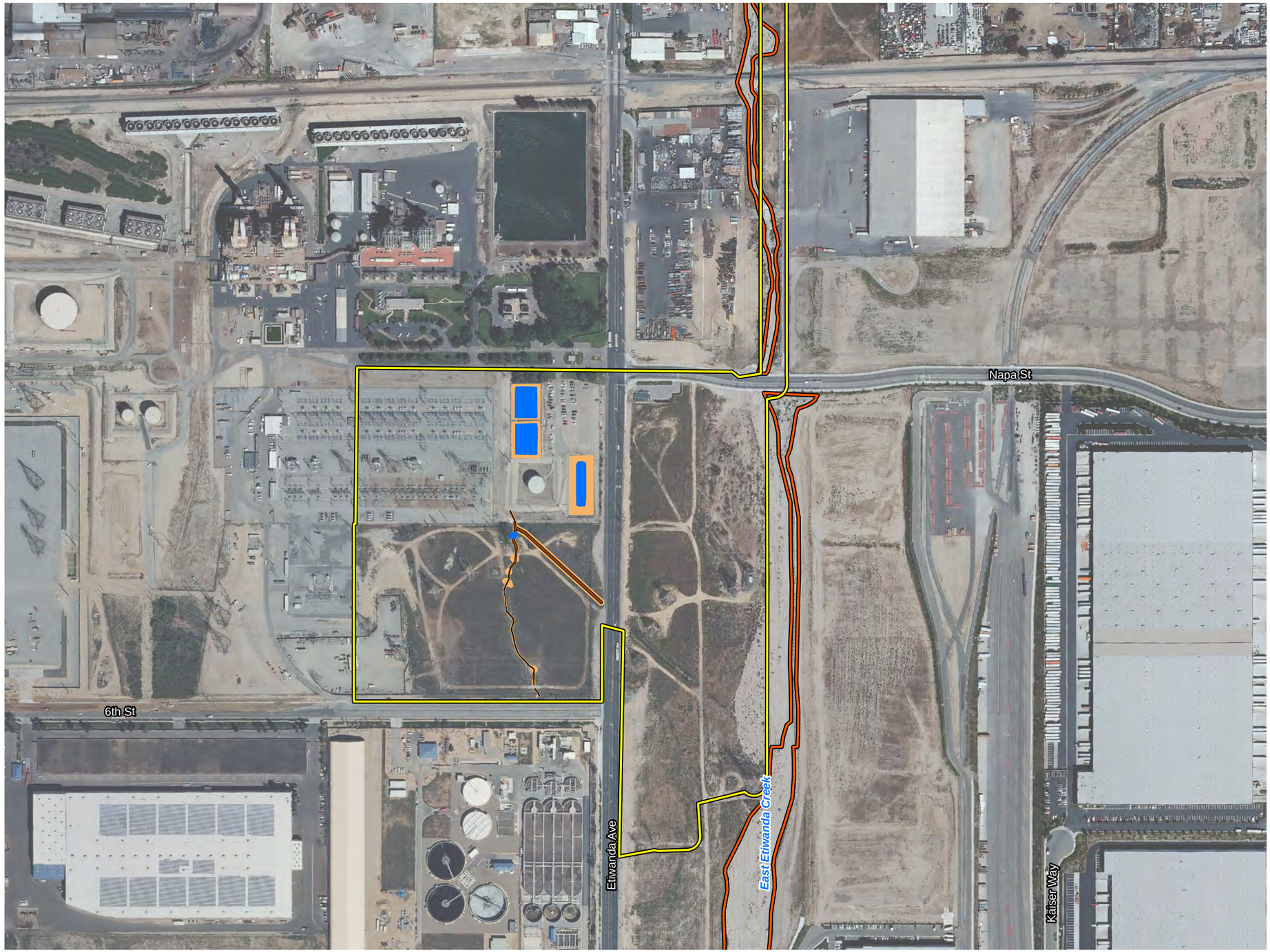
Typically, riparian vegetation provides important biological functions for an ecosystem such as (1) for cover and water sources for wildlife; (2) for filtration of runoff water and groundwater to be recharged; and for flood control and sediment stabilization purposes. As a result, the resource agencies often consider riparian vegetation types to be important resources. Riparian habitat in the survey area is limited to disturbed mule fat scrub and the Riversidean alluvial fan sage scrub vegetation types described above. Riparian habitats are often under the jurisdiction of the USACE and/or the CDFG due to their association with wetlands, "Waters of the U.S.", or streambeds. However, it should be noted that the riparian habitats are not equivalent to delineated areas subject to the jurisdiction of the CDFG and/or the USACE. Only the portion of these habitats associated within a discernable streambed and/or adjacent wetlands that meet certain criteria are within the jurisdiction of the USACE and/or the CDFG. Additionally, some areas that are not considered riparian habitat may meet the criteria to be regulated by these agencies (e.g., flood-control channels). Multiple features within and adjacent to the survey area may be under the jurisdiction of the USACE and/or the CDFG. These features include Lytle Creek and east Etiwanda Creek, as well as flood-control channels that connect with these features. A jurisdictional determination to identify potentially jurisdictional resources has been conducted throughout the survey area and a jurisdictional delineation has been conducted within the Etiwanda Substation (Exhibit 6).

3.3.3 Special Status Plants

Fifty-four special status plant species are known to occur in the vicinity of the survey area based on the results of the literature review. These species and their potential for occurrence are summarized in Table 2 with further discussions after the table. Note that these species are listed alphabetically according to their scientific name.

TABLE 2
SPECIAL STATUS PLANT SPECIES KNOWN TO OCCUR IN THE PROJECT VICINITY

Species	Status			Potential to Occur in the Survey Area
	USFWS	CDFG	CNPS	
Ambrosia monogyra singlewhorl burrobrush	—	—	2.2	Suitable habitat; not observed during focused surveys.
Arenaria paludicola marsh sandwort	FE	SE	1B.1	No potential to occur; no suitable habitat; not observed during focused surveys.
Asclepias nyctaginifolia Mojave milkweed	—	—	2.1	No potential to occur; no suitable habitat and below elevational range; not observed during focused surveys.
Astragalus hornii var. *hornii* Horn's milk-vetch	—	—	1B.1	No potential to occur; no suitable habitat; not observed during focused surveys.



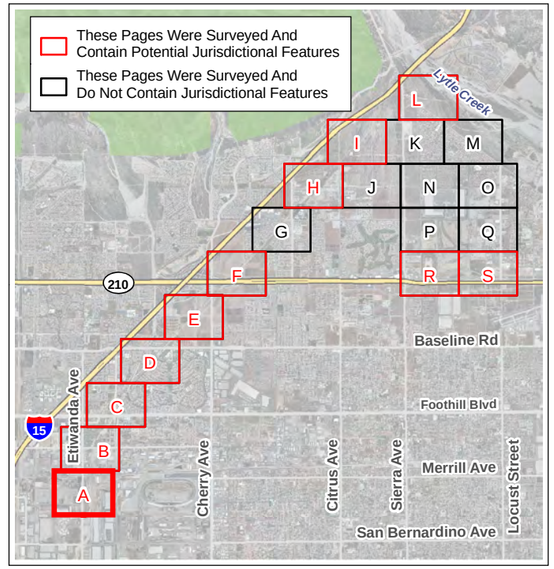
Survey Area
Not Surveyed
CDFG Jurisdiction

USACE Jurisdiction

Open Water
Other Waters of the U.S.

Potential Jurisdictional Resources

Other



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Potential Jurisdictional Resources

Exhibit 6A

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

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Survey Area
Not Surveyed
CDFG Jurisdiction

USACE Jurisdiction

Open Water
Other Waters of the U.S.

Potential Jurisdictional Resources

Other

These Pages Were Surveyed And Contain Potential Jurisdictional Features
These Pages Were Surveyed And Do Not Contain Jurisdictional Features

Potential Jurisdictional Resources

Exhibit 6B

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

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Potential Jurisdictional Resources

Exhibit 6C

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

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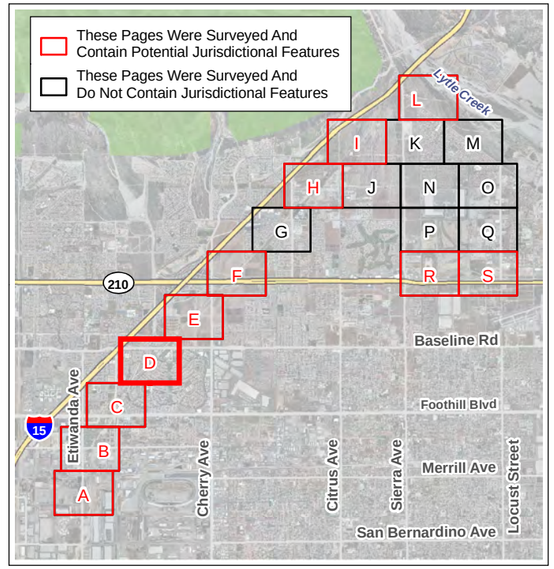
Survey Area
Not Surveyed
CDFG Jurisdiction

USACE Jurisdiction

Open Water
Other Waters of the U.S.

Potential Jurisdictional Resources

Other



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Potential Jurisdictional Resources

Exhibit 6D

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

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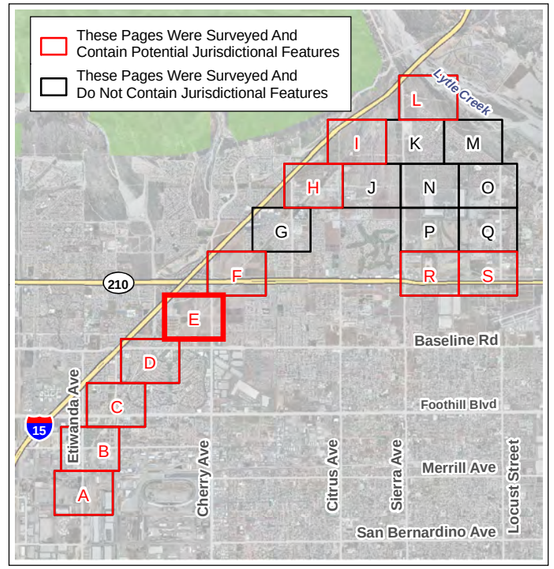
Survey Area
Not Surveyed
CDFG Jurisdiction

USACE Jurisdiction

Open Water
Other Waters of the U.S.

Potential Jurisdictional Resources

Other



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Potential Jurisdictional Resources

Exhibit 6E

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

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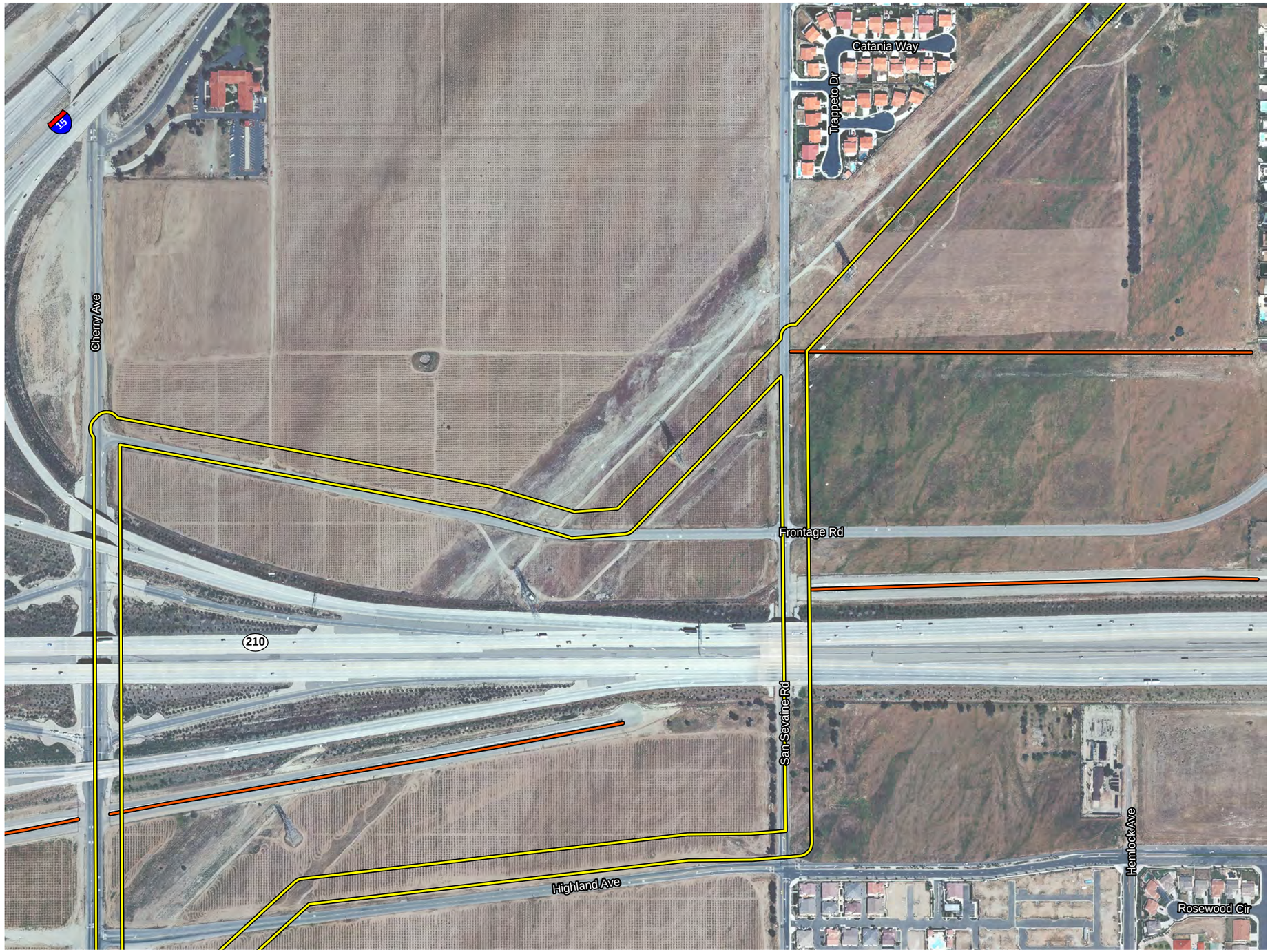


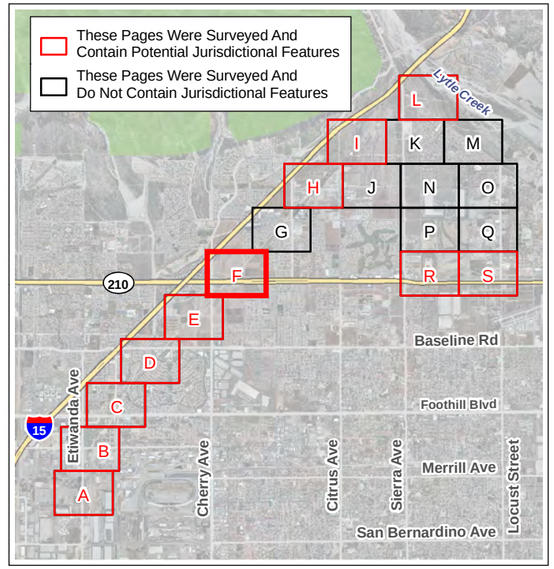
Survey Area
Not Surveyed
CDFG Jurisdiction

USACE Jurisdiction

Open Water
Other Waters of the U.S.

Potential Jurisdictional Resources

Other



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Potential Jurisdictional Resources

Exhibit 6F

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

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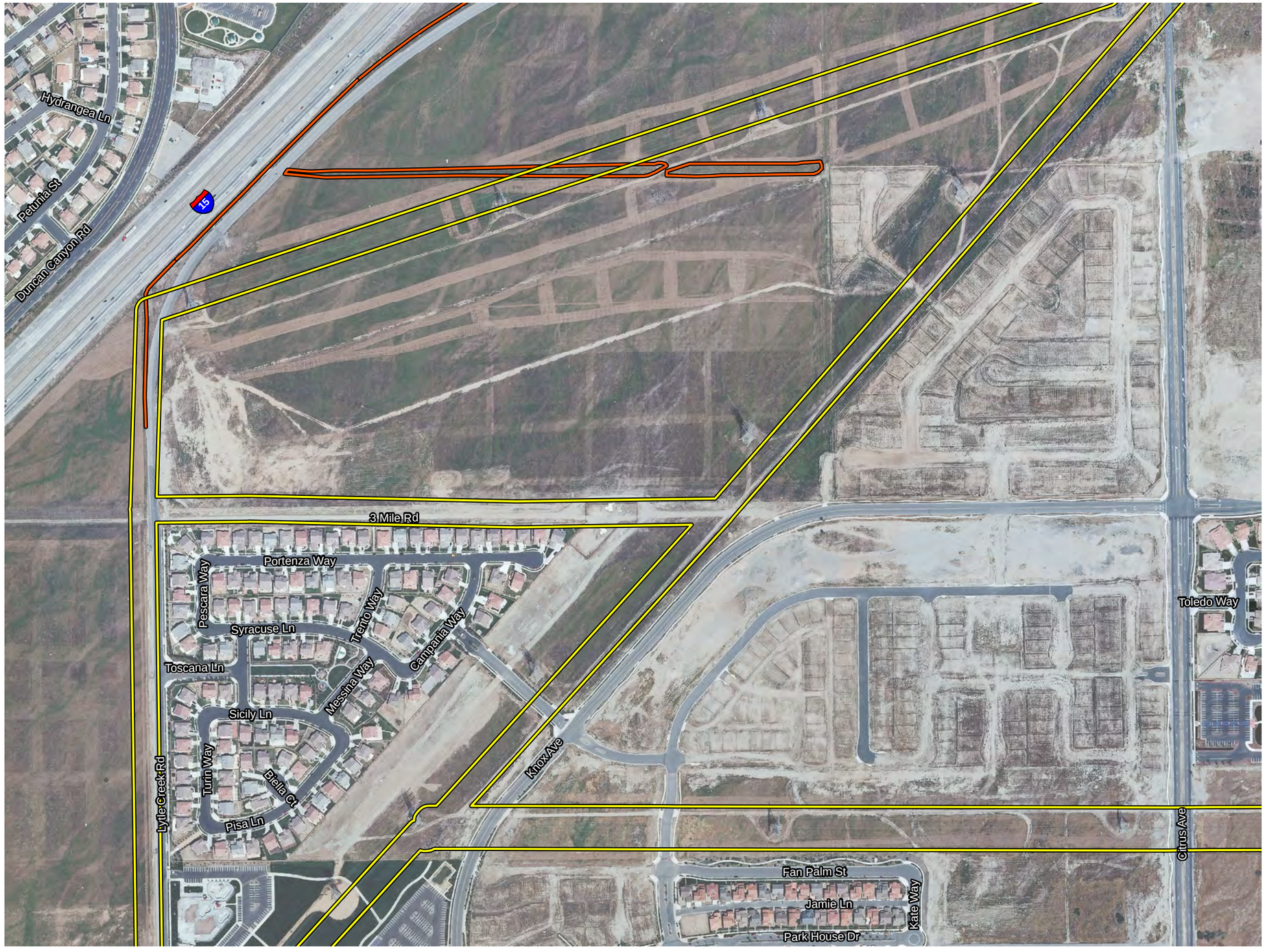


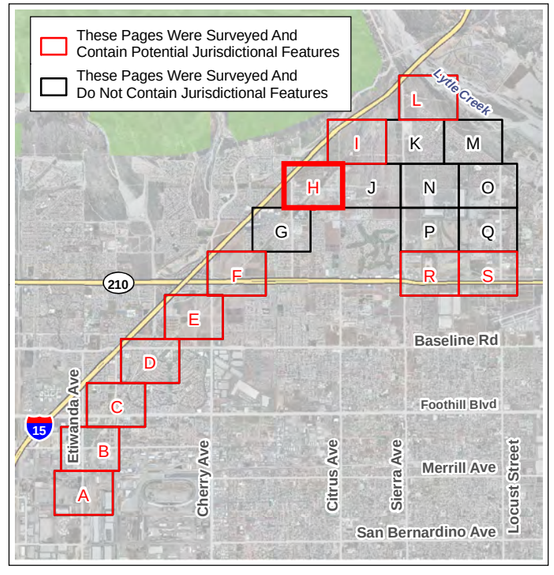
Survey Area
Not Surveyed
CDFG Jurisdiction

USACE Jurisdiction

Open Water
Other Waters of the U.S.

Potential Jurisdictional Resources

Other



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Potential Jurisdictional Resources

Exhibit 6H

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

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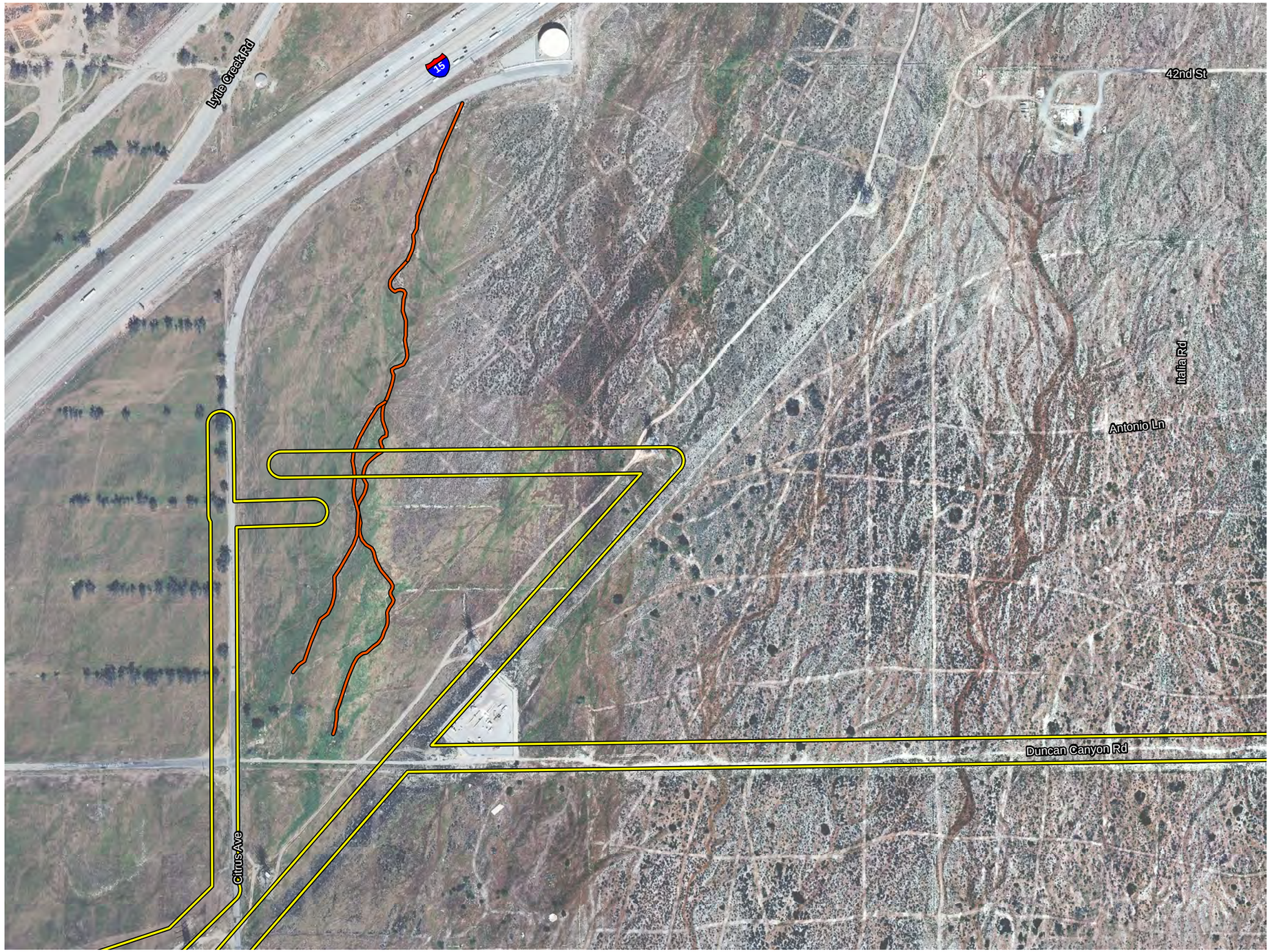


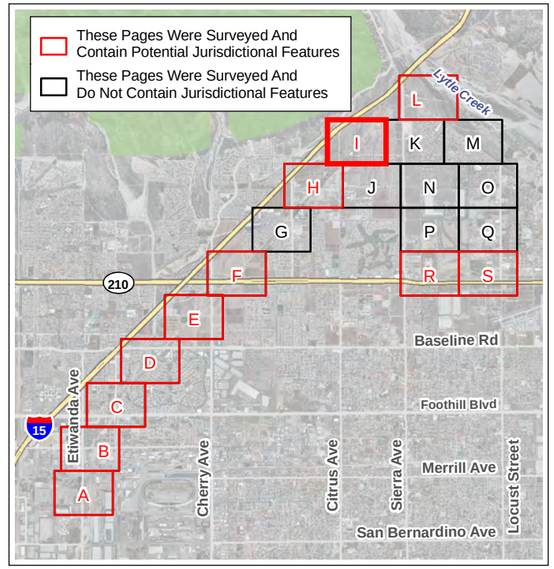
Survey Area
Not Surveyed
CDFG Jurisdiction

USACE Jurisdiction

Open Water
Other Waters of the U.S.

Potential Jurisdictional Resources

Other



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Potential Jurisdictional Resources

Exhibit 6I

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

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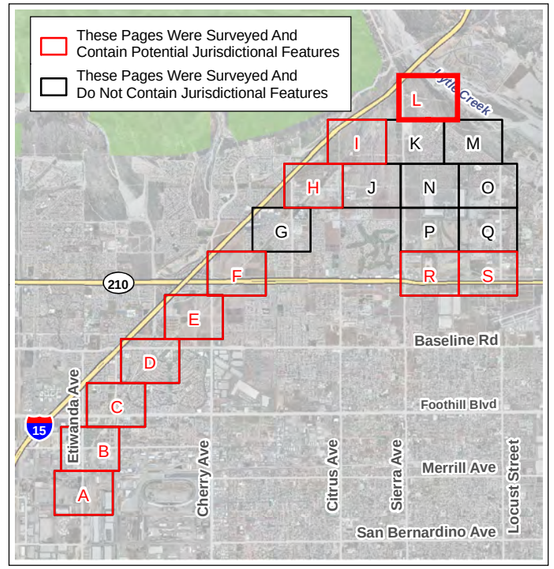
Survey Area
Not Surveyed
CDFG Jurisdiction

USACE Jurisdiction

Open Water
Other Waters of the U.S.

Potential Jurisdictional Resources

Other



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Potential Jurisdictional Resources

Exhibit 6L

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

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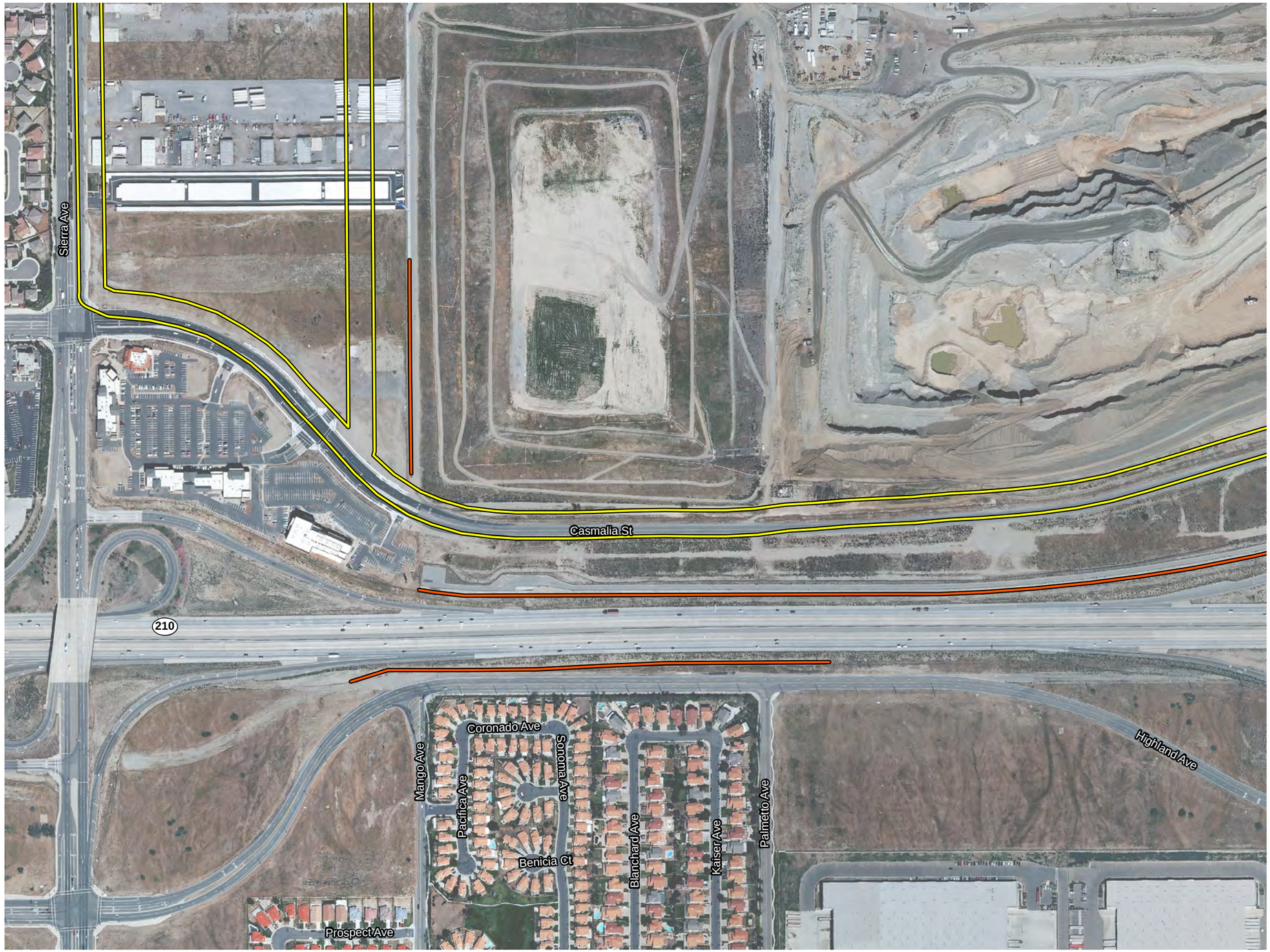


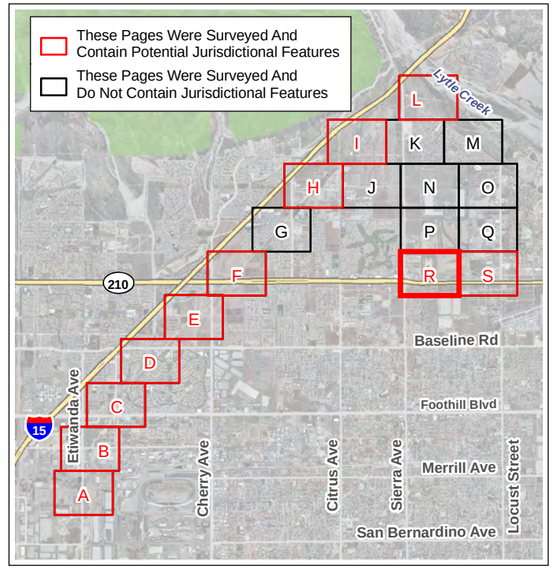
Survey Area
Not Surveyed
CDFG Jurisdiction

USACE Jurisdiction

Open Water
Other Waters of the U.S.

Potential Jurisdictional Resources

Other



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Potential Jurisdictional Resources

Exhibit 6R

Falcon Ridge Substation Project

N W E S

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Feet

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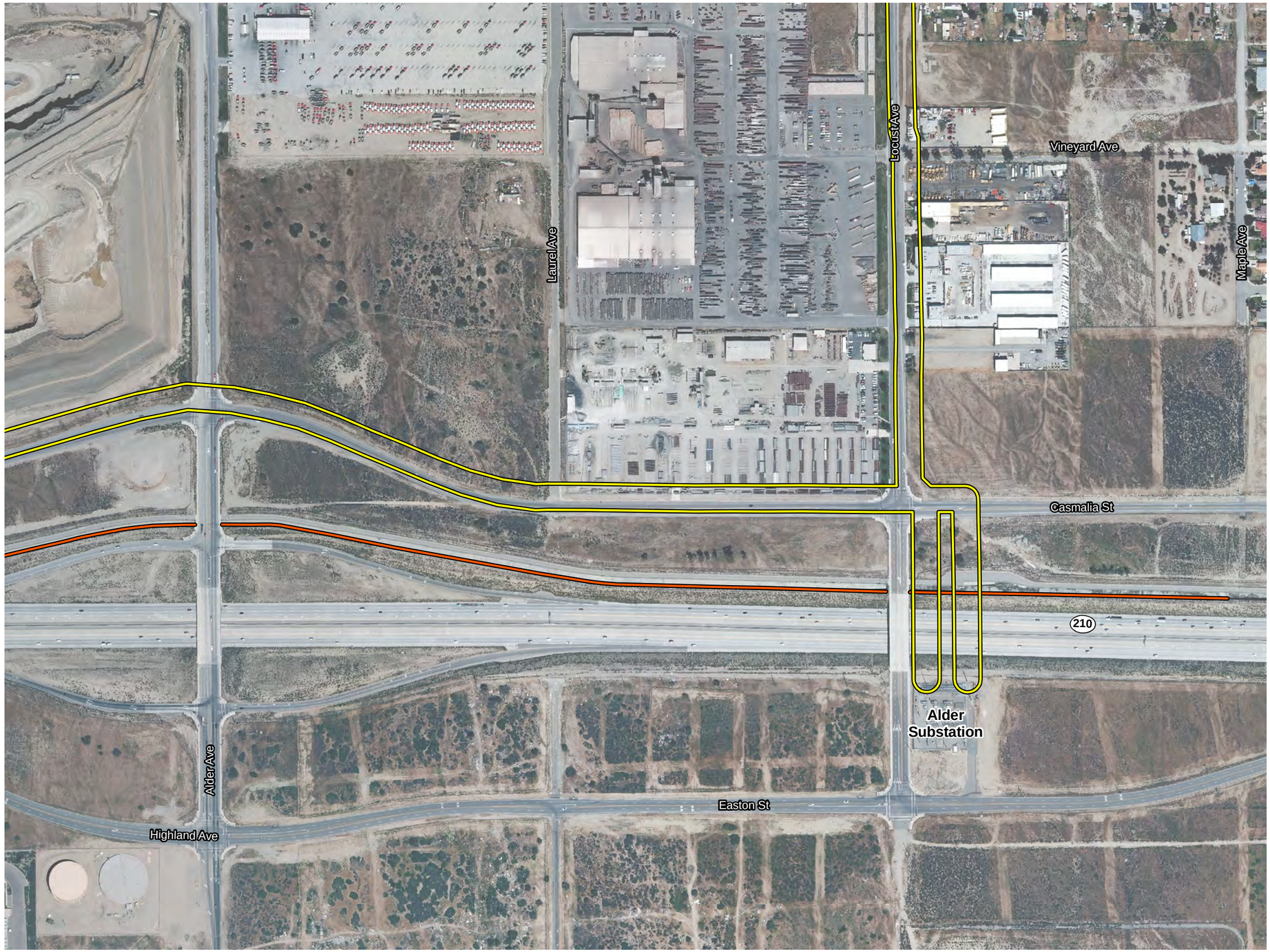


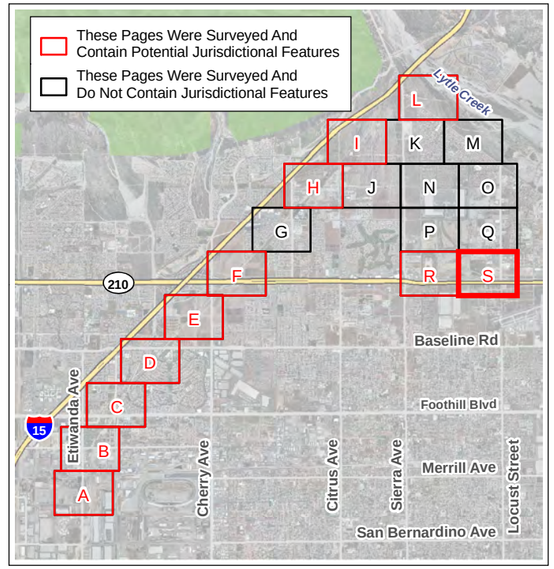
Survey Area
Not Surveyed
CDFG Jurisdiction

USACE Jurisdiction

Open Water
Other Waters of the U.S.

Potential Jurisdictional Resources

Other



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Potential Jurisdictional Resources

Exhibit 6S

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

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TABLE 2 (Continued)
SPECIAL STATUS PLANT SPECIES KNOWN TO OCCUR IN THE PROJECT VICINITY

Species	Status			Potential to Occur in the Survey Area
	USFWS	CDFG	CNPS	
Astragalus lentiginosus var. *antonius* San Antonio milk-vetch	—	—	1B.3	No potential to occur; no suitable habitat and below elevational range; not observed during focused surveys.
Astragalus leucolobus Big Bear Valley woollypod	—	—	1B.2	No potential to occur; no suitable habitat; not observed during focused surveys.
Berberis nevinii Nevin's barberry	FE	SE	1B.1	Limited suitable habitat; not observed during focused surveys.
Botrychium crenulatum scalloped moonwort	—	—	2.2	No potential to occur; no suitable habitat and below elevational range; not observed during focused surveys.
Botrychium minganense mingan moonwort	—	—	2.2	No potential to occur; no suitable habitat and below elevational range; not observed during focused surveys.
Brodiaea filifolia thread-leaved brodiaea	FT	SE	1B.1	No potential to occur; no suitable habitat; not observed during focused surveys.
Calochortus palmeri var. *palmeri* Palmer's mariposa lily	—	—	1B.2	No potential to occur; no suitable habitat and below elevational range; not observed during focused surveys.
Calochortus plummerae Plummer's mariposa lily	—	—	1B.2	Observed; suitable habitat.
Camissonia boothii ssp. *boothii* Booth's evening-primrose	—	—	2.3	No potential to occur; no suitable habitat and below elevational range; not observed during focused surveys.
Canbya candida white pygmy-poppy	—	—	4.2	No potential to occur; no suitable habitat and below elevational range; not observed during focused surveys.
Carex comosa bristly sedge	—	—	2.1	No potential to occur; no suitable habitat; not observed during focused surveys.
Castilleja lasiorhyncha San Bernardino Mountains owl's-clover	—	—	1B.2	No potential to occur; no suitable habitat and below elevational range; not observed during focused surveys.
Centromadia pungens ssp. *laevis* smooth tarplant	—	—	1B.1	Suitable habitat; not observed during focused surveys.
Chorizanthe parryi var. *parryi* Parry's spineflower	—	—	1B.1	Observed; suitable habitat.
Chorizanthe xanti var. *leucotheca* white-bracted spineflower	—	—	1B.2	Suitable habitat; not observed during focused surveys.
Cladium californicum California saw-grass	—	—	2.2	No potential to occur; no suitable habitat; not observed during focused surveys.

TABLE 2 (Continued)
SPECIAL STATUS PLANT SPECIES KNOWN TO OCCUR IN THE PROJECT VICINITY

Species	Status			Potential to Occur in the Survey Area
	USFWS	CDFG	CNPS	
Claytonia lanceolata var. *peirsonii* Peirson's spring beauty	—	—	1B.1	No potential to occur; no suitable habitat and below elevational range; not observed during focused surveys.
Cordylanthus maritimus ssp. *maritimus* salt marsh bird's-beak	FE	SE	1B.2	No potential to occur; no suitable habitat and above elevational range; not observed during focused surveys.
Deinandra mohavensis Mojave tarplant	—	SE	1B.3	No potential to occur; no suitable habitat; not observed during focused surveys.
Dodecahema leptoceras slender-horned spineflower	FE	SE	1B.1	Suitable habitat; not observed during focused surveys.
Dudleya multicaulis many-stemmed dudleya	—	—	1B.2	No potential to occur; no suitable habitat; not observed during focused surveys.
Eriastrum densifolium ssp. *sanctorum* Santa Ana River woollystar	FE	SE	1B.1	Suitable habitat; not observed during focused surveys.
Eriogonum evanidum vanishing wild buckwheat	—	—	1B.1	No potential to occur; no suitable habitat and below elevational range; not observed during focused surveys.
Eriogonum microthecum var. *johnstonii* Johnston's buckwheat	—	—	1B.3	No potential to occur; no suitable habitat and below elevational range; not observed during focused surveys.
Fimbristylis thermalis hot springs fimbristylis	—	—	2.2	No potential to occur; no suitable habitat; not observed during focused surveys.
Galium californicum ssp. *primum* Alvin Meadow bedstraw	—	—	1B.2	No potential to occur; no suitable habitat and below elevational range; not observed during focused surveys.
Gentiana fremontii Fremont's gentian	—	—	2.3	No potential to occur; no suitable habitat and below elevational range; not observed during focused surveys.
Helianthus nuttallii ssp. *parishii* Los Angeles sunflower	—	—	1A	No potential to occur; no suitable habitat; not observed during focused surveys.
Horkelia cuneata ssp. *puberula* mesa horkelia	—	—	1B.1	No potential to occur; no suitable habitat; not observed during focused surveys.
Imperata brevifolia California satintail	—	—	2.1	Limited suitable habitat; not observed during focused surveys.
Lepidium virginicum var. *robinsonii* Robinson's pepper-grass	—	—	1B.2	Suitable habitat; not observed during focused surveys.
Lilium parryi lemon lily	—	—	1B.2	No potential to occur; no suitable habitat and below elevational range; not observed during focused surveys.

TABLE 2 (Continued)
SPECIAL STATUS PLANT SPECIES KNOWN TO OCCUR IN THE PROJECT VICINITY

Species	Status			Potential to Occur in the Survey Area
	USFWS	CDFG	CNPS	
Linanthus concinnus San Gabriel linanthus	—	—	1B.2	No potential to occur; no suitable habitat and below elevational range; not observed during focused surveys.
Lycium parishii Parish's desert-thorn	—	—	2.3	Suitable habitat; not observed during focused surveys.
Monardella pringlei Pringle's monardella	—	—	1A	No potential to occur; no suitable habitat; not observed during focused surveys.
Muhlenbergia californica California muhly	—	—	4.3	No potential to occur; no suitable habitat; not observed during focused surveys.
Nasturtium gabmelii Gambel's water cress	FE	ST	1B.1	No potential to occur; no suitable habitat; not observed during focused surveys.
Navarretia prostrata prostrate vernal pool navarretia	—	—	1B.1	No potential to occur; no suitable habitat; not observed during focused surveys.
Opuntia basilaris var. *brachyclada* short-joint beavertail	—	—	1B.2	No potential to occur; no suitable habitat and below elevational range; not observed during focused surveys.
Oreonana vestita woolly mountain-parsley	—	—	1B.3	No potential to occur; no suitable habitat and below elevational range; not observed during focused surveys.
Orobanche valida ssp. *valida* Rock Creek broomrape	—	—	1B.2	Limited potentially suitable habitat; not observed during focused surveys.
Ribes divaricatum var. *parishii* Parish's gooseberry	—	—	1A	No potential to occur; no suitable habitat; not observed during focused surveys.
Schoenus nigricans black bog-rush	—	—	2.2	No potential to occur; no suitable habitat; not observed during focused surveys.
Senecio aphanactis chaparral ragwort	—	—	2.2	No potential to occur; no suitable habitat; not observed during focused surveys.
Sidalcea neomexicana salt spring checkerbloom	—	—	2.2	No potential to occur; no suitable habitat; not observed during focused surveys.
Sphenopholis obtusata prairie wedge grass	—	—	2.2	No potential to occur; no suitable habitat; not observed during focused surveys.
Streptanthus bernardinus Laguna Mountains jewel-flower	—	—	4.3	No potential to occur; no suitable habitat and below elevational range; not observed during focused surveys.
Streptanthus campestris southern jewel-flower	—	—	1B.3	No potential to occur; no suitable habitat; not observed during focused surveys.

TABLE 2 (Continued)
SPECIAL STATUS PLANT SPECIES KNOWN TO OCCUR IN THE PROJECT VICINITY

Species	Status			Potential to Occur in the Survey Area
	USFWS	CDFG	CNPS	
Symphyotrichum defoliatum San Bernardino aster	—	—	1B.2	No potential to occur; no suitable habitat; not observed during focused surveys.
Viola aurea golden violet	—	—	2.2	No potential to occur; no suitable habitat and below elevational range; not observed during focused surveys.

LEGEND:

Federal (USFWS)
FE Endangered
FT Threatened

State (CDFG)
SE Endangered
ST Threatened

California Native Plant Society (CNPS) List Categories
List 1A Plants Presumed Extinct in California
List 1B Plants Rare, Threatened, or Endangered in California and Elsewhere
List 2 Plants Rare, Threatened, or Endangered in California But More Common Elsewhere
List 4 Plants of Limited Distribution – A Watch List

California Native Plant Society (CNPS) Threat Code Extensions
None Plants lacking any threat information
.1 Seriously Endangered in California (over 80% of occurrences threatened; high degree and immediacy of threat)
.2 Fairly Endangered in California (20–80% of occurrences threatened)
.3 Not Very Threatened in California (low degree/immediacy of threat or no current threats known)

Singlewhorl Burrobrush

Singlewhorl burrowbrush (*Ambrosia monogyra*) is a CNPS List 2.2 species. It typically blooms between August and November (CNPS 2010). This shrub occurs in washes and dry riverbeds at elevations between 0 and approximately 1,640 feet above msl (Jepson Flora Project 2009). It is known from southwestern California, east of the Sierra Nevadas, and the Sonoran Desert to western Nevada, Texas, and northern Mexico (Jepson Flora Project 2009). In the vicinity of the survey area, this species has been historically reported near the Fontana Power Plant north of Rialto (1961 record); all recent records are from San Diego County (Jepson Flora Project 2009). Suitable habitat for this species is present in the survey area; however, singlewhorl burrobrush was not observed during focused plant surveys. Therefore, it is not expected to occur in the survey area.

Marsh Sandwort

Marsh sandwort (*Arenaria paludicola*) is a federally and State-listed Endangered species and a CNPS List 1B.1 species. It typically blooms between May and August (CNPS 2010). This stoloniferous herb (i.e., one that can reproduce by aboveground horizontal stems) occurs in boggy meadows and marshes at elevations between 0 and approximately 985 feet above msl (Hickman 1993). It is known from Washington to the southern Central Coast (i.e., Nipoma Mesa, San Luis Obispo County) and the South Coast (i.e., the Santa Ana River) of California and south to Mexico (Hickman 1993). In the vicinity of the survey area, this species has been

reported historically from the San Bernardino area (Jepson Flora Project 2009; 1889 records). No suitable habitat for this species is present in the survey area, therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

No critical habitat has been proposed by the USFWS for this species.

Mojave Milkweed

Mojave milkweed (*Asclepias nyctaginifolia*) is a CNPS List 2.1 species. It typically blooms between May and June (CNPS 2010). This perennial herb occurs in arroyos and dry slopes at elevations between approximately 3,280 and 5,580 feet above msl (Jepson Flora Project 2009). It is known from the Mojave Desert to Nevada and New Mexico (Jepson Flora Project 2009). In the vicinity of the survey area, this species has been reported from the Ivanpah Valley in the eastern Mojave Desert (Jepson Flora Project 2009). No suitable habitat for this species is present in the survey area and the survey area is below the elevational range of this species; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

Horn's Milk-vetch

Horn's milk-vetch (*Astragalus hornii* var. *hornii*) is a CNPS List 1B.1 species. It typically blooms between May and October (CNPS 2010). This annual herb occurs in salty flats and lake shores at elevations between approximately 200 and 990 feet above msl (Jepson Flora Project 2009). It is known from the southern San Joaquin Valley, western Transverse Ranges, south coast, and the western edge of the Mojave Desert to west-central Nevada (Jepson Flora Project 2009). In the vicinity of the survey area, this species has been historically reported from San Bernardino (Jepson Flora Project 2009; 1898 record). No suitable habitat for this species is present in the survey area; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

San Antonio Milk-vetch

San Antonio milk-vetch (*Astragalus lentiginosus* var. *antonius*) is a CNPS List 1B.3 species. It typically blooms between April and July (CNPS 2010). This perennial herb occurs on dry slopes in open pine forests at elevations between approximately 4,590 and 8,530 feet above msl (Jepson Flora Project 2009). It is known from the San Gabriel Mountains (Jepson Flora Project 2009). In the vicinity of the survey area, this species has been reported from the San Gabriel Mountains, just north of Wrightwood (CDFG 2010a). No suitable habitat for this species is present in the survey area and the survey area is below the elevational range of this species; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

Big Bear Valley Woollypod

Big Bear Valley woollypod (*Astragalus leucolobus*) is a CNPS List 1B.2 species. It typically blooms between May and July (CNPS 2010). This perennial herb occurs in sandy areas, especially with creosote bush (*Larrea tridentata*), at elevations between approximately 460 and 6,070 feet above msl (Jepson Flora Project 2009). It is known from the southern Sierra Nevada foothills, the Tehachapi Mountain area, the southern San Joaquin Valley, the southernmost areas east of the Sierra Nevadas, and the western and southern Mojave Desert (Jepson Flora Project 2009). In the vicinity of the survey area, this species has been reported from Lone Pine Canyon in the San Gabriel Mountains (CDFG 2010a). No suitable habitat for this species is present in the survey area, therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

Nevin's Barberry

Nevin's barberry (*Berberis nevinii*) is a federally and State-listed Endangered species and a CNPS List 1B.1 species. It typically blooms between March and June (CNPS 2010). This evergreen shrub occurs in sandy to gravelly soils in washes and chaparral (Jepson Flora Project 2009). It is known from southwestern California at elevations between 0 and approximately 2,130 feet above msl (Jepson Flora Project 2009). In the vicinity of the survey area, this species has been reported from the Arrowhead Highlands/Rimforest area within the San Bernardino Mountains (CDFG 2010a). Limited suitable habitat is present in the survey area and Nevin's barberry was not observed during focused surveys.

On Feburary 13, 2008, the USFWS published a final rule designating critical habitat for Nevin's barberry (USFWS 2008a). This final rule designated six acres in Riverside County as critical habitat. The survey area is not located in designated critical habitat for this species.

Scalloped Moonwort

Scalloped moonwort (*Botrychium crenulatum*) is a CNPS List 2.2 species. It typically blooms between June and September (CNPS 2010). This rhizomatous herb (i.e., one that can reproduce through horizontal underground stems) occurs in saturated hard water seeps and stream margins at elevations between approximately 4,920 and 11,810 feet above msl (Jepson Flora Project 2009). It is known from high north Coast Ranges, high Cascade Ranges, high Sierra Nevadas, San Gabriel Mountains, San Bernardino Mountains, Warner Mountains, and east of the Sierra Nevadas to Washington, Montana, and Utah (Jepson Flora Project 2009). In the vicinity of the survey area, this species has been reported from the headwaters of Cold Water Canyon of Lytle Creek within the San Gabriel Mountains (CDFG 2010a). No suitable habitat for this species is present in the survey area and the survey area is below the elevational range of this species; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

Mingan Moonwort

Mingan moonwort (*Botrychium minganense*) is a CNPS List 2.2 species. It typically blooms between July and September. This rhizomatous herb occurs in meadows and open forests along streams or around seeps at elevations between approximately 4,920 and 10,170 feet above msl (Jepson Flora Project 2009). It is known from the high Cascade Range, high Sierra Nevadas, and Warner Mountains to Alaska, eastern North America, and Iceland (Jepson Flora Project 2009). In the vicinity of the survey area, this species has been reported from Cold Water Canyon of Lytle Creek within the San Gabriel Mountains (CDFG 2010a). No suitable habitat for this species is present in the survey area and the survey area is below the elevational range of this species; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

Thread-leaved Brodiaea

Thread-leaved brodiaea (*Brodiaea filifolia*) is a federally listed Threatened species, a State-listed Endangered species, and a CNPS List 1B.1 species. It typically blooms between March and June (CNPS 2010). This bulbiferous perennial herb occurs on heavy clay soils in vernal pools, coastal scrub, chaparral, and valley and foothill grasslands (Hickman 1993; Munz 1974). It is known from the southern South Coast in western San Diego County and the western Peninsular Ranges in Riverside and San Diego counties (Hickman 1993). In the vicinity of the survey area, this species has been reported from Arrowhead Hot Springs in the San Bernardino Mountains (CDFG 2010a). No suitable habitat for this species is present in the survey area; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

On December 13, 2005, the USFWS published a final rule designating critical habitat for thread-leaved brodiaea (USFWS 2005b). This final rule designated 597 acres in Los Angeles and San Diego counties as critical habitat. The survey area is not located in designated critical habitat for this species.

Palmer's Mariposa Lily

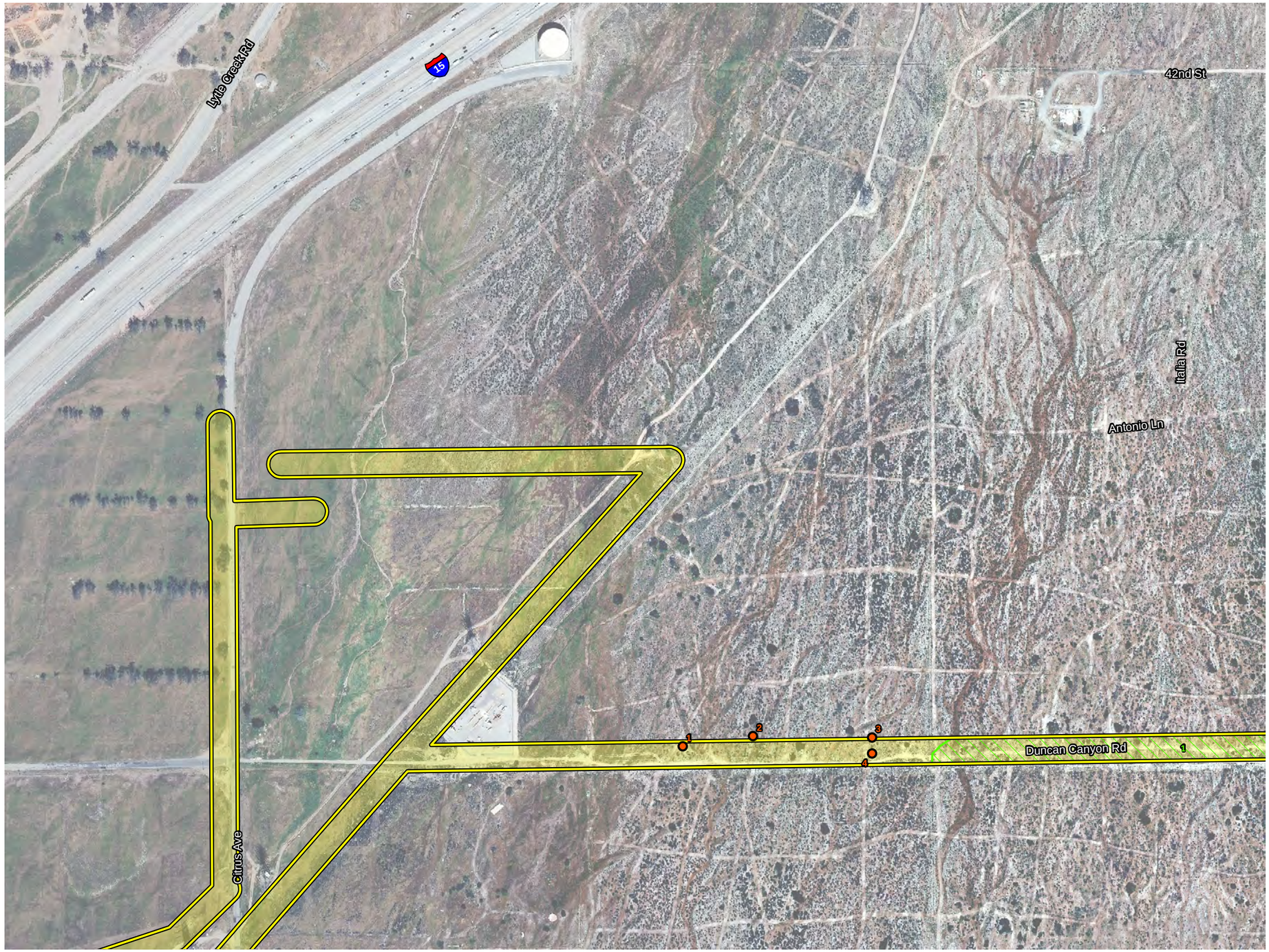
Palmer's mariposa lily (*Calochortus palmeri* var. *palmeri*) is a CNPS List 1B.2 species. It typically blooms between April and July (CNPS 2010). This bulbiferous herb (i.e., one that sprouts from bulbs) occurs in meadows and vernally moist places in yellow-pine forests and chaparral at elevations between approximately 3,940 and 7,220 feet above msl (Jepson Flora Project 2009). It is known from the Tehachapi Mountains, southern central western California, the Transverse Ranges, and the San Jacinto Mountains (Jepson Flora Project 2009). In the vicinity of the survey area, this species has been reported from Horsethief Canyon south of State Route (SR) 138 (CDFG 2010a). No suitable habitat for this species is present in the survey area and the survey area is below the elevational range of this species; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

Plummer's Mariposa Lily

Plummer's mariposa lily is a CNPS List 1B.2 species. It typically blooms between May and July (CNPS 2010). This perennial bulbiferous herb occurs in coastal sage scrub; dry, rocky chaparral; and yellow-pine forest at elevations between 0 and approximately 5,580 feet above msl (Roberts et al. 2004; Hickman 1993). This species is known from Ventura, Los Angeles, San Bernardino, and Riverside counties (CNPS 2010). A total of 182 individuals of Plummer's mariposa lily were observed in the survey area (Table 3; Exhibit 7). The associated species at the various populations included: black sage, California croton (*Croton californica*), California sagebrush, chamise, deer weed, goldentop grass, holly-leaved cherry (*Prunus ilicifolia*), long-beaked filaree, popcorn flower (*Plagiobothrys* sp.), ripgut brome, foxtail fescue, peak rush rose (*Helianthemum scoparium*), sapphire wolly-star (*Eriastrum sapphirinum*), white sage, and wild oat. These plants were observed on rocky or cobble type soils including Soboba stony and Soboba gravelly loamy sand.

TABLE 3
PLUMMER'S MARIPOSA LILY POPULATIONS OBSERVED IN THE SURVEY AREA

Population	Number of Individuals	Percent Phenology		
		Vegetative	Flowering	Fruiting
1	2	100		
2	4	25	75	
3	1		100	
4	1	100		
5	2	100		
6	4		100	
7	3	33	67	
8	2		100	
9	3	67	33	
10	1		100	
11	1		100	
12	4	75	25	
13	5	60	40	
14	8	25	75	
15	2	50	50	
16	1		100	
17	7	100		
18	4	25	75	
19	1		100	
20	1	100		
21	1		100	
22	3	67	33	
23	2		100	
24	1		100	



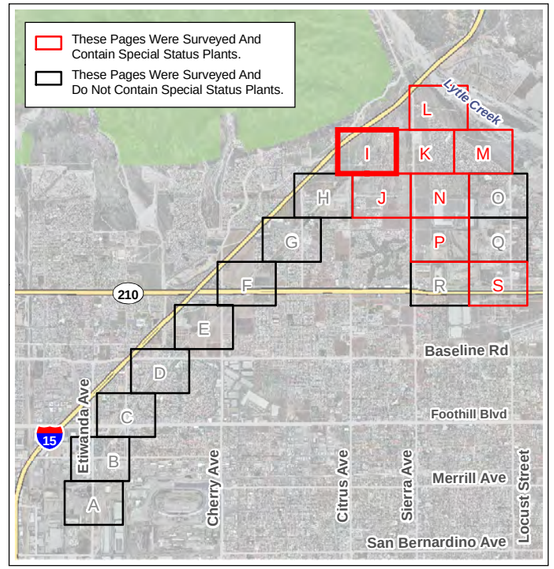
Survey Area

Not Surveyed

Plummer's Mariposa Lily Population Locations

Parry's Spineflower Locations

Parry's Spineflower Polygon Locations



Special Status Plant Locations

Exhibit 7I

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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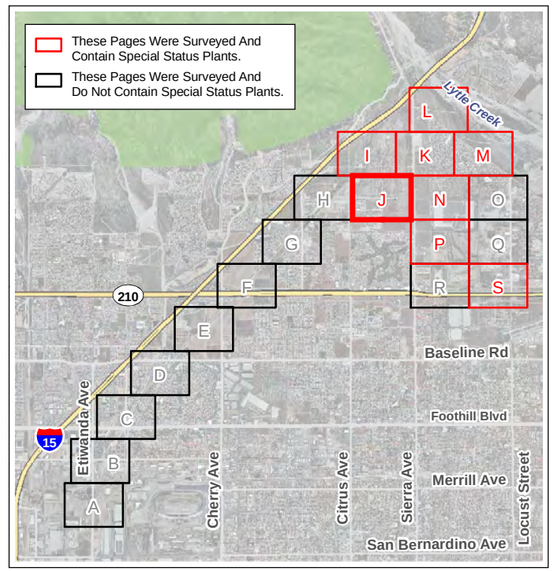
Survey Area

Not Surveyed

Plummer's Mariposa Lily Population Locations

Parry's Spineflower Locations

Parry's Spineflower Polygon Locations



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Special Status Plant Locations

Exhibit 7J

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

Bonterra CONSULTING

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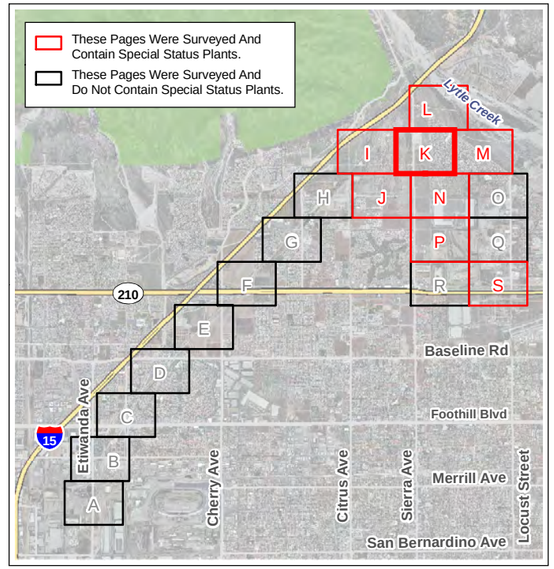
Survey Area

Not Surveyed

Plummer's Mariposa Lily Population Locations

Parry's Spineflower Locations

Parry's Spineflower Polygon Locations



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Special Status Plant Locations

Exhibit 7K

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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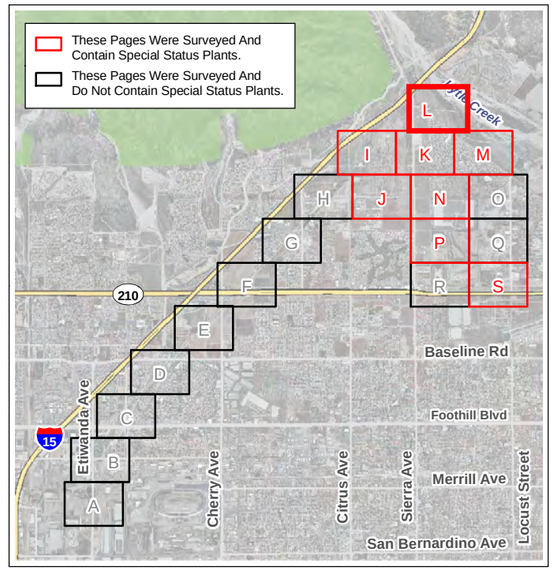
Survey Area

Not Surveyed

Plummer's Mariposa Lily Population Locations

Parry's Spineflower Locations

Parry's Spineflower Polygon Locations



Special Status Plant Locations

Exhibit 7L

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

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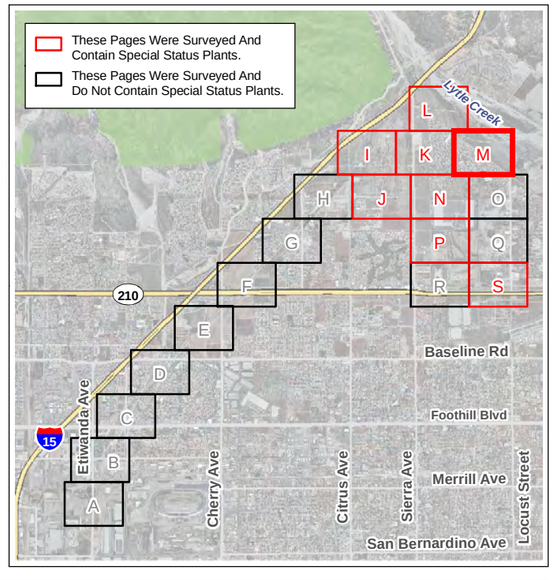
Survey Area

Not Surveyed

Plummer's Mariposa Lily Population Locations

Parry's Spineflower Locations

Parry's Spineflower Polygon Locations



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Special Status Plant Locations

Exhibit 7M

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

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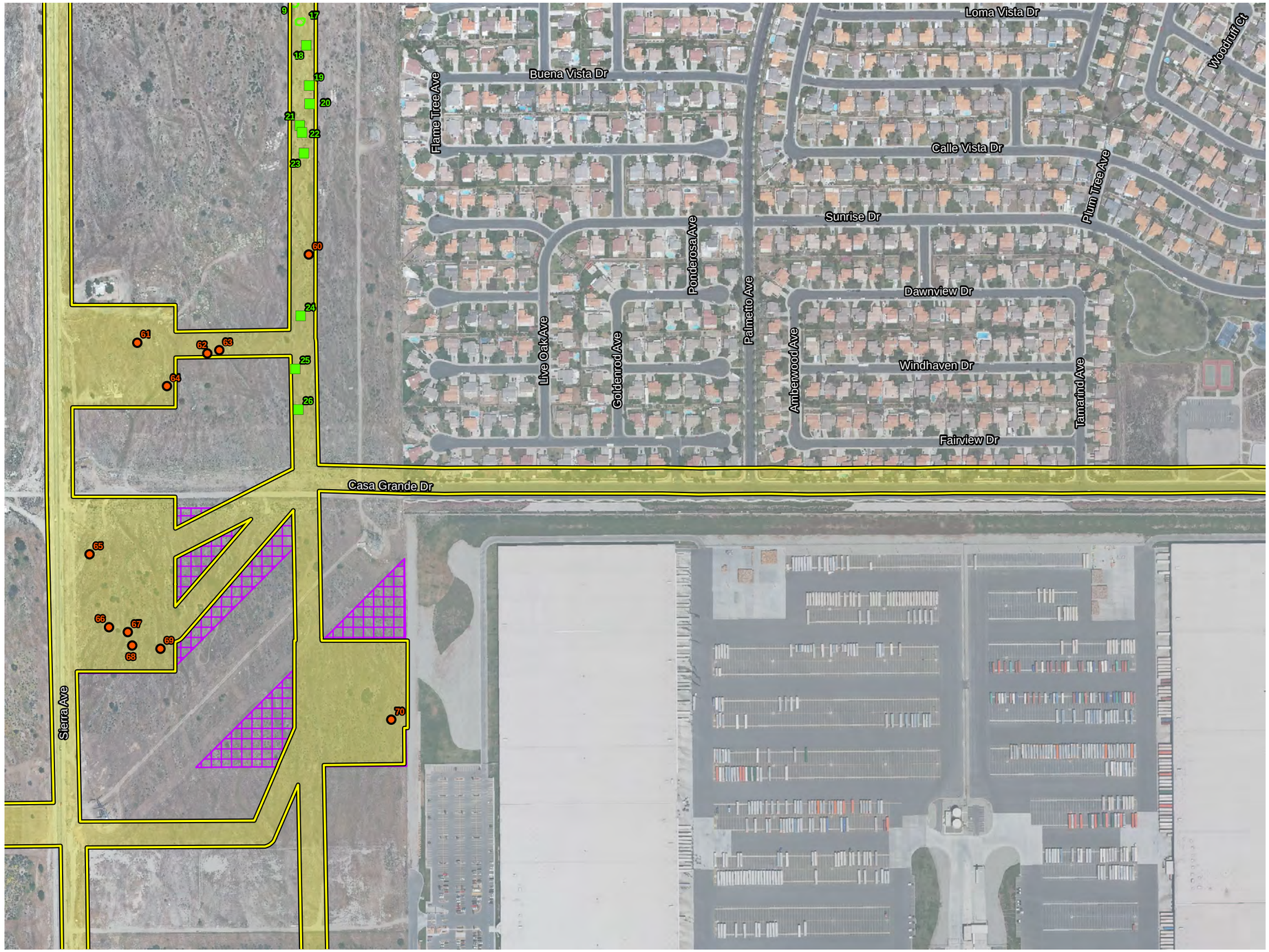


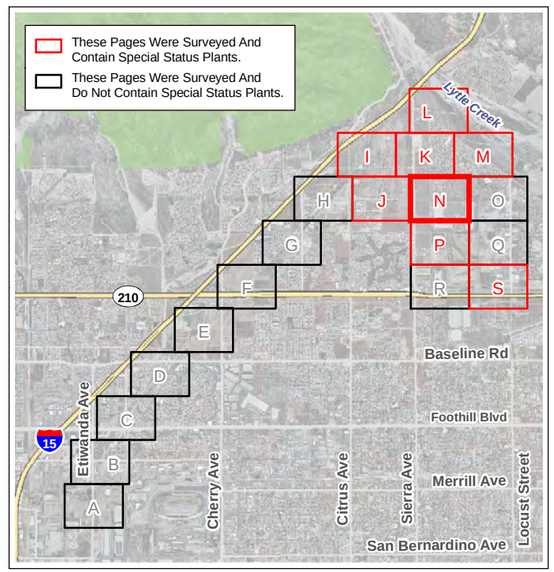
Survey Area

Not Surveyed

Plummer's Mariposa Lily Population Locations

Parry's Spineflower Locations

Parry's Spineflower Polygon Locations



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Special Status Plant Locations

Falcon Ridge Substation Project

Exhibit 7N

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

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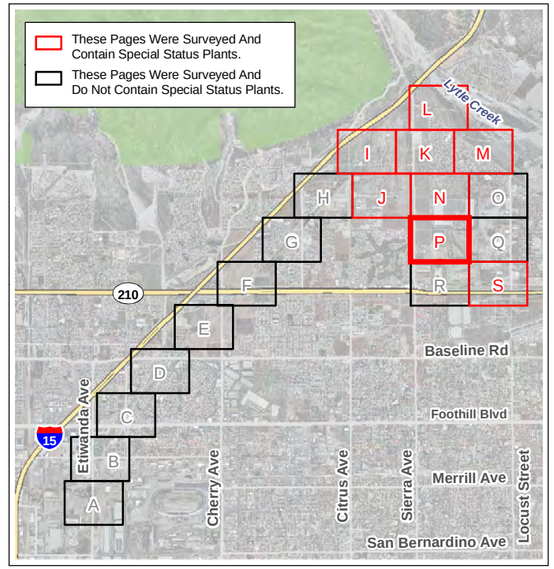
Survey Area
Not Surveyed
Plummer's Mariposa Lily Population Locations
Parry's Spineflower Locations
Parry's Spineflower Polygon Locations



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Special Status Plant Locations

Exhibit 7P

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

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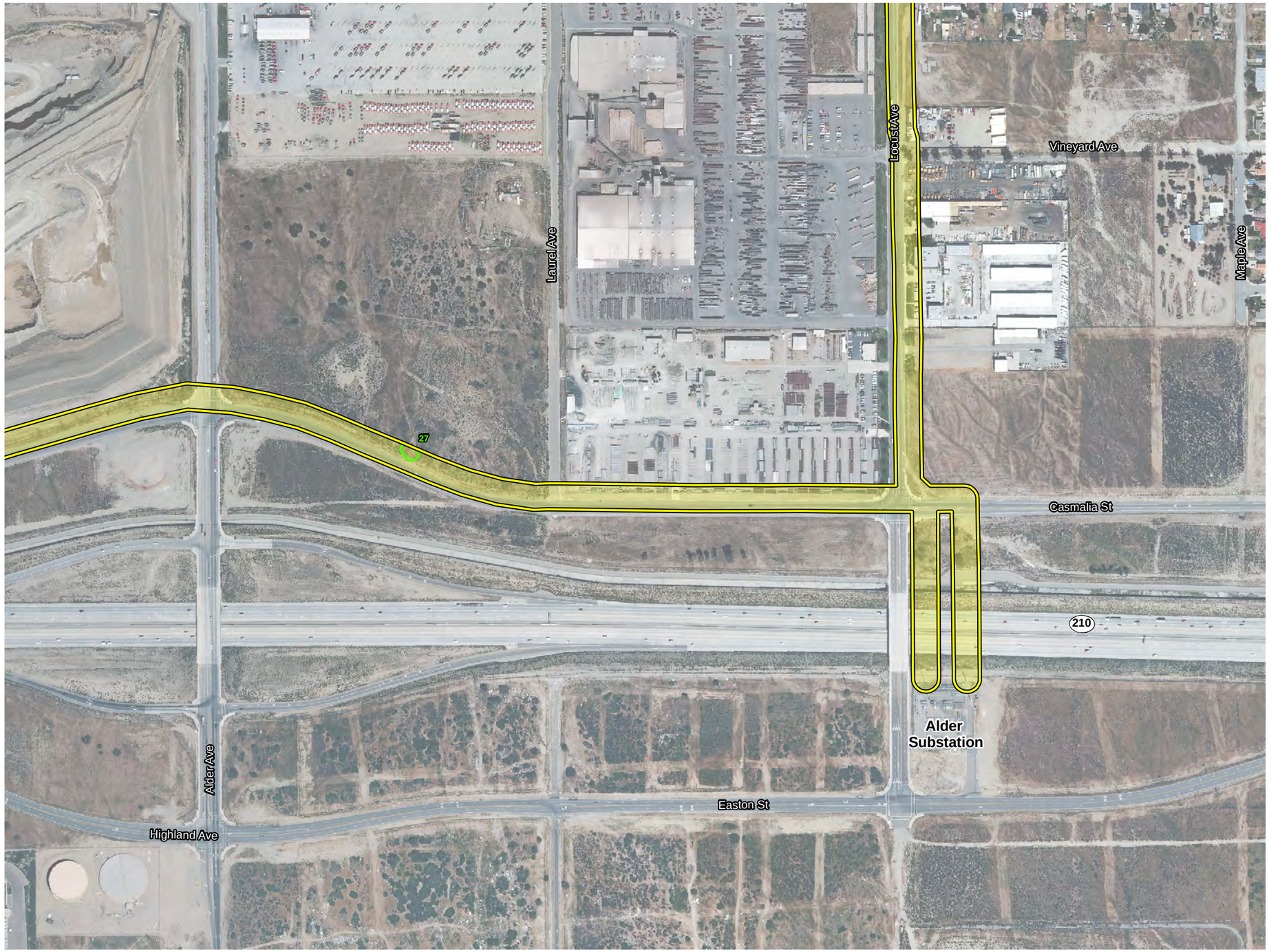
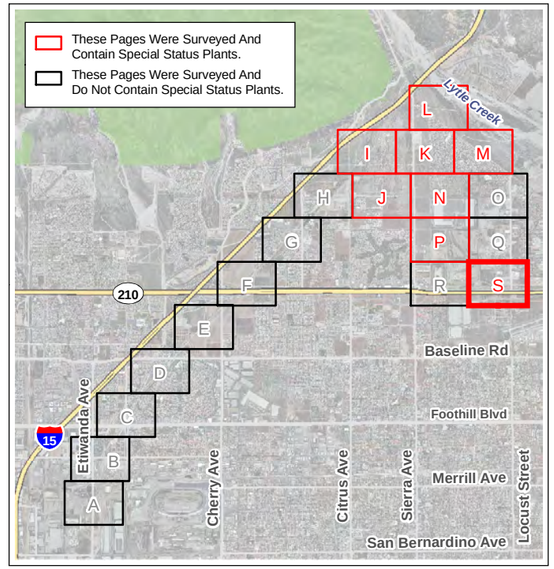


Survey Area
Not Surveyed
Plummer's Mariposa Lily Population Locations
Parry's Spineflower Locations
Parry's Spineflower Polygon Locations



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Special Status Plant Locations

Exhibit 7S

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

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TABLE 3 (Continued)
PLUMMER'S MARIPOSA LILY POPULATIONS OBSERVED IN THE SURVEY AREA

Population	Number of Individuals	Percent Phenology		
		Vegetative	Flowering	Fruiting
25	1		100	
26	1		100	
27	1		100	
28	2		100	
29	8	20	80	
30	25	10	90	
31	1	100		
32	1		100	
33	3		100	
34	7	43	57	
35	1		100	
36	1		100	
37	3	33	67	
38	9	22	78	
39	5	40	60	
40	5	40	60	
41	1		100	
42	1		100	
43	1		100	
44	1		100	
45	1			100
46	1			100
47	1		100	
48	1			100
49	1			100
50	1			100
51	2		100	
52	1		100	
53	4	25	75	
54	1		100	
55	2		100	
56	1		100	
57	1	100		
58	1		100	
59	1		100	
60	1		100	
61	1		100	
62	1		100	
63	1	100		
64	2		100	
65	1		100	

TABLE 3 (Continued)
PLUMMER'S MARIPOSA LILY POPULATIONS OBSERVED IN THE SURVEY AREA

Population	Number of Individuals	Percent Phenology		
		Vegetative	Flowering	Fruiting
66	2		100	
67	1		100	
68	5	60	40	
69	1		100	
70	3	67	33	
71	1		100	
Total:	**182**			

Booth's Evening-primrose

Booth's evening-primrose (*Camissonia boothii* ssp. *boothii*) is a CNPS List 2.3 species. It typically blooms between April and September (CNPS 2010). This annual herb occurs in sandy flats, steep loose slopes, and Joshua tree and pinyon/juniper woodlands at elevations between 2,950 and 7,875 feet above msl (Hickman 1993). It is known from east of the Sierra Nevadas to Washington and northwestern Arizona (Hickman 1993). In the vicinity of the survey area, this species has been reported near Hesperia at the northern foot of the San Bernardino Mountains (CDFG 2010a). No suitable habitat for this species is present in the survey area and the survey area is below the elevational range of this species; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

White Pygmy-poppy

White pygmy-poppy (*Canbya candida*) is a CNPS List 4.2 species. It typically blooms between March and June (CNPS 2010). This annual herb occurs in sandy places at elevations between approximately 1,970 and 4,430 feet above msl (Jepson Flora Project 2009). It is known from the western Mojave Desert and adjacent Sierra Nevadas (Jepson Flora Project 2009). In the vicinity of the survey area, this species has been reported from Cajon Pass hear Horsethief Canyon (CDFG 2010a). No suitable habitat for this species is present in the survey area and the survey area is below the elevational range of this species; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

Bristly Sedge

Bristly sedge (*Carex comosa*) is a CNPS List 2.1 species. It typically blooms between May and September. This rhizomatous herb occurs in wet places at elevations between 0 and approximately 1,310 feet above msl (Hickman 1993). It is known from the inner north Coast Ranges, high Cascade Range, Great Central Valley, northern Central Coast (i.e., Bodega Bay), San Francisco Bay area, San Bernardino Mountains, and Modoc Plateau to Washington and eastern North America (Hickman 1993). In the vicinity of the survey area, this species has been reported from the San Bernardino Valley near Urbita Hot Springs (CDFG 2010a). No suitable

habitat for this species is present in the survey area; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

San Bernardino Mountains Owl's-clover

San Bernardino Mountains owl's-clover (*Castilleja lasiorhyncha*) is a CNPS List 1B.2 species. It typically blooms between May and August (CNPS 2010). This hemiparasitic annual herb (i.e., one that can be free-living or parasitic) occurs in meadows, flats, and open forests at elevations between approximately 4,265 and 7,545 feet above msl (Hickman 1993). It is known from the San Bernardino Mountains and north-central Peninsular Ranges (Hickman 1993). In the vicinity of the survey area, this species has been reported from around Crestline Highway in the San Bernardino National Forest (CDFG 2010a). No suitable habitat for this species is present in the survey area and the survey area is below the elevational range of this species; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

Smooth Tarplant

Smooth tarplant is a CNPS List 1B.1 species. It typically blooms between April and September (CNPS 2010). This annual herb occurs in grasslands and open, poorly drained flats, depressions, and waterways with fine or alkaline soils (Jepson Flora Project 2009; Roberts et al. 2004). It is known from the South Coast and Peninsular Ranges in San Bernardino, Riverside, and San Diego counties to northwestern Baja California, Mexico at elevations between 295 and 1,640 feet above msl (Jepson Flora Project 2009; CNPS 2010). While this species is threatened by agriculture, road maintenance, urbanization, and flood-control Projects, it is tolerant of disturbance (CNPS 2010; Jepson Flora Project 2009). In the vicinity of the survey area, this subspecies has been reported from the upper bench of Lytle Creek wash (CDFG 2010a). Suitable habitat for this species is present in the survey area; however, smooth tarplant was not observed during focused plant surveys.

Parry's Spineflower

Parry's spineflower is a CNPS List 1B.1 species. It typically blooms between April and June (CNPS 2010). This annual herb occurs in open, sandy sites, often on gravelly slopes in coastal or desert scrub at elevations between approximately 980 and 3,940 feet above msl (Roberts et al. 2004; Hickman 1993). It is known from the east-central South Coast, the eastern Transverse Ranges, and the northwestern edge of the Sonoran Desert (Jepson Flora Project 2009). A total of 15,804 individuals of Parry's spineflower were observed within the survey area (Table 4; Exhibit 7). The associated species at the various populations included: California croton, California sun cup (*Camissonia bistorta*), chamise, deer weed, everlasting nest straw (*Stylocline gnaphaloides*), lastarriaea (*Lastarriaea coriacea*), long-beaked filaree, ripgut brome, foxtail fescue, and wild oat. These plants were observed on rocky or cobble type soils including Soboba stony loamy sand, Soboba gravelly loamy sand, and Tujunga gravelly loamy sand.

TABLE 4
PARRY'S SPINEFLOWER POPULATIONS OBSERVED IN THE SURVEY AREA

Population	Number of Individuals	Percent Phenology		
		Vegetative	Flowering	Fruiting
1	339		100	
2	8		100	
3	5		100	
4	400		100	
5	3		100	
6	109		100	
7	5		100	
8	5		100	
9	18		100	
10	3		100	
11	21		100	
12	200		100	
13	3		100	
14	10		100	
15	54		100	
16	14		100	
17	2		100	
18	3		100	
19	3		100	
20	1		100	
21	4		100	
22	2		100	
23	8		100	
24	10		100	
25	24		100	
26	3		100	
27	47		100	
28	6000		100	
29	2500		100	
30	700		100	
31	3000		100	
32	300		100	
33	2000		100	
Total:	**15,804**			

White-bracted Spineflower

White-bracted spineflower (*Chorizanthe xanti* var. *leucotheca*) is a CNPS List 1B.2 species. It typically blooms between April and June (CNPS 2010). This annual herb occurs in desert scrub at elevations between approximately 985 and 3,940 feet above msl (Hickman 1993). It is known from the eastern San Bernardino Mountains and northern San Jacinto Mountains (Hickman 1993). In the vicinity of the survey area, this species has been reported from Lytle

Creek Road in San Bernardino (CDFG 2010a). Suitable habitat for this species is present in the survey area; however, white-bracted spineflower was not observed during focused plant surveys

California Saw-grass

California saw-grass (*Cladium californicum*) is a CNPS List 2.2 species. It typically blooms between June and September (CNPS 2010). This rhizomatous herb generally occurs in alkaline marshes and swamps at elevations between 0 and approximately 6,560 feet above msl (Hickman 1993). It is known from the Central Coast, outer South Coast Ranges, South Coast, Western Transverse Ranges, and Desert, east to Nevada and Arizona (Hickman 1993). In the vicinity of the survey area, this species has been reported from Redhill, east of Upland (CDFG 2010a). No suitable habitat for this species is present in the survey area; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

Peirson's Spring Beauty

Peirson's spring beauty (*Claytonia lanceolata* var. *peirsonii*) is a CNPS List 1B.1 species. It typically blooms between May and June (CNPS 2010). This perennial herb occurs in gravelly woodlands and meadows at elevations between approximately 4,920 and 8,530 feet above msl (Jepson Flora Project 2009). It is known from the Klamath Ranges, high north Coast Ranges, high Cascade Range, north-central high Sierra Nevadas, San Gabriel Mountains, Modoc Plateau, and desert mountains (i.e., Panamint Mountains) to Montana, Colorado, New Mexico, and western Canada (Jepson Flora Project 2009). In the vicinity of the survey area, this species has been reported from Telegraph Peak in the San Gabriel Mountains (CDFG 2010a). No suitable habitat for this species is present in the survey area and the survey area is below the elevational range of this species; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

Salt Marsh Bird's-beak

Salt marsh bird's-beak (*Cordylanthus maritimus* ssp*. maritimus*) is a federally and State-listed Endangered species and a CNPS List 1B.2 species. It typically blooms between May and October (CNPS 2010). This hemiparasitic annual herb occurs in coastal salt marshes at elevations below approximately 33 feet above msl (Hickman 1993). It is known from the central and southern coasts from Morro Bay to northern Baja California, Mexico (Hickman 1993). In the vicinity of the survey area, this species has been historically reported from the San Bernardino Valley (CDFG 2010a; 1888 record). No suitable habitat for this species is present in the survey area and the survey area is above the elevational range of this species; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

No critical habitat has been proposed by the USFWS for this species.

Mojave Tarplant

Mojave tarplant (*Deinandra mohavensis*) is a State-listed Endangered species and a CNPS List 1B.3 species. It typically blooms between June and October, and uncommonly as late as January (CNPS 2010). This annual herb occurs in moist sites in openings in chaparral, desert scrub, and woodlands at elevations between approximately 1,510 and 5,250 feet above msl (Jepson Flora Project 2009). It is known from the southern high Sierra Nevadas, the Peninsular Ranges, and the western edge of the Mojave Desert; it is considered extirpated from the southern San Bernardino Mountains (Jepson Flora Project 2009). In the vicinity of the survey area, this species has been reported from near the Mojave River (CDFG 2010a). No suitable habitat for this species is present in the survey area; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

Slender-horned Spineflower

Slender-horned spineflower is a federally and State-listed Endangered species and a CNPS List 1B.1 species. It typically blooms between April and June (CNPS 2010). This annual herb occurs in alluvial sand in coastal sage scrub at elevations between approximately 655 and 2,295 feet above msl (Hickman 1993). It is known from the east-central South Coast, the adjacent foothills of the Transverse Ranges, and the Peninsular Ranges (Hickman 1993). In the vicinity of the survey area, this species has been reported from Lytle Creek in the San Bernardino Mountains (CDFG 2010a). Suitable habitat for this species is present in the survey area; however, slender-horned spineflower was not observed during focused plant surveys.

No critical habitat has been proposed by the USFWS for this species.

Many-stemmed Dudleya

Many-stemmed dudleya (*Dudleya multicaulis*) is a CNPS List 1B.2 species. It typically blooms between April and July (CNPS 2010). This perennial herb, from a corm (i.e., a swollen underground vertical plant stem similar to a bulb), occurs in heavy, often clayey, soils in coastal plains and sandstone outcrops at elevations between sea level and 2,000 feet above msl (Hickman 1993; Munz 1974). It occurs along the southern coast in Los Angeles, Orange, Riverside, San Bernardino, and San Diego counties (Hickman 1993; CNPS 2010). In the vicinity of the survey area, this species has been reported from the Ontario area of San Bernardino County (Jepson Flora Project 2009). No suitable habitat for this species is present in the survey area; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

Santa Ana River Woollystar

Santa Ana River woollystar is a federally and State-listed Endangered species and a CNPS List 1B.1 species. It typically blooms between May and September (CNPS 2010). This perennial herb occurs in gravelly riverbeds, washes, and floodplains between 0 and approximately

1,640 feet above msl (Jepson Flora Project 2009; Hickman 1993). It is known from the Santa Ana River and Lytle and Cajon Creek floodplains in southwestern San Bernardino County to the Santa Ana Canyon of northeastern Orange County (Hickman 1993; Dudek 2003). In the vicinity of the survey area, this species has been reported historically from Lytle Creek in San Bernardino County (Jepson Flora Project 2009; 1909 records). Suitable habitat for this species is present in the survey area; however, Santa Ana River woollystar was not observed during focused plant surveys.

No critical habitat has been proposed by the USFWS for this species.

Vanishing Wild Buckwheat

Vanishing wild buckwheat (*Eriogonum evanidum*) is a CNPS List 1B.1 species. It typically blooms between July and October (CNPS 2010). This annual herb occurs in sandy areas at elevations between approximately 3,300 and 6,675 feet above msl (Jepson Flora Project 2009). It is known from the San Bernardino Mountains, Peninsular Ranges, and northern Baja California, Mexico (Jepson Flora Project 2009). In the vicinity of the survey area, this species has been reported from the San Bernardino Mountains (Jepson Flora Project 2009). No suitable habitat for this species is present in the survey area and the survey area is below the elevational range of this species; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

Johnston's Buckwheat

Johnston's buckwheat (*Eriogonum microthecum* var. *johnstonii*) is a CNPS List 1B.3 species. It typically blooms between July and September (CNPS 2010). This deciduous shrub occurs in rocky areas at elevations between approximately 8,530 and 9,515 feet above msl (Jepson Flora Project 2009). It is known from the eastern San Gabriel Mountains and the western San Bernardino Mountains (Jepson Flora Project 2009). In the vicinity of the survey area, this species has been reported from southwest of Cucamonga Peak in San Bernardino County (CDFG 2010a). No suitable habitat for this species is present in the survey area and the survey area is below the elevational range of this species; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

Hot Springs Fimbristylis

Hot springs fimbristylis (*Fimbristylis thermalis*) is a CNPS List 2.2 species. It typically blooms between July and September (CNPS 2010). This rhizomatous herb occurs in alkaline soils, generally near hot springs, and at elevations above approximately 1,640 feet above msl (Hickman 1993). It is known from the White and Inyo Mountains and the Mojave Desert to southern Nevada and Arizona (Hickman 1993). In the vicinity of the survey area, this species has been reported from Arrowhead Hot Springs in San Bernardino County (CDFG 2010a). No suitable habitat for this species is present in the survey area; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

Alvin Meadow Bedstraw

Alvin Meadow bedstraw (*Galium californicum* ssp. *primum*) is a CNPS List 1B.2 species. It typically blooms between May and July (CNPS 2010). This perennial herb occurs in shade at the lower edge of the pine belt at elevations between approximately 4,430 and 5,580 feet above msl (Hickman 1993). It is known from the San Jacinto Mountains (Hickman 1993). In the vicinity of the survey area, this species has been reported from Reche Canyon south of San Bernardino (CDFG 2010a). No suitable habitat for this species is present in the survey area and the survey area is below the elevational range of this species; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

Fremont's Gentian

Fremont's gentian (*Gentiana fremontii*) is a CNPS List 2.3 species. It typically blooms between June and August (CNPS 2010). This annual herb occurs in meadows and seeps at elevations between approximately 7,200 and 8,100 feet above msl (CNPS 2010). It is known from the San Bernardino Mountains, western Canada, and Colorado (Hickman 1993). In the vicinity of the survey area, this species has been reported from the upper Santa Ana River in the San Bernardino Mountains (Jepson Flora Project 2009). No suitable habitat for this species is present in the survey area and the survey area is below the elevational range of this species; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

Los Angeles Sunflower

Los Angeles sunflower (*Helianthus nuttallii* ssp. *parishii)* is a CNPS List 1A species; it is presumed extinct in California. This species was known to bloom between August and October (CNPS 2010). It occurred in marshes of southwestern California (Jepson Flora Project 2009). It was last observed in 1937 (CNPS 2010). In the vicinity of the survey area, this species historically has been reported from the Santa Ana River, south of San Bernardino (CDFG 2010; 1917 record). No suitable habitat for this species is present in the survey area; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

Mesa Horkelia

Mesa horkelia (*Horkelia cuneata* ssp. *puberula*) is a CNPS List 1B.1 species. It typically blooms between February and July (CNPS 2010). This perennial herb occurs in dry, sandy chaparral from approximately 250 to 2,300 feet above msl (Munz 1974; Hickman 1993). In California, this species is known from Los Angeles, Orange, Santa Barbara, San Bernardino, San Luis Obispo, and Ventura Counties, and possibly Riverside and San Diego Counties (CNPS 2010). In the vicinity of the survey area, this species has been reported from the mesas west of Colton (CDFG 2010a). No suitable habitat for this species is present in the survey area; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

California Satintail

California satintail (*Imperata brevifolia*) is a CNPS list 2.1 species. It typically blooms between September and May (CNPS 2010). This rhizomatous herb occurs in wet springs, meadows, stream banks, and floodplains at elevations between 0 and approximately 1,640 feet above msl (Jepson Flora Project 2009). It is known from the high North Coast Ranges, Cascade Range foothills, southern Sierra Nevada foothills, San Joaquin Valley, South Coast, Transverse Ranges, and deserts to Utah, Texas, and Mexico (Jepson Flora Project 2009). In the vicinity of the survey area, this species has been reported from Arrowhead Hot Springs in San Bernardino County (CDFG 2010a). Limited suitable habitat for this species is present in the survey area; however, California satintail was not observed during focused plant surveys.

Robinson's Pepper-grass

Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*) is a CNPS List 1B.2 species. It typically blooms between January and July (CNPS 2010). This annual herb occurs on dry, rocky slopes and in shrublands at elevations between 0 and approximately 1,640 feet above msl (Roberts et al. 2004; Hickman 1993). It is known from southwestern California and Baja California, Mexico (Hickman 1993). In the vicinity of the survey area, this species historically has been reported from San Bernardino (Jepson Flora Project 2009; 1889 records). Suitable habitat for this species is present in the survey area; however, Robinson's pepper-grass was not observed during focused plant surveys.

Lemon Lily

Lemon lily (*Lilium parryi*) is a CNPS List 1B.2 species. It typically blooms between July and August (CNPS 2010). This bulbiferous herb occurs in meadows and streams in montane coniferous forest at elevations between approximately 4,265 and 8,530 feet above msl (Jepson Flora Project 2009). It is known from the Transverse Ranges and Peninsular Ranges to Arizona (Jepson Flora Project 2009). In the vicinity of the survey area, this species has been reported from the San Bernardino Mountains north of Devore (CDFG 2010a, Jepson Flora Project 2009). No suitable habitat for this species is present in the survey area and the survey area is below the elevational range of this species; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

San Gabriel Linanthus

San Gabriel linanthus (*Linanthus concinnus*) is a CNPS List 1B.2 species. It typically blooms between April and July (CNPS 2010). This annual herb occurs on dry rocky slopes at elevations between approximately 5,580 and 9,185 feet above msl (Jepson Flora Project 2009). It is known from the San Gabriel Mountains (Jepson Flora Project 2009). In the vicinity of the survey area, this species has been reported from the North Fork Lytle Creek in the San Bernardino Mountains (CDFG 2010a). No suitable habitat for this species is present in the survey area and

the survey area is below the elevational range of this species; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

Parish's Desert-thorn

Parish's desert-thorn (*Lycium parishii*) is a CNPS List 2.3 species. It typically blooms between March and April (CNPS 2010). This shrub occurs on sandy to rocky slopes and canyons at elevations between 0 and approximately 3,280 feet above msl (Hickman 1993). It is known from the eastern south coast and western Sonoran Desert to Arizona and northwestern Mexico (Hickman 1993). In the vicinity of the survey area, this species has been reported from mesas north of San Bernardino (CDFG 2010a). Suitable habitat for this species is present in the survey area; however, Parish's desert-thorn was not observed during focused plant surveys. Therefore, it is not expected to occur in the survey area.

Pringle's Monardella

Pringle's monardella (*Monardella pringlei*) is a CNPS List 1A species; it is presumed extinct in California. This species was known to bloom between May and June (CNPS 2010). It occurred in sandy soils in coastal sage scrub (Hickman 1993). This species was last observed in 1941; the only two occurrences were from west of Colton in hills between Colton and Rialto and Declez Pass in the Jurupa Mountains (CNPS 2010). No suitable habitat for this species is present in the survey area because the sage scrub vegetation types in the survey area are likely too disturbed to support this species; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

California Muhly

California muhly (*Muhlenbergia californica*) is a CNPS List 4.3 species. It typically blooms between June and September (CNPS 2010). This rhizomatous herb occurs in streambanks, canyons, and moist ditches (Hickman 1993). It is known from the South Coast and the San Gabriel, San Bernardino, and San Jacinto mountains in Los Angeles, Riverside, and San Bernardino counties at elevations between approximately 330 and 6,560 feet above msl (Hickman 1993; Dudek 2003). In the vicinity of the survey area, this species has been reported from Redhill to the east of Upland as well as Cold Water Fork of Lytle Creek (CDFG 2010a). No suitable habitat for this species is present in the survey area; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

Gambel's Water Cress

Gambel's water cress (*Nasturtium gambelii*) is a federally listed Endangered species, a State-listed Threatened species, and a CNPS List 1B.1 species. It typically blooms between April and October (CNPS 2010). This rhizomatous herb occurs in marshes, streambanks, and lake margins at elevations below approximately 1,150 feet above msl (Jepson Flora Project 2009). It is known from the southern-central coast and South Coast to Mexico (Jepson Flora Project

2009). In the vicinity of the survey area, this species has been reported from the San Bernardino Valley, near Urbita Hot Springs (CDFG 2010a). No suitable habitat for this species is present in the survey area; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

Prostrate Vernal Pool Navarretia

Prostrate vernal pool navarretia (*Navarretia prostrata*) is a CNPS List 1B.1 species. It typically blooms between April and July (CNPS 2010). This annual herb occurs on alkaline floodplains and in vernal pools between 0 and approximately 2,000 feet above msl (Munz 1974; Hickman 1993). In California, this species is known from Alameda, Los Angeles, Merced, Monterey, Orange, Riverside, San Bernardino, San Diego, and San Luis Obispo counties (CNPS 2010). In the vicinity of the survey area, this species has been reported from Redhill, near Upland (CDFG 2010a). No suitable habitat for this species is present in the survey area; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

Short-joint Beavertail

Short-joint beavertail (*Opuntia basilaris* var. *brachyclada*) is a CNPS List 1B.2 species. It typically blooms between April and June (CNPS 2010). This succulent cactus occurs in chaparral and oak/pine woodlands at elevations between approximately 3,940 and 5,905 feet above msl (Jepson Flora Project 2009). It is known from the San Gabriel Mountains and the San Bernardino Mountains (Jepson Flora Project 2009). In the vicinity of the survey area, this species has been reported from Cajon Canyon and Lone Pine Canyon (CDFG 2010a). No suitable habitat for this species is present in the survey area and the survey area is below the elevational range of this species; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

Woolly Mountain-parsley

Woolly mountain-parsley (*Oreonana vestita*) is a CNPS List 1B.3 species. It typically blooms between May and September (CNPS 2010). This perennial herb occurs on ridge tops at elevations between approximately 5,480 and 11,480 feet above msl (Jepson Flora Project 2009). It is known from the San Gabriel Mountains and the San Bernardino Mountains (Jepson Flora Project 2009). In the vicinity of the survey area, this species has been reported from Ontario Peak, Cucamonga Peak, and Coldwater Canyon Fork off Lytle Creek (CDFG 2010a). No suitable habitat for this species is present in the survey area and the survey area is below the elevational range of this species; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

Rock Creek Broomrape

Rock Creek broomrape (*Orobanche valida* ssp. *valida*) is a CNPS List 1B.2 species. It typically blooms between May and September (CNPS 2010). This perennial herb occurs in decomposed

granite as a parasite of various chaparral shrubs (Hickman 1993). It is known from the central western Transverse Ranges (i.e., the Topatopa Mountains) and the San Gabriel Mountains (Hickman 1993). In the vicinity of the survey area, this species has been reported from the north fork of Lytle Creek near Dawson Peak (CDFG 2010a). Limited, potentially suitable habitat for this species is present in the survey area; however, Rock Creek broomrape was not observed during focused plant surveys. Therefore, it is not expected to occur in the survey area.

Parish's Gooseberry

Parish's gooseberry (*Ribes divaricatum* var. *parishii*) is a CNPS List 1A species; it is presumed extinct in California. This variety was known to bloom between February and April (CNPS 2010). This deciduous shrub occurred in moist woodlands at elevations between approximately 200 and 1,020 feet above msl (Jepson Flora Project 2009). It was last documented in 1980 from the Whittier Narrows Nature Center and was known from fewer than five historical occurrences which were extirpated by urbanization (Jepson Flora Project 2009). In the vicinity of the survey area, this species historically has been reported from the San Bernardino Valley (CDFG 2010; 1917 record). No suitable habitat for this species is present in the survey area; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

Black Bog-rush

Black bog-rush (*Schoenus nigricans*) is a CNPS List 2.2 species. It typically blooms between August and September (CNPS 2010). This perennial herb occurs in marshes, swamps, and springs at elevations between 0 and approximately 6,560 feet above msl (Hickman 1993). It is known from the San Bernardino Mountains and Mojave Desert in California, but also in the Caribbean, Eurasia, and northern Africa (Hickman 1993). In the vicinity of the survey area, this species has been reported from Cajon Canyon, Lone Pine Canyon, and Lytle Creek Village (CDFG 2010a). No suitable habitat for this species is present in the survey area; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

Chaparral Ragwort

Chaparral ragwort (*Senecio aphanactis*) is a CNPS List 2.2 species. It typically blooms between January and April (CNPS 2010). This annual herb occurs in drying alkaline flats at elevations between 0 and approximately 1,315 feet above msl (Hickman 1993). It is known from central-western California and the southern coast to Baja California, Mexico and the Channel Islands (Hickman 1993). In the vicinity of the survey area, this species has been reported from Wilder's Canyon in the Jurupa Hills (CDFG 2010a). No suitable habitat for this species is present in the survey area; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

Salt Spring Checkerbloom

Salt spring checkerbloom (*Sidalcea neomexicana*) is a CNPS List 2.2 species. It typically blooms between March and June (CNPS 2010). This perennial herb occurs in alkaline springs and marshes at elevations between 0 and approximately 4,920 feet above msl (Hickman 1993). It occurs along the South Coast, the San Gabriel Mountains, the San Bernardino Mountains, the Peninsular Ranges, and the southwestern Mojave Desert to New Mexico and northern Mexico (Hickman 1993). In the vicinity of the survey area, this species has been reported from San Bernardino (CDFG 2010a). No suitable habitat for this species is present in the survey area; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

Prairie Wedge Grass

Prairie wedge grass (*Sphenopholis obtusata*) is a CNPS List 2.2 species. It typically blooms between April and July (CNPS 2010). This perennial herb occurs in meadows and seeps at elevations between approximately 900 and 6,000 feet above msl (CNPS 2010). It occurs in the southern Sierra Nevada Foothills, the southern High Sierra Nevadas, the northeastern South Coast along the Santa Ana River, the San Bernardino Mountains, the south-central Peninsular Ranges, the White and Inyo Mountains, and within other parts of North America and the Caribbean (Jepson Flora Project 2009). In the vicinity of the survey area, this species has been reported from the Santa Ana River in San Bernardino (Jespon Flora Project 2010). No suitable habitat for this species is present in the survey area; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

Laguna Mountains Jewel-flower

Laguna Mountains jewel-flower (*Streptanthus bernardinus*) is a CNPS List 4.3 species. It typically blooms between May and August (CNPS 2010). This perennial herb occurs in chaparral and montane conifer forest at elevations between approximately 3,940 and 8,200 feet above msl (Jepson Flora Project 2009). It is restricted to San Bernardino and San Diego counties in the eastern Transverse Ranges and Peninsular Ranges and to Sierra Juarez and Sierra San Pedro Martir in Baja California, Mexico (Jepson Flora Project 2009). In the vicinity of the survey area, this species has been reported from the south fork of Lytle Creek near Buck Point (CDFG 2010a). No suitable habitat for this species is present in the survey area and the survey area is below the elevational range of this species; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

Southern Jewel-flower

Southern jewel-flower (*Streptanthus campestris*) is a CNPS List 1B.3 species. It typically blooms between May and July (CNPS 2010). This perennial herb occurs in chaparral and open, rocky lower montane conifer forest at elevations between approximately 1,800 and 6,900 feet above msl (CNPS 2010; Jepson Flora Project 2009). It occurs in Riverside, Santa Barbara, San

Bernardino, San Diego, and Ventura counties in the Transverse Ranges, Peninsular Ranges and Baja California, Mexico (Jepson Flora Project 2009). In the vicinity of the survey area, this species has been reported from the San Bernardino Mountains (Jepson Flora Project 2009). No suitable habitat for this species is present in the survey area; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

San Bernardino Aster

San Bernardino aster (*Symphyotrichum defoliatum*) is a CNPS List 1B.2 species. It typically blooms between July and November (Munz 1974). This perennial rhizomatous herb occurs in grasslands, damp meadows, freshwater marshes, and coastal sage scrub between 0 and approximately 4,900 feet above msl (Munz 1974; Hickman 1993). In California, this species is known from Los Angeles, Orange, Riverside, San Bernardino, Kern, and San Diego Counties and possibly San Luis Obispo County (CNPS 2010). In the vicinity of the survey area, this species historically has been reported from Redhill east of Upland (CDFG 2010a; 1916 record); recent occurrences in San Bernardino County are from the Mojave Narrows Regional Park and Clark's Ranch in the San Bernardino Mountains (Jepson Flora Project 2009). No suitable habitat for this species is present in the survey area because appropriate hydrology in the sage scrub vegetation is not present in the survey area; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

Golden Violet

Golden violet (*Viola aurea*) is a CNPS List 2.2 species. It typically blooms between April and June (CNPS 2010). This perennial herb occurs on sandy slopes of pinyon/juniper woodlands and sagebrush at elevations between approximately 3,280 and 7,545 feet above msl (Jepson Flora Project 2009). It is known from east of the Sierra Nevadas and Mojave Desert to western Nevada (Jepson Flora Project 2009). In the vicinity of the survey area, this species has been reported from Cajon Pass in San Bernardino County (CDFG 2010a). No suitable habitat for this species is present in the survey area and the survey area is below the elevational range of this species; therefore, it has no potential to occur in the survey area, and it was not observed during focused surveys.

3.3.4 Special Status Wildlife

Forty-nine special status wildlife species are known to occur in vicinity of the survey area based on the results of the literature review. These species and their potential for occurrence are summarized in Table 5 with further discussions after the table. Note that these species are listed taxonomically.

TABLE 5
SPECIAL STATUS WILDLIFE SPECIES KNOWN TO OCCUR IN THE PROJECT VICINITY

Species	Status		Likelihood to Occur
	USFWS	CDFG	
Invertebrates			
Rhaphiomidas terminates abdominalis Delhi sands flower-loving fly	FE	–	Limited potential to occur; potentially suitable habitat.
Fish			
Gila orcuttii arroyo chub	–	SSC	Not expected to occur; lack of suitable habitat; may occur adjacent to the survey area (Lytle Creek).
Rhinichthys osculus ssp. 3 Santa Ana speckled dace	–	SSC	Not expected to occur; lack of suitable habitat; may occur adjacent to the survey area (Lytle Creek).
Catostomus santaanae Santa Ana sucker	FT	SSC	Not expected to occur; lack of suitable habitat.
Amphibians			
Spea hammondii western spadefoot	–	SSC	May occur; suitable habitat.
Anaxyrus californicus [*Bufo californicus*] arroyo toad	FE	SSC	Not expected to occur; lack of suitable habitat; may occur adjacent to the survey area (Lytle Creek).
Rana draytonii California red-legged frog	FT	SSC	Not expected to occur; lack of suitable habitat.
Rana muscosa Sierra Madre yellow-legged frog	FE	SSC	Not expected to occur; lack of suitable habitat.
Reptiles			
Actinemys [*Emys*] *marmorata pallida* southwestern pond turtle	–	SSC	Not expected to occur; lack of suitable habitat.
Phrynosoma coronatum [*blainvillii* population] coast horned lizard	–	SSC	Observed; suitable habitat.
Aspidoscelis hyperytha [*Cnemidophorus hyperythus beldingi*] orange-throated whiptail	–	SSC	Not expected to occur; outside range of the species.
Charina umbratica southern rubber boa	–	ST	Not expected to occur; lack of suitable habitat.
Thamnophis hammondii two-striped garter snake	–	SSC	Not expected to occur; lack of suitable habitat.
Salvadora hexalepis virgultea coast patch-nosed snake	–	SSC	May occur; suitable habitat.
Crotalus ruber ruber northern red-diamond rattlesnake	–	SSC	Not expected to occur; outside range of the species.

TABLE 5 (Continued)
SPECIAL STATUS WILDLIFE SPECIES KNOWN TO OCCUR IN THE PROJECT VICINITY

Species	Status		Likelihood to Occur
	USFWS	CDFG	
Birds			
Aquila chrysaetos golden eagle (nesting and non-breeding/ wintering)	–	FP	May occur for foraging; not expected to nest in the survey area; suitable foraging habitat; no suitable nesting habitat.
Buteo swainsoni Swainson's hawk (nesting)	–	ST	Not expected to occur for foraging or nesting, survey area is outside breeding range.
Circus cyaneus northern harrier (nesting)	–	SSC	May occur for foraging; not expected to nest in the survey area; suitable foraging habitat; no suitable nesting habitat.
Elanus leucurus white-tailed kite (nesting)	–	FP	May occur for foraging; not expected to nest in the survey area; suitable foraging habitat; no suitable nesting habitat.
Haliaeetus leucocephalus bald eagle (nesting and non-breeding/wintering)	Delisted	SE/FP	Not expected to occur for wintering or nesting; lack of suitable habitat.
Charadrius montanus mountain plover (non-breeding/wintering)	–	SSC	Not expected to occur; marginally suitable foraging habitat; only occurs at a few known wintering locations.
Coccyzus americanus occidentalis western yellow-billed cuckoo (nesting)	FC	SE	Not expected to occur; no suitable habitat.
Asio otus long-eared owl (nesting)	–	SSC	Not expected to occur; no suitable habitat.
Athene cunicularia burrowing owl (burrow sites; wintering in northern counties)	–	SSC	Not expected to occur; not observed during focused surveys; suitable habitat.
Empidonax traillii extimus southwestern willow flycatcher (nesting)	FE	SE	Not expected to occur; lack of suitable habitat.
Pyrocephalus rubinus Vermilion flycatcher (nesting)	–	SSC	Not expected to occur; lack of suitable habitat.
Lanius ludovicianus loggerhead shrike (nesting)	–	SSC	Observed; suitable habitat.
Vireo bellii pusillus least Bell's vireo (nesting)	FE	SE	Not expected to occur; lack of suitable habitat.
Polioptila californica californica coastal California gnatcatcher	FT	SSC	Not expected to occur; not observed during focused surveys; suitable habitat.

TABLE 5 (Continued)
SPECIAL STATUS WILDLIFE SPECIES KNOWN TO OCCUR IN THE PROJECT VICINITY

Species	Status		Likelihood to Occur
	USFWS	CDFG	
Dendroica petechia brewsteri yellow warbler (nesting)	–	SSC	Not expected to occur; lack of suitable habitat.
Icteria virens yellow-breasted chat (nesting)	–	SSC	Not expected to occur; lack of suitable habitat.
Ammodramus savannarum grasshopper sparrow (nesting)	–	SSC	May occur; potentially suitable habitat.
Pooecetes gramineus affinis Oregon vesper sparrow (non-breeding/wintering)	–	SSC	May occur; potentially suitable habitat.
Agelaius tricolor tricolored blackbird (nesting colony)	–	SSC	Limited potential to occur; marginally suitable habitat.
Mammals			
Antrozous pallidus pallid bat	–	SSC	Limited potential to occur for foraging and roosting; potentially suitable foraging habitat; limited suitable roosting habitat.
Corynorhinus townsendii Townsend's big-eared bat	–	SSC	Limited potential to occur for foraging and roosting; potentially suitable foraging habitat; limited suitable roosting habitat.
Lasiurus xathinus western yellow bat	–	SSC	May occur for foraging; not expected to occur for roosting; suitable foraging habitat; no suitable roosting habitat.
Eumops perotis californicus western mastiff bat	–	SSC	May occur for foraging; not expected to occur for roosting; suitable foraging habitat; no suitable roosting habitat.
Nyctinomops femorosaccus pocketed free-tailed bat	–	SSC	May occur for foraging; not expected to occur for roosting; suitable foraging habitat; no suitable roosting habitat.
Lepus californicus bennettii San Diego black-tailed jackrabbit	–	SSC	Observed; suitable habitat.
Glaucomys sabrinus californicus San Bernardino flying squirrel	–	SSC	Not expected to occur; lack of suitable habitat.
Chaetodipus fallax fallax northwestern San Diego pocket mouse	–	SSC	Observed; suitable habitat.
Chaetodipus fallax pallidus pallid San Diego pocket mouse	–	SSC	Not expected to occur; outside subspecies range.

TABLE 5 (Continued)
SPECIAL STATUS WILDLIFE SPECIES KNOWN TO OCCUR
IN THE PROJECT VICINITY

Species	Status		Likelihood to Occur
	USFWS	CDFG	
Dipodomys merriami parvus San Bernardino kangaroo rat	FE	SSC	Not expected to occur; not observed during focused surveys; suitable habitat.
Dipodomys stephensi Stephens' kangaroo rat	FE	ST	Not expected to occur; outside range of the species.
Perognathus longimembris brevinasus Los Angeles pocket mouse	–	SSC	Observed; suitable habitat.
Neotoma lepida intermedia San Diego desert woodrat	–	SSC	Observed; suitable habitat.
Onychomys torridus ramona southern grasshopper mouse	–	SSC	May occur; suitable habitat.
Taxidea taxus American badger	–	SSC	May occur; potentially suitable habitat.

LEGEND

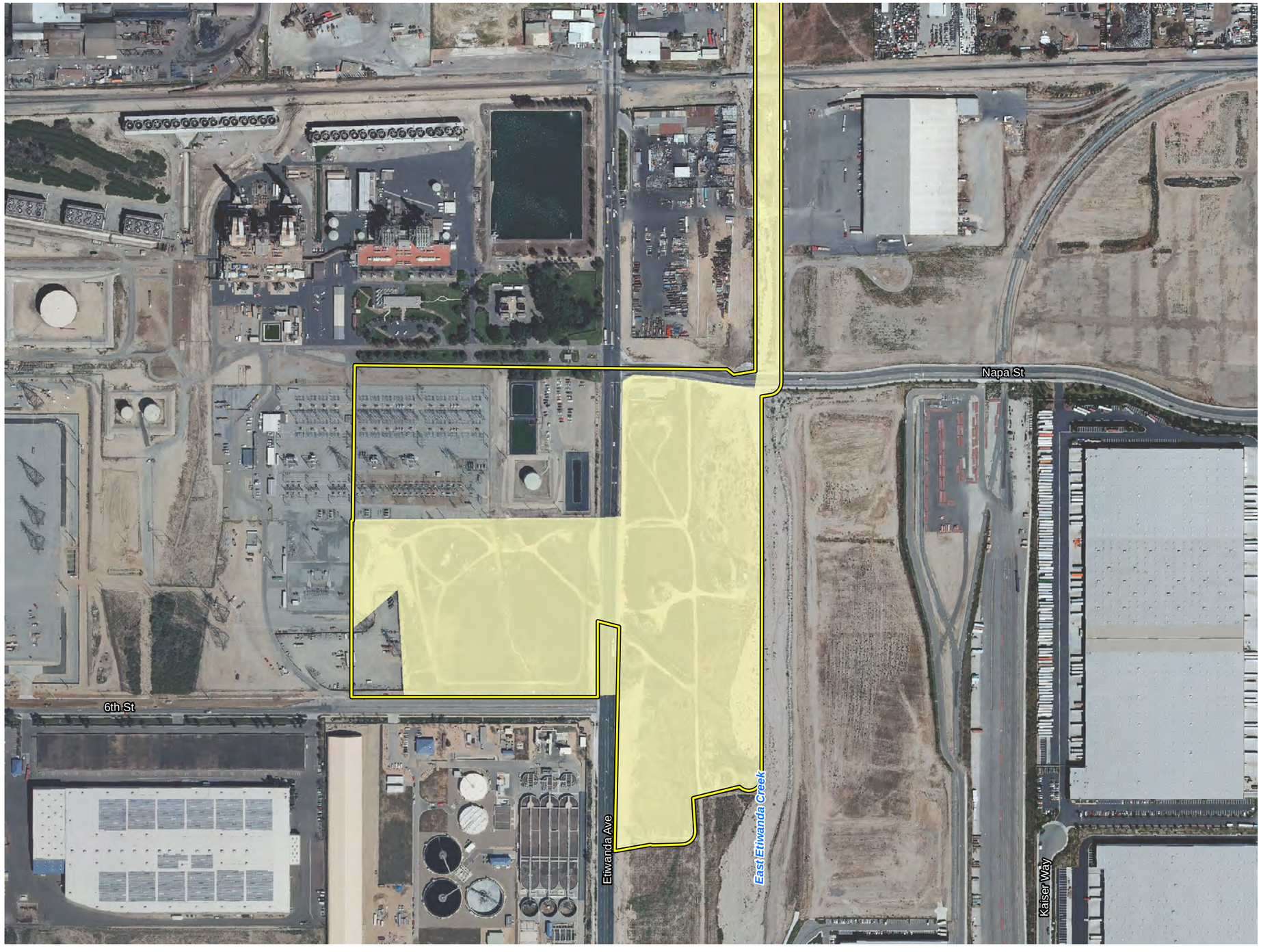
Federal (USFWS)		*State (CDFG)*	
FE	Endangered	SE	Endangered
FT	Threatened	ST	Threatened
FC	Candidate Species	SSC	Species of Special Concern
FP	Fully Protected		

Invertebrates

Delhi Sands Flower-loving Fly

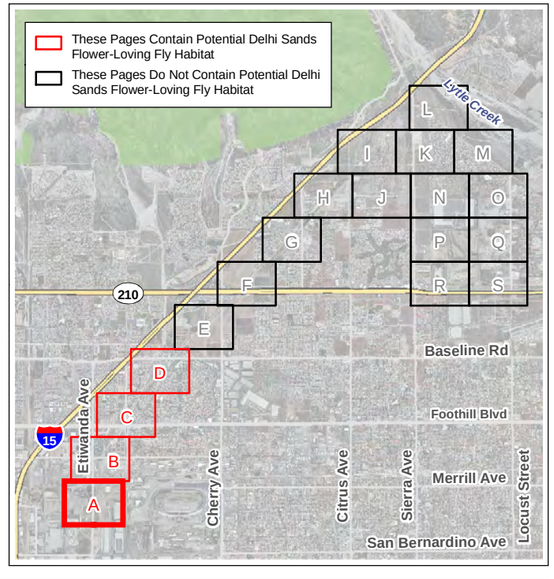
Delhi Sands flower-loving fly is a federally listed Endangered species. This species is limited to areas that contain Delhi fine sand, an Aeolian soil type. Suitable vegetative cover for this fly is typically sparse (0 to 50 percent) to absent. Dominant native plant species in its habitat include California buckwheat, California croton, and telegraph weed (USFWS 1993). The Delhi Sands flower-loving fly is known from about a dozen populations in southwestern San Bernardino and Riverside counties (Xerces Society n.d.). In the vicinity of the survey area, this species has been reported from several locations with Delhi sands in the USGS's San Bernardino South, Fontana, and Guasti quadrangles; however, location information is suppressed. Abandoned vineyards and open habitat types such as Riversidean alluvial fan sage scrub are present in the survey area and may provide suitable habitat for this species. Although there are no Delhi soils mapped in the survey area, there may be small unmapped areas of suitable soils in the survey area. Additionally, the survey area is within the Ontario Recovery Unit for this species. Therefore, the Delhi sand flower-loving fly has a limited potential to occur in the survey area. Focused surveys for this species are currently in progress for areas of potentially suitable habitat within the Recovery Unit (Exhibit 8).

No critical habitat has been proposed by the USFWS for this species.



Survey Area

Potential Delhi Sands Flower-Loving Fly Habitat



Delhi Sands Flower-Loving Fly

Exhibit 8A

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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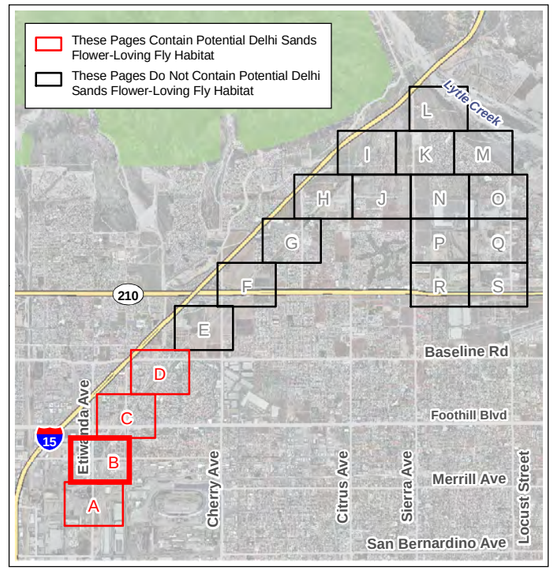
Survey Area

Potential Delhi Sands Flower-Loving Fly Habitat



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Delhi Sands Flower-Loving Fly

Exhibit 8B

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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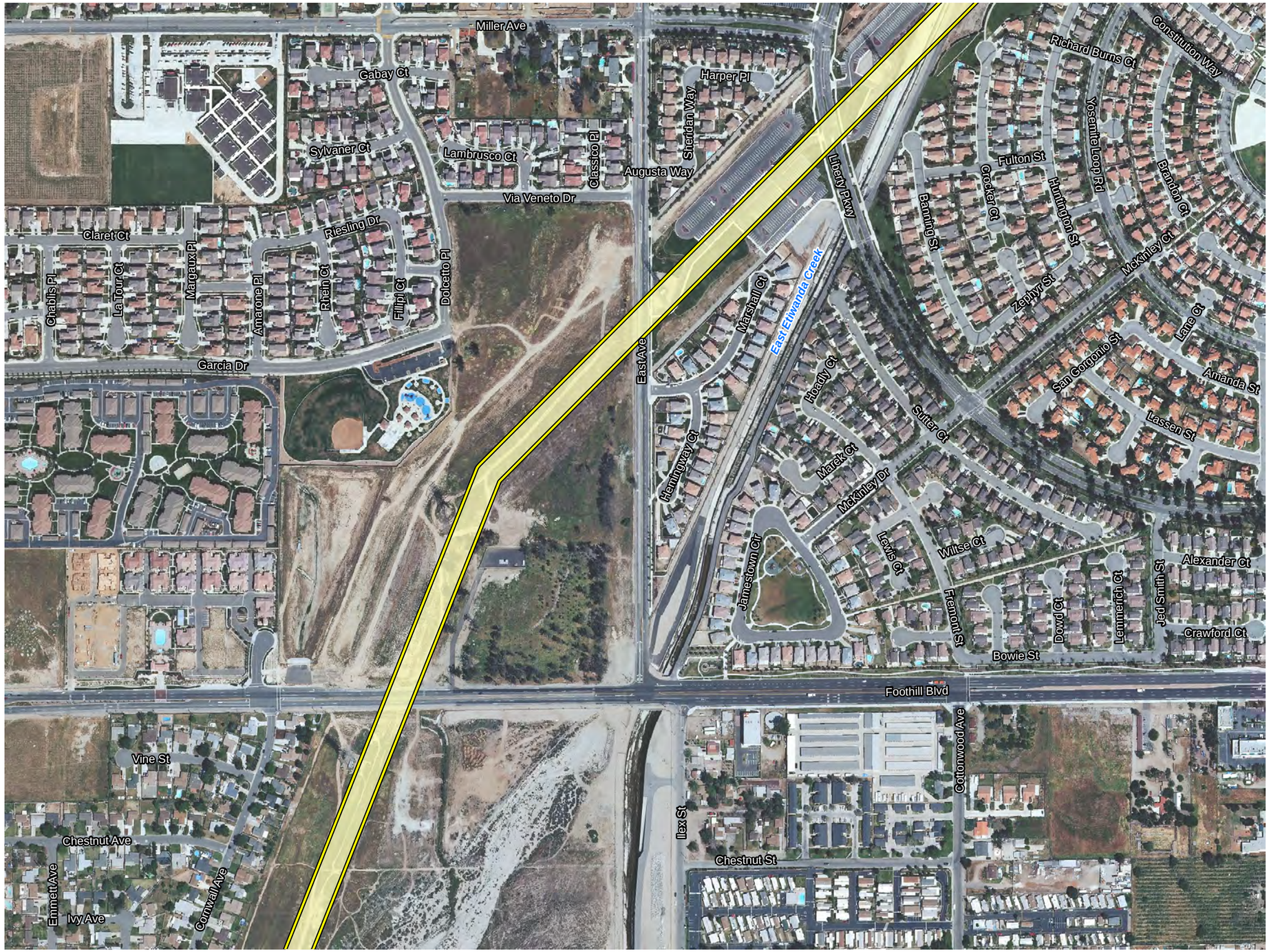
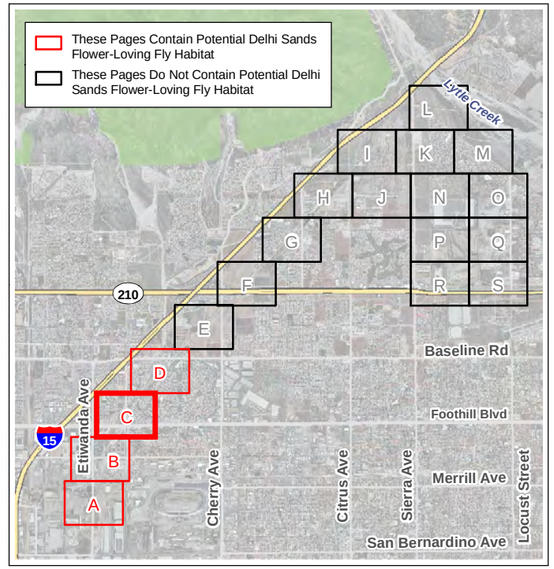


Survey Area

Potential Delhi Sands Flower-Loving Fly Habitat



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Delhi Sands Flower-Loving Fly

Exhibit 8C

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

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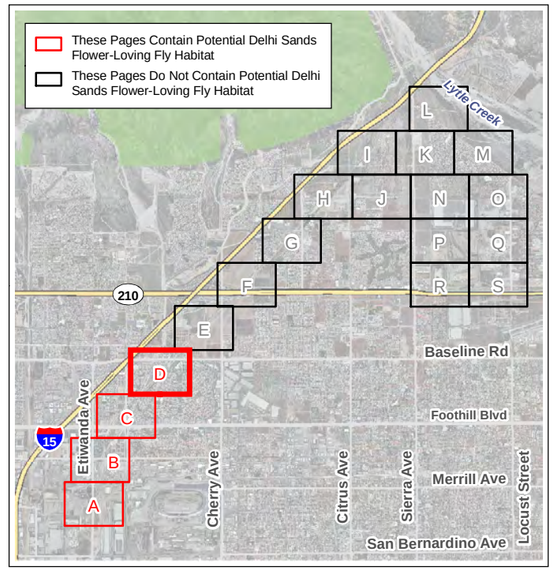
Survey Area

Potential Delhi Sands Flower-Loving Fly Habitat



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Delhi Sands Flower-Loving Fly

Exhibit 8D

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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Fish

Arroyo Chub

Arroyo chub (*Gila orcutti*) is a California Species of Special Concern. This species feeds on algae and prefers warm water temperatures and pool habitats with sand and mud bottoms. The chub is adapted to survive in widely fluctuating water temperatures and dissolved oxygen levels. The arroyo chub is native to streams and rivers of the Los Angeles plain including the Los Angeles, San Gabriel, San Luis Rey, Santa Ana, and Santa Margarita Rivers, and Malibu and San Juan Creeks (UCANR 2010). They have been extirpated from much of their native range, but have been introduced to streams along the coast as far north as San Luis Obispo County (UCANR 2010). In the vicinity of the survey area, this species is known to occur in the Santa Ana River (CDFG 2010a). There are no areas of naturally occurring open water in the survey area; therefore, the arroyo chub is not expected to occur in the survey area due to lack of suitable habitat. However, it may occur in Lytle Creek, adjacent to the survey area, during times when there is flow in the creek.

Santa Ana Speckled Dace

Santa Ana speckled dace (*Rhinichthys osculus* ssp. *3*) is a California Species of Special Concern. This small, freshwater fish requires permanent flowing streams (Moyle et al. 1995). It prefers riffles in clean, rocky-bottomed streams and rivers, but is also found near the shores of lakes (Moyle et al. 1995). Except for the breeding season, this species does not form schools. This species was once distributed throughout the upland portions of the Santa Ana, San Gabriel, and Los Angeles river systems, but currently has a limited distribution in the headwaters of the Santa Ana and San Gabriel rivers (Moyle et al. 1995). In the vicinity of the survey area, this species has been reported from Cajon Creek and Lytle Creek, which are adjacent to the survey area (CDFG 2010a). There are no areas of naturally occurring open water in the survey area; therefore, the Santa Ana speckled dace is not expected to occur in the survey area due to lack of suitable habitat. However, it may occur in Lytle Creek, adjacent to the survey area, during times when there is flow in the creek.

Santa Ana Sucker

Santa Ana sucker (*Catostomus santaanae*) is a federally listed Threatened species and a California Species of Special Concern. This fish is found in perennial streams, often shallow, with currents that run from swift to sluggish. They are most abundant where waters are cool and unpolluted, although they can withstand turbidity. They are also associated with bottom materials of boulders, rubble, and sand where there are growths of filamentous algae. They feed on algae and detritus that they scrape from rock surfaces, and occasionally take aquatic insect larvae. The only populations that are federally protected are those within its historic range, which consists of the Los Angeles, San Gabriel, and Santa Ana River Basins. In the immediate vicinity of the survey area, this species has been reported from the Santa Ana River

(CDFG 2010a). There are no perennial streams within or adjacent to the survey area; therefore, the Santa Ana sucker is not expected to occur in the survey area due to lack of suitable habitat.

On January 4, 2005, the USFWS published a final rule designating critical habitat for the Santa Ana sucker (USFWS 2005b). Two areas in Los Angeles County, one along the San Gabriel River (Unit 2) and the other along Big Tujunga Creek (Unit 3) have been designated as critical habitat for the Santa Ana sucker. Following lawsuits, the USFWS proposed a revised designation of critical habitat on December 9, 2009 (USFWS 2009b). The proposed rule adds habitat along the Santa Ana River as critical habitat for the species. The nearest critical habitat for this species is located approximately eight miles south of the survey area along the Santa Ana River. The survey area is not located within critical habitat for this species.

Amphibians

Western Spadefoot

Western spadefoot (*Spea hammondii*) is a California Species of Special Concern. It occurs in the Coast Ranges from Monterey Bay south to Baja California, Mexico and includes the San Joaquin Valley and bordering foothills (Stebbins 2003). From the Santa Clara River Valley in Los Angeles and Ventura Counties southward, an estimated 80 percent of habitat for this species has been lost (Stebbins 2003). The western spadefoot is primarily a species of the lowlands, frequenting washes, river floodplains, alluvial fans, and alkali flats (Stebbins 2003). The western spadefoot breeds in quiet streams, vernal pools and temporary ponds, and is rarely encountered outside the breeding season (January to March) given that it aestivates and hibernates in burrows during the driest summer months and coldest winter months, respectively, emerging occasionally to forage during suitable conditions (Lannoo 2005). Suitable habitat is present for this species and the western spadefoot may occur in the survey area.

Arroyo Toad

Arroyo toad (*Anaxyrus californicus* [*Bufo microscaphus californicus*]) is a federally listed Endangered species and a California Species of Special Concern. This toad only occurs in streams of southwestern California and northwestern Baja California, Mexico (USFWS 1994). In California, it primarily occurs along the Coast Ranges from San Luis Obispo County south to San Diego County, but also occurs at a few locations on the western edge of the desert (Jennings and Hayes 1994). The arroyo toad is generally found in semi-arid regions near washes or intermittent streams (Zeiner et al. 1988). This species has highly specialized habitat requirements such as breeding pools within approximately 300 feet of juvenile and adult habitat consisting of shoreline with stable, sandy terraces and little herbaceous cover (Jennings and Hayes 1994). Streams must be of low velocity with sand or gravel substrate (Dudek 2003). In the vicinity of the survey area, this species has been reported from Cajon Creek (five miles north-northwest of Devore), Horsethief Canyon, and at multiple locations near Silverwood Lake (CDFG 2010a). Although portions of Etiwanda Creek contain potentially suitable habitat for this

species, the creek is channelized upstream and downstream of the survey area. Therefore, the arroyo toad is not expected to occur along this creek in the survey area. However, potentially suitable habitat is located along Lytle Creek, adjacent to the survey area and it may occur adjacent to the survey area.

On April 13, 2005, the USFWS published a final rule designating critical habitat for arroyo toad (USFWS 2005a). This final rule designated 11,695 acres in Santa Barbara, Ventura, Los Angeles, San Bernardino, and Riverside Counties as critical habitat. Following lawsuits, the USFWS proposed a revised designation of critical habitat on October 13, 2009 (USFWS 2009a). The revised critical habitat would cover 109,110 acres of land in Santa Barbara, Ventura, Los Angeles, San Bernardino, Riverside, Orange, and San Diego Counties. The nearest critical habitat for this species is located approximately 3.5 miles north of the survey area in the National Forest. The survey area is not located in critical habitat for this species.

California Red-legged Frog

California red-legged frog (*Rana draytonii*) is a federally listed Threatened species and a California Species of Special Concern. This frog has been extirpated from approximately 70 percent of its historic range and now primarily occurs only in the wetlands and streams of central California (USFWS 2000). This species is found in humid forests, woodlands, grasslands, streams, wetlands, ponds, and lakes from sea level to 8,000 feet above msl (Stebbins 2003). Preferred breeding habitat includes deep ponds and slow-moving streams where emergent vegetation is found on the bank edges (Jennings and Hayes 1994). Adults feed primarily on aquatic and terrestrial invertebrates. In the vicinity of the survey area, this species has been reported from the Mojave River near Silverwood Lake (CDFG 2010a). The California red-legged frog is not expected to occur in the survey area due to lack of suitable habitat.

On March 17, 2010, the USFWS reissued the final critical habitat designation for the California red-legged frog designating 1,636,609 acres of habitat in 27 California counties (USFWS 2010). There are no areas within San Bernardino County designated as critical habitat for this species. The survey area is not within an area designated as critical habitat for this species.

Sierra Madre Yellow-legged Frog

The Sierra Madre yellow-legged frog (*Rana muscosa*) is a federally listed Endangered species and a California Species of Special Concern. This species has been extirpated from more than 90 percent of its historic range. The southern distribution of the Sierra Madre yellow-legged frog consists of several small, isolated populations in the San Gabriel, San Bernardino, and San Jacinto Mountains, the largest of which does not exceed 100 individuals. This species is found in narrow, rock-walled rivers, perennial creeks, permanent plunge pools within intermittent creeks, and pools in montane riparian and/or chaparral habitat from 1,200 to 7,500 feet above msl (Jennings and Hayes 1994). Breeding pools must maintain water during the entire tadpole growth phase which can last up to four years. Substrates within the aquatic habitat consist of

varying proportions of silt, sand, gravel, cobble, rock, and boulders. In the vicinity of the survey area, this species was historically reported from Waterman Canyon, Lytle Creek, Etiwanda Canyon, Cucamonga Canyon, and Horsethief Canyon within the San Bernardino National Forest (1958–1959 occurrences and prior) and more recently from Day Canyon in the San Bernardino National Forest, though this occurrence is also considered extirpated (CDFG 2010a). This species is not expected to occur in the survey area due to lack of suitable habitat.

On September 14, 2006, the USFWS proposed a rule designating approximately 8,283 acres of land as critical habitat for the Southern California Distinct Vertebrate Population Segment of the Mountain Yellow-Legged Frog (*Rana muscosa*) in Los Angeles, San Bernardino, and Riverside Counties, California (USFWS 2006). The nearest critical habitat for this species is located approximately 4.3 miles northwest of the survey area in the National Forest. The survey area is not within critical habitat for this species.

Reptiles

Southwestern Pond Turtle

Southwestern pond turtle (*Actinemys* [*Emys*] *marmorata pallida*) is a California Species of Special Concern. This subspecies of western pond turtle occurs from approximately the San Francisco Bay area south through the Coast Ranges to northern Baja California, Mexico (Stebbins 2003). The southwestern pond turtle occurs primarily in freshwater rivers, streams, lakes, ponds, vernal pools, and seasonal wetlands, and requires basking sites such as logs, banks, or other suitable areas above water level. The western pond turtle is estimated to be in decline throughout 75 to 80 percent of its range (Stebbins 2003). The current range is similar to the historic range, but populations have become fragmented by agriculture and urban development. In addition to loss of habitat, this species is also threatened by grazing, non-native species, and disease (Jennings and Hayes 1994). In the vicinity of the survey area, this species has been reported from Silverwood Lake (CDFG 2010a). The southwestern pond turtle is not expected to occur in the survey area due to lack of suitable habitat.

Coast Horned Lizard

Coast horned lizard (*Phrynosoma coronatum* [*blainvillii* population]) is a California Species of Special Concern. The two former subspecies of the coast horned lizard, (P. c. *blainvillii* and P. c. *frontale*) have recently been eliminated in scientific literature, such as Stebbins (2003), based on current scientific studies on this species. Coast horned lizard is a small, spiny, somewhat rounded lizard that occurs in scrubland, grassland, coniferous forests, and broadleaf woodland vegetation types. The coast horned lizard prefers open areas for basking and loose, friable soil for burrowing (Stebbins 2003). The coast horned lizard occurs throughout much of California, west of the desert and Cascade-Sierra highlands south to Baja California, Mexico (Stebbins 2003). However, many of the populations in lowland areas have been reduced or

eliminated due to urbanization and agricultural expansion (Stebbins 2003). Three factors have contributed to its decline: loss of habitat, overcollecting, and the introduction of exotic ants (Jennings and Hayes 1994). In the vicinity of the survey area, this species has been reported from several locations near Etiwanda, Cajon Canyon, Lytle Creek, Silverwood Lake, and Devore (CDFG 2010a). Suitable habitat for the coast horned lizard is present in the survey area and it was observed in the survey area.

Orange-throated Whiptail

Orange-throated whiptail (*Aspidoscelis hyperytha* [*Cnemidophorus hyperythus beldingi*]) is a California Species of Special Concern. The two former subspecies of the orange-throated whiptail (C. h. *hyperythrus* and C. h. *beldingi*) have recently been eliminated in scientific literature, such as Stebbins (2003), based on current scientific studies on this species. The orange-throated whiptail occurs in washes and in open areas of sage scrub and chaparral with gravelly soils, often with rocks. It prefers well drained, friable soil on slopes that are barren or only sparsely covered with vegetation and that have a southern exposure. This species occurs between sea level and 2,000 feet above msl in the western Peninsular Ranges from Orange and San Bernardino Counties south to Baja California, Mexico (Stebbins 2003). Approximately 75 percent of the former range has been lost to development, and the remaining populations are highly fragmented (Stebbins 2003). In the vicinity of the survey area, this species has been reported from Colton and near California State University, San Bernardino (CDFG 2010a). The orange-throated whiptail is not expected to occur in the survey area because it is outside the range of the species.

Southern Rubber Boa

The southern rubber boa (*Charina umbratica*) is a State-listed Threatened species. The southern rubber boa is typically associated with moist coniferous forest and woodland habitats (Hover and Stewart 2000), although it may occur in a variety of habitats (Hover and Stewart 2000). The southern rubber boa generally occurs at higher elevations in the San Bernardino and San Jacinto Mountains, within an elevation range of roughly 4,900 to 7,900 feet (Hover and Stewart 2000). In the vicinity of the survey area, this species has been reported from a location on the San Bernardino North USGS quadrangle; however, location information is considered sensitive (CDFG 2010a). The southern rubber boa is not expected to occur in the survey area due to lack of suitable habitat.

Two-striped Garter Snake

Two-striped garter snake (*Thamnophis hammondii*) is a California Species of Special Concern. It occurs primarily in wetlands and is found in freshwater marsh and riparian habitats with perennial water. The two-striped garter snake feeds on small fishes, frogs, and tadpoles (Stebbins 2003). This highly aquatic species occurs from Monterey County south to Rio Rosario in Baja California, Mexico (Stebbins 2003). It is considered locally rare in southwestern

California. In the vicinity of the survey area, this species has been reported from Cajon Canyon and several locations near Silverwood Lake (CDFG 2010a). The two-striped garter snake is not expected to occur in the survey area due to lack of suitable habitat.

Coast Patch-Nosed Snake

Coast patch-nosed snake (*Salvadora hexalepis virgultea*) is a California Species of Special Concern. The coast patch-nosed snake ranges along the coast of California from San Luis Obispo County south into Baja California, Mexico. It occurs from sea level to about 7,000 feet above msl (Stebbins 2003). It inhabits open sandy areas and rocky outcrops in scrub, chaparral, grassland, and woodland vegetation types. This species is threatened by development, grazing, and fire control (Jennings and Hayes 1994). Suitable habitat for this species is present in the survey area. Therefore, the coast patch-nosed snake may occur in the survey area.

Northern Red-diamond Rattlesnake

Northern red-diamond rattlesnake (*Crotalus ruber ruber*) is a California Species of Special Concern. It inhabits open scrub, chaparral, woodland, and grassland vegetation types. This species ranges from approximately Orange County and San Bernardino Counties south to Baja California, Mexico at elevations from sea level to about 5,000 feet above msl (Stebbins 2003; Zeiner 1988). This species is threatened by development and human disturbance (Jennings and Hayes 1994). In the vicinity of the survey area, this species has been reported from Pigeon Pass in Riverside County (CDFG 2010a). The northern red-diamond rattlesnake is not expected to occur in the survey area because it is outside the range of the species.

Birds

Golden Eagle

Golden eagle (*Aquila chrysaetos*) is a California Fully Protected species and is also protected by the Federal Bald Eagle Act; both nesting and wintering individuals are protected. Habitat for this species generally consists of grasslands, deserts, savannas, and early successional stages of forest and shrub habitats. Broad expanses of open country are required for foraging while nesting is primarily restricted to rugged mountainous areas with large trees or on cliffs (Johnsgard 2001); they are generally absent from the immediate coast and urbanized areas (Garrett and Dunn 1981). The golden eagle is an uncommon resident throughout Southern California, except in the Colorado Desert and Colorado River where it is a casual winter visitor (Garrett and Dunn 1981). Suitable foraging but no suitable nesting habitat occurs in the survey area for this species. Therefore, golden eagle may occur in the survey area for foraging, but it is not expected to nest in the survey area.

Swainson's Hawk

Swainson's hawk (*Buteo swainsoni*) is a State-listed Threatened species; nesting individuals are protected. It forages over the grassland and ruderal vegetation types during migration to and

from South America, primarily feeding on small rodents, reptiles, and some insects within these habitats. It is a very rare migrant along the coast of Southern California (Garrett and Dunn 1981). This species formerly bred along the coast in Southern California, but breeding is now mostly limited to the Sacramento and San Joaquin Valleys, the extreme northeast part of California, as well as Mono and Inyo Counties (England et al*.* 1997). This species is threatened by loss of habitat, habitat deterioration on the South American wintering grounds, human disturbance at nest sites, shooting, and possibly pesticides (Remsen 1978). Although it may migrate over the survey area, the Swainson's hawk is not expected to occur in the survey area for foraging or nesting because the survey area is outside the breeding range for this species.

Northern Harrier

Northern harrier (*Circus cyaneus*) is a California Species of Special Concern; nesting individuals are protected. It is a regular winter migrant in marshes and fields throughout Southern California, but is very scarce as a local breeder (Garrett and Dunn 1981). Breeding habitat includes prairie, savannah, slough, wet meadow, and marsh vegetation types. The northern harrier can be expected at any time of the year and can be seen foraging in grassland, scrub, and riparian vegetation types. This species is threatened by loss of habitat, pesticides (Ehrlich et al*.* 1988), and loss of suitable breeding habitat (Grinnell and Miller 1944). Suitable foraging but no suitable nesting habitat occurs in the survey area for this species. Therefore, northern harrier may occur in the survey area for foraging, but it is not expected to nest in the survey area.

White-tailed Kite

White-tailed kite is a California Fully Protected species; nesting individuals are protected. Kites nest primarily in oaks (*Quercus* spp.), willows (*Salix* spp.), and sycamores (*Platanus racemosa*); they forage in grassland and scrub vegetation types. White-tailed kites show strong site fidelity to nest groves and trees. This species is an uncommon to locally fairly common resident in coastal Southern California as well as a rare visitor and local nester on the western edge of the deserts (Garrett and Dunn 1981). Many populations in North America declined in the 1980s and 1990s, including those in Southern California (Dunk 1995). Suitable foraging but no suitable nesting habitat occurs in the survey area for this species. Therefore, white-tailed kite may occur in the survey area for foraging, but it is not expected to nest in the survey area.

Bald Eagle

Bald eagle (*Haliaeetus leucocephalus*) is a State-listed Endangered Species, a California Fully Protected species, and is also protected by the Federal Bald Eagle Act; both nesting and wintering individuals are protected. This species was delisted by the USFWS in 2007, and will be monitored for 20 years as part of the Post-delisting Monitoring Plan for the species, issued on May 11, 2010 (USFWS 2007). This species requires large bodies of water or free-flowing rivers with abundant fish with adjacent snags or perches (Zeiner et al. 1990a). The bald eagle

nests in large, old-growth trees or snags in remote stands near water (Zeiner et al. 1990a). In the vicinity of the survey area, this species has been reported from Silverwood Lake (CDFG 2010a). The bald eagle is not expected to occur in the survey area for nesting or wintering due to lack of suitable habitat.

Mountain Plover

Mountain plover (*Charadrius montanus*) is a California Species of Special Concern; non-breeding/wintering individuals are protected. This species breeds from southern Alberta and southwestern Saskatchewan, Canada south through Montana and Wyoming to southeastern New Mexico and western Texas (AOU 1998). Most of these birds spend the winter in the Central and Imperial Valleys of California (Knopf 1996). The mountain plover's winter range in California was previously described as interior valleys and plains at low elevations from the Sacramento Valley and eastern parts of the San Francisco Bay region south to the coastal counties of Southern California and the Imperial Valley (Grinnell and Miller 1986). The largest numbers of mountain plovers currently winter in the Imperial Valley and in the Central Valley from Colusa County south to Kern County (Shuford and Gardali 2008). Relatively small populations also occur in the Panoche Valley and Carrizo Plains west of the west of the San Joaquin Valley (or southern Central Valley), in the Colorado River Valley near Blythe, and the western Antelope Valley (Hunting and Edison 2008). For both breeding and wintering, mountain plovers are strongly associated with short-grass prairie habitats or other similar habitats that are flat and generally lack vegetation (Knopf 1996). They also occur on more natural, non-cultivated sites, such as alkali sink scrub, valley sink scrub, alkali playa, and annual grasslands (USFWS 1999).Grazed or burned agricultural fields also provide suitable habitat for this species, as does Bermuda grass fields (Knopf 1996). Although suitable wintering habitat is present in the survey area, mountain plovers are very faithful to their wintering locations, and the only known wintering location in the Project region is the San Jacinto Wildlife Area. Therefore, the mountain plover is not expected to occur in the survey area.

Western Yellow-billed Cuckoo

Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) is a State-listed Endangered species and a federal Candidate for listing by the USFWS; nesting individuals are protected. The western yellow-billed cuckoo requires broad areas of old-growth riparian habitats dominated by willows and cottonwoods (*Populus* sp.) with dense understory vegetation. California's population was once estimated to be over 15,000 pairs, but in less than 100 years, it has declined to less than 30 pairs (Hughes 1999). Along the coast, breeding cuckoos currently persist along the Santa Ana River in Riverside County and perhaps along the San Luis Rey River in San Diego County (Zeiner et al. 1990a). Transients are rarely observed away from known breeding populations (Garrett and Dunn 1981). The Santa Ana River, specifically Prado Basin, is the only area in the region with riparian woodlands extensive enough to support breeding western yellow-billed cuckoos and a few birds have persisted there until recently. In the vicinity of the survey area, this species was historically reported from along the Santa Ana

River near Colton (CDFG 2010a, 1930 record). The yellow-billed cuckoo is not expected to occur in the survey area due to lack of suitable habitat.

Long-eared Owl

Long-eared owl (*Asio otus*) is a California Species of Special Concern; nesting individuals are protected. This owl hunts mostly at night over grasslands and other open habitats (Marks et al. 1994). Nesting occurs in dense trees such as oaks and willows where it occupies the stick nests of other species, particularly raptors and corvids (Marks et al. 1994; Bloom 1994). This species is an uncommon resident in the deserts, and is quite rare coastally (Garrett and Dunn 1981). Long-eared owls have declined in Southern California due to the loss of riparian and grassland habitats to development (Marks et al. 1994). In the vicinity of the survey area, this species has been historically reported from near Hesperia (CDFG 2010a; 1950 record). The long-eared owl is not expected to occur in the survey area due to lack of suitable habitat.

Burrowing Owl

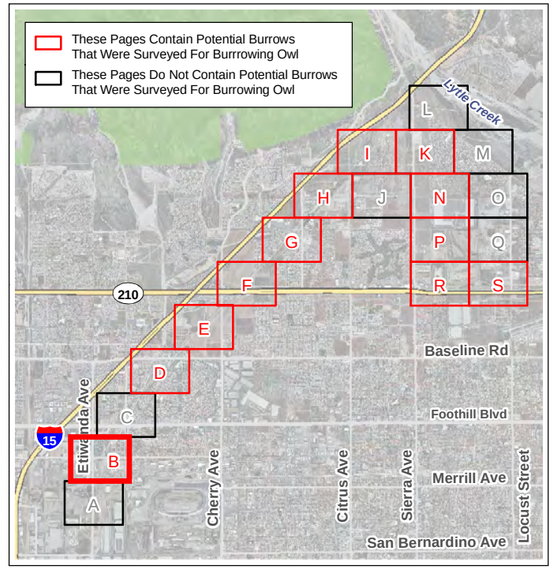
Burrowing owl is a California Species of Special Concern; burrow sites are protected. Although the burrowing owl was recently proposed as a State Candidate for listing, the CDFG determined that the species did not warrant listing in consideration of its population throughout the State. However, this species is considered a species of local concern because it is much less common in Southern California than in the Central Valley. In Southern California, burrowing owls breed and forage in grasslands and prefer flat to low rolling hills in treeless terrain. They are small owls that nest in burrows, typically in open habitats most often along banks and roadsides. In the immediate vicinity of the survey area, this species has been reported from multiple locations near Colton, Fontana, Ontario, Rancho Cucamonga, and Rialto (CDFG 2010a). Suitable habitat for burrowing owl occurs in the survey area. Focused surveys for burrowing owl were conducted and, although potentially suitable burrows were observed (Exhibit 9), no burrowing owls were found during the surveys. While scrub and grassland habitats are generally considered suitable for this species, much of the substrate is considered too rocky to provide suitable burrowing habitat for this species. Therefore, burrowing owl is not expected to occur in the survey area because it was not observed during focused surveys.

Southwestern Willow Flycatcher

Southwestern willow flycatcher (*Empidonax traillii extimus*) is a federally and State-listed Endangered species; nesting individuals are protected. This subspecies was once considered a common breeder in coastal Southern California. However, it has declined drastically due to loss of breeding habitat and nest parasitism by the brown-headed cowbird. It occurs in riparian habitats along rivers, streams, or other wetlands where dense growths of willows, baccharis (*Baccharis* sp.), arrowweed (*Pluchea* sp.), tamarisk (*Tamarix* sp.), or other plants are present, often with a scattered overstory of cottonwood (USFWS 2005). In the vicinity of the survey area,

Focused Survey Area

Survey Area



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Burrowing Owl

Exhibit 9B

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

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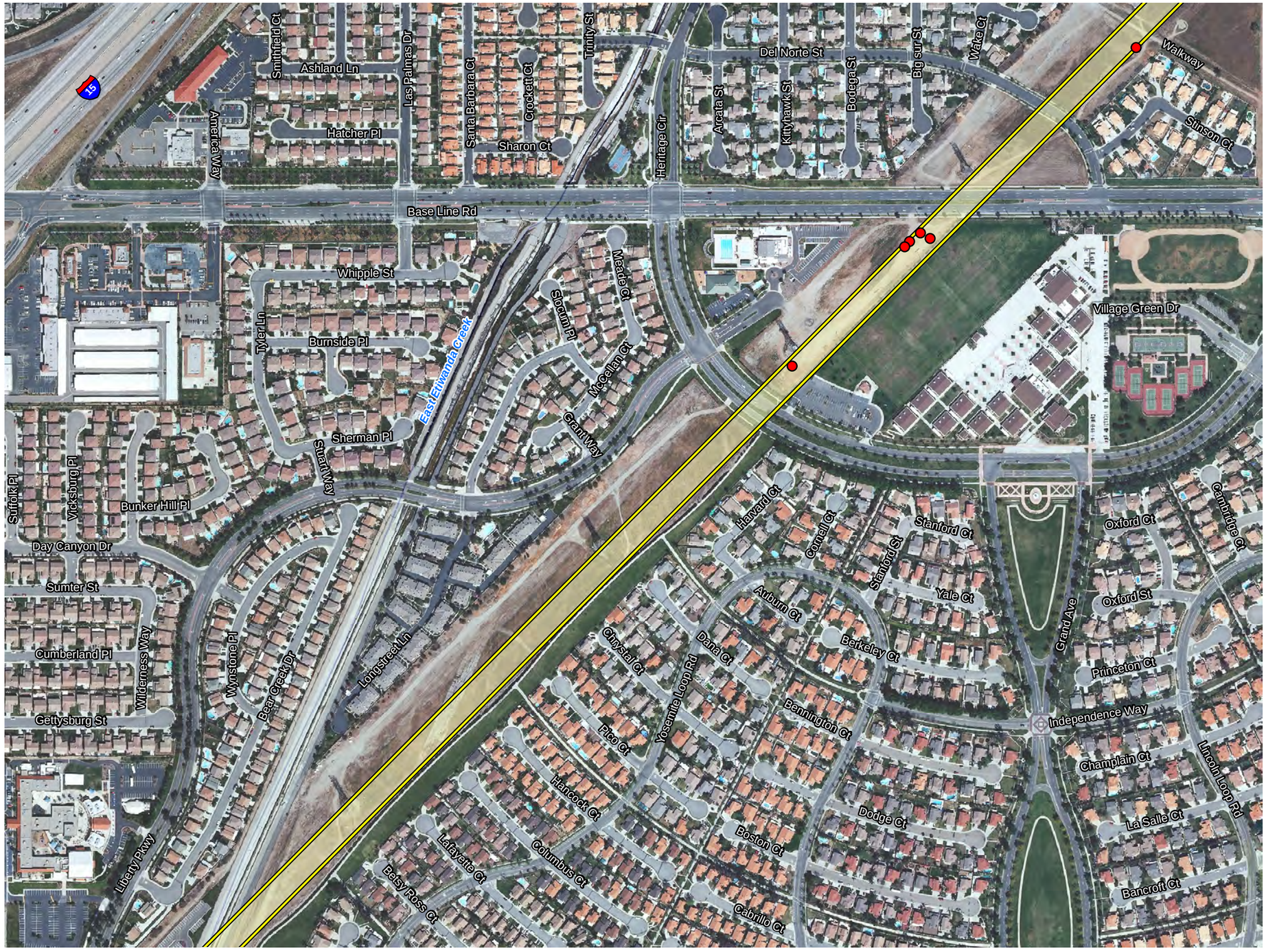
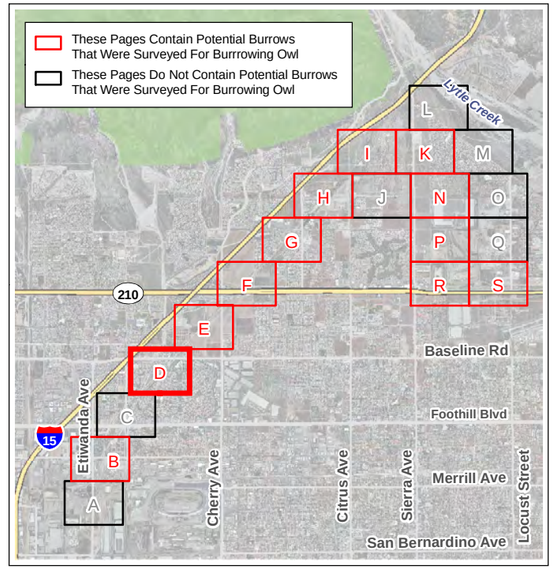
(Rev 08-17-10 JFG) R:\Projects\Edison\J046\Graphics\BioTech\Ex9_BUOW.pdf



Focused Survey Area

Survey Area



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Burrowing Owl

Exhibit 9D

Falcon Ridge Substation Project

N W E S

400 200 0 400

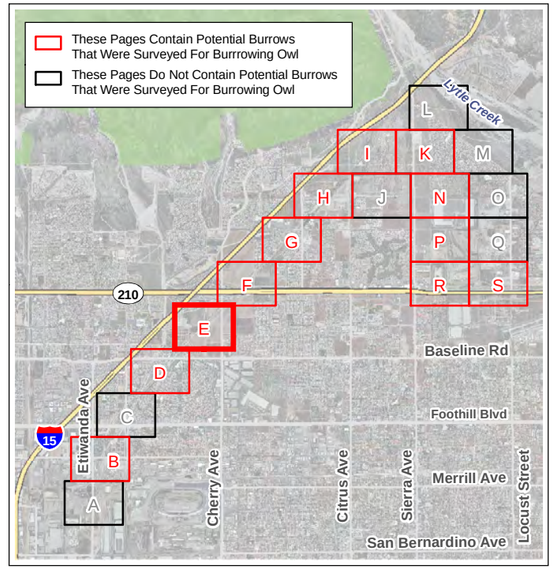
Feet

BonTerra CONSULTING

(Rev 08-17-10 JFG) R:\Projects\Edison\J046\Graphics\BioTech\Ex9_BUOW.pdf

Focused Survey Area

Survey Area



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Burrowing Owl

Exhibit 9E

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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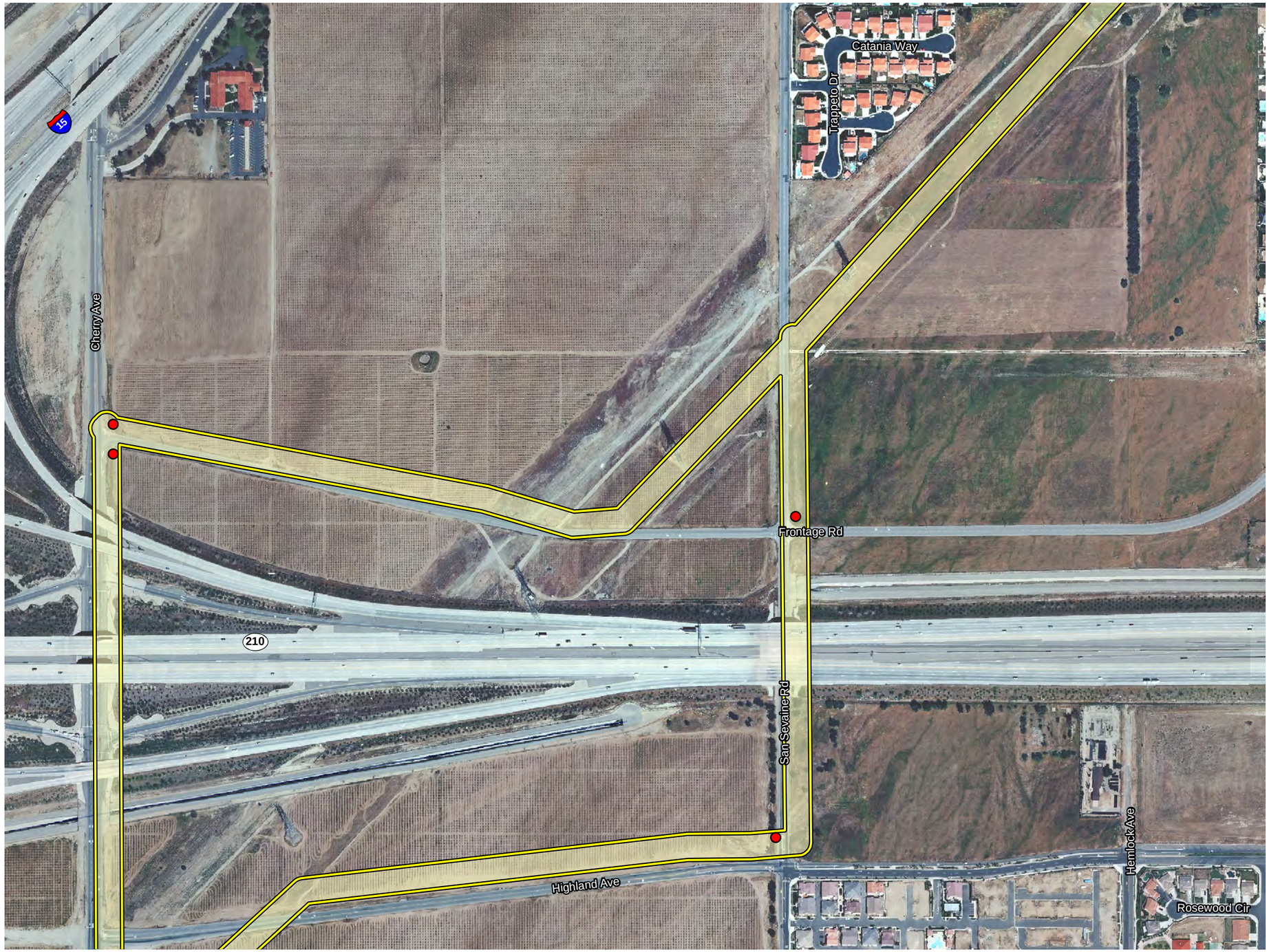
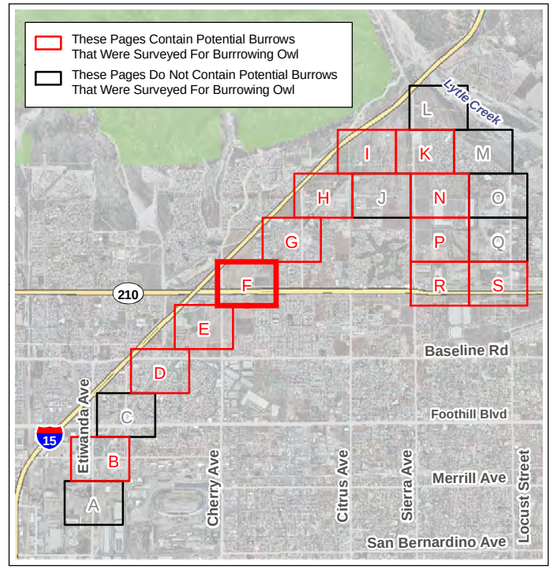


Focused Survey Area

Survey Area



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Burrowing Owl

Exhibit 9F

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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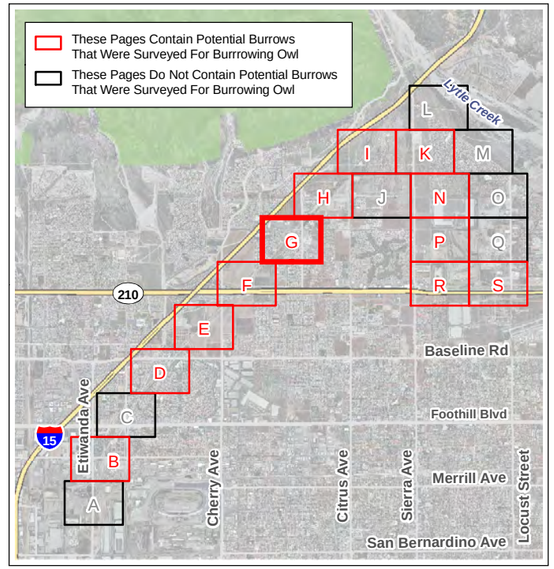
Focused Survey Area

Survey Area



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Burrowing Owl

Exhibit 9G

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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Burrowing Owl

Exhibit 9H

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

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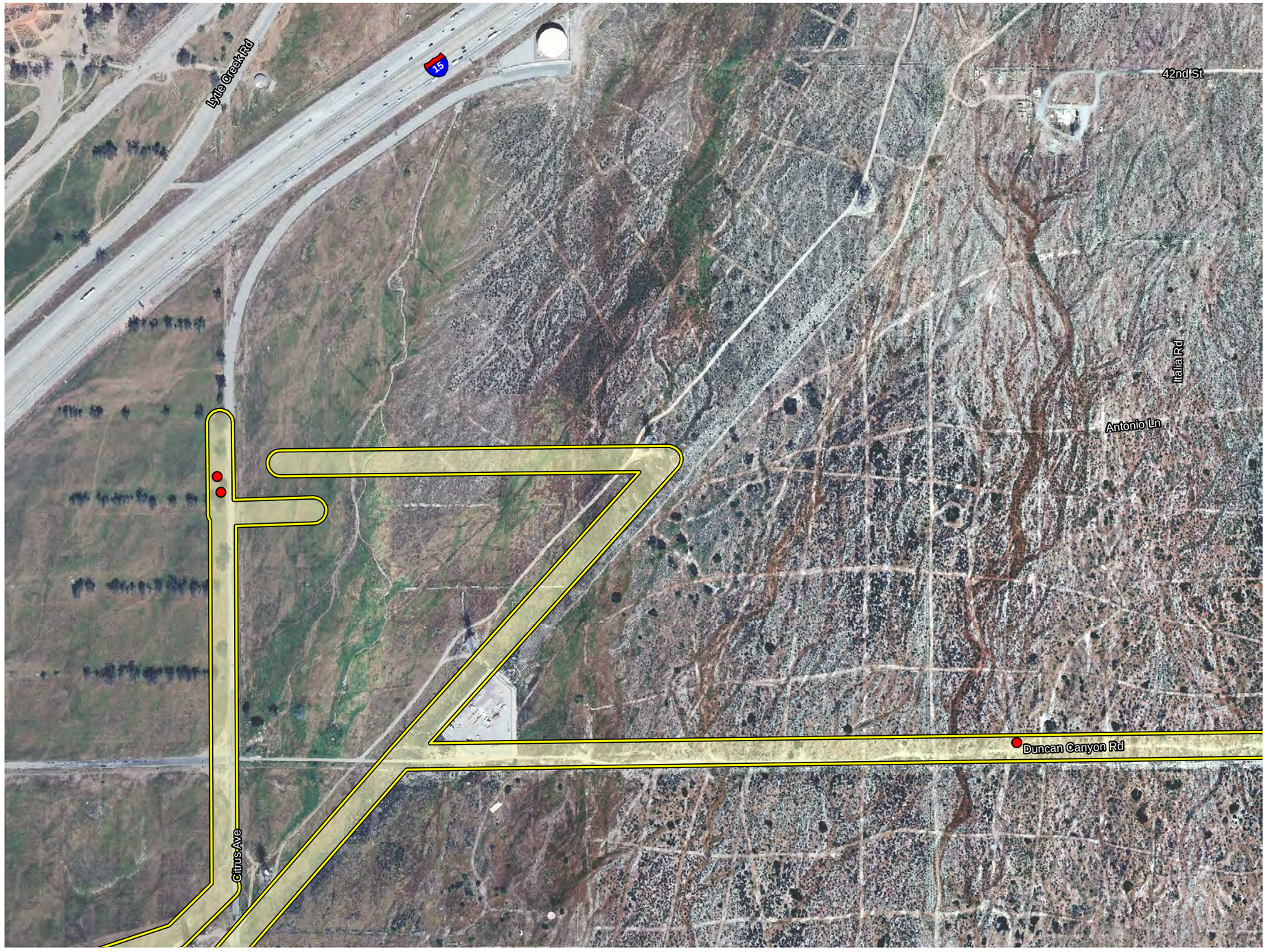
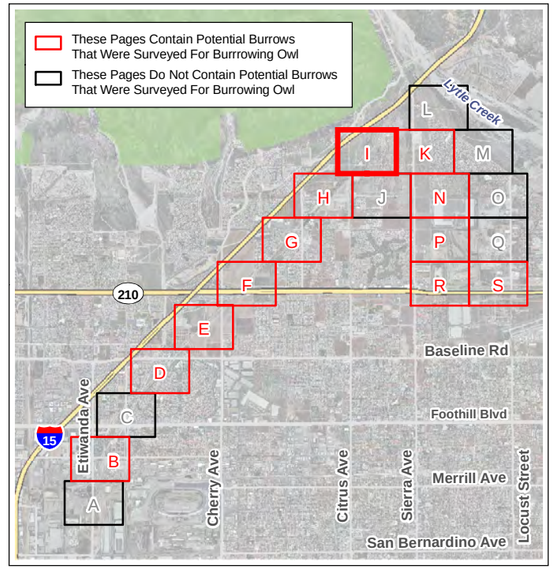


Focused Survey Area

Survey Area



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Burrowing Owl

Exhibit 9I

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

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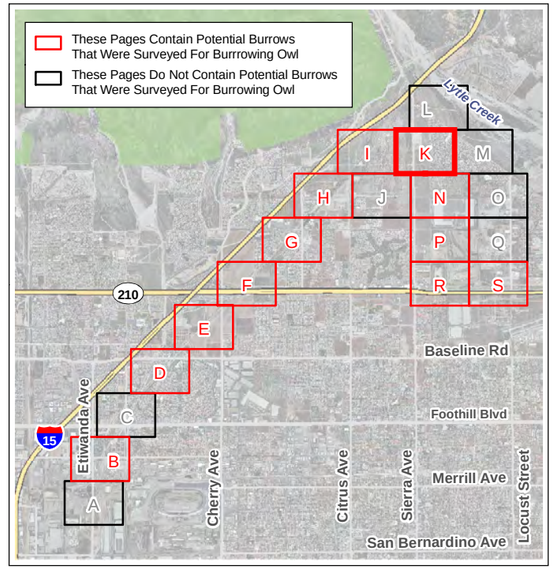
Focused Survey Area

Survey Area



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Burrowing Owl

Exhibit 9K

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

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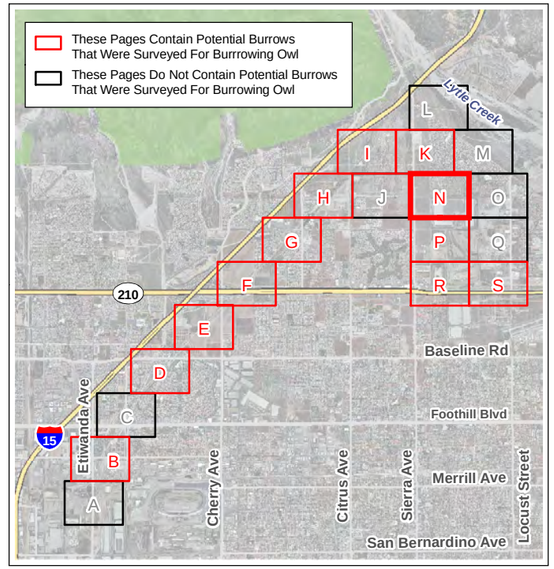
Focused Survey Area

Survey Area



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Burrowing Owl

Exhibit 9N

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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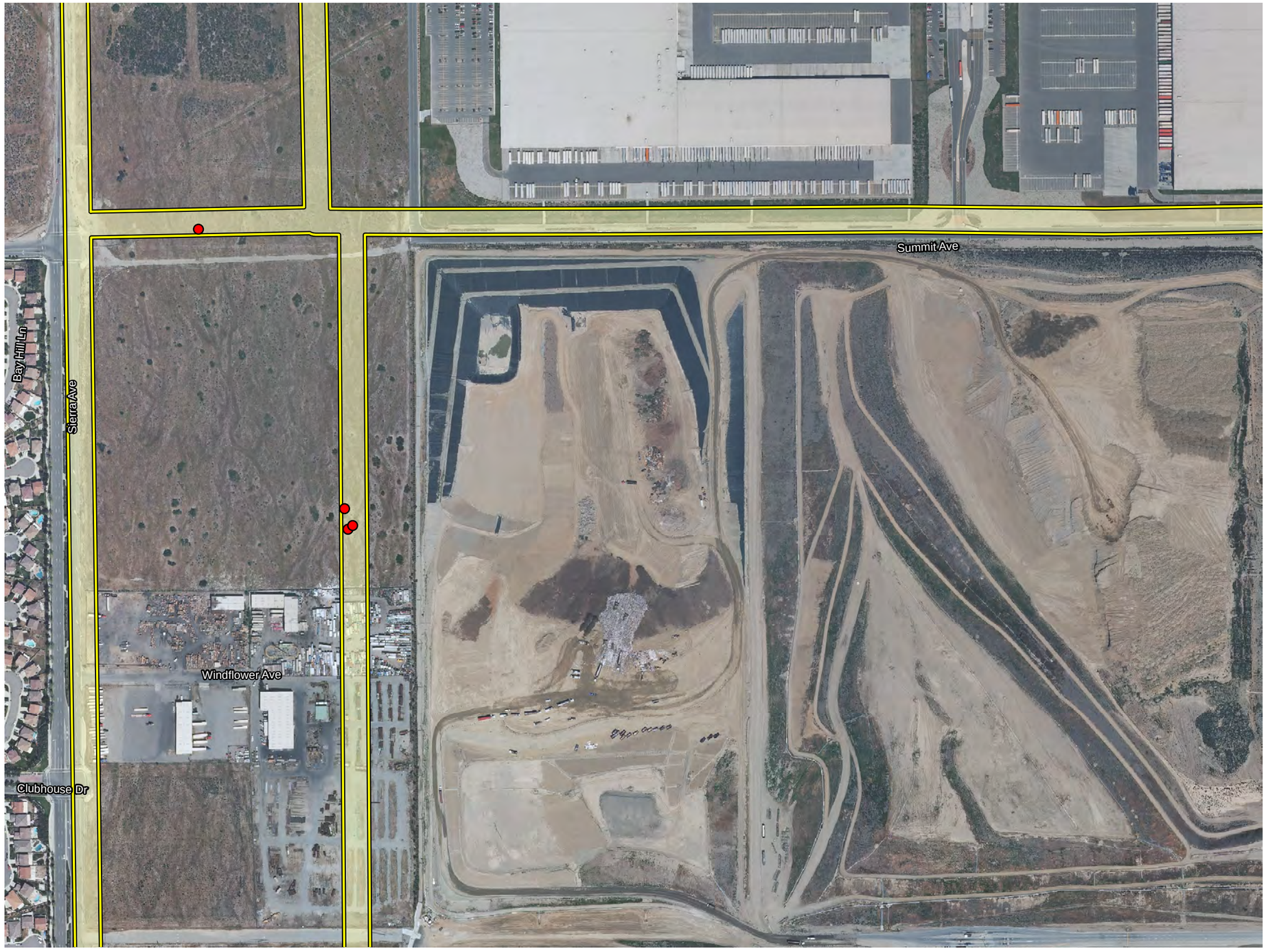
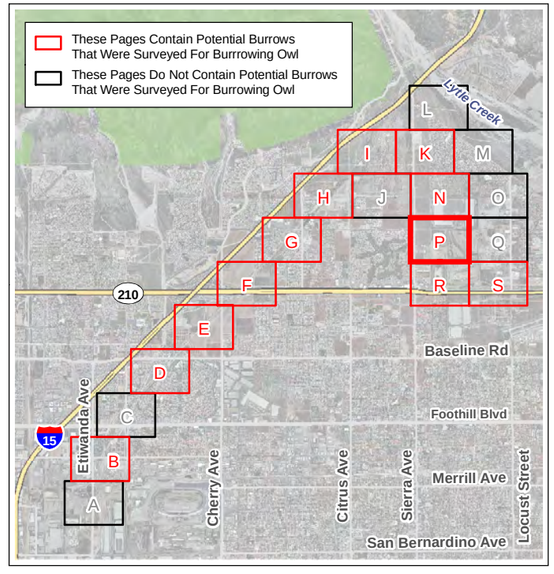


Focused Survey Area

Survey Area



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Burrowing Owl

Exhibit 9P

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

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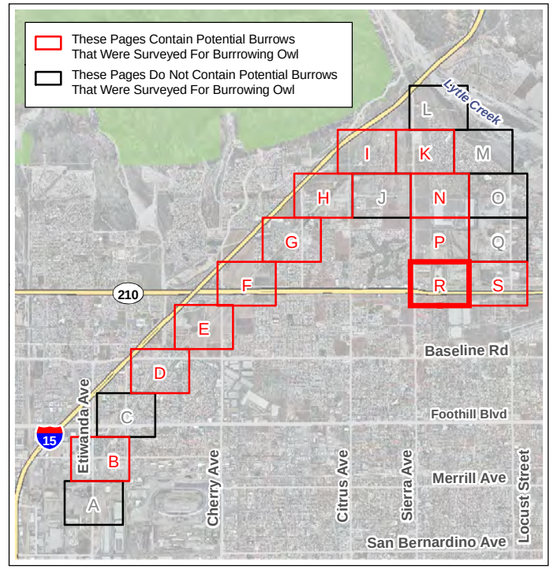
Focused Survey Area

Survey Area



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Burrowing Owl

Exhibit 9R

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

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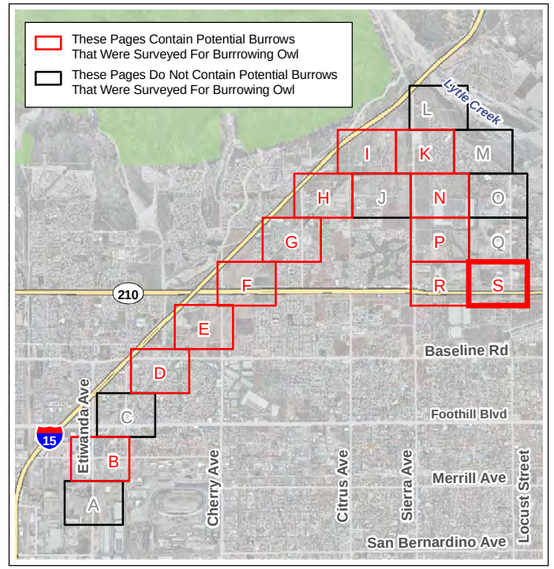
Focused Survey Area

Survey Area



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Burrowing Owl

Exhibit 9S

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

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this species has been reported from Cajon Canyon (CDFG 2010a). The southwestern willow flycatcher is not expected to occur in the survey area due to lack of suitable habitat.

On October 19, 2005, the USFWS published a Final Rule designating critical habitat for the southwestern willow flycatcher (USFWS 2005d). This Final Rule designated 120,824 acres in Arizona, California, Nevada, New Mexico, and Utah as critical habitat. Of that, 17,212 acres were designated in Kern, Santa Barbara, San Bernardino, and San Diego Counties. The nearest critical habitat is approximately 6.5 miles south of the survey area along the Santa Ana River. The survey area is not located in critical habitat for this species.

Vermilion Flycatcher

Vermilion flycatcher (*Pyrocephalus rubinus*) is a California Species of Special Concern; nesting individuals are protected. This is a widespread species that occurs from South and Central America to the southwestern United States (DeGraff and Rappole 1995). This species occupies desert riparian areas or areas near water, such as irrigated fields, ditches, ponds, and sloughs. Typical breeding habitat for this species consists of a mixture of trees, open fields, and open water habitats (Wolf and Jones 2000). In Southern California, this species breeds at sites above 500 feet in elevation in San Bernardino, Kern, Los Angeles and Riverside Counties (CDFG BDB 2007). The vermilion flycatcher is not expected to occur in the survey area due to lack of suitable habitat.

Loggerhead Shrike

Loggerhead shrike (*Lanius ludovicianus*) is a California Species of Special Concern; nesting individuals are protected. Year-round, shrikes inhabit open habitats with short vegetation such as pastures, agricultural fields, riparian areas, and open woodlands (Yosef 1996). They can often be found perched on fences and posts from which prey items (e.g., large insects, small mammals, and lizards) can be seen. This species was widely distributed across North America but has declined throughout most of its range in recent decades (Yosef 1996). It was considered to be a fairly common year-round resident in Southern California (Garrett and Dunn 1981), but has recently shown declines in its California population (Small 1994; Hamilton and Willick 1996). Suitable habitat for loggerhead shrike is present in the survey area and it was observed in the survey area.

Least Bell's Vireo

Least Bell's vireo (*Vireo bellii pusillus*) is a federally and State-listed Endangered species; nesting individuals are protected. This subspecies was formerly considered to be a common breeder in riparian habitats throughout the Central Valley and other low-elevation river systems in California and Baja California, Mexico (Franzreb 1989). It is now a rare and local summer resident of Southern California's lowland riparian woodlands. The least Bell's vireo breeds primarily in riparian habitats dominated by willows with dense understory vegetation (USFWS 1986). A dense shrub layer two to ten feet above ground is the most important habitat

characteristic for this subspecies (Goldwasser 1981; Franzreb 1989). While destruction of lowland riparian habitats has played a large role in driving this subspecies to its present precarious situation, brood parasitism by brown-headed cowbirds is the most important factor in its decline (Garrett and Dunn 1981). In the vicinity of the survey area, this species has been reported from Cajon Canyon and at multiple locations along the Santa Ana River (CDFG 2010a). The least Bell's vireo is not expected to occur in the survey area due to lack of suitable habitat.

On February 2, 1994, the USFWS published a final critical habitat for the least Bell's vireo, designating approximately 37,560 acres of land in California's Santa Barbara, Ventura, Los Angeles, San Bernardino, Riverside, and San Diego Counties (USFWS 1994b). The nearest critical habitat is approximately eight miles south along the Santa Ana River. The survey area is not located in critical habitat for this species.

Coastal California Gnatcatcher

Coastal California gnatcatcher is a federally listed Threatened species and a California Species of Special Concern. In California, this subspecies is an obligate resident of coastal sage scrub vegetation types. It occurs in most of Baja California, Mexico's arid regions, but this subspecies is extremely localized in the United States, where it predominantly occurs in coastal regions of highly urbanized Los Angeles, Orange, Riverside, and San Diego Counties (Atwood 1992). Brood parasitism by brown-headed cowbirds and loss of habitat to urban development have been cited as causes of coastal California gnatcatcher population decline (Unitt 1984; Atwood 1990). In the vicinity of the survey area, this species has been reported from the confluence of Lytle Wash and Cajon Wash in Rialto, Colton, Fontana, Etiwanda, Jarupa Hills, and Rancho Cucamonga (CDFG 2010a). Suitable habitat is present within the Riversidean alluvial fan sage scrub and Riversidean sage scrub vegetation types in the survey area. Focused surveys were completed in one portion of the survey area, and are partially completed for the remaining suitable habitat in the survey area (Exhibit 10). No coastal California gnatcatchers have been observed to date in the survey area. Therefore, no coastal California gnatcatchers are expected to occur in the survey area because they have not been observed during focused surveys. However, coastal California gnatcatcher cannot be considered absent from the survey area until focused surveys are completed.

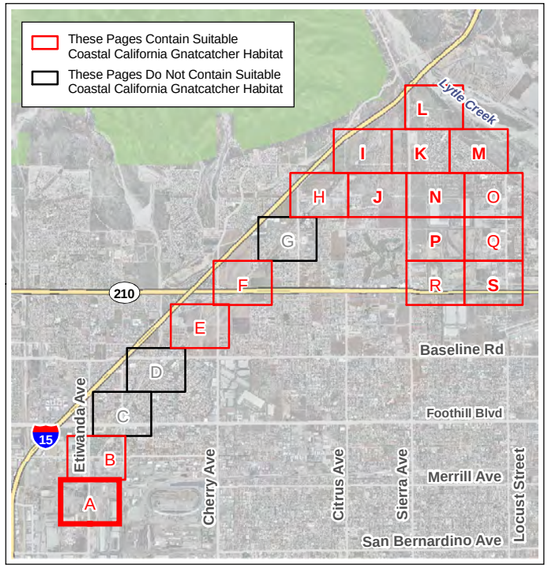
On December 19, 2007, the USFWS published a Final Rule revising critical habitat for the coastal California gnatcatcher. The revised critical habitat designates 197,303 acres of land in Ventura, Los Angeles, Orange, Riverside, San Bernardino, and San Diego Counties, California (USFWS 2007). The nearest critical habitat is located approximately four miles south of the survey area. The survey area is not located in critical habitat for this species.

Survey Area

Suitable Coastal California Gnatcatcher Habitat

Breeding Season Surveys Conducted

Non-Breeding Season Surveys Conducted



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Coastal California Gnatcatcher

Exhibit 10A

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

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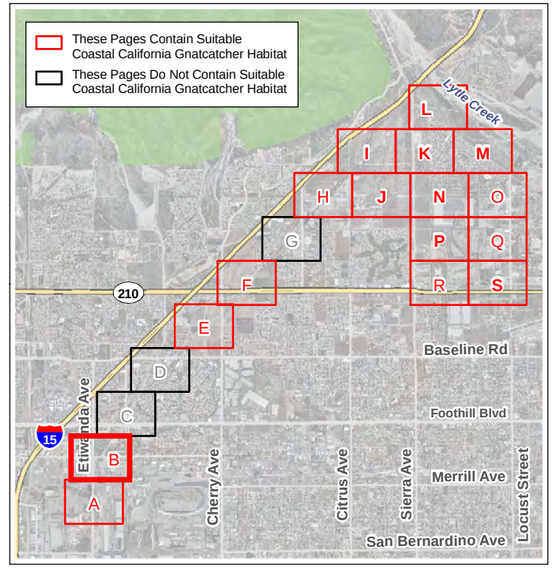
Survey Area

Suitable Coastal California Gnatcatcher Habitat

Breeding Season Surveys Conducted

Non-Breeding Season Surveys Conducted



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Coastal California Gnatcatcher

Exhibit 10B

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

Benterra CONSULTING

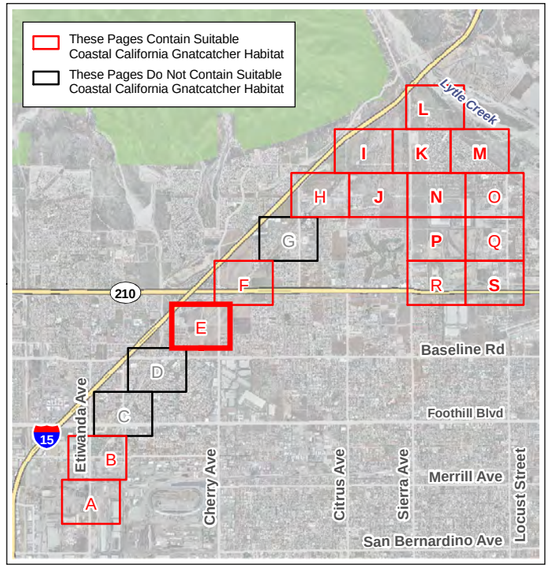
(Rev 8-10-10 JFG) R:\Projects\Edison\J046\Graphics\BioTech\Ex10_CAGN.pdf

Survey Area

Suitable Coastal California Gnatcatcher Habitat

Breeding Season Surveys Conducted

Non-Breeding Season Surveys Conducted



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Coastal California Gnatcatcher

Exhibit 10E

Falcon Ridge Substation Project

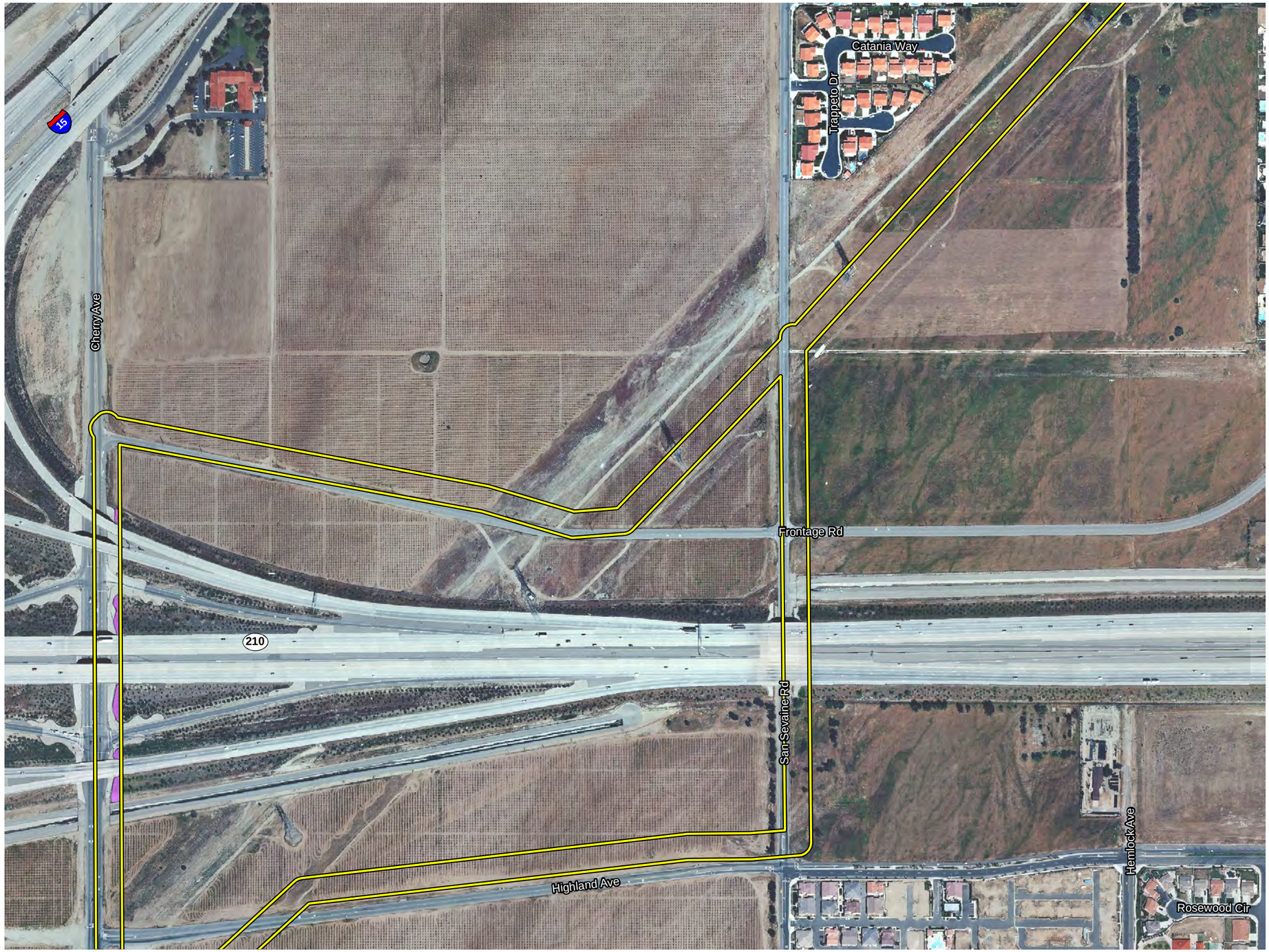
N W E S

400 200 0 400

Feet

BonTerra CONSULTING

(Rev 8-10-10 JFG) R:\Projects\Edison\J046\Graphics\BioTech\Ex10_CAGN.pdf

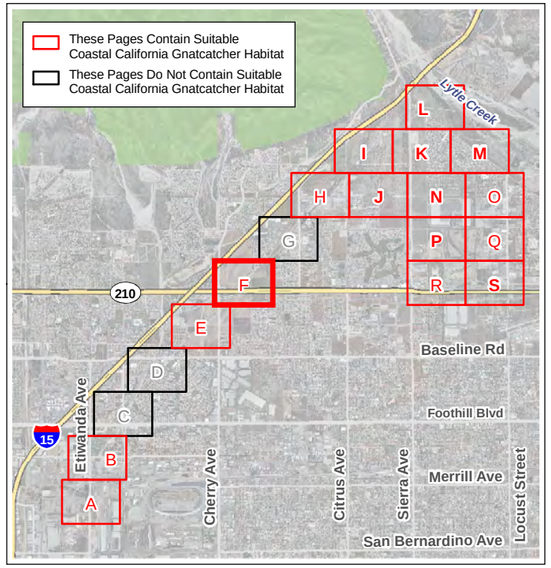


Survey Area

Suitable Coastal California Gnatcatcher Habitat

Breeding Season Surveys Conducted

Non-Breeding Season Surveys Conducted



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Coastal California Gnatcatcher

Exhibit 10F

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

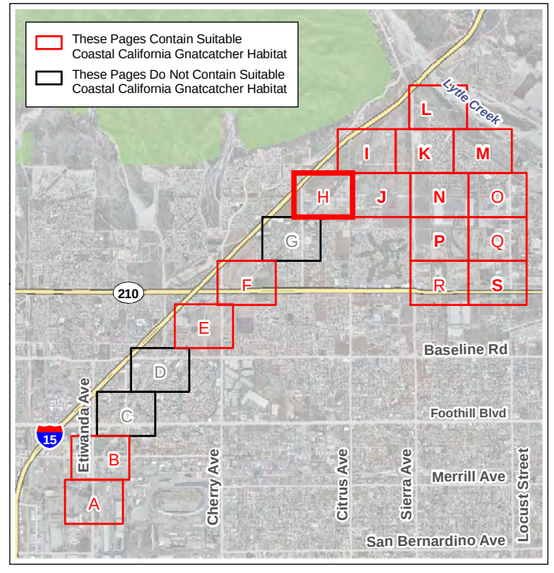
BonTerra CONSULTING

(Rev 8-10-10 JFG) R:\Projects\Edison\J046\Graphics\BioTech\Ex10_CAGN.pdf

Survey Area

Suitable Coastal California Gnatcatcher Habitat

- Breeding Season Surveys Conducted
- Non-Breeding Season Surveys Conducted



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Coastal California Gnatcatcher

Exhibit 10H

Falcon Ridge Substation Project

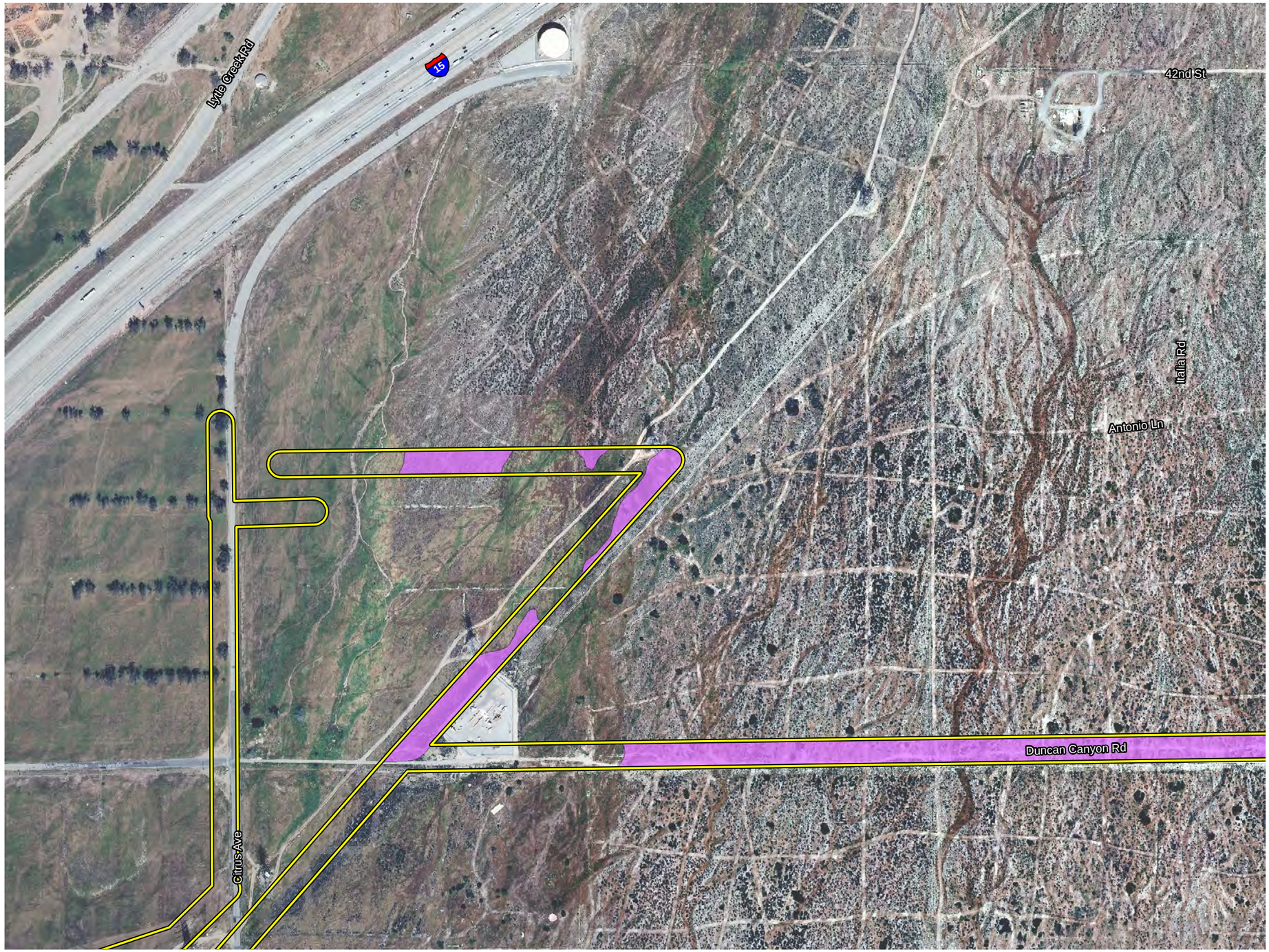
N W E S

400 200 0 400

Feet

BonTerra CONSULTING

(Rev 8-10-10 JFG) R:\Projects\Edison\J046\Graphics\BioTech\Ex10_CAGN.pdf

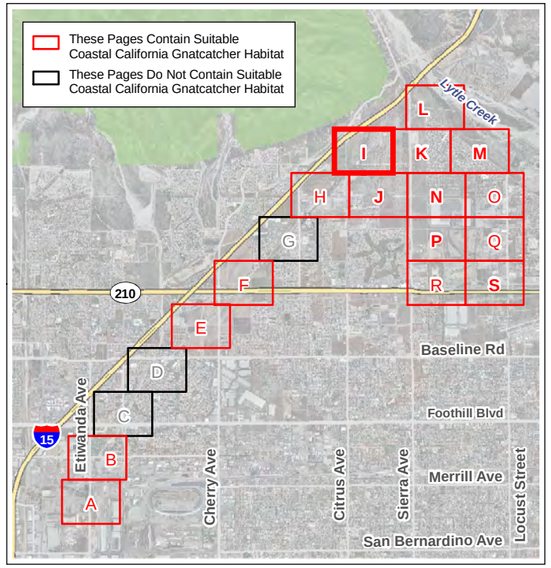


Survey Area

Suitable Coastal California Gnatcatcher Habitat

Breeding Season Surveys Conducted

Non-Breeding Season Surveys Conducted



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Coastal California Gnatcatcher

Exhibit 10I

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

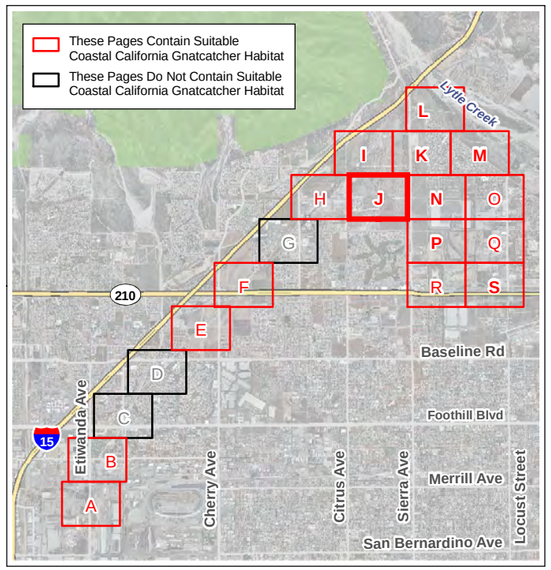
(Rev 8-10-10 JFG) R:\Projects\Edison\J046\Graphics\BioTech\Ex10_CAGN.pdf

Survey Area

Suitable Coastal California Gnatcatcher Habitat

Breeding Season Surveys Conducted

Non-Breeding Season Surveys Conducted



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Coastal California Gnatcatcher

Exhibit 10J

Falcon Ridge Substation Project

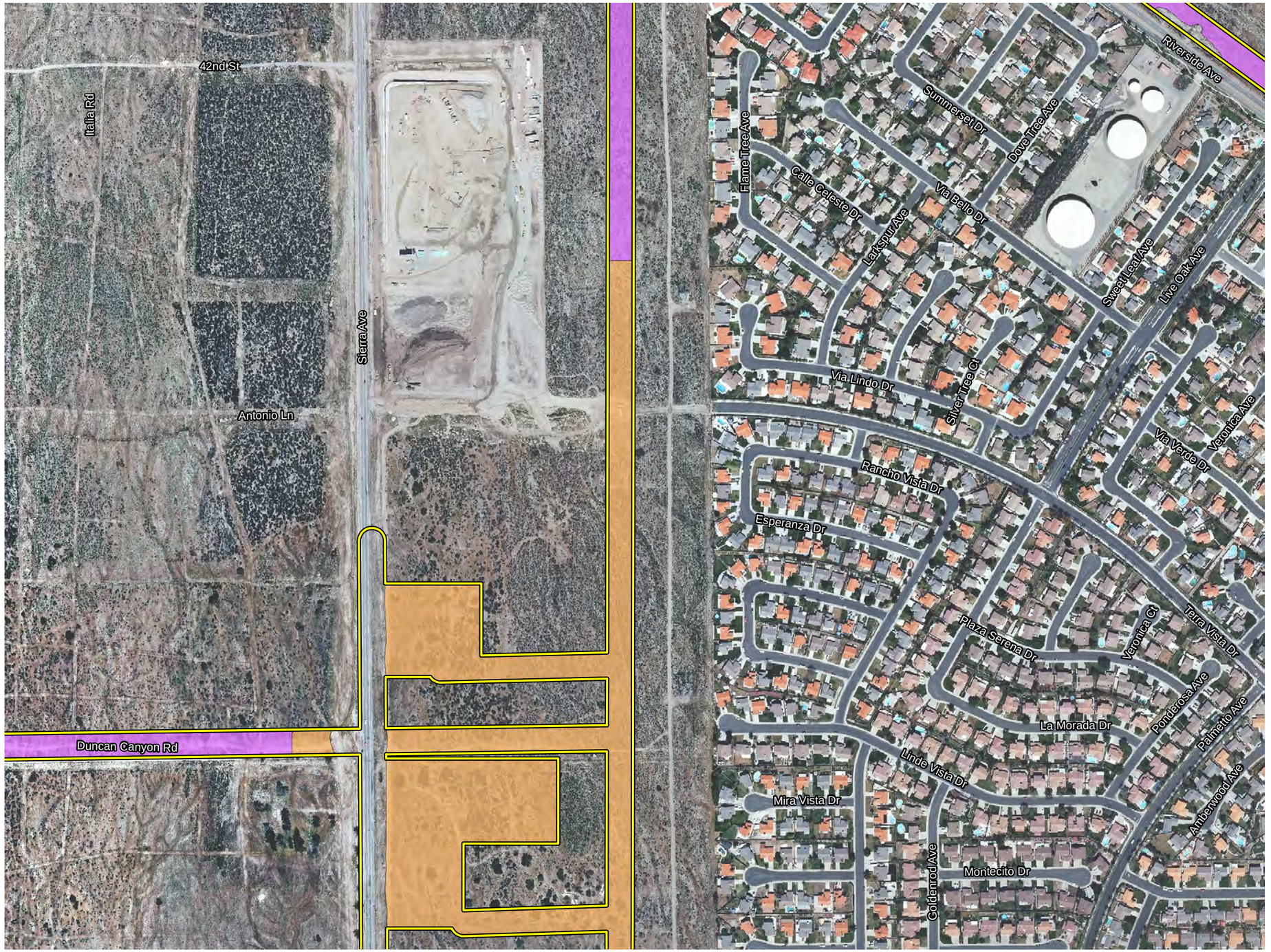
N W E S

400 200 0 400

Feet

BonTerra CONSULTING

(Rev 8-10-10 JFG) R:\Projects\Edison\J046\Graphics\BioTech\Ex10_CAGN.pdf

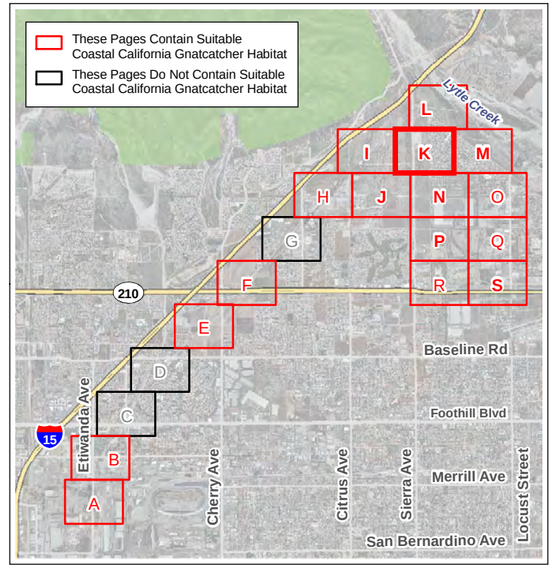


Survey Area

Suitable Coastal California Gnatcatcher Habitat

Breeding Season Surveys Conducted

Non-Breeding Season Surveys Conducted



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Coastal California Gnatcatcher

Exhibit 10K

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

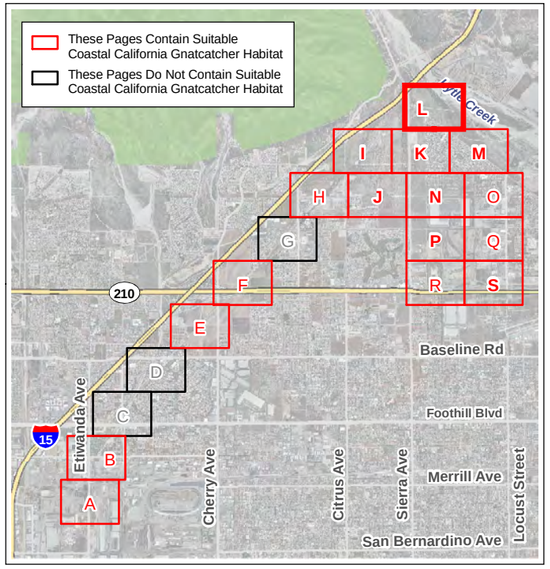
(Rev 8-10-10 JFG) R:\Projects\Edison\J046\Graphics\BioTech\Ex10_CAGN.pdf

Survey Area

Suitable Coastal California Gnatcatcher Habitat

Breeding Season Surveys Conducted

Non-Breeding Season Surveys Conducted



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Coastal California Gnatcatcher

Exhibit 10L

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

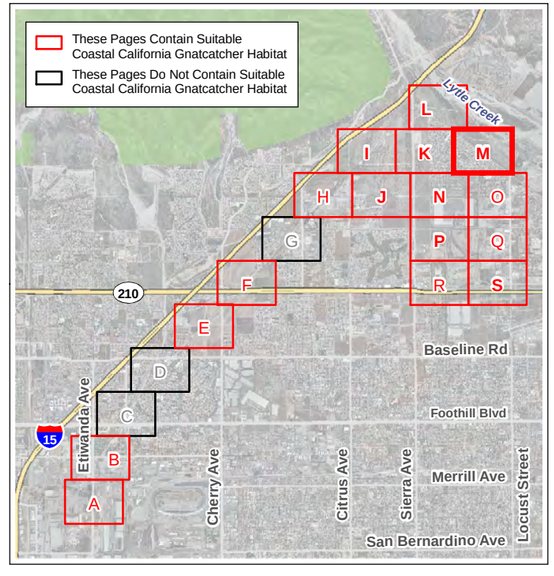
(Rev 8-10-10 JFG) R:\Projects\Edison\J046\Graphics\BioTech\Ex10_CAGN.pdf

Survey Area

Suitable Coastal California Gnatcatcher Habitat

Breeding Season Surveys Conducted

Non-Breeding Season Surveys Conducted



Coastal California Gnatcatcher

Exhibit 10M

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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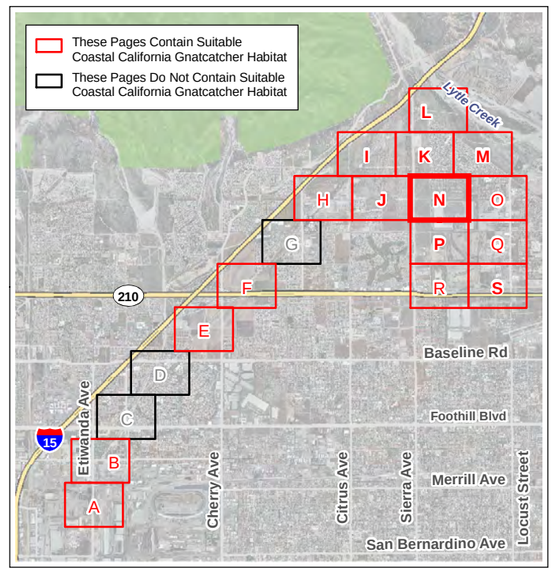
Survey Area

Suitable Coastal California Gnatcatcher Habitat

Breeding Season Surveys Conducted

Non-Breeding Season Surveys Conducted



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Coastal California Gnatcatcher

Falcon Ridge Substation Project

Exhibit 10N

N W E S

400 200 0 400 Feet

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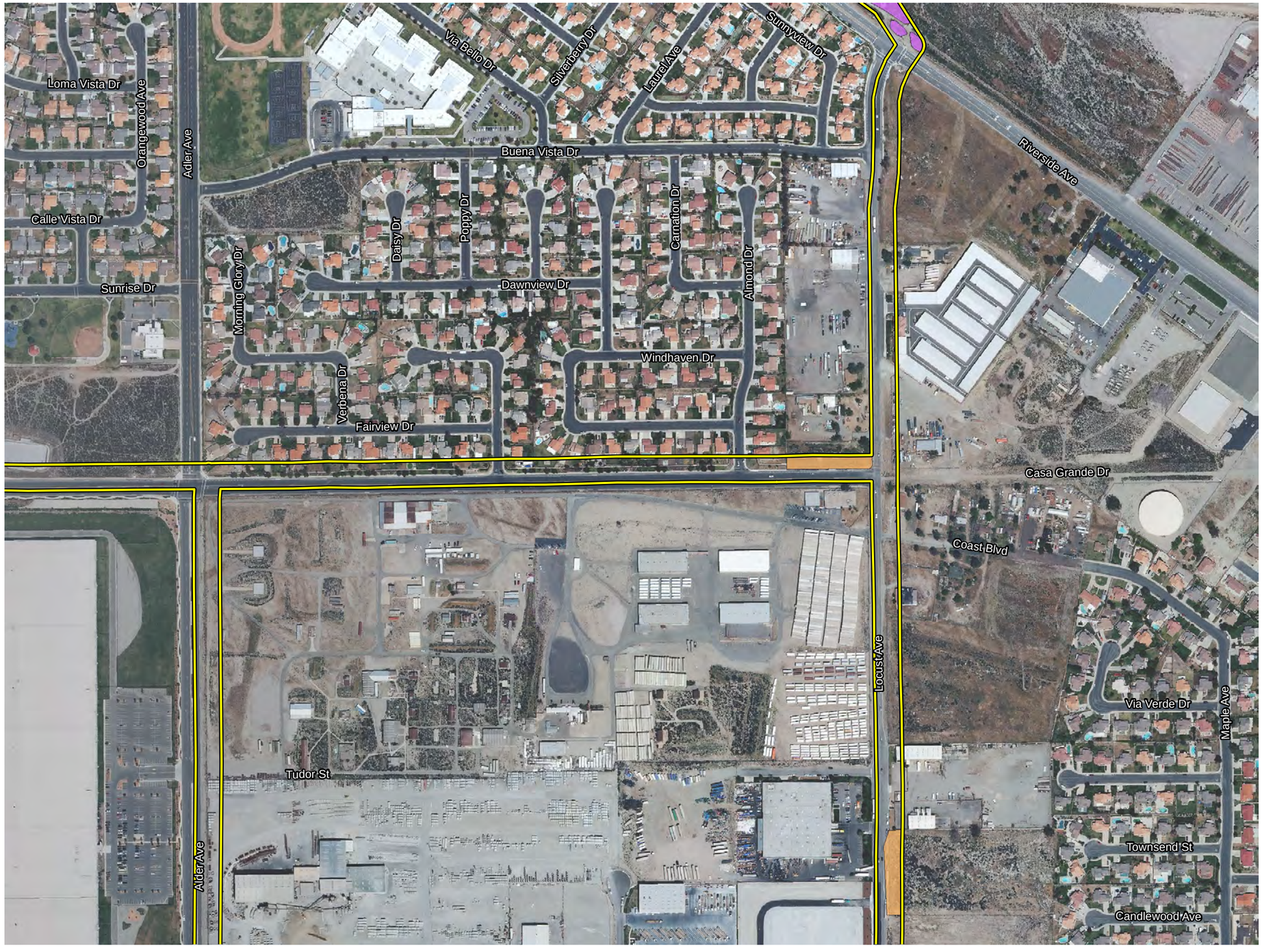
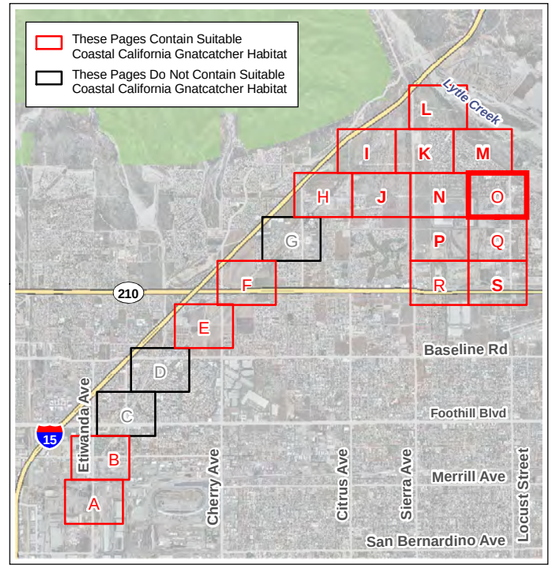


Survey Area

Suitable Coastal California Gnatcatcher Habitat

Breeding Season Surveys Conducted

Non-Breeding Season Surveys Conducted



Coastal California Gnatcatcher

Exhibit 10O

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

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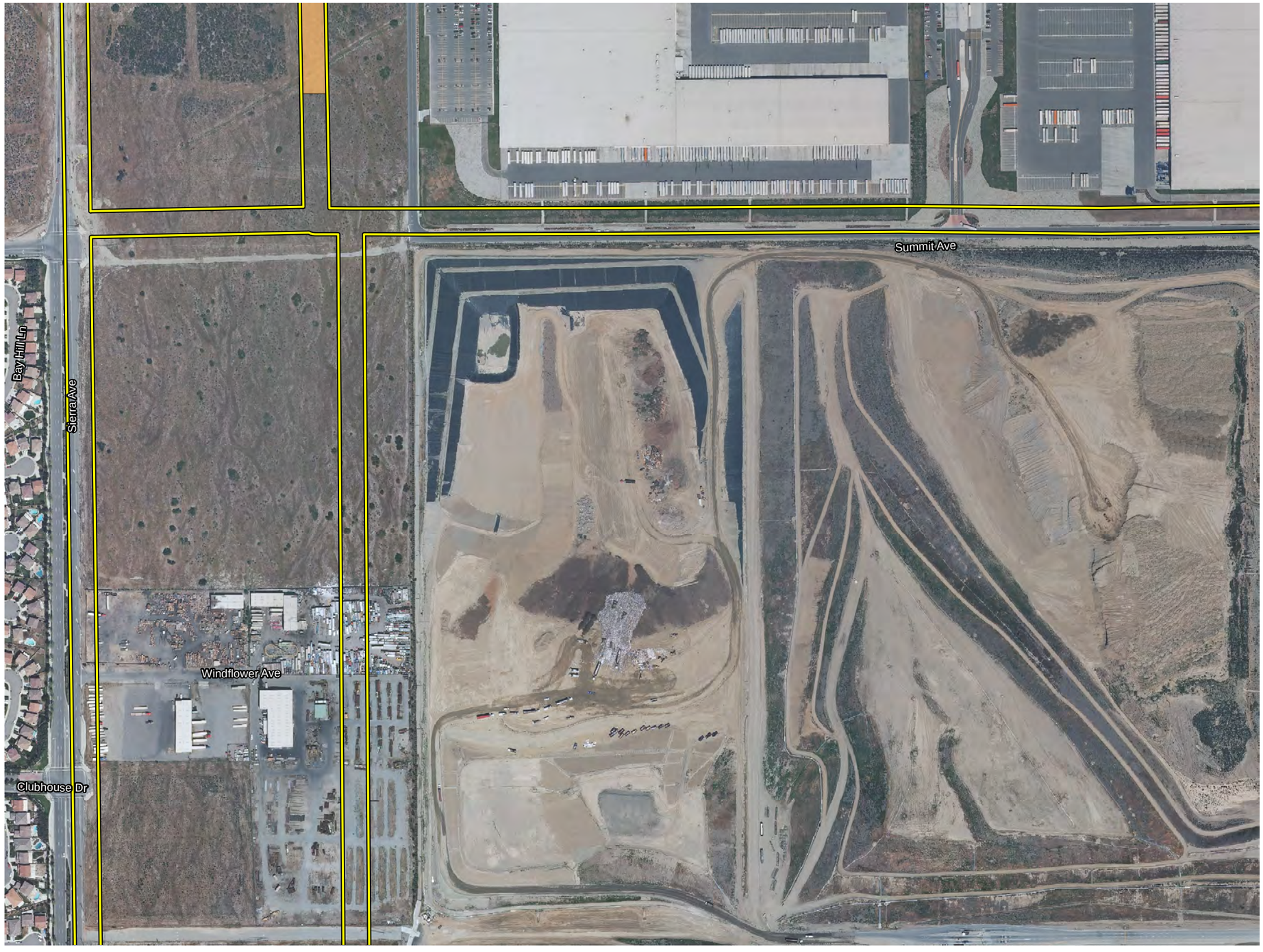
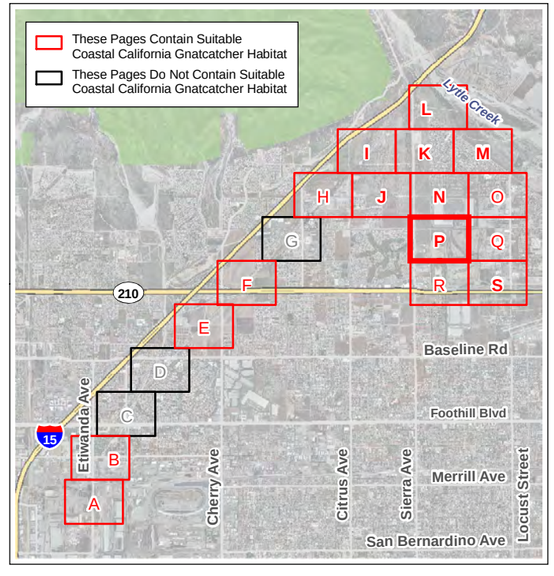


Survey Area

Suitable Coastal California Gnatcatcher Habitat

Breeding Season Surveys Conducted

Non-Breeding Season Surveys Conducted



Coastal California Gnatcatcher

Exhibit 10P

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

(Rev 8-10-10 JFG) R:\Projects\Edison\J046\Graphics\BioTech\Ex10_CAGN.pdf

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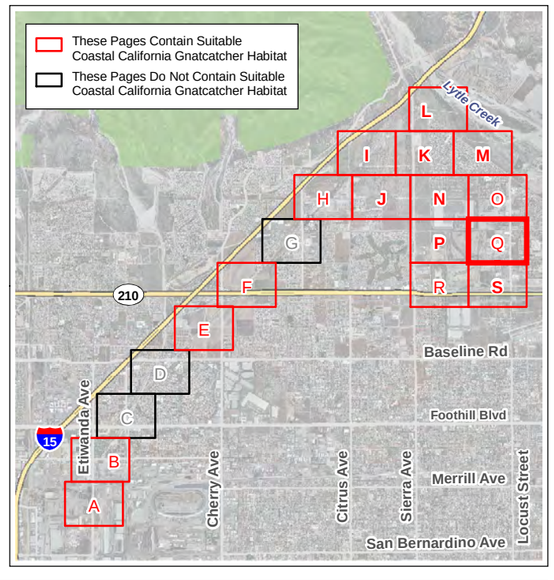
Survey Area

Suitable Coastal California Gnatcatcher Habitat

Breeding Season Surveys Conducted

Non-Breeding Season Surveys Conducted



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Coastal California Gnatcatcher

Exhibit 10Q

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

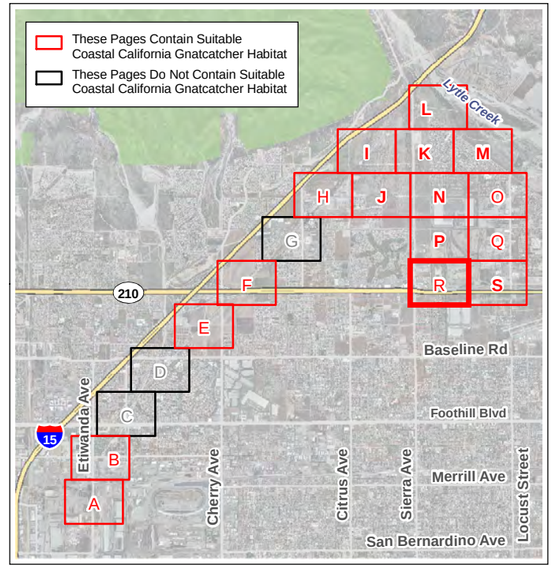
(Rev 8-10-10 JFG) R:\Projects\Edison\J046\Graphics\BioTech\Ex10_CAGN.pdf

Survey Area

Suitable Coastal California Gnatcatcher Habitat

Breeding Season Surveys Conducted

Non-Breeding Season Surveys Conducted



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Coastal California Gnatcatcher

Exhibit 10R

Falcon Ridge Substation Project

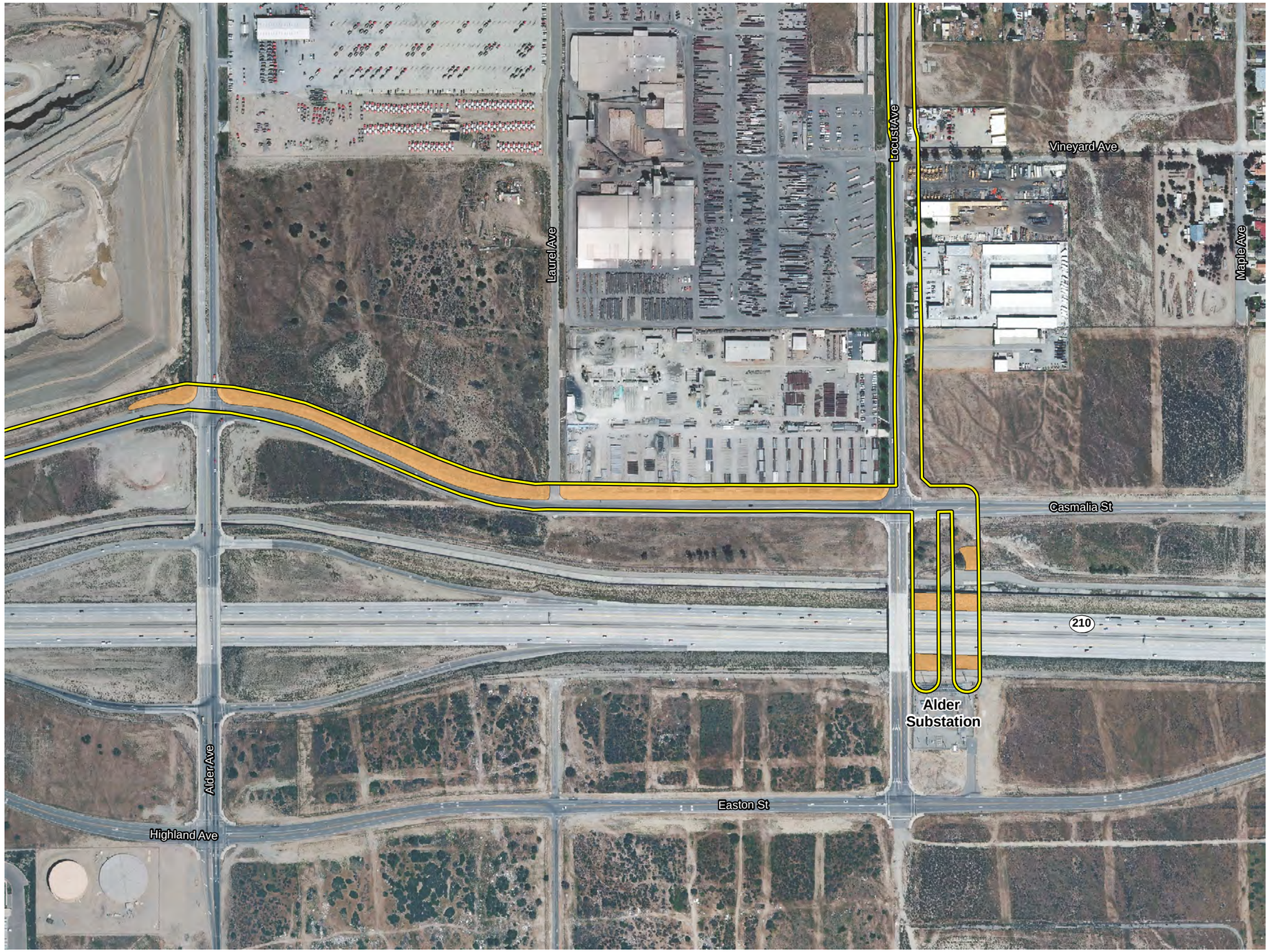
N W E S

400 200 0 400

Feet

BonTerra CONSULTING

(Rev 8-10-10 JFG) R:\Projects\Edison\J046\Graphics\BioTech\Ex10_CAGN.pdf

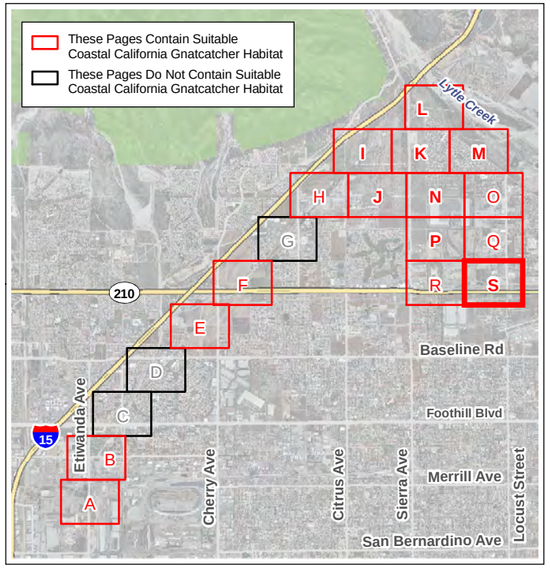


Survey Area

Suitable Coastal California Gnatcatcher Habitat

Breeding Season Surveys Conducted

Non-Breeding Season Surveys Conducted



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Coastal California Gnatcatcher

Exhibit 10S

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

(Rev 8-10-10 JFG) R:\Projects\Edison\J046\Graphics\BioTech\Ex10_CAGN.pdf

Yellow Warbler

Yellow warbler (*Dendroica petechia brewsteri*) is a California Species of Special Concern; nesting individuals are protected. In California, most yellow warblers are migrants, but this subspecies breeds in Southern California from northwestern Washington south to western Baja California, Mexico (Dunn and Garrett 1997). In Southern California, migrant yellow warblers forage in a variety of different habitat types, but nest locally in riparian woodlands. This subspecies is threatened by loss of habitat and nest parasitism by brown-headed cowbirds (Remsen 1978). In the vicinity of the survey area, this species has been reported from near Hesperia (CDFG 2010a). The yellow warbler is not expected to occur for nesting due to lack of suitable habitat.

Yellow-breasted Chat

Yellow-breasted chat (*Icteria virens*) is a California Species of Special Concern; nesting individuals are protected. This species requires dense, brushy tangles near water and riparian woodlands supporting a thick understory for breeding. The yellow-breasted chat occurs as an uncommon and local summer resident in Southern California along the coast and in the deserts (Garrett and Dunn 1981). This large warbler was once a fairly common summer resident in riparian woodlands throughout California, but is now much reduced in numbers, especially in Southern California (Remsen 1978). This species is threatened by loss of habitat and possibly nest parasitism by the brown-headed cowbird (Remsen 1978). The yellow-breasted chat is not expected to occur in the survey area due to lack of suitable habitat.

Grasshopper Sparrow

Grasshopper sparrow (*Ammodramus savannarum*) is a California Species of Special Concern; nesting individuals are protected. It is a year-round resident in the western states. This species occupies open grasslands and prairies with patchy, bare ground (Dudek 2003). In California, the species occurs on slopes and mesas, frequenting dense, dry or well-drained grassland with a thick cover of grasses and forbs (Dudek 2003). It breeds from eastern Washington to southern Maine and south to Southern California, Virginia, and northernmost Mexico (Dudek 2003). Potentially suitable habitat is present for this species in the grassland vegetation types in survey area. Therefore, grasshopper sparrow may occur in the survey area.

Oregon Vesper Sparrow

Oregon vesper sparrow (*Pooecetes gramineus affinis*) is a California Species of Special Concern; non-breeding/wintering individuals are protected. This species occurs from southern Canada south through most of the United States into Mexico (DeGraff and Rappole 1995).This is a sparrow of open fields and grasslands (DeGraff and Rappole 1995). The Great Basin vesper sparrow (*P. g. confinis*) and Oregon vesper sparrow both breed and winter in California with the former confined to the Great Basin region of the state and the Oregon vesper sparrow occurring on the coast of Southern California (Patten et al. 2003).The winter ranges of both

subspecies overlap in coastal Southern California, so determining the actual status and distribution of these similar appearing subspecies is difficult and not well known (Erickson 2008). Potentially suitable habitat is present for this species in the grassland vegetation types in survey area. Therefore, Oregon vesper sparrow may occur in the survey area.

Tricolored Blackbird

Tricolored blackbird (*Agelaius tricolor*) is a California Species of Special Concern; nesting colonies are protected. These colonially nesting birds prefer to breed in marsh vegetation of bulrushes (*Scirpus* sp.) and cattails (*Typha* sp.) and have also been recorded nesting in willows, blackberries (*Rubus ursinus*), and mustard (*Brassica* spp.) (Beedy et al. 1991). During winter months, they are often found foraging in wet pastures, agricultural fields, and seasonal wetlands. Tricolored blackbirds are nomadic, wandering during the non-breeding season and occupying colony sites intermittently (Unitt 1984). In the vicinity of the survey area, this species has been reported from the San Bernardino Flood Control Basin (CDFG 2010a). Marginally suitable habitat is present in the survey area. Therefore, the tricolored blackbird has a limited potential to occur in the survey area.

Mammals

Pallid Bat

Pallid bat (*Antrozous pallidus*) is a California Species of Special Concern. It occurs in a wide variety of habitats including grasslands, shrublands and woodlands, but is most common in open habitats with rocky areas for roosting (Zeiner et al. 1990b). Roosting habitat consists of caves, crevices, mines, and occasionally hollow trees and buildings (Whitaker 1980; Zeiner et al. 1990b). The pallid bat is very sensitive to disturbance at its roosting sites (Zeiner et al. 1990b) This species occurs throughout California except for the high Sierra Nevada from Shasta County to Kern County and in the northwestern portion of the State (Zeiner et al. 1990b). The survey area provides potentially suitable foraging habitat and a limited amount of suitable roosting habitat. Therefore, the pallid bat has a limited potential to occur in the survey area for foraging and roosting.

Townsend's Big-eared Bat

Townsend's big-eared bat (*Corynorhinus townsendii*) is a California Species of Special Concern. The Townsend's big-eared bat is considered an uncommon year-round resident throughout much of California (Zeiner et al. 1990b). It occupies a variety of habitats including oak woodlands, arid deserts, grasslands, and high-elevation forests and meadows (Hall 1981). Known roosting sites in California include mine tunnels, limestone caves, lava tubes, buildings, and other man-made structures (Williams 1986). The roosts, especially of larger breeding colonies, are especially susceptible to disturbance (Williams 1986). The survey area provides potentially suitable foraging habitat and a limited amount of suitable roosting habitat. Therefore,

the Townsend's big-eared bat has a limited potential to occur in the survey area for foraging and roosting.

Western Yellow Bat

Western yellow bat (*Lasiurus xanthinus*) is a California Species of Special Concern. Little is known about its habitat, but it is known to roost in leafy vegetation (Best et al. 1998). This species is associated with dry thorny vegetation of the Mexican Plateau, coastal western Mexico, and the deserts of the southwestern U.S. (Best et al. 1998). In the vicinity of the survey area, this species has been reported from Alta Loma, Fontana, Muscoy, and San Bernardino (CDFG 2010a). The survey area provides suitable foraging habitat but no suitable roosting habitat. Therefore, the Townsend's big-eared bat may occur in the survey area for foraging but is not expected to occur in the survey area for roosting.

Western Mastiff Bat

Western mastiff bat (*Eumops perotis californicus*) is a California Species of Special Concern. It is found in many open semi-arid to arid habitats including conifer and deciduous woodlands, coastal scrub, grasslands, palm oases, chaparral, desert scrub, and urban areas (Zeiner et al. 1990b). The western mastiff bat is a very wide-ranging and high-flying insectivore that typically forages in open areas with high cliffs. It roosts in small colonies in crevices on cliff faces. It occurs in the southeastern San Joaquin Valley and Coastal Ranges from Monterey County southward through Southern California, and from the coast eastward to the Colorado Desert (Zeiner et al. 1990b). Threats to this subspecies include loss of habitat due to development, drainage of marshes, and conversion of land to agriculture (Williams 1986). In the vicinity of the survey area, this species has been reported from Rancho Cucamonga and Colton (CDFG 2010a). The survey area provides suitable foraging habitat but no suitable roosting habitat. Therefore, the western mastiff bat may occur in the survey area for foraging but is not expected to occur in the survey area for roosting.

Pocketed Free-tailed Bat

Pocketed free-tailed bat (*Nyctinomops femorosaccus*) is a California Species of Special Concern. This species is known to occur in a variety of arid habitats such as pine-juniper woodland, desert scrub, palm oasis, desert wash, and desert riparian. It primarily roosts in crevices in rugged cliffs, slopes, and tall rocky outcrops (Best et al. 1998). This bat occurs in the southwestern United States to south-central Mexico (Best et al. 1998). In the vicinity of the survey area, this species has been reported from San Bernardino (CDFG 2010a). Suitable foraging habitat for this species occurs in the survey area, but no suitable roosting habitat is present in the survey area. Therefore, pocketed free-tailed bat may occur for foraging but is not expected to roost in the survey area.

San Diego Black-tailed Jackrabbit

San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) is a California Species of Special Concern. This species occurs in intermediate canopy stages of shrub habitats as well as within open shrub, herbaceous tree habitats (CDFG 2010a). This species can be found in coastal sage scrub habitats in Southern California (CDFG 2010a). The San Diego subspecies of the widespread black-tailed jackrabbit is restricted to the Pacific slope from Santa Barbara County south to northwestern Baja California, Mexico. In the vicinity of the survey area, this species has been reported from multiple locations in Fontana, Etiwanda, and along Lytle Creek in Rialto (CDFG 2010a). Suitable habitat for this species is present in the survey area and the San Diego black-tailed jackrabbit was observed in the survey area.

San Bernardino Flying Squirrel

San Bernardino flying squirrel (*Glaucomys sabrinus californicus*) is a California Species of Special Concern. The San Bernardino flying squirrel is a subspecies of the northern flying squirrel that occurs in the San Bernardino and San Jacinto mountains (CDFG 2010a). The San Bernardino flying squirrel occurs in black oak or white fir woodlands from 5,200 to 8,500 feet above msl (CDFG 2010a). This species requires mature trees, snags, and logs for cover and often occurs near rivers and streams (Zeiner et al. 1990b). This species nests in the cavities of trees and snags (Zeiner et al. 1990b). In the vicinity of the survey area, this species has been reported from the San Bernardino National Forest (CDFG 2010a). The San Bernardino flying squirrel is not expected to occur in the survey area due to lack of suitable habitat.

Northwestern San Diego Pocket Mouse

Northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*) is a California Species of Special Concern. It occupies a variety of habitats including chaparral, coastal sage scrub, and grassland (CDFG 2010a). This subspecies ranges from southwest San Bernardino County south to northern Baja California, Mexico. The primary threat to this species is loss of habitat due to development. In the vicinity of the survey area, this species has been reported from the confluence of Lytle and Cajon Creeks in Rialto, along Etiwanda Creek, and in multiple locations in Fontana and Devore (CDFG 2010a). Suitable habitat for this species is present in the survey area and this species was observed during small mammal trapping.

Pallid San Diego Pocket Mouse

Pallid San Diego pocket mouse (*Chaetodipus fallax pallidus*) is a California Species of Special Concern. This species occurs along the arid coastal and desert border areas in Imperial, Los Angeles, Riverside, San Diego, San Bernardino, and San Diego counties from sea level to 4,500 feet above msl (Zeiner et al. 1990b; NatureServe 2007). This species occurs in coastal scrub, chamise-redshank chaparral, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent scrub, pinyon-juniper and annual grassland with rocky, gravelly, or sandy soils (Zeiner et al. 1990b). In the vicinity of the survey area, this species has been reported from

Devore (CDFG 2010a); however, this record may be a misidentification (Montgomery 2010). Pallid San Diego pocket mouse is not expected to occur in the survey area because it is outside of the known range of this subspecies.

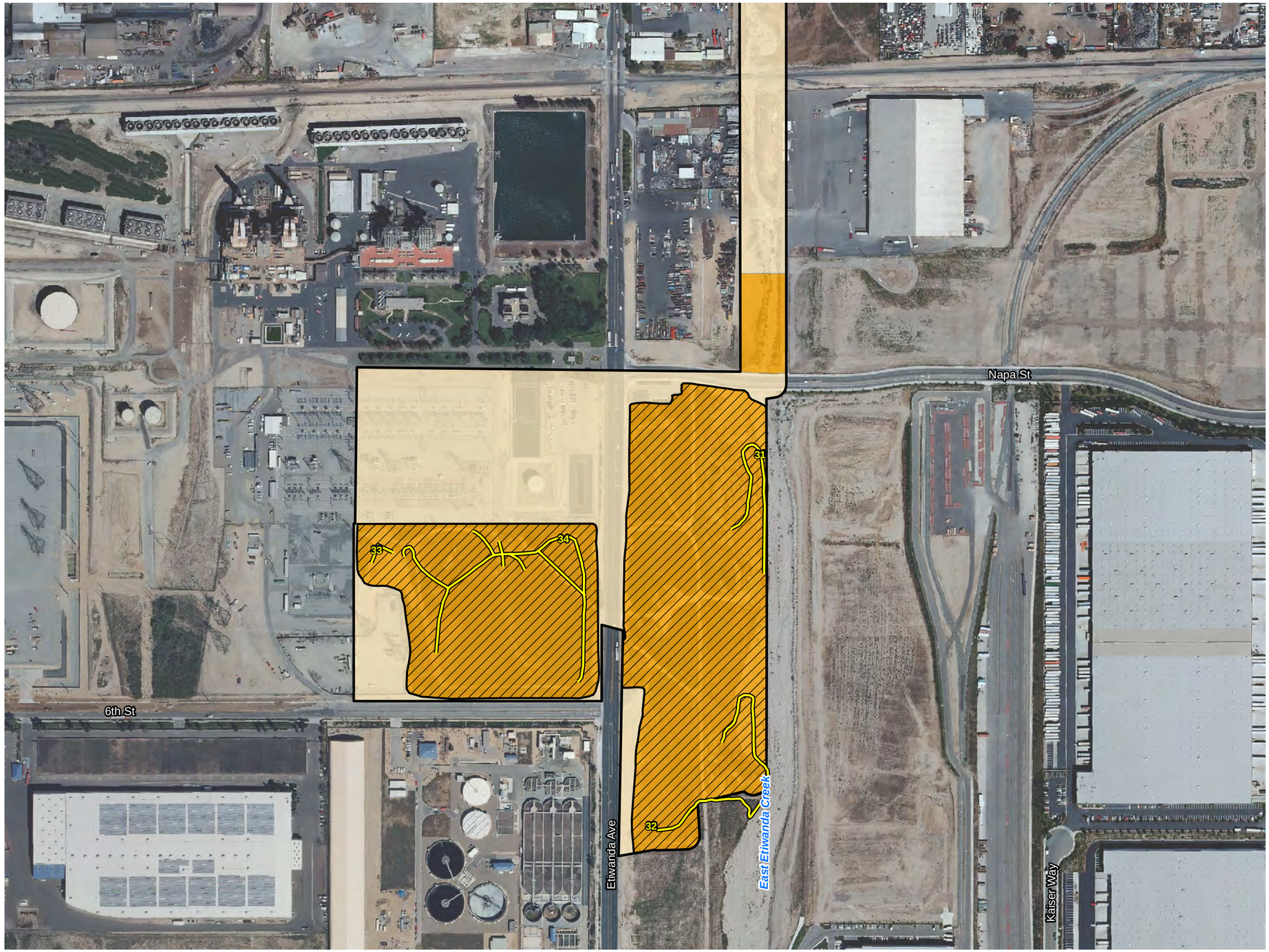
San Bernardino Kangaroo Rat

San Bernardino kangaroo rat is a federally listed Endangered species and a California Species of Special Concern. It is a subspecies of the Merriam's kangaroo rat (*Dipodomys merriami*), which is widely distributed throughout the western United States and northwestern Mexico (Zeiner et al. 1990b). San Bernardino kangaroo rat historically occurred from the San Bernardino Valley in San Bernardino County to Menifee Valley in Riverside County (USFWS 2002). This species is found primarily on sandy and sandy loam substrates, where they can readily excavate simple, shallow burrows typically associated with alluvial scrub vegetation (USFWS 2002). San Bernardino kangaroo rat habitat is characterized by a low-stature, relatively open shrub canopy with a reduced herbaceous cover (USFWS 2002). In the vicinity of the survey area, this species has been reported from near the I-15 and Sierra Avenue in Rialto, Lytle Creek, Cajon Wash, and Etiwanda (CDFG 2010a). Suitable habitat for this species is present in the survey area. Focused trapping was conducted for this species throughout suitable habitat in all areas of potential impact; therefore, areas that were not included in the trapping effort may have potential for these species and may require trapping at a future date if impact boundaries change (Exhibit 11). San Bernardino kangaroo rat is not expected to occur in the survey area because it was not observed during focused surveys.

On October 17, 2008, the USFWS published a final rule revising critical habitat for the San Bernardino kangaroo rat. The revised critical habitat designates 7,779 acres of land in San Bernardino and Riverside Counties, California (USFWS 2008b). The survey area is located within critical habitat for this species (Exhibit 11).

Stephens' Kangaroo Rat

Stephens' kangaroo rat (*Dipodomys stephensi*) is a federally listed Endangered species and a State-listed Threatened species. It primarily occurs in annual and perennial grasslands, but also occurs in coastal sage scrub habitats with sparse canopy cover (Zeiner et al. 1990b). Habitats occupied by Stephens' kangaroo rat characteristically occur on level to gently sloping terrain, although the species has occasionally been found on relatively steep slopes (USFWS 1997b). Soils in habitats harboring Stephens' kangaroo rat are typically loamy in nature, while soils dominated by clay or sand very rarely contain this species (Price and Endo 1989; O'Farrell 1990; O'Farrell and Uptain 1987). It occurs in the San Jacinto Valley and adjacent areas of western Riverside, southwestern San Bernardino, and northwestern San Diego counties (USFWS 1997b). In the vicinity of the survey area, this species has been reported from Reche Canyon near Loma Linda (CDFG 2010a). Stephens' kangaroo rat is not expected to occur in the survey area because the survey area is outside of the range of the species.



Approximate Traplines

Survey Area

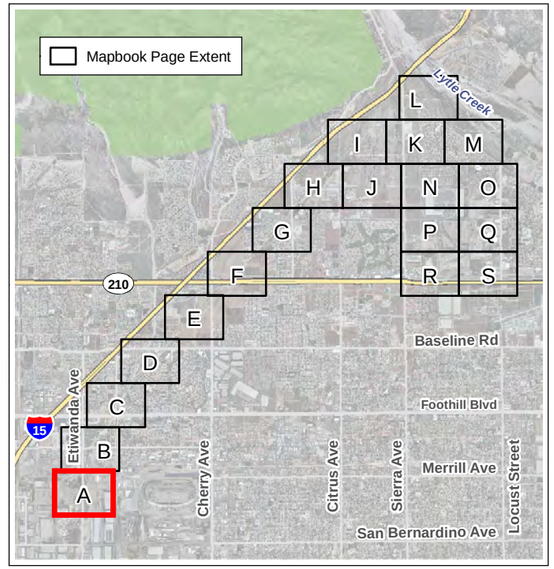
Area Generally Occupied By Los Angeles Pocket Mouse

San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

Habitat Potential

Suitable

Not Suitable



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San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 11A

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

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Approximate Traplines

Survey Area

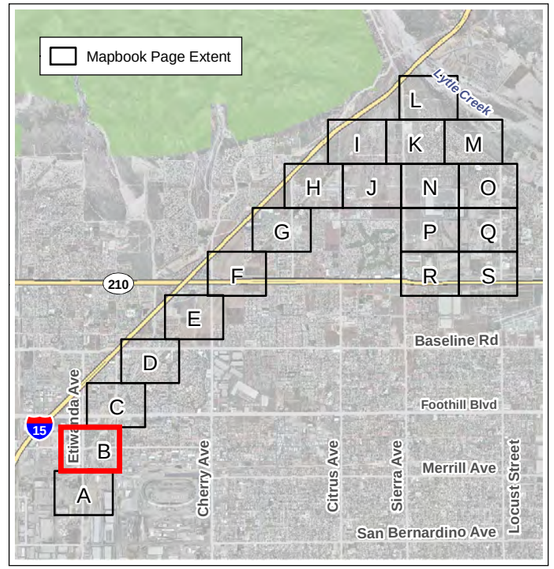
Area Generally Occupied By Los Angeles Pocket Mouse

San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

Habitat Potential

Suitable

Not Suitable



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San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 11B

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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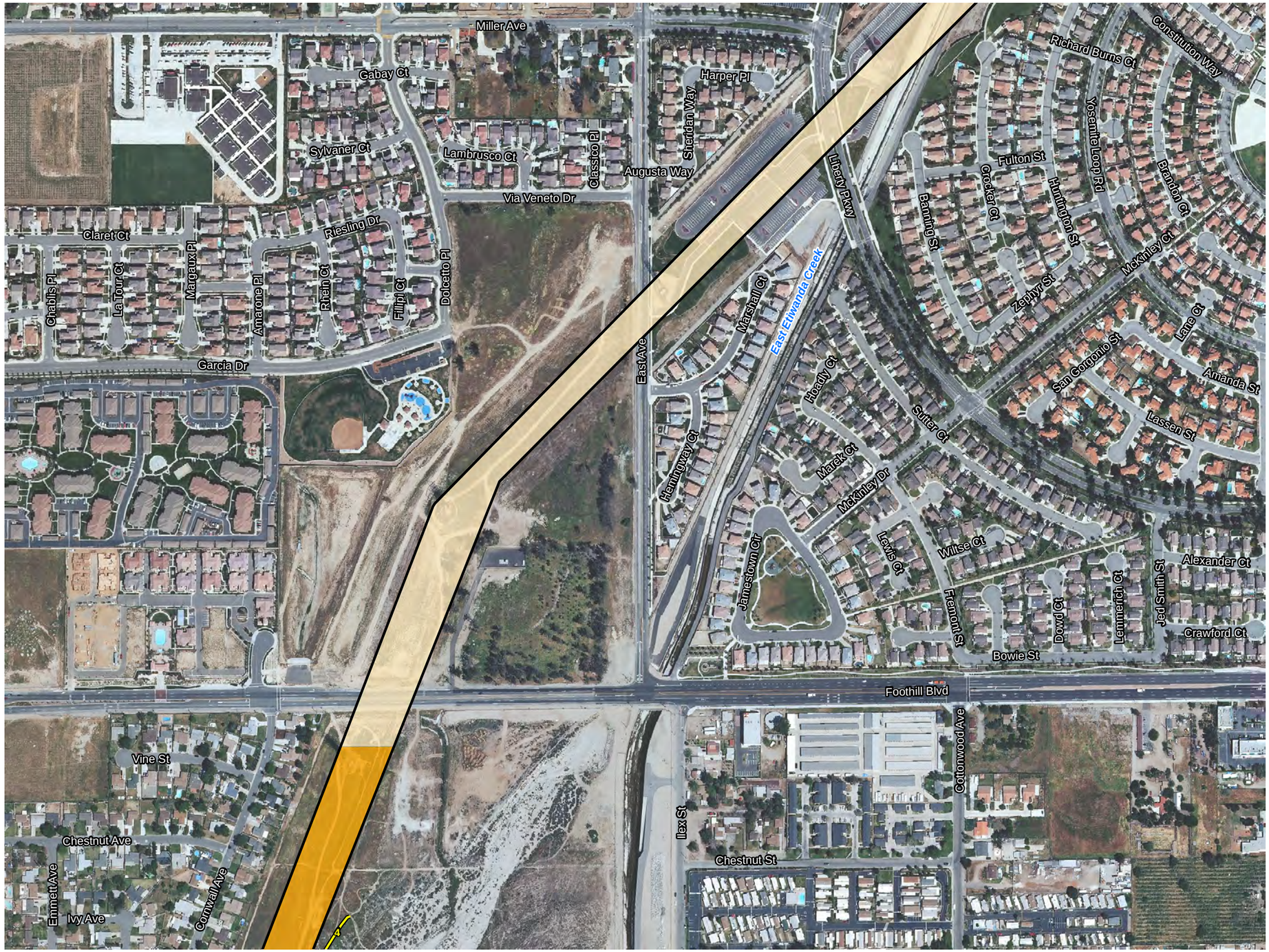


Approximate Traplines

Survey Area

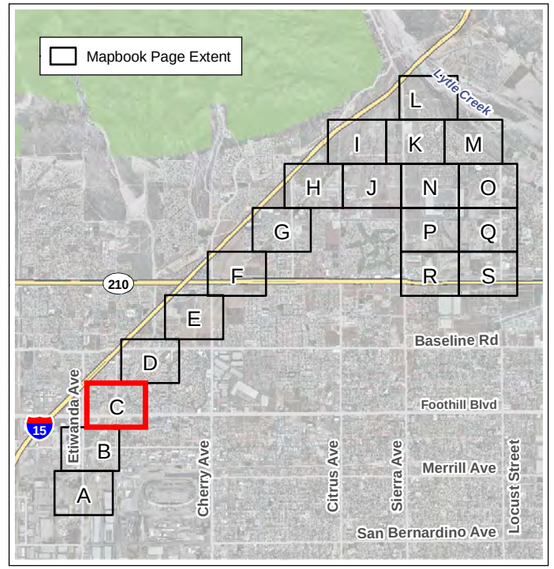
Area Generally Occupied By Los Angeles Pocket Mouse

San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

Habitat Potential

Suitable

Not Suitable



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San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 11C

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

(Rev 08/10/10 JFG) R:\Projects\Edison\J046\Graphics\Bio\ex11_mammmals.pdf

Approximate Traplines

Survey Area

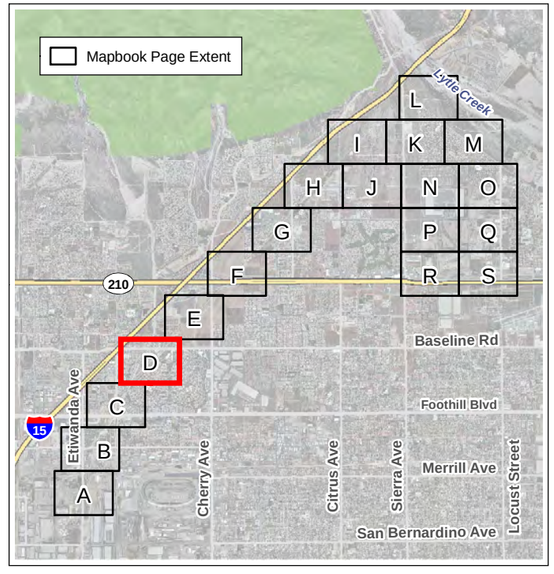
Area Generally Occupied By Los Angeles Pocket Mouse

San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

Habitat Potential

Suitable

Not Suitable



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San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 11D

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

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(Rev 08/10/10 JFG) R:\Projects\Edison\J046\Graphics\Bio\ex11_mammmals.pdf

Approximate Traplines

Survey Area

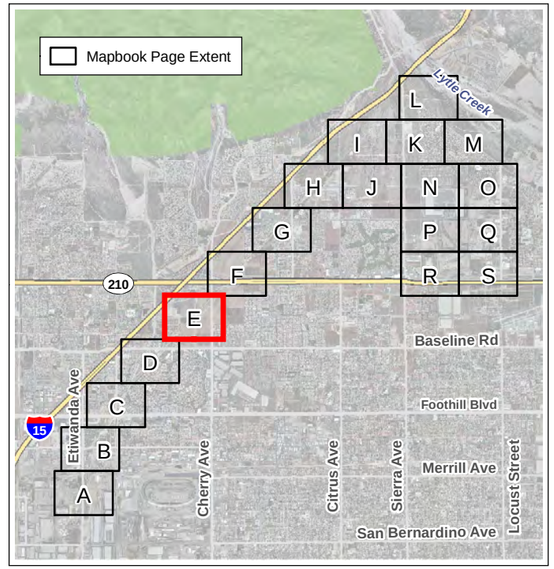
Area Generally Occupied By Los Angeles Pocket Mouse

San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

Habitat Potential

Suitable

Not Suitable



San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 11E

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

(Rev 08/10/10 JFG) R:\Projects\Edison\J046\Graphics\Bio\ex11_mammmals.pdf

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Approximate Traplines

Survey Area

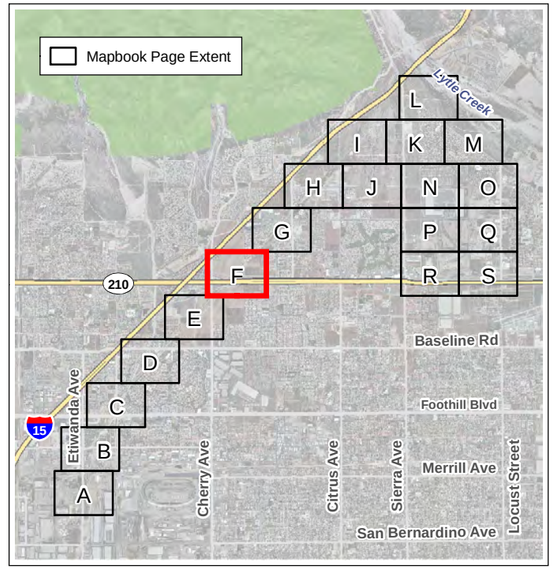
Area Generally Occupied By Los Angeles Pocket Mouse

San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

Habitat Potential

Suitable

Not Suitable



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San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 11F

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

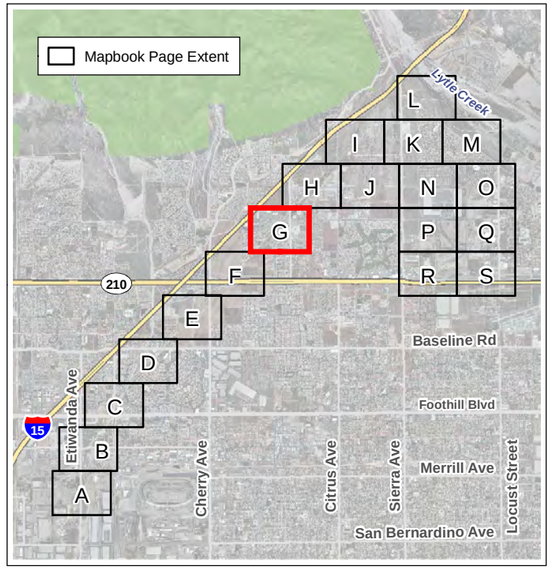
BonTerra CONSULTING

(Rev 08/10/10 JFG) R:\Projects\Edison\J046\Graphics\Bio\ex11_mammmals.pdf

- Approximate Traplines
- Survey Area
- Area Generally Occupied By Los Angeles Pocket Mouse
- San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

Habitat Potential

- Suitable
- Not Suitable



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San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 11G

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

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Approximate Traplines

Survey Area

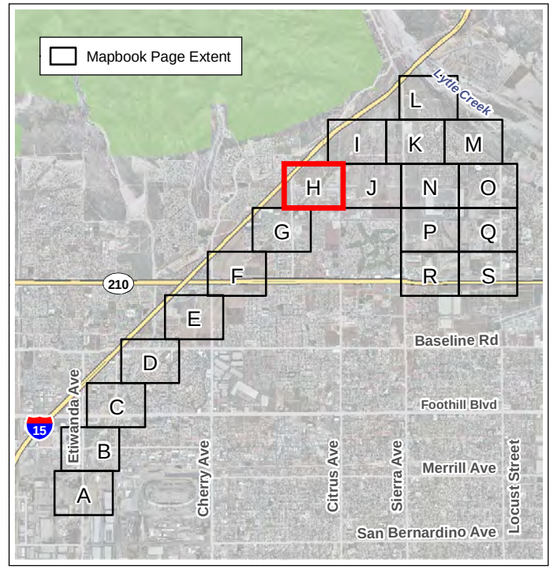
Area Generally Occupied By Los Angeles Pocket Mouse

San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

Habitat Potential

Suitable

Not Suitable



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San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 11H

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

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Approximate Traplines

Survey Area

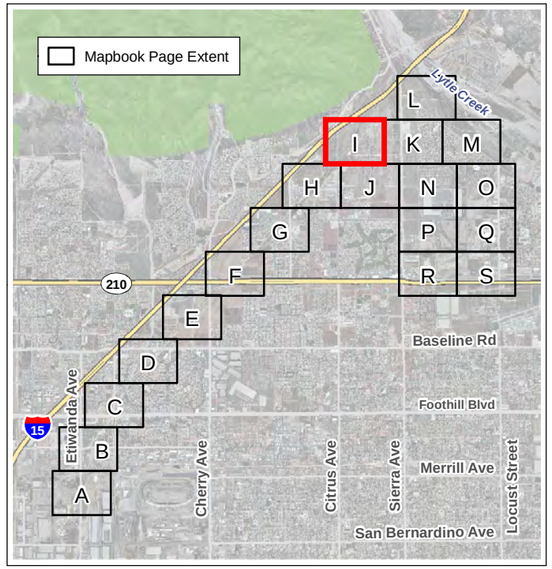
Area Generally Occupied By Los Angeles Pocket Mouse

San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

Habitat Potential

Suitable

Not Suitable



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San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 11I

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

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Approximate Traplines

Survey Area

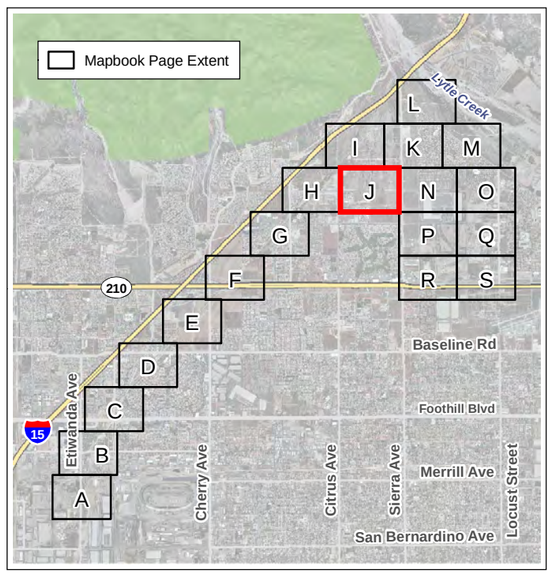
Area Generally Occupied By Los Angeles Pocket Mouse

San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

Habitat Potential

Suitable

Not Suitable



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San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 11J

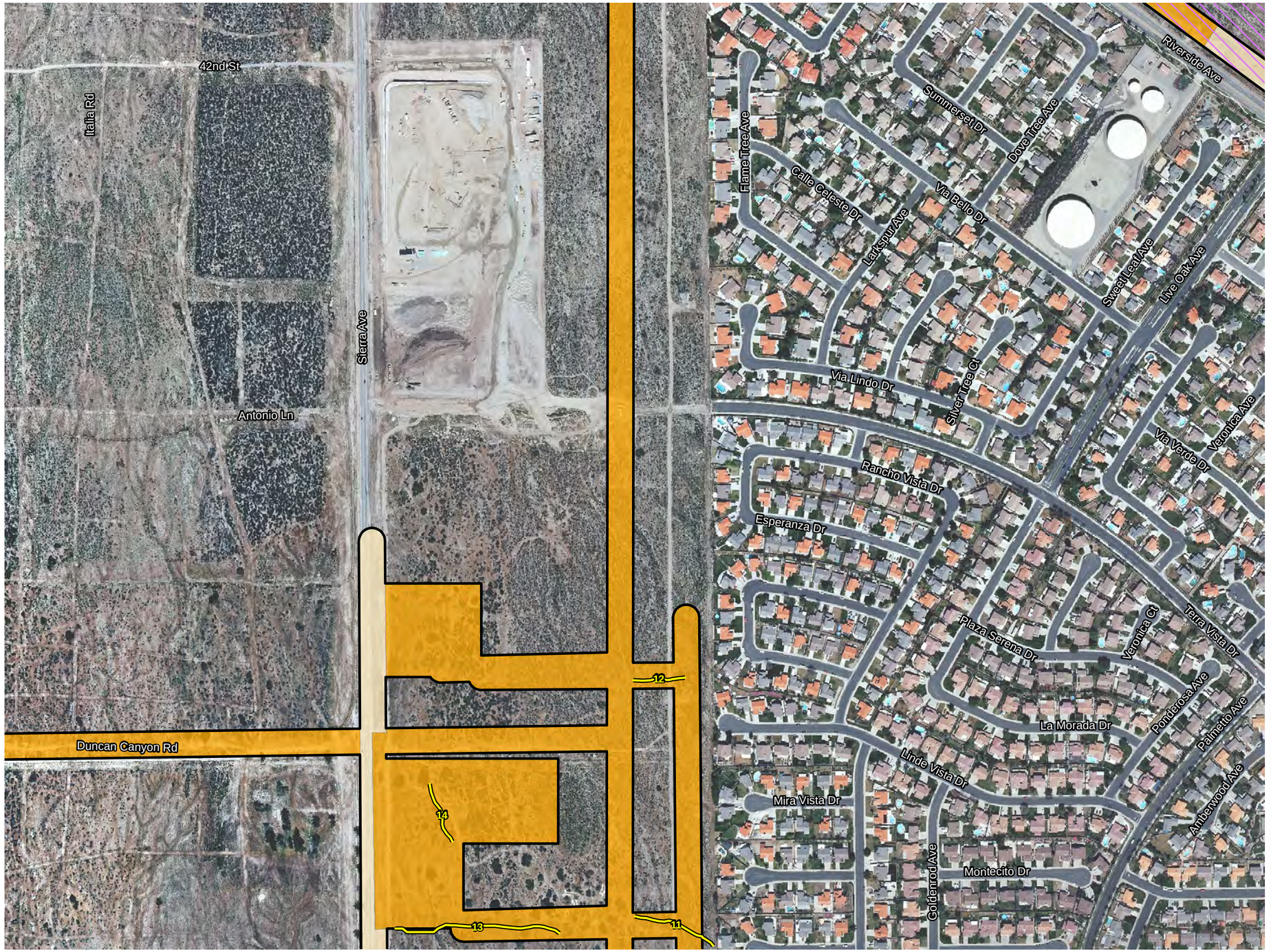
Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

(Rev 08/10/10 JFG) R:\Projects\Edison\J046\Graphics\Bio\ex11_mammmals.pdf



Approximate Traplines

Survey Area

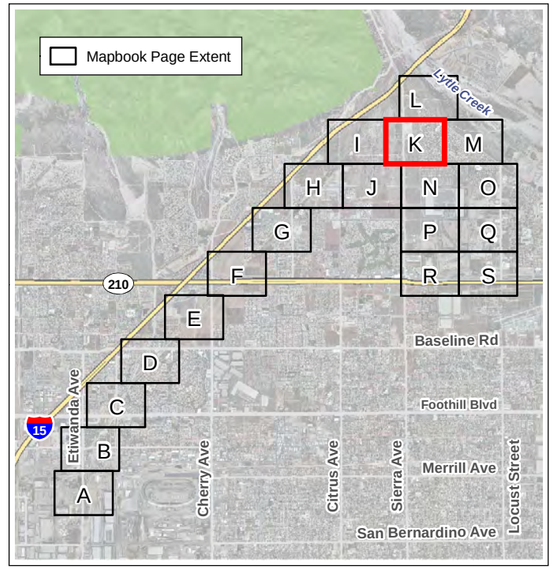
Area Generally Occupied By Los Angeles Pocket Mouse

San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

Habitat Potential

Suitable

Not Suitable



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San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 11K

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

(Rev 08/10/10 JFG) R:\Projects\Edison\J046\Graphics\Bio\ex11_mammmals.pdf

Approximate Traplines

Survey Area

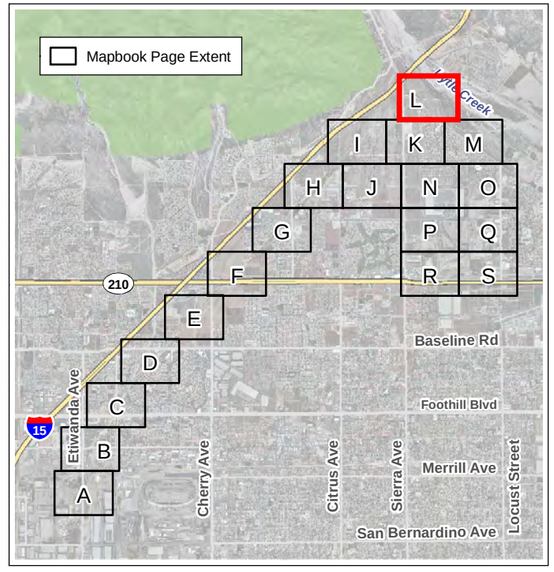
Area Generally Occupied By Los Angeles Pocket Mouse

San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

Habitat Potential

Suitable

Not Suitable



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San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 11L

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

(Rev 08/10/10 JFG) R:\Projects\Edison\J046\Graphics\Bio\ex11_mammmals.pdf

Approximate Traplines

Survey Area

Area Generally Occupied By Los Angeles Pocket Mouse

San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

Habitat Potential

Suitable

Not Suitable

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San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 11M

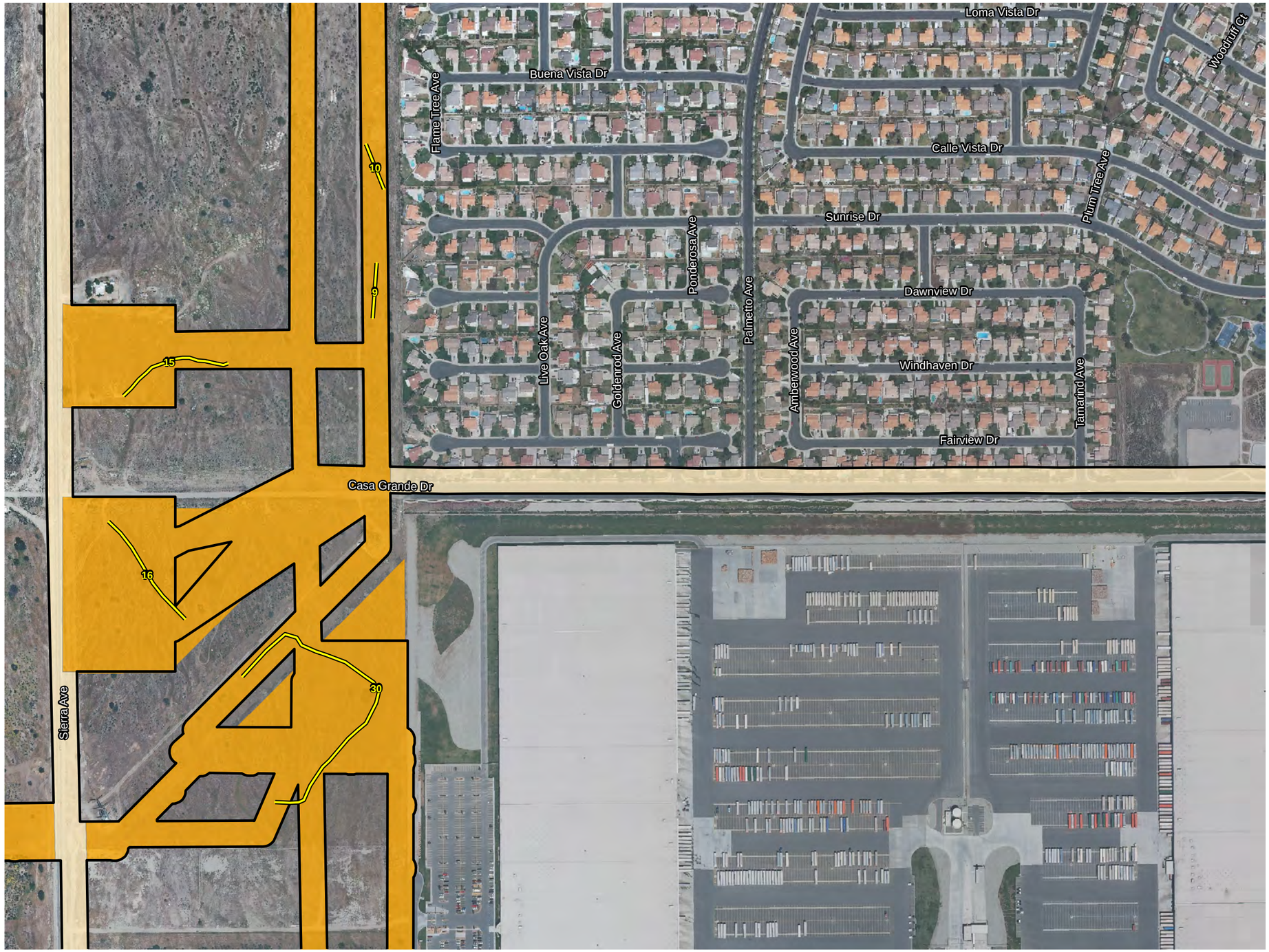
Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

(Rev 08/10/10 JFG) R:\Projects\Edison\J046\Graphics\Bio\ex11_mammmals.pdf



Approximate Traplines

Survey Area

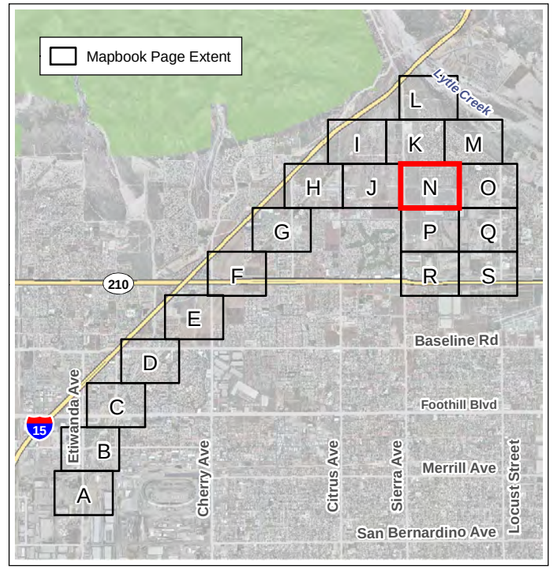
Area Generally Occupied By Los Angeles Pocket Mouse

San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

Habitat Potential

Suitable

Not Suitable



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San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 11N

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

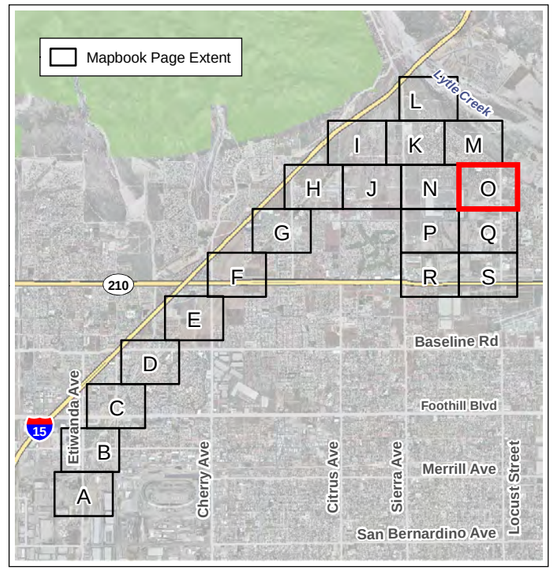
BonTerra CONSULTING

(Rev 08/10/10 JFG) R:\Projects\Edison\J046\Graphics\Bio\ex11_mammmals.pdf

- Approximate Traplines
- Survey Area
- Area Generally Occupied By Los Angeles Pocket Mouse
- San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

Habitat Potential

- Suitable
- Not Suitable



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San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 11O

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

Bonterra CONSULTING

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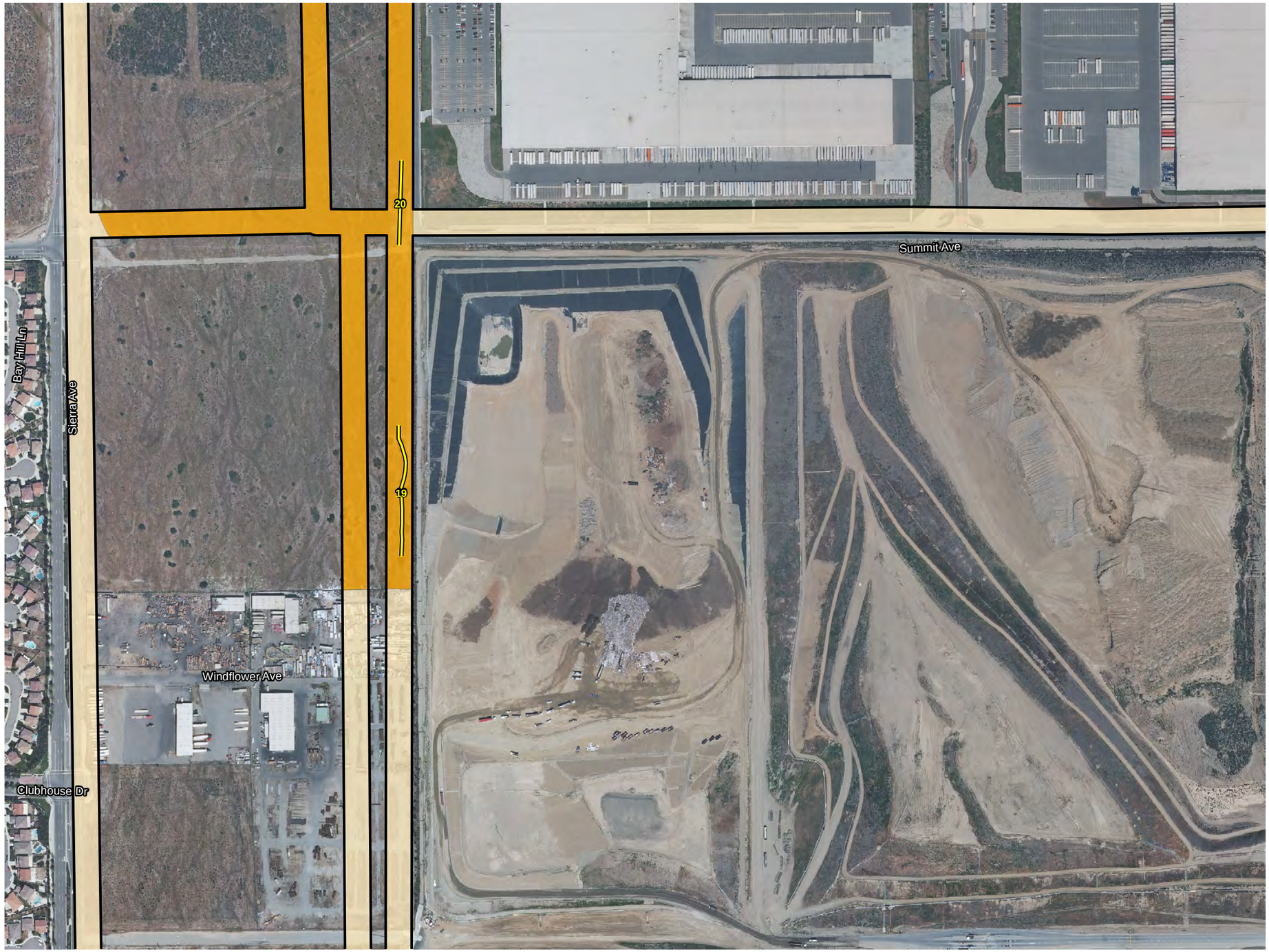


Approximate Traplines

Survey Area

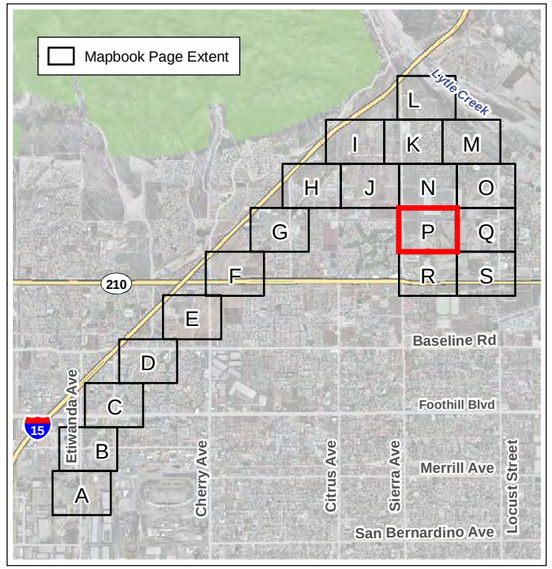
Area Generally Occupied By Los Angeles Pocket Mouse

San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

Habitat Potential

Suitable

Not Suitable



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San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 11P

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

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Approximate Traplines

Survey Area

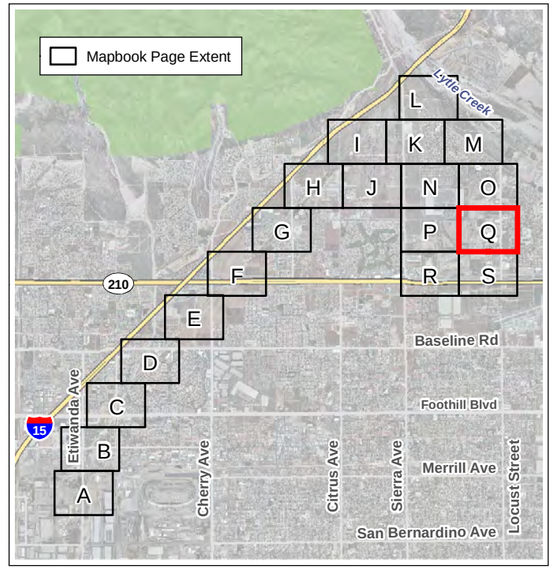
Area Generally Occupied By Los Angeles Pocket Mouse

San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

Habitat Potential

Suitable

Not Suitable



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San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 11Q

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

(Rev 08/10/10 JFG) R:\Projects\Edison\J046\Graphics\Bio\ex11_mammmals.pdf

Approximate Traplines

Survey Area

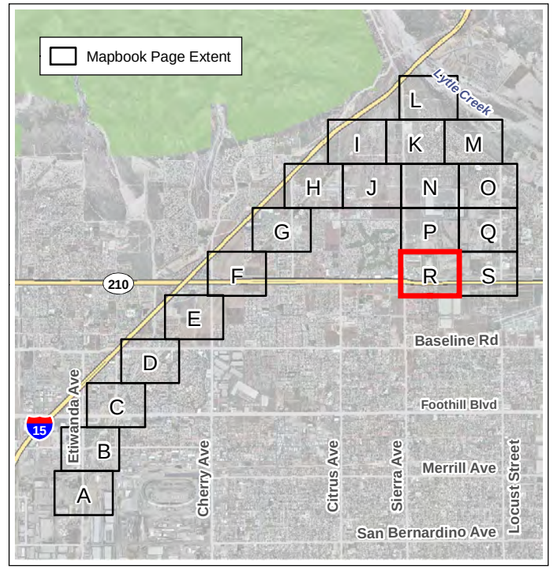
Area Generally Occupied By Los Angeles Pocket Mouse

San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

Habitat Potential

Suitable

Not Suitable



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San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 11R

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

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Approximate Traplines

Survey Area

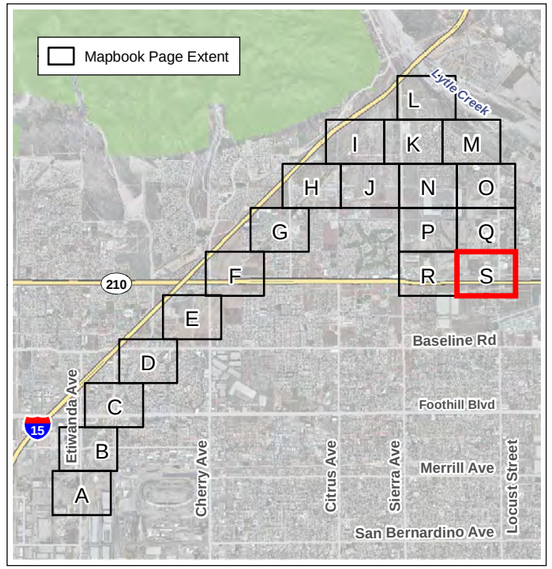
Area Generally Occupied By Los Angeles Pocket Mouse

San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

Habitat Potential

Suitable

Not Suitable



San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 11S

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

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No critical habitat has been proposed by the USFWS for this species.

Los Angeles Pocket Mouse

Los Angeles pocket mouse is a California Species of Special Concern. This species occurs in lower elevation grasslands and coastal sage scrub vegetation (CDFG 2010a). It prefers areas with open ground and fine sandy soils (CDFG 2010a). The Los Angeles pocket mouse may shelter under vegetation instead of digging extensive burrows (CDFG 2010a). It is a subspecies of the little pocket mouse. Los Angeles pocket mouse occurs from the Los Angeles Basin; from approximately Burbank and San Fernando in the northwest; to San Bernardino in the northeast; and Cabazon, Hemet, and Aguanga in the east and southeast (Williams 1986). In the vicinity of the survey area, this species has been reported from Reche Canyon and multiple locations in Colton, Fontana, Etiwanda, and Lytle Creek (CDFG 2010a). Suitable habitat for this species is present in the survey area and 48 individuals, including many subadults (indicating that the population is successfully reproducing), were observed during focused trapping (Exhibit 11A). Los Angeles pocket mice were observed primarily in alluvial habitat near Etiwanda Avenue and within the Etiwanda Substation in the southern portion of the survey area.

San Diego Desert Woodrat

San Diego desert woodrat (*Neotoma lepida intermedia*) is a California Species of Special Concern. This subspecies occupies arid areas with sparse vegetation, especially those comprised of cactus and other thorny plants. The San Diego subspecies is restricted to the Pacific slope in a range that stretches from San Luis Obispo south to northwestern Baja California, Mexico (Hall and Kelson 1959). Threats to this species involve the loss of habitat due to development. In the vicinity of the survey area, this species has been reported from the confluence of Lytle and Cajon Creeks, Etiwanda Creek, Alta Loma, and Day Creek in Rancho Cucamonga (CDFG 2010a). Suitable habitat for this species is present in the survey area. San Diego desert woodrat was observed during small mammal trapping.

Southern Grasshopper Mouse

Southern grasshopper mouse (*Onychomys torridus ramona*) is a California Species of Special Concern. It is a territorial, predatory rodent of grassland and sparse scrub vegetation types that prefers sandy soils and has been found to occur from Los Angeles County to northwestern Baja California, Mexico (Zeiner et al. 1990b). Threats to this species include the loss of habitat due to development. In the vicinity of the survey area, this species has been reported from Reche Canyon (CDFG 2010a). Suitable habitat for this species occurs in the survey area. Therefore, southern grasshopper mouse may occur in the survey area.

American Badger

American badger (*Taxidea taxus*) is a California Species of Special Concern. This species occupies a wide variety of habitats and ranges throughout the State except for the coastal

redwood forests of the extreme northwest. In Southern California, this species is most commonly associated with grasslands and other relatively open habitats with friable, uncultivated soils (Zeiner et al. 1990b). In the vicinity of the survey area, this species has been reported from Silverwood Lake, Reche Canyon near Colton, and San Bernardino (CDFG 2010a). Potentially suitable habitat is present in the survey area. Therefore, American badger may occur.

4.0 PROJECT IMPACTS

4.1 INTRODUCTION

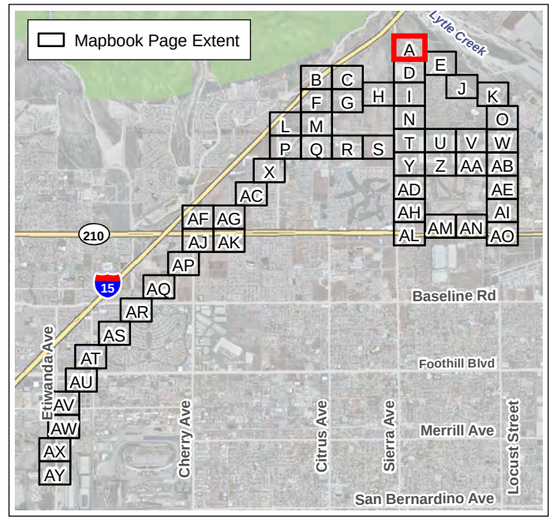
This section presents a general impact analysis of the Proposed Project. Impact assessments are based on the Project footprint, as available July 2010. Because the Project is still early in the design stage and focused surveys are still in progress (Delhi sands flower-loving fly surveys), this section outlines the potential issues that are likely to arise from construction of the Proposed Project. Where feasible, the information gathered from these focused surveys may be used to finalize Project design in order to avoid special status species or to minimize the potential impact to these resources from Project-related activities. If special status species are identified during surveys, minimization or avoidance measures would be implemented. If avoidance is not feasible, SCE would work with the appropriate agencies to determine the mitigation measures that would reduce impacts to less than significant levels.

The determination of impacts in this analysis is based on a comparison of maps depicting Project limits and maps of biological resources in the survey area. All construction activities, including equipment areas, are assumed to be within the limits of grading identified on Exhibit 12. In this analysis, Project impacts along the subtransmission source line routes (including Preferred and Alternative Subtransmission Source Line Routes, Proposed Telecommunications Route, pole locations, wire stringing locations, and access roads) are assumed to be 14 feet wide with a 2-foot shoulder on each side for a total disturbance width of 18 feet wide. Project impacts associated with the Etiwanda Substation are assumed to be 3 feet wide with a 2-foot shoulder on each side for a total temporary impact width of 7 feet. The entire approximate 7.5-acre Preferred Substation Site and 9.6-acre Alternative Substation Site would be impacted.Construction support activities, such as the establishment of one or more temporary staging areas and the development of additional access roads extending to construction sites have not been analyzed and analysis would be required. Both direct and indirect impacts on biological resources have been evaluated. Direct impacts are those that involve the initial loss of habitats due to grading, construction, and construction-related activities. Indirect impacts are those that would be related to impacts on the adjacent remaining habitat due to construction activities (e.g., noise, dust) or operation of the Project (e.g., human activity, indirect lighting).

- Impacts - Preferred Subtransmission Source Line Route*
- Impacts - Alternative Subtransmission Source Line Route
- Preferred Substation Site
- Alternative Substation Site
- Etiwanda Substation
- Alder Substation
- Potential Staging Locations (Not To Scale)
- Survey Area

Vegetation Types and Other Areas

- Not Surveyed
- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Project Impacts – Vegetation Types and Other Areas

Exhibit 12A

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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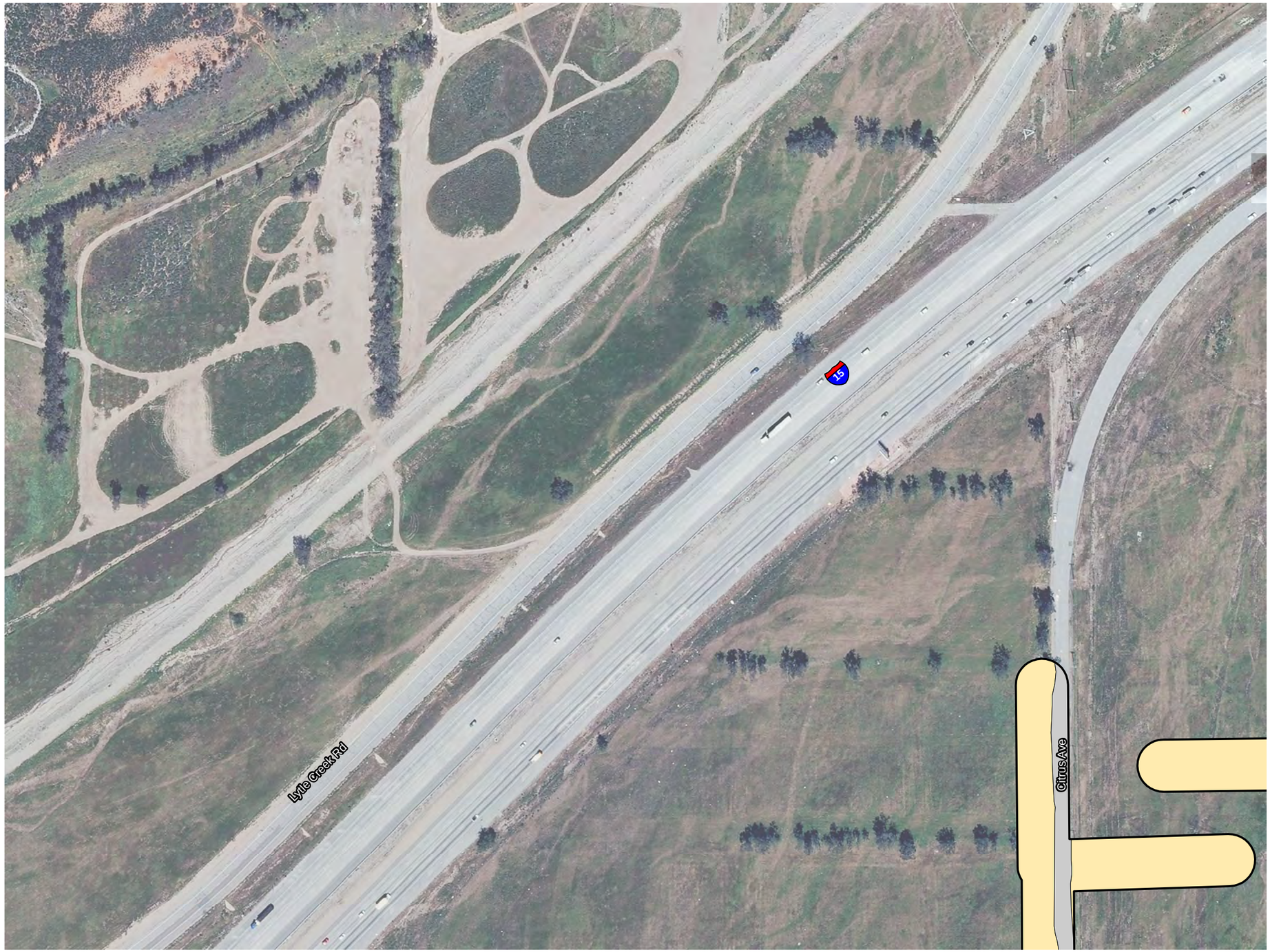

Impacts - Preferred Subtransmission Source Line Route*

Impacts - Alternative Subtransmission Source Line Route

Preferred Substation Site

Alternative Substation Site

Etiwanda Substation

Alder Substation

Potential Staging Locations (Not To Scale)

Survey Area

Vegetation Types and Other Areas

Not Surveyed

Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Sage Scrub

Disturbed Mule Fat Scrub

Annual Grassland

Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub

Vineyards

Ruderal

Ornamental

Disturbed

Developed

Developed/Ornamental

Developed/Ruderal

Flood-control Channel

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Project Impacts – Vegetation Types and Other Areas

Exhibit 12B

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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Impacts - Preferred Subtransmission Source Line Route*

Impacts - Alternative Subtransmission Source Line Route

Preferred Substation Site

Alternative Substation Site

Etiwanda Substation

Alder Substation

Potential Staging Locations (Not To Scale)

Survey Area

Vegetation Types and Other Areas

Not Surveyed

Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Sage Scrub

Disturbed Mule Fat Scrub

Annual Grassland

Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub

Vineyards

Ruderal

Ornamental

Disturbed

Developed

Developed/Ornamental

Developed/Ruderal

Flood-control Channel

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Project Impacts - Vegetation Types and Other Areas

Exhibit 12C

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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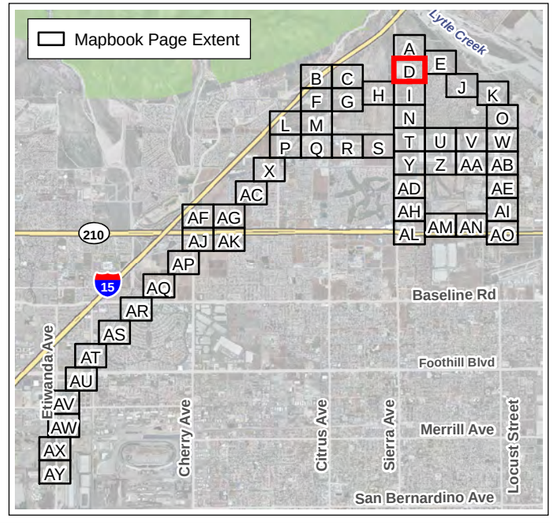
- Impacts - Preferred Subtransmission Source Line Route*
- Impacts - Alternative Subtransmission Source Line Route
- Preferred Substation Site
- Alternative Substation Site
- Etiwanda Substation
- Alder Substation
- Potential Staging Locations (Not To Scale)
- Survey Area

Vegetation Types and Other Areas

- Not Surveyed
- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Project Impacts – Vegetation Types and Other Areas

Exhibit 12D

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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Impacts - Preferred Subtransmission Source Line Route*

Impacts - Alternative Subtransmission Source Line Route

Preferred Substation Site

Alternative Substation Site

Etiwanda Substation

Alder Substation

Potential Staging Locations (Not To Scale)

Survey Area

Vegetation Types and Other Areas

Not Surveyed

Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Sage Scrub

Disturbed Mule Fat Scrub

Annual Grassland

Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub

Vineyards

Ruderal

Ornamental

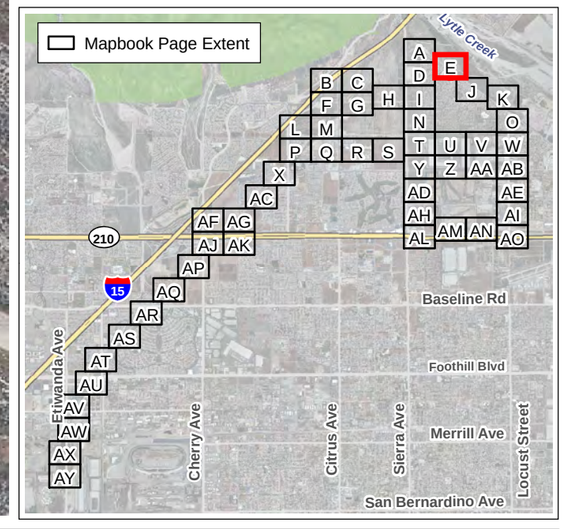
Disturbed

Developed

Developed/Ornamental

Developed/Ruderal

Flood-control Channel



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Project Impacts – Vegetation Types and Other Areas

Exhibit 12E

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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Impacts - Preferred Subtransmission Source Line Route*

Impacts - Alternative Subtransmission Source Line Route

Preferred Substation Site

Alternative Substation Site

Etiwanda Substation

Alder Substation

Potential Staging Locations (Not To Scale)

Survey Area

Vegetation Types and Other Areas

Not Surveyed

Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Sage Scrub

Disturbed Mule Fat Scrub

Annual Grassland

Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub

Vineyards

Ruderal

Ornamental

Disturbed

Developed

Developed/Ornamental

Developed/Ruderal

Flood-control Channel

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Project Impacts – Vegetation Types and Other Areas

Exhibit 12F

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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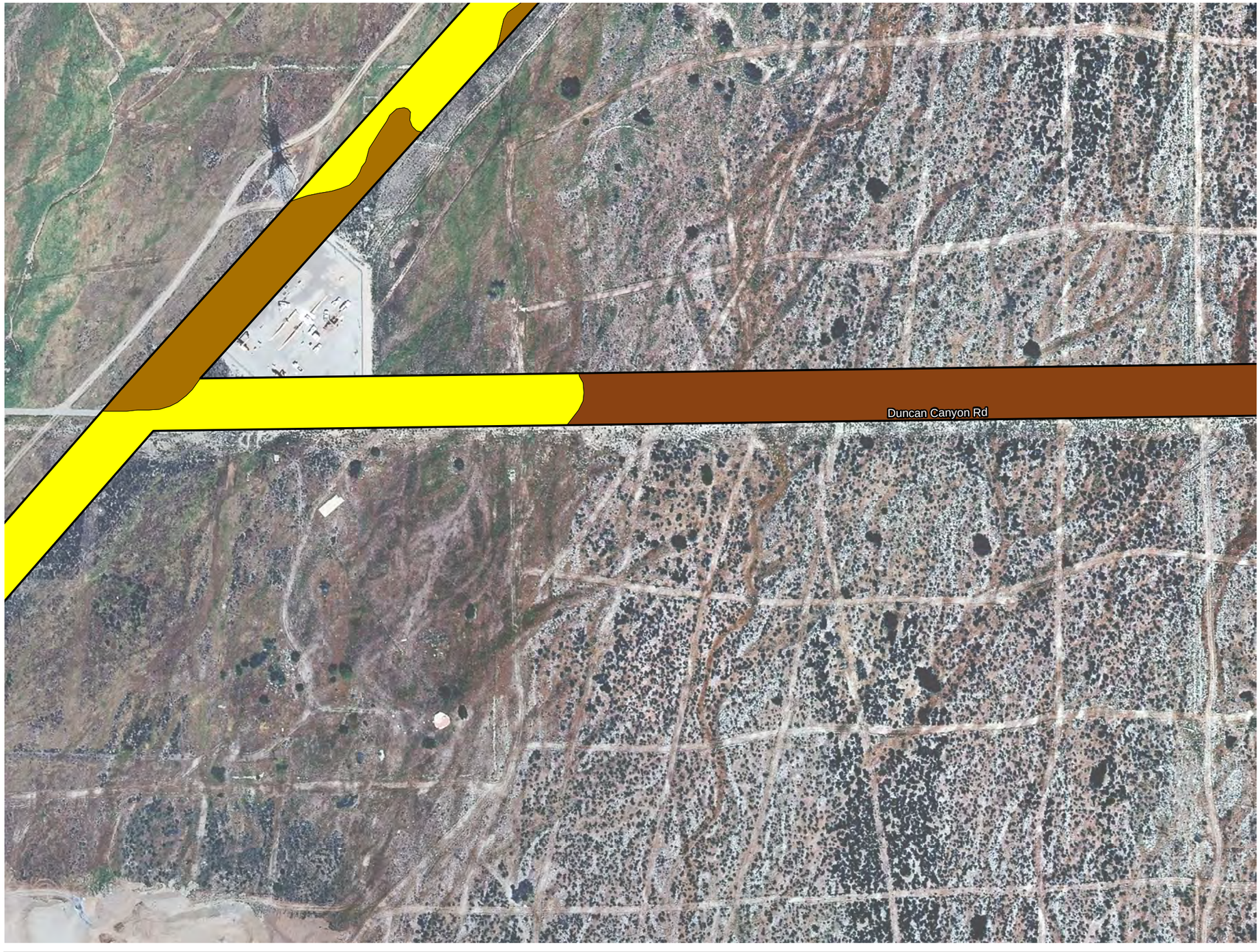

- Impacts - Preferred Subtransmission Source Line Route*
- Impacts - Alternative Subtransmission Source Line Route
- Preferred Substation Site
- Alternative Substation Site
- Etiwanda Substation
- Alder Substation
- Potential Staging Locations (Not To Scale)
- Survey Area

Vegetation Types and Other Areas

- Not Surveyed
- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel

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Project Impacts – Vegetation Types and Other Areas

Exhibit 12G

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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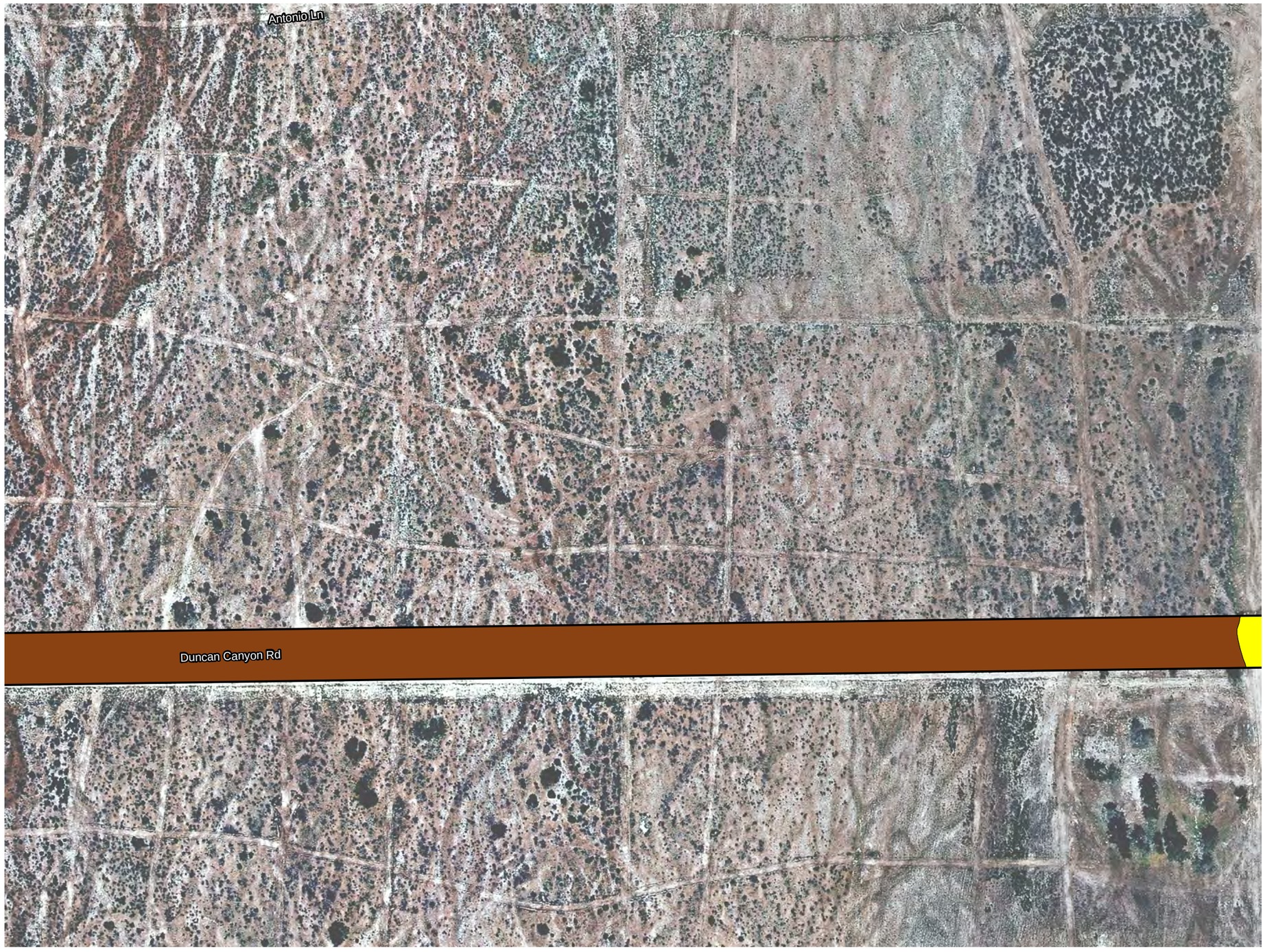


Impacts - Preferred Subtransmission Source Line Route*

Impacts - Alternative Subtransmission Source Line Route

Preferred Substation Site

Alternative Substation Site

Etiwanda Substation

Alder Substation

Potential Staging Locations (Not To Scale)

Survey Area

Vegetation Types and Other Areas

Not Surveyed

Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Sage Scrub

Disturbed Mule Fat Scrub

Annual Grassland

Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub

Vineyards

Ruderal

Ornamental

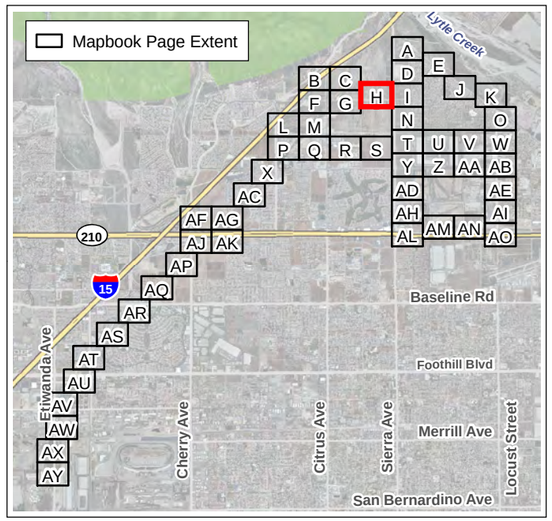
Disturbed

Developed

Developed/Ornamental

Developed/Ruderal

Flood-control Channel



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Project Impacts – Vegetation Types and Other Areas

Exhibit 12H

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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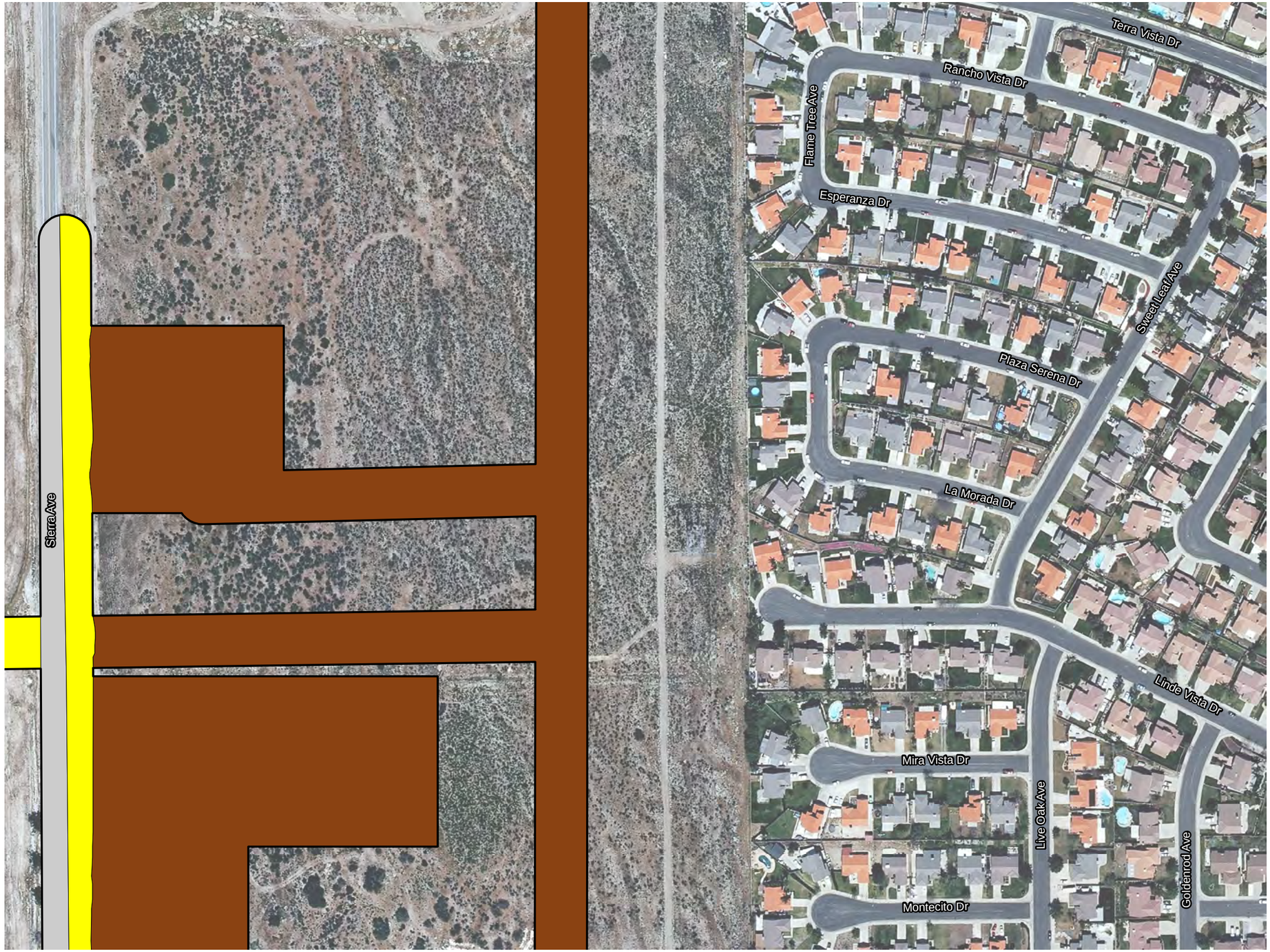
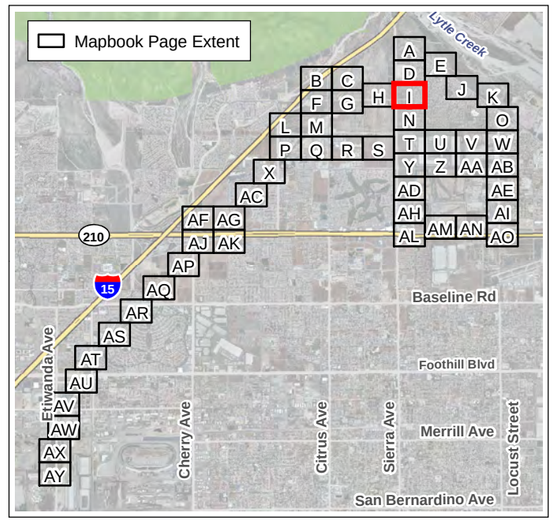


- Impacts - Preferred Subtransmission Source Line Route*
- Impacts - Alternative Subtransmission Source Line Route
- Preferred Substation Site
- Alternative Substation Site
- Etiwanda Substation
- Alder Substation
- Potential Staging Locations (Not To Scale)
- Survey Area

Vegetation Types and Other Areas

- Not Surveyed
- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Project Impacts – Vegetation Types and Other Areas

Exhibit 12I

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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Impacts - Preferred Subtransmission Source Line Route*

Impacts - Alternative Subtransmission Source Line Route

Preferred Substation Site

Alternative Substation Site

Etiwanda Substation

Alder Substation

Potential Staging Locations (Not To Scale)

Survey Area

Vegetation Types and Other Areas

Not Surveyed

Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Sage Scrub

Disturbed Mule Fat Scrub

Annual Grassland

Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub

Vineyards

Ruderal

Ornamental

Disturbed

Developed

Developed/Ornamental

Developed/Ruderal

Flood-control Channel

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Project Impacts – Vegetation Types and Other Areas

Exhibit 12J

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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Impacts - Preferred Subtransmission Source Line Route*

Impacts - Alternative Subtransmission Source Line Route

Preferred Substation Site

Alternative Substation Site

Etiwanda Substation

Alder Substation

Potential Staging Locations (Not To Scale)

Survey Area

Vegetation Types and Other Areas

Not Surveyed

Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Sage Scrub

Disturbed Mule Fat Scrub

Annual Grassland

Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub

Vineyards

Ruderal

Ornamental

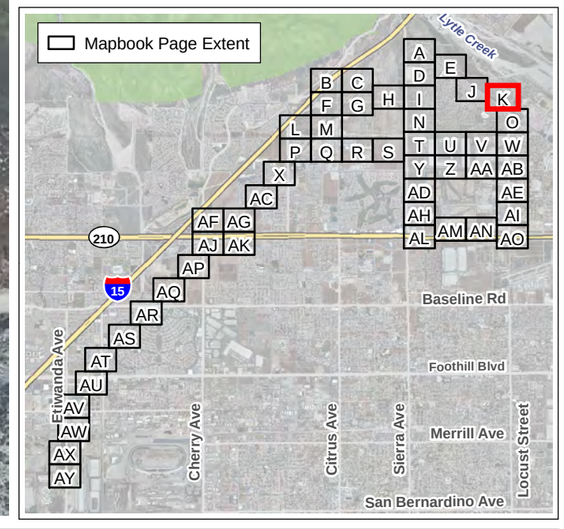
Disturbed

Developed

Developed/Ornamental

Developed/Ruderal

Flood-control Channel



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Project Impacts – Vegetation Types and Other Areas

Exhibit 12K

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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Impacts - Preferred Subtransmission Source Line Route*

Impacts - Alternative Subtransmission Source Line Route

Preferred Substation Site

Alternative Substation Site

Etiwanda Substation

Alder Substation

Potential Staging Locations (Not To Scale)

Survey Area

Vegetation Types and Other Areas

Not Surveyed

Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Sage Scrub

Disturbed Mule Fat Scrub

Annual Grassland

Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub

Vineyards

Ruderal

Ornamental

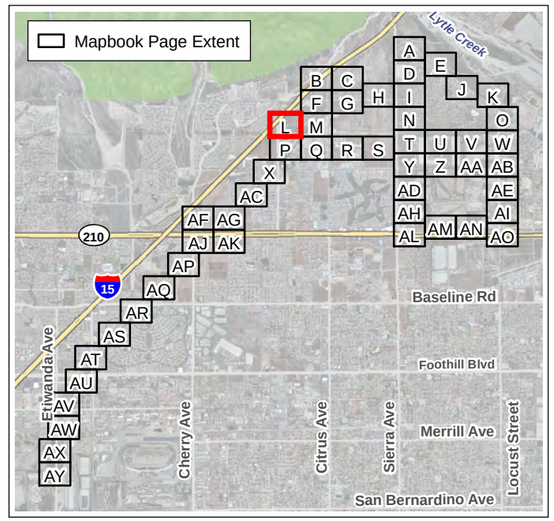
Disturbed

Developed

Developed/Ornamental

Developed/Ruderal

Flood-control Channel



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Project Impacts - Vegetation Types and Other Areas

Exhibit 12L

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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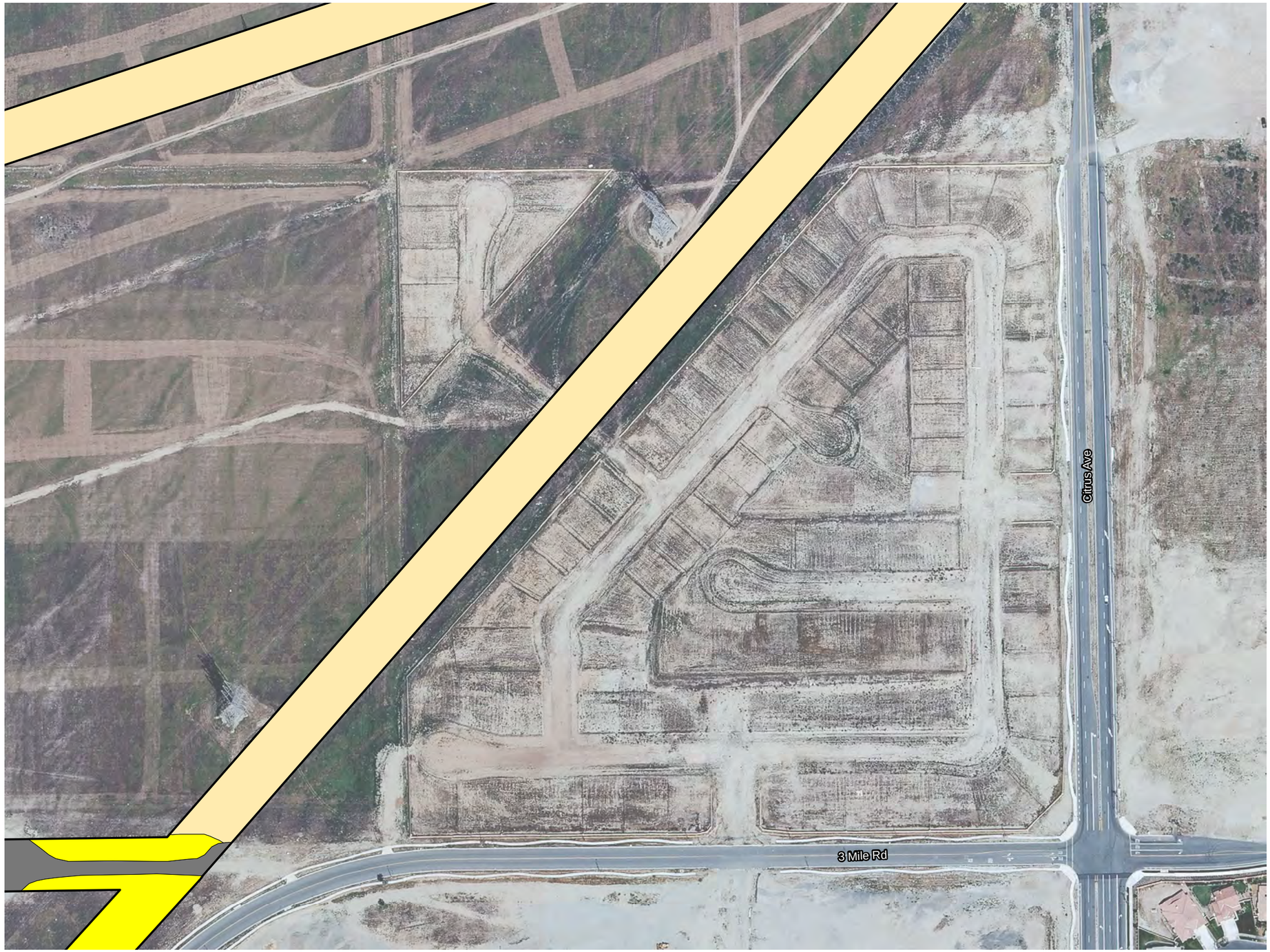


Impacts - Preferred Subtransmission Source Line Route*

Impacts - Alternative Subtransmission Source Line Route

Preferred Substation Site

Alternative Substation Site

Etiwanda Substation

Alder Substation

Potential Staging Locations (Not To Scale)

Survey Area

Vegetation Types and Other Areas

Not Surveyed

Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Sage Scrub

Disturbed Mule Fat Scrub

Annual Grassland

Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub

Vineyards

Ruderal

Ornamental

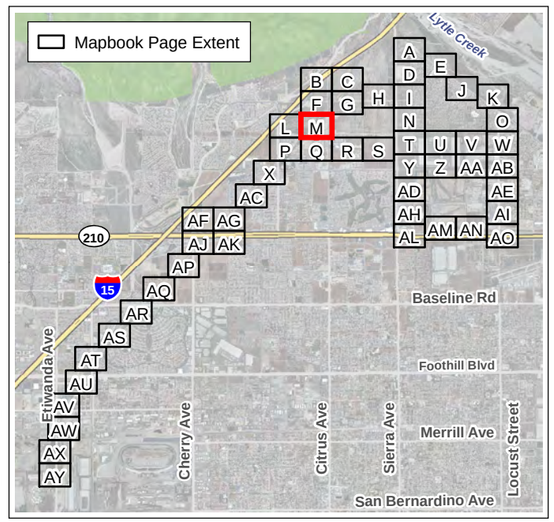
Disturbed

Developed

Developed/Ornamental

Developed/Ruderal

Flood-control Channel



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Project Impacts – Vegetation Types and Other Areas

Exhibit 12M

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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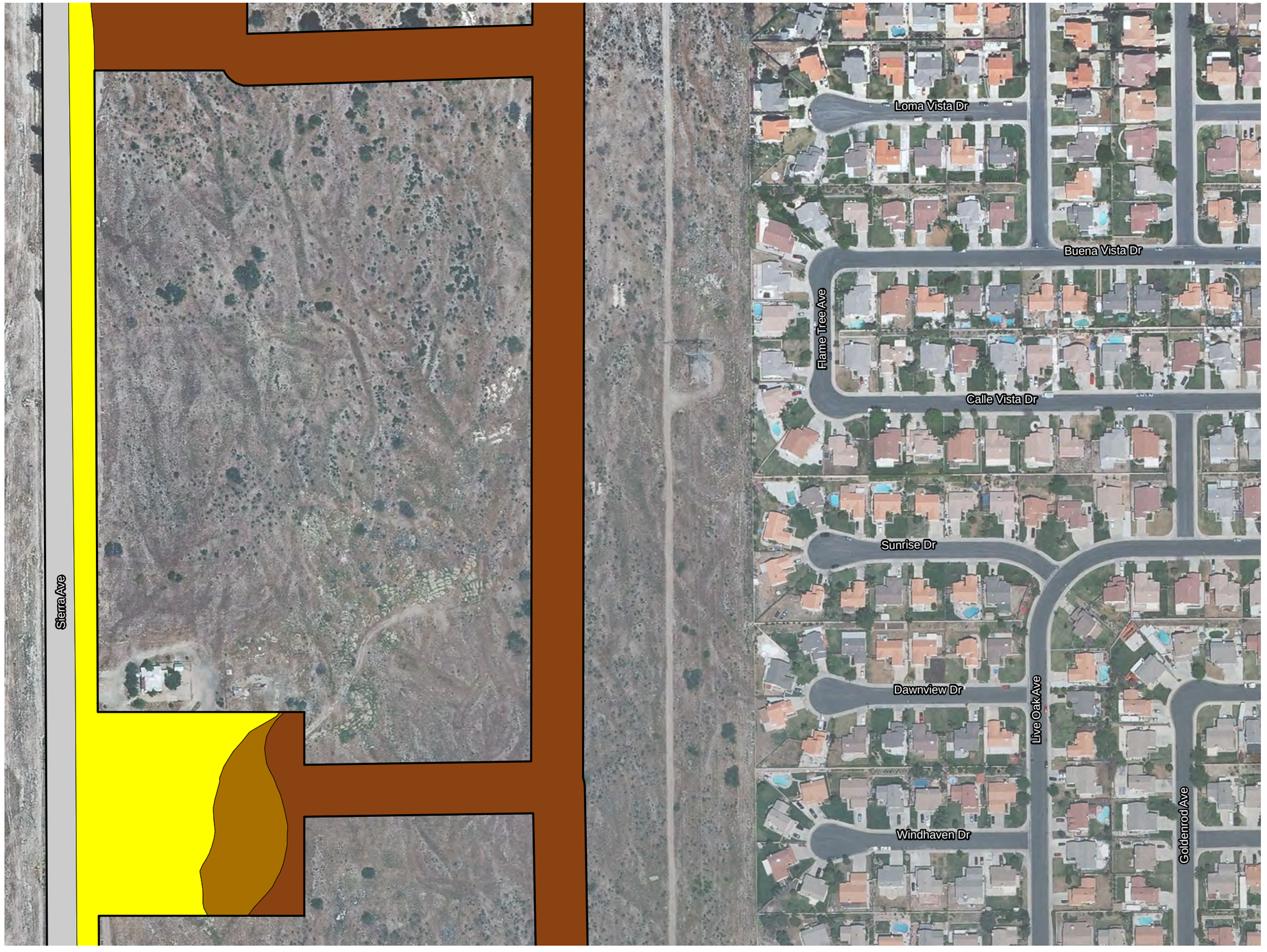
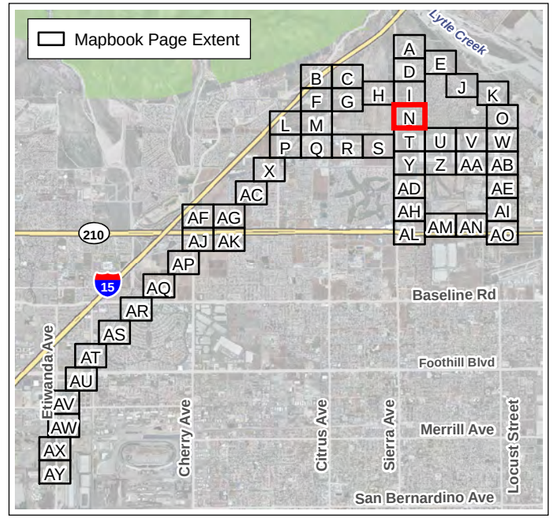
(Rev 08/04/10 JFG) R:\Projects\Edison\J046\Graphics\Bio\ex12_veg.pdf



- Impacts - Preferred Subtransmission Source Line Route*
- Impacts - Alternative Subtransmission Source Line Route
- Preferred Substation Site
- Alternative Substation Site
- Etiwanda Substation
- Alder Substation
- Potential Staging Locations (Not To Scale)
- Survey Area

Vegetation Types and Other Areas

- Not Surveyed
- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Project Impacts – Vegetation Types and Other Areas

Exhibit 12N

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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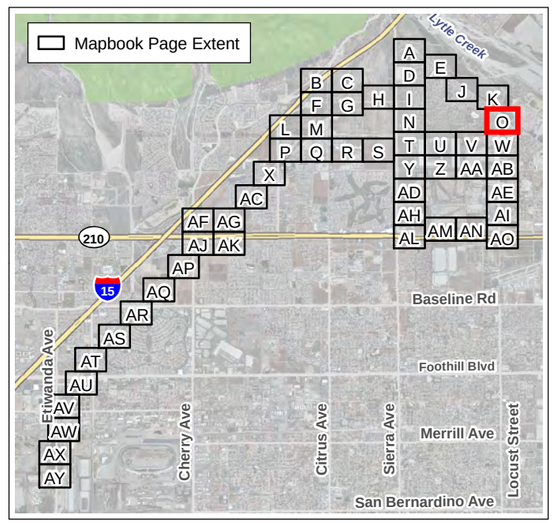
- Impacts - Preferred Subtransmission Source Line Route*
- Impacts - Alternative Subtransmission Source Line Route
- Preferred Substation Site
- Alternative Substation Site
- Etiwanda Substation
- Alder Substation
- Potential Staging Locations (Not To Scale)
- Survey Area

Vegetation Types and Other Areas

- Not Surveyed
- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Project Impacts – Vegetation Types and Other Areas

Exhibit 12O

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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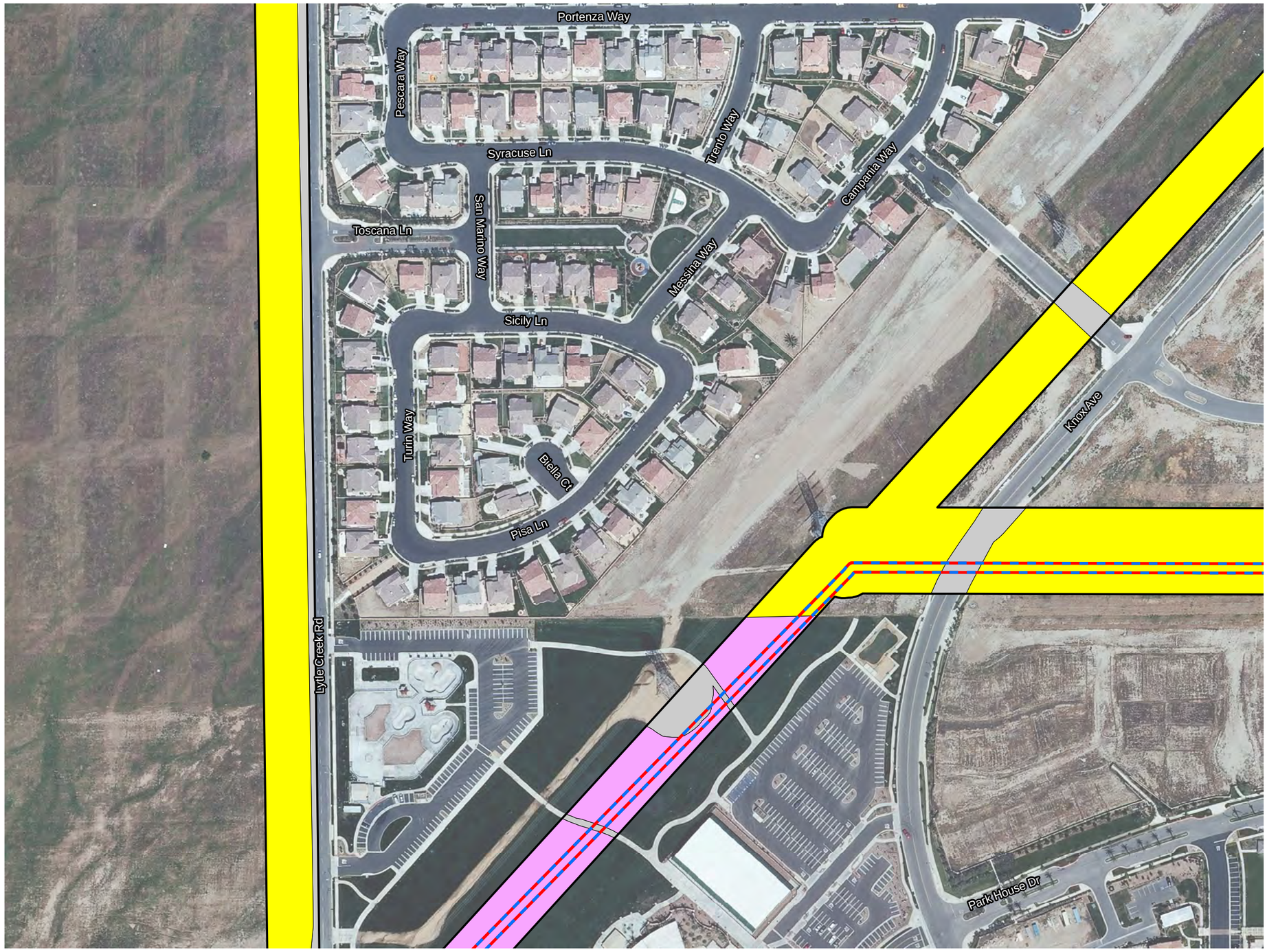


Impacts - Preferred Subtransmission Source Line Route*

Impacts - Alternative Subtransmission Source Line Route

Preferred Substation Site

Alternative Substation Site

Etiwanda Substation

Alder Substation

Potential Staging Locations (Not To Scale)

Survey Area

Vegetation Types and Other Areas

Not Surveyed

Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Sage Scrub

Disturbed Mule Fat Scrub

Annual Grassland

Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub

Vineyards

Ruderal

Ornamental

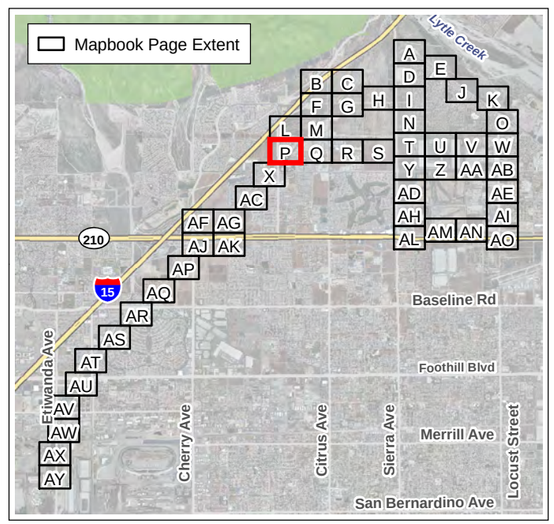
Disturbed

Developed

Developed/Ornamental

Developed/Ruderal

Flood-control Channel



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Project Impacts – Vegetation Types and Other Areas

Exhibit 12P

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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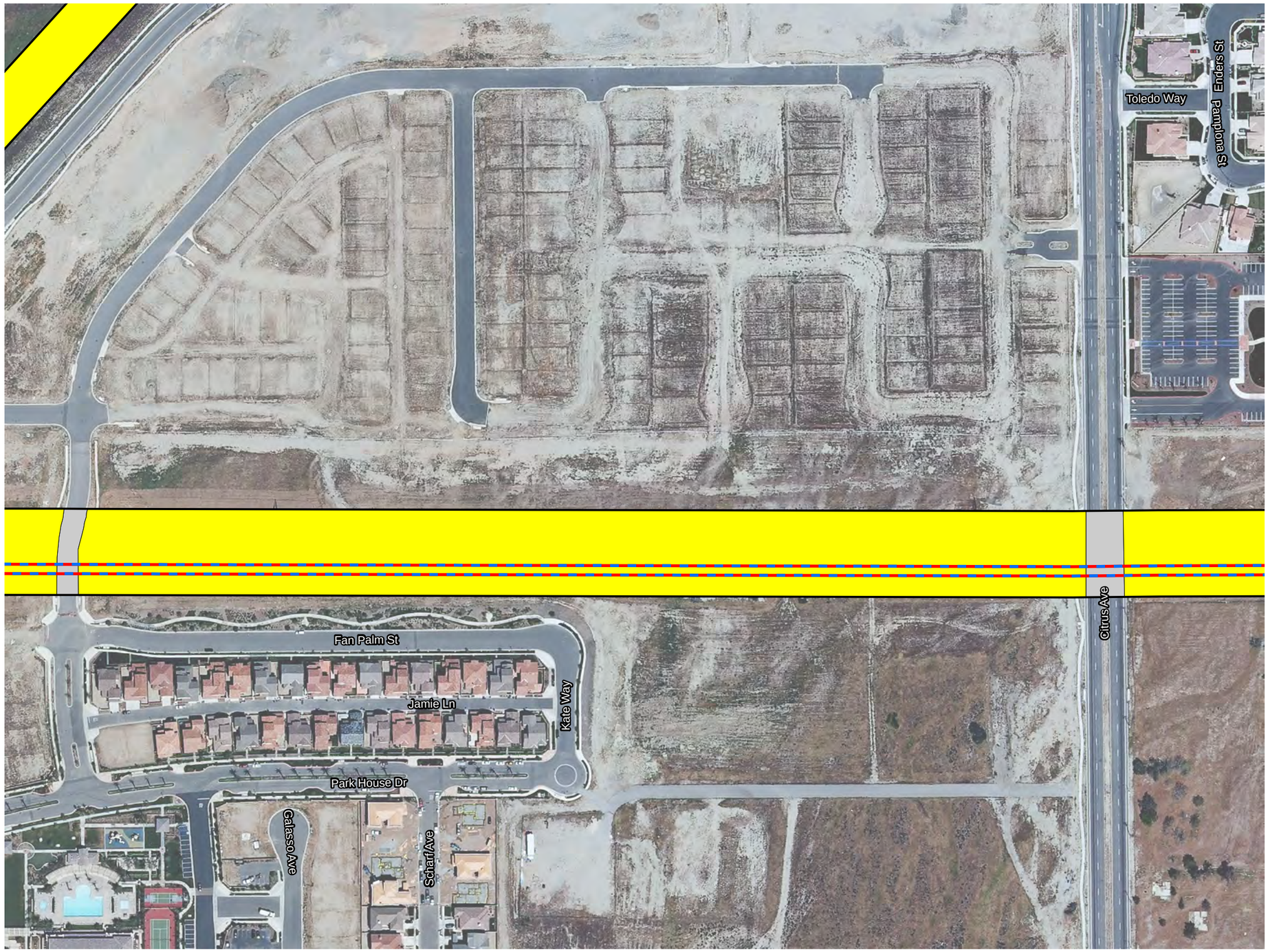
(Rev 08/04/10 JFG) R:\Projects\Edison\J046\Graphics\Bio\ex12_veg.pdf



Impacts - Preferred Subtransmission Source Line Route*

Impacts - Alternative Subtransmission Source Line Route

Preferred Substation Site

Alternative Substation Site

Etiwanda Substation

Alder Substation

Potential Staging Locations (Not To Scale)

Survey Area

Vegetation Types and Other Areas

Not Surveyed

Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Sage Scrub

Disturbed Mule Fat Scrub

Annual Grassland

Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub

Vineyards

Ruderal

Ornamental

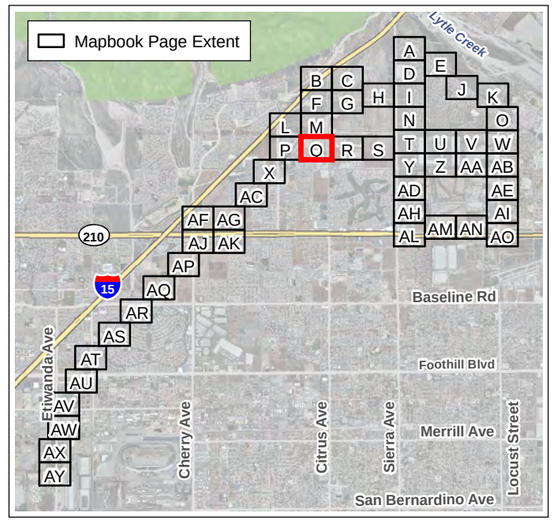
Disturbed

Developed

Developed/Ornamental

Developed/Ruderal

Flood-control Channel



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Project Impacts – Vegetation Types and Other Areas

Exhibit 12Q

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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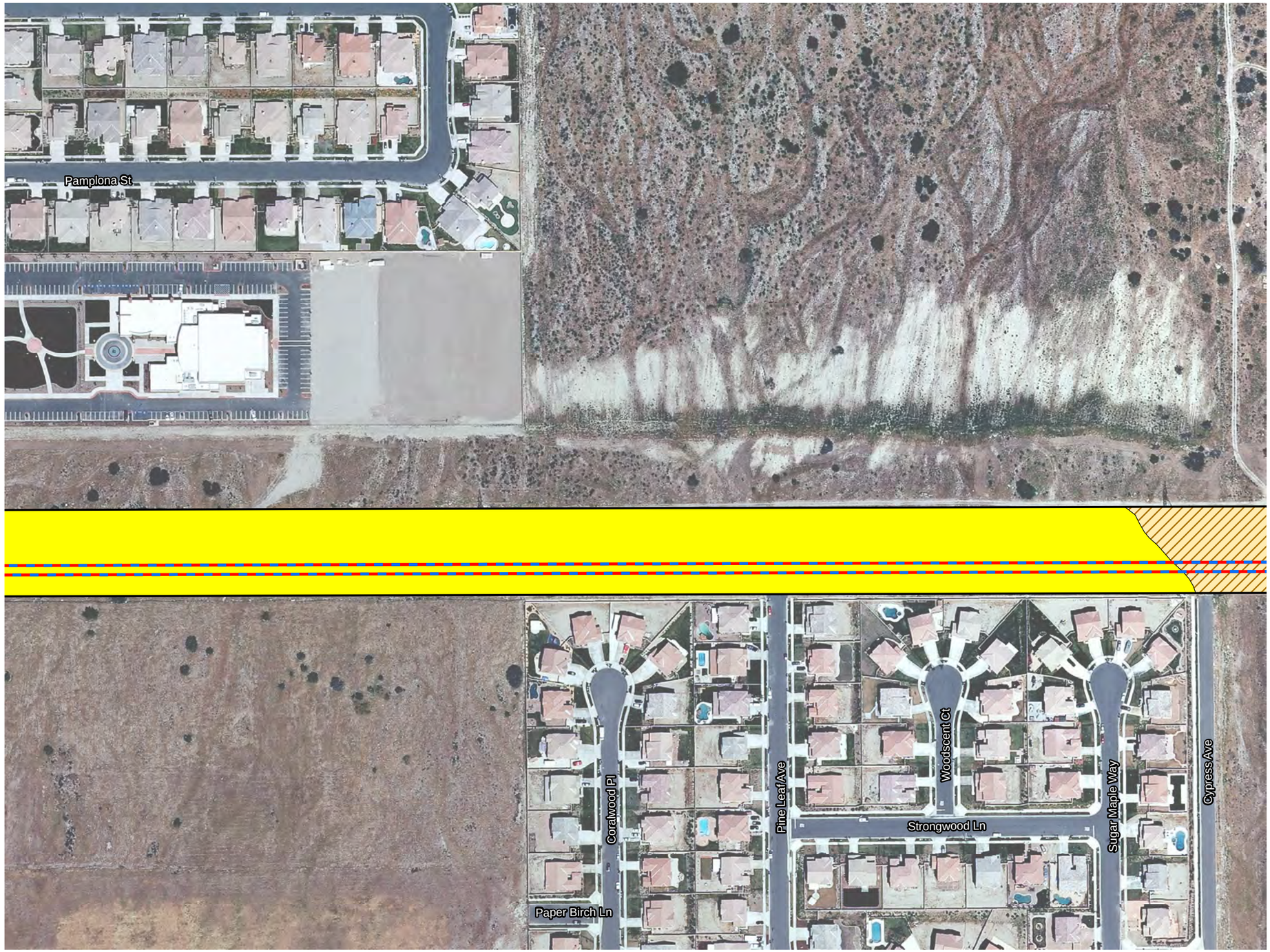
(Rev 08/04/10 JFG) R:\Projects\Edison\J046\Graphics\Bio\ex12_veg.pdf



Impacts - Preferred Subtransmission Source Line Route*

Impacts - Alternative Subtransmission Source Line Route

Preferred Substation Site

Alternative Substation Site

Etiwanda Substation

Alder Substation

Potential Staging Locations (Not To Scale)

Survey Area

Vegetation Types and Other Areas

Not Surveyed

Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Sage Scrub

Disturbed Mule Fat Scrub

Annual Grassland

Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub

Vineyards

Ruderal

Ornamental

Disturbed

Developed

Developed/Ornamental

Developed/Ruderal

Flood-control Channel

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Project Impacts – Vegetation Types and Other Areas

Exhibit 12R

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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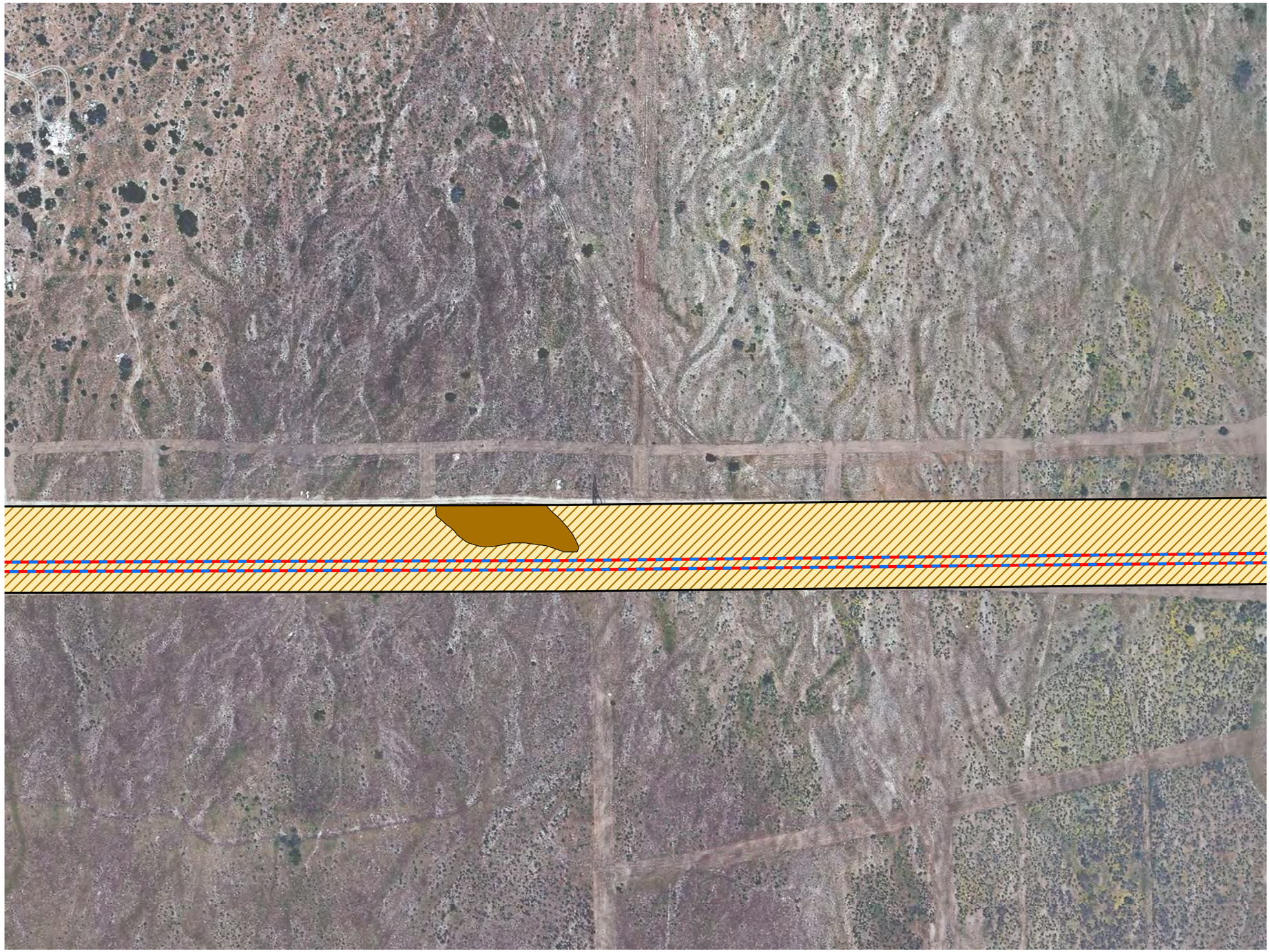
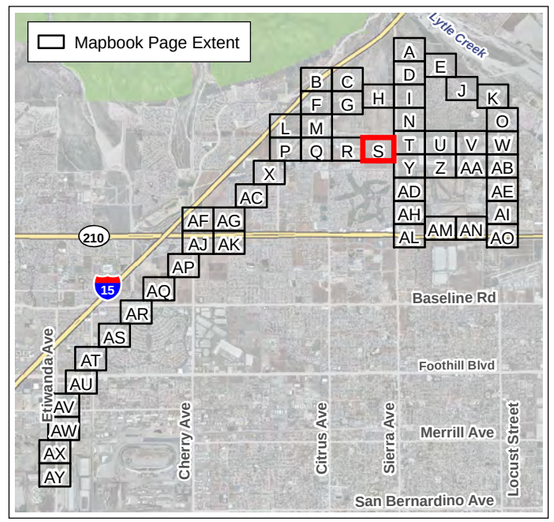
(Rev 08/04/10 JFG) R:\Projects\Edison\J046\Graphics\Bio\ex12_veg.pdf



Impacts - Preferred Subtransmission Source Line Route*
Impacts - Alternative Subtransmission Source Line Route
Preferred Substation Site
Alternative Substation Site
Etiwanda Substation
Alder Substation
Potential Staging Locations (Not To Scale)
Survey Area

Vegetation Types and Other Areas

Not Surveyed
Riversidean Alluvial Fan Sage Scrub
Disturbed Riversidean Alluvial Fan Sage Scrub
Disturbed Riversidean Sage Scrub
Disturbed Mule Fat Scrub
Annual Grassland
Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
Vineyards
Ruderal
Ornamental
Disturbed
Developed
Developed/Ornamental
Developed/Ruderal
Flood-control Channel



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Project Impacts – Vegetation Types and Other Areas

Exhibit 12S

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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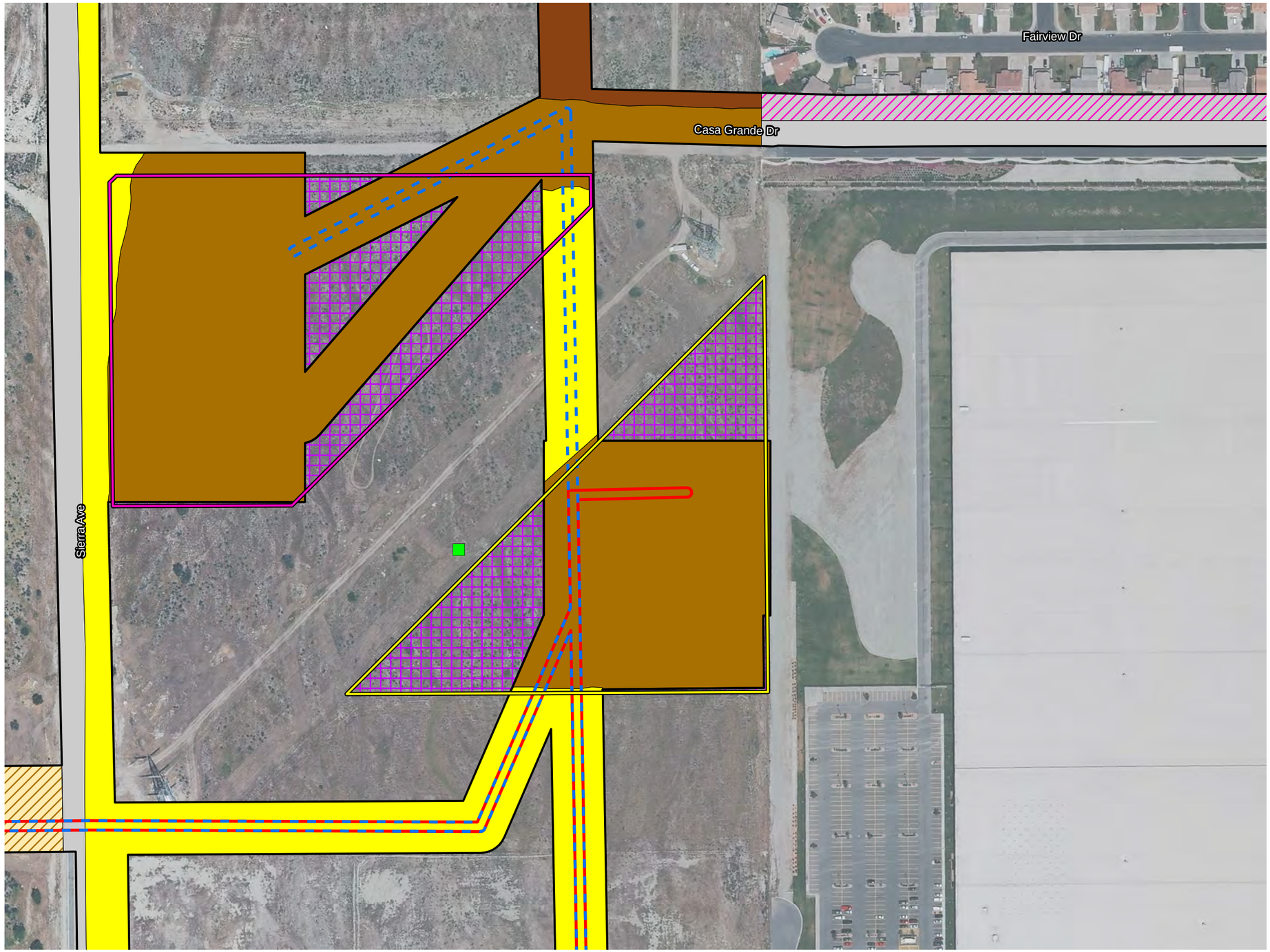


Impacts - Preferred Subtransmission Source Line Route*

Impacts - Alternative Subtransmission Source Line Route

Preferred Substation Site

Alternative Substation Site

Etiwanda Substation

Alder Substation

Potential Staging Locations (Not To Scale)

Survey Area

Vegetation Types and Other Areas

Not Surveyed

Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Sage Scrub

Disturbed Mule Fat Scrub

Annual Grassland

Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub

Vineyards

Ruderal

Ornamental

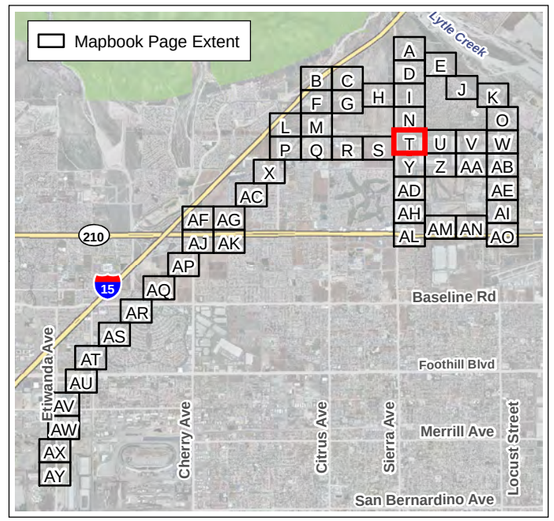
Disturbed

Developed

Developed/Ornamental

Developed/Ruderal

Flood-control Channel



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Project Impacts – Vegetation Types and Other Areas

Exhibit 12T

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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Impacts - Preferred Subtransmission Source Line Route*

Impacts - Alternative Subtransmission Source Line Route

Preferred Substation Site

Alternative Substation Site

Etiwanda Substation

Alder Substation

Potential Staging Locations (Not To Scale)

Survey Area

Vegetation Types and Other Areas

Not Surveyed

Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Sage Scrub

Disturbed Mule Fat Scrub

Annual Grassland

Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub

Vineyards

Ruderal

Ornamental

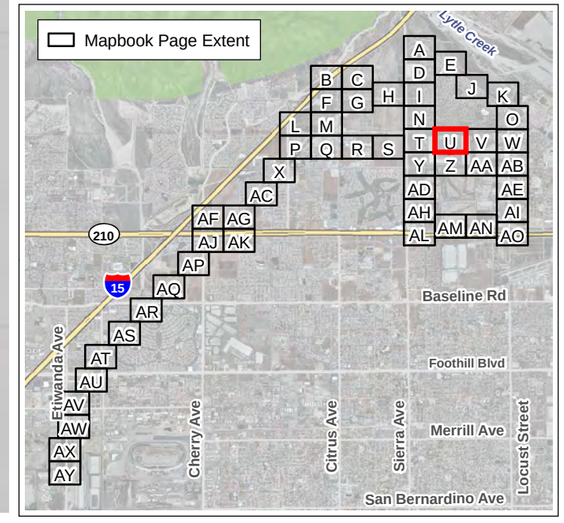
Disturbed

Developed

Developed/Ornamental

Developed/Ruderal

Flood-control Channel



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Project Impacts – Vegetation Types and Other Areas

Exhibit 12U

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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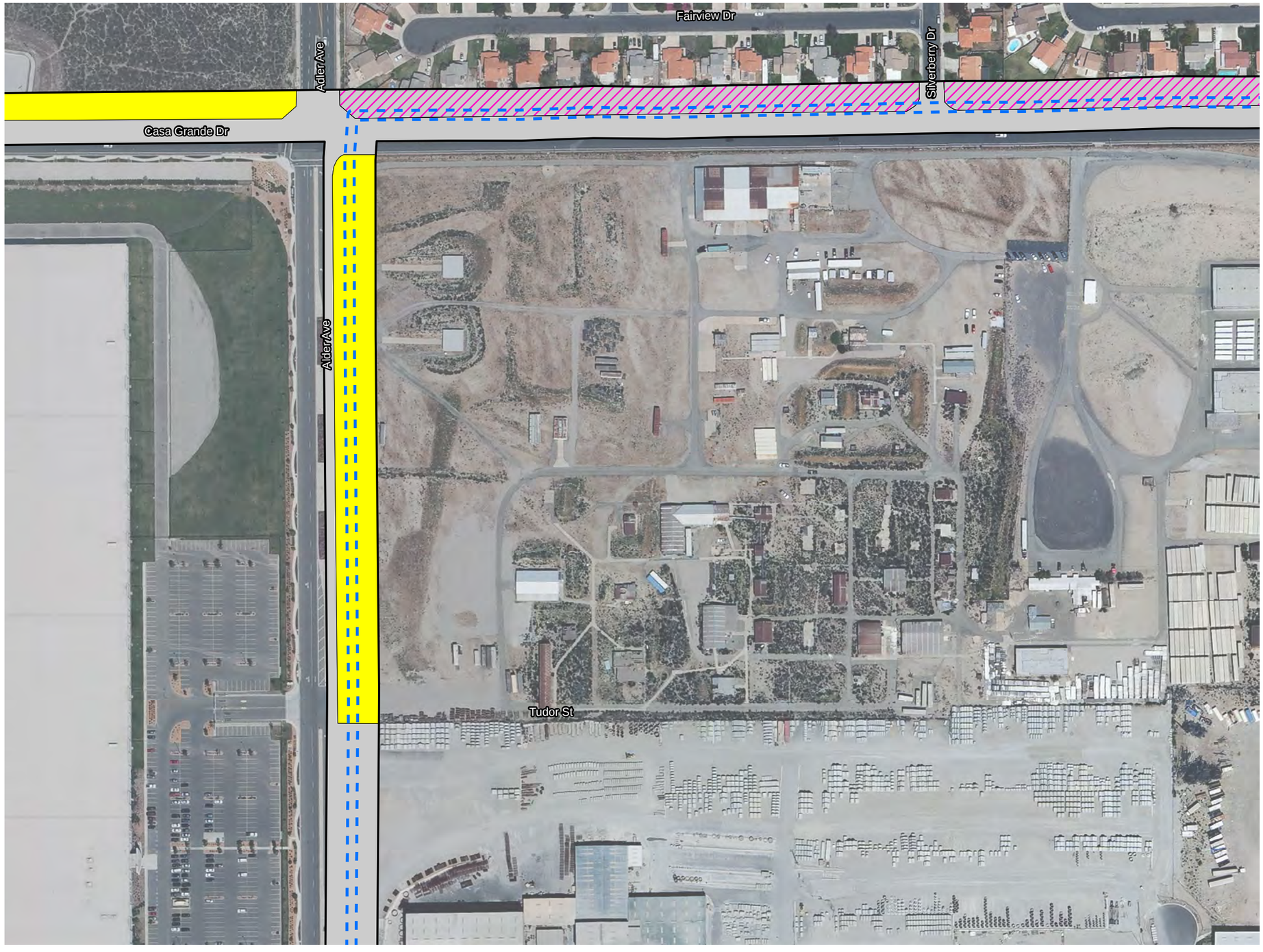
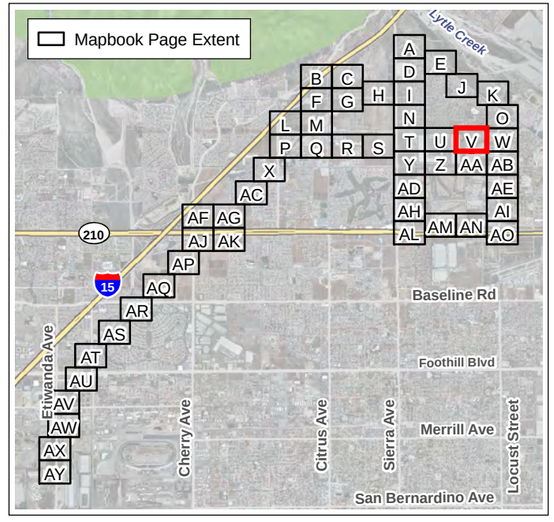


Impacts - Preferred Subtransmission Source Line Route*
Impacts - Alternative Subtransmission Source Line Route
Preferred Substation Site
Alternative Substation Site
Etiwanda Substation
Alder Substation
Potential Staging Locations (Not To Scale)
Survey Area

Vegetation Types and Other Areas

Not Surveyed
Riversidean Alluvial Fan Sage Scrub
Disturbed Riversidean Alluvial Fan Sage Scrub
Disturbed Riversidean Sage Scrub
Disturbed Mule Fat Scrub
Annual Grassland
Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
Vineyards
Ruderal
Ornamental
Disturbed
Developed
Developed/Ornamental
Developed/Ruderal
Flood-control Channel



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Project Impacts – Vegetation Types and Other Areas

Exhibit 12V

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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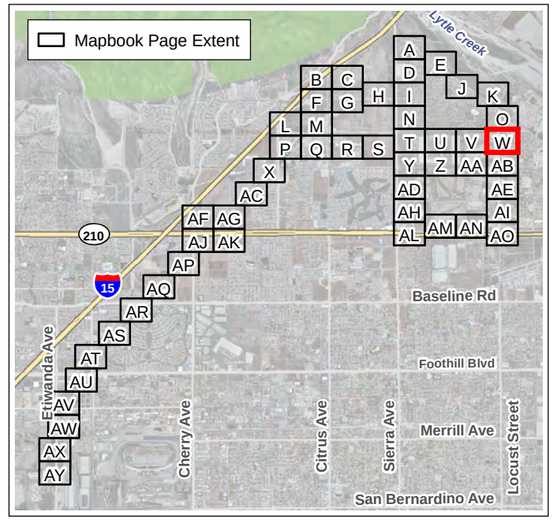
- Impacts - Preferred Subtransmission Source Line Route*
- Impacts - Alternative Subtransmission Source Line Route
- Preferred Substation Site
- Alternative Substation Site
- Etiwanda Substation
- Alder Substation
- Potential Staging Locations (Not To Scale)
- Survey Area

Vegetation Types and Other Areas

- Not Surveyed
- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Project Impacts – Vegetation Types and Other Areas

Exhibit 12W

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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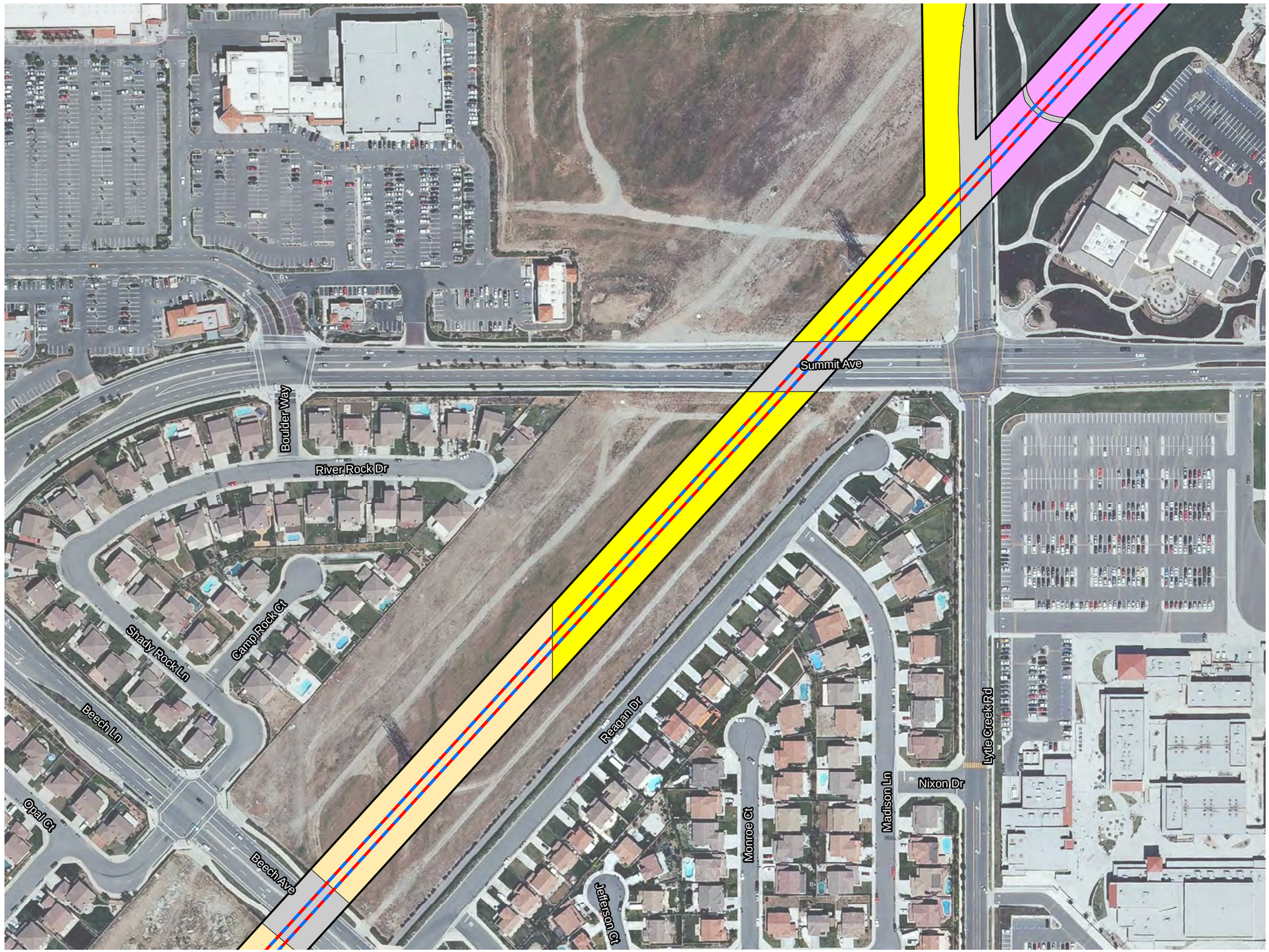


Impacts - Preferred Subtransmission Source Line Route*

Impacts - Alternative Subtransmission Source Line Route

Preferred Substation Site

Alternative Substation Site

Etiwanda Substation

Alder Substation

Potential Staging Locations (Not To Scale)

Survey Area

Vegetation Types and Other Areas

Not Surveyed

Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Sage Scrub

Disturbed Mule Fat Scrub

Annual Grassland

Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub

Vineyards

Ruderal

Ornamental

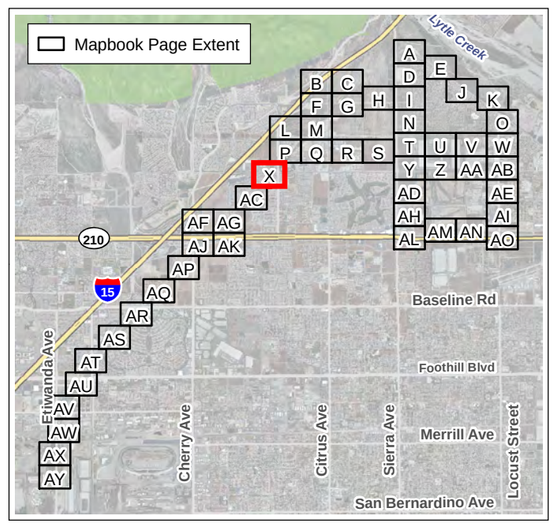
Disturbed

Developed

Developed/Ornamental

Developed/Ruderal

Flood-control Channel



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Project Impacts – Vegetation Types and Other Areas

Exhibit 12X

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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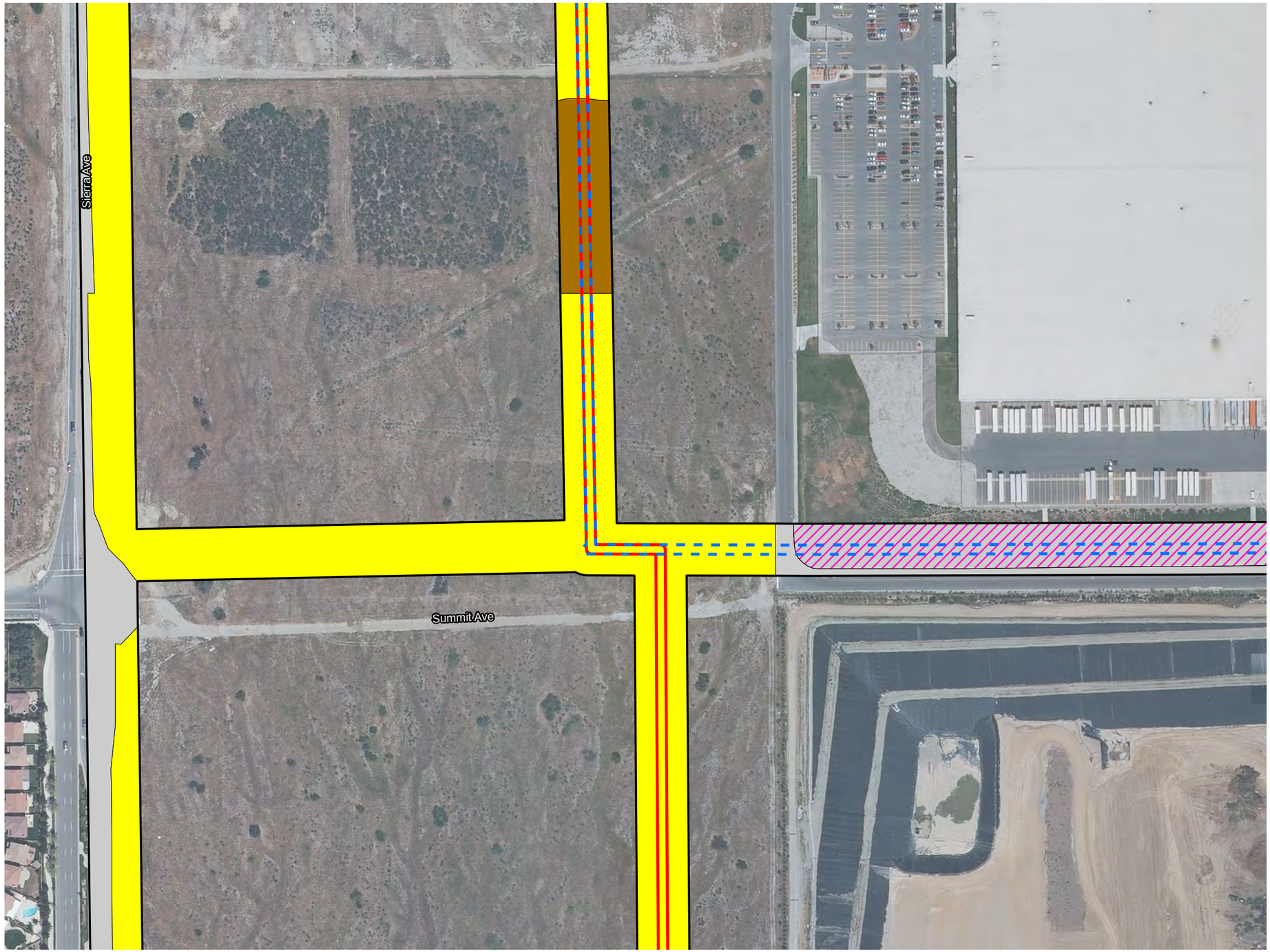


Impacts - Preferred Subtransmission Source Line Route*

Impacts - Alternative Subtransmission Source Line Route

Preferred Substation Site

Alternative Substation Site

Etiwanda Substation

Alder Substation

Potential Staging Locations (Not To Scale)

Survey Area

Vegetation Types and Other Areas

Not Surveyed

Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Sage Scrub

Disturbed Mule Fat Scrub

Annual Grassland

Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub

Vineyards

Ruderal

Ornamental

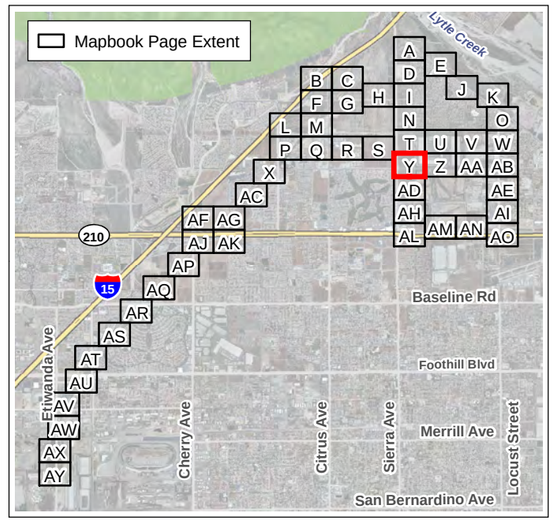
Disturbed

Developed

Developed/Ornamental

Developed/Ruderal

Flood-control Channel



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Project Impacts – Vegetation Types and Other Areas

Exhibit 12Y

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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Impacts - Preferred Subtransmission Source Line Route*

Impacts - Alternative Subtransmission Source Line Route

Preferred Substation Site

Alternative Substation Site

Etiwanda Substation

Alder Substation

Potential Staging Locations (Not To Scale)

Survey Area

Vegetation Types and Other Areas

Not Surveyed

Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Sage Scrub

Disturbed Mule Fat Scrub

Annual Grassland

Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub

Vineyards

Ruderal

Ornamental

Disturbed

Developed

Developed/Ornamental

Developed/Ruderal

Flood-control Channel

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Project Impacts – Vegetation Types and Other Areas

Exhibit 12Z

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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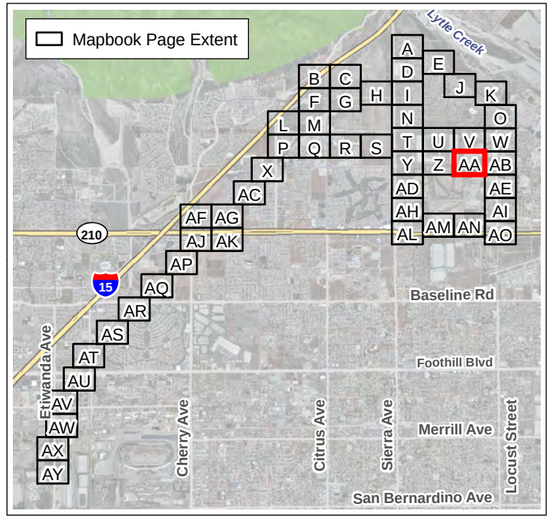
- Impacts - Preferred Subtransmission Source Line Route*
- Impacts - Alternative Subtransmission Source Line Route
- Preferred Substation Site
- Alternative Substation Site
- Etiwanda Substation
- Alder Substation
- Potential Staging Locations (Not To Scale)
- Survey Area

Vegetation Types and Other Areas

- Not Surveyed
- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Project Impacts - Vegetation Types and Other Areas

Exhibit 12AA

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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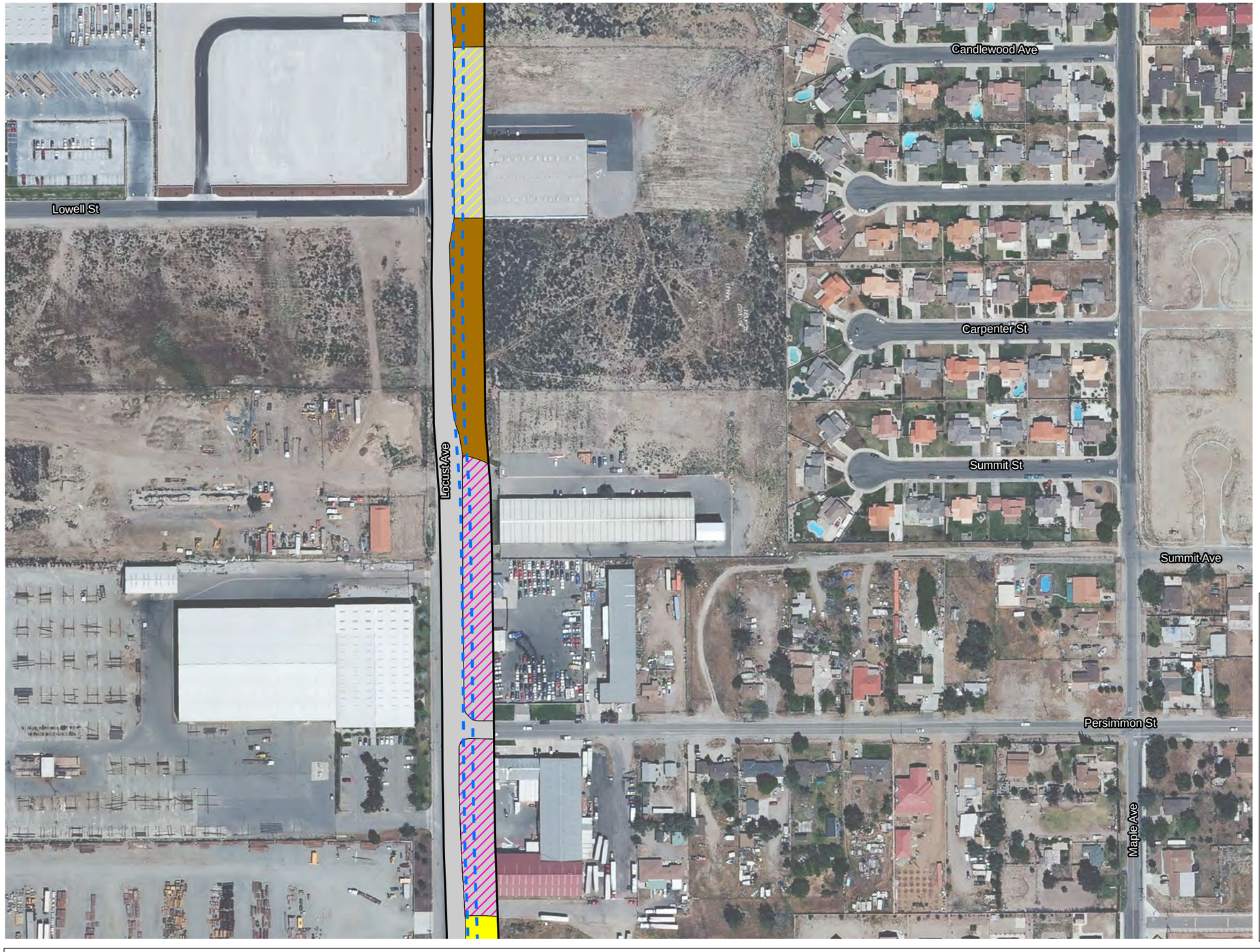

- Impacts - Preferred Subtransmission Source Line Route*
- Impacts - Alternative Subtransmission Source Line Route
- Preferred Substation Site
- Alternative Substation Site
- Etiwanda Substation
- Alder Substation
- Potential Staging Locations (Not To Scale)
- Survey Area

Vegetation Types and Other Areas

- Not Surveyed
- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel

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Project Impacts – Vegetation Types and Other Areas

Exhibit 12AB

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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Impacts - Preferred Subtransmission Source Line Route*

Impacts - Alternative Subtransmission Source Line Route

Preferred Substation Site

Alternative Substation Site

Etiwanda Substation

Alder Substation

Potential Staging Locations (Not To Scale)

Survey Area

Vegetation Types and Other Areas

Not Surveyed

Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Sage Scrub

Disturbed Mule Fat Scrub

Annual Grassland

Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub

Vineyards

Ruderal

Ornamental

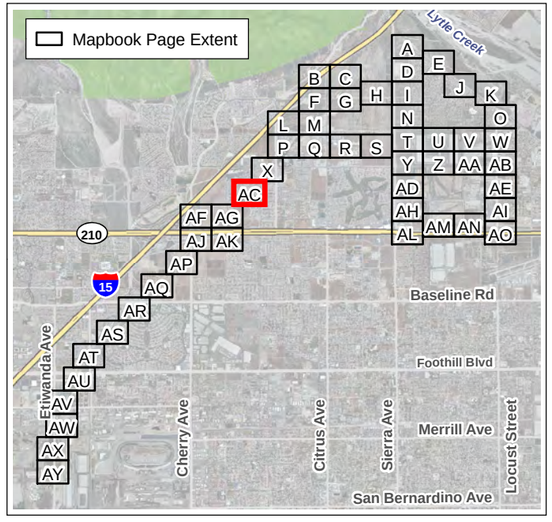
Disturbed

Developed

Developed/Ornamental

Developed/Ruderal

Flood-control Channel



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Project Impacts – Vegetation Types and Other Areas

Exhibit 12AC

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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Impacts - Preferred Subtransmission Source Line Route*

Impacts - Alternative Subtransmission Source Line Route

Preferred Substation Site

Alternative Substation Site

Etiwanda Substation

Alder Substation

Potential Staging Locations (Not To Scale)

Survey Area

Vegetation Types and Other Areas

Not Surveyed

Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Sage Scrub

Disturbed Mule Fat Scrub

Annual Grassland

Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub

Vineyards

Ruderal

Ornamental

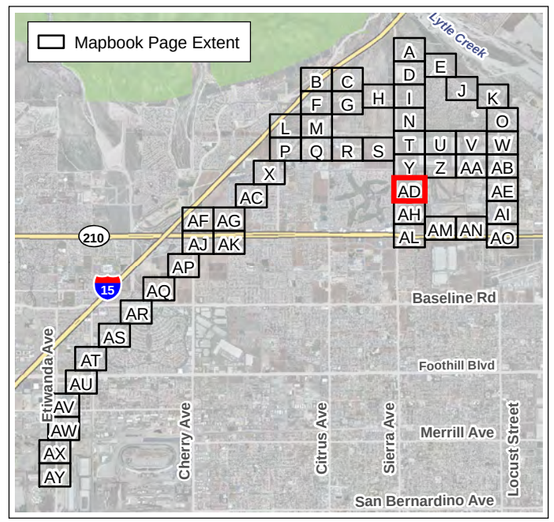
Disturbed

Developed

Developed/Ornamental

Developed/Ruderal

Flood-control Channel



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Project Impacts – Vegetation Types and Other Areas

Exhibit 12AD

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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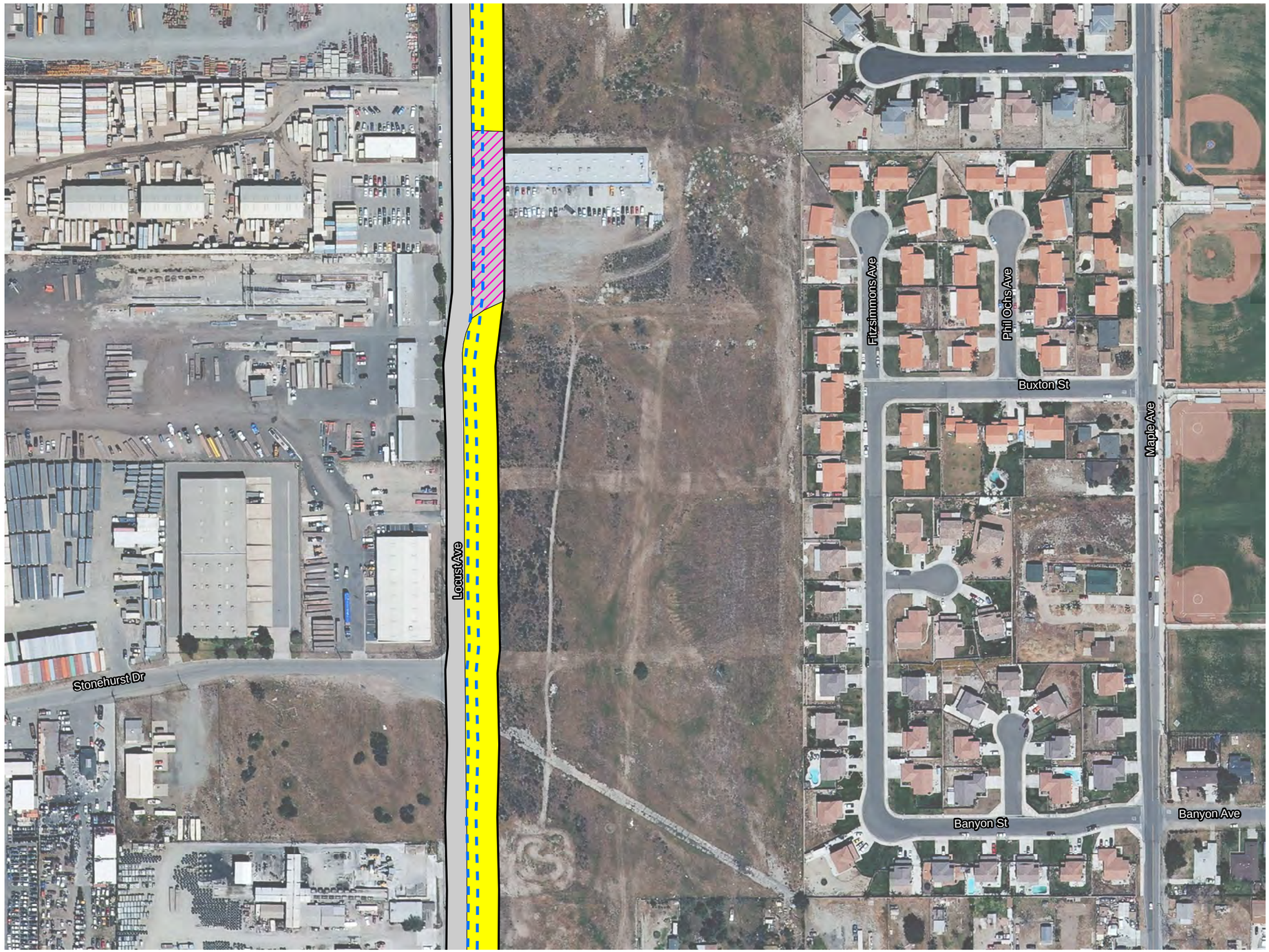


Impacts - Preferred Subtransmission Source Line Route*

Impacts - Alternative Subtransmission Source Line Route

Preferred Substation Site

Alternative Substation Site

Etiwanda Substation

Alder Substation

Potential Staging Locations (Not To Scale)

Survey Area

Vegetation Types and Other Areas

Not Surveyed

Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Sage Scrub

Disturbed Mule Fat Scrub

Annual Grassland

Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub

Vineyards

Ruderal

Ornamental

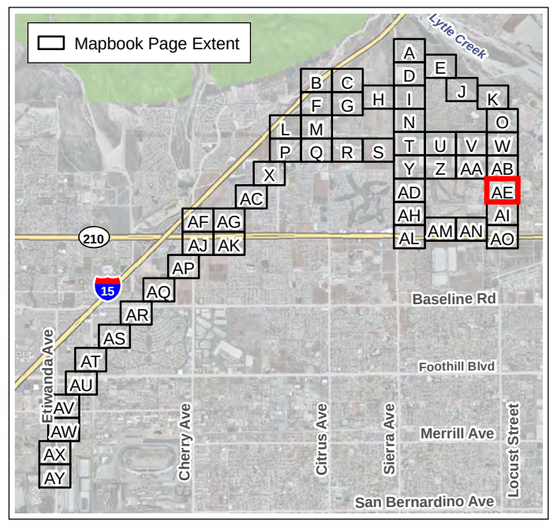
Disturbed

Developed

Developed/Ornamental

Developed/Ruderal

Flood-control Channel



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Project Impacts – Vegetation Types and Other Areas

Exhibit 12AE

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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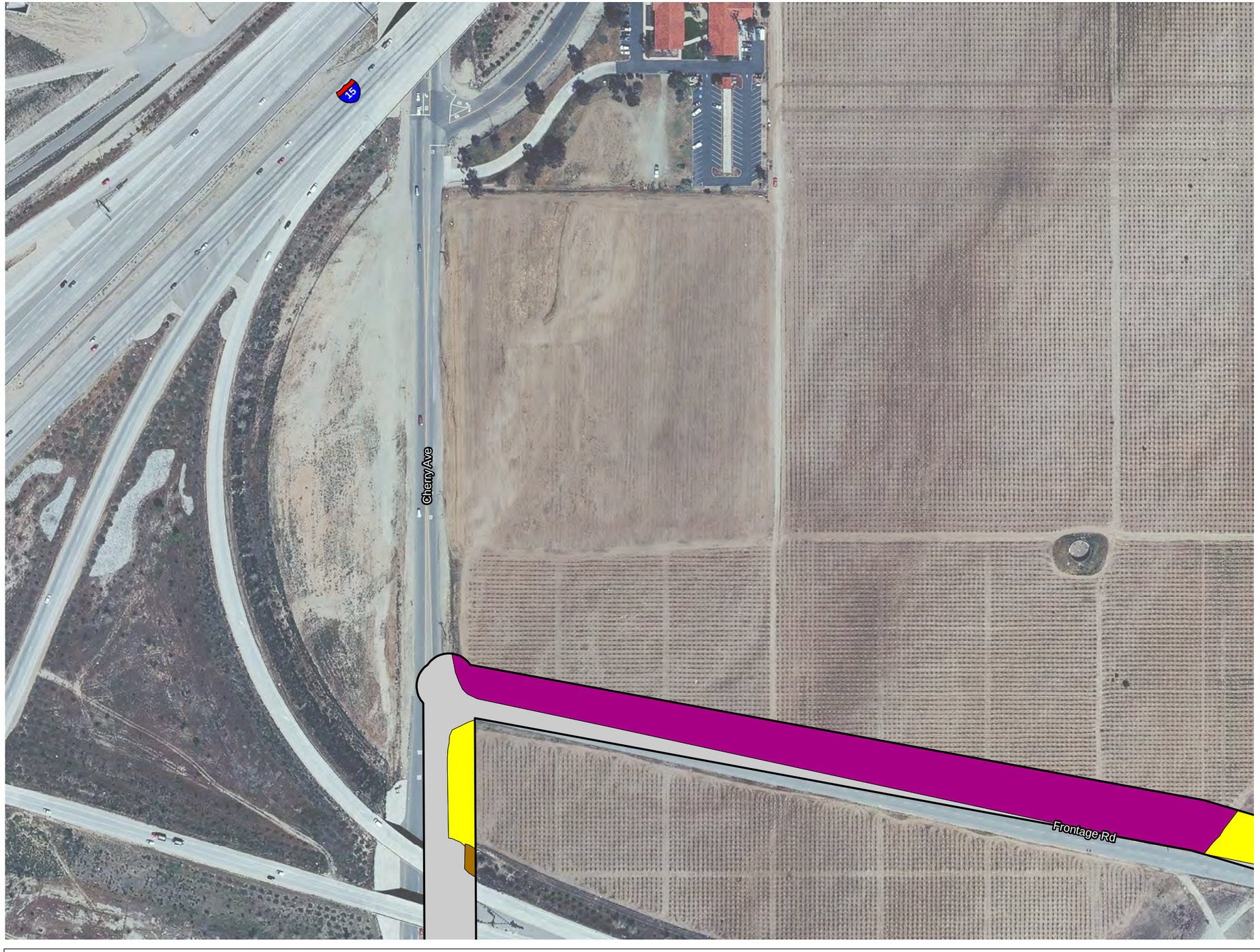

- Impacts - Preferred Subtransmission Source Line Route*
- Impacts - Alternative Subtransmission Source Line Route
- Preferred Substation Site
- Alternative Substation Site
- Etiwanda Substation
- Alder Substation
- Potential Staging Locations (Not To Scale)
- Survey Area

Vegetation Types and Other Areas

- Not Surveyed
- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel

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Project Impacts – Vegetation Types and Other Areas

Exhibit 12AF

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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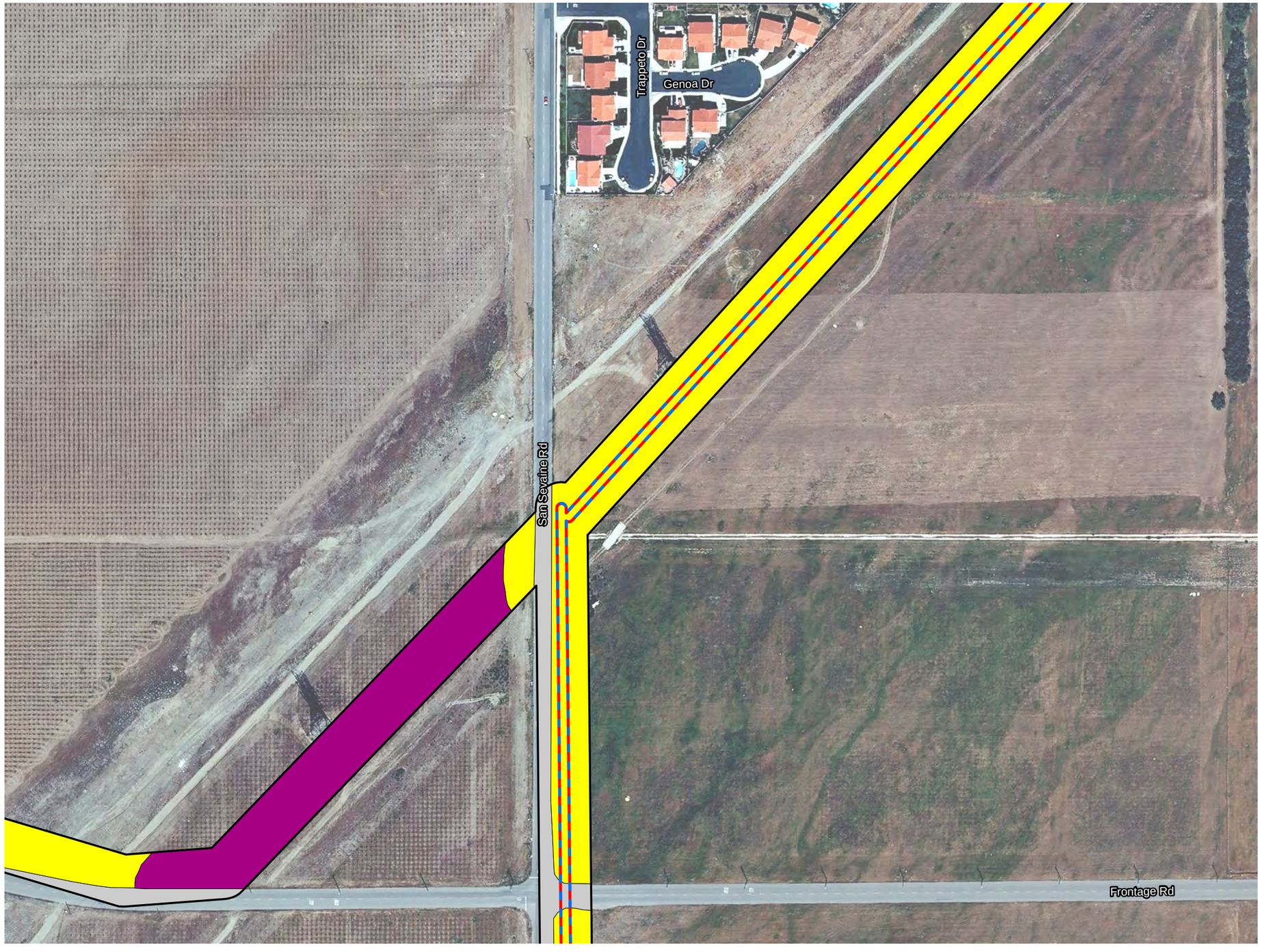


Impacts - Preferred Subtransmission Source Line Route*

Impacts - Alternative Subtransmission Source Line Route

Preferred Substation Site

Alternative Substation Site

Etiwanda Substation

Alder Substation

Potential Staging Locations (Not To Scale)

Survey Area

Vegetation Types and Other Areas

Not Surveyed

Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Sage Scrub

Disturbed Mule Fat Scrub

Annual Grassland

Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub

Vineyards

Ruderal

Ornamental

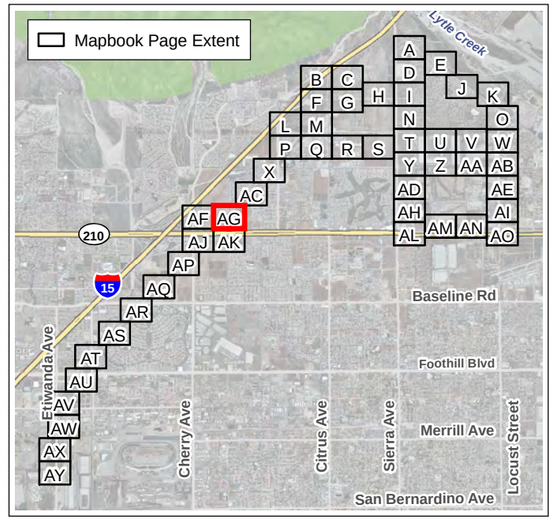
Disturbed

Developed

Developed/Ornamental

Developed/Ruderal

Flood-control Channel



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Project Impacts – Vegetation Types and Other Areas

Exhibit 12AG

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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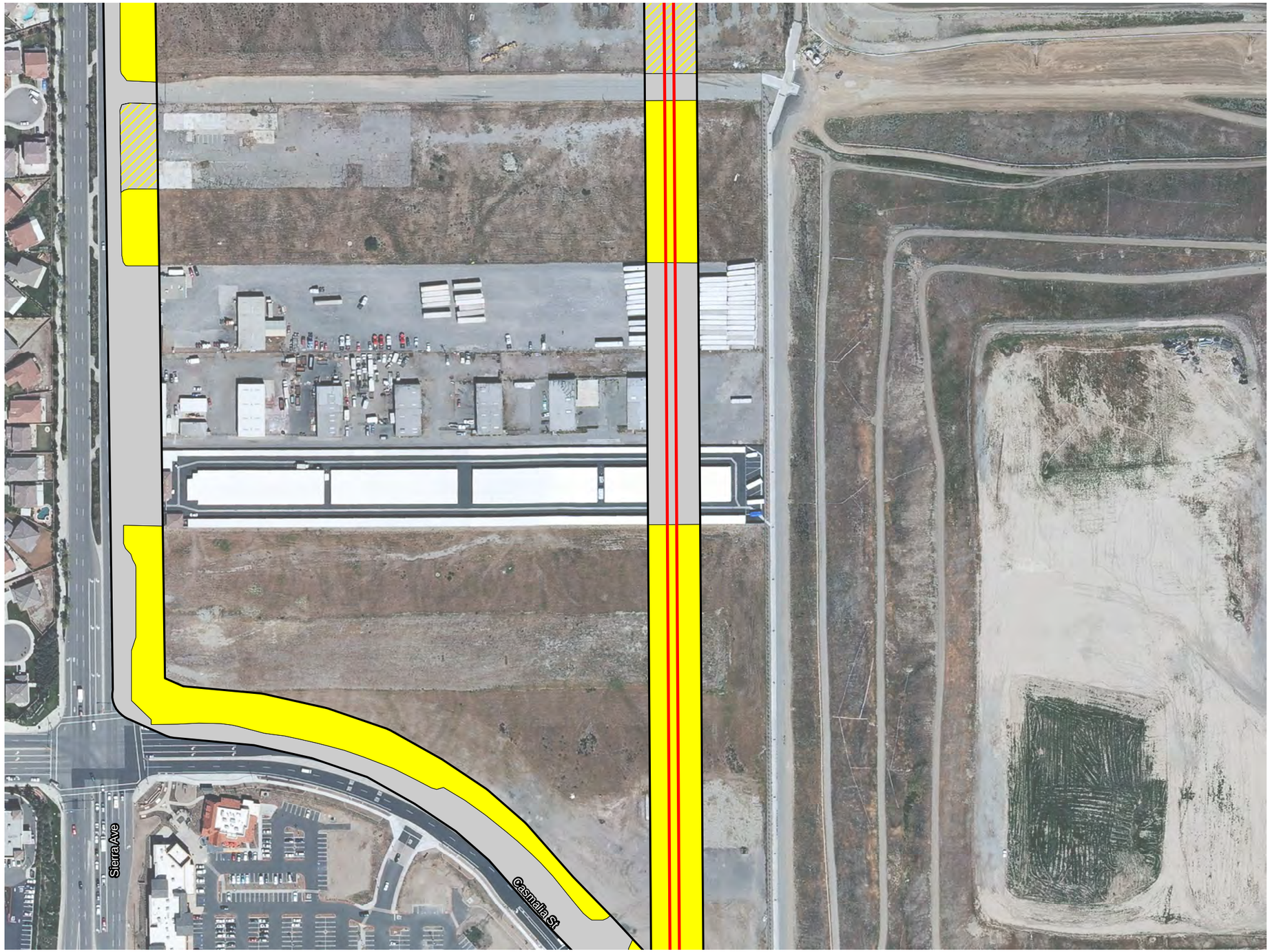


Impacts - Preferred Subtransmission Source Line Route*

Impacts - Alternative Subtransmission Source Line Route

Preferred Substation Site

Alternative Substation Site

Etiwanda Substation

Alder Substation

Potential Staging Locations (Not To Scale)

Survey Area

Vegetation Types and Other Areas

Not Surveyed

Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Sage Scrub

Disturbed Mule Fat Scrub

Annual Grassland

Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub

Vineyards

Ruderal

Ornamental

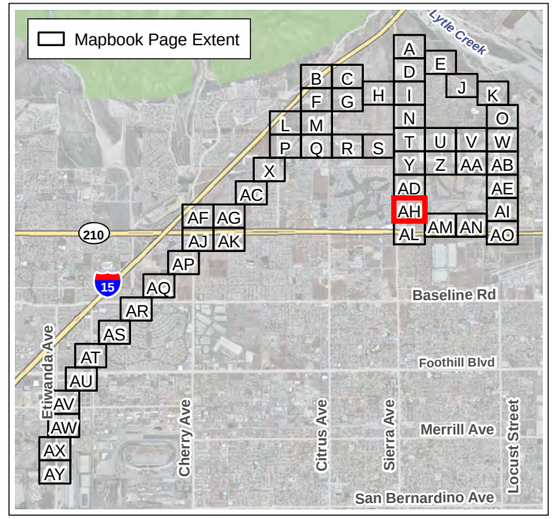
Disturbed

Developed

Developed/Ornamental

Developed/Ruderal

Flood-control Channel



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Project Impacts - Vegetation Types and Other Areas

Exhibit 12AH

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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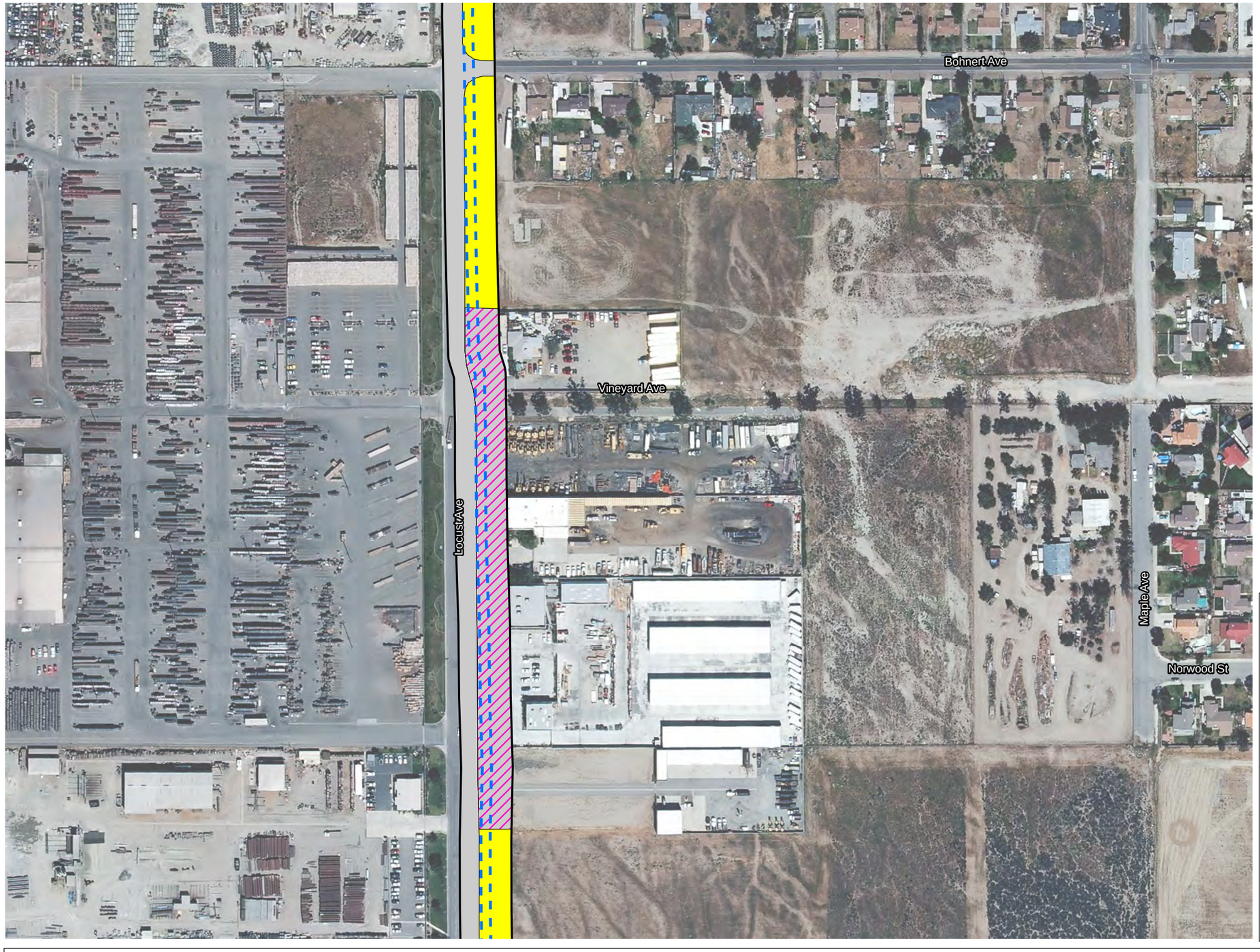

Impacts - Preferred Subtransmission Source Line Route*

Impacts - Alternative Subtransmission Source Line Route

Preferred Substation Site

Alternative Substation Site

Etiwanda Substation

Alder Substation

Potential Staging Locations (Not To Scale)

Survey Area

Vegetation Types and Other Areas

Not Surveyed

Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Sage Scrub

Disturbed Mule Fat Scrub

Annual Grassland

Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub

Vineyards

Ruderal

Ornamental

Disturbed

Developed

Developed/Ornamental

Developed/Ruderal

Flood-control Channel

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Project Impacts – Vegetation Types and Other Areas

Exhibit 12AI

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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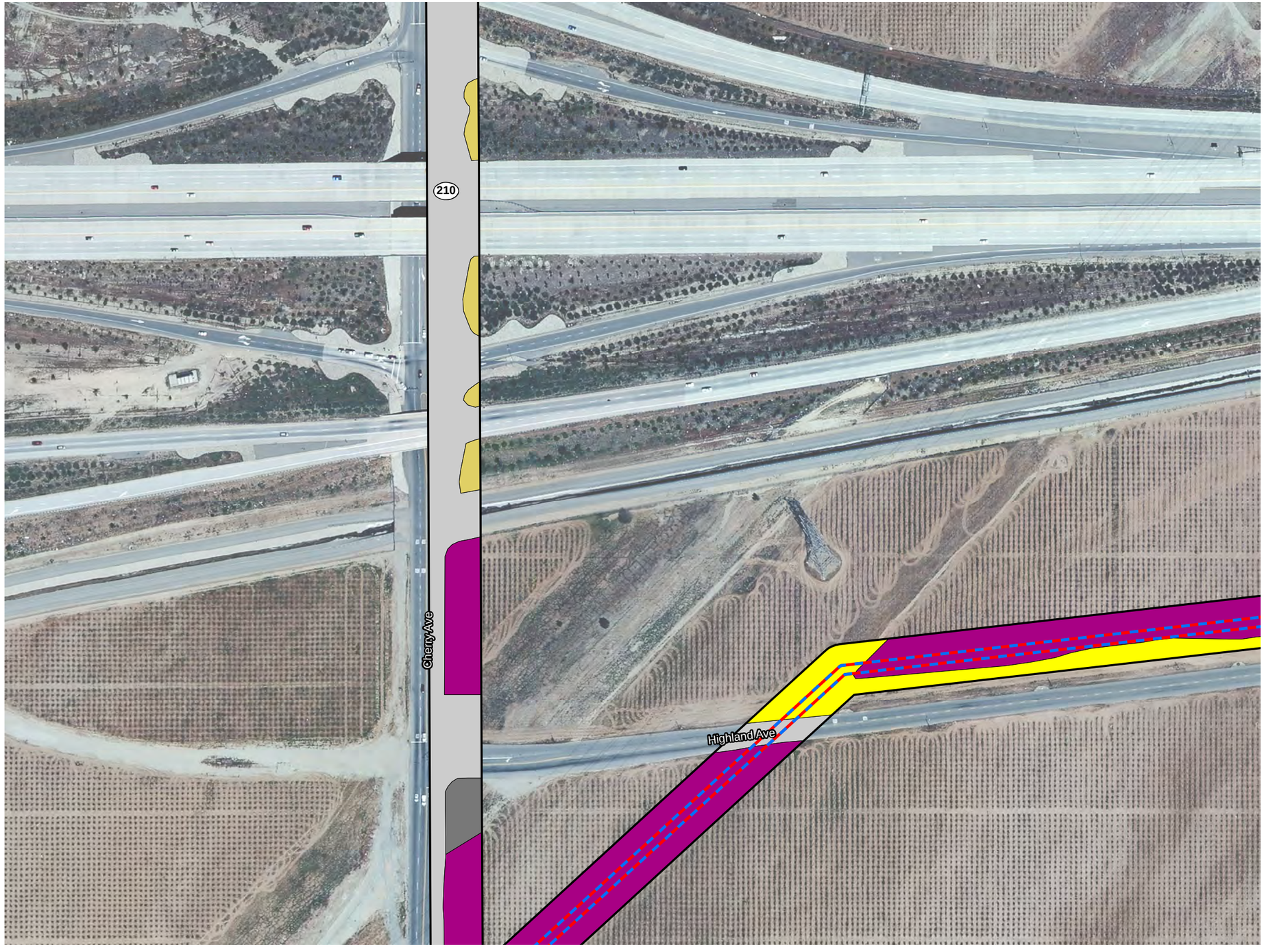

Impacts - Preferred Subtransmission Source Line Route*

Impacts - Alternative Subtransmission Source Line Route

Preferred Substation Site

Alternative Substation Site

Etiwanda Substation

Alder Substation

Potential Staging Locations (Not To Scale)

Survey Area

Vegetation Types and Other Areas

Not Surveyed

Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Sage Scrub

Disturbed Mule Fat Scrub

Annual Grassland

Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub

Vineyards

Ruderal

Ornamental

Disturbed

Developed

Developed/Ornamental

Developed/Ruderal

Flood-control Channel

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Project Impacts – Vegetation Types and Other Areas

Exhibit 12AJ

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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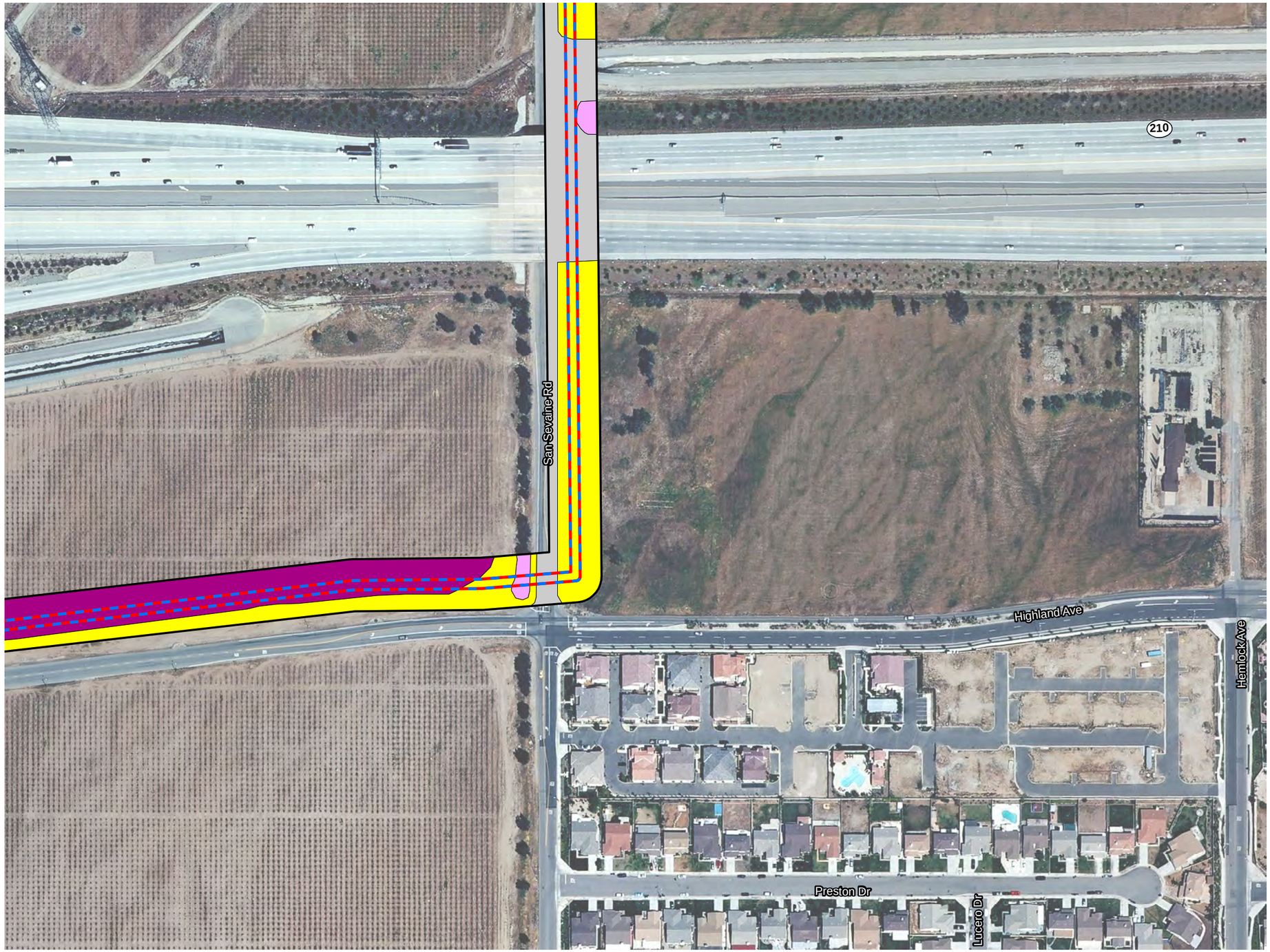

- Impacts - Preferred Subtransmission Source Line Route*
- Impacts - Alternative Subtransmission Source Line Route
- Preferred Substation Site
- Alternative Substation Site
- Etiwanda Substation
- Alder Substation
- Potential Staging Locations (Not To Scale)
- Survey Area

Vegetation Types and Other Areas

- Not Surveyed
- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel

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Project Impacts – Vegetation Types and Other Areas

Exhibit 12AK

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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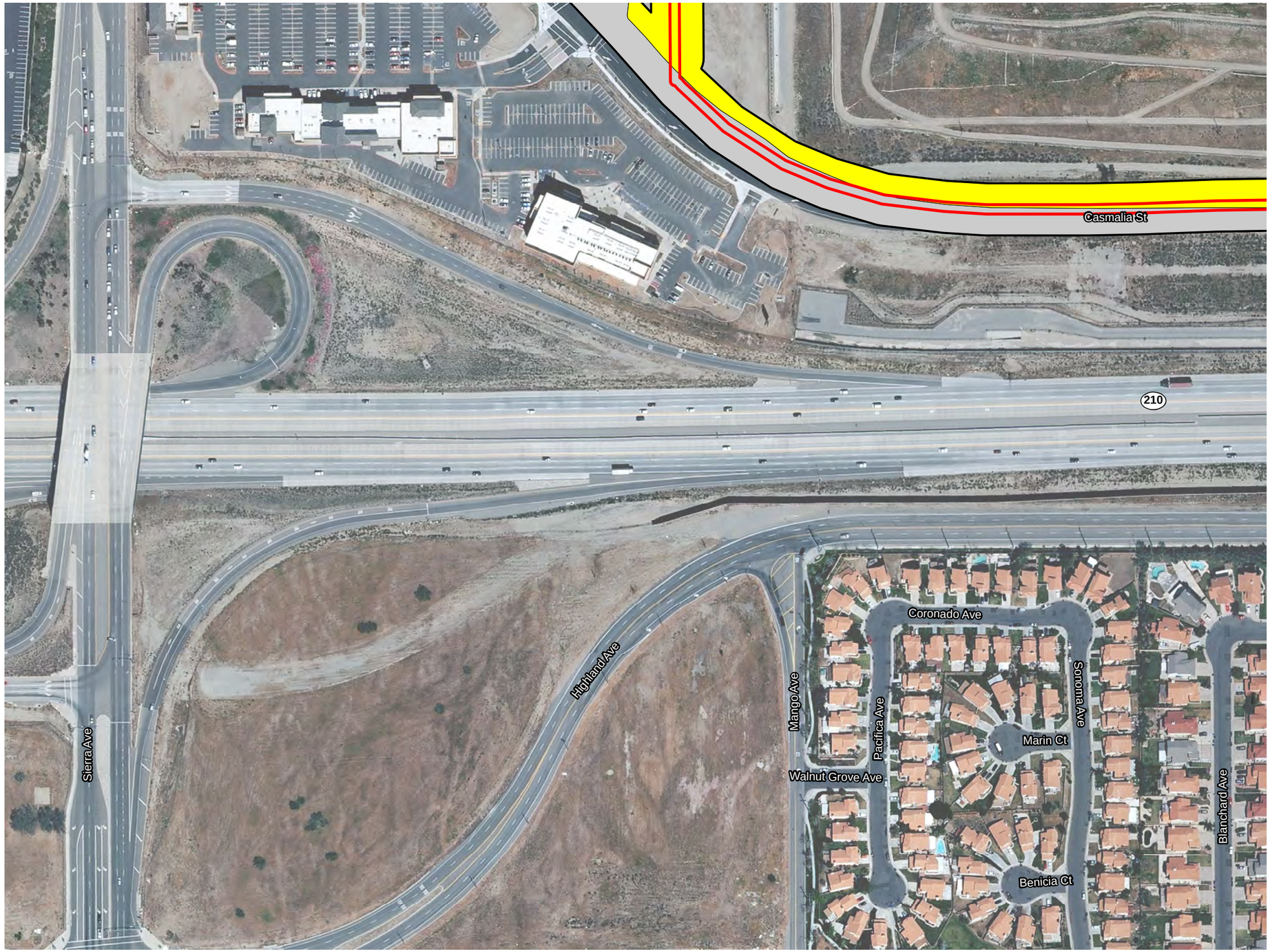


Impacts - Preferred Subtransmission Source Line Route*

Impacts - Alternative Subtransmission Source Line Route

Preferred Substation Site

Alternative Substation Site

Etiwanda Substation

Alder Substation

Potential Staging Locations (Not To Scale)

Survey Area

Vegetation Types and Other Areas

Not Surveyed

Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Sage Scrub

Disturbed Mule Fat Scrub

Annual Grassland

Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub

Vineyards

Ruderal

Ornamental

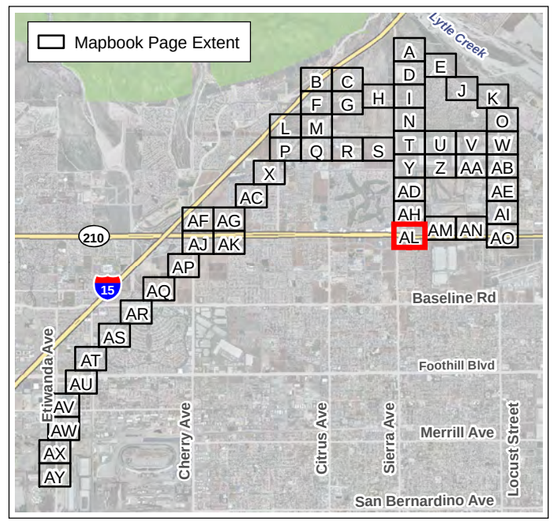
Disturbed

Developed

Developed/Ornamental

Developed/Ruderal

Flood-control Channel



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Project Impacts – Vegetation Types and Other Areas

Exhibit 12AL

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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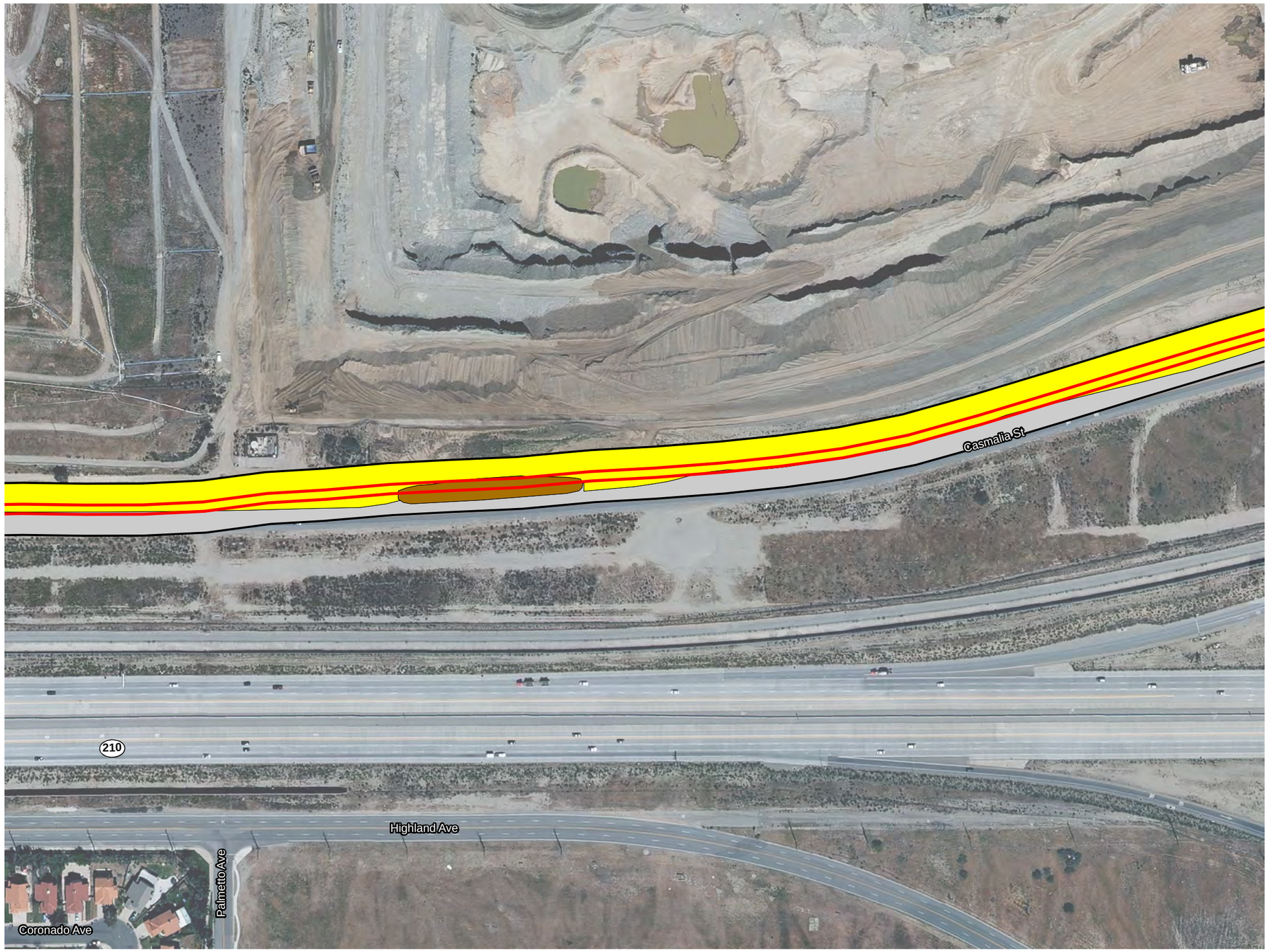


Impacts - Preferred Subtransmission Source Line Route*

Impacts - Alternative Subtransmission Source Line Route

Preferred Substation Site

Alternative Substation Site

Etiwanda Substation

Alder Substation

Potential Staging Locations (Not To Scale)

Survey Area

Vegetation Types and Other Areas

Not Surveyed

Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Sage Scrub

Disturbed Mule Fat Scrub

Annual Grassland

Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub

Vineyards

Ruderal

Ornamental

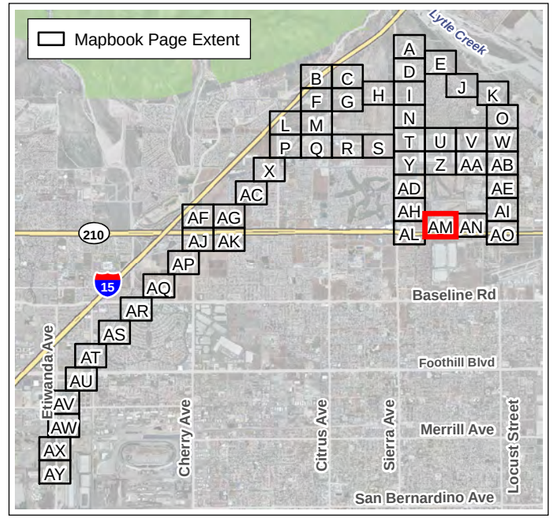
Disturbed

Developed

Developed/Ornamental

Developed/Ruderal

Flood-control Channel



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Project Impacts - Vegetation Types and Other Areas

Exhibit 12AM

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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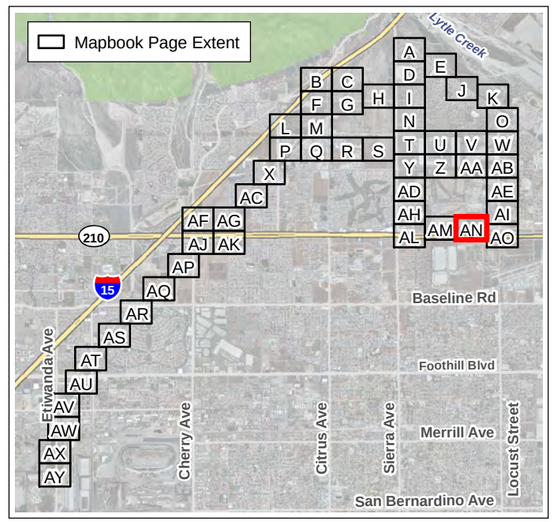
- Impacts - Preferred Subtransmission Source Line Route*
- Impacts - Alternative Subtransmission Source Line Route
- Preferred Substation Site
- Alternative Substation Site
- Etiwanda Substation
- Alder Substation
- Potential Staging Locations (Not To Scale)
- Survey Area

Vegetation Types and Other Areas

- Not Surveyed
- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Project Impacts – Vegetation Types and Other Areas

Exhibit 12AN

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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Impacts - Preferred Subtransmission Source Line Route*

Impacts - Alternative Subtransmission Source Line Route

Preferred Substation Site

Alternative Substation Site

Etiwanda Substation

Alder Substation

Potential Staging Locations (Not To Scale)

Survey Area

Vegetation Types and Other Areas

Not Surveyed

Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Sage Scrub

Disturbed Mule Fat Scrub

Annual Grassland

Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub

Vineyards

Ruderal

Ornamental

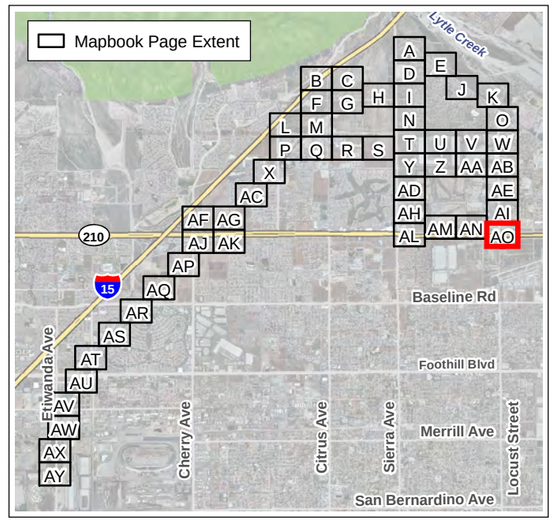
Disturbed

Developed

Developed/Ornamental

Developed/Ruderal

Flood-control Channel



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Project Impacts – Vegetation Types and Other Areas

Exhibit 12AO

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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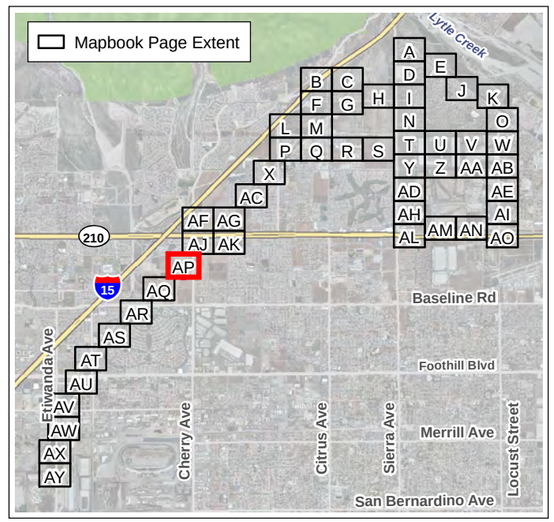
Impacts - Preferred Subtransmission Source Line Route*
Impacts - Alternative Subtransmission Source Line Route
Preferred Substation Site
Alternative Substation Site
Etiwanda Substation
Alder Substation
Potential Staging Locations (Not To Scale)
Survey Area

Vegetation Types and Other Areas

Not Surveyed
Riversidean Alluvial Fan Sage Scrub
Disturbed Riversidean Alluvial Fan Sage Scrub
Disturbed Riversidean Sage Scrub
Disturbed Mule Fat Scrub
Annual Grassland
Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
Vineyards
Ruderal
Ornamental
Disturbed
Developed
Developed/Ornamental
Developed/Ruderal
Flood-control Channel



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Project Impacts – Vegetation Types and Other Areas

Exhibit 12AP

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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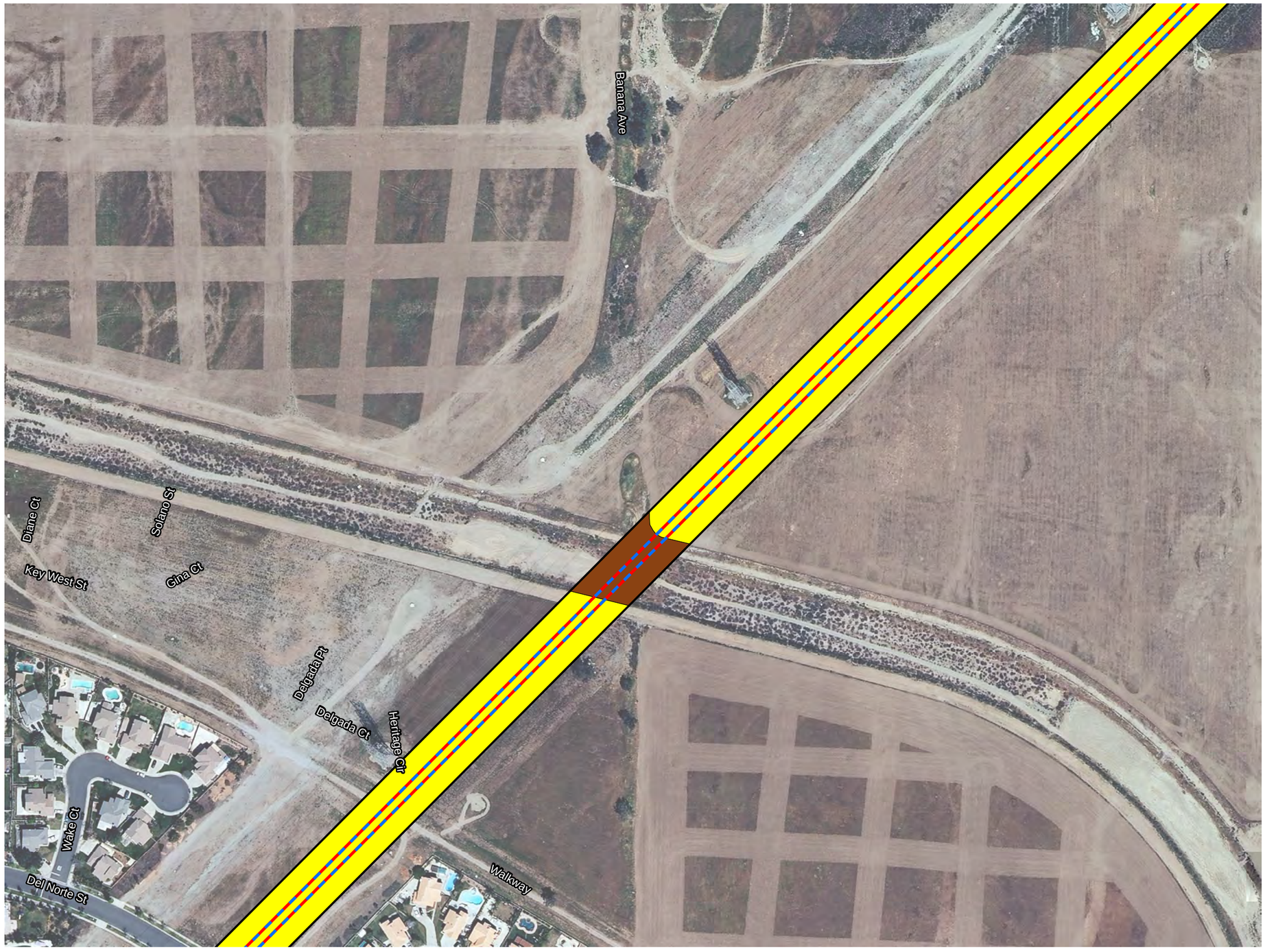


Impacts - Preferred Subtransmission Source Line Route*

Impacts - Alternative Subtransmission Source Line Route

Preferred Substation Site

Alternative Substation Site

Etiwanda Substation

Alder Substation

Potential Staging Locations (Not To Scale)

Survey Area

Vegetation Types and Other Areas

Not Surveyed

Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Sage Scrub

Disturbed Mule Fat Scrub

Annual Grassland

Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub

Vineyards

Ruderal

Ornamental

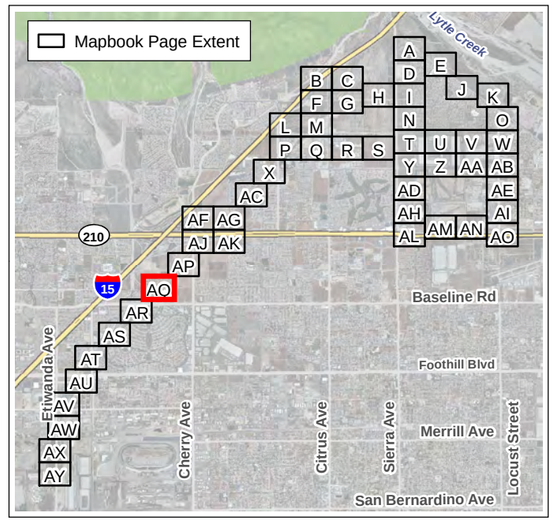
Disturbed

Developed

Developed/Ornamental

Developed/Ruderal

Flood-control Channel



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Project Impacts – Vegetation Types and Other Areas

Exhibit 12AQ

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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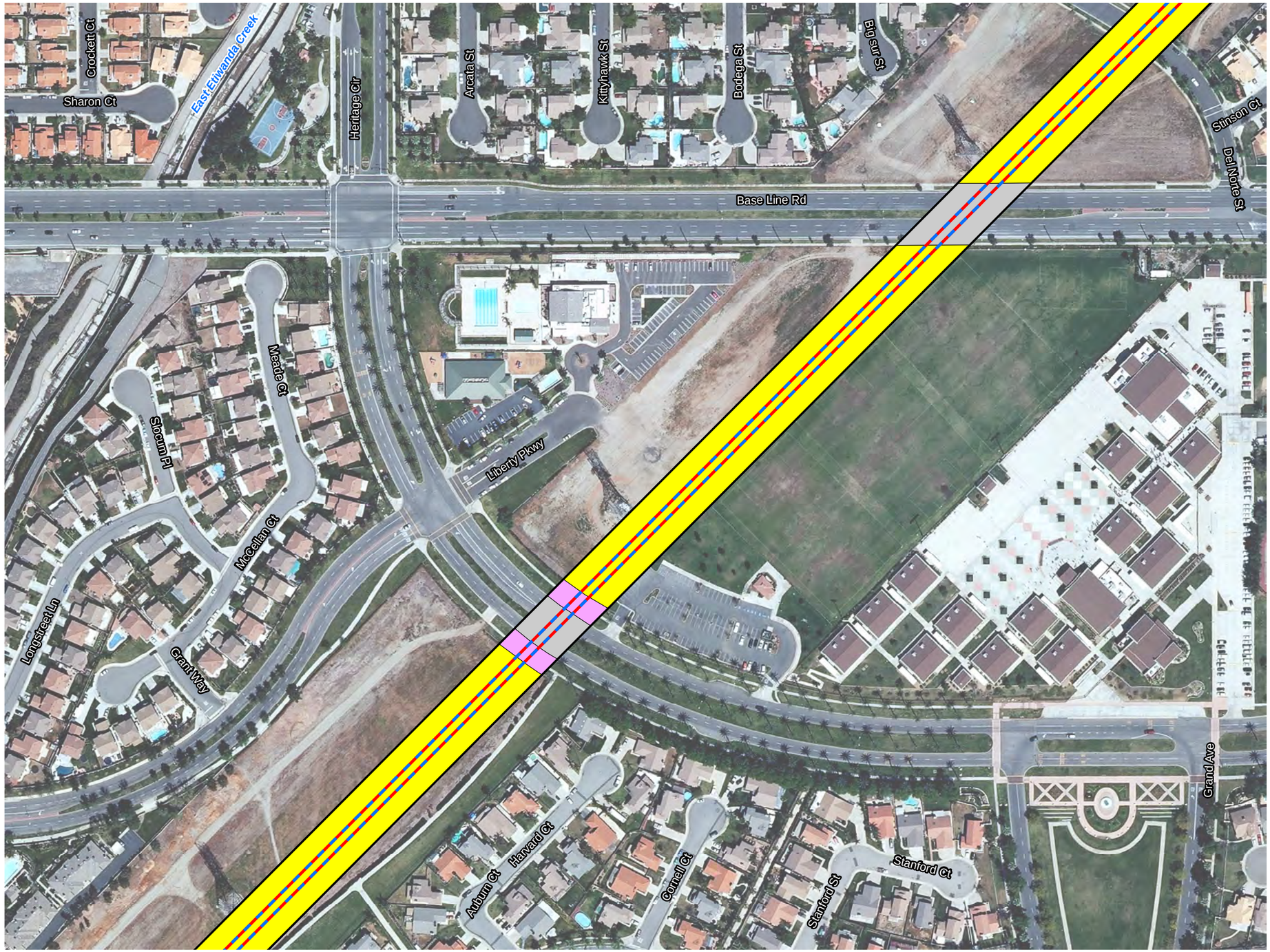
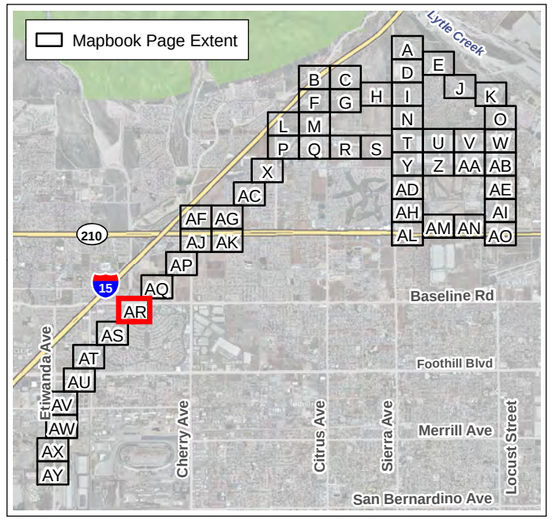


- Impacts - Preferred Subtransmission Source Line Route*
- Impacts - Alternative Subtransmission Source Line Route
- Preferred Substation Site
- Alternative Substation Site
- Etiwanda Substation
- Alder Substation
- Potential Staging Locations (Not To Scale)
- Survey Area

Vegetation Types and Other Areas

- Not Surveyed
- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Project Impacts - Vegetation Types and Other Areas

Exhibit 12AR

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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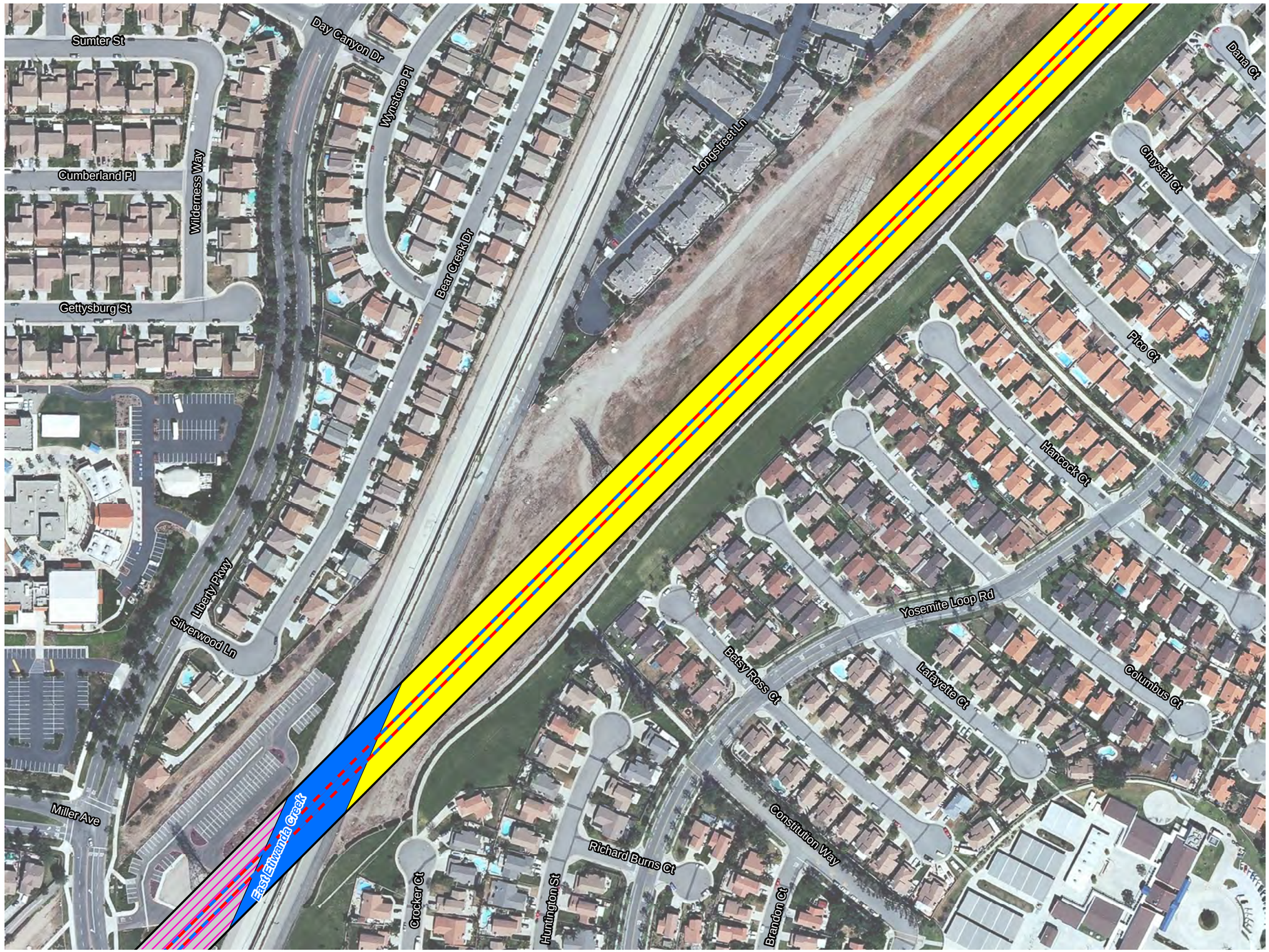
(Rev 08/04/10 JFG) R:\Projects\Edison\J046\Graphics\Bio\ex12_veg.pdf



Impacts - Preferred Subtransmission Source Line Route*

Impacts - Alternative Subtransmission Source Line Route

Preferred Substation Site

Alternative Substation Site

Etiwanda Substation

Alder Substation

Potential Staging Locations (Not To Scale)

Survey Area

Vegetation Types and Other Areas

Not Surveyed

Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Sage Scrub

Disturbed Mule Fat Scrub

Annual Grassland

Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub

Vineyards

Ruderal

Ornamental

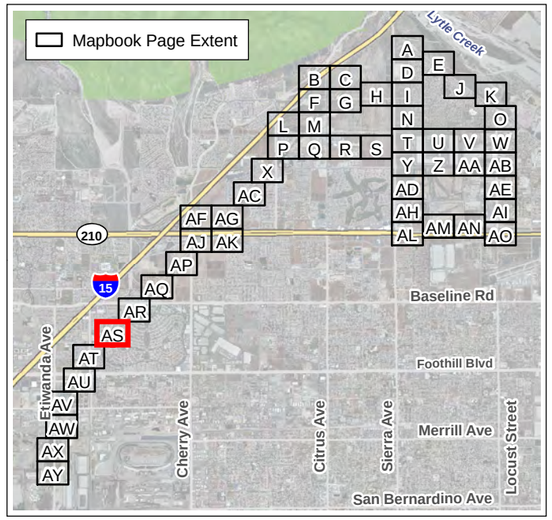
Disturbed

Developed

Developed/Ornamental

Developed/Ruderal

Flood-control Channel



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Project Impacts – Vegetation Types and Other Areas

Exhibit 12AS

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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Impacts - Preferred Subtransmission Source Line Route*

Impacts - Alternative Subtransmission Source Line Route

Preferred Substation Site

Alternative Substation Site

Etiwanda Substation

Alder Substation

Potential Staging Locations (Not To Scale)

Survey Area

Vegetation Types and Other Areas

Not Surveyed

Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Sage Scrub

Disturbed Mule Fat Scrub

Annual Grassland

Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub

Vineyards

Ruderal

Ornamental

Disturbed

Developed

Developed/Ornamental

Developed/Ruderal

Flood-control Channel

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Project Impacts – Vegetation Types and Other Areas

Exhibit 12AT

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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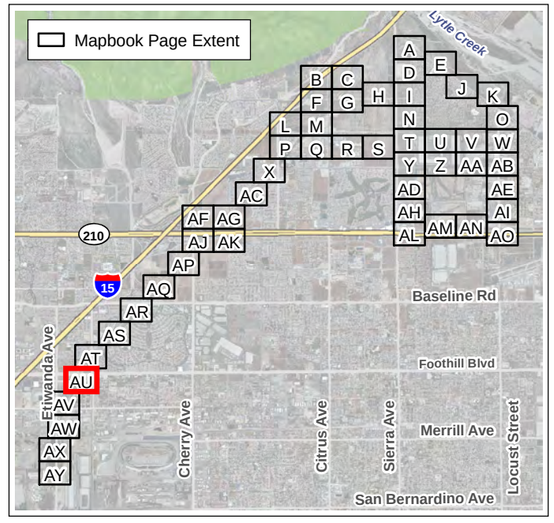
Impacts - Preferred Subtransmission Source Line Route*
Impacts - Alternative Subtransmission Source Line Route
Preferred Substation Site
Alternative Substation Site
Etiwanda Substation
Alder Substation
Potential Staging Locations (Not To Scale)
Survey Area

Vegetation Types and Other Areas

Not Surveyed
Riversidean Alluvial Fan Sage Scrub
Disturbed Riversidean Alluvial Fan Sage Scrub
Disturbed Riversidean Sage Scrub
Disturbed Mule Fat Scrub
Annual Grassland
Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
Vineyards
Ruderal
Ornamental
Disturbed
Developed
Developed/Ornamental
Developed/Ruderal
Flood-control Channel



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Project Impacts – Vegetation Types and Other Areas

Exhibit 12AU

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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- Impacts - Preferred Subtransmission Source Line Route*
- Impacts - Alternative Subtransmission Source Line Route
- Preferred Substation Site
- Alternative Substation Site
- Etiwanda Substation
- Alder Substation
- Potential Staging Locations (Not To Scale)
- Survey Area

Vegetation Types and Other Areas

- Not Surveyed
- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel

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Project Impacts - Vegetation Types and Other Areas

Exhibit 12AV

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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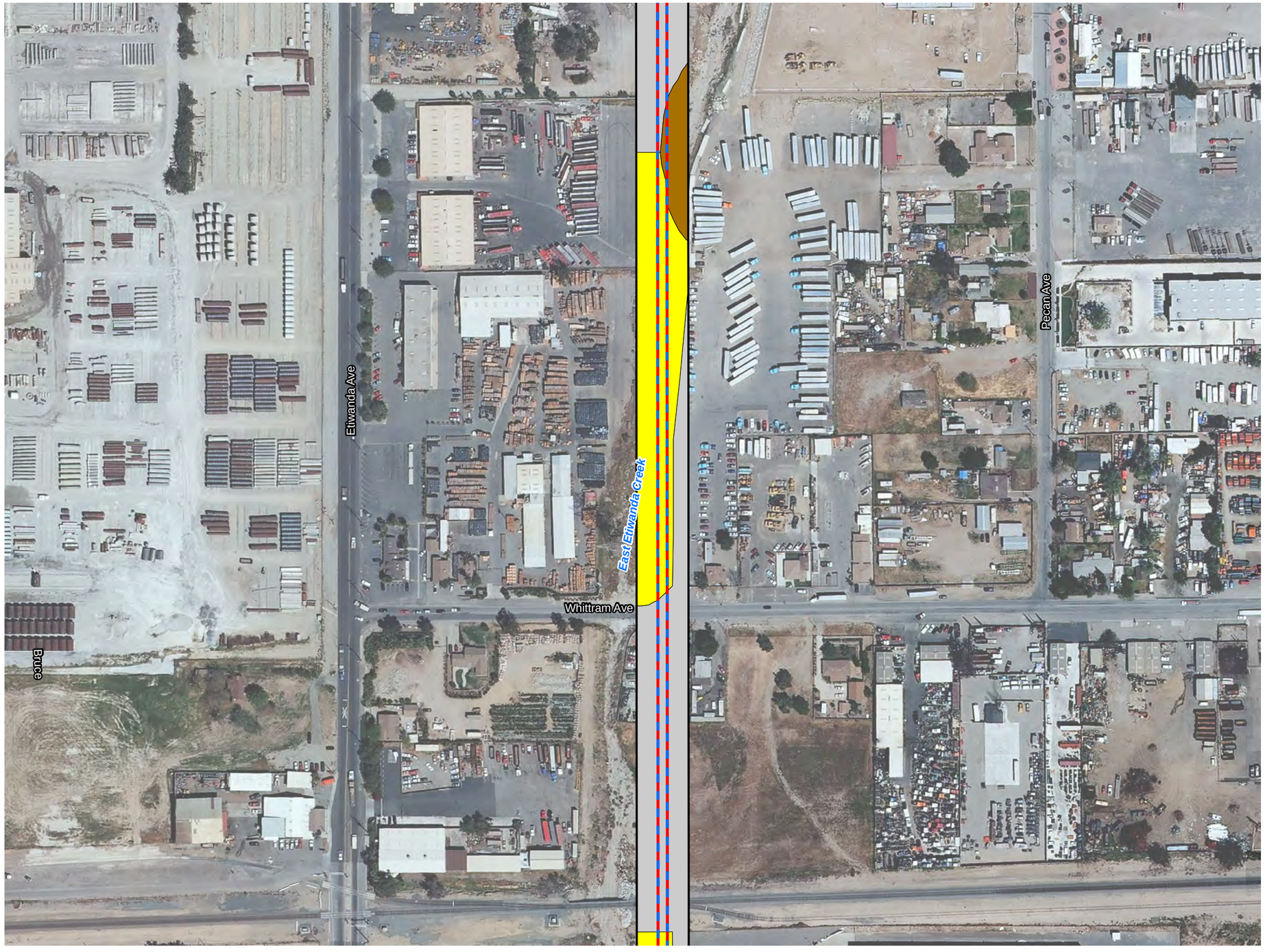


Impacts - Preferred Subtransmission Source Line Route*

Impacts - Alternative Subtransmission Source Line Route

Preferred Substation Site

Alternative Substation Site

Etiwanda Substation

Alder Substation

Potential Staging Locations (Not To Scale)

Survey Area

Vegetation Types and Other Areas

Not Surveyed

Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Sage Scrub

Disturbed Mule Fat Scrub

Annual Grassland

Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub

Vineyards

Ruderal

Ornamental

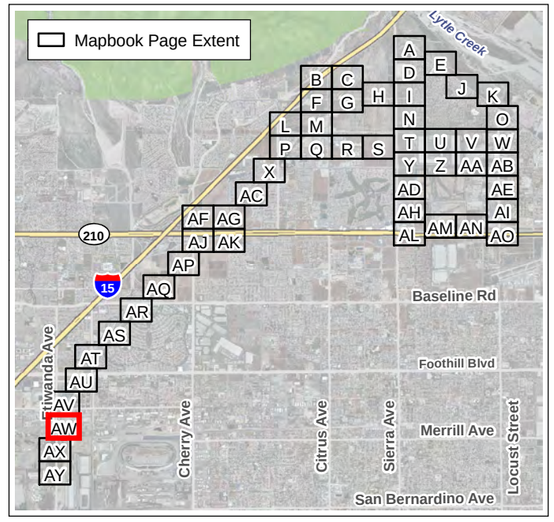
Disturbed

Developed

Developed/Ornamental

Developed/Ruderal

Flood-control Channel



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Project Impacts – Vegetation Types and Other Areas

Exhibit 12AW

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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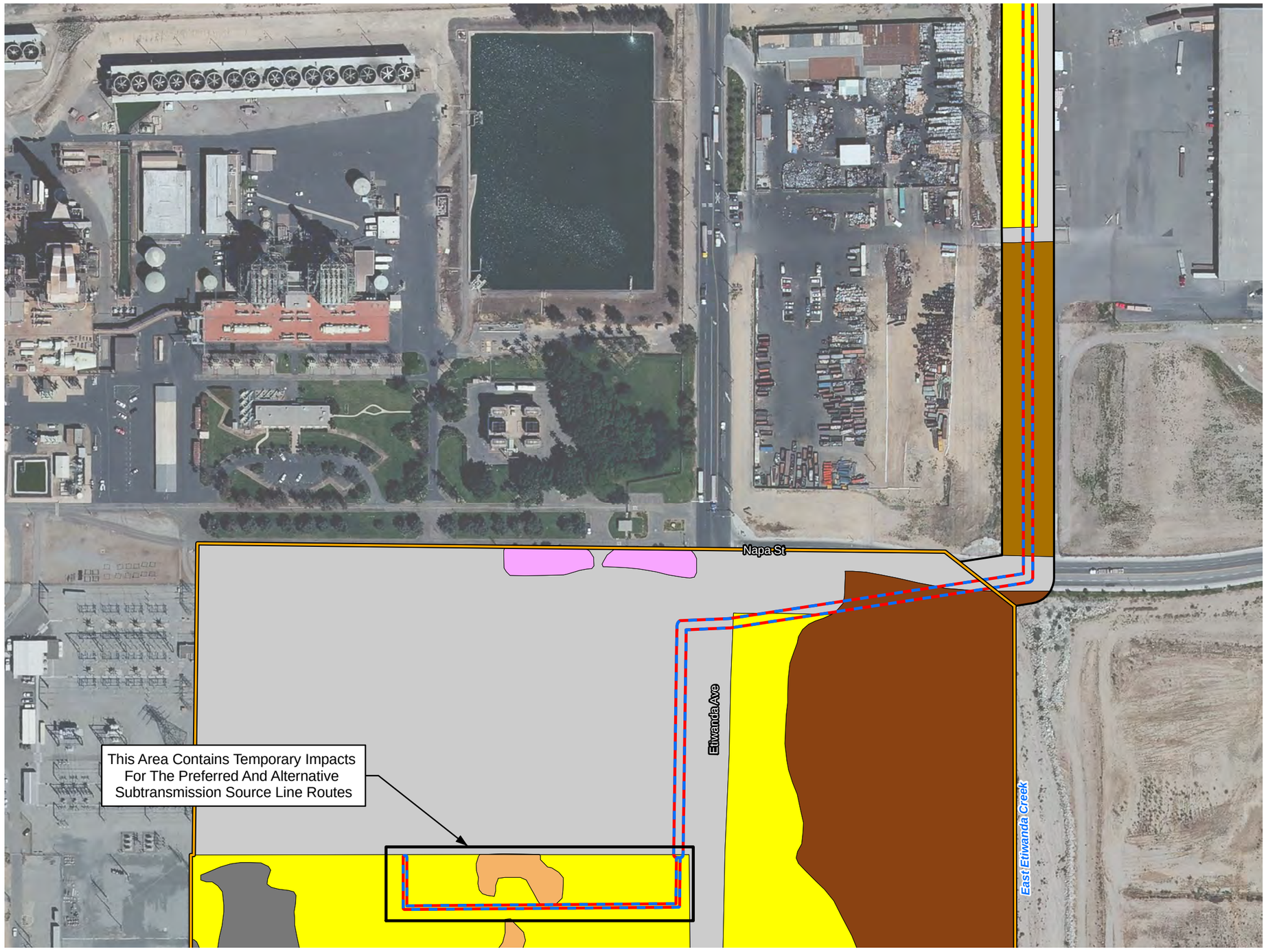
(Rev 08/04/10 JFG) R:\Projects\Edison\J046\Graphics\Bio\ex12_veg.pdf



Impacts - Preferred Subtransmission Source Line Route*

Impacts - Alternative Subtransmission Source Line Route

Preferred Substation Site

Alternative Substation Site

Etiwanda Substation

Alder Substation

Potential Staging Locations (Not To Scale)

Survey Area

Vegetation Types and Other Areas

Not Surveyed

Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Sage Scrub

Disturbed Mule Fat Scrub

Annual Grassland

Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub

Vineyards

Ruderal

Ornamental

Disturbed

Developed

Developed/Ornamental

Developed/Ruderal

Flood-control Channel

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Project Impacts – Vegetation Types and Other Areas

Exhibit 12AX

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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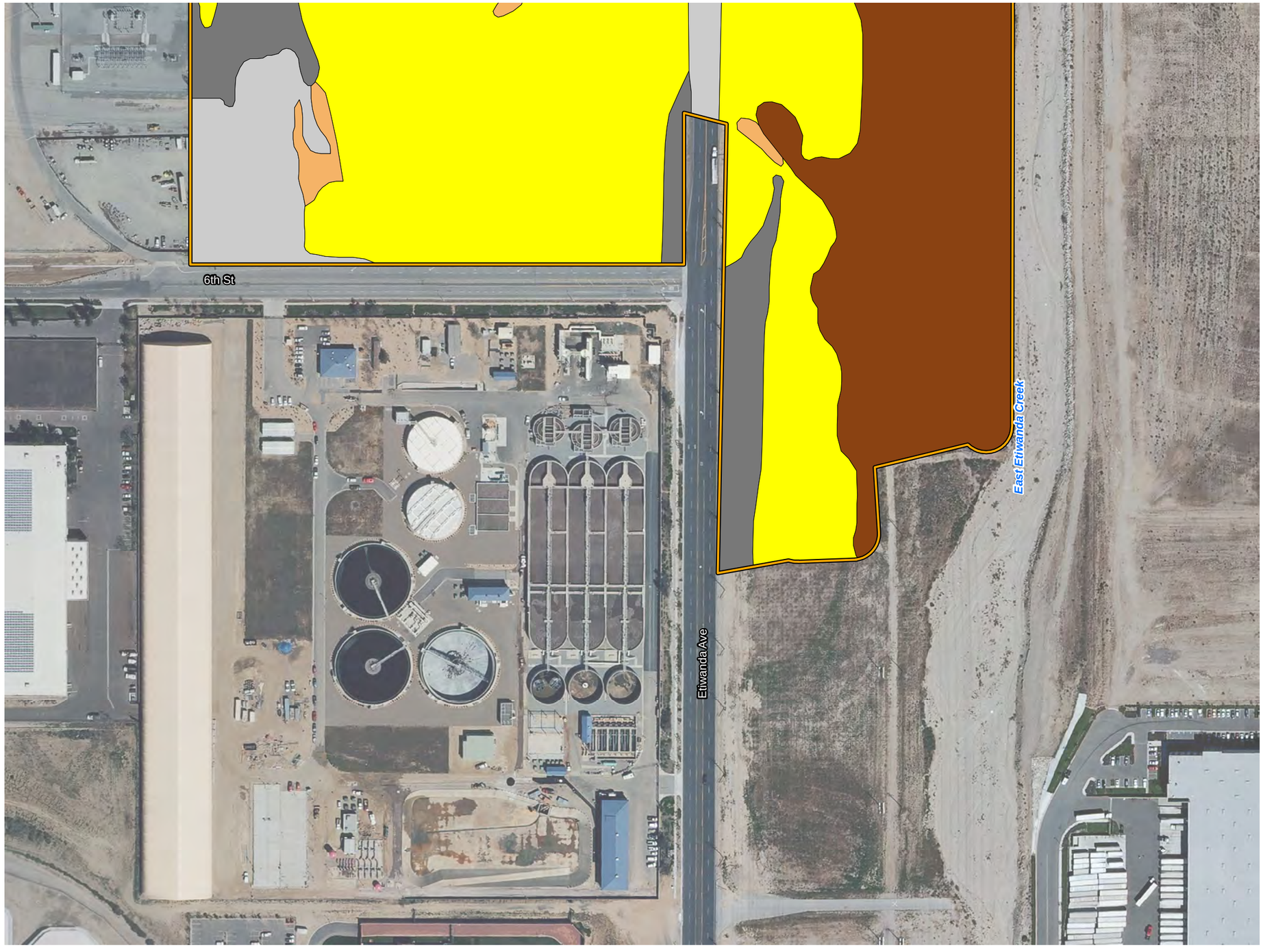

Impacts - Preferred Subtransmission Source Line Route*

Impacts - Alternative Subtransmission Source Line Route

Preferred Substation Site

Alternative Substation Site

Etiwanda Substation

Alder Substation

Potential Staging Locations (Not To Scale)

Survey Area

Vegetation Types and Other Areas

Not Surveyed

Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Alluvial Fan Sage Scrub

Disturbed Riversidean Sage Scrub

Disturbed Mule Fat Scrub

Annual Grassland

Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub

Vineyards

Ruderal

Ornamental

Disturbed

Developed

Developed/Ornamental

Developed/Ruderal

Flood-control Channel

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Project Impacts - Vegetation Types and Other Areas

Exhibit 12AY

Falcon Ridge Substation Project

N W E S

200 100 0 200 Feet

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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Biological impacts associated with the Proposed Project were evaluated with respect to the following special status biological issues:

- federally or State Endangered or Threatened species of plant or wildlife;
- non-listed species that meet the criteria in the definition of Rare or Endangered in the CEQA Guidelines (i.e., 14 *California Code of Regulations* Section 15380);[2]
- species designated as California Species of Special Concern;
- streambeds, wetlands, and their associated vegetation;
- habitats suitable to support a federally or State Endangered or Threatened species of plant or wildlife;
- habitat, other than wetlands, considered special status by regulatory agencies (USFWS, CDFG) or resource conservation organizations;
- other species or issues of concern to regulatory agencies or conservation organizations.

The actual and potential occurrence of these resources in the survey area was correlated with the significance criteria listed in the next section in order to determine whether Project impacts on these resources would be considered significant.

4.2 SIGNIFICANCE CRITERIA

The criteria for determining significant impacts on biological resources were developed in accordance with the State CEQA Guidelines. Section 15065(a) of the CEQA Guidelines states that a Project may have a significant effect on the environment if "...the Project has the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare, or threatened species". An evaluation of whether an impact on biological resources would be significant must consider both the resource itself and how that resource fits into a regional or local context. Significant impacts are those that would diminish or result in the loss of an important biological resource or those that would obviously conflict with local, State, or federal resource conservation plans, goals, or regulations. Impacts are sometimes locally adverse but not significant because, although they would result in an adverse alteration of existing conditions, they would not substantially diminish or result in the permanent loss of an important resource on a population- or region-wide basis.

[2] Section 15380 of the CEQA Guidelines indicates that a lead agency can consider a non-listed species (e.g., CNPS List 1B plants) to be Endangered, Rare, or Threatened for the purposes of CEQA if the species can be shown to meet the criteria in the definition of Rare or Endangered. For the purposes of this discussion, the current scientific knowledge on the population size and distribution for each special status species was considered in determining if a non-listed species met the definitions for rare and endangered according to Section 15380 of the CEQA Guidelines.

4.3 DIRECT IMPACTS

Many regulated biological resources are known to occur in the Project region, including special status plant and wildlife species, jurisdictional drainage features, and nesting bird activity. Direct impact analysis is subject to final Project design. Direct impacts on special status species and vegetation types resulting from this Project may come from the following construction activities:

- Constructing a new substation,
- Expanding facilities at existing substations,
- Constructing subtransmission source line routes,
- Installing and/or replacing subtransmission poles,
- Constructing new access and spur roads,
- Improving or repairing existing creek crossings,
- Constructing and removing transmission support structures,
- Equipment Staging for construction and line-pulling activities,
- Moving equipment and Project material.

Temporary impacts may include staging areas and pull and tension sites. Permanent impacts may include tower footings, new access roads, and substation construction and expansion footprints. Because the final design has not been finalized, the temporary or permanent nature of these impacts are not quantifiable at this time, but have been addressed together for reporting purposes.

The actual and potential occurrence of biological resources in the Project vicinity was correlated with the significance criteria described above to determine whether impacts from the Project on these resources would be significant. Potential direct impacts are described below.

4.3.1 Vegetation Types and Other Areas

The vegetation types and other areas that would be impacted by each Project element is shown in Table 6 and illustrated on Exhibit 12. These impacts are discussed in more detail below. Due to changes in the Project description after surveys had been completed, the vegetation was not mapped on part of the Preferred and Alternative Substation Sites and is shown on Table 6 and Exhibit 12 as “Not Surveyed”. These areas will be mapped prior to construction and vegetation impacts will be recalculated.

TABLE 6
VEGETATION TYPES AND OTHER AREAS IMPACTED
BY THE PROPOSED PROJECT

Vegetation Types and Other Areas	Project Impact				
	Preferred Subtransmission Source Line Route[1] (acres)	**Alternative Subtransmission Source Line Route (acres)**	**Preferred Substation Site (acres)**	**Alternative Substation Site (acres)**	**Etiwanda Substation (acres)**
Not Surveyed	0.00	0.00	2.75	1.99	0.00
Riversidean Alluvial Fan Sage Scrub	0.23	0.23	0.00	0.00	0.00
Disturbed Riversidean Alluvial Fan Sage Scrub	2.15	1.65	4.60	7.30	0.00
Disturbed Riversidean Sage Scrub	0.05	0.15	0.00	0.00	0.00
Disturbed Mule Fat Scrub	0.06	0.06	0.00	0.00	0.00
Annual Grassland	1.55	1.55	0.00	0.00	0.00
Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub	1.12	1.12	0.00	0.00	0.00
Vineyards	1.36	1.36	0.00	0.00	0.00
Ruderal	11.48	11.03	0.04	0.33	0.11
Ornamental	0.70	0.70	0.00	0.00	0.00
Disturbed	0.61	0.61	0.00	0.00	0.00
Developed	2.51	2.84	0.00	0.00	0.00
Developed/Ornamental	0.57	3.83	0.00	0.00	0.00
Developed/Ruderal	0.54	0.55	0.00	0.00	0.00
Flood Control Channel	0.13	0.13	0.00	0.00	0.00
Total Acreage	**23.06**	**25.81**	**7.39**	**9.62**	**0.11**

[1] The Proposed Telecommunications Route overlaps this component of the survey area. If the Project is implemented with the Alternative Subtransmission Source Line Route, then there will be additional impacts for the Proposed Telecommunications Route. These impacts have not been analyzed.

Riversidean Alluvial Fan Sage Scrub, Disturbed Riversidean Alluvial Fan Sage Scrub, Disturbed Riversidean Sage Scrub, and Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub

The Preferred Subtransmission Source Line Route would impact a total of 3.55 acres of Riversidean alluvial fan sage scrub, disturbed Riversidean alluvial fan sage scrub, disturbed Riversidean sage scrub, and annual grassland/disturbed Riversidean alluvial fan sage scrub, while the Alternative Subtransmission Source Line Route would impact 3.15 acres of these vegetation types. The Preferred Substation Site would impact 4.60 acres of disturbed Riversidean alluvial fan sage scrub while the Alternative Substation Site would impact 7.30 acres of disturbed Riversidean alluvial fan sage scrub. The loss of these vegetation types in the Project region would be considered a substantial adverse effect on the Riversidean alluvial fan sage scrub community. Direct grading and construction impacts to these vegetation types will be avoided to the maximum extent feasible in the final Project design. Native vegetation will be marked as “off limits” in construction plans and specifications and areas will be clearly marked with orange and red flagging in the field prior to construction. The presence of a Biological Monitor during Project construction would further ensure than any potential impacts

to these vegetation types are avoided. If impacts to these vegetation types are unavoidable, implementation of Mitigation Measure 1 would reduce this impact to a less than significant level.

Disturbed Mule Fat Scrub

Both the Preferred and Alternative Subtransmission Source Line Routes would impact 0.06 acre of disturbed mule fat scrub; neither the Preferred nor the Alternative Substation Sites would impact this vegetation type. This vegetation type occurs within an area delineated as under the jurisdiction of the USACE and CDFG. Both the Preferred and Alternative Subtransmission Source Lines Routes would temporarily impact 0.004 acre of "Waters of the U.S." and 0.006 acre of "Waters of the State" within the Etiwanda Substation (Exhibit 13). Impacts on these jurisdictional features would be considered adverse but less than significant; however, implementation of Mitigation Measure 2 would most likely be required by the resource agencies.

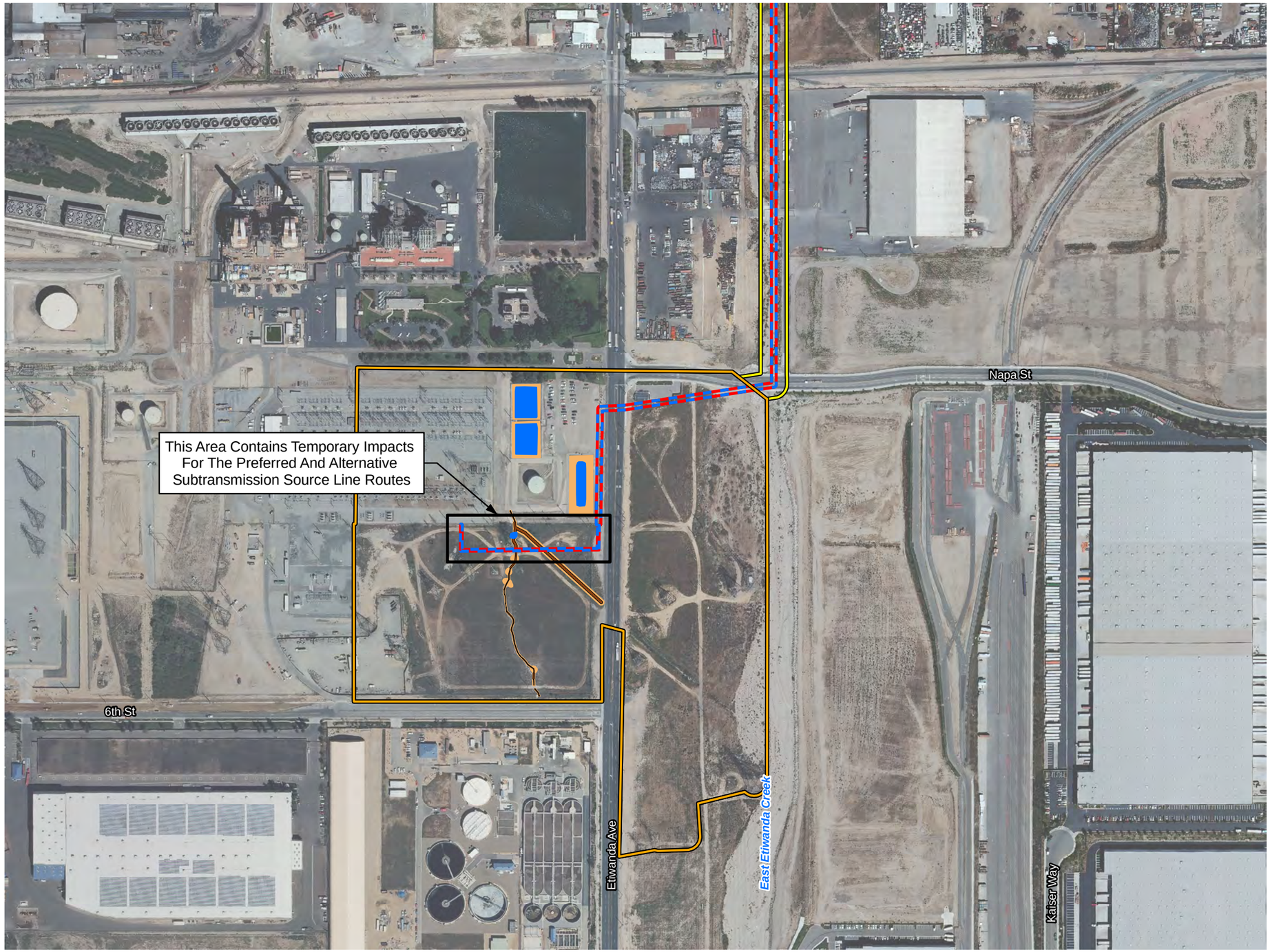
Annual Grassland and Ruderal

The Preferred Subtransmission Source Line Route would impact 13.03 acres of annual grassland and ruderal, while the Alternative Subtransmission Source Line Route would impact 12.58 acres of these vegetation types. The Preferred Substation Site would impact 0.04 acre of ruderal vegetation, while the Alternative Substation Site would impact 0.33 acre. In addition, Etiwanda Substation will impact 0.11 acre of ruderal vegetation. Although these areas are dominated by non-native species, they typically provide habitat for a variety of native plant and wildlife species. The loss of these vegetation types would be considered adverse, this loss would be limited in relation to the total amount of these vegetation types available in the Project region. Therefore, impacts on these vegetation types would be considered less than significant and no mitigation would be required.

Other Areas

The Preferred Subtransmission Source Line Route would impact a total of 6.42 acres of vineyard, ornamental, disturbed, developed, developed/ornamental, developed/ruderal, and flood-control channel while the Alternative Subtransmission Source Line Route would impact a total of 10.02 acres of these vegetation types and other areas. The Preferred Substation Site would not impact these vegetation types and other areas, while the Alternative Substation Site would impact 0.08 acre of developed areas. These areas generally are considered of low biological value because they lack vegetation or are vegetated by ornamental species; they also have a high level of human activity. Therefore, the loss of these vegetation types and other areas would be considered less than significant and no mitigation would be required.

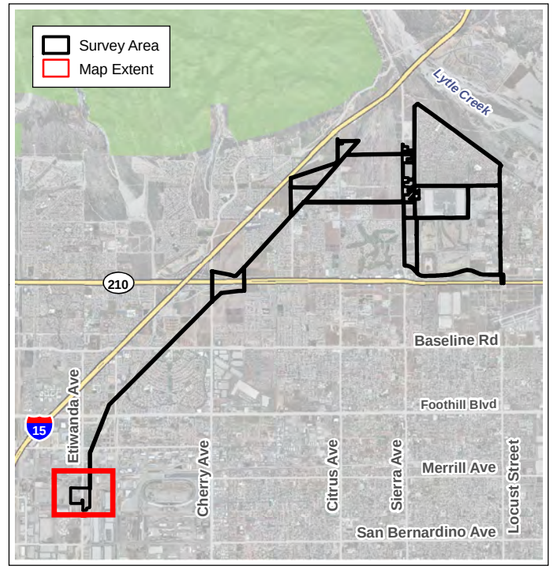
Flood-control channels are potentially under the jurisdiction of the USACE, the CDFG, and the RWQCB. The Preferred and Alternative Subtransmission Source Line Routes cross over the flood-control channel in parts of the survey area. The total acreage of potentially jurisdictional areas (including flood control channels and other vegetation types with jurisdictional features) is



Survey Area
Etiwanda Substation
CDFG Jurisdiction

USACE Jurisdiction

Open Water
Other Waters of the U.S.
Impacts - Preferred Subtransmission Source Line Route*
Impacts - Alternative Subtransmission Source Line Route



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Project Impacts – Jurisdictional Resources

Exhibit 13

Falcon Ridge Substation Project

N W E S

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**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*

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0.13 acre. Neither the Preferred nor Alternative Substation Sites would impact potentially jurisdictional areas. Direct grading and construction impacts on these areas will be avoided as subtransmission line routes will span the flood-control channels so that there will be no direct or indirect impacts. Therefore, impacts are considered less than significant and no mitigation would be required. If Project design changes and impacts to these areas are unavoidable then impacts would be considered potentially significant and mitigation would be required.

4.3.2 Wildlife

To assess impacts on wildlife, the total impact on particular vegetation types that provide habitat for wildlife was assessed (Table 6; Exhibit 12). The following discussion of wildlife impacts focuses on the common species occurring in the survey area.

General Habitat and Wildlife Loss and Wildlife Movement

The Preferred Subtransmission Source Line Route would result in the loss of approximately 5.10 acres and the Alternative Subtransmission Source Line Route would result in the loss of approximately 4.70 acres of native and non-native habitats (e.g., sage scrub and grassland vegetation types) that provide valuable nesting, foraging, roosting, and denning opportunities for a variety of wildlife species. The Preferred Substation Site would result in the loss of 4.60 acres and the Alternative Substation Site would result in the loss of 7.30 acres of these habitats. In addition, the Preferred Subtransmission Source Line Route would result in the loss of 17.96 acres and the Alternative Subtransmission Source Line Route would result in the loss of 21.11 acres of marginal habitats (i.e., ruderal and ornamental vegetation types and disturbed and developed areas) that provide lower quality wildlife habitat. The Preferred Substation Site would impact 0.04 acre of marginal habitats and the Alternative Substation Site would impact 0.33 acre of these marginal habitats. Marginal habitats, while lower in quality, provide nesting, foraging, roosting, denning, and dispersal opportunities for urban-tolerant species.

Removing or altering habitats on the Project would likely result in the loss of small mammals, reptiles, amphibians, and other slow-moving wildlife that live in the Project's direct impact area. More mobile wildlife species that are now using the survey area would be forced to move into the remaining areas of open space, which would consequently increase competition for available resources in those areas. This situation would result in the loss of individuals that cannot successfully compete.

The loss of native and non-native habitats that provide wildlife habitat is considered an adverse impact. However, the loss of habitat would not be expected to reduce wildlife populations below self-sustaining populations in the San Bernardino Valley. Therefore, this impact would be considered adverse, but less than significant. The loss of marginal habitats would be considered less than significant because of the low habitat value of these vegetation types and other areas.

Several common bird and raptor species may nest in the survey area. The Migratory Bird Treaty Act (MBTA) protects migratory birds, their nests, and eggs. If construction is initiated during the peak bird nesting season (i.e., March 15 to September 15), it could impact nesting birds protected by the MBTA. Additionally, *California Fish and Game Code,* Sections 3503, 3503.5, and 3513 protect active raptor nests. If construction is initiated during the peak raptor nesting season (i.e., February 1 to June 30), it could impact nesting raptors protected by the *California Fish and Game Code*. The loss of any active bird or raptor nest would be considered a potentially significant impact. Implementation of Mitigation Measure 3 would reduce this impact to a less than significant level.

Overall, the Proposed Project occurs within an urban area. Both the Preferred Subtransmission Source Line Route and Alternative Subtransmission Source Line Route would be constructed within or adjacent to existing streets, developed areas, or existing powerlines. Although some of these areas are adjacent to open space (e.g., open lots near both substation sites, and a segment of both the Preferred and Alternative Subtransmission Source Line Routes over the natural segment of Etiwanda Creek), once constructed, powerlines would not obstruct the movement of wildlife because they would be elevated and wildlife would be able to move along the dirt access roads underneath the powerlines. Additionally, neither the Preferred or Alternative Subtransmission Line Routes nor the substations would be expected to disrupt wildlife movement along Lytle Creek, which is approximately one mile from the nearest Proposed Project feature (i.e., Alternative Subtransmission Source Line Route).

Construction activities to install either the Preferred or Alternative Subtransmission Source Line Routes could temporarily disrupt local wildlife movement along the natural segment of Etiwanda Creek between Foothill Boulevard and the Etiwanda Substation because it would remove habitat and create dust and noise in this segment of the proposed impact area. This impact is expected to be adverse but less than significant because the impact area is limited to 18-feet wide while the creek width ranges from 60 or 100- feet wide (between Arrow Route and Napa Street) and 600-feet or greater along other less constrained portions of this segment of the creek; therefore, wildlife could continue to move along the creek in natural habitats adjacent to the proposed impact area. During active construction, wildlife movement may be deterred by noise and human activity; however, most wildlife movement would occur at night while construction activities would occur during the day. Additionally, wildlife in this segment of the creek is likely somewhat acclimated to noise and human activity due to the extensive urbanization and constrained nature of the creek along this segment. Construction activities would also be temporary in nature. Therefore, construction impacts on wildlife movement would be considered adverse, but less than significant.

4.3.3 Special Status Biological Resource Impacts

Implementation of the Proposed Project would result in impacts on special status plant and wildlife species that occur within or adjacent to the proposed impact area. Potential impacts on

special status species were evaluated by determining the impacts on habitat that the species are expected to occupy or based on the results of focused surveys conducted in spring/summer 2010.

Special Status Plant Species

Focused surveys for special status plant species were conducted in spring/summer 2010.Fifty-two of the 54 special status plant species listed in Table 2 either have no potential to occur or they were not observed during focused special status plant surveys. Therefore, there would be no impact on those species, and no mitigation would be required.

Two special status plant species were observed during the surveys and are discussed further below: Plummer's mariposa lily (CNPS List 1B.1) and Parry's spineflower (CNPS List 1B.1).

A total of 182 Plummer's mariposa lily individuals were observed during 2010 focused surveys (Exhibit 7). The Preferred and Alternative Subtransmission Source Line Routes would impact four individuals of Plummer's mariposa lily (Exhibit 14). The Preferred Substation Site would impact three individuals within the area that has been surveyed ; while the Alternative Substation Site would impact ten individuals of Plummer's mariposa lily within the area that has been surveyed. Additional individuals of Plummer's mariposa lily may occur within the area not surveyed; therefore, focused surveys will be completed in spring 2011. If additional Plummer's mariposa lilies are present within the unsurveyed area; it will be assumed that there would be no more than 1.8 individuals present in the 2.75 acre unsurveyed area. Therefore, this impact would be considered adverse but less than significant because the loss of these individuals would not adversely affect the regional population of this species. Therefore, no mitigation would be required. However, complete avoidance of these plant populations is recommended.

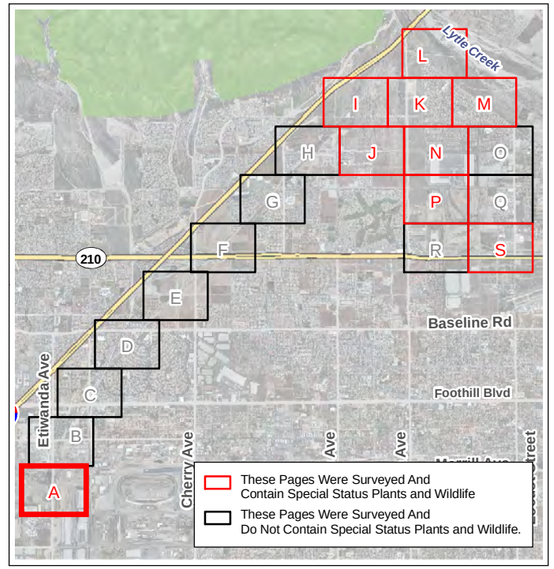
A total of 15,804 Parry's spineflower individuals were observed during 2010 focused surveys (Exhibit 7). The Preferred and Alternative Subtransmission Source Line Routes would impact 47 individuals of Parry's spineflower (Exhibit 14). The Preferred and Alternative Substation Sites would not impact Parry's spineflower within the area that has been surveyed. Additional individuals of Parry's spineflower may occur within the area not surveyed; therefore, focused surveys will be completed in spring 2011. Impacts to Parry's spineflower may be potentially significant since there potentially can be 6,000 individuals within a 2.5 acre area. Therefore, complete avoidance of this species would be recommended and individuals will be marked as "off limits" in construction plans and specifications. The presence of a Biological Monitor during Project construction would further ensure that any potential impacts to this species are avoided. If significant impacts to Parry's spineflower are unavoidable, implementation of Mitigation Measure 4 would reduce this impact to a less than significant level.

This Area Contains Temporary Impacts For The Preferred And Alternative Subtransmission Source Line Routes

- Plummer's Mariposa Lily Population Locations
- Parry's Spineflower Locations
- Parry's Spineflower Polygon Locations
- Area Generally Occupied By Los Angeles Pocket Mouse
- Not Surveyed*
- Survey Area
- Preferred Substation Site
- Alternative Substation Site
- Etiwanda Substation
- Impacts - Preferred Subtransmission Source Line Route**
- Impacts - Alternative Subtransmission Source Line Route

Note: Not Surveyed For Special Status Plants But Was Surveyed For Special Status Wildlife

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*



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Project Impacts - Special Status Plants and Wildlife Species

Exhibit 14A

Falcon Ridge Substation Project

N W E S

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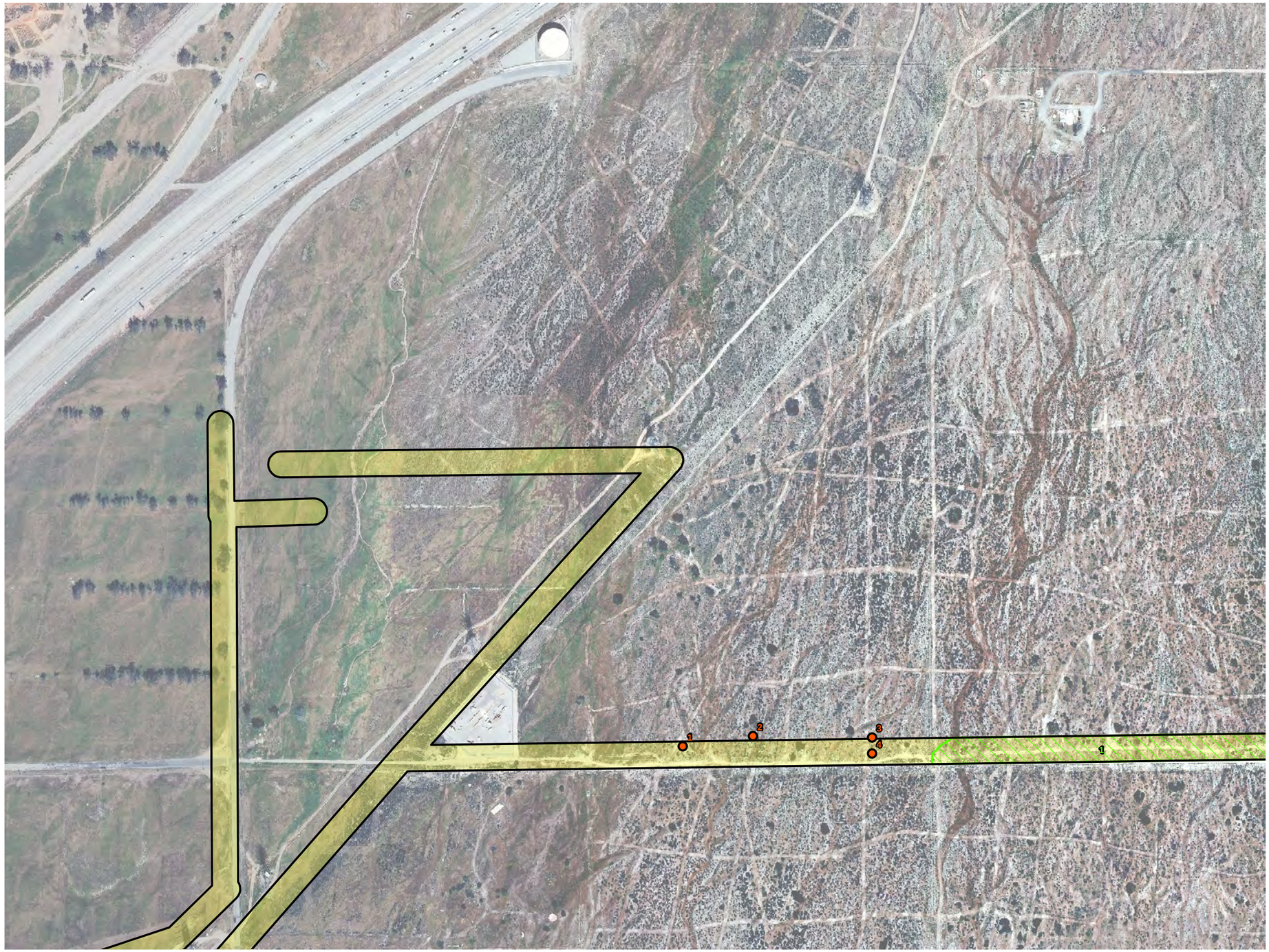
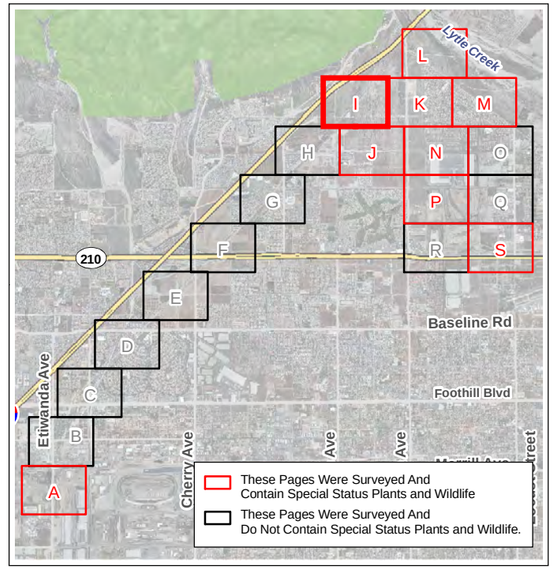


- Plummer's Mariposa Lily Population Locations
- Parry's Spineflower Locations
- Parry's Spineflower Polygon Locations
- Area Generally Occupied By Los Angeles Pocket Mouse
- Not Surveyed*
- Survey Area
- Preferred Substation Site
- Alternative Substation Site
- Etiwanda Substation
- Impacts - Preferred Subtransmission Source Line Route**
- Impacts - Alternative Subtransmission Source Line Route

Note: Not Surveyed For Special Status Plants But Was Surveyed For Special Status Wildlife

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*



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Project Impacts – Special Status Plants and Wildlife Species

Exhibit 14I

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

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Plummer's Mariposa Lily Population Locations

Parry's Spineflower Locations

Parry's Spineflower Polygon Locations

Area Generally Occupied By Los Angeles Pocket Mouse

Not Surveyed*

Survey Area

Preferred Substation Site

Alternative Substation Site

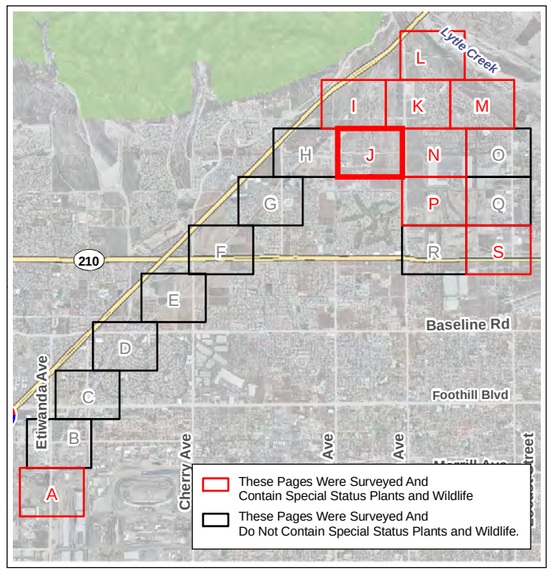
Etiwanda Substation

Impacts - Preferred Subtransmission Source Line Route**

Impacts - Alternative Subtransmission Source Line Route

**Note: Not Surveyed For Special Status Plants But Was Surveyed For Special Status Wildlife*

***Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*



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Project Impacts – Special Status Plants and Wildlife Species

Exhibit 14J

Falcon Ridge Substation Project

N W E S

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Plummer's Mariposa Lily Population Locations

Parry's Spineflower Locations

Parry's Spineflower Polygon Locations

Area Generally Occupied By Los Angeles Pocket Mouse

Not Surveyed*

Survey Area

Preferred Substation Site

Alternative Substation Site

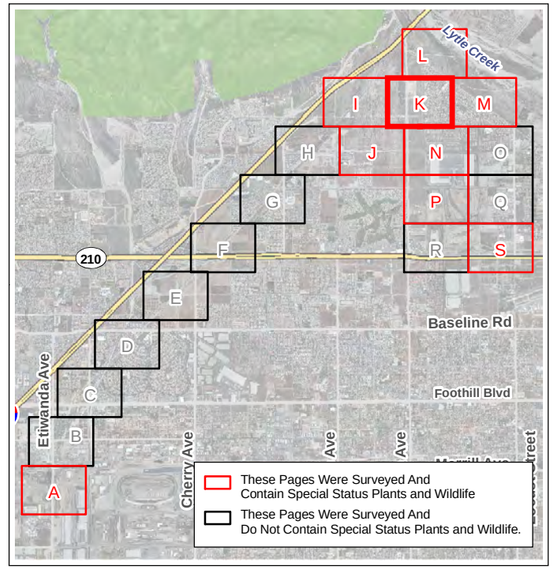
Etiwanda Substation

Impacts - Preferred Subtransmission Source Line Route**

Impacts - Alternative Subtransmission Source Line Route

**Note: Not Surveyed For Special Status Plants But Was Surveyed For Special Status Wildlife*

***Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*



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Project Impacts – Special Status Plants and Wildlife Species

Exhibit 14K

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

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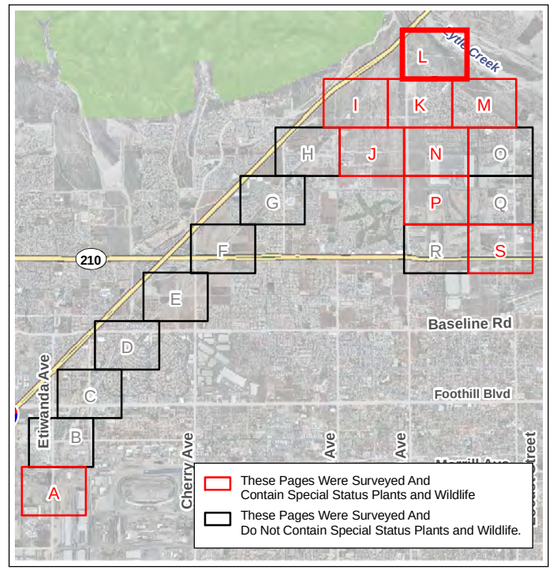
- Plummer's Mariposa Lily Population Locations
- Parry's Spineflower Locations
- Parry's Spineflower Polygon Locations
- Area Generally Occupied By Los Angeles Pocket Mouse
- Not Surveyed*
- Survey Area
- Preferred Substation Site
- Alternative Substation Site
- Etiwanda Substation
- Impacts - Preferred Subtransmission Source Line Route**
- Impacts - Alternative Subtransmission Source Line Route

**Note: Not Surveyed For Special Status Plants But Was Surveyed For Special Status Wildlife*

***Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*



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Project Impacts – Special Status Plants and Wildlife Species

Exhibit 14L

Falcon Ridge Substation Project

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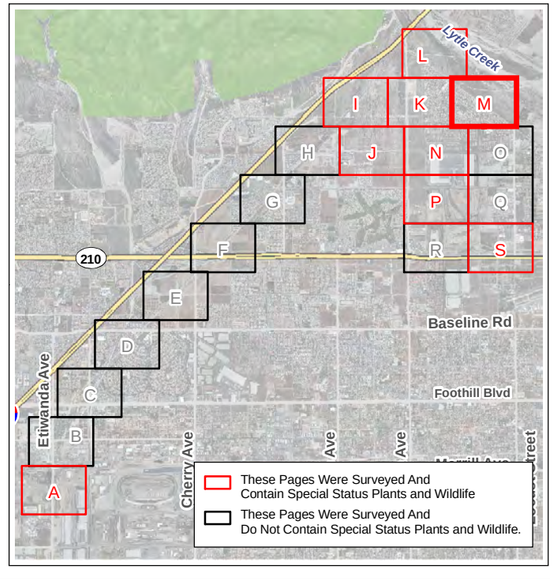
- Plummer's Mariposa Lily Population Locations
- Parry's Spineflower Locations
- Parry's Spineflower Polygon Locations
- Area Generally Occupied By Los Angeles Pocket Mouse
- Not Surveyed*
- Survey Area
- Preferred Substation Site
- Alternative Substation Site
- Etiwanda Substation
- Impacts - Preferred Subtransmission Source Line Route**
- Impacts - Alternative Subtransmission Source Line Route

*Note: Not Surveyed For Special Status Plants But Was Surveyed For Special Status Wildlife

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route



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Project Impacts – Special Status Plants and Wildlife Species

Exhibit 14M

Falcon Ridge Substation Project

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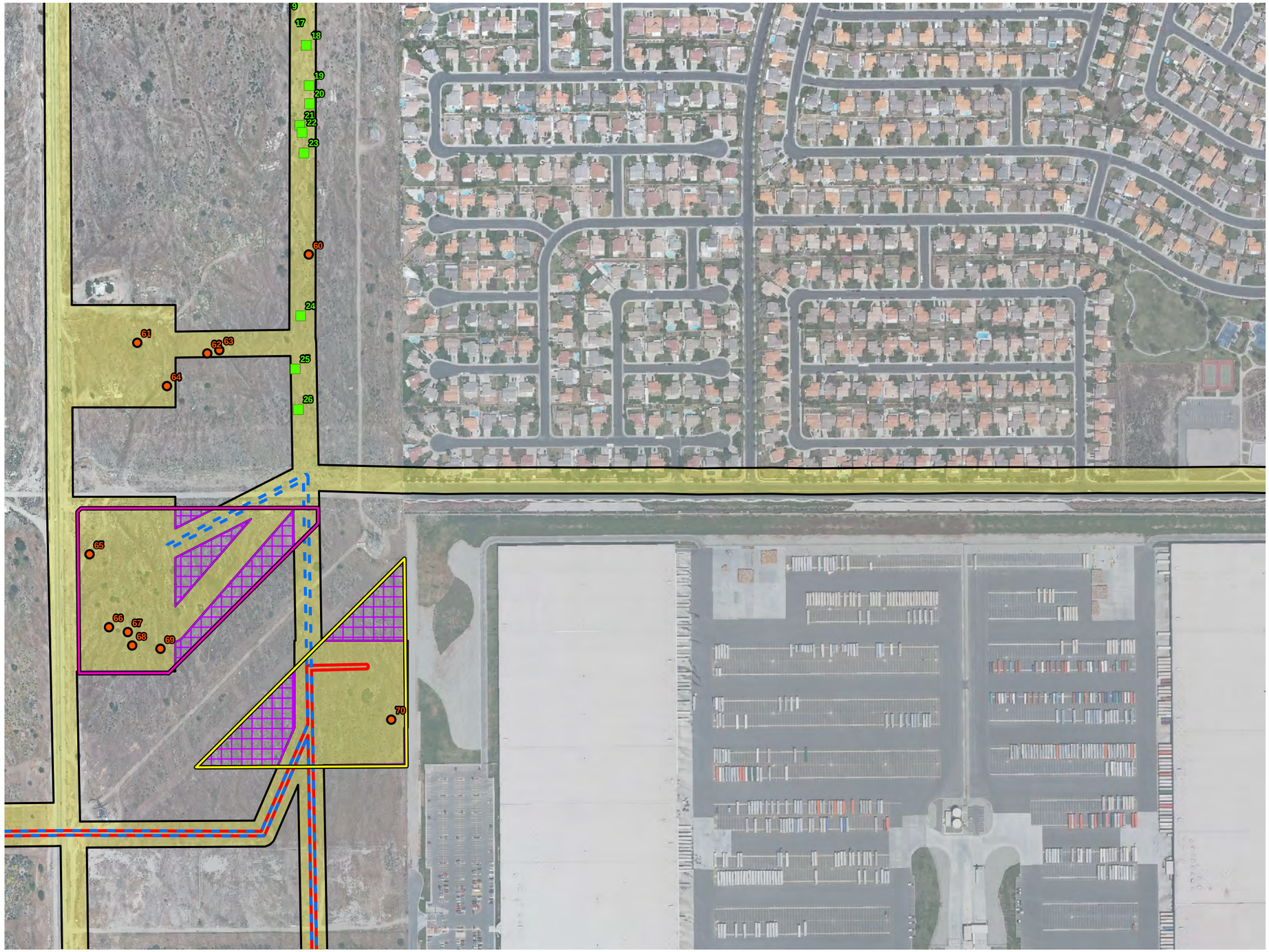


Plummer's Mariposa Lily Population Locations

Parry's Spineflower Locations

Parry's Spineflower Polygon Locations

Area Generally Occupied By Los Angeles Pocket Mouse

Not Surveyed*

Survey Area

Preferred Substation Site

Alternative Substation Site

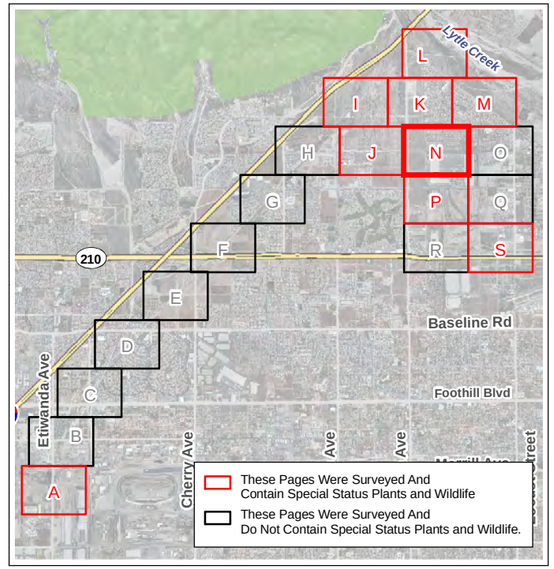
Etiwanda Substation

Impacts - Preferred Subtransmission Source Line Route**

Impacts - Alternative Subtransmission Source Line Route

Note: Not Surveyed For Special Status Plants But Was Surveyed For Special Status Wildlife

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*



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Project Impacts - Special Status Plants and Wildlife Species

Exhibit 14N

Falcon Ridge Substation Project

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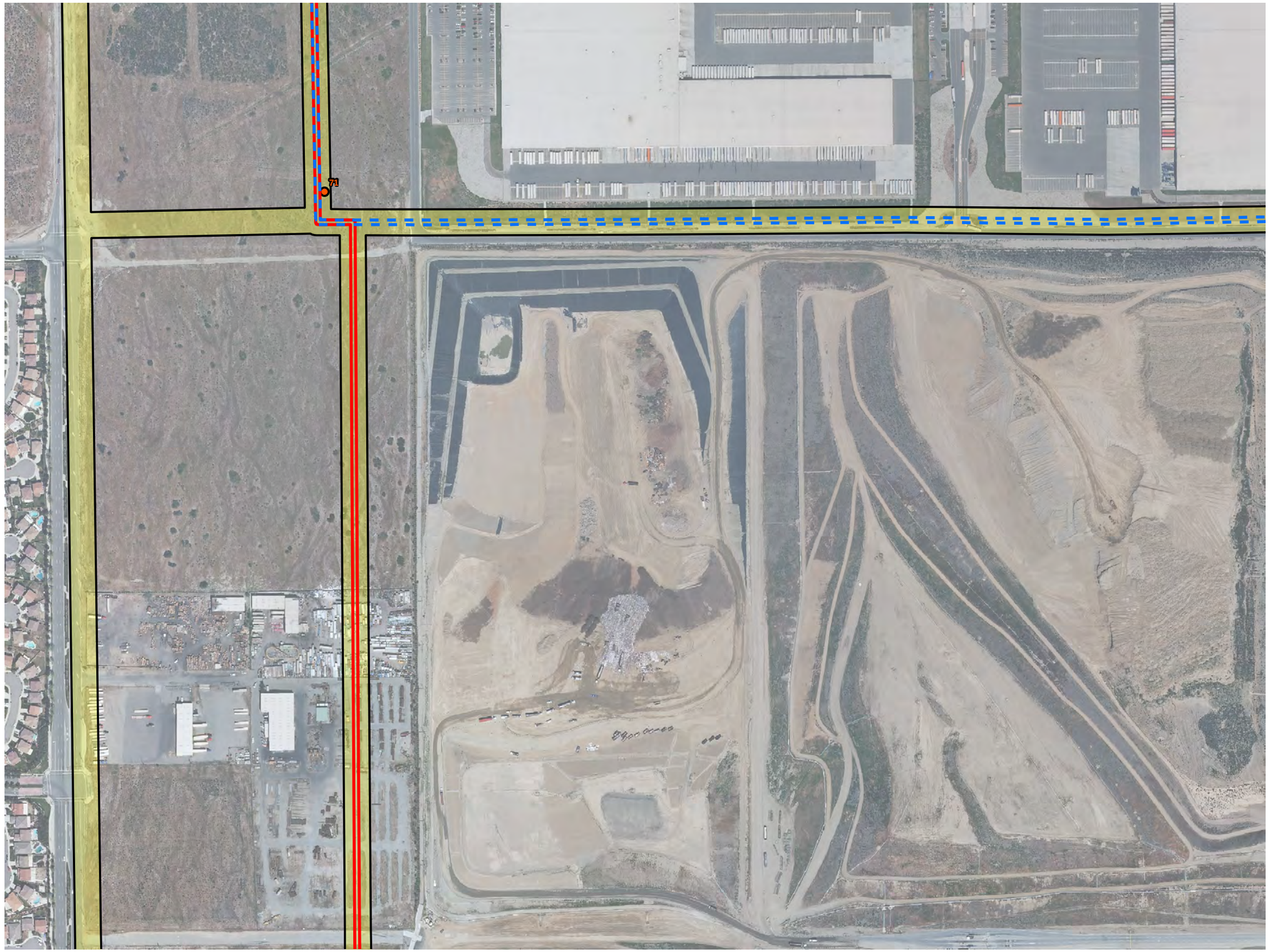
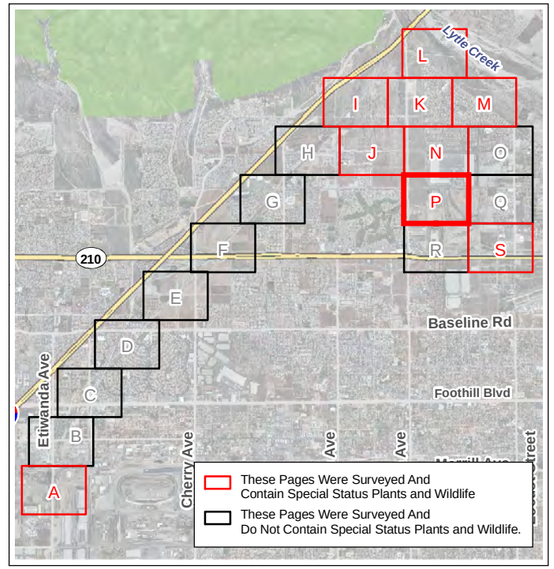


- Plummer's Mariposa Lily Population Locations
- Parry's Spineflower Locations
- Parry's Spineflower Polygon Locations
- Area Generally Occupied By Los Angeles Pocket Mouse
- Not Surveyed*
- Survey Area
- Preferred Substation Site
- Alternative Substation Site
- Etiwanda Substation
- Impacts - Preferred Subtransmission Source Line Route**
- Impacts - Alternative Subtransmission Source Line Route

Note: Not Surveyed For Special Status Plants But Was Surveyed For Special Status Wildlife

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*



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Project Impacts - Special Status Plants and Wildlife Species

Exhibit 14P

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

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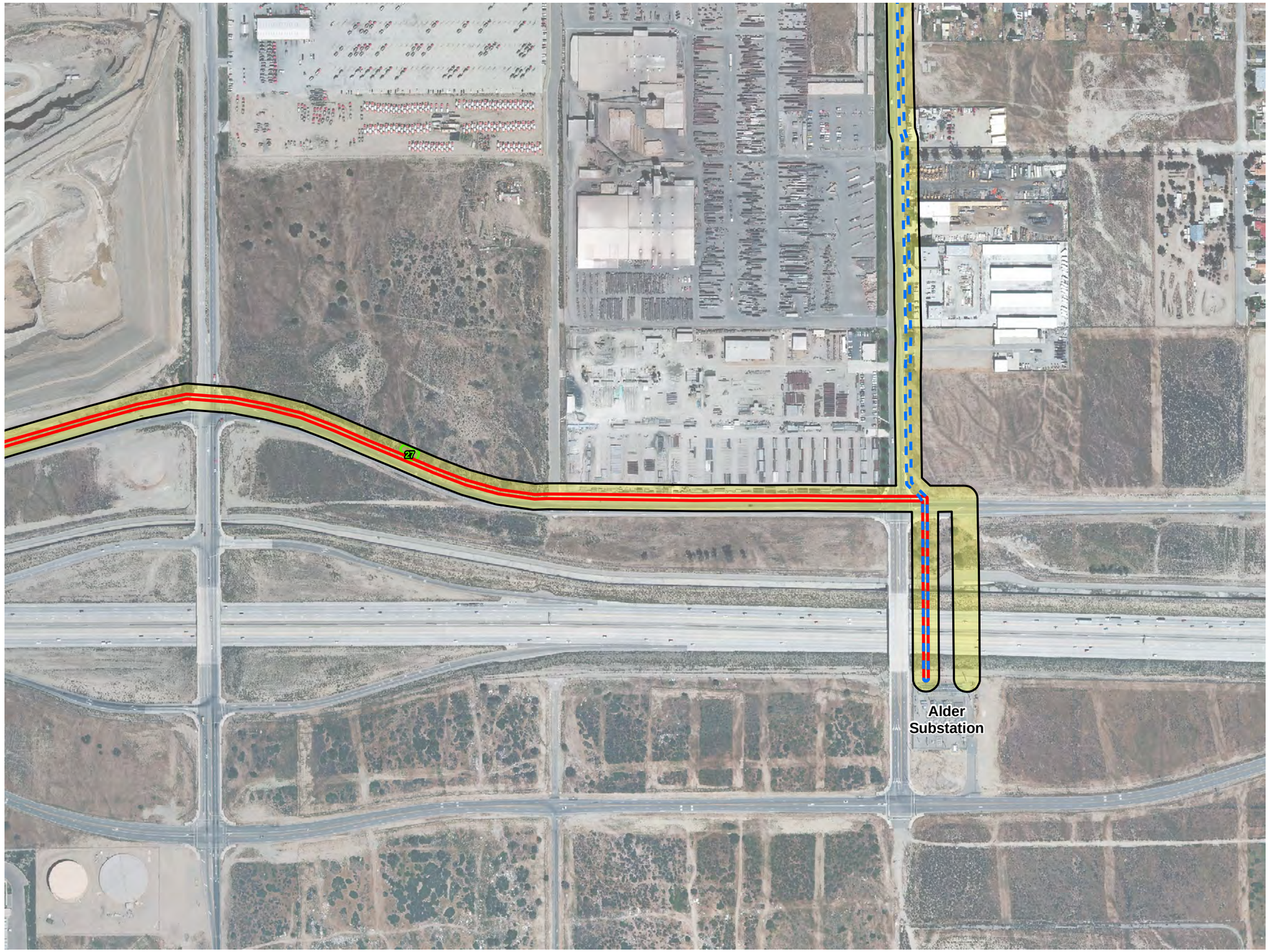

- Plummer's Mariposa Lily Population Locations
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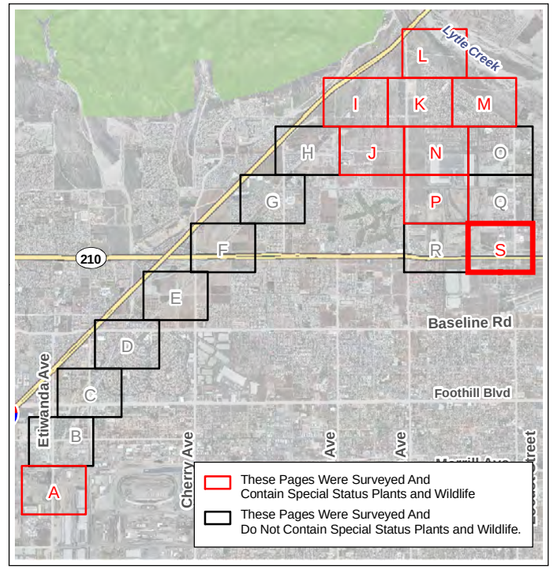
Note: Not Surveyed For Special Status Plants But Was Surveyed For Special Status Wildlife

**Note: The Proposed Telecommunications Route also follows the Preferred Subtransmission Source Line Route*



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Project Impacts - Special Status Plants and Wildlife Species

Exhibit 14S

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

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Wildlife

The Delhi sands flower-loving fly has limited potential to occur in the survey area. Focused surveys are currently being conducted within potentially suitable habitat in the survey area. If the Delhi sands flower-loving fly is not observed during focused surveys, there would be no impact and no mitigation would be required. If Delhi sands flower-loving fly is observed during focused surveys, complete avoidance of fly habitat is recommended, and the areas will be clearly marked with orange and red flagging in the field prior to construction. Fly habitat will be marked as "off limits" in construction plans and specifications. The presence of a Biological Monitor during Project construction would further ensure that any potential impacts to this species are avoided. If its habitat would be impacted by the Proposed Project, any impact on this species would be considered significant. Mitigation Measure 5 would be required to reduce the impact on this species to less than significant.

Fish

The arroyo chub, Santa Ana speckled dace, and Santa Ana sucker are not expected to occur in the survey area due to lack of suitable habitat. Therefore, there would be no impact on these species and no mitigation would be required.

Amphibians

The arroyo toad, California red-legged frog, and Sierra Madre yellow-legged frog are not expected to occur in the survey area due to lack of suitable habitat. Therefore, there would be no impact on these species and no mitigation would be required.

The western spadefoot may occur in the survey area, most likely in the natural segment of Etiwanda Creek between Foothill Boulevard and the southern boundary of the survey area. However, no potential breeding pools were noted during surveys. The Proposed Project (both the Preferred and Alternative Subtransmission Source Line Routes) would result in the loss of a limited amount of foraging habitat for this species. This loss would be considered an adverse, but less than significant impact. Therefore, no mitigation would be required.

Reptiles

The southwestern pond turtle, orange-throated whiptail, southern rubber boa, two-striped garter snake, and northern red-diamond rattlesnake are not expected to occur in the survey area due to lack of suitable habitat or because the survey area is outside of the species' range. Therefore, there would be no impact on these species and no mitigation would be required.

The coast horned lizard was observed and coast patch-nosed snake may occur in the survey area. These species would be most likely to occur in the Riversidean sage scrub and grassland vegetation types in the survey area. Due to the limited amount of habitat loss relative to the

availability of habitat for these species in the region, impacts on these species would be considered adverse, but less than significant and no mitigation would be required.

Birds

Swainson's hawk, bald eagle, mountain plover, western yellow-billed cuckoo, long-eared owl, southwestern willow flycatcher, Vermilion flycatcher, least Bell's vireo, yellow warbler, and yellow-breasted chat are not expected to occur in the survey area either due to lack of suitable habitat or because they are not known to winter in the Project vicinity. Therefore, there would be no impact on these species and no mitigation would be required.

Although there is suitable habitat present in the survey area, the coastal California gnatcatcher is not expected to occur because it was not observed during focused surveys. The gnatcatcher's absence has been established in the area surveyed during the breeding season; however, the focused surveys are still in progress for a portion of the survey area and its absence will not be confirmed until focused surveys are completed. If no coastal California gnatcatchers are observed, there would be no impact on this species and no mitigation would be required. If this species is found to be present during one of the remaining focused surveys, complete avoidance of habitat is recommended, and the areas will be clearly marked with orange and red flagging in the field prior to construction. Gnatcatcher habitat will be marked as "off limits" in construction plans and specifications. The presence of a Biological Monitor during Project construction would further ensure that any potential impacts to this species are avoided. If its habitat would be impacted by the Proposed Project, impacts would be considered significant. Mitigation Measure 6 would be required to reduce the impact on this species to less than significant.

Loggerhead shrike was observed, grasshopper sparrow may occur, and tricolored blackbird has a limited potential to occur in the survey area. The shrike and sparrow have some potential to nest in the survey area, but the blackbird is only expected for foraging. Impacts on active nests would be avoided with implementation of Mitigation Measure 3, described below. Therefore, there should be no impact on nests of these species, and no additional mitigation would be required.

Oregon vesper sparrow has potential to winter in the survey area, most likely in the grassland vegetation types. Due to the limited amount of habitat loss relative to the availability of habitat for this species in the region, impacts on Oregon vesper sparrow would be considered adverse, but less than significant and no mitigation would be required.

Golden eagle, northern harrier, and white-tailed kite have potential to forage in the survey area but would not be expected to nest in the survey area. The Preferred Subtransmission Source Line Route would result in the loss of approximately 18.00 acres and the Alternative Subtransmission Source Line Route would result in the loss of approximately 17.15 acres of quality foraging habitat (i.e., sage scrub, mule fat, grassland, ruderal, and vineyard vegetation

types) for these species. The Preferred Substation Site would result in the loss of 4.64 acres and the Alternative Substation Site would result in the loss of 7.63 acres of these foraging areas. Etiwanda Substation would result in the loss of 0.11 acre of these foraging areas. The loss of up to 25.63 acres (i.e., highest impact for a subtransmission line route plus the highest impact for a substation) of foraging habitat for these raptor species would cumulatively contribute to the ongoing regional and local loss of foraging habitat. Impacts on foraging habitat would be considered adverse, but would not be expected to appreciably affect the overall population of these species given the amount of suitable foraging habitat in the region. Therefore, impacts on raptor foraging habitat would be considered adverse but less than significant and no mitigation would be required.

Burrowing owl is not expected to occur in the survey area because it was not observed during focused surveys. Although the burrowing owl did not nest in the survey area in 2010, burrowing owl has been reported from many locations near the survey area (CDFG 2010a). This species is known to move seasonally and there is potential for this species to nest in the survey area in the future. Impacts on an active burrow would be avoided with implementation of Mitigation Measure 3, described below. Therefore, there should be no impact on nest burrows of this species.

Mammals

San Bernardino flying squirrel, pallid San Diego pocket mouse, and Stephens' kangaroo rat are not expected to occur in the survey area due to lack of suitable habitat or because the survey area is outside the species' range. Therefore, there would be no impact on these species and no mitigation would be required.

San Bernardino kangaroo rat is not expected to occur in the survey area because it was not trapped during focused survey efforts. Therefore, there would be no impact on this species and no mitigation would be required.

Pallid bat, Townsend's big-eared bat, western yellow bat, western mastiff bat, and pocketed free-tailed bat have potential to forage in the survey area. The Preferred Subtransmission Source Line Route would result in the loss of approximately 18.00 acres, and the Alternative Subtransmission Source Line Route would result in the loss of approximately 17.15 acres of quality foraging habitat (i.e., sage scrub, mule fat, grassland, ruderal, and vineyard vegetation types) for these bat species. The Preferred Substation Site would result in the loss of 4.64 acres and the Alternative Substation Site would result in the loss of 7.63 acres of these foraging areas for bat species. The loss of up to 25.63 acres (i.e., highest impact for a transmission route plus the highest impact for a substation) of foraging habitat for these bat species would cumulatively contribute to the ongoing regional and local loss of foraging habitat. Impacts on foraging habitat would be considered adverse but would not be expected to appreciably affect the overall population of these species given the amount of suitable foraging habitat in the region.

Therefore, impacts on bat foraging habitat would be considered adverse but less than significant and no mitigation would be required.

Limited suitable bat roosting habitat is present in the survey area (e.g., old buildings). Few bats are expected to roost in the survey area; pallid bat and Townsend's big-eared bat have limited potential to roost in old buildings in the survey area. Due to the limited loss of bat roosts relative to the availability of roosts in the region, impacts on these species would be considered less than significant and no mitigation would be required.

Los Angeles pocket mouse occurs in the survey area (Exhibit 11A). The Preferred and Alternative Substation Sites would not impact occupied habitat for this species because it was not trapped during focused survey efforts. The Preferred and Alternative Subtransmission Source Line Routes would impact occupied habitat for this species (Exhibit 14A). This impact would be considered potentially significant; therefore, impacts to Los Angeles pocket mouse will be avoided to the maximum extent feasible in the final Project Design. Habitat areas will be marked as "off limits" in construction plans and specifications. The presence of a Biological Monitor during Project construction would further ensure that any potential impacts to this species are avoided. If impacts to this species are unavoidable, a pre-construction trapping program shall be conducted by a qualified Biologist (one holding the necessary Memorandum of Understanding to handle the species) immediately prior to construction. The objective of the trapping program shall be to trap any Los Angeles pocket mice within the impact area and release them back into the same home area following completion of construction activities. The installation of artificial burrows in the release areas would likely be required to provide immediate shelter in unoccupied burrows for released animals.

San Diego black-tailed jackrabbit, northwestern San Diego pocket mouse, and San Diego desert woodrat were observed in the survey area, and southern grasshopper mouse and American badger may occur in the survey area. Due to the limited amount of habitat loss relative to the availability of habitat for these species in the region, impacts on these species would be considered adverse, but less than significant and no mitigation would be required.

4.4 INDIRECT IMPACTS

Indirect impact analysis is subject to final Project design. It is anticipated that there may be some indirect impacts resulting from the Project; possible indirect impacts are described below.

4.4.1 Noise Impacts

Noise levels in the survey area would be expected to increase over present levels during construction of the Proposed Project. During construction, temporary noise impacts have the potential to disrupt foraging, nesting, roosting, and/or denning activities for a variety of wildlife species. Although noise impacts may also increase over present levels due to normal operation of the Project, the Project noise increase would be minor. Wildlife species stressed by noise

may disperse from the habitat located in the vicinity of the Project. This impact is considered adverse but less than significant and no mitigation would be required.

If the construction noise levels are expected to cause impacts to wildlife species, proposed noise-generating activities should incorporate setbacks, berms or walls to minimize the effects of noise on open space areas adjacent to the site.

4.4.2 Increased Dust and Urban Pollutants

Grading and other construction activities would disturb soils and result in the accumulation of dust on the surface of the leaves of trees, shrubs, and herbs. The respiratory function of the plants in the area could be impaired if dust accumulation is excessive. This indirect impact is considered adverse but less than significant since it would not reduce plant populations below self-sustaining levels in the region. Therefore, no mitigation would be required.

During construction, excess silt, petroleum, or chemicals on the soil surface within the construction could be washed into drainages during storms and may affect areas downstream of the Proposed Project. Adverse effects on water quality could indirectly impact species that use riparian areas within the watershed by affecting the food web interactions (e.g., abundance of insects or other prey) or through biomagnification (i.e., the build up of pesticides to toxic levels in higher trophic levels). With implementation of standard Best Management Practices, this impact is expected to be less than significant. Therefore, no mitigation would be required.

No dust or urban pollutants would be expected during operation of the Proposed Project. Therefore, there would be no impact and no mitigation would be required.

4.4.3 Invasive Exotic Plant Species

There would be no landscaping associated with the Proposed Project. Therefore, there would be no impact as a result of invasive species and no mitigation would be required.

4.4.4 Night Lighting

There would be no additional lighting associated with the proposed subtransmission lines. Therefore, there would be no impact as a result of night lighting and no mitigation would be required.

The proposed substations would include night lighting, which may result in an indirect impact on the open space habitat remaining adjacent to the proposed development. Night lighting may impact the behavioral patterns of nocturnal and crepuscular (i.e., active at dawn and dusk) wildlife adjacent to the lighted areas. Of greatest concern is the effect on small, ground-dwelling animals that use the darkness to hide from predators and on owls, which are specialized night foragers. Night lighting will be directed away from open space areas and shielding will be incorporated in the final Project design to ensure ambient lighting is not increased; therefore

impacts would be considered adverse but less than significant and no mitigation would be required.

4.4.5 Human Activity

Following Project implementation, human activity is not expected to substantially increase along the subtransmission lines or the substations. Additionally, the Proposed Project occurs within an urban context and therefore, wildlife in the vicinity are expected to be somewhat tolerant of human activity. Therefore, this impact would be considered less than significant and no mitigation would be required.

5.0 MITIGATION MEASURES

This section focuses on the development of mitigation measures for Proposed Project impacts that were found to be significant or potentially significant. Strategies to mitigate each impact to a less than significant level are identified and described below.

5.1 MITIGATION MEASURE 1 – RIVERSIDEAN ALLUVIAL FAN SAGE SCRUB, DISTURBED RIVERSIDEAN ALLUVIAL FAN SAGE SCRUB, DISTURBED RIVERSIDEAN SAGE SCRUB, AND ANNUAL GRASSLAND/DISTURBED RIVERSIDEAN ALLUVIAL FAN SAGE SCRUB

Project impacts on sage scrub vegetation types shall be avoided and/or minimized to the maximum extent practicable. Residual impacts on Riversidean alluvial fan sage scrub shall be mitigated at a minimum replacement ratio of 3:1. Residual impacts on disturbed Riversidean alluvial fan sage scrub, disturbed Riversidean sage scrub, and annual grassland/disturbed Riversidean alluvial fan sage scrub vegetation shall be mitigated at a minimum replacement ratio 1:1. Prior to clearing, grubbing, or grading of a subtransmission line or substation, a detailed restoration program shall be prepared for approval by SCE and the appropriate resource agencies. Restoration shall consist of seeding and planting containers of appropriate Riversidean alluvial fan sage scrub species. The program shall include, at a minimum, the following items:

1. ***Responsibilities and qualifications of the personnel to implement and supervise the plan.*** The responsibilities of the landowner, specialists, and maintenance personnel that would supervise and implement the plan shall be specified.

2. ***Site selection.*** The mitigation site shall be determined in coordination with SCE and the resource agencies. The site shall either be located in the survey area or in a dedicated open space area, or suitable adjacent off-site open space shall be obtained/purchased. Selected sites shall not result in the removal of a biologically valuable resource (e.g., native grassland or special status species).

3. ***Site preparation and planting implementation.*** The site preparation shall include (a) protection of existing native species; (b) trash and weed removal; (c) native species

salvage and reuse (i.e., seed collection and duff); (d) topsoil relocation; (e) soil treatments (i.e., imprinting, decompacting); (f) temporary irrigation installation; (g) erosion-control measures if appropriate (i.e., rice or willow wattles); (h) seed mix application; and (i) container species planting.

4. ***Schedule.*** A schedule shall be developed that includes planting to occur in late fall and early winter (i.e., between October 1 and January 30).

5. ***Maintenance plan/guidelines.*** The maintenance plan shall include (a) weed control; (b) herbivory control; (c) trash removal; (d) irrigation system maintenance; (e) maintenance training; and (f) replacement planting. The maintenance plan shall also include biological monitoring during maintenance activities if they occur during the bird breeding/nesting season (March 15–September 15).

6. ***Monitoring plan.*** The monitoring plan shall include (a) qualitative monitoring (i.e., photographs and general observations); (b) quantitative monitoring (i.e., randomly placed transects); (c) performance criteria, as approved by the resource agencies (as appropriate); (d) monthly reports for the first year and reports every other month thereafter; and (e) annual reports for five years, which shall be submitted to the resource agencies (as appropriate).

7. ***Long-term preservation.*** Long-term preservation of the site shall also be outlined in the conceptual mitigation plan to ensure the mitigation site is not impacted by future development.

Additionally, the limits of grading shall be clearly marked, and temporary fencing or other appropriate markers shall be placed around any sage scrub vegetation adjacent to work areas prior to the commencement of any ground-disturbing activity or native vegetation removal. No construction access, parking, or storage of equipment or materials shall be permitted within the marked areas.

SCE shall be fully responsible for the implementation of the Riversidean Alluvial Fan Sage Scrub Revegetation Program until the restoration areas have met the success criteria outlined in the program. SCE and the appropriate resource agencies shall have final authority over mitigation area sign-off. The site shall be monitored and maintained for five years to ensure successful establishment of Riversidean alluvial fan sage scrub habitat within the restored and created areas.

5.2 MITIGATION MEASURE 2 – JURISDICTIONAL AREAS

The Proposed Project has been designed to avoid and/or minimize impacts on USACE and CDFG jurisdictional areas, and areas potentially within these jurisdictions. These areas will be marked as “not to be impacted” in construction plans and specifications.

If impacts to jurisdictional areas are determined to be necessary, a jurisdictional delineation shall be conducted to describe the type and extent of "Waters of the U.S.", including wetlands, and/or "Waters of the State" within the proposed impact area. The presence or absence of wetlands shall be verified through an analysis of any hydrological conditions, hydrophytic vegetation, and hydric soils pursuant to the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008).

Prior to any impacts on jurisdictional areas, permits/agreements from the USACE, the CDFG, and the RWQCB shall be obtained for direct and indirect impacts on areas within these agencies' jurisdictions. Acquisition and implementation of the permit/agreement may constrain proposed activities. SCE shall implement all measures required by the permits/agreements as issued by the resource agencies. Mitigation will include restoration of disturbed jurisdictional areas. A minimum replacement ratio of 1:1, or as otherwise agreed to by the resource agencies, would be required to ensure that there would be no net loss of habitat value.

5.3 MITIGATION MEASURE 3 – MIGRATORY BIRD TREATY ACT (MBTA) AND NESTING RAPTORS

In order to avoid impacts on nesting birds and raptors (common or special status), Project initiation shall be scheduled outside the breeding season (i.e., March 15 – September 15 for nesting birds; February 1 – June 30 for nesting raptors). If Project timing requires that work be initiated during this time period, a pre-construction survey shall be conducted by a qualified Biologist for nesting birds and/or raptors within seven days prior to clearing of any vegetation or any work within 500 feet of existing powerlines/structures. If the Biologist does not find any active nests within the impact area, the vegetation clearing/construction work shall be allowed to proceed.

If the Biologist finds an active nest within the construction area and determines that the nest may be impacted or breeding activities substantially disrupted, the Biologist will delineate an appropriate buffer zone around the nest depending on the sensitivity of the species and the nature of the construction activity. Any nest found during survey efforts will be mapped on the construction plans. The active site will be protected until nesting activity has ended to ensure compliance with the Migratory Bird Treaty Act and *California Fish and Game Code*. To protect any nest site, the following restrictions to construction activities shall be required until nests are no longer active as determined by a qualified Biologist: (1) clearing limits will be established within a buffer around any occupied nest (the buffer shall be 300-500 feet for raptors), unless otherwise determined by a qualified Biologist and (2) access and surveying will be restricted within the buffer of any occupied nest, unless otherwise determined by a qualified Biologist. Encroachment into the buffer area around a known nest shall only be allowed if the Biologist determines that the proposed activity would not disturb the nest occupants. Construction can proceed when the qualified Biologist has determined that fledglings have left the nest or the nest has failed.

5.4 MITIGATION MEASURE 4 – PARRY'S SPINEFLOWER

Impacts on Parry's spineflower shall be avoided and/or minimized to the maximum extent practicable. SCE shall be required to mitigate for residual impacts on this species through preparation and implementation of a Parry's Spineflower Mitigation Plan. Prior to clearing, grubbing, or grading, a qualified Biologist shall prepare a detailed mitigation plan that focuses on (1) avoiding impacts on Parry's spineflower to the extent practicable through Project planning; (2) minimizing impacts; (3) rectifying impacts through the repair, rehabilitation, or restoration of the impacted environment; (4) reducing or eliminating the impact by preservation and maintenance operations during the life of the Project; and (5) compensating for impacts by replacing or providing substitute resources or environments.

If avoidance is not possible then a mitigation plan shall be reviewed and approved by SCE prior to site disturbance.

A pre-construction survey during the peak flowering period (approximately April to June [CNPS 2010]) shall be conducted by a qualified Biologist the spring prior to construction. The area surveyed will include the entire proposed impact area, including the entire Preferred Substation Site (if this site is selected), the Alternative Substation Site (if this site is selected), and any staging areas. The locations of each plant within the impact area shall be clearly delineated with brightly colored flagging.

Impacts on Parry's spineflower shall be mitigated by seed collection. The seeds shall then be placed into a suitable mitigation site in the undeveloped portion of the survey area or at an approved off-site location. A qualified Biologist shall be selected by SCE to prepare and implement the mitigation plan. The detailed mitigation plan shall include those measures listed below.

- Seed ripeness shall be monitored every two weeks by a qualified Biologist and/or a qualified seed collector at the existing spineflower locations to determine when the seeds are ready for collection. A qualified seed collector shall collect all the seeds from the plants to be impacted when the seeds are ripe. The seeds shall be cleaned and stored by a qualified nursery or institution with appropriate storage facilities.

- The mitigation site shall be located in dedicated open space in the survey area or at an off-site mitigation site. The mitigation site shall not be within the road easement and shall not be located in a fuel modification zone. The mitigation site shall not attempt to enhance existing populations and shall not be impacted by any pesticides or herbicides used on adjacent properties.

- Topsoil shall be collected from areas with limited amounts of weeds from the impacted population and re-spread in the selected mitigation site, as approved by the qualified Biologist.

- The spineflower mitigation site shall be prepared for seeding as described in the mitigation plan.

- The topsoil shall be re-spread in the selected location as approved by a qualified Biologist. Approximately 60 to 80 percent of the seeds collected shall be spread in the fall following soil preparation. The remainder of the seeds shall be kept in storage for subsequent seeding, if necessary.

- A detailed maintenance and monitoring plan shall be developed by a qualified Biologist. The plan shall include detailed descriptions of maintenance appropriate for the mitigation site, monitoring requirements, and annual report requirements, and shall have the full authority to suspend any operation in the survey area which is, in the qualified Biologist's opinion, not consistent with the plan. Any disputes regarding the consistency of an action with the plan shall be resolved by SCE and the qualified Biologist.

- The performance criteria for Parry's spineflower shall mimic the native populations that will be impacted. The performance criteria shall be determined by conducting point-intercept transects throughout the areas to be impacted. The data will then be used to calculate the percent cover of spineflower and the native plant palette to be used. The performance goal will be to have the same percent cover of spineflower with <10 percent non-native weed species.

- If the performance criterion is not achieved following the first season, remediation measures shall be implemented prior to seeding with the remaining contingency of seeds. Remedial measures shall include at a minimum: soils testing, control of invasive species, soil amendments, and physical disturbance of the planted areas by raking or similar actions. Additional mitigation measures may be suggested as determined appropriate by the qualified Biologist.

5.5 MITIGATION MEASURE 5 – DELHI SANDS FLOWER-LOVING FLY

Focused surveys for Delhi sands flower-loving fly are currently in progress within all suitable habitat in the Ontario Recovery Unit. If no Delhi sands flower-loving flies are found, no further mitigation shall be required. If Delhi sands flower-loving fly is observed in the survey area, the Proposed Project shall avoid all occupied and potentially occupied habitat for this species. If there would be a residual impact on habitat for this species, authorization to proceed shall be required from the USFWS. The mitigation/compensation for the loss of Delhi sands flower-loving fly habitat will be approved through either a Section 7 or 10 Consultation of the Federal Endangered Species Act. Specific measures to avoid, minimize, and/or compensate for direct take of the fly and/or the loss of habitat will be developed during consultation with the resource agencies. Measures developed in the consultation process will be implemented to the satisfaction of the resource agencies.

5.6 MITIGATION MEASURE 6 – COASTAL CALIFORNIA GNATCATCHER

Focused surveys for the coastal California gnatcatcher are currently in progress within all suitable habitat in the survey area. If no coastal California gnatcatchers are found, no further mitigation shall be required. If coastal California gnatcatchers are observed in the survey area, the Proposed Project shall avoid all occupied and potentially occupied habitat for this species. If there would be a residual impact on habitat for this species, authorization to proceed shall be required from the USFWS. The mitigation/compensation for the loss of gnatcatcher habitat will be approved through either a Section 7 or 10 Consultation of the Federal Endangered Species Act. Specific measures to avoid, minimize, and/or compensate for direct take of the gnatcatcher and/or the loss of habitat will be developed during consultation with the resource agencies. Measures developed in the consultation process will be implemented to the satisfaction of the resource agencies.

6.0 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Implementation of the recommended measures will mitigate biological impacts to a level that is considered less than significant.

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APPENDIX A

PLANT AND WILDLIFE COMPENDIA

PLANT COMPENDIUM

Species
GYMNOSPERMS
PINACEAE - PINE FAMILY
FLOWERING PLANTS
CLASS DICOTYLEDONES (DICOTS)
AMARANTHACEAE - AMARANTH FAMILY
*Amaranthus albus**   tumbleweed
ANACARDIACEAE - SUMAC FAMILY
Rhus trilobata   skunkbush
*Schinus molle**   Peruvian pepper tree
APOCYNACEAE - DOGBANE FAMILY
*Nerium oleander**   oleander
ASCLEPIADACEAE - MILKWEED FAMILY
Asclepias eriocarpa   Indian milkweed
ASTERACEAE (COMPOSITAE) - SUNFLOWER FAMILY
Ambrosia acanthicarpa   annual bursage
Artemisia californica   California sagebrush
Baccharis salicifolia   mule fat
*Centaurea melitensis**   tocalote
Chaenactis glabriuscula   yellow pincushion
*Chamomilla suaveolens**   common pineapple weed
Conyza canadensis   common horseweed
Ericameria sp.   goldenbush
Ericameria pin   goldenbush
Erigeron foliosus var. *foliosus*   leafy daisy
Eriophyllum confertiflorum   golden yarrow
Filago californica   fluffweed
*Filago gallica**   narrow-leaved filago
*Gazania linearis**   gazania
Gutierrezia sarothrae   San Joaquin matchweed
*Hedypnois cretica**   Crete hedypnois

PLANT COMPENDIUM
(Continued)

Species
Helianthus annuus western sunflower
Heterotheca grandiflora telegraph weed
*Hypochaeris glabra** smooth cat's ear
*Lactuca serriola** prickly lettuce
Lepidospartum squamatum scale-broom
Lessingia filaginifolia California aster
Lessingia glandulifera var. *glandulifera* valley lessingia
*Sonchus oleraceus** common sow-thistle
Stephanomeria exigua wreath stephanomeria
Stylocline gnaphaloides everlasting nest straw
Tetradymia comosa cotton thorn
Uropappus lindleyi silver puffs
BORAGINACEAE - BORAGE FAMILY
Amsinckia menziesii rancher's fiddleneck
Cryptantha intermedia common cryptantha
Cryptantha muricata prickly cryptantha
Pectocarya linearis comb-bur
Pectocarya penicillata winged pectocarya
Plagiobothrys canescens valley popcornflower
BRASSICACEAE (CRUCIFERAE) - MUSTARD FAMILY
*Brassica tournefortii** wild turnip
*Hirschfeldia incana** shortpod mustard
Lepidium nitidum peppergrass/shining peppergrass
*Sisymbrium irio** London rocket
CACTACEAE - CACTUS FAMILY
Opuntia littoralis coastal prickly pear
Opuntia parryi Parry's cholla

PLANT COMPENDIUM
(Continued)

Species
CAPRIFOLIACEAE - HONEYSUCKLE FAMILY
Sambucus mexicana blue elderberry
CARYOPHYLLACEAE - PINK FAMILY
*Silene gallica** windmill pink/common catchfly
Spergularia sp. sand spurrey
CHENOPODIACEAE - GOOSEFOOT FAMILY
*Atriplex semibaccata** Australian saltbush
*Chenopodium album** lamb's quarters
Chenopodium californicum California goosefoot
*Salsola tragus** Russian thistle
CISTACEAE - ROCK-ROSE FAMILY
Helianthemum scoparium peak rush-rose
CONVOLVULACEAE - MORNING-GLORY FAMILY
Calystegia macrostegia morning-glory
CRASSULACEAE - STONECROP FAMILY
Crassula connata pigmy-weed
CUCURBITACEAE - GOURD FAMILY
Marah macrocarpus wild cucumber/man-root
EUPHORBIACEAE - SPURGE FAMILY
*Chamaesyce maculata** spotted spurge
Croton californicus California croton
Eremocarpus setigerus doveweed/turkey mullein
*Ricinus communis** castor bean
FABACEAE (LEGUMINOSAE) - LEGUME FAMILY
Lotus purshianus Spanish clover
Lotus scoparius deerweed/California broom
Lotus strigosus strigose lotus
Lupinus bicolor miniature lupine
Lupinus sparsiflorus Coulter's lupine

PLANT COMPENDIUM
(Continued)

Species
Lupinus truncatus truncate lupine/collar lupine
*Melilotus officinalis** yellow sweetclover
GERANIACEAE - GERANIUM FAMILY
*Erodium botrys** long-beaked filaree
*Erodium cicutarium** red-stemmed filaree
HYDROPHYLLACEAE - WATERLEAF FAMILY
Emmenanthe penduliflora whispering bells
Eriodictyon trichocalyx hairy yerba santa
Phacelia cicutaria caterpillar phacelia
Phacelia distans common phacelia
Phacelia ramosissima branching phacelia
LAMIACEAE (LABIATAE) - MINT FAMILY
*Marrubium vulgare** common horehound
Salvia apiana white sage
Salvia columbariae chia
Salvia mellifera black sage
Trichostema lanceolatum vinegar weed
MALVACEAE - MALLOW FAMILY
Malacothamnus fasciculatus chaparral bushmallow
*Malva parviflora** cheeseweed
MORACEAE - FIG FAMILY
Ficus sp.
MYOPORACEAE - MYOPORUM FAMILY
*Myoporum laetum** myoporum
MYRTACEAE - MYRTLE FAMILY
Eucalyptus sp.* gum
ONAGRACEAE - EVENING PRIMROSE FAMILY
Camissonia bistorta California sun cup
Camissonia californica mustard-like evening primrose

PLANT COMPENDIUM
(Continued)

Species
OROBANCHACEAE - BROOM-RAPE FAMILY
Orobanche bulbosa chaparral broom-rape
PAPAVERACEAE - POPPY FAMILY
Dicentra chrysantha golden ear-drops
Eschscholzia californica California poppy
PLANTAGINACEAE - PLANTAIN FAMILY
Plantago erecta dwarf plantain/California plantain
POLEMONIACEAE - PHLOX FAMILY
Eriastrum sapphirinum annual woolly-star/sapphire woolly-star
Gilia angelensis Los Angeles phlox/Los Angeles gilia
Navarretia atractyloides holly-leaved skunkweed
POLYGONACEAE - BUCKWHEAT FAMILY
Chorizanthe parryi var. parryi Parry's spine-flower
Chorizanthe staticoides Turkish rugging
Eriogonum fasciculatum var. *fasciculatum* California buckwheat
Eriogonum gracile slender buckwheat
Lastarriaea coriacea lastarriaea
Pterostegia drymarioides pterostegia/notch leaf
Rumex hymenosepalus wild rhubarb
PORTULACACEAE - PURSLANE FAMILY
Calandrinia ciliata red maids
RANUNCULACEAE - CROWFOOT FAMILY
Delphinium parryi ssp. *parryi* Parry's larkspur/blue larkspur
ROSACEAE - ROSE FAMILY
Adenostoma fasciculatum chamise
Prunus ilicifolia holly-leaved cherry
SALICACEAE - WILLOW FAMILY
Salix exigua narrow-leaved willow
Salix gooddingii black willow

PLANT COMPENDIUM
(Continued)

Species
SCROPHULARIACEAE - FIGWORT FAMILY
Penstemon spectabilis royal penstemon
SOLANACEAE - NIGHTSHADE FAMILY
*Datura stramonium** jimson weed
*Nicotiana glauca** tree tobacco
Solanum douglasii Douglas' nightshade
ZYGOPHYLLACEAE - CALTROP FAMILY
*Tribulus terrestris** puncture vine
CLASS MONOCOTYLEDONES (MONOCOTS)
ARECACEAE (PALMAE) - PALM FAMILY
*Washingtonia robusta** Mexican fan palm
LILIACEAE - LILY FAMILY
Calochortus plummerae Plummer's mariposa lily
Dichelostemma capitatum blue dicks
Muilla maritima rough muilla
Yucca whipplei Our Lord's candle
POACEAE [GRAMINEAE] - GRASS FAMILY
Achnatherum coronatum giant needlegrass
*Avena barbata** slender wild oat
*Avena fatua** wild oat
*Bromus diandrus** ripgut grass
Bromus madritensis ssp. *rubens** foxtail chess
*Bromus tectorum** cheat grass
*Cynodon dactylon** bermuda grass
*Hordeum murinum** foxtail barley
*Lamarckia aurea** goldentop grass
Leymus condensatus giant wild rye
*Poa annua** annual bluegrass

PLANT COMPENDIUM
(Continued)

Species
*Schismus barbatus**   Mediterranean schismus
*Vulpia myuros**   foxtail fescue
** non-native species*

WILDLIFE COMPENDIUM

Species
Reptiles
PHRYNOSOMATIDAE - ZEBRA-TAILED, FRINGE-TOED, SPINY, TREE, SIDE-BLOTCHED, AND HORNED LIZARDS
Sceloporus occidentalis western fence lizard
Uta stansburiana side-blotched lizard
Phrynosoma coronatum coast horned lizard
TEIIDAE - WHIPTAIL LIZARDS
Aspidoscelis [Cnemidophorus] tigris stejnegeri coastal western whiptail
Birds
ODONTOPHORIDAE - QUAILS
Callipepla californica California quail
CATHARTIDAE - NEW WORLD VULTURES
Cathartes aura turkey vulture
ACCIPITRIDAE - HAWKS
Buteo jamaicensis red-tailed hawk
FALCONIDAE - FALCONS
Falco sparverius American kestrel
Falco columbarius merlin
CHARADRIIDAE - PLOVERS
Charadrius vociferus killdeer
COLUMBIDAE - PIGEONS & DOVES
Columba livia * rock pigeon
Zenaida macroura mourning dove
TYTONIDAE - BARN OWLS
Tyto alba barn owl
APODIDAE - SWIFTS
Aeronautes saxatalis white-throated swift
TROCHILIDAE - HUMMINGBIRDS
Calypte anna Anna's hummingbird
TYRANNIDAE - TYRANT FLYCATCHERS
Sayornis nigricans black phoebe
Sayornis saya Say's phoebe
Myiarchus cinerascens ash-throated flycatcher

WILDLIFE COMPENDIUM
(Continued)

Species
Tyrannus vociferans Cassin's kingbird
Tyrannus verticalis western kingbird
LANIIDAE - SHRIKES
Lanius ludovicianus loggerhead shrike
CORVIDAE - JAYS & CROWS
Aphelocoma californica western scrub-jay
Corvus brachyrhynchos American crow
Corvus corax common raven
ALAUDIDAE - LARKS
Eremophila alpestris horned lark
HIRUNDINIDAE - SWALLOWS
Stelgidopteryx serripennis northern rough-winged swallow
Petrochelidon pyrrhonota cliff swallow
Hirundo rustica barn swallow
AEGITHALIDAE - BUSHTITS
Psaltriparus minimus bushtit
TROGLODYTIDAE - WRENS
Thryomanes bewickii Bewick's wren
SYLVIIDAE - GNATCATCHERS
Polioptila caerulea blue-gray gnatcatcher
MIMIDAE - THRASHERS
Mimus polyglottos northern mockingbird
STURNIDAE - STARLINGS
Sturnus vulgaris * European starling
PARULIDAE - WARBLERS
Dendroica coronata yellow-rumped warbler
EMBERIZIDAE - SPARROWS & JUNCOS
Pipilo maculatus spotted towhee
Pipilo crissalis California towhee
Chondestes grammacus lark sparrow

WILDLIFE COMPENDIUM
(Continued)

Species
Melospiza melodia song sparrow
Zonotrichia leucophrys white-crowned sparrow
CARDINALIDAE - GROSBEAKS & BUNTINGS
Pheucticus melanocephalus black-headed grosbeak
ICTERIDAE - BLACKBIRDS
Sturnella neglecta western meadowlark
Euphagus cyanocephalus Brewer's blackbird
Quiscalis mexicanus great-tailed grackle
Molothrus ater brown-headed cowbird
Icterus cucullatus hooded oriole
Icterus bullockii Bullock's oriole
FRINGILLIDAE - FINCHES
Carpodacus mexicanus house finch
Spinus [Carduelis] psaltria lesser goldfinch
PASSERIDAE - OLD WORLD SPARROWS
Passer domesticus house sparrow *
Mammals
LEPORIDAE - HARES & RABBITS
Sylvilagus audubonii desert cottontail
Lepus californicus black-tailed jackrabbit
SCIURIDAE - SQUIRRELS
Spermophilus beecheyi California ground squirrel
GEOMYIDAE - POCKET GOPHERS
Thomomys bottae Botta's pocket gopher
HETEROMYIDAE - POCKET MICE & KANGAROO RATS
Perognathus longimembris brevinasus Los Angeles pocket mouse
MURIDAE - MICE, RATS, AND VOLES
Microtus californicus California vole
Neotoma sp. woodrat
Peromyscus maniculatus deer mouse

WILDLIFE COMPENDIUM
(Continued)

Species
CANIDAE - WOLVES & FOXES
Canis latrans coyote
Canis familiaris domestic dog
MUSTELIDAE - WEASELS, SKUNKS & OTTERS
Mustela frenata long-tailed weasel
Invertebrates
PIERIDAE - WHITES, SULFURS, & ORANGETIPS
Pontia protodice common (checkered) white
* introduced species

APPENDIX B

SPECIAL STATUS PLANT SURVEY REPORT

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August 23, 2010

Andrew Keller
Southern California Edison
2244 Walnut Grove Avenue, GO1 Quad 3A
Rosemead, California 91770

VIA EMAIL
Andrew.Keller@sce.com

Subject: Results of Focused Plant Surveys for the Falcon Ridge Substation Project, San Bernardino County, California

Dear Mr. Keller:

This Letter Report presents the findings of focused plant surveys conducted along the Falcon Ridge Substation Project (hereafter referred to as "the Proposed Project") in San Bernardino County, California (Exhibits 1 and 2). The survey area for the Proposed Project is approximately 100 feet in diameter where new powerlines are proposed, and also includes alternative sites for a substation (Exhibit 3). The approximate 412-acre survey area is located in the City of Fontana and in unincorporated San Bernardino County on the U.S. Geological Survey (USGS) Devore, Guasti, and Fontana 7.5-minute quadrangles (Exhibit 2). One named blueline stream, Etiwanda Creek, and an unnamed blueline stream are located in the survey area; Lytle Creek is located just east of the survey area. Topography in the survey area is relatively flat with elevations ranging from approximately 1,090 to 1,930 feet above mean sea level (msl).

The Proposed Project involves the construction of a new substation to meet forecasted electrical demands in the Cities of Rancho Cucamonga, Fontana, Rialto, and the surrounding areas of unincorporated San Bernardino County. The preferred Project alternative would include the construction of a new 66/12-kilovolt (kV) distribution substation (Falcon Ridge Substation), and the installation of 2 new 66-kV subtransmission source lines to connect the proposed Falcon Ridge Substation to the existing Etiwanda 220/66-kV Substation and Alder 66/12-kV Substation. In order to accommodate the connection of the subtransmission source line, a 66-kV switchrack position at Alder Substation would need to be equipped, and the operating and transfer bus would need to be extended. The Proposed Project would also include the construction of 3 new underground 12-kV distribution getaways, the installation of new telecommunications facilities at the proposed Falcon Ridge Substation, installation of telecommunications fiber-optic cable on the proposed 66-kV subtransmission source lines, and modification of the existing telecommunications facilities at the Etiwanda and Alder Substations to connect the proposed substation to the Southern California Edison (SCE) telecommunications network.

METHODS

Botanical surveys were floristic in nature and consistent with the current protocols created by the California Department of Fish and Game (CDFG) (CDFG 2009). Due to changes in the Project description after plant surveys had been completed,

the special status plant surveys were not conducted in part of the survey area that is shown as "Not Surveyed" (Exhibits 2 and 3). These areas occur in the Preferred and Alternative Substation Sites and will be surveyed next spring. Reference populations were monitored for annual and difficult-to-detect target species to ensure that the scheduled surveys were comprehensive.Known reference populations of Plummer's mariposa lily (*Calochortus plummerae*), Parry's spineflower (*Chorizanthe parryi* var. *parryi*), slender-horned spineflower (*Dodecahema leptoceras*), and Santa Ana River woollystar (*Eriastrum densifolium* ssp. *sanctorum*) were monitored to confirm their flowering status and to verify that the surveys were conducted during the appropriate blooming period for these species. Plummer's mariposa lily was monitored in Fontana and observed flowering on May 27, 2010. Parry's spineflower was monitored in Fontana and observed flowering on April 15, 2010. Slender-horned spineflower was monitored at Soledad Canyon and observed flowering on April 22, 2010. Santa Ana River woollystar was monitored in the Santa Ana River wash and was observed flowering on June 5, 2010. According to the National Weather Service (NWS), the region (data taken from Ontario International Airport) received 11.94 inches of precipitation, which is 0.70 inch above average, between January 1 and June 2010 (NWS 2010).

A literature search was conducted to identify special status plants and habitats known to occur in the vicinity of the survey area. Sources reviewed include the Devore, San Bernardino North, San Bernardino South, Cucamonga Peak, Guasti, Fontana, Cajon, Telegraph Peak, and Silverwood Lake quadrangles in the California Native Plant Society's (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPS 2010) and the CDFG's California Natural Diversity Database (CNDDB) (CDFG 2010a). Table 1 lists the special status plant species known to occur in the vicinity of the survey area.

The special status plant species survey area was surveyed on March 31; April 15, 26, 27, 29; May 14, 21, 25, 27, 28; and June 1, 2, and 3, 2010, by BonTerra Consulting Senior Botanists Sandra Leatherman and Jeff Crain; Senior Biologists Amber Oneal, Stacie Tennant, and Ann Johnston; Biologists Jennifer Pareti, Allison Rudalevige, Linda Robb, and Richard Lewis; and Consulting Botanist Bob Allen. The total number of person-hours spent was 220 hours. A systematic survey was conducted in all areas of suitable special status plant habitat within the survey area. All plant species observed were recorded in field notes. Plant species were identified in the field or collected for later identification. Plants were identified to the taxonomic level necessary to determine whether or not they are a special status species. Plants were identified using taxonomic keys, descriptions, and illustrations in Hickman (1993), Munz (1974), Abrams (1923, 1944, 1951), and Abrams and Ferris (1960). All voucher specimens collected will be deposited with the herbarium at Rancho Santa Ana Botanic Gardens in Claremont, California. Taxonomy and nomenclature follows Hickman (1993), the CNPS (2010), and current scientific journals for scientific and common names.

SITE DESCRIPTION

Fourteen vegetation types and other areas occur in the survey area. Vegetation types and other areas mapped in the survey area consist of Riversidean alluvial fan sage scrub, disturbed Riversidean alluvial fan sage scrub, disturbed Riversidean sage scrub, disturbed mule fat scrub, annual grassland, annual grassland/disturbed Riversidean alluvial fan sage scrub, vineyards, ruderal, ornamental, disturbed, developed, developed/ornamental, developed/ruderal, and flood-control channel. Where vegetation overlaps another type of mapping unit (e.g., a tree canopy over water or roads), the area was mapped according to the uppermost layer of vegetation.

Soil types in the survey area include Hanford coarse sandy loam, psamments and fluvents (frequently flooded), Soboba gravelly loamy sand, Soboba stony loamy sand, Tujunga loamy sand, and Tujunga gravelly loamy sand (Exhibit 4) (USDA NRCS 2007).

TABLE 1
SPECIAL STATUS PLANT SPECIES KNOWN TO OCCUR
IN THE SURVEY AREA

Species	Status			Potential to Occur in the Survey Area; Results of Focused Survey
	USFWS	CDFG	CNPS	
Ambrosia monogyra singlewhorl burrobrush	—	—	2.2	Suitable habitat; not observed during focused surveys.
Arenaria paludicola marsh sandwort	FE	SE	1B.1	No potential to occur; no suitable habitat; not observed during focused surveys.
Asclepias nyctaginifolia Mojave milkweed	—	—	2.1	No potential to occur; no suitable habitat and below elevation range; not observed during focused surveys.
Astragalus hornii var. *hornii* Horn's milk-vetch	—	—	1B.1	No potential to occur; no suitable habitat; not observed during focused surveys.
Astragalus lentiginosus var. *antonius* San Antonio milk-vetch	—	—	1B.3	No potential to occur; no suitable habitat and below elevation range; not observed during focused surveys.
Astragalus leucolobus Big Bear Valley woollypod	—	—	1B.2	No potential to occur; no suitable habitat; not observed during focused surveys.
Berberis nevinii Nevin's barberry	FE	SE	1B.1	Limited suitable habitat; not observed during focused surveys.
Botrychium crenulatum scalloped moonwort	—	—	2.2	No potential to occur; no suitable habitat and below elevation range; not observed during focused surveys.
Botrychium minganense mingan moonwort	—	—	2.2	No potential to occur; no suitable habitat and below elevation range; not observed during focused surveys.
Brodiaea filifolia thread-leaved brodiaea	FT	SE	1B.1	No potential to occur; no suitable habitat; not observed during focused surveys.
Calochortus palmeri var. *palmeri* Palmer's mariposa lily	—	—	1B.2	No potential to occur; no suitable habitat and below elevation range; not observed during focused surveys.
Calochortus plummerae Plummer's mariposa lily	—	—	1B.2	**Observed; suitable habitat**.
Camissonia boothii ssp. *boothii* Booth's evening-primrose	—	—	2.3	No potential to occur; no suitable habitat and below elevation range; not observed during focused surveys.
Canbya candida white pygmy-poppy	—	—	4.2	No potential to occur; no suitable habitat and below elevation range; not observed during focused surveys.

TABLE 1
SPECIAL STATUS PLANT SPECIES KNOWN TO OCCUR
IN THE SURVEY AREA
(Continued)

Species	Status			Potential to Occur in the Survey Area; Results of Focused Survey
	USFWS	CDFG	CNPS	
Carex comosa bristly sedge	—	—	2.1	No potential to occur; no suitable habitat; not observed during focused surveys.
Castilleja lasiorhyncha San Bernardino Mountains owl's-clover	—	—	1B.2	No potential to occur; no suitable habitat and below elevation range; not observed during focused surveys.
Centromadia pungens ssp. *laevis* smooth tarplant	—	—	1B.1	Suitable habitat; not observed during focused surveys.
Chorizanthe parryi var. *parryi* Parry's spineflower	—	—	1B.1	**Observed; suitable habitat.**
Chorizanthe xanti var. *leucotheca* white-bracted spineflower	—	—	1B.2	Suitable habitat; not observed during focused surveys.
Cladium californicum California saw-grass	—	—	2.2	No potential to occur; no suitable habitat; not observed during focused surveys.
Claytonia lanceolata var. *peirsonii* Peirson's spring beauty	—	—	1B.1	No potential to occur; no suitable habitat and below elevation range; not observed during focused surveys.
Cordylanthus maritimus ssp. *maritimus* salt marsh bird's-beak	FE	SE	1B.2	No potential to occur; no suitable habitat and above elevation range; not observed during focused surveys.
Deinandra mohavensis Mojave tarplant	—	SE	1B.3	No potential to occur; no suitable habitat; not observed during focused surveys.
Dodecahema leptoceras slender-horned spineflower	FE	SE	1B.1	Suitable habitat; not observed during focused surveys.
Dudleya multicaulis many-stemmed dudleya	—	—	1B.2	No potential to occur; no suitable habitat; not observed during focused surveys.
Eriastrum densifolium ssp. *sanctorum* Santa Ana River woollystar	FE	SE	1B.1	Suitable habitat; not observed during focused surveys.
Eriogonum evanidum vanishing wild buckwheat	—	—	1B.1	No potential to occur; no suitable habitat and below elevation range; not observed during focused surveys.
Eriogonum microthecum var. *johnstonii* Johnston's buckwheat	—	—	1B.3	No potential to occur; no suitable habitat and below elevation range; not observed during focused surveys.
Fimbristylis thermalis hot springs fimbristylis	—	—	2.2	No potential to occur; no suitable habitat; not observed during focused surveys.
Galium californicum ssp. *primum* Alvin Meadow bedstraw	—	—	1B.2	No potential to occur; no suitable habitat and below elevation range; not observed during focused surveys.

TABLE 1
SPECIAL STATUS PLANT SPECIES KNOWN TO OCCUR
IN THE SURVEY AREA
(Continued)

Species	Status			Potential to Occur in the Survey Area; Results of Focused Survey
	USFWS	CDFG	CNPS	
Gentiana fremontii Fremont's gentian	—	—	2.3	No potential to occur; no suitable habitat and below elevation range; not observed during focused surveys.
Helianthus nuttallii ssp. *parishii* Los Angeles sunflower	—	—	1A	No potential to occur; no suitable habitat; not observed during focused surveys.
Horkelia cuneata ssp. *puberula* mesa horkelia	—	—	1B.1	No potential to occur; no suitable habitat; not observed during focused surveys.
Imperata brevifolia California satintail	—	—	2.1	Limited suitable habitat; not observed during focused surveys.
Lepidium virginicum var. *robinsonii* Robinson's pepper-grass	—	—	1B.2	Suitable habitat; not observed during focused surveys.
Lilium parryi lemon lily	—	—	1B.2	No potential to occur; no suitable habitat and below elevation range; not observed during focused surveys.
Linanthus concinnus San Gabriel linanthus	—	—	1B.2	No potential to occur; no suitable habitat and below elevation range; not observed during focused surveys.
Lycium parishii Parish's desert-thorn	—	—	2.3	Suitable habitat; not observed during focused surveys.
Monardella pringlei Pringle's monardella	—	—	1A	No potential to occur; no suitable habitat; not observed during focused surveys.
Muhlenbergia californica California muhly	—	—	4.3	No potential to occur; no suitable habitat; not observed during focused surveys.
Nasturtium gabmelii Gambel's water cress	FE	ST	1B.1	No potential to occur; no suitable habitat; not observed during focused surveys.
Navarretia prostrata prostrate vernal pool navarretia	—	—	1B.1	No potential to occur; no suitable habitat; not observed during focused surveys.
Opuntia basilaris var. *brachyclada* short-joint beavertail	—	—	1B.2	No potential to occur; no suitable habitat and below elevation range; not observed during focused surveys.
Oreonana vestita woolly mountain-parsley	—	—	1B.3	No potential to occur; no suitable habitat and below elevation range; not observed during focused surveys.
Orobanche valida ssp. *valida* Rock Creek broomrape	—	—	1B.2	Limited potentially suitable habitat; not observed during focused surveys.

TABLE 1
SPECIAL STATUS PLANT SPECIES KNOWN TO OCCUR
IN THE SURVEY AREA
(Continued)

Species	Status			Potential to Occur in the Survey Area; Results of Focused Survey
	USFWS	CDFG	CNPS	
Ribes divaricatum var. *parishii* Parish's gooseberry	—	—	1A	No potential to occur; no suitable habitat; not observed during focused surveys.
Schoenus nigricans black bog-rush	—	—	2.2	No potential to occur; no suitable habitat; not observed during focused surveys.
Senecio aphanactis chaparral ragwort	—	—	2.2	No potential to occur; no suitable habitat; not observed during focused surveys.
Sidalcea neomexicana salt spring checkerbloom	—	—	2.2	No potential to occur; no suitable habitat; not observed during focused surveys.
Sphenopholis obtusata prairie wedge grass	—	—	2.2	No potential to occur; no suitable habitat; not observed during focused surveys.
Streptanthus bernardinus Laguna Mountains jewel-flower	—	—	4.3	No potential to occur; no suitable habitat and below elevation range; not observed during focused surveys.
Streptanthus campestris southern jewel-flower	—	—	1B.3	No potential to occur; no suitable habitat; not observed during focused surveys.
Symphyotrichum defoliatum San Bernardino aster	—	—	1B.2	No potential to occur; no suitable habitat; not observed during focused surveys.
Viola aurea golden violet	—	—	2.2	No potential to occur; no suitable habitat and below elevation range; not observed during focused surveys.

LEGEND:

Federal (USFWS)
FE Endangered
FT Threatened

State (CDFG)
SE Endangered
ST Threatened

California Native Plant Society (CNPS) List Categories
List 1 APlants Presumed Extinct in California
List 1 BPlants Rare, Threatened, or Endangered in California and Elsewhere
List 2 Plants Rare, Threatened, or Endangered in California But More Common Elsewhere
List 4 Plants of Limited Distribution A Watch List

California Native Plant Society (CNPS) Threat Code Extensions
None Plants lacking any threat information
.1 Seriously Endangered in California (over 80% of occurrences threatened; high degree and immediacy of threat)
.2 Fairly Endangered in California (20–80% of occurrences threatened)
.3 Not Very Threatened in California (low degree/immediacy of threat or no current threats known)

SURVEY RESULTS

As noted above, Table 1 identifies the special status plants with potential to occur within the survey area and the results of the survey.

Plummer's mariposa lily and Parry's spineflower were both observed within the survey area. Exhibits 5, 6A, and 6B show the locations and photographs of these species; details for each species are below. A list of all plants observed within the survey area during focused surveys can be found in Attachment A, and the CNDDB forms for the Plummer's mariposa lily and Parry's spineflower occurrences can be found in Attachment B. A voucher specimen was collected for each of these two species and will be deposited in the herbarium at the Rancho Santa Ana Botanic Garden in Claremont, California. Although reference populations and regional rainfall amounts were monitored to ensure the scientific adequacy of these focused surveys, there is always a minimal potential for false negative survey results as species could possibly be present on a site but may not be detectable at the time of the surveys.

Plummer's Mariposa Lily

Plummer's mariposa lily is a CNPS List 1B.2 species. It typically blooms between May and July (CNPS 2010). This perennial bulbiferous herb occurs in coastal sage scrub; dry, rocky chaparral; and yellow-pine forest at elevations between 0 and approximately 5,580 feet above msl (Roberts et al. 2004; Hickman 1993). This species is known from Ventura, Los Angeles, San Bernardino, and Riverside Counties (CNPS 2010). A total of 182 individuals of Plummer's mariposa lily were observed in the survey area (Table 2; Exhibit 5). The associated species at the various populations included black sage (*Salvia mellifera*), California croton (*Croton californica*), California sagebrush (*Artemisia californica*), chamise (*Adenostoma fasciculatum*), deerweed (*Lotus scoparius*), goldentop grass (*Lamarckia aurea*), holly-leaved cherry (*Prunus ilicifolia*), long-beaked filaree (*Erodium botrys*), popcorn flower (*Plagiobothrys* sp.), ripgut brome (*Bromus diandrus*), foxtail fescue (*Bromus madritensis* ssp. *rubens*), peak rush rose (*Helianthemum scoparium*), sapphire wolly-star (*Eriastrum sapphirinum*), white sage (*Salvia apiana)*, and wild oat (*Avena* sp.). These plants were observed on rocky or cobble-type soils including Soboba stony and Soboba gravelly loamy sand.

TABLE 2
PLUMMER'S MARIPOSA LILY POPULATIONS OBSERVED
IN THE SURVEY AREA

Population	Number of Individuals	Percent Phenology		
		Vegetative	Flowering	Fruiting
1	2	100	-	
2	4	25	75	
3	1	-	100	
4	1	100	-	
5	2	100	-	
6	4	-	100	
7	3	33	67	
8	2		100	
9	3	67	33	
10	1	-	100	
11	1	-	100	
12	4	75	25	

TABLE 2
PLUMMER'S MARIPOSA LILY POPULATIONS OBSERVED
IN THE SURVEY AREA
(Continued)

Population	Number of Individuals	Percent Phenology		
		Vegetative	Flowering	Fruiting
13	5	60	40	
14	8	25	75	
15	2	50	50	
16	1	-	100	
17	7	100	-	
18	4	25	75	
19	1	-	100	
20	1	100	-	
21	1	-	100	
22	3	67	33	
23	2	-	100	
24	1	-	100	
25	1	-	100	
26	1	-	100	
27	1	-	100	
28	2	-	100	
29	8	20	80	
30	25	10	90	
31	1	100	-	
32	1	-	100	
33	3	-	100	
34	7	43	57	-
35	1	-	100	-
36	1	-	100	-
37	3	33	67	-
38	9	22	78	-
39	5	40	60	-
40	5	40	60	-
41	1	-	100	-
42	1	-	100	-
43	1	-	100	-
44	1	-	100	-
45	1	-	-	100
46	1	-	-	100
47	1	-	100	-
48	1	-	-	100
49	1	-	-	100
50	1	-	-	100
51	2	-	100	-
52	1	-	100	-
53	4	25	75	-
54	1	-	100	-

TABLE 2
PLUMMER'S MARIPOSA LILY POPULATIONS OBSERVED
IN THE SURVEY AREA
(Continued)

Population	Number of Individuals	Percent Phenology		
		Vegetative	Flowering	Fruiting
55	2	-	100	-
56	1	-	100	-
57	1	100	-	-
58	1	-	100	-
59	1	-	100	-
60	1	-	100	-
61	1	-	100	-
62	1	-	100	-
63	1	100	-	-
64	2	-	100	-
65	1	-	100	-
66	2	-	100	-
67	1	-	100	-
68	5	60	40	-
69	1	-	100	-
70	3	67	33	-
71	1	-	100	-
Total:	**182**	**NA**	**NA**	**NA**

Parry's Spineflower

Parry's spineflower is a CNPS List 1B.1 species. It typically blooms between April and June (CNPS 2010). This annual herb occurs in open, sandy sites, often on gravelly slopes in coastal or desert scrub at elevations between approximately 980 and 3,940 feet above msl (Roberts et al. 2004; Hickman 1993). It is known from the east-central South Coast, the eastern Transverse Ranges, and the northwestern edge of the Sonoran Desert (Jepson Flora Project 2009). A total of 15,804 individuals of Parry's spineflower were observed within the survey area (Table 3; Exhibit 5). The associated species at the various populations included California croton, California sun cup (*Camissonia bistorta*), chamise, deerweed, everlasting nest straw (*Stylocline gnaphaloides*), lastarriaea (*Lastarriaea coriacea*), long-beaked filaree, ripgut brome, foxtail fescue, and wild oat. These plants were observed on rocky or cobble-type soils including Soboba stony loamy sand, Soboba gravelly loamy sand, and Tujunga gravelly loamy sand.

TABLE 3
PARRY'S SPINEFLOWER POPULATIONS OBSERVED
IN THE SURVEY AREA

Population	Number of Individuals	Percent Phenology		
		Vegetative	Flowering	Fruiting
1	339	-	100	-
2	8	-	100	-
3	5	-	100	-
4	400	-	100	-
5	3	-	100	-
6	109	-	100	-
7	5	-	100	-
8	5	-	100	-
9	18	-	100	-
10	3	-	100	-
11	21	-	100	-
12	200	-	100	-
13	3	-	100	-
14	10	-	100	-
15	54	-	100	-
16	14	-	100	-
17	2	-	100	-
18	3	-	100	-
19	3	-	100	-
20	1	-	100	-
21	4	-	100	-
22	2	-	100	-
23	8	-	100	-
24	10	-	100	-
25	24	-	100	-
26	3	-	100	-
27	47	-	100	-
28	6000	-	100	-
29	2500	-	100	-
30	700	-	100	-
31	3000	-	100	-
32	300	-	100	-
33	2000	-	100	-
Total:	**15,804**	**NA**	**NA**	**NA**

In summary, based on overall species distribution and listing status, the observed populations of Plummer's mariposa lily and Parry's spineflower are considered highly significant. Complete avoidance of the plant populations through biological monitoring during Project construction is recommended to eliminate any potential threats or direct, indirect, or cumulative impacts to these species from the Proposed Project. However, future threats to these species still exist due to unforeseeable utility improvements, project needs, possible plant collection or damage by vehicular activity, and/or increased distribution of non-native invasive plant species. The Biological Technical Report prepared in addition to this Letter Report provides mitigation measures for these two species if full avoidance is not possible. The mitigation includes preparation of a conceptual mitigation plan and implementation of the plan, including site selection, site preparation, site maintenance, site monitoring, and performance criteria.

If you have any comments or questions, please call Stacie Tennant at (714) 444-9199.

Sincerely,

BONTERRA CONSULTING

Stacie A. Tennant
Senior Project Manager

Sandra J. Leatherman
Senior Project Manager, Senior Botanist

Enclosures: Exhibit 1 – Regional Location
Exhibit 2 – Local Vicinity
Exhibit 3 – Project Location
Exhibit 4 – Soils
Exhibit 5 – Special Status Plant Locations
Exhibits 6A/B – Special Status Plant Photographs
Attachment A – Plant Compendium
Attachment B – California Natural Diversity Database Forms

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Regional Location

Exhibit 1

Falcon Ridge Substation Project

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(Rev 07/14/10 CJS) R:\Projects\Edison\J046\Graphics\BioTech\Ex1_RL.pdf

Etiwanda Substation

Not Surveyed
Survey Area
Etiwanda Substation
Alder Substation

Exhibit 2a
Exhibit 2b
Lytle Creek
Etiwanda Ave
Cherry Ave
Citrus Ave
Sierra Ave
Locust Street
Baseline Rd
Foothill Blvd
Merrill Ave
San Bernardino Ave
210
15

Local Vicinity

Exhibit 2a

Falcon Ridge Substation Project

N W E S

2,000 1,000 0 2,000 Feet

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(Rev 08/02/10 JFG) R:\Projects\Edison\J046\Graphics\BioTech\Ex2_LV.pdf

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Not Surveyed
Survey Area
Etiwanda Substation
Alder Substation

Exhibit 2b
Exhibit 2a
Lytle Creek
210
15
Baseline Rd
Foothill Blvd
Merrill Ave
San Bernardino Ave
Etiwanda Ave
Cherry Ave
Citrus Ave
Sierra Ave
Locust Street

Local Vicinity

Exhibit 2b

Falcon Ridge Substation Project

N W E S

2,000 1,000 0 2,000 Feet

BonTerra CONSULTING

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Map Book Key
Survey Area
Not Surveyed
Alder Substation
Etiwanda Substation

San Bernardino National Forest

A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
S

Sierra
Lytle Creek
North Locust Ave
East Etiwanda Creek
East Ave
Cherry Ave
Citrus Ave
Sierra Ave
Locust Ave
North Etiwanda Ave
Baseline Rd
Foothill Blvd
Merrill Ave
San Bernardino Ave
Valley Blvd
15
210
10

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Project Location

Exhibit 3

Falcon Ridge Substation Project

N W E S

4,000 2,000 0 4,000 Feet

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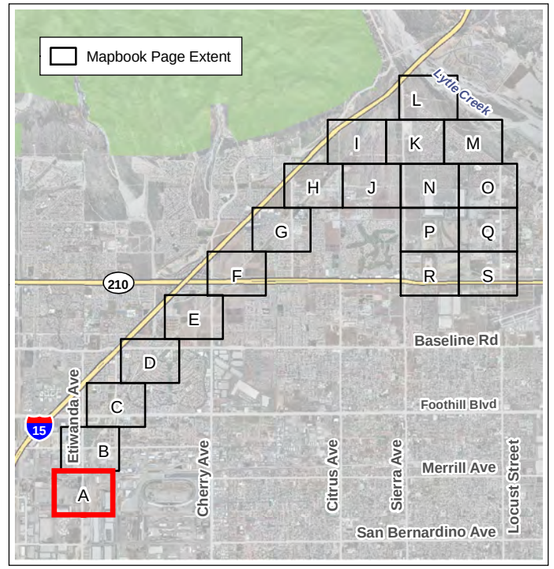
Survey Area

Soil Types

- HaC, Hanford Coarse Sandy Loam 2 to 9 Percent Slopes
- Ps - Psamments and Fluvents Frequently Flooded
- SoC - Soboba Gravelly Loamy Sand 0 to 9 Percent Slopes
- SpC - Soboba Stony Loamy Sand 2 to 9 Percent Slopes
- TuB - Tujunga Loamy Sand 0 to 5 Percent Slopes
- TvC - Tujunga Gravelly Loamy Sand 0 to 9 Percent Slopes
- W - Water



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Soils

Exhibit 4A

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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Soils

Exhibit 4B

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

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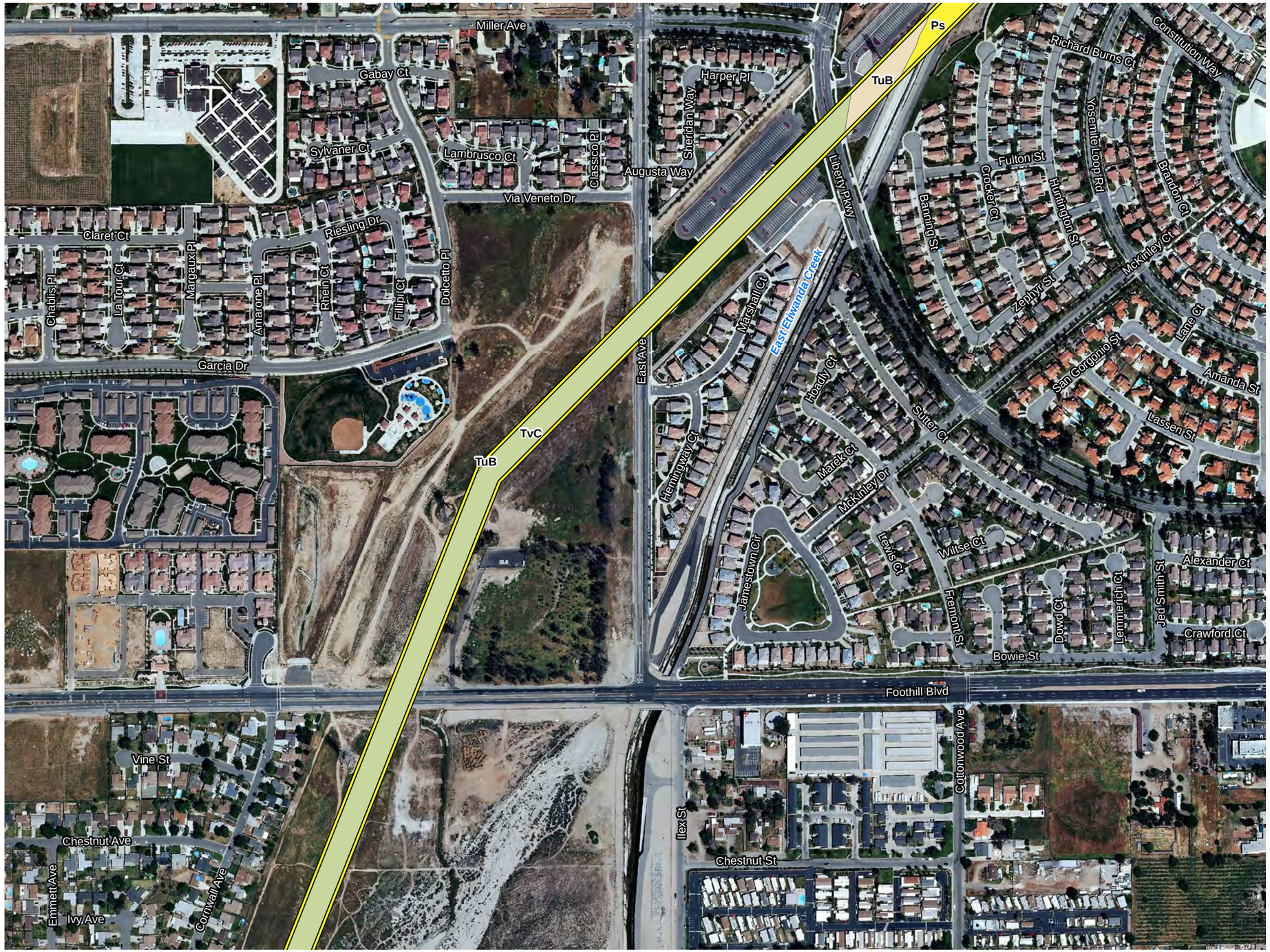
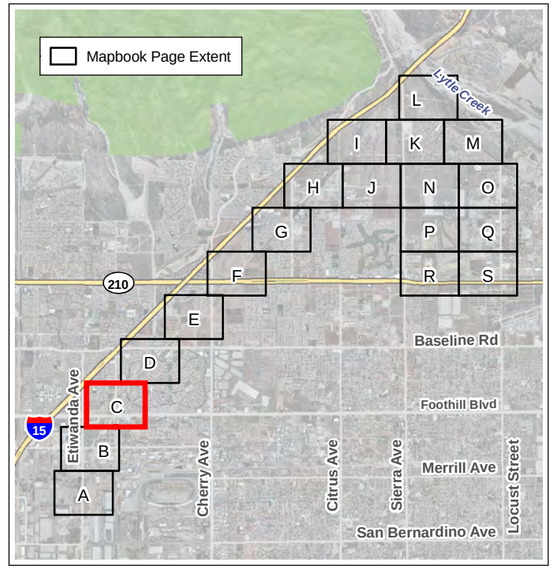


Survey Area

Soil Types

- HaC, Hanford Coarse Sandy Loam 2 to 9 Percent Slopes
- Ps - Psamments and Fluvents Frequently Flooded
- SoC - Soboba Gravelly Loamy Sand 0 to 9 Percent Slopes
- SpC - Soboba Stony Loamy Sand 2 to 9 Percent Slopes
- TuB - Tujunga Loamy Sand 0 to 5 Percent Slopes
- TvC - Tujunga Gravelly Loamy Sand 0 to 9 Percent Slopes
- W - Water



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Soils

Exhibit 4C

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

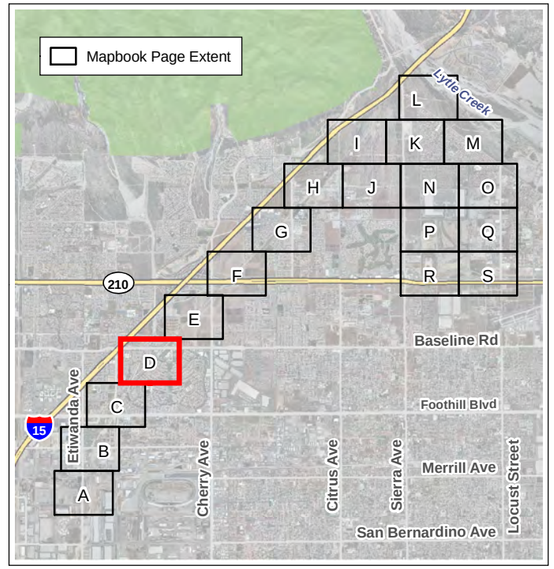
BonTerra CONSULTING

(Rev 07/16/10 CJS) R:\Projects\Edison\J046\Graphics\Bio\ex4_soils.pdf

Survey Area

Soil Types

- HaC, Hanford Coarse Sandy Loam 2 to 9 Percent Slopes
- Ps - Psamments and Fluvents Frequently Flooded
- SoC - Soboba Gravelly Loamy Sand 0 to 9 Percent Slopes
- SpC - Soboba Stony Loamy Sand 2 to 9 Percent Slopes
- TuB - Tujunga Loamy Sand 0 to 5 Percent Slopes
- TvC - Tujunga Gravelly Loamy Sand 0 to 9 Percent Slopes
- W - Water



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Soils

Exhibit 4D

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

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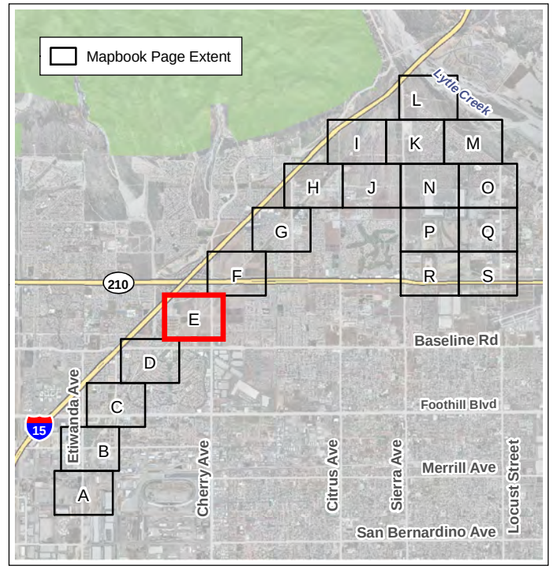
(Rev 07/16/10 CJS) R:\Projects\Edison\J046\Graphics\Bio\ex4_soils.pdf

Survey Area

Soil Types

- HaC, Hanford Coarse Sandy Loam 2 to 9 Percent Slopes
- Ps - Psamments and Fluvents Frequently Flooded
- SoC - Soboba Gravelly Loamy Sand 0 to 9 Percent Slopes
- SpC - Soboba Stony Loamy Sand 2 to 9 Percent Slopes
- TuB - Tujunga Loamy Sand 0 to 5 Percent Slopes
- TvC - Tujunga Gravelly Loamy Sand 0 to 9 Percent Slopes
- W - Water



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Soils

Exhibit 4E

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

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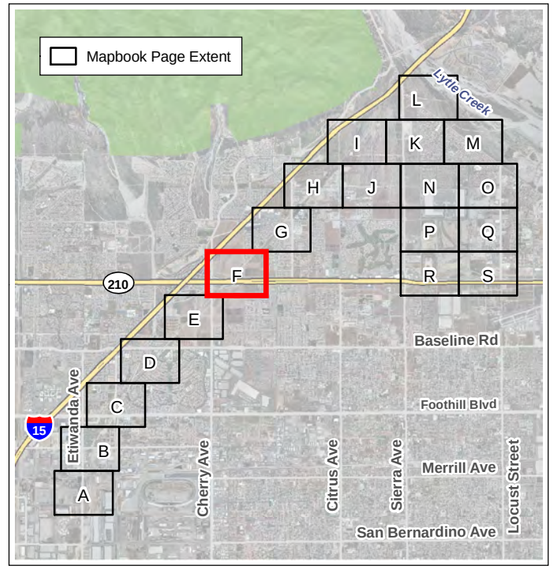
Survey Area

Soil Types

- HaC, Hanford Coarse Sandy Loam 2 to 9 Percent Slopes
- Ps - Psamments and Fluvents Frequently Flooded
- SoC - Soboba Gravelly Loamy Sand 0 to 9 Percent Slopes
- SpC - Soboba Stony Loamy Sand 2 to 9 Percent Slopes
- TuB - Tujunga Loamy Sand 0 to 5 Percent Slopes
- TvC - Tujunga Gravelly Loamy Sand 0 to 9 Percent Slopes
- W - Water



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Soils

Falcon Ridge Substation Project

Exhibit 4F

N W E S

400 200 0 400 Feet

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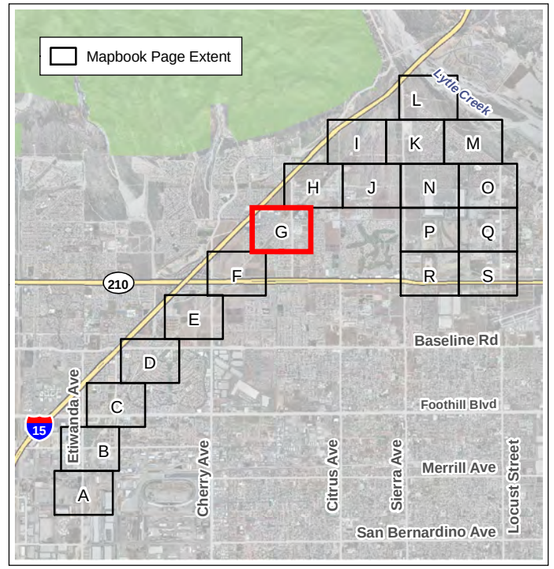
Survey Area

Soil Types

- HaC, Hanford Coarse Sandy Loam 2 to 9 Percent Slopes
- Ps - Psamments and Fluvents Frequently Flooded
- SoC - Soboba Gravelly Loamy Sand 0 to 9 Percent Slopes
- SpC - Soboba Stony Loamy Sand 2 to 9 Percent Slopes
- TuB - Tujunga Loamy Sand 0 to 5 Percent Slopes
- TvC - Tujunga Gravelly Loamy Sand 0 to 9 Percent Slopes
- W - Water



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Soils

Exhibit 4G

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

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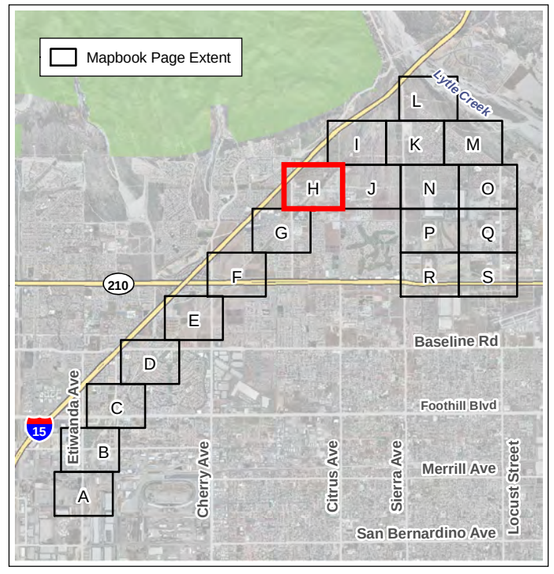
Survey Area

Soil Types

- HaC, Hanford Coarse Sandy Loam 2 to 9 Percent Slopes
- Ps - Psamments and Fluvents Frequently Flooded
- SoC - Soboba Gravelly Loamy Sand 0 to 9 Percent Slopes
- SpC - Soboba Stony Loamy Sand 2 to 9 Percent Slopes
- TuB - Tujunga Loamy Sand 0 to 5 Percent Slopes
- TvC - Tujunga Gravelly Loamy Sand 0 to 9 Percent Slopes
- W - Water



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Soils

Exhibit 4H

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

Benterra CONSULTING

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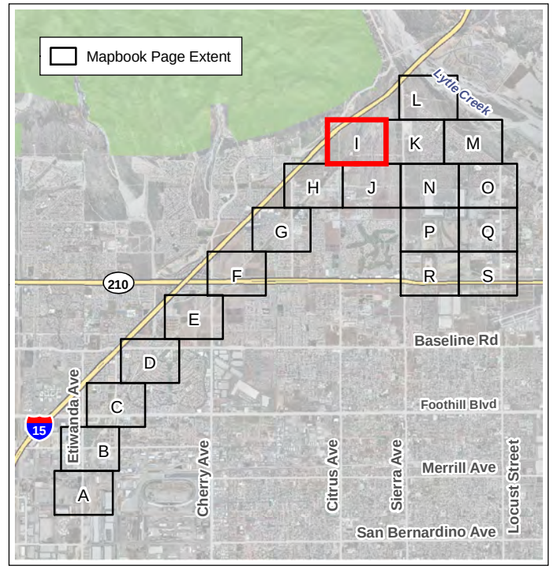
Survey Area

Soil Types

- HaC, Hanford Coarse Sandy Loam 2 to 9 Percent Slopes
- Ps - Psamments and Fluvents Frequently Flooded
- SoC - Soboba Gravelly Loamy Sand 0 to 9 Percent Slopes
- SpC - Soboba Stony Loamy Sand 2 to 9 Percent Slopes
- TuB - Tujunga Loamy Sand 0 to 5 Percent Slopes
- TvC - Tujunga Gravelly Loamy Sand 0 to 9 Percent Slopes
- W - Water



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Soils

Exhibit 4I

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

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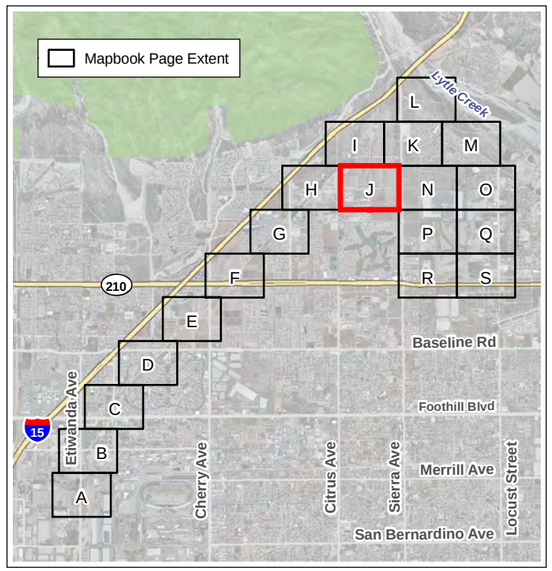
Survey Area

Soil Types

- HaC, Hanford Coarse Sandy Loam 2 to 9 Percent Slopes
- Ps - Psamments and Fluvents Frequently Flooded
- SoC - Soboba Gravelly Loamy Sand 0 to 9 Percent Slopes
- SpC - Soboba Stony Loamy Sand 2 to 9 Percent Slopes
- TuB - Tujunga Loamy Sand 0 to 5 Percent Slopes
- TvC - Tujunga Gravelly Loamy Sand 0 to 9 Percent Slopes
- W - Water



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Soils

Exhibit 4J

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

Bonterra CONSULTING

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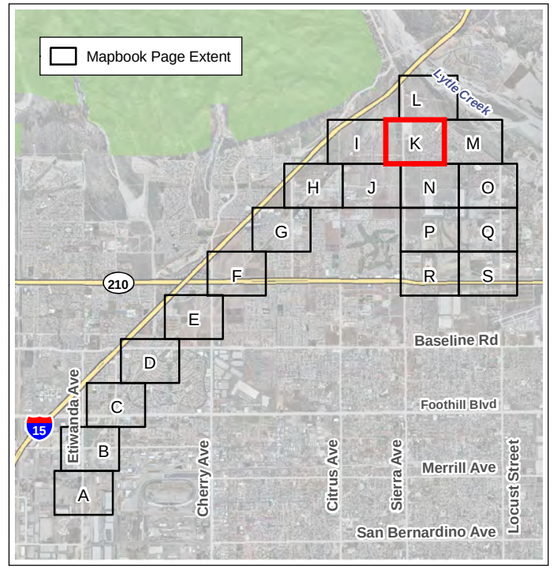
Survey Area

Soil Types

- HaC, Hanford Coarse Sandy Loam 2 to 9 Percent Slopes
- Ps - Psamments and Fluvents Frequently Flooded
- SoC - Soboba Gravelly Loamy Sand 0 to 9 Percent Slopes
- SpC - Soboba Stony Loamy Sand 2 to 9 Percent Slopes
- TuB - Tujunga Loamy Sand 0 to 5 Percent Slopes
- TvC - Tujunga Gravelly Loamy Sand 0 to 9 Percent Slopes
- W - Water



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Soils

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

Exhibit 4K

BonTerra CONSULTING

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Soils

Exhibit 4L

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

(Rev 07/16/10 CJS) R:\Projects\Edison\J046\Graphics\Bio\ex4_soils.pdf

Survey Area

Soil Types

- HaC, Hanford Coarse Sandy Loam 2 to 9 Percent Slopes
- Ps - Psamments and Fluvents Frequently Flooded
- SoC - Soboba Gravelly Loamy Sand 0 to 9 Percent Slopes
- SpC - Soboba Stony Loamy Sand 2 to 9 Percent Slopes
- TuB - Tujunga Loamy Sand 0 to 5 Percent Slopes
- TvC - Tujunga Gravelly Loamy Sand 0 to 9 Percent Slopes
- W - Water

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Soils

Exhibit 4M

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

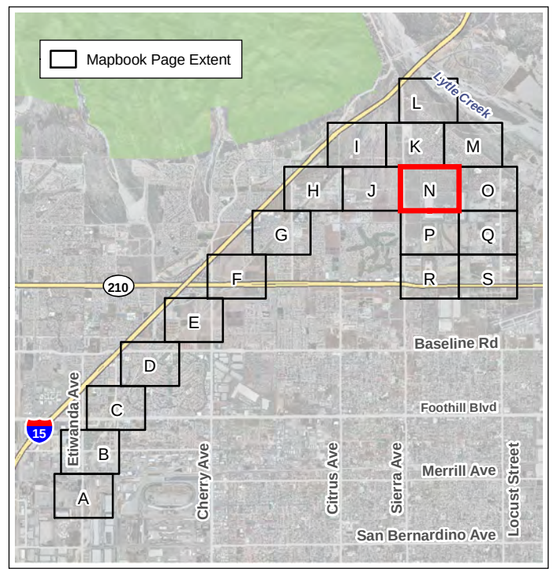
BonTerra CONSULTING

(Rev 07/16/10 CJS) R:\Projects\Edison\J046\Graphics\Bio\ex4_soils.pdf

Survey Area

Soil Types

- HaC, Hanford Coarse Sandy Loam 2 to 9 Percent Slopes
- Ps - Psamments and Fluvents Frequently Flooded
- SoC - Soboba Gravelly Loamy Sand 0 to 9 Percent Slopes
- SpC - Soboba Stony Loamy Sand 2 to 9 Percent Slopes
- TuB - Tujunga Loamy Sand 0 to 5 Percent Slopes
- TvC - Tujunga Gravelly Loamy Sand 0 to 9 Percent Slopes
- W - Water



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Soils

Exhibit 4N

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

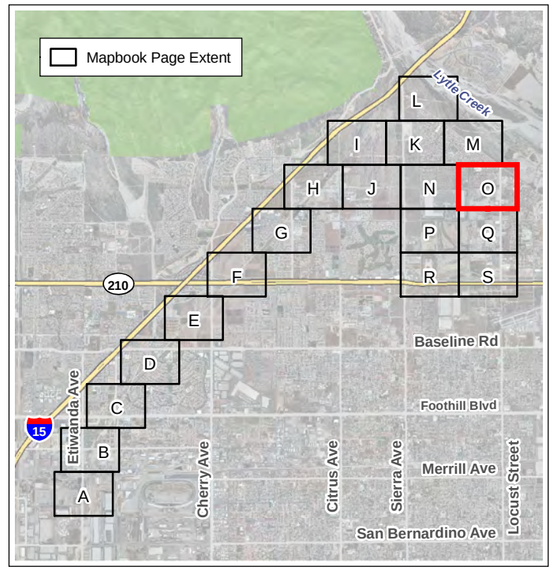
Bonterra CONSULTING

(Rev 07/16/10 CJS) R:\Projects\Edison\J046\Graphics\Bio\ex4_soils.pdf

Survey Area

Soil Types

- HaC, Hanford Coarse Sandy Loam 2 to 9 Percent Slopes
- Ps - Psamments and Fluvents Frequently Flooded
- SoC - Soboba Gravelly Loamy Sand 0 to 9 Percent Slopes
- SpC - Soboba Stony Loamy Sand 2 to 9 Percent Slopes
- TuB - Tujunga Loamy Sand 0 to 5 Percent Slopes
- TvC - Tujunga Gravelly Loamy Sand 0 to 9 Percent Slopes
- W - Water



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Soils

Exhibit 4O

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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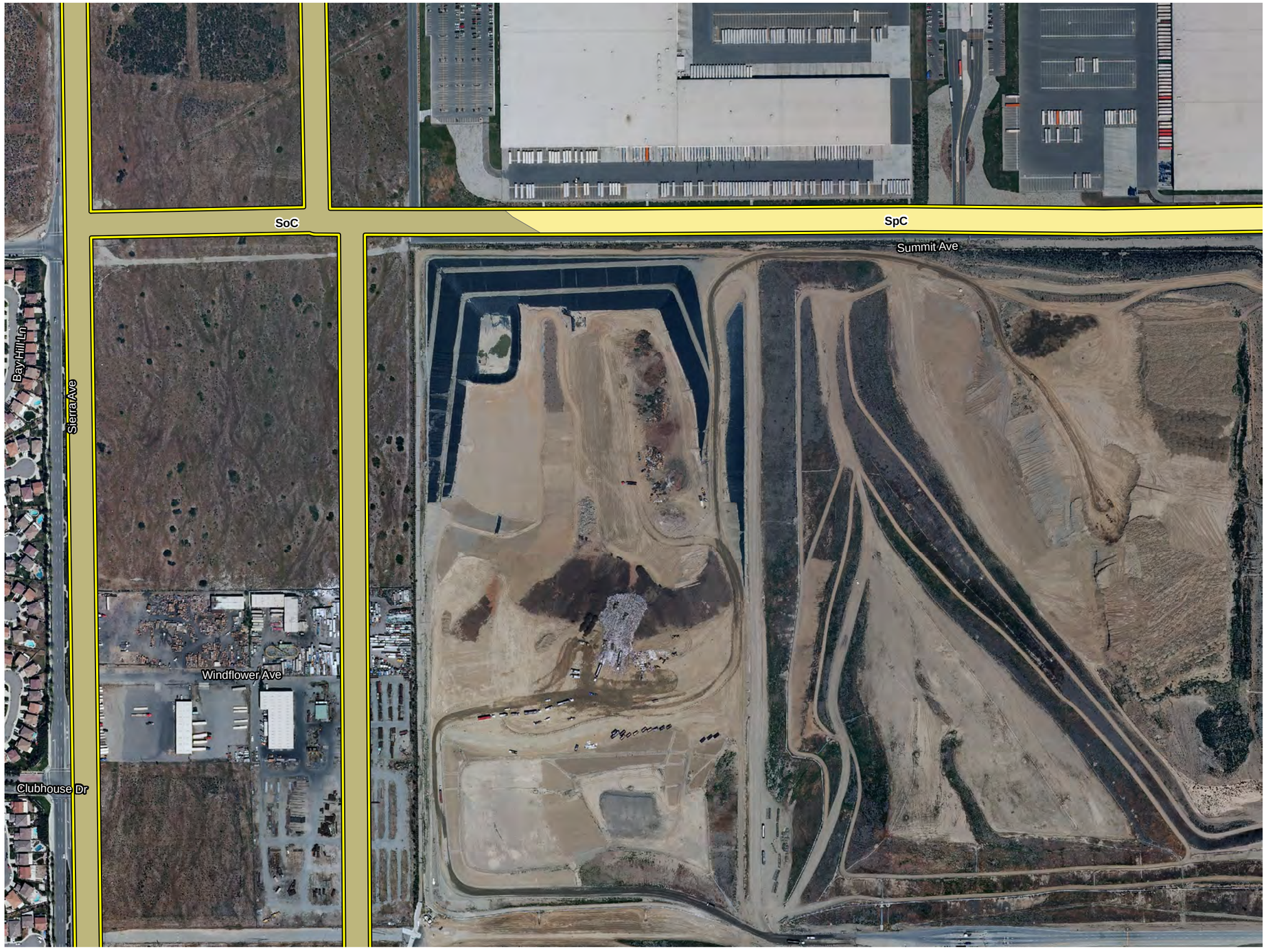
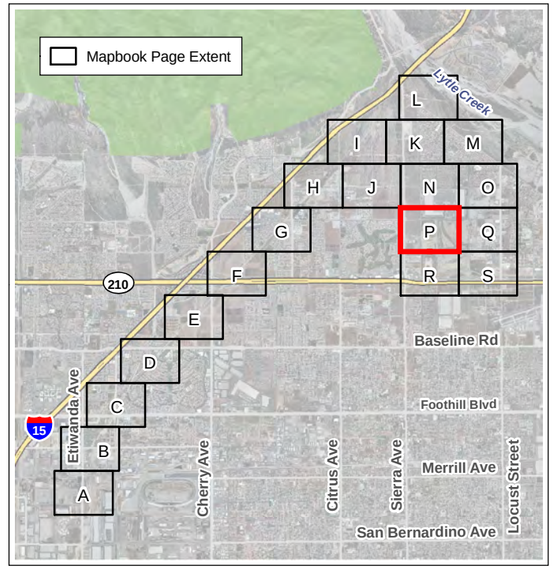


Survey Area

Soil Types

- HaC, Hanford Coarse Sandy Loam 2 to 9 Percent Slopes
- Ps - Psamments and Fluvents Frequently Flooded
- SoC - Soboba Gravelly Loamy Sand 0 to 9 Percent Slopes
- SpC - Soboba Stony Loamy Sand 2 to 9 Percent Slopes
- TuB - Tujunga Loamy Sand 0 to 5 Percent Slopes
- TvC - Tujunga Gravelly Loamy Sand 0 to 9 Percent Slopes
- W - Water



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Soils

Exhibit 4P

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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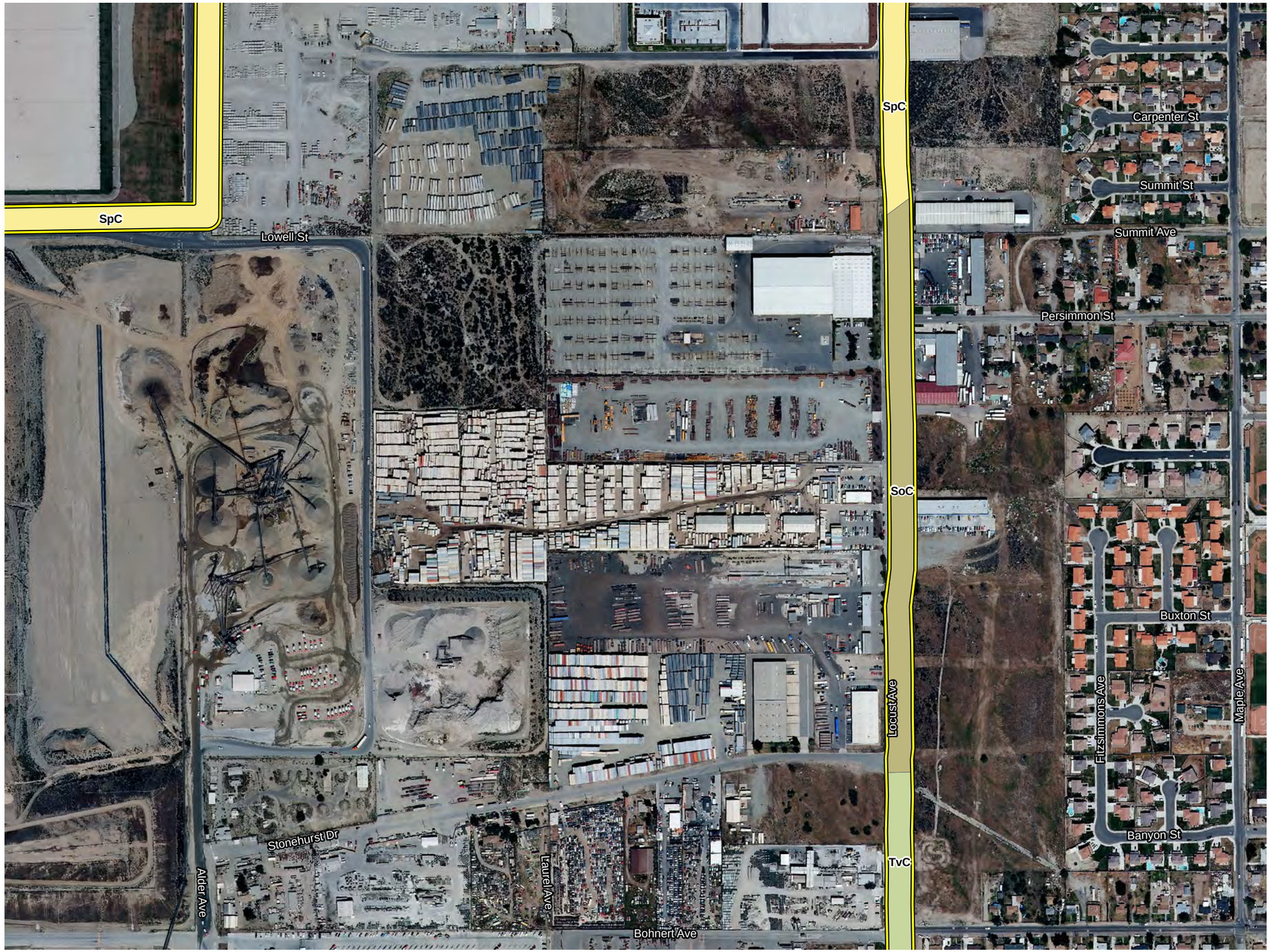
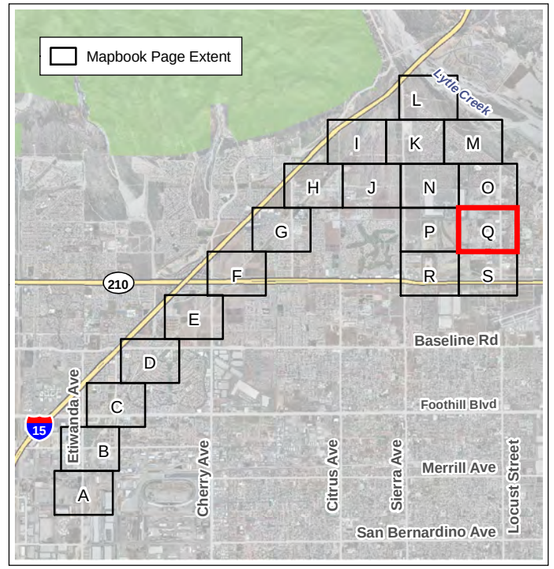


Survey Area

Soil Types

- HaC, Hanford Coarse Sandy Loam 2 to 9 Percent Slopes
- Ps - Psamments and Fluvents Frequently Flooded
- SoC - Soboba Gravelly Loamy Sand 0 to 9 Percent Slopes
- SpC - Soboba Stony Loamy Sand 2 to 9 Percent Slopes
- TuB - Tujunga Loamy Sand 0 to 5 Percent Slopes
- TvC - Tujunga Gravelly Loamy Sand 0 to 9 Percent Slopes
- W - Water



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Soils

Exhibit 4Q

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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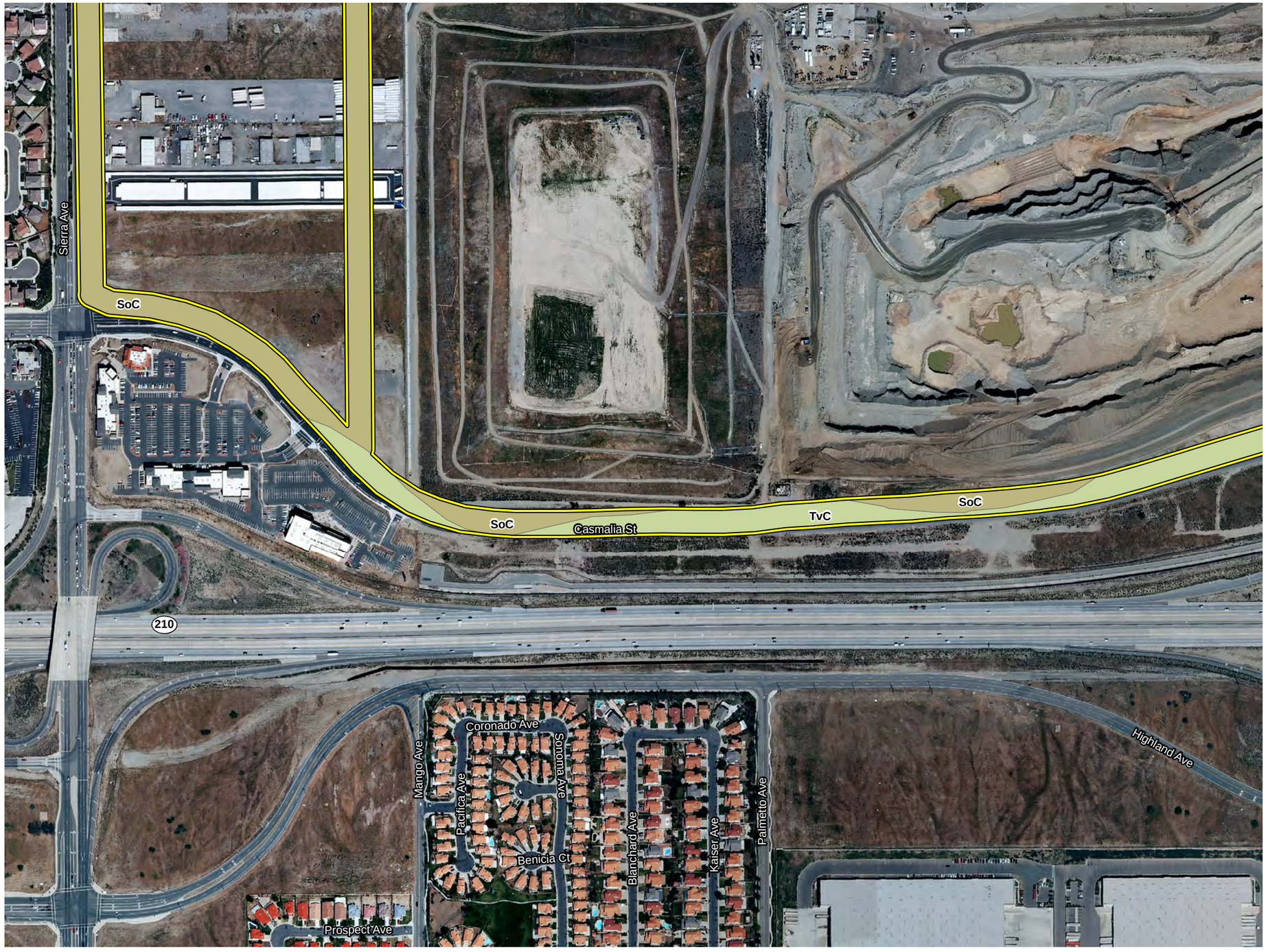
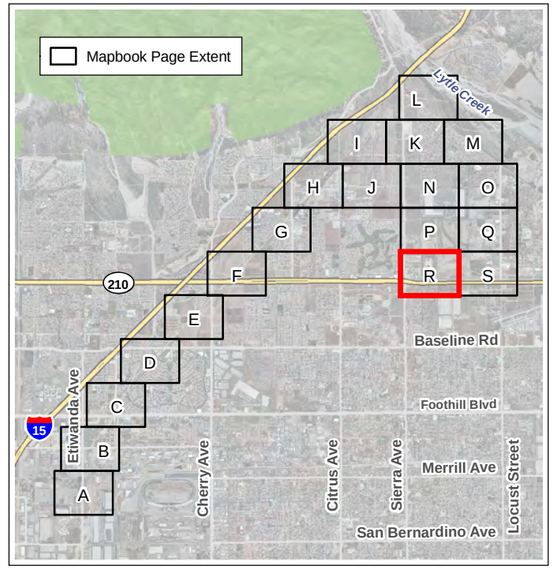


Survey Area

Soil Types

- HaC, Hanford Coarse Sandy Loam 2 to 9 Percent Slopes
- Ps - Psamments and Fluvents Frequently Flooded
- SoC - Soboba Gravelly Loamy Sand 0 to 9 Percent Slopes
- SpC - Soboba Stony Loamy Sand 2 to 9 Percent Slopes
- TuB - Tujunga Loamy Sand 0 to 5 Percent Slopes
- TvC - Tujunga Gravelly Loamy Sand 0 to 9 Percent Slopes
- W - Water



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Soils

Exhibit 4R

Falcon Ridge Substation Project

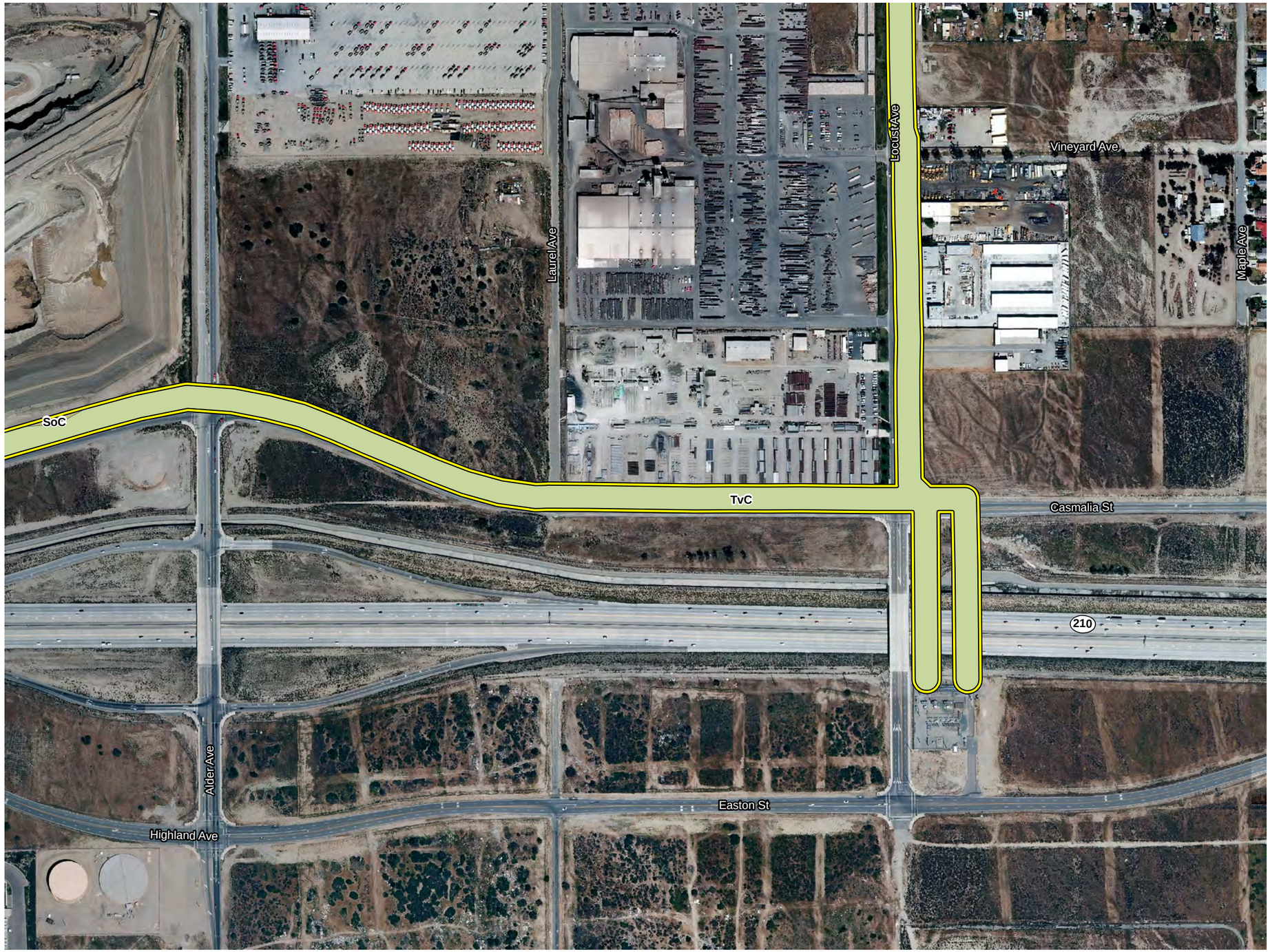
N W E S

400 200 0 400

Feet

BonTerra CONSULTING

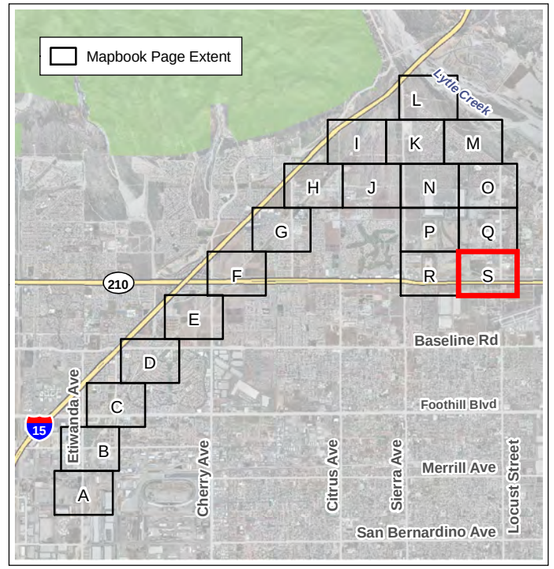
(Rev 07/16/10 CJS) R:\Projects\Edison\J046\Graphics\Bio\ex4_soils.pdf



Survey Area

Soil Types

- HaC, Hanford Coarse Sandy Loam 2 to 9 Percent Slopes
- Ps - Psamments and Fluvents Frequently Flooded
- SoC - Soboba Gravelly Loamy Sand 0 to 9 Percent Slopes
- SpC - Soboba Stony Loamy Sand 2 to 9 Percent Slopes
- TuB - Tujunga Loamy Sand 0 to 5 Percent Slopes
- TvC - Tujunga Gravelly Loamy Sand 0 to 9 Percent Slopes
- W - Water



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Soils

Exhibit 4S

Falcon Ridge Substation Project

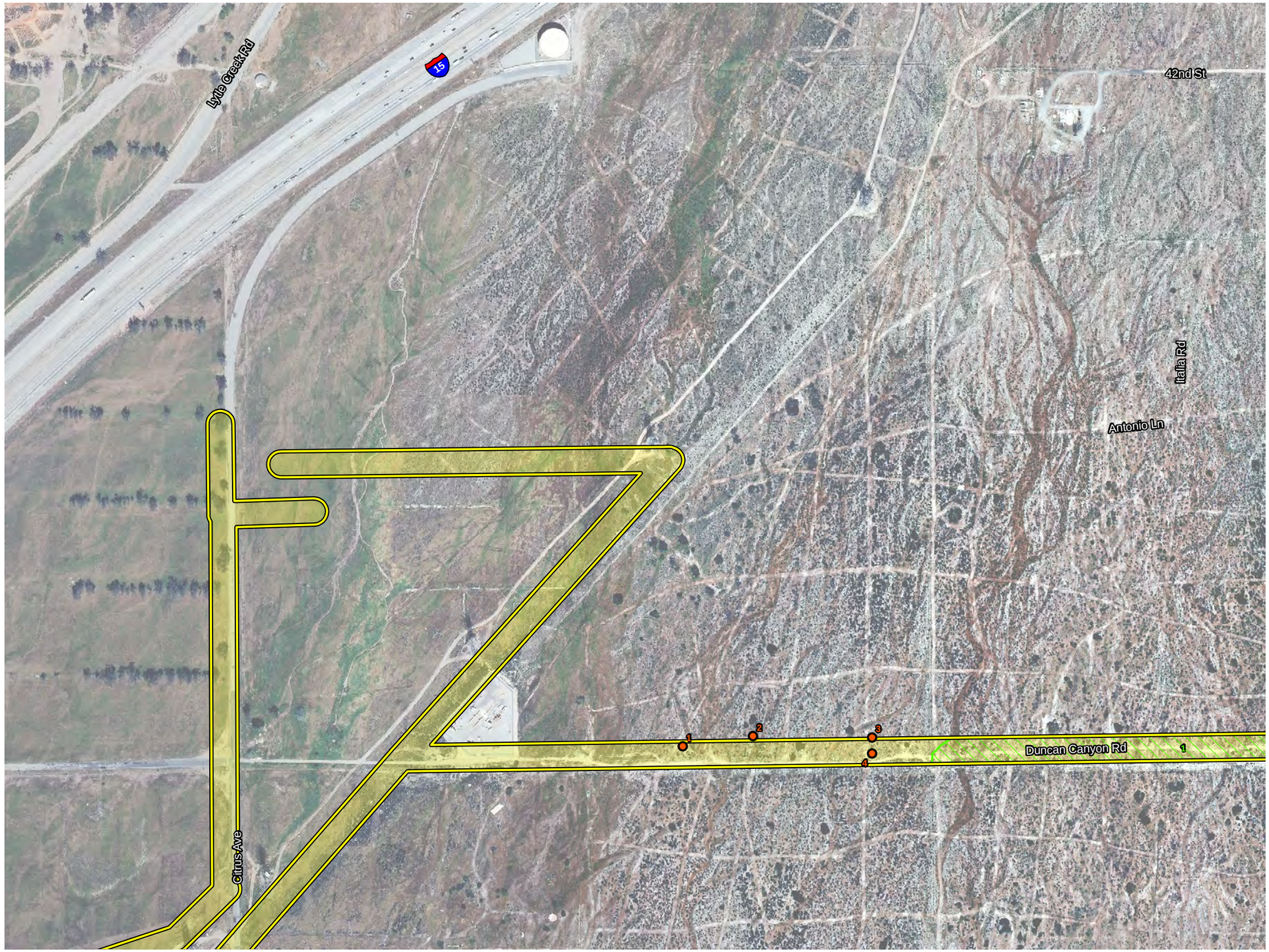
N W E S

400 200 0 400

Feet

BonTerra CONSULTING

(Rev 07/16/10 CJS) R:\Projects\Edison\J046\Graphics\Bio\ex4_soils.pdf



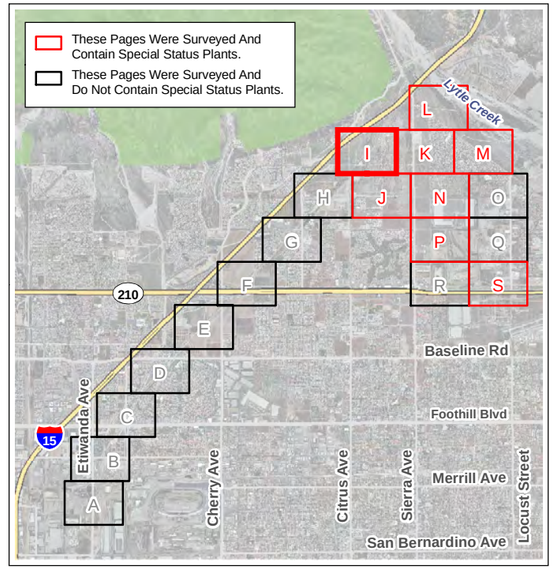
Survey Area

Not Surveyed

Plummer's Mariposa Lily Population Locations

Parry's Spineflower Locations

Parry's Spineflower Polygon Locations



D:\Projects\Edison\J046\MXD\PlantReport\ex_plants.mxd

Special Status Plant Locations

Exhibit 5I

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

Bonterra CONSULTING

(Rev 0811-10 JFG) R:\Projects\Edison\J046\Graphics\Plant\ex5_plants.pdf

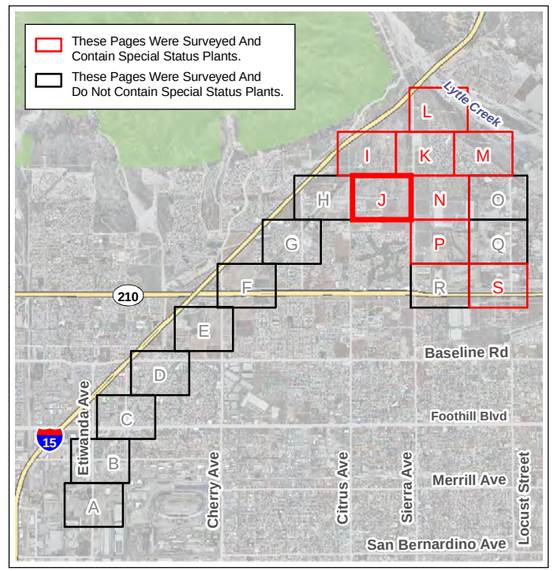
Survey Area

Not Surveyed

Plummer's Mariposa Lily Population Locations

Parry's Spineflower Locations

Parry's Spineflower Polygon Locations



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Special Status Plant Locations

Exhibit 5J

Falcon Ridge Substation Project

N W E S

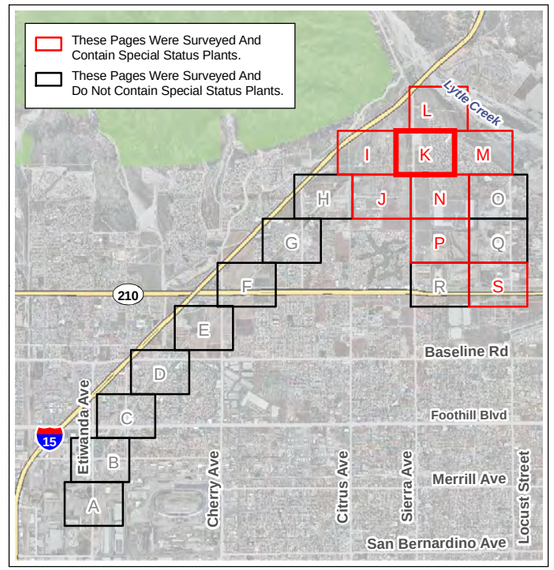
400 200 0 400

Feet

Bonterra CONSULTING

(Rev 0811-10 JFG) R:\Projects\Edison\J046\Graphics\Plant\ex5_plants.pdf

Survey Area
Not Surveyed
Plummer's Mariposa Lily Population Locations
Parry's Spineflower Locations
Parry's Spineflower Polygon Locations



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Special Status Plant Locations

Exhibit 5K

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

(Rev 0811-10 JFG) R:\Projects\Edison\J046\Graphics\Plant\ex5_plants.pdf

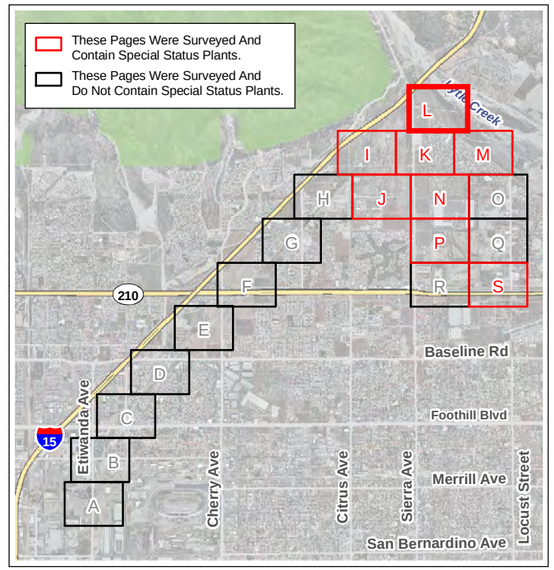
Survey Area

Not Surveyed

Plummer's Mariposa Lily Population Locations

Parry's Spineflower Locations

Parry's Spineflower Polygon Locations



Special Status Plant Locations

Exhibit 5L

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

(Rev 0811-10 JFG) R:\Projects\Edison\J046\Graphics\Plant\ex5_plants.pdf

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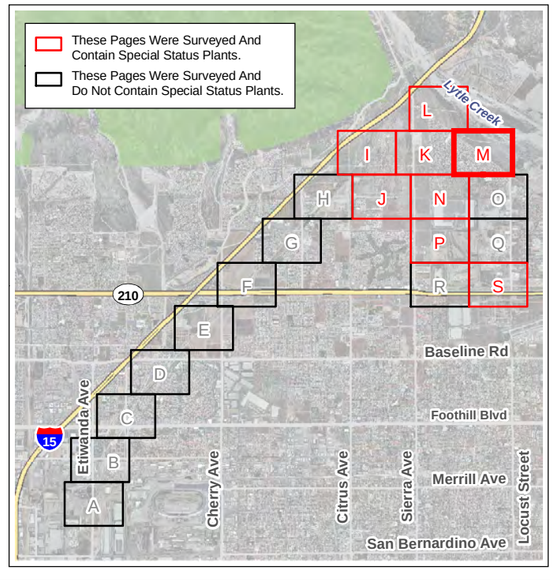
Survey Area

Not Surveyed

Plummer's Mariposa Lily Population Locations

Parry's Spineflower Locations

Parry's Spineflower Polygon Locations



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Special Status Plant Locations

Exhibit 5M

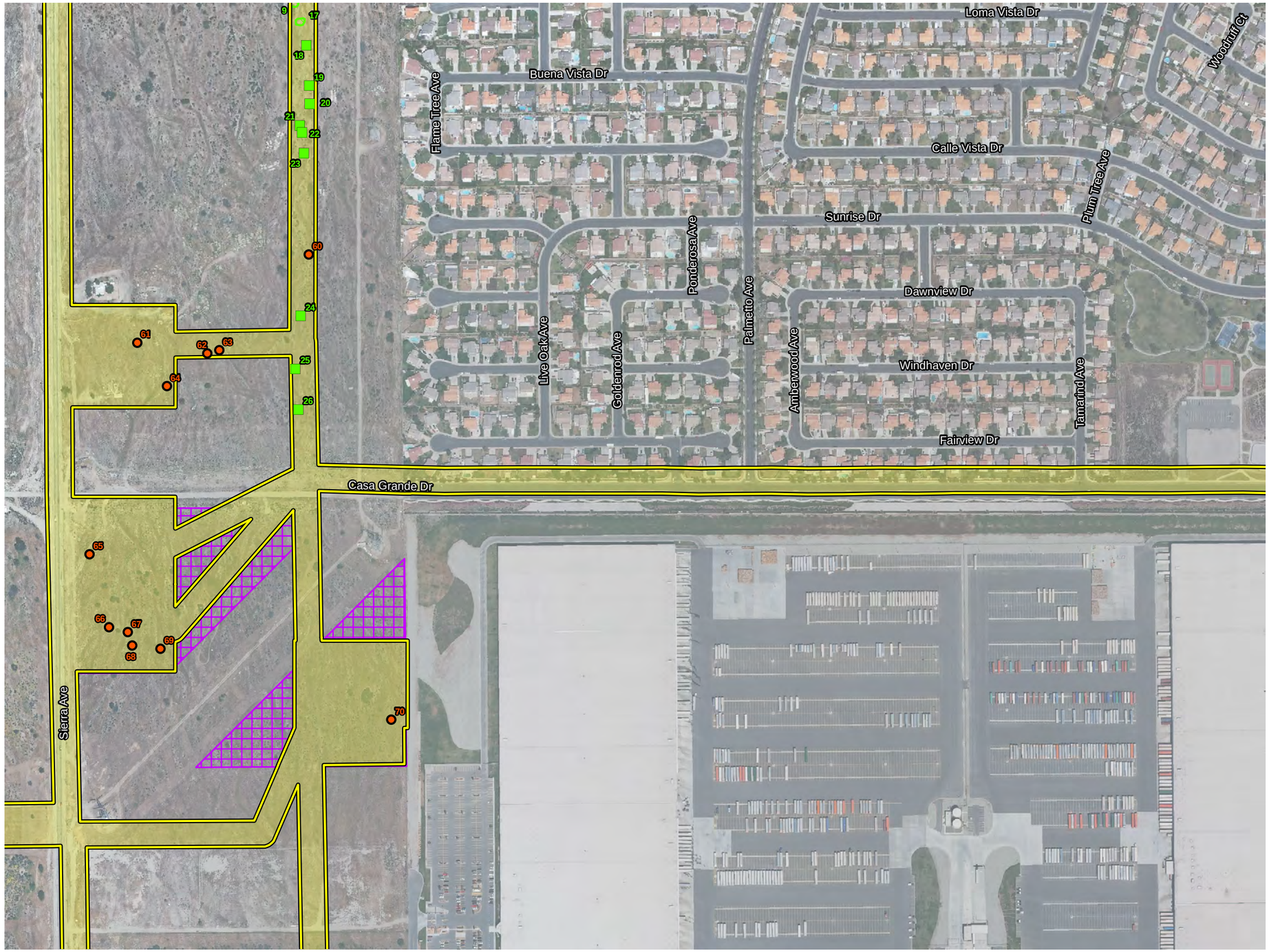
Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

(Rev 0811-10 JFG) R:\Projects\Edison\J046\Graphics\Plant\ex5_plants.pdf



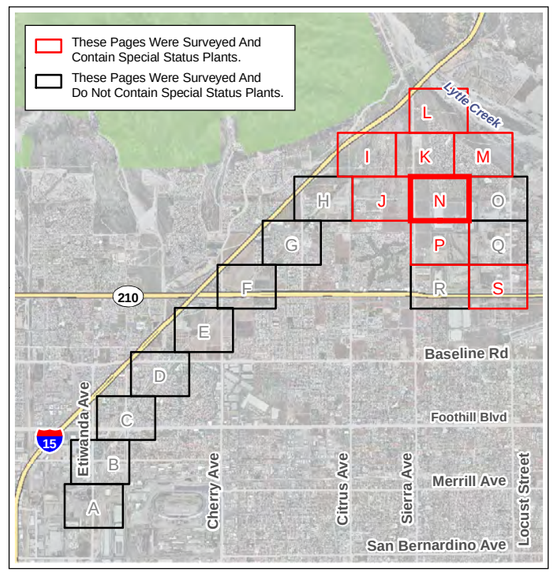
Survey Area

Not Surveyed

Plummer's Mariposa Lily Population Locations

Parry's Spineflower Locations

Parry's Spineflower Polygon Locations



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Special Status Plant Locations

Exhibit 5N

Falcon Ridge Substation Project

N W E S

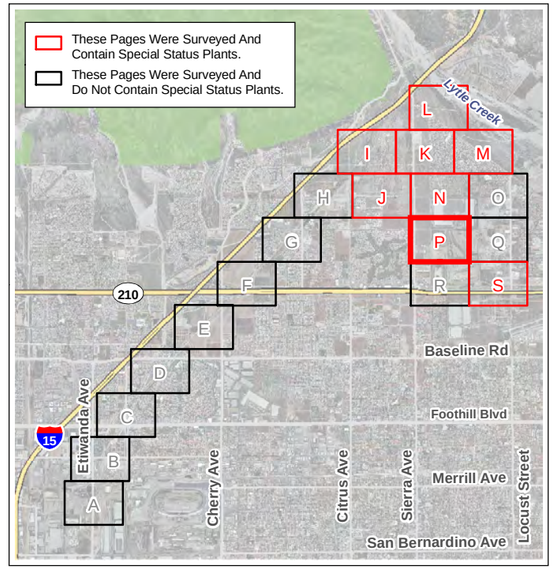
400 200 0 400

Feet

Bonterra CONSULTING

(Rev 0811-10 JFG) R:\Projects\Edison\J046\Graphics\Plant\ex5_plants.pdf

Survey Area
Not Surveyed
Plummer's Mariposa Lily Population Locations
Parry's Spineflower Locations
Parry's Spineflower Polygon Locations



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Special Status Plant Locations

Exhibit 5P

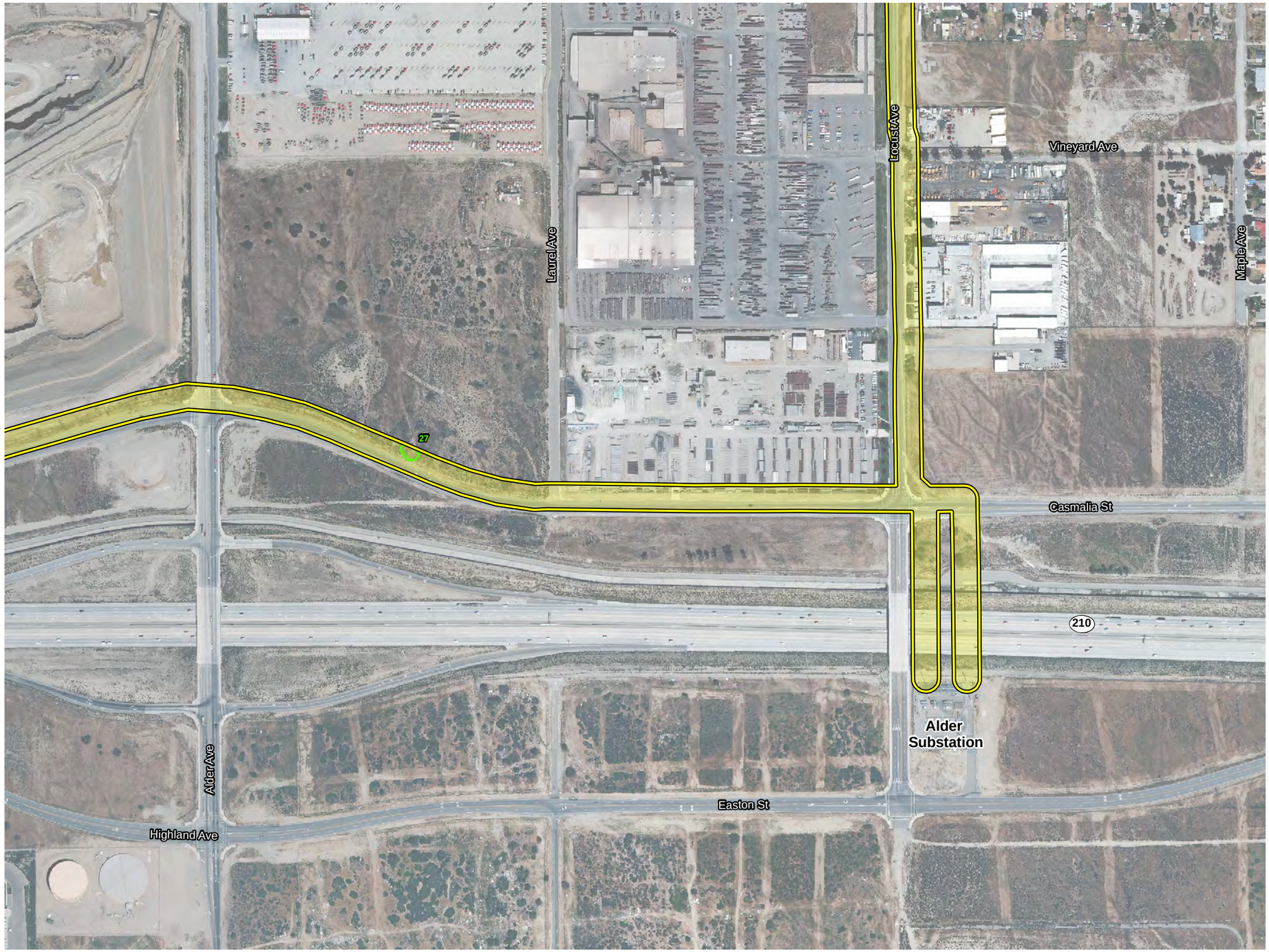
Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

(Rev 0811-10 JFG) R:\Projects\Edison\J046\Graphics\Plant\ex5_plants.pdf



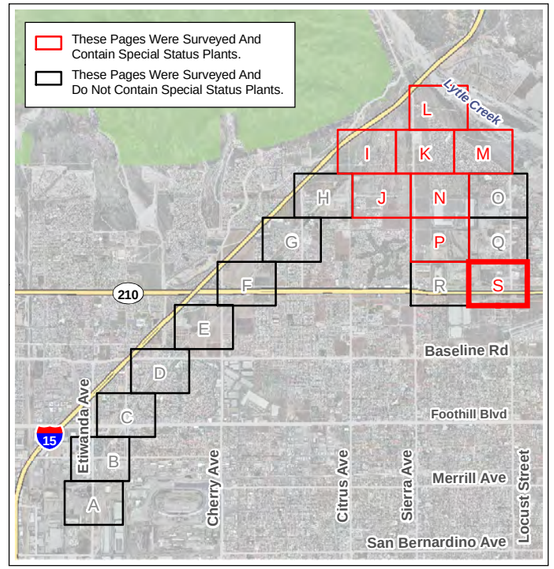
Survey Area

Not Surveyed

Plummer's Mariposa Lily Population Locations

Parry's Spineflower Locations

Parry's Spineflower Polygon Locations



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Special Status Plant Locations

Exhibit 5S

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

(Rev 0811-10 JFG) R:\Projects\Edison\J046\Graphics\Plant\ex5_plants.pdf

Plummer’s mariposa lilies in Annual Grassland/ Disturbed Riversidean Alluvial Fan Sage Scrub (foreground of photograph). Near Plummer’s mariposa lily population number 21, facing west.

Plummer's mariposa lily.

Plummer’s mariposa lily in disturbed Riversidean Alluvial Fan Sage Scrub (center of photograph). Near Plummer’s mariposa lily population number 67, facing southwest.

Plummer's mariposa lily.

Special Status Plant Species Photographs

Exhibit 6A

Falcon Ridge Substation Project

BonTerra CONSULTING

(Rev 081210 KFD) R: Projects\Edison\J046\Graphics\PlantReport\ex6A_spPL.pdf

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Flagging of Parry’s spineflower individuals in Disturbed Riversidean Alluvial Fan Sage Scrub. Near Parry’s spineflower population number 30.

Parry's spineflower.

Parry’s spineflower habitat in Disturbed Riversidean Alluvial Fan Sage Scrub. Near Parry’s spineflower population number 30 along Sierra Avenue, facing northwest.

Parry's spineflower (center of photograph).

Special Status Plant Species Photographs

Exhibit 6B

Falcon Ridge Substation Project

BonTerra CONSULTING

(Rev 081210 KFD) R: Projects\Edison\J046\Graphics\PlantReport\ex6B_spPS.pdf

D:\Projects\Edison\J046\Graphics\ex_spPS_081110.ai

ATTACHMENT A

PLANT COMPENDIUM

PLANTS SPECIES OBSERVED WITHIN THE SURVEY AREA DURING FOCUSED SURVEYS

Species
GYMNOSPERMS
PINACEAE - PINE FAMILY
FLOWERING PLANTS
CLASS DICOTYLEDONES (DICOTS)
AMARANTHACEAE - AMARANTH FAMILY
*Amaranthus albus** tumbleweed
ANACARDIACEAE - SUMAC FAMILY
Rhus trilobata skunkbush
*Schinus molle** Peruvian pepper tree
APOCYNACEAE - DOGBANE FAMILY
*Nerium oleander** oleander
ASCLEPIADACEAE - MILKWEED FAMILY
Asclepias eriocarpa Indian milkweed
ASTERACEAE (COMPOSITAE) - SUNFLOWER FAMILY
Ambrosia acanthicarpa annual bursage
Artemisia californica California sagebrush
Baccharis salicifolia mule fat
*Centaurea melitensis** tocalote
Chaenactis glabriuscula yellow pincushion
*Chamomilla suaveolens** common pineapple weed
Conyza canadensis common horseweed
Ericameria sp. goldenbush
Ericameria pin goldenbush
Erigeron foliosus var. *foliosus* leafy daisy
Eriophyllum confertiflorum golden yarrow
Filago californica fluffweed
*Filago gallica** narrow-leaved filago
*Gazania linearis** gazania
Gutierrezia sarothrae San Joaquin matchweed

PLANTS SPECIES OBSERVED WITHIN THE SURVEY AREA DURING FOCUSED SURVEYS (Continued)

Species
*Hedypnois cretica** Crete hedypnois
Helianthus annuus western sunflower
Heterotheca grandiflora telegraph weed
*Hypochaeris glabra** smooth cat's ear
*Lactuca serriola** prickly lettuce
Lepidospartum squamatum scale-broom
Lessingia filaginifolia California aster
Lessingia glandulifera var. *glandulifera* valley lessingia
*Sonchus oleraceus** common sow-thistle
Stephanomeria exigua wreath stephanomeria
Stylocline gnaphaloides everlasting nest straw
Tetradymia comosa cotton thorn
Uropappus lindleyi silver puffs
BORAGINACEAE - BORAGE FAMILY
Amsinckia menziesii rancher's fiddleneck
Cryptantha intermedia common cryptantha
Cryptantha muricata prickly cryptantha
Pectocarya linearis comb-bur
Pectocarya penicillata winged pectocarya
Plagiobothrys canescens valley popcornflower
BRASSICACEAE (CRUCIFERAE) - MUSTARD FAMILY
*Brassica tournefortii** wild turnip
*Hirschfeldia incana** shortpod mustard
Lepidium nitidum peppergrass/shining peppergrass
*Sisymbrium irio** London rocket

PLANTS SPECIES OBSERVED WITHIN THE SURVEY AREA DURING FOCUSED SURVEYS (Continued)

Species
CACTACEAE - CACTUS FAMILY
Opuntia littoralis coastal prickly pear
Opuntia parryi Parry's cholla
CAPRIFOLIACEAE - HONEYSUCKLE FAMILY
Sambucus mexicana blue elderberry
CARYOPHYLLACEAE - PINK FAMILY
*Silene gallica** windmill pink/common catchfly
Spergularia sp. sand spurrey
CHENOPODIACEAE - GOOSEFOOT FAMILY
*Atriplex semibaccata** Australian saltbush
*Chenopodium album** lamb's quarters
Chenopodium californicum California goosefoot
*Salsola tragus** Russian thistle
CISTACEAE - ROCK-ROSE FAMILY
Helianthemum scoparium peak rush-rose
CONVOLVULACEAE - MORNING-GLORY FAMILY
Calystegia macrostegia morning-glory
CRASSULACEAE - STONECROP FAMILY
Crassula connata pigmy-weed
CUCURBITACEAE - GOURD FAMILY
Marah macrocarpus wild cucumber/man-root
EUPHORBIACEAE - SPURGE FAMILY
*Chamaesyce maculata** spotted spurge
Croton californicus California croton
Eremocarpus setigerus doveweed/turkey mullein
*Ricinus communis** castor bean
FABACEAE (LEGUMINOSAE) - LEGUME FAMILY
Lotus purshianus Spanish clover

PLANTS SPECIES OBSERVED WITHIN THE SURVEY AREA DURING FOCUSED SURVEYS (Continued)

Species
Lotus scoparius deerweed/California broom
Lotus strigosus strigose lotus
Lupinus bicolor miniature lupine
Lupinus sparsiflorus Coulter's lupine
Lupinus truncatus truncate lupine/collar lupine
*Melilotus officinalis** yellow sweetclover
GERANIACEAE - GERANIUM FAMILY
*Erodium botrys** long-beaked filaree
*Erodium cicutarium** red-stemmed filaree
HYDROPHYLLACEAE - WATERLEAF FAMILY
Emmenanthe penduliflora whispering bells
Eriodictyon trichocalyx hairy yerba santa
Phacelia cicutaria caterpillar phacelia
Phacelia distans common phacelia
Phacelia ramosissima branching phacelia
LAMIACEAE (LABIATAE) - MINT FAMILY
*Marrubium vulgare** common horehound
Salvia apiana white sage
Salvia columbariae chia
Salvia mellifera black sage
Trichostema lanceolatum vinegar weed
MALVACEAE - MALLOW FAMILY
Malacothamnus fasciculatus chaparral bushmallow
*Malva parviflora** cheeseweed
MORACEAE - FIG FAMILY
Ficus sp.
MYOPORACEAE - MYOPORUM FAMILY
*Myoporum laetum** myoporum

PLANTS SPECIES OBSERVED WITHIN THE SURVEY AREA DURING FOCUSED SURVEYS (Continued)

Species
MYRTACEAE - MYRTLE FAMILY
Eucalyptus sp.* gum
ONAGRACEAE - EVENING PRIMROSE FAMILY
Camissonia bistorta California sun cup
Camissonia californica mustard-like evening primrose
OROBANCHACEAE - BROOM-RAPE FAMILY
Orobanche bulbosa chaparral broom-rape
PAPAVERACEAE - POPPY FAMILY
Dicentra chrysantha golden ear-drops
Eschscholzia californica California poppy
PLANTAGINACEAE - PLANTAIN FAMILY
Plantago erecta dwarf plantain/California plantain
POLEMONIACEAE - PHLOX FAMILY
Eriastrum sapphirinum annual woolly-star/sapphire woolly-star
Gilia angelensis Los Angeles phlox/Los Angeles gilia
Navarretia atractyloides holly-leaved skunkweed
POLYGONACEAE - BUCKWHEAT FAMILY
Chorizanthe parryi var. parryi Parry's spine-flower
Chorizanthe staticoides Turkish rugging
Eriogonum fasciculatum var. *fasciculatum* California buckwheat
Eriogonum gracile slender buckwheat
Lastarriaea coriacea lastarriaea
Pterostegia drymarioides pterostegia/notch leaf
Rumex hymenosepalus wild rhubarb
PORTULACACEAE - PURSLANE FAMILY
Calandrinia ciliata red maids
RANUNCULACEAE - CROWFOOT FAMILY
Delphinium parryi ssp. *parryi* Parry's larkspur/blue larkspur

PLANTS SPECIES OBSERVED WITHIN THE SURVEY AREA DURING FOCUSED SURVEYS (Continued)

Species
ROSACEAE - ROSE FAMILY
Adenostoma fasciculatum chamise
Prunus ilicifolia holly-leaved cherry
SALICACEAE - WILLOW FAMILY
Salix exigua narrow-leaved willow
Salix gooddingii black willow
SCROPHULARIACEAE - FIGWORT FAMILY
Penstemon spectabilis royal penstemon
SOLANACEAE - NIGHTSHADE FAMILY
*Datura stramonium** jimson weed
*Nicotiana glauca** tree tobacco
Solanum douglasii Douglas' nightshade
ZYGOPHYLLACEAE - CALTROP FAMILY
*Tribulus terrestris** puncture vine
CLASS MONOCOTYLEDONES (MONOCOTS)
ARECACEAE (PALMAE) - PALM FAMILY
*Washingtonia robusta** Mexican fan palm
LILIACEAE - LILY FAMILY
Calochortus plummerae Plummer's mariposa lily
Dichelostemma capitatum blue dicks
Muilla maritima rough muilla
Yucca whipplei Our Lord's candle
POACEAE [GRAMINEAE] - GRASS FAMILY
Achnatherum coronatum giant needlegrass
*Avena barbata** slender wild oat
*Avena fatua** wild oat
*Bromus diandrus** ripgut grass
Bromus madritensis ssp. *rubens** foxtail chess
*Bromus tectorum** cheat grass

PLANTS SPECIES OBSERVED WITHIN THE SURVEY AREA DURING FOCUSED SURVEYS (Continued)

Species
*Cynodon dactylon** bermuda grass
*Hordeum murinum** foxtail barley
*Lamarckia aurea** goldentop grass
Leymus condensatus giant wild rye
*Poa annua** annual bluegrass
*Schismus barbatus** Mediterranean schismus
*Vulpia myuros** foxtail fescue
** non-native species*

ATTACHMENT B

CALIFORNIA NATURAL DIVERSITY DATABASE FORMS

Mail to:
California Natural Diversity Database
Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95811
Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov

Date of Field Work (mm/dd/yyyy): 04/15/2010

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Chorizanthe parryi var. parryi*

Common Name: Parry's spineflower

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 15,804 Subsequent Visit? ☐ yes ☐ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☐ no ☐ unk.

Collection? If yes: _____ Number Rancho Santa Ana Botanic Garden Museum / Herbarium

Reporter: Sandra Leatherman
Address: 151 Kalmus Drive, Suite E-200
Costa Mesa, CA 92626
E-mail Address: sleatherman@bonterraconsulting.com
Phone: (714) 444-9199

Plant Information

Phenology: _____% vegetative 100 % flowering _____% fruiting

Animal Information

_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ wintering ☐ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

County: San Bernardino Landowner / Mgr.: Private

Quad Name: Devore, Guasti, and Fontana Elevation: 1,090 to 1,930 feet msl

T see table R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): GPS

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model Garmin ETREX

DATUM: NAD27 ☐ NAD83 ☑ WGS84 ☐ Horizontal Accuracy _____ meters/feet

Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ *OR* Geographic (Latitude & Longitude) ☑

Coordinates: see attached

Habitat Description (plants & animals) *plant communities, dominants, associates, substrates/soils, aspects/slope:*
Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

The associated species at the various populations included: California croton (Croton californica), California sun cup (Camissonia bistorta), chamise (Adenostoma fasciculatum), deer weed (Lotus scoparius), everlasting nest straw (Stylocline gnaphaloides), lastarriaea (Lastarriaea coriacea), long-beaked filaree (Erodium botrys), ripgut brome (Bromus diandrus), foxtail fescue (Vulpia myuros), and wild oat (Avena spp.). These plants were observed on rocky or cobble type soils including Soboba stony loamy sand, Soboba gravelly loamy sand, and Tujunga gravelly loamy sand.

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: transportation, open space.

Visible disturbances: horticultural collectors and fire.

Threats: utility improvement project needs, possible plant collection or damage by vehicular activity, and/or increased distribution of non natives

Comments: photographs available upon request.

Determination: *(check one or more, and fill in blanks)*

☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☑ Other: previous work done with species

Photographs: *(check one or more)* Slide Print Digital

Plant / animal ☐ ☐ ☐
Habitat ☐ ☐ ☐
Diagnostic feature ☐ ☐ ☐

May we obtain duplicates at our expense? yes☐ no☐

Mail to:
California Natural Diversity Database
Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95811
Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov

Date of Field Work (mm/dd/yyyy): 05/28/2010

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Calochortus plummerae*

Common Name: Plummer's mariposa lily

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 182 Subsequent Visit? ☑ yes ☐ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☐ no ☑ unk.

Collection? If yes: _____ Number Rancho Santa Ana Botanic Garden Museum / Herbarium

Reporter: Sandra Leatherman
Address: 151 Kalmus Drive, Suite E-200
Costa Mesa, CA 92626
E-mail Address: sleatherman@bonterraconsulting.com
Phone: (714) 444-9199

Plant Information

Phenology: 22 % vegetative 71 % flowering 7 % fruiting

Animal Information

_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ wintering ☐ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

Location Description ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: San Bernardino Landowner / Mgr.: Private

Quad Name: Devore, Guasti, and Fontana Elevation: 1,090 to 1,930 feet msl

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): GPS

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model Garmin ETREX

DATUM: NAD27 ☐ NAD83 ☑ WGS84 ☐ Horizontal Accuracy _____ meters/feet

Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ *OR* Geographic (Latitude & Longitude) ☑

Coordinates: see attached

Habitat Description (plants & animals) *plant communities, dominants, associates, substrates/soils, aspects/slope:*
Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

The associated species at the various populations included: black sage (Salvia mellifera), California croton (Croton californica), California sagebrush (Artemisia californica), chamise (Adenostoma fasciculatum), deer weed (Lotus scoparius), goldentop grass (Lamarckia aurea), holly-leaved cherry (Prunus ilicifolia), long beaked filaree (Erodium botrysboytrys), popcorn flower (Cryptantha intermedia), ripgut brome (Bromus diandrus), peak rush rose (Helianthemum scoparium), sapphire wolly-star (Eriastrum sapphirinum), white sage (Salvia apian), and wild oat (Avena spp.). These plants were observed on rocky or cobble type soils including Soboba stony and Soboba gravelly loamy sand.

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: transportation, open space.

Visible disturbances: horticultural collectors and fire.

Threats: utility improvement project needs, possible plant collection or damage by vehicular activity, and/or increased distribution of non natives

Comments: photographs available upon request.

Determination: *(check one or more, and fill in blanks)*

☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☑ Other: previous work done with species

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☐
Habitat	☐	☐	☐
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☐ no ☐

APPENDIX C

COASTAL CALIFORNIA GNATCATCHER SURVEY REPORT

BonTerra CONSULTING
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151 Kalmus Drive, Suite E-200
Costa Mesa, CA 92626

November 17, 2010

Mr. Andrew Keller
Southern California Edison
2244 Walnut Grove Avenue, G01 Quad 3A
Rosemead, California 91770

VIA EMAIL
Andrew.Keller@sce.com

Subject: Results of Focused Presence/Absence Surveys for the Coastal California Gnatcatcher for the Falcon Ridge Substation Project located in the City of Fontana and in unincorporated San Bernardino County, California

Dear Mr. Keller:

This Letter Report presents the results of focused surveys for the coastal California gnatcatcher (*Polioptila californica californica*) on the Falcon Ridge Substation Project (hereafter referred to as "the Project site") in San Bernardino County, California. The purpose of the surveys was to determine the presence or absence of the coastal California gnatcatcher on or immediately adjacent to the Project site. Surveys were conducted by Biologists that hold the necessary Federal Endangered Species Act (FESA) survey permit and according to guidelines established by the U.S. Fish and Wildlife Service (USFWS).

Project Location and Description

The Project site is located in the southwestern portion of the County of San Bernardino in the cities of Rancho Cucamonga, Rialto, and Fontana, and a portion of unincorporated San Bernardino County (Exhibit 1). The survey area for the Project site is approximately 100 feet in diameter where new powerlines are proposed and also includes alternative sites for a substation. The approximate 412-acre survey area is located on the U.S. Geological Survey (USGS) Devore, Guasti, and Fontana 7.5-minute quadrangle maps (Exhibit 2). The survey area is located east of Interstate 15 (I-15), south of Riverside Avenue, north of San Bernardino Avenue, and west of Locust Avenue (north of State Route 210 [SR-210]) and Cherry Avenue (south of SR-210). Land uses in the immediate vicinity include industrial, commercial, residential, and open space. Topography in the survey area is relatively flat with elevations ranging from approximately 1,090 to 1,930 feet above mean sea level (msl).

Fourteen vegetation types and other areas occur in the survey area (Exhibit 3). Vegetation types and other areas mapped in the survey area consist of Riversidean alluvial fan sage scrub, disturbed Riversidean alluvial fan sage scrub, disturbed Riversidean sage scrub, disturbed mule fat scrub, annual grassland, annual grassland/disturbed Riversidean alluvial fan sage scrub, vineyards, ruderal, ornamental, disturbed, developed, developed/ornamental, developed/ruderal, and flood-control channel. The focused surveys for the coastal California gnatcatcher were conducted within all suitable Riversidean alluvial fan sage scrub and Riversidean sage scrub habitats within the survey area. These habitats were dominated by chamise (*Adenostoma fasciculatum*), California buckwheat (*Eriogonum fasciculatum*), black sage(*Salvia mellifera*), and

white sage (*Salvia apiana*) with our Lord's candle (*Yucca whipplei*), cane cholla (*Opuntia parryi*), deerweed (*Lotus scoparius*), and California sagebrush (*Artemisia californica*) also occurring.

Background

Coastal California Gnatcatcher

Recent taxonomic studies indicate the California gnatcatcher consists of four subspecies that extend from southwestern California to southern Baja California, Mexico (Atwood and Lerman 2006; Mellink and Rea 1994). The coastal California gnatcatcher, the northernmost gnatcatcher subspecies, is restricted to lowland areas from central Ventura County through Los Angeles, San Bernardino, Riverside, Orange, and San Diego Counties to the Baja California, Mexico border (Atwood and Lerman 2006; Mellink and Rea 1994). Formerly, the coastal California gnatcatcher was common from the San Fernando Valley east along the base of the San Gabriel Mountains to Claremont (Atwood 1990). The coastal California gnatcatcher is now rare in the northern part of its range with a handful of sightings from Santa Clarita to Tujunga Wash, though a small population persists near Moorpark in Ventura County. The coastal California gnatcatcher has been recorded from sea level to approximately 3,000 feet above msl (USFWS 2003); however, greater than 90 percent of gnatcatcher records are from elevations below 820 feet above msl along the coast (Atwood and Bolsinger 1992; MBA 1991) and between sea level and 1,800 feet above msl inland. Recent estimates by the USFWS regarding the population size of the coastal California gnatcatcher in Southern California have been about 3,000 pairs (Atwood and Bontrager 2001).

The coastal California gnatcatcher typically occurs within coastal and inland sage scrub vegetation types. Sage scrub often occurs in a patchy distribution pattern throughout the range of the gnatcatcher. Coastal California gnatcatchers also use chaparral, grassland, and riparian habitats that are near sage scrub. These non-sage scrub habitats are used for dispersal and foraging (Atwood et al. 1998; Campbell et al. 1998; USFWS 2003). Availability of these non-sage scrub areas is essential during certain times of the year, particularly during drought conditions, or for dispersal, foraging, or nesting (USFWS 2003).

The coastal California gnatcatcher was designated as a Threatened species by the USFWS on March 25, 1993. A Special Rule was issued that would allow incidental take of the coastal California gnatcatcher under Section 9 of the FESA if the take results from activities conducted in accordance with the State's Natural Community Conservation Plan (NCCP) Act (USFWS 1993). For activities not conducted in accordance with the State's NCCP, any activity that may result in the take of coastal California gnatcatcher requires formal consultation with the USFWS under Sections 7 or 10 of the FESA.

On December 19, 2007, the USFWS published a final rule revising critical habitat for the coastal California gnatcatcher. The revised critical habitat designates 197,303 acres of land in San Diego, Orange, Riverside, San Bernardino, Los Angeles, and Ventura Counties as critical habitat for the coastal California gnatcatcher (USFWS 2007). The survey area is not located inside the designated critical habitat for the coastal California gnatcatcher. The nearest critical habitat is located approximately four miles south of the survey area.

Survey Methodology

The USFWS coastal California gnatcatcher survey protocol recommends six visits to all potentially occupied habitat areas for surveys conducted entirely within the breeding season, which extends from March 15 to June 30 (USFWS 1997a, 1997b) and nine visits to all potentially occupied habitat areas for surveys conducted entirely within the non-breeding season, which extends from July 1 to March 14 (USFWS 1997b). Surveys for the coastal California gnatcatcher were initiated during the breeding season in spring 2010, but due to Project design changes, surveys in a portion of the survey area were initiated later and therefore continued into the non-breeding season (Exhibit 4). Per consultation with the USFWS, five non-breeding season surveys were conducted for a total of eight focused gnatcatcher surveys in this portion of the survey area (Exhibits 4F-4I and 4K-4M).

All breeding season surveys followed USFWS guidelines and were conducted at least one week apart. Due to the late start date of the gnatcatcher surveys in one portion of the survey area, only the first three surveys were conducted within the breeding season. The remaining surveys in this portion of the survey area extended into the non-breeding season and therefore followed the USFWS protocol and were conducted at least two weeks apart. All surveys were conducted during the morning hours and no more than 80 acres of suitable habitat were surveyed per visit. BonTerra Consulting Biologist Lindsay Messett (Permit# TE-067064-1) conducted the surveys on April 15, 23, 30; May 7, 17; and June 3, 2010, for the areas surveyed during the breeding season, and on June 3, 18, and 25; July 9 and 23; August 6 and 20; and September 20, 2010, for the areas surveyed in the non-breeding season.

Weather conditions met the USFWS survey protocol requirements for optimal gnatcatcher detection. Weather conditions that were too cold (below 55 degrees Fahrenheit [°F]), too hot (above 95°F), or too windy (wind speed greater than 15 miles per hour) were avoided. Surveys were conducted by slowly walking through all appropriate habitats (i.e., Riversidean alluvial fan sage scrub, Riversidean sage scrub) and while listening and watching for gnatcatcher activity. A combination of taped recordings of gnatcatcher vocalizations and “pishing” sounds were used in an attempt to elicit responses from any gnatcatchers that might be present. The frequency of vocalization playback and “pishing” varied depending on conditions such as habitat patch size and topography in each area. All bird species detected during the survey were recorded, including notable observations of special status birds or other wildlife species. A list of the species observed during the surveys is included in Appendix A. Photographs of representative habitat in the survey area are provided in Exhibit 5.

Survey Results

No coastal California gnatcatchers were observed or detected within the survey area during the focused surveys. Survey dates, times and weather data for the focused coastal California gnatcatcher surveys are shown in Tables 1 and 2 below.

TABLE 1
SUMMARY OF COASTAL CALIFORNIA GNATCATCHER SURVEYS
(BREEDING SEASON SURVEYS)

Survey Number	Date	Time (Start/End)	Surveyors	Weather Conditions			Gnatcatchers Observed and/or Detected
				Temperature (°F) (Start/End)	Wind (mph) (Start/End)	Cloud Cover (%) (Start/End)	
1	April 15, 2010	0700/1210	Messett	63/71	0–1/0–2	Clear/Clear	None
2	April 23, 2010	0715/1150	Messett	55/61	0–1/0–3	25/20	None
3	April 30, 2010	0730/1200	Messett	56/68	0–4/0–8	Clear/Clear	None
4	May 7, 2010	0700/1155	Messett	58/80	0–1/0–4	Clear/Clear	None
5	May 17, 2010	0650/1145	Messett	56/63	0–2/0–4	100/100	None
6	June 3, 2010	0700/1215	Messett	63/78	0–1/0–2	10/50	None

°F: degrees Fahrenheit; mph: miles per hour

TABLE 2
SUMMARY OF COASTAL CALIFORNIA GNATCATCHER SURVEYS
(NON-BREEDING SEASON SURVEYS)

Survey Number	Date	Time (Start/End)	Surveyors	Weather Conditions			Gnatcatchers Observed and/or Detected
				Temperature (°F) (Start/End)	Wind (mph) (Start/End)	Cloud Cover (%) (Start/End)	
1	June 3, 2010	0620/1200	Messett	57/76	0–1/0–3	90/Hazy	None
2	June 18, 2010	0700/1220	Messett	60/72	0–1/0–2	Clear/Clear	None
3	June 25, 2010	0700/1200	Messett	59/81	0–1/0–3	45/Clear	None
4	July 9, 2010	0720/1155	Messett	59/78	0–1/0–4	100/Clear	None
5	July 23, 2010	0710/1210	Messett	65/83	0–1/0–4	Clear/Clear	None
6	August 6, 2010	0730/1215	Messett	60/79	0–1/0–1	100/Clear	None
7	August 20, 2010	0600/1130	Messett	70/87	0–1/0–4	Clear/Clear	None
8	September 20, 2010	0630/1200	Messett	61/80	0–1/0–3	Clear/Clear	None

°F: degrees Fahrenheit; mph: miles per hour

Sensitive Species

One sensitive species, the loggerhead shrike (*Lanius ludovicianus*), was observed in the survey area during the surveys.

Loggerhead shrike is a California Species of Special Concern; nesting individuals are protected. Year-round, shrikes inhabit open habitats with short vegetation such as pastures, agricultural fields, riparian areas, and open woodlands (Yosef 1996). They can often be found perched on fences and posts from which prey items (e.g., large insects, small mammals, and lizards) can be seen. This species was widely distributed across North America but has declined throughout most of its range in recent decades (Yosef 1996). It was considered to be a fairly common year-round resident in Southern California (Garrett and Dunn 1981), but has recently shown declines in its California population (Small 1994; Hamilton and Willick 1996). Suitable habitat for loggerhead shrike is present throughout the survey area, and it was observed in the survey area.

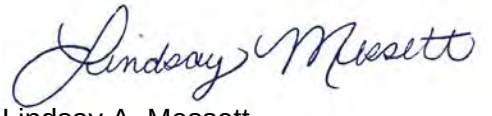
If you have any comments or questions, please call Stacie Tennant at (714) 444-9199.

Sincerely,

BONTERRA CONSULTING

Stacie A. Tennant
Senior Project Manager/Biologist

I certify that the information in this survey report and enclosed exhibits fully and accurately present my work.



Lindsay A. Messett
Biologist
(PRT # 067064-1)

Attachments: Exhibits 1, 2, 3, 4, and 5
Appendix A – Wildlife Compendium

cc: Ms. Sandy Marquez, USFWS

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Regional Location

Exhibit 1

Falcon Ridge Substation Project

N
W E
S

10 5 0 10 Miles

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Survey Area
Alternative Substations
Preferred Substation
Substation (6th and Etiwanda)

Etiwanda Substation

Exhibit 2A

Exhibit 2B

Lytle Creek
Etiwanda Ave
Cherry Ave
Citrus Ave
Sierra Ave
Locust Street
Baseline Rd
Foothill Blvd
Merrill Ave
San Bernardino Ave
210
15

Local Vicinity

Exhibit 2A

Falcon Ridge Substation Project

N W E S

2,000 1,000 0 2,000 Feet

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Survey Area

Alternative Substations

Preferred Substation

Substation (6th and Etiwanda)

Alder Substation

Exhibit 2A

Exhibit 2B

Local Vicinity

Exhibit 2B

Falcon Ridge Substation Project

N W E S

2,000 1,000 0 2,000 Feet

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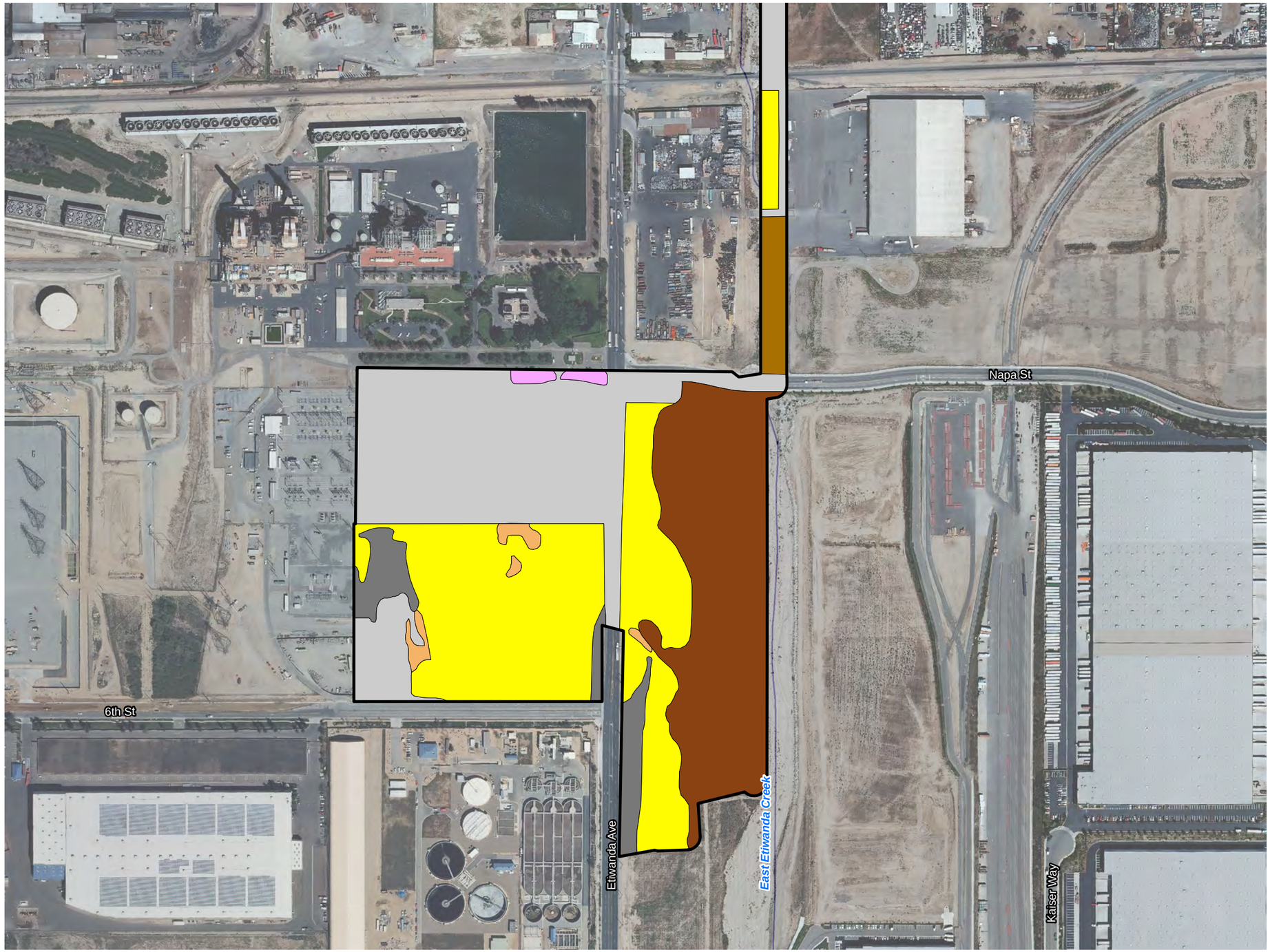
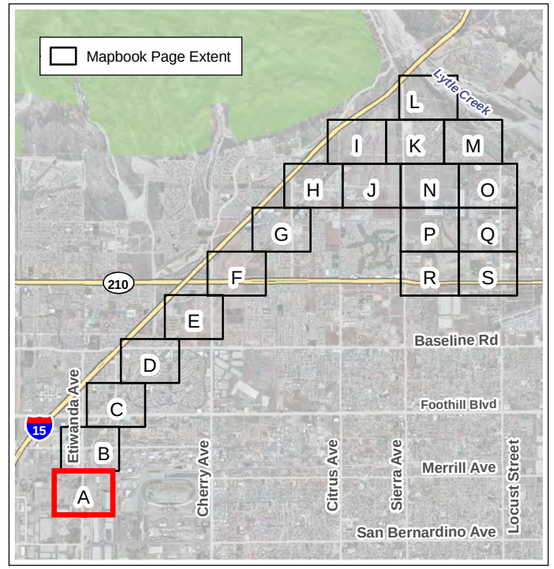


Survey Area

Vegetation Types and Other Areas

- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Vegetation Types and Other Areas

Exhibit 3A

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

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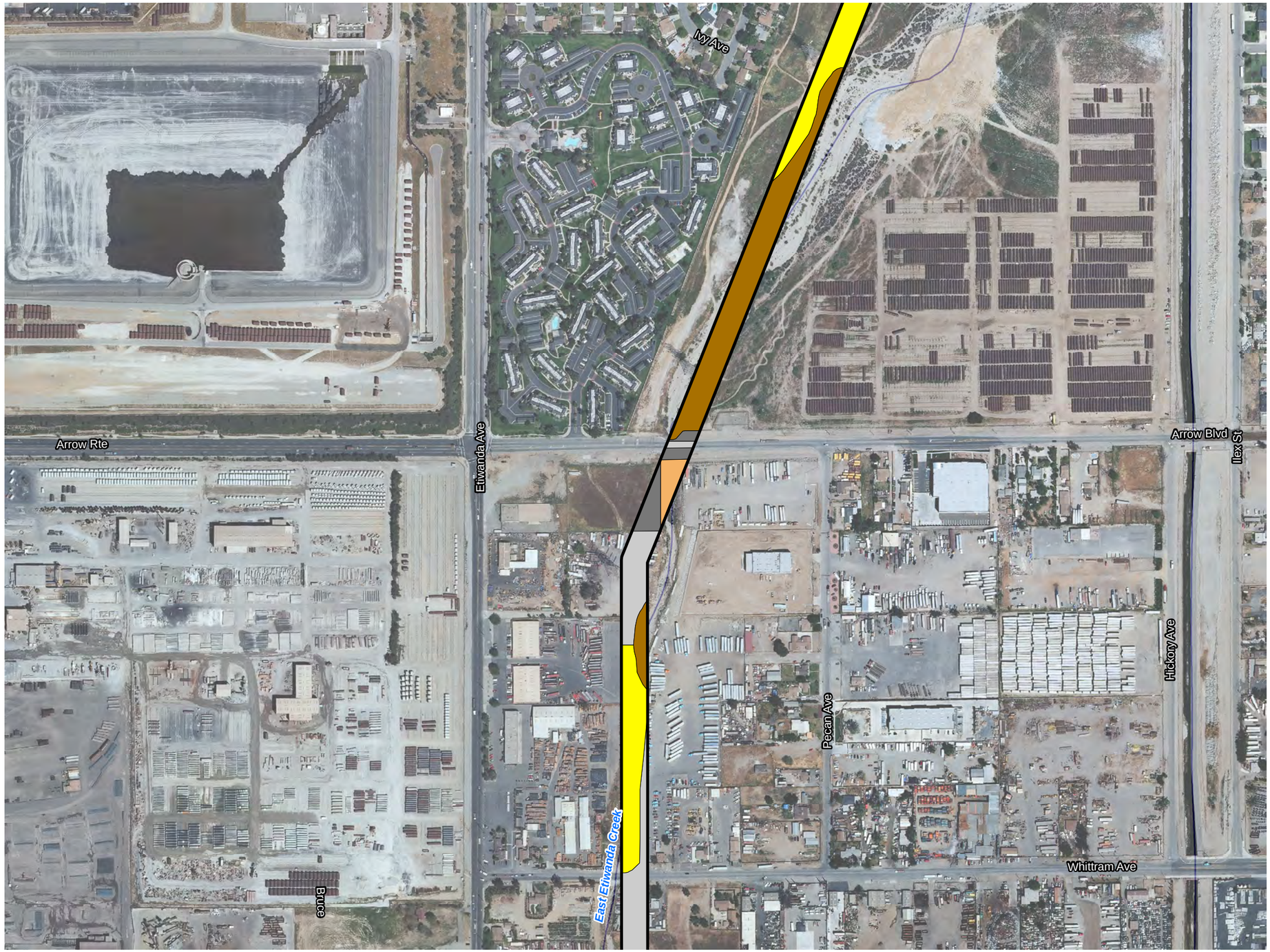

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Vegetation Types and Other Areas

Exhibit 3B

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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Survey Area

Vegetation Types and Other Areas

- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel

Mapbook Page Extent

Vegetation Types and Other Areas

Exhibit 3C

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

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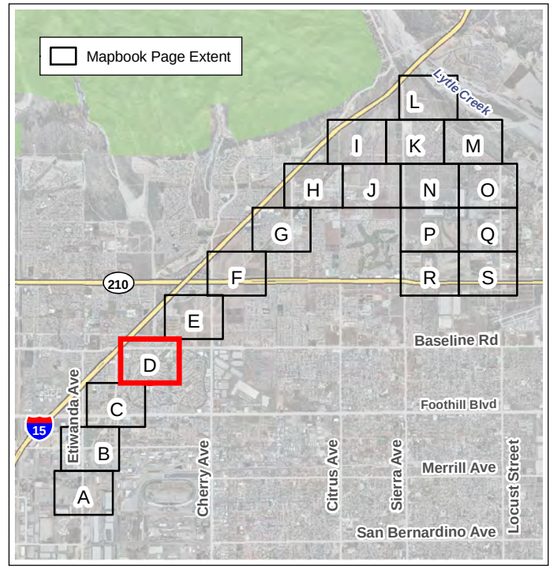
Survey Area

Vegetation Types and Other Areas

- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Vegetation Types and Other Areas

Exhibit 3D

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

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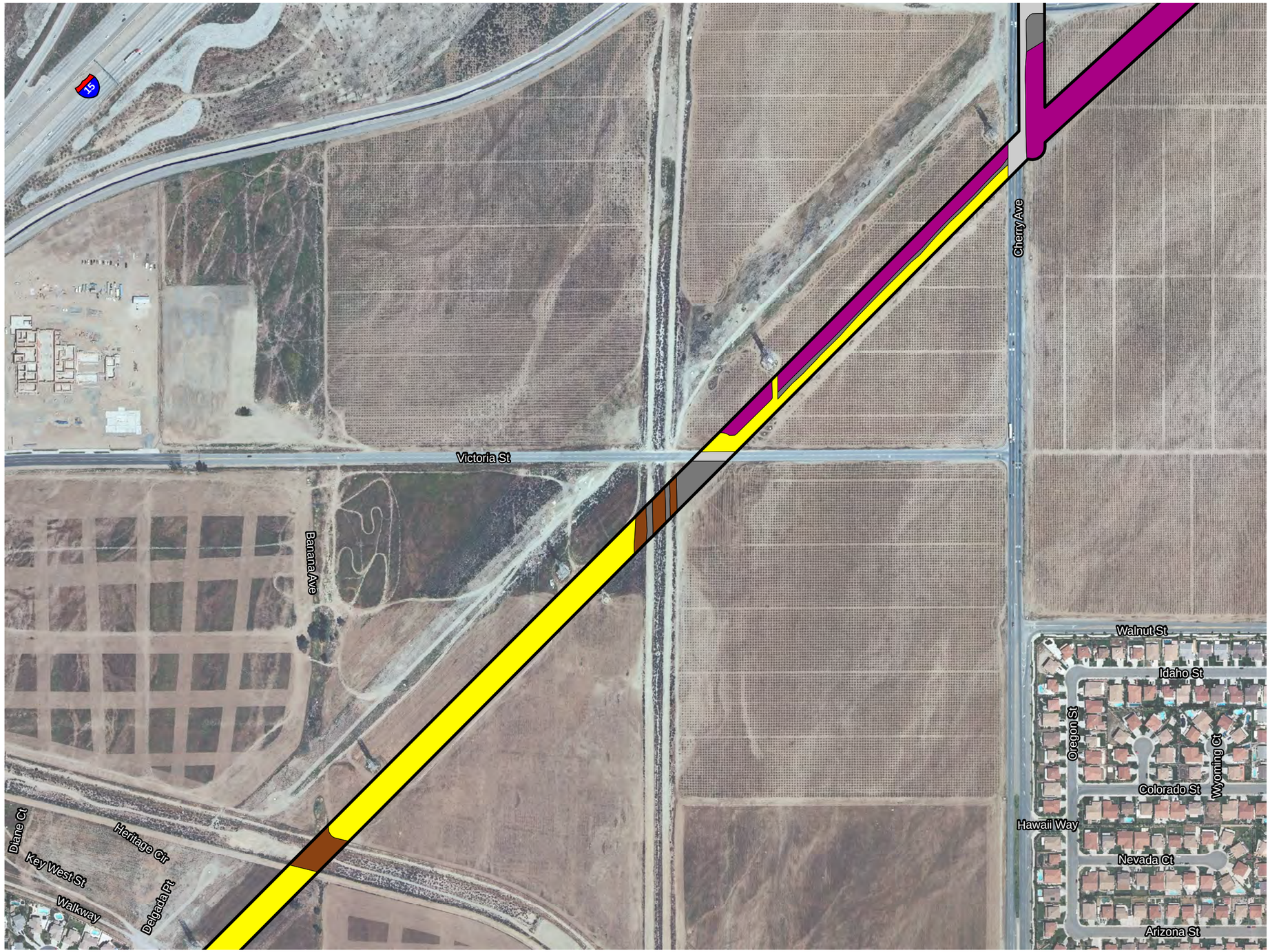
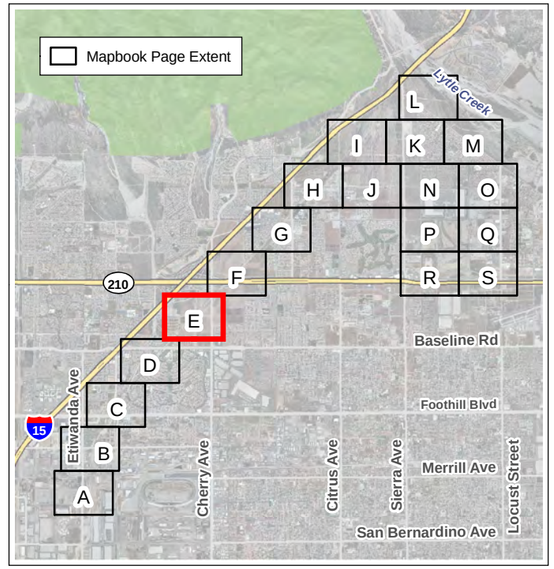


Survey Area

Vegetation Types and Other Areas

- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Vegetation Types and Other Areas

Exhibit 3E

Falcon Ridge Substation Project

N W E S

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Feet

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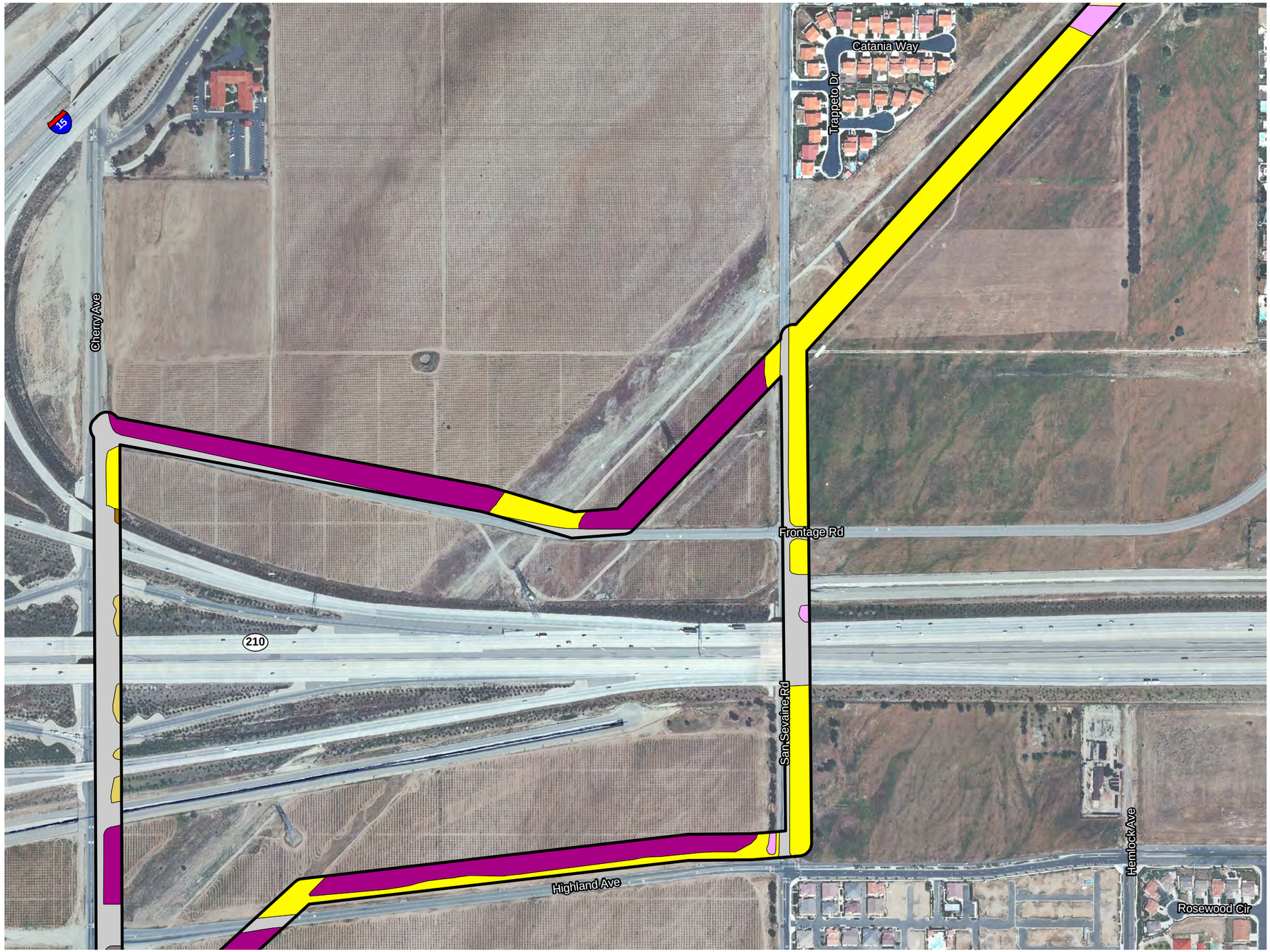
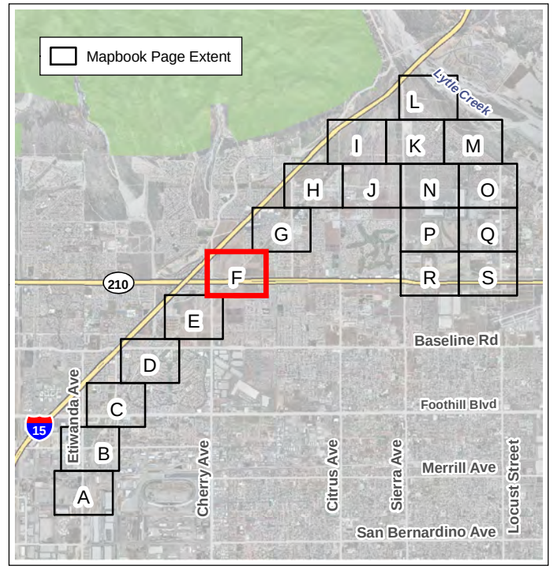


Survey Area

Vegetation Types and Other Areas

- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Vegetation Types and Other Areas

Exhibit 3F

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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Survey Area

Vegetation Types and Other Areas

- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel

Mapbook Page Extent

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Vegetation Types and Other Areas

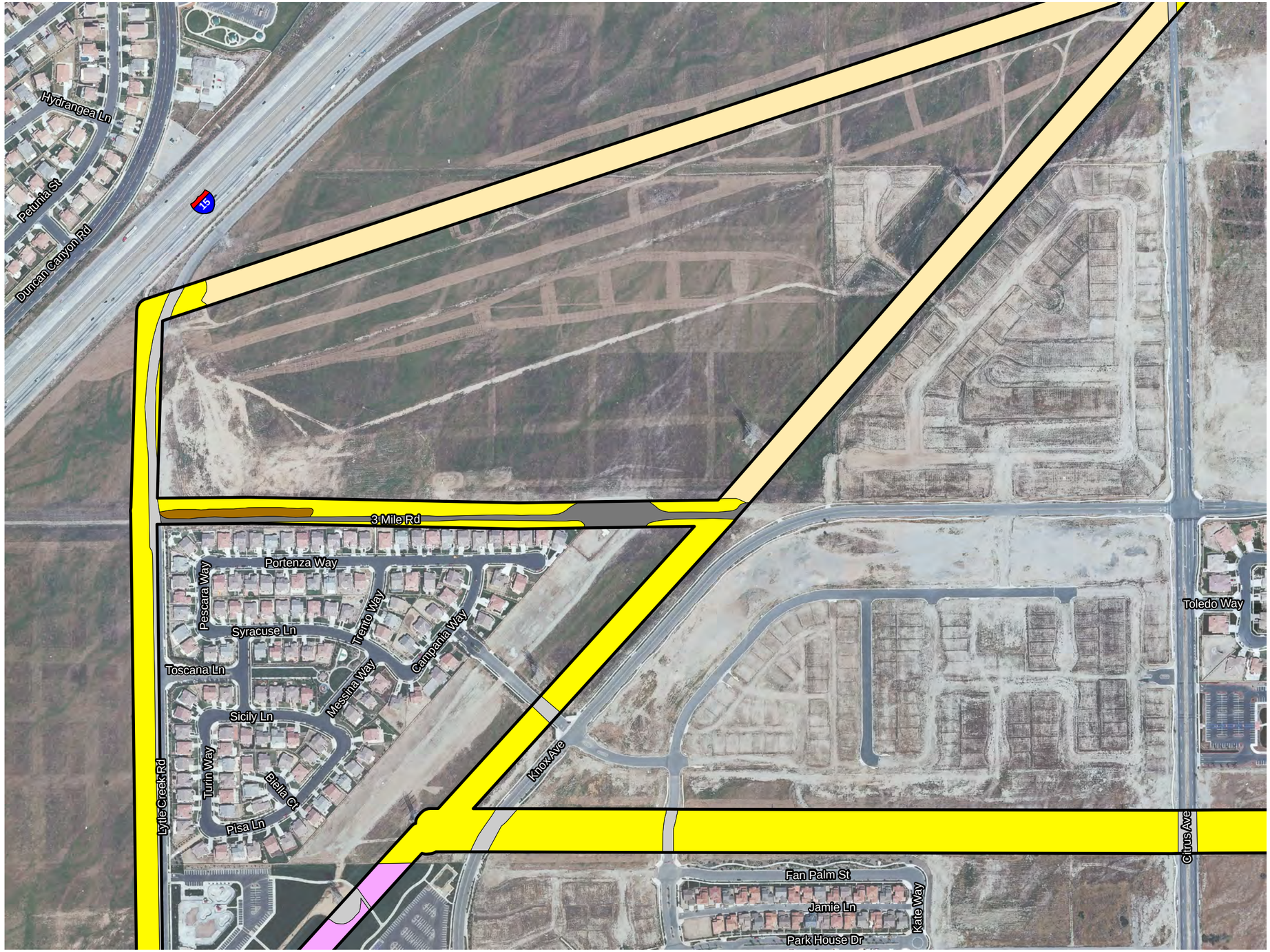
Exhibit 3G

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

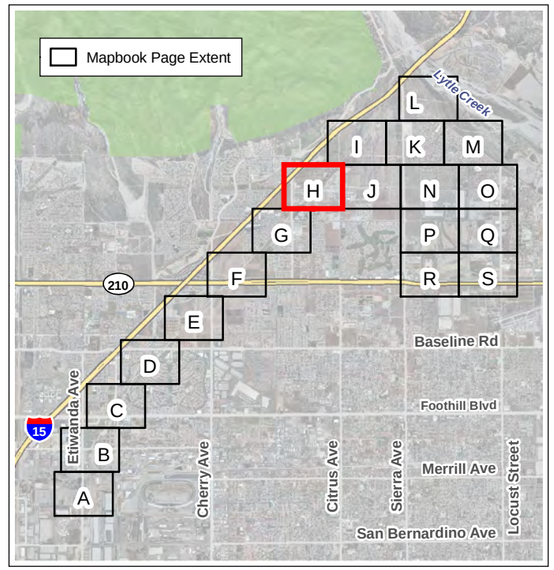
(Rev 10/20/10 JFG) R:\Projects\Edison\J046\Graphics\CAGN\ex3_veg.pdf



Survey Area

Vegetation Types and Other Areas

- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Vegetation Types and Other Areas

Exhibit 3H

Falcon Ridge Substation Project

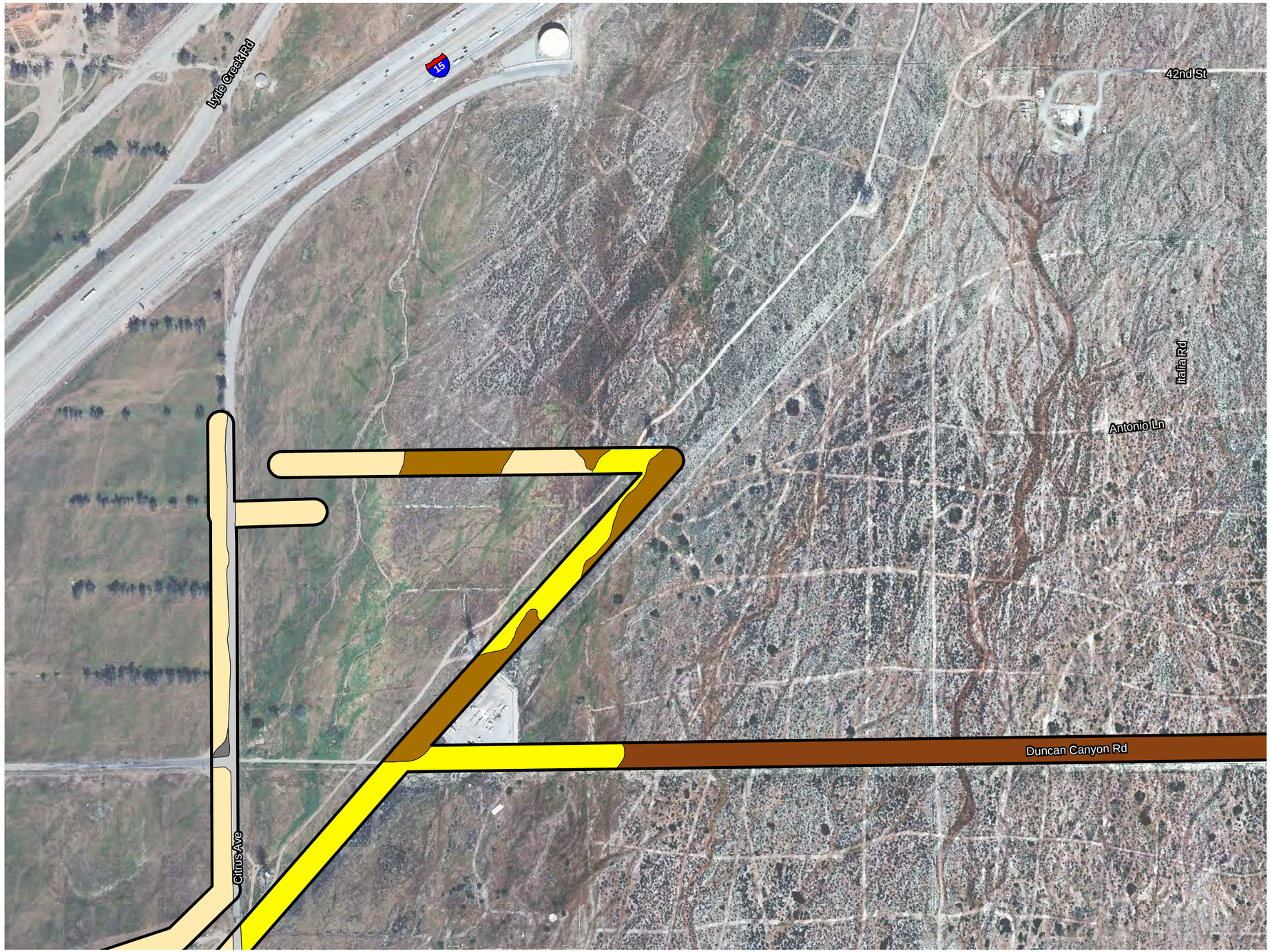
N W E S

400 200 0 400

Feet

Bonterra CONSULTING

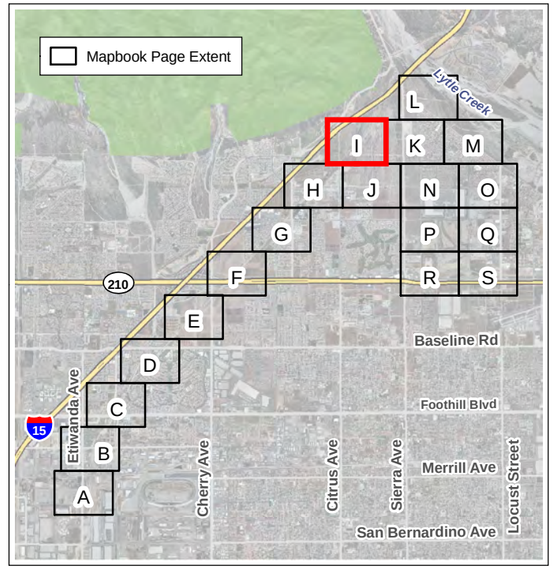
(Rev 10/20/10 JFG) R:\Projects\Edison\J046\Graphics\CAGN\ex3_veg.pdf



Survey Area

Vegetation Types and Other Areas

- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Vegetation Types and Other Areas

Exhibit 3I

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

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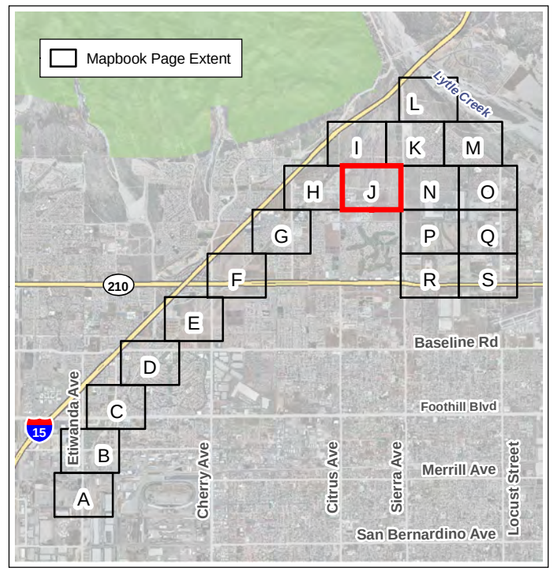
Survey Area

Vegetation Types and Other Areas

- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Vegetation Types and Other Areas

Exhibit 3J

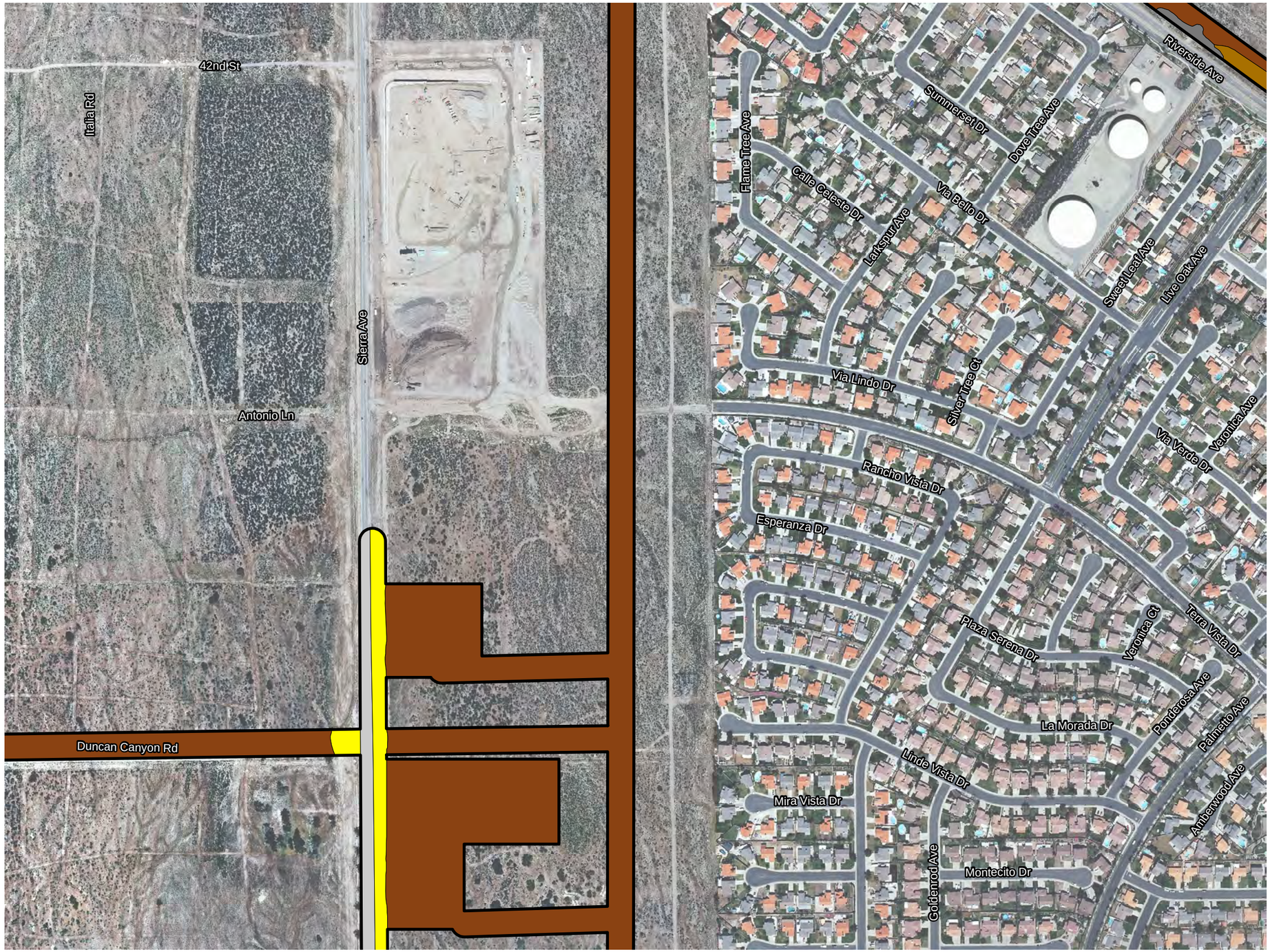
Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

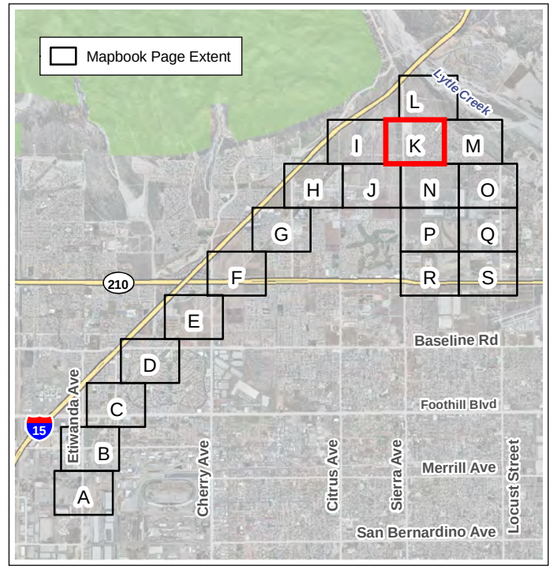
(Rev 10/20/10 JFG) R:\Projects\Edison\J046\Graphics\CAGN\ex3_veg.pdf



Survey Area

Vegetation Types and Other Areas

- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Vegetation Types and Other Areas

Exhibit 3K

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

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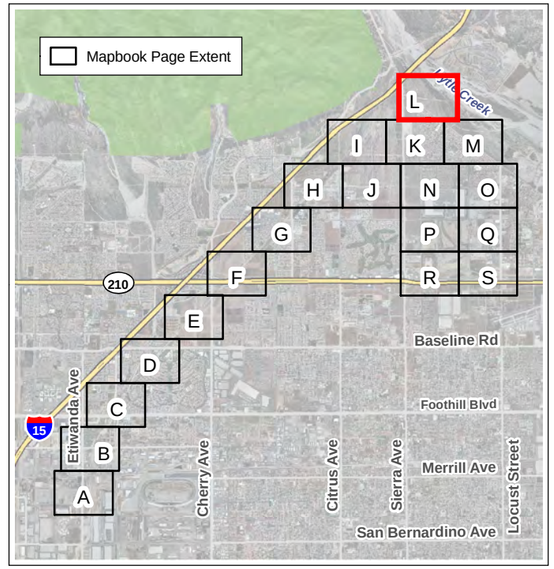
Survey Area

Vegetation Types and Other Areas

- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Vegetation Types and Other Areas

Exhibit 3L

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

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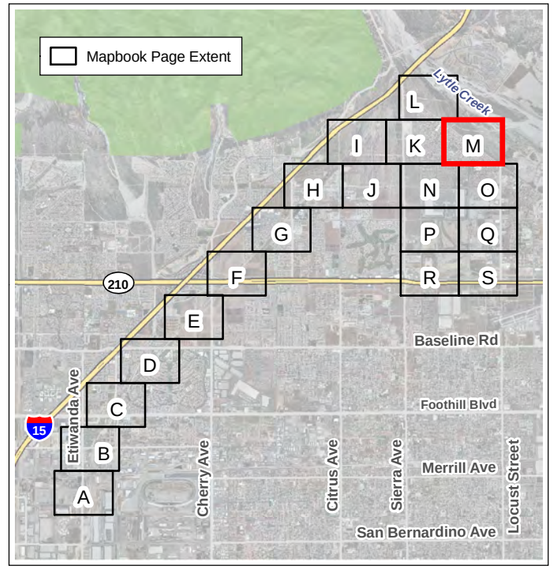
Survey Area

Vegetation Types and Other Areas

- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Vegetation Types and Other Areas

Exhibit 3M

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

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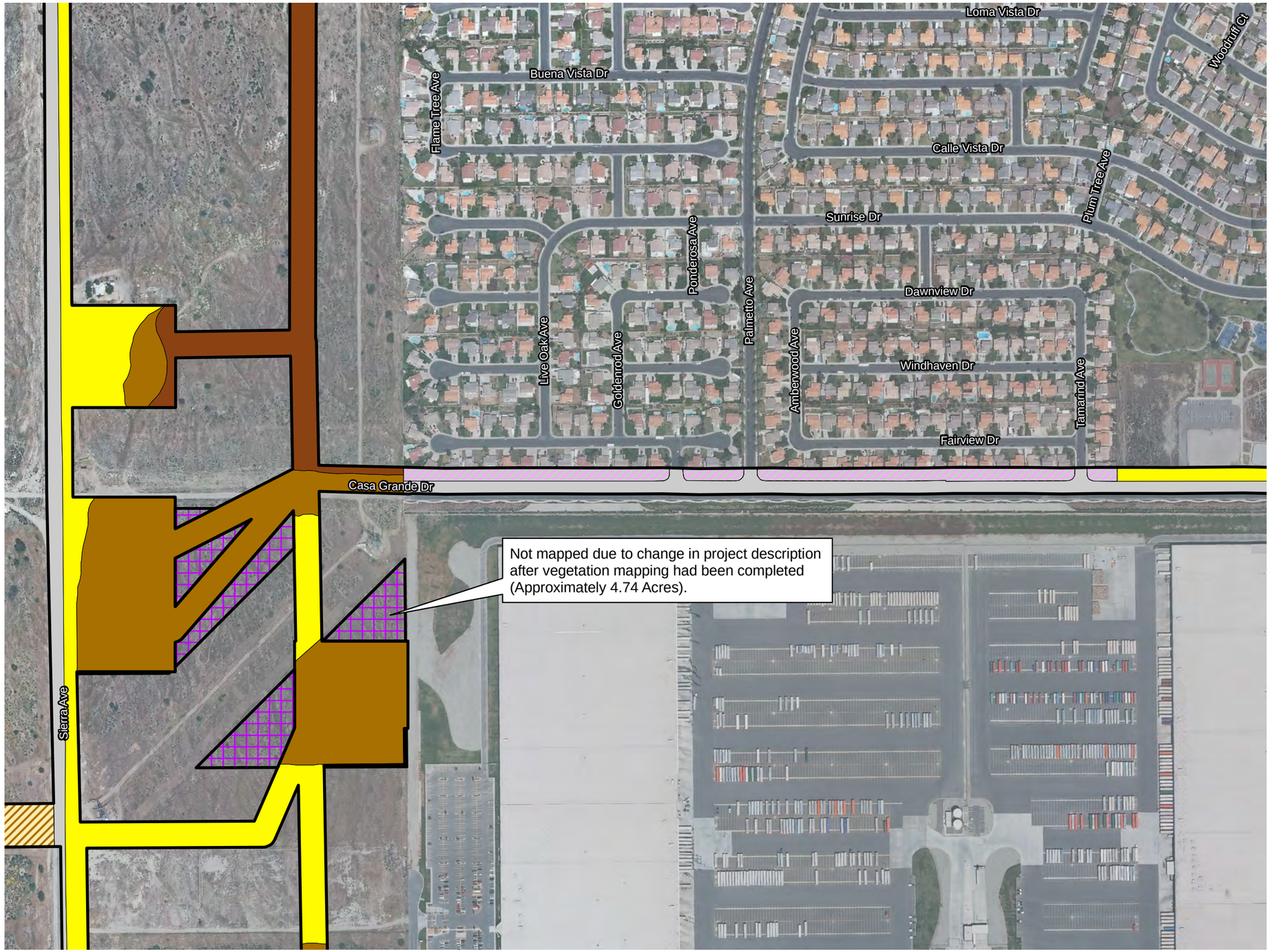
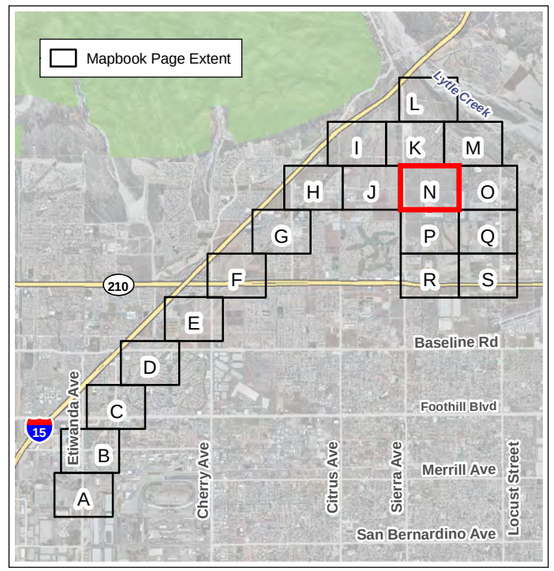


Survey Area

Vegetation Types and Other Areas

- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Vegetation Types and Other Areas

Exhibit 3N

Falcon Ridge Substation Project

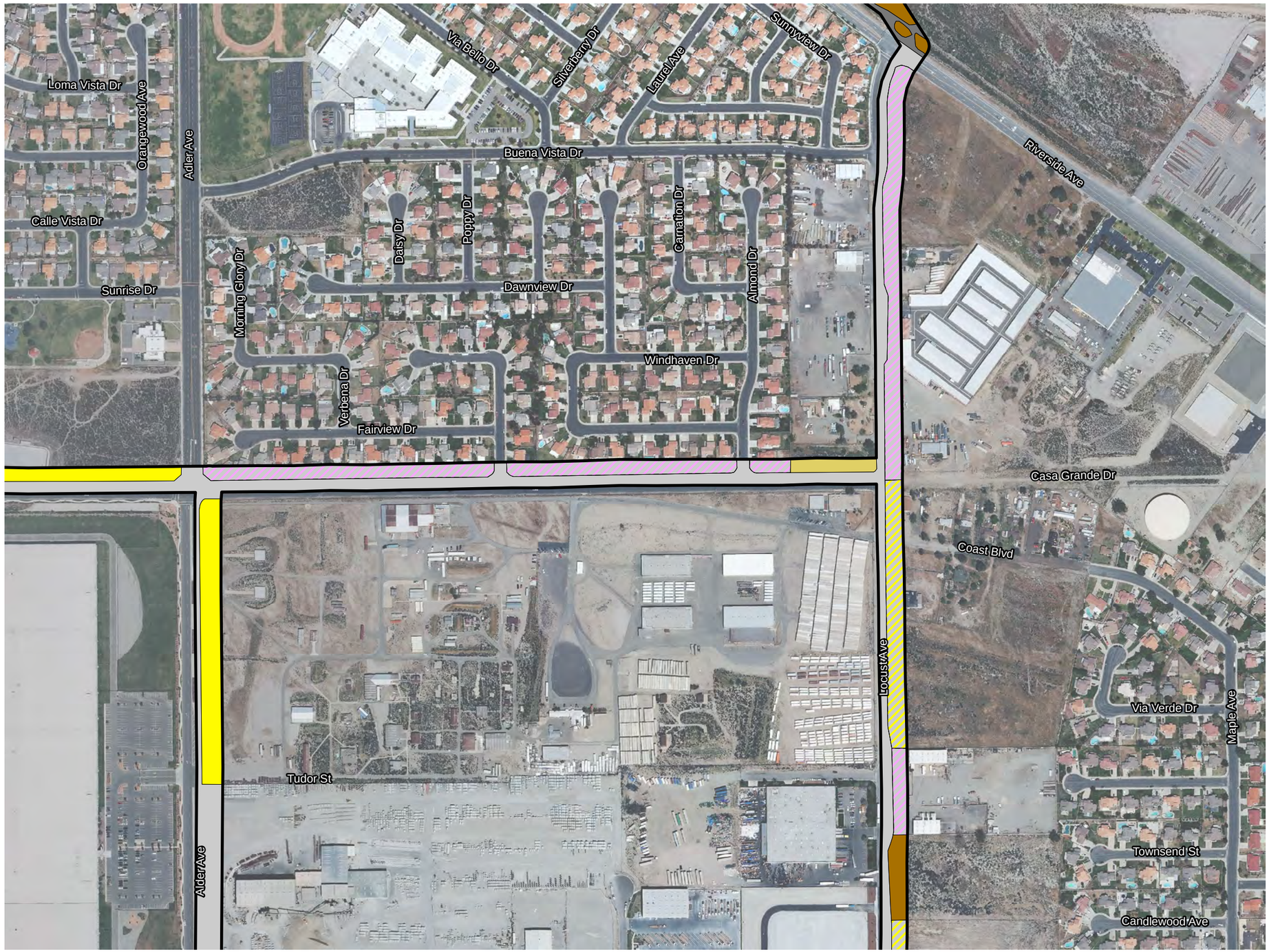
N W E S

400 200 0 400

Feet

BonTerra CONSULTING

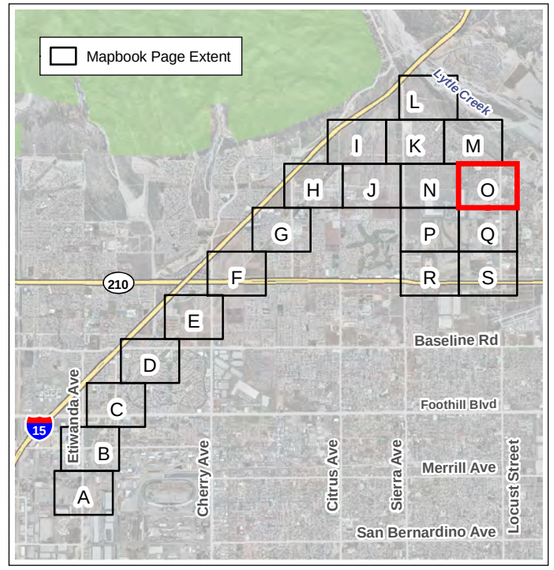
(Rev 10/20/10 JFG) R:\Projects\Edison\J046\Graphics\CAGN\ex3_veg.pdf



- Survey Area

Vegetation Types and Other Areas

- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



Vegetation Types and Other Areas

Exhibit 3O

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

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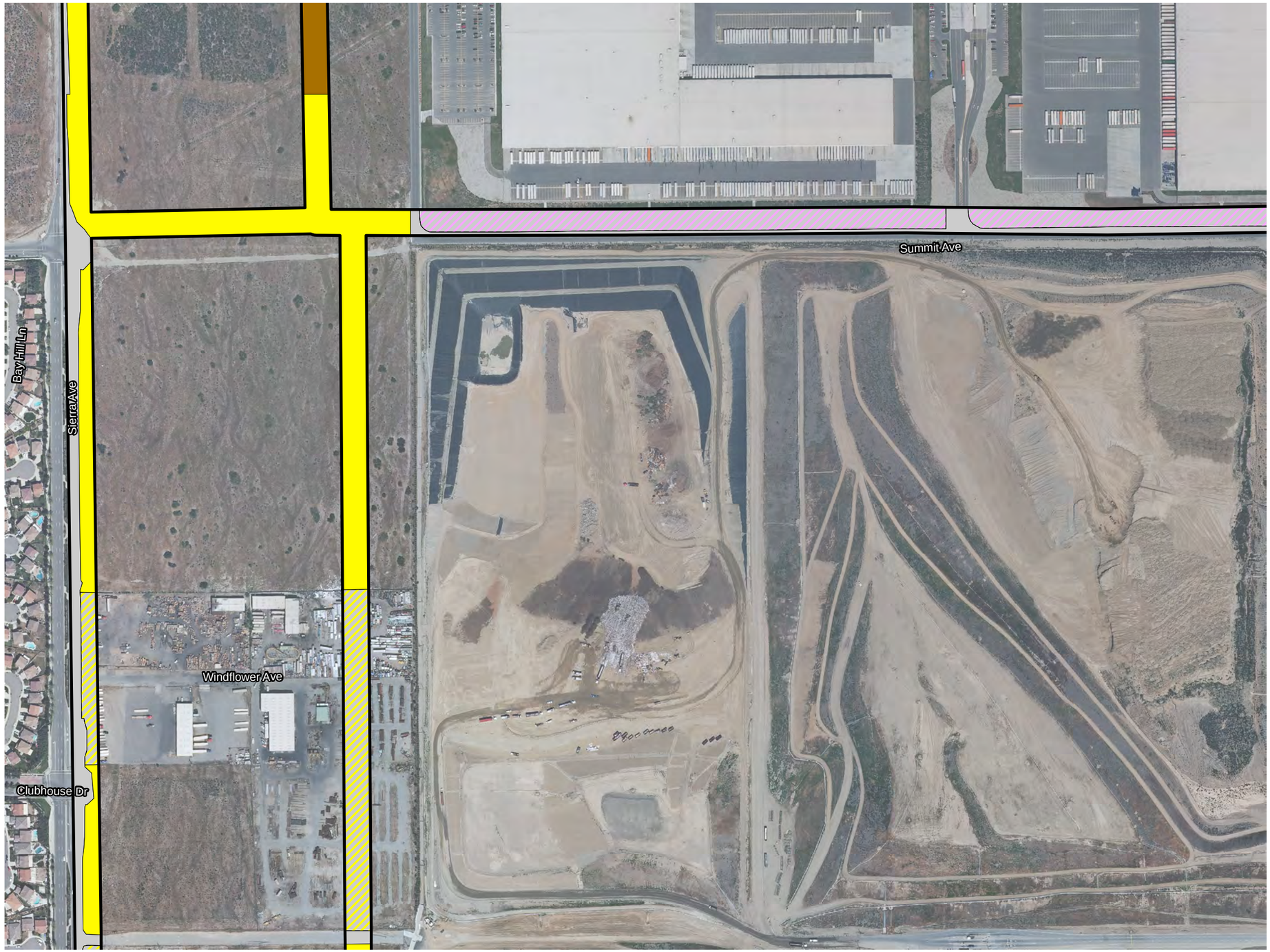
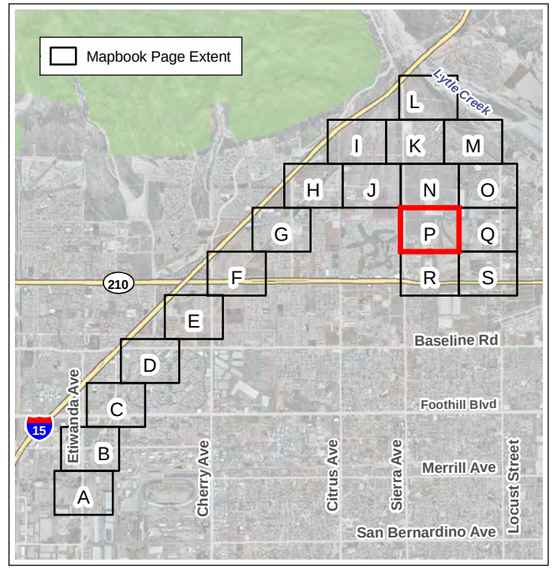


Survey Area

Vegetation Types and Other Areas

- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Vegetation Types and Other Areas

Exhibit 3P

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

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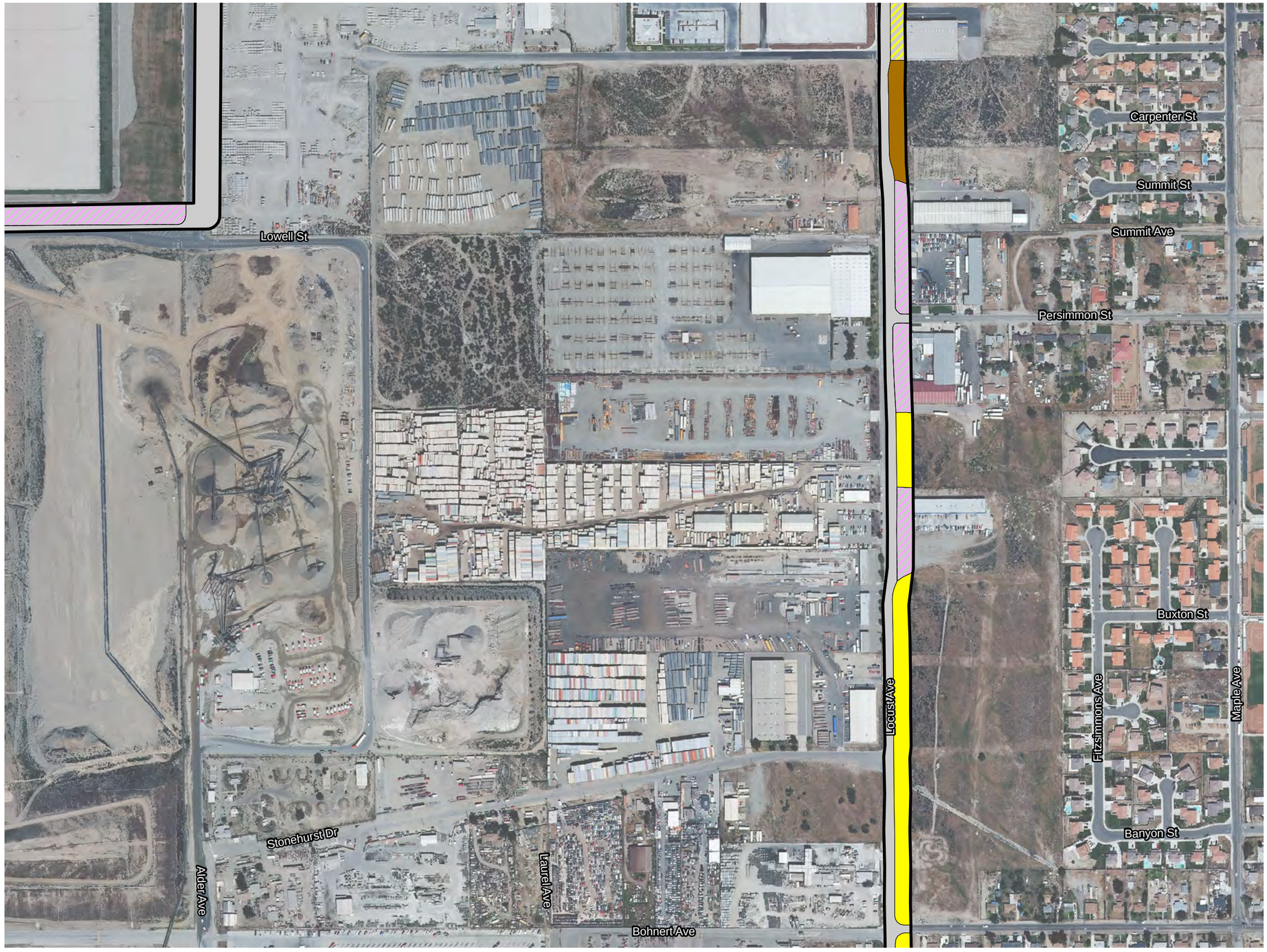
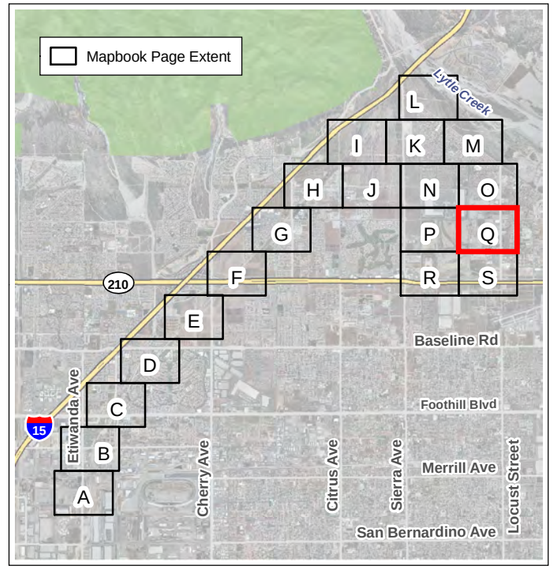


Survey Area

Vegetation Types and Other Areas

- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Vegetation Types and Other Areas

Exhibit 3Q

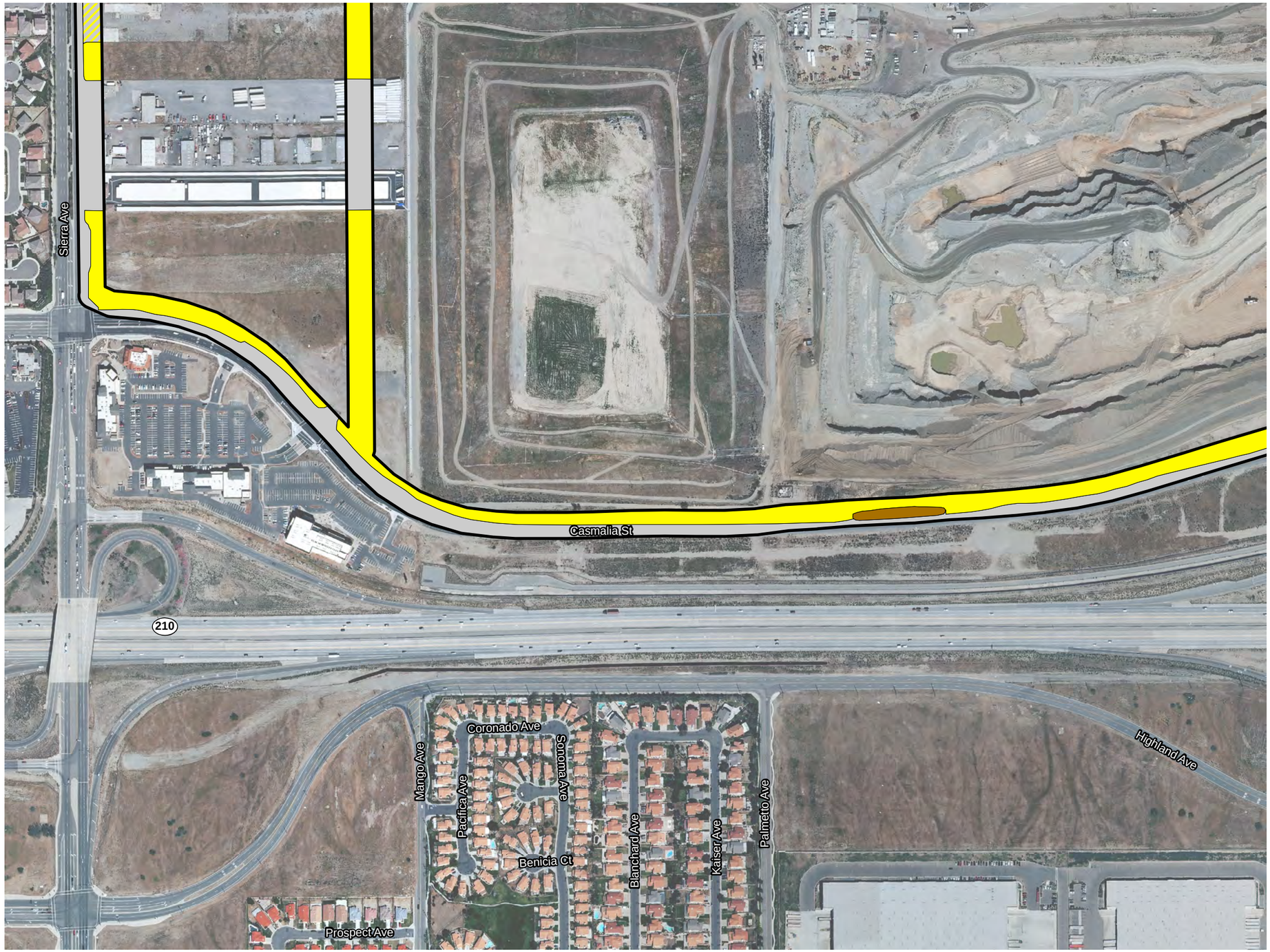
Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

Bonterra CONSULTING

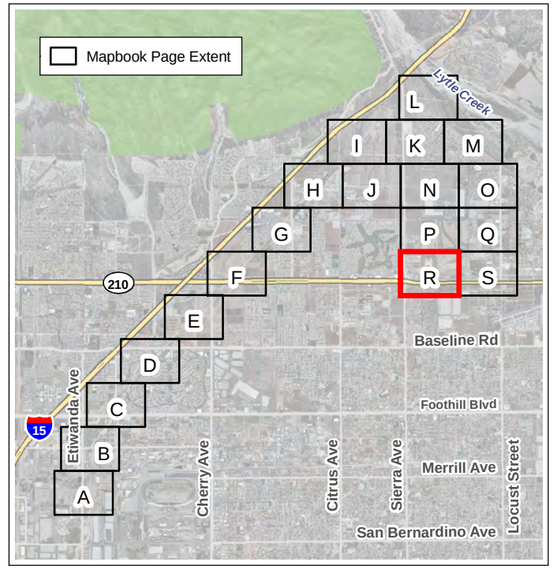
(Rev 10/20/10 JFG) R:\Projects\Edison\J046\Graphics\CAGN\ex3_veg.pdf



Survey Area

Vegetation Types and Other Areas

- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Vegetation Types and Other Areas

Exhibit 3R

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

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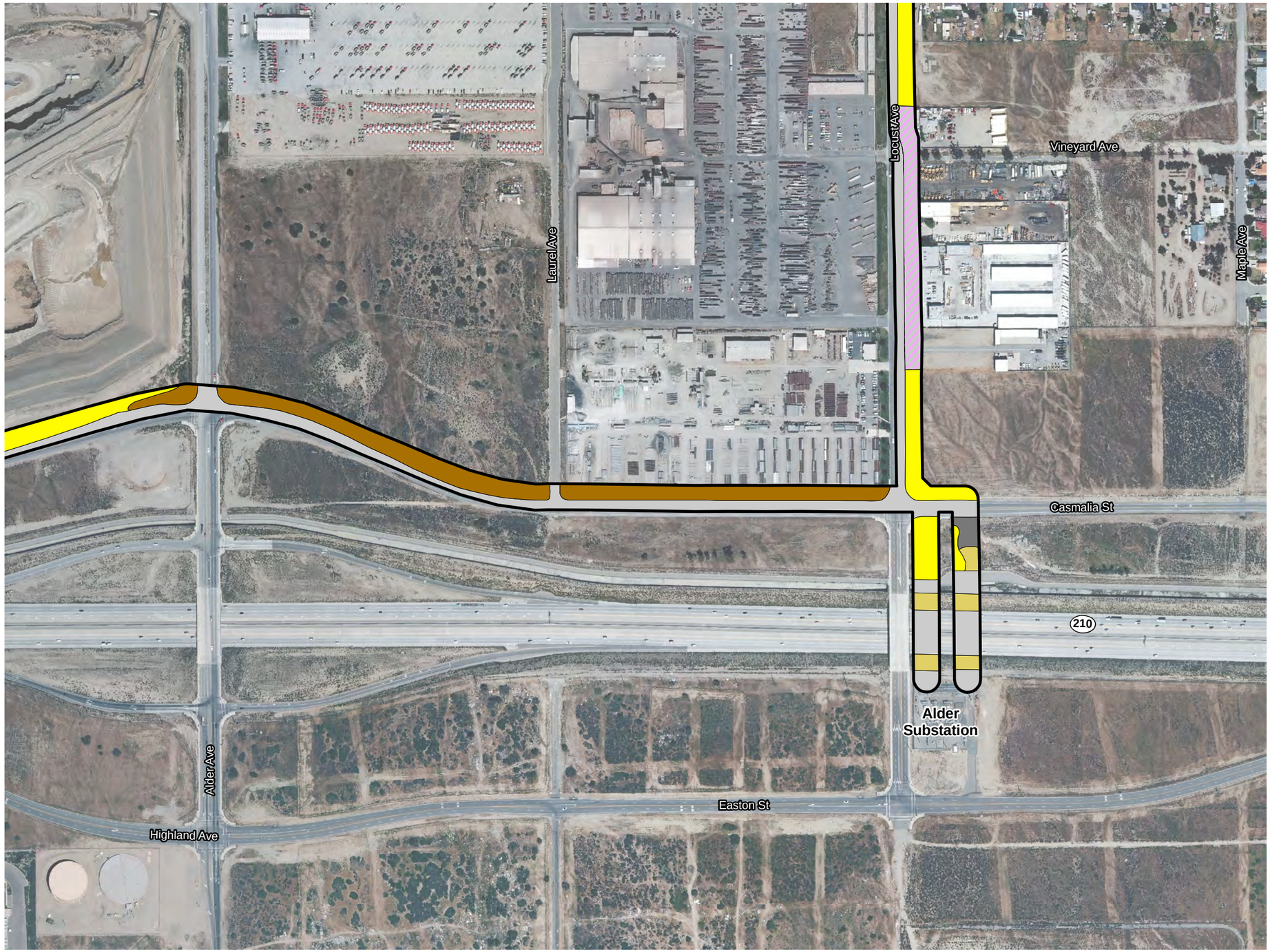
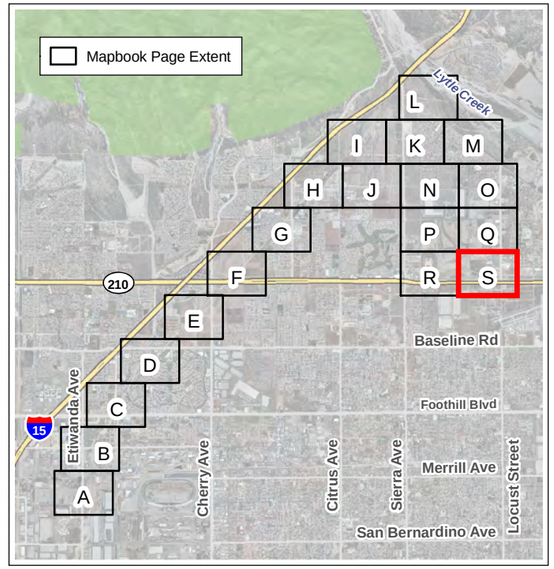


Survey Area

Vegetation Types and Other Areas

- Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Alluvial Fan Sage Scrub
- Disturbed Riversidean Sage Scrub
- Disturbed Mule Fat Scrub
- Annual Grassland
- Annual Grassland/Disturbed Riversidean Alluvial Fan Sage Scrub
- Vineyards
- Ruderal
- Ornamental
- Disturbed
- Developed
- Developed/Ornamental
- Developed/Ruderal
- Flood-control Channel



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Vegetation Types and Other Areas

Exhibit 3S

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

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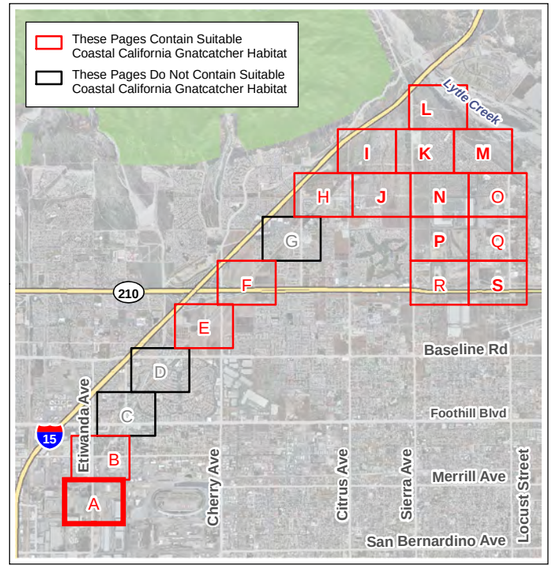
Survey Area

Suitable Coastal California Gnatcatcher Habitat

Breeding Season Surveys Conducted

Non-Breeding Season Surveys Conducted



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Coastal California Gnatcatcher

Exhibit 4A

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

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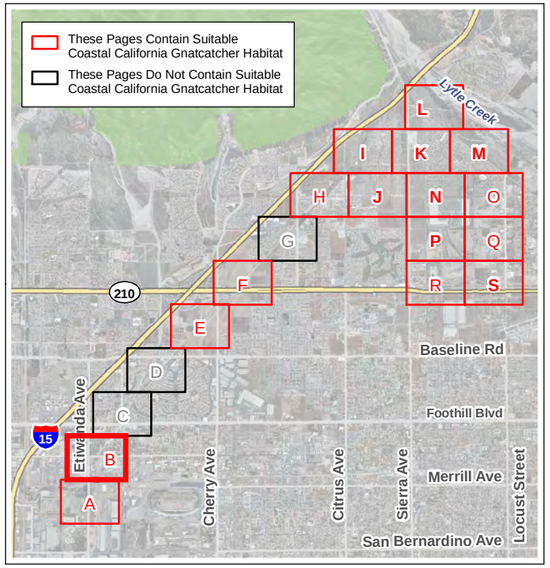
Survey Area

Suitable Coastal California Gnatcatcher Habitat

Breeding Season Surveys Conducted

Non-Breeding Season Surveys Conducted



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Coastal California Gnatcatcher

Exhibit 4B

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

Benterra CONSULTING

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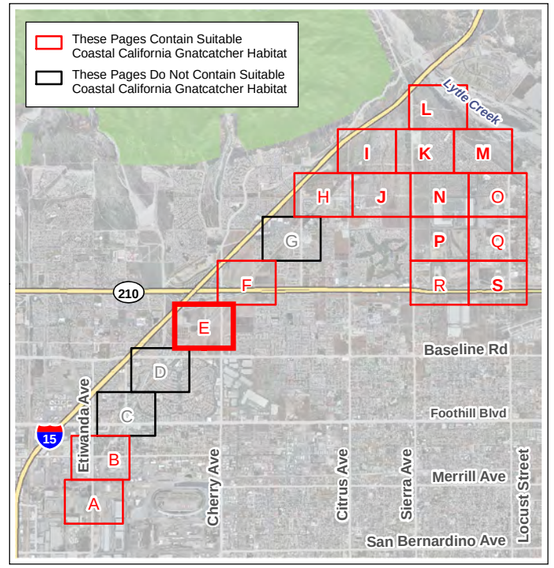
Survey Area

Suitable Coastal California Gnatcatcher Habitat

Breeding Season Surveys Conducted

Non-Breeding Season Surveys Conducted



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Coastal California Gnatcatcher

Exhibit 4E

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

Bonterra CONSULTING

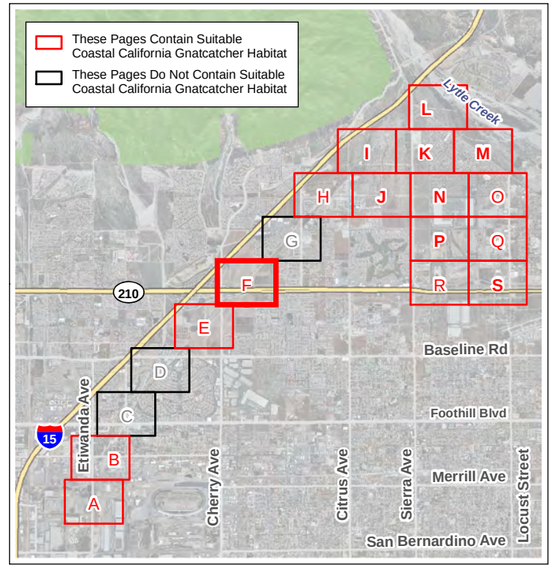
(Rev 10-20-10 JFG) R:\Projects\Edison\J046\Graphics\CAGN\Ex4_CAGN.pdf

Survey Area

Suitable Coastal California Gnatcatcher Habitat

Breeding Season Surveys Conducted

Non-Breeding Season Surveys Conducted



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Coastal California Gnatcatcher

Exhibit 4F

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

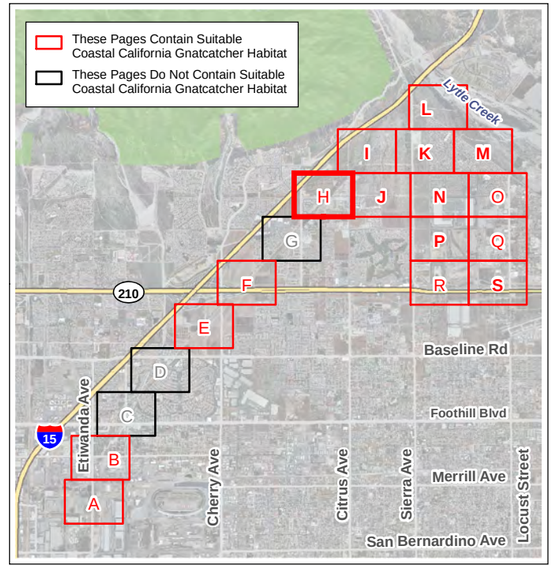
BonTerra CONSULTING

(Rev 10-20-10 JFG) R:\Projects\Edison\J046\Graphics\CAGN\Ex4_CAGN.pdf

Survey Area

Suitable Coastal California Gnatcatcher Habitat

- Breeding Season Surveys Conducted
- Non-Breeding Season Surveys Conducted



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Coastal California Gnatcatcher

Exhibit 4H

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

Benterra CONSULTING

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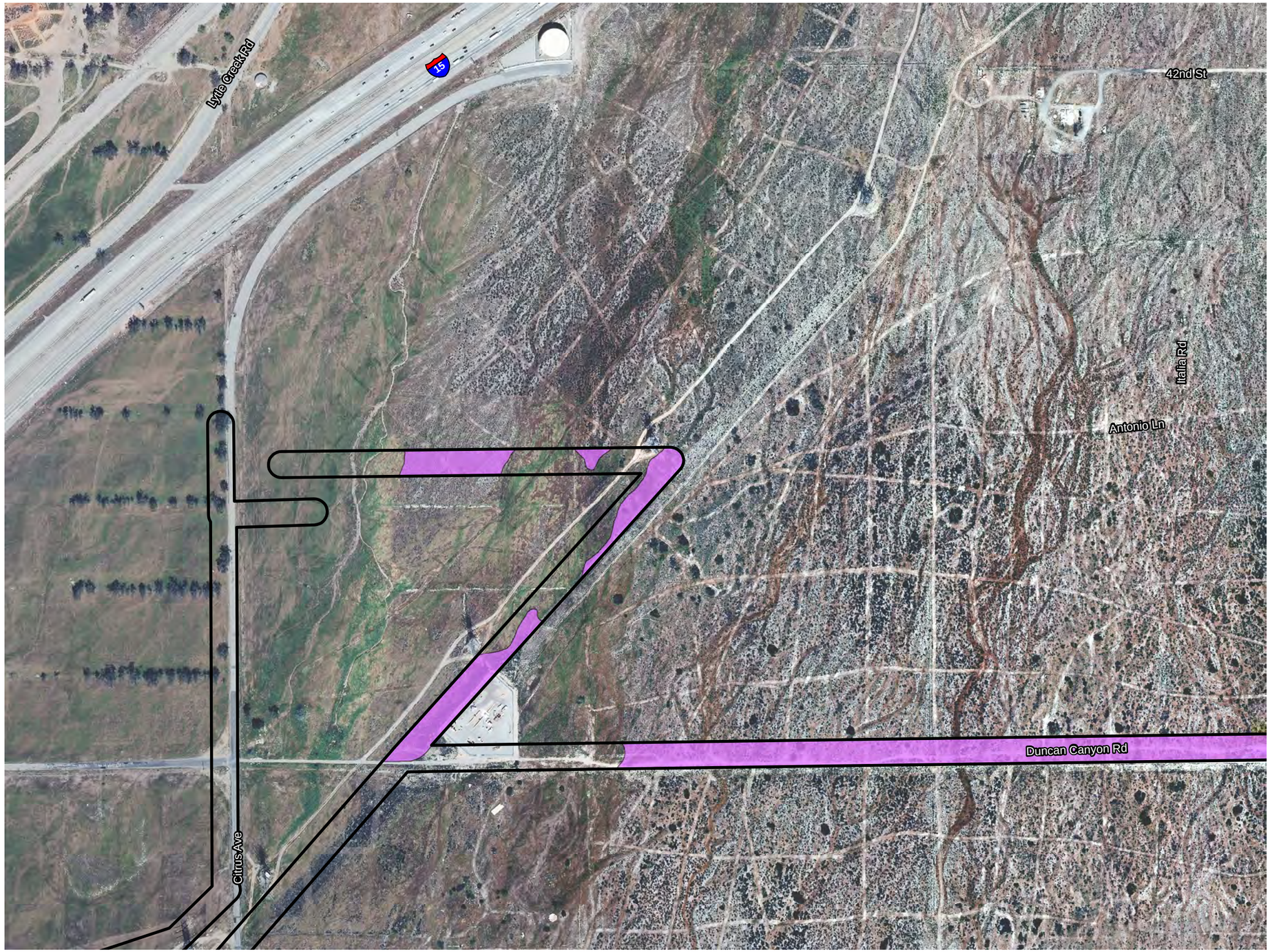
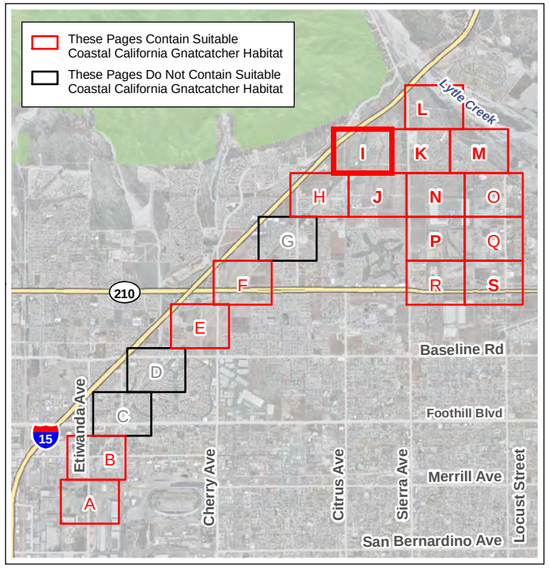


Survey Area

Suitable Coastal California Gnatcatcher Habitat

Breeding Season Surveys Conducted

Non-Breeding Season Surveys Conducted



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Coastal California Gnatcatcher

Exhibit 4I

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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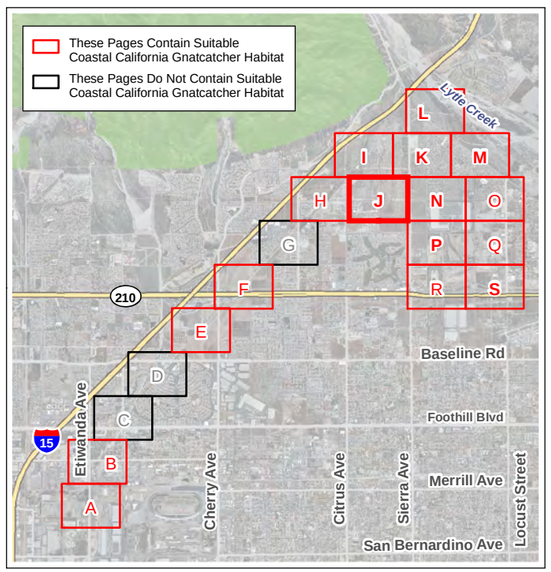
Survey Area

Suitable Coastal California Gnatcatcher Habitat

Breeding Season Surveys Conducted

Non-Breeding Season Surveys Conducted



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Coastal California Gnatcatcher

Exhibit 4J

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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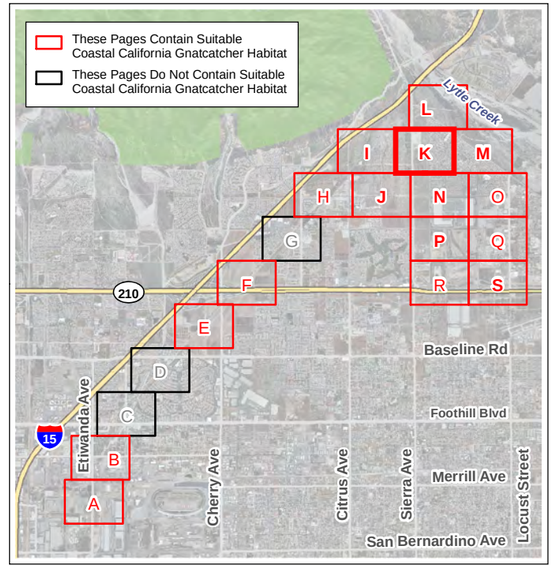
Survey Area

Suitable Coastal California Gnatcatcher Habitat

Breeding Season Surveys Conducted

Non-Breeding Season Surveys Conducted



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Coastal California Gnatcatcher

Exhibit 4K

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

Bonterra CONSULTING

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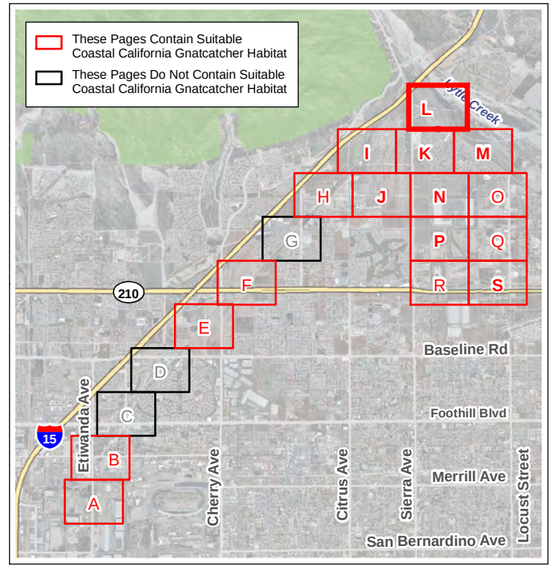
Survey Area

Suitable Coastal California Gnatcatcher Habitat

Breeding Season Surveys Conducted

Non-Breeding Season Surveys Conducted



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Coastal California Gnatcatcher

Exhibit 4L

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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Survey Area

Suitable Coastal California Gnatcatcher Habitat

Breeding Season Surveys Conducted

Non-Breeding Season Surveys Conducted

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Coastal California Gnatcatcher

Exhibit 4M

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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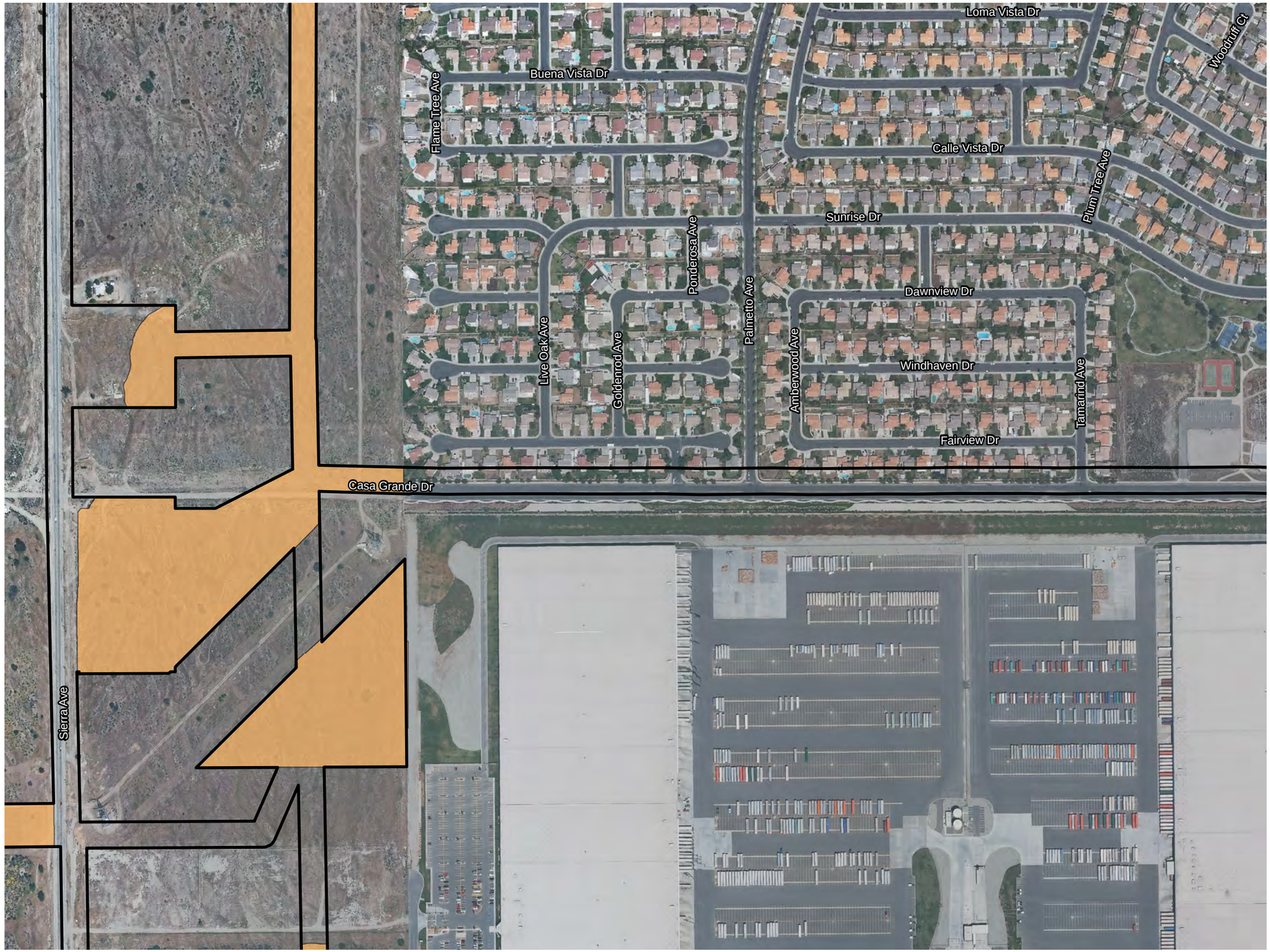
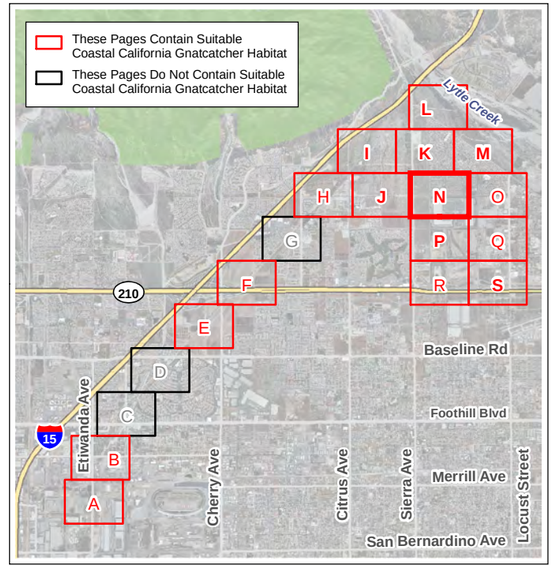


Survey Area

Suitable Coastal California Gnatcatcher Habitat

Breeding Season Surveys Conducted

Non-Breeding Season Surveys Conducted



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Coastal California Gnatcatcher

Falcon Ridge Substation Project

Exhibit 4N

N W E S

400 200 0 400

Feet

Bonterra CONSULTING

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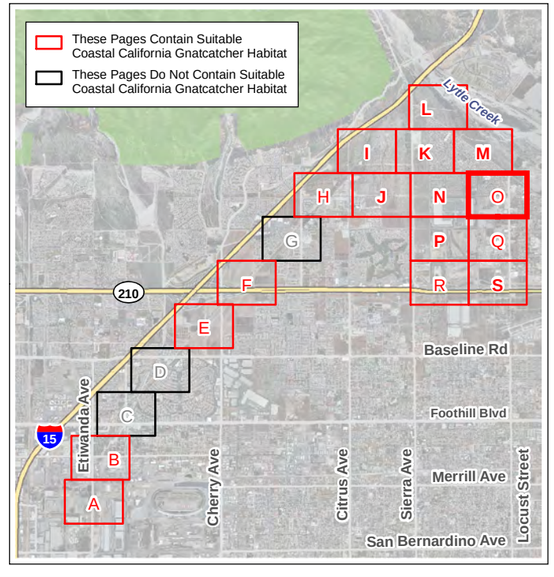
Survey Area

Suitable Coastal California Gnatcatcher Habitat

Breeding Season Surveys Conducted

Non-Breeding Season Surveys Conducted



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Coastal California Gnatcatcher

Exhibit 4O

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

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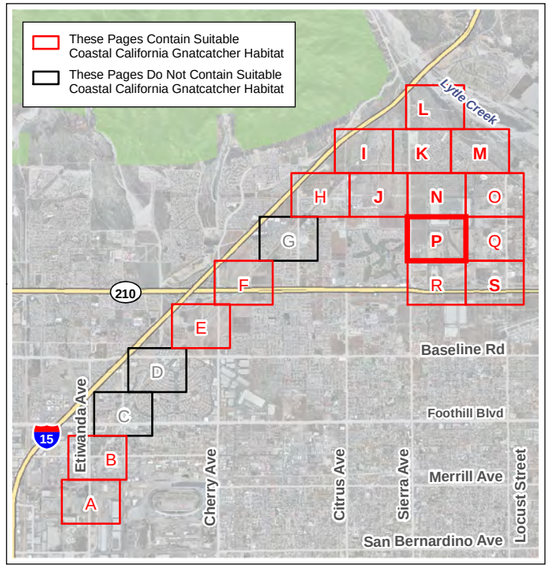
Survey Area

Suitable Coastal California Gnatcatcher Habitat

Breeding Season Surveys Conducted

Non-Breeding Season Surveys Conducted



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Coastal California Gnatcatcher

Exhibit 4P

Falcon Ridge Substation Project

N
W E
S

400 200 0 400

Feet

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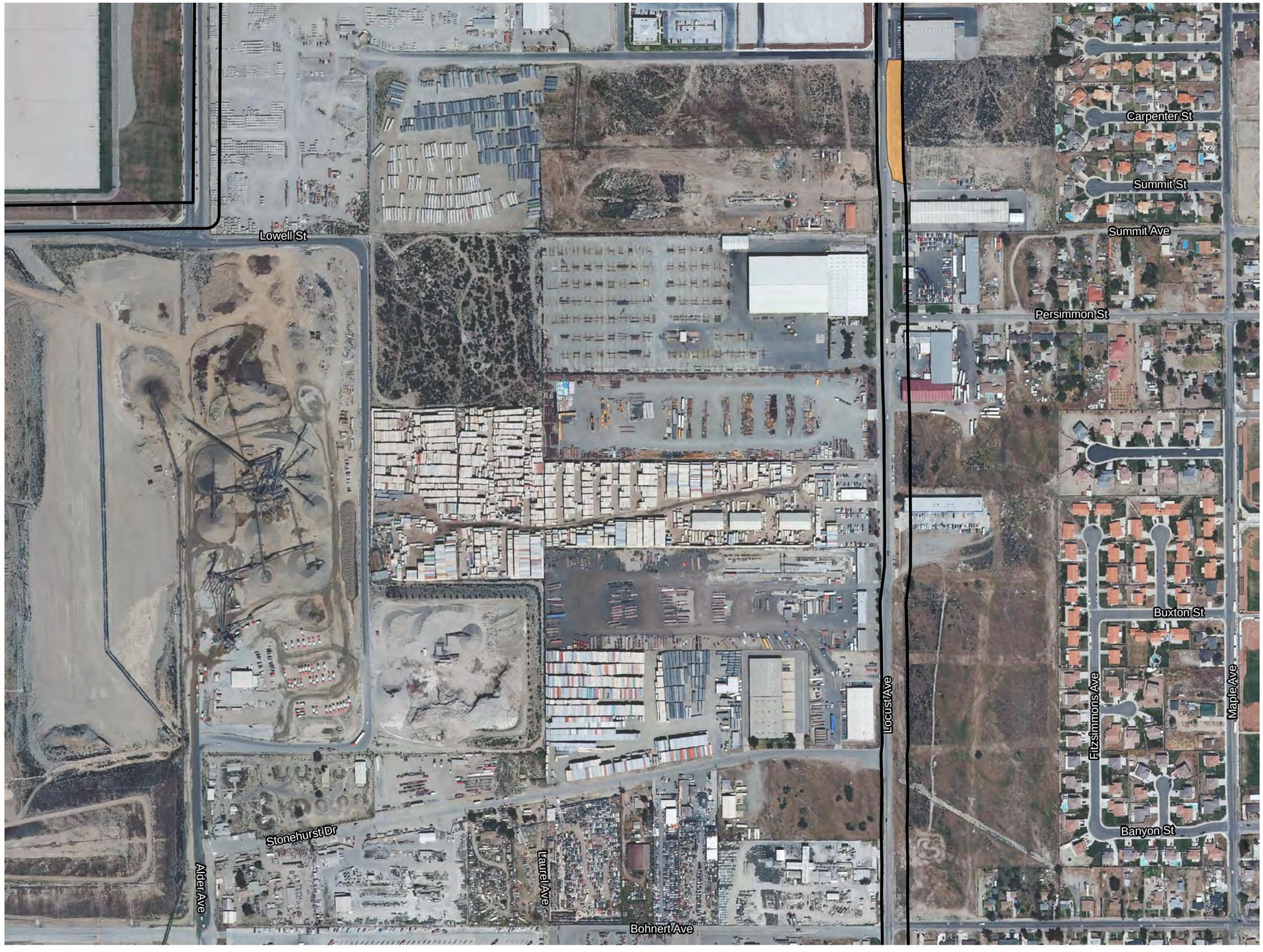
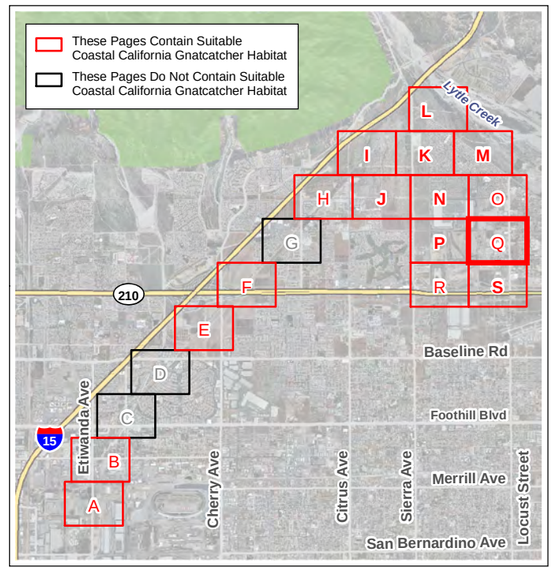


Survey Area

Suitable Coastal California Gnatcatcher Habitat

Breeding Season Surveys Conducted

Non-Breeding Season Surveys Conducted



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Coastal California Gnatcatcher

Exhibit 4Q

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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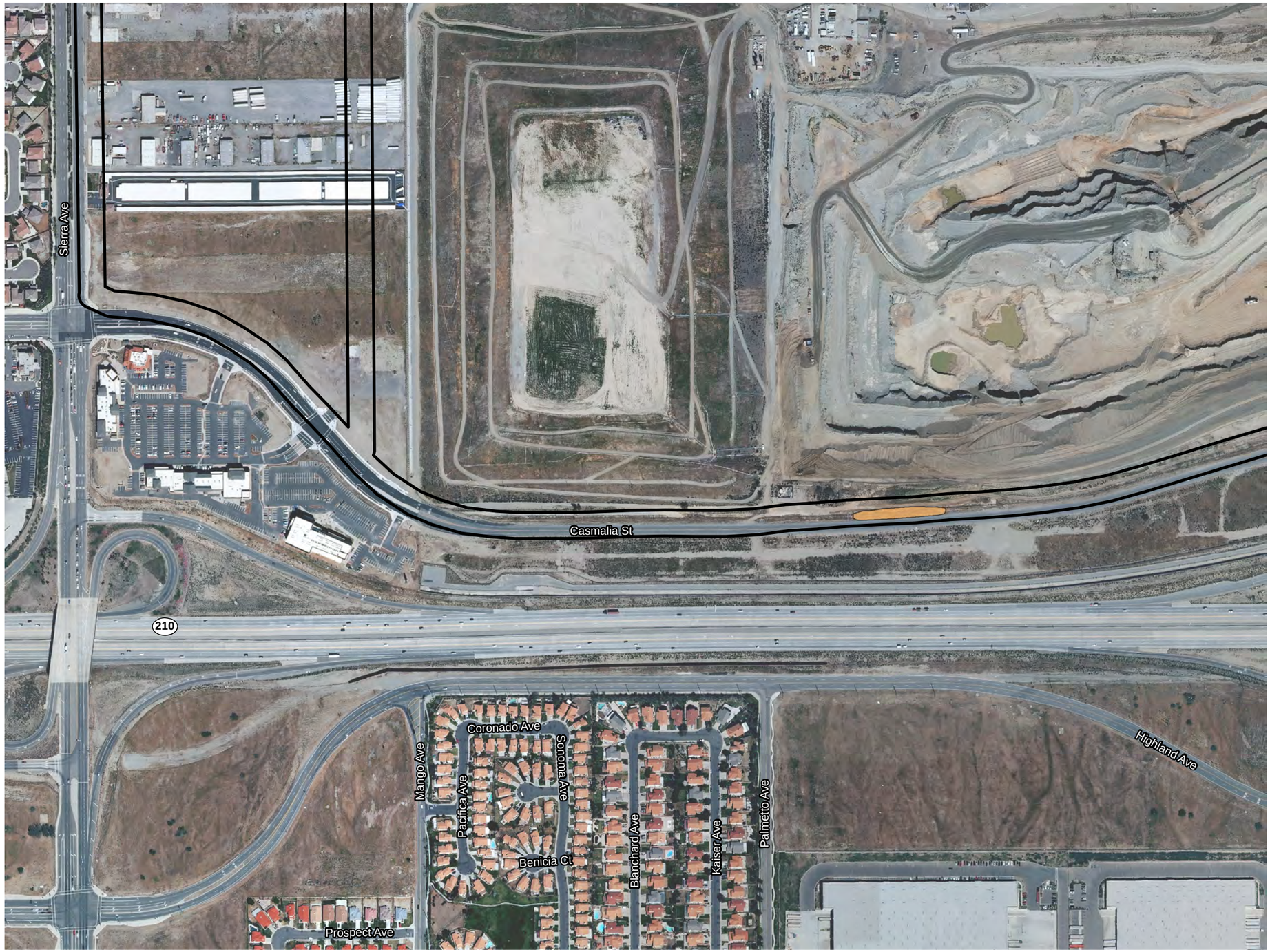
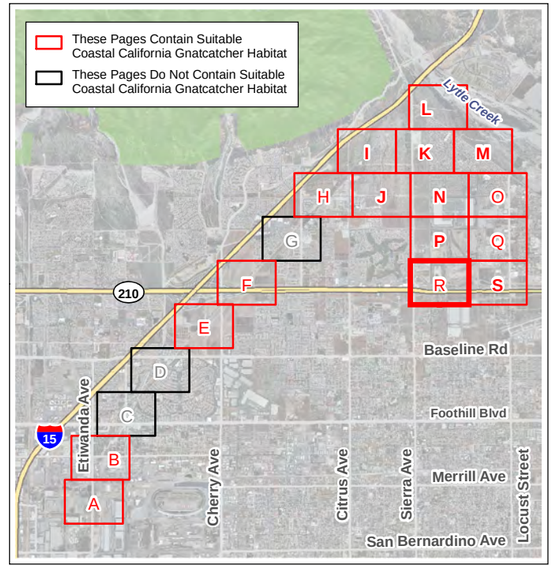


Survey Area

Suitable Coastal California Gnatcatcher Habitat

Breeding Season Surveys Conducted

Non-Breeding Season Surveys Conducted



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Coastal California Gnatcatcher

Exhibit 4R

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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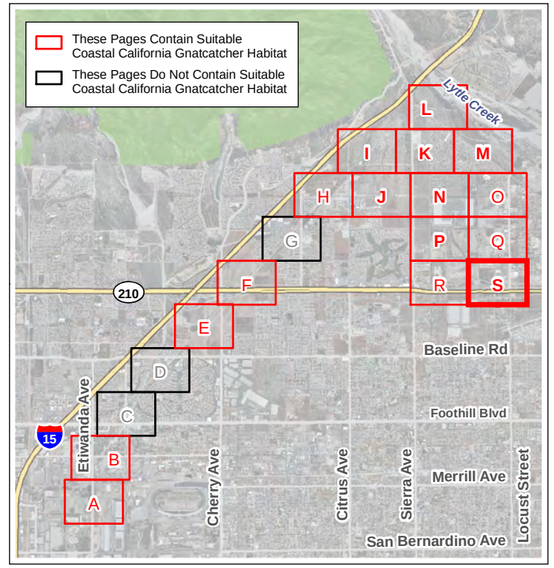
Survey Area

Suitable Coastal California Gnatcatcher Habitat

Breeding Season Surveys Conducted

Non-Breeding Season Surveys Conducted



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Coastal California Gnatcatcher

Exhibit 4S

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

Benterra CONSULTING

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Representative site photograph depicting coastal sage scrub habitat, looking north.

Representative site photograph depicting coastal sage scrub habitat, looking east.

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Site Photographs

Exhibit 5

Falcon Ridge Substation Project

BonTerra CONSULTING

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Attachment **A**

WILDLIFE COMPENDIUM

WILDLIFE SPECIES OBSERVED DURING SURVEYS

Species
Reptiles
PHRYNOSOMATIDAE - ZEBRA-TAILED, FRINGE-TOED, SPINY, TREE, SIDE-BLOTCHED, AND HORNED LIZARDS
Sceloporus occidentalis western fence lizard
Uta stansburiana side-blotched lizard
TEIIDAE - WHIPTAIL LIZARDS
Aspidoscelis [Cnemidophorus] tigris stejnegeri coastal western whiptail
Birds
ODONTOPHORIDAE - QUAILS
Callipepla californica California quail
CATHARTIDAE - NEW WORLD VULTURES
Cathartes aura turkey vulture
ACCIPITRIDAE - HAWKS
Buteo jamaicensis red-tailed hawk
FALCONIDAE - FALCONS
Falco sparverius American kestrel
CHARADRIIDAE - PLOVERS
Charadrius vociferus killdeer
COLUMBIDAE - PIGEONS & DOVES
Columba livia * rock pigeon
Zenaida macroura mourning dove
APODIDAE - SWIFTS
Aeronautes saxatalis white-throated swift
TROCHILIDAE - HUMMINGBIRDS
Calypte anna Anna's hummingbird
TYRANNIDAE - TYRANT FLYCATCHERS
Sayornis nigricans black phoebe
Sayornis saya Say's phoebe
Myiarchus cinerascens ash-throated flycatcher
Tyrannus vociferans Cassin’s kingbird
LANIIDAE - SHRIKES
Lanius ludovicianus loggerhead shrike

WILDLIFE SPECIES OBSERVED DURING SURVEYS (Continued)

Species
CORVIDAE - JAYS & CROWS
Aphelocoma californica western scrub-jay
Corvus brachyrhynchos American crow
Corvus corax common raven
HIRUNDINIDAE - SWALLOWS
Stelgidopteryx serripennis northern rough-winged swallow
Petrochelidon pyrrhonota cliff swallow
AEGITHALIDAE - BUSHTITS
Psaltriparus minimus bushtit
TROGLODYTIDAE - WRENS
Thryomanes bewickii Bewick's wren
MIMIDAE - THRASHERS
Mimus polyglottos northern mockingbird
Toxostoma redivivum California thrasher
STURNIDAE - STARLINGS
Sturnus vulgaris * European starling
PARULIDAE - WARBLERS
Dendroica coronata yellow-rumped warbler
EMBERIZIDAE - SPARROWS & JUNCOS
Pipilo maculatus spotted towhee
Pipilo crissalis California towhee
Chondestes grammacus lark sparrow
Amphispiza belli sage sparrow
Zonotrichia leucophrys white-crowned sparrow
CARDINALIDAE - GROSBEAKS & BUNTINGS
Pheucticus melanocephalus black-headed grosbeak
ICTERIDAE - BLACKBIRDS
Sturnella neglecta western meadowlark
Euphagus cyanocephalus Brewer’s blackbird
Icterus cucullatus hooded oriole

WILDLIFE SPECIES OBSERVED DURING SURVEYS (Continued)

Species
Icterus bullockii Bullock's oriole
FRINGILLIDAE - FINCHES
Carpodacus mexicanus house finch
Spinus [Carduelis] psaltria lesser goldfinch
PASSERIDAE - OLD WORLD SPARROWS
Passer domesticus house sparrow *
Mammals
LEPORIDAE - HARES & RABBITS
Sylvilagus audubonii desert cottontail
Lepus californicus black-tailed jackrabbit
SCIURIDAE - SQUIRRELS
Spermophilus beecheyi California ground squirrel
GEOMYIDAE - POCKET GOPHERS
Thomomys bottae Botta's pocket gopher
CANIDAE - WOLVES & FOXES
Canis latrans coyote
* introduced species

APPENDIX D

BURROWING OWL SURVEY REPORT

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August 24, 2010

Andrew Keller
Southern California Edison
2244 Walnut Grove Avenue, G01 Quad 3A
Rosemead, California 91770

VIA EMAIL
Andrew.Keller@sce.com

Subject: Results of Western Burrowing Owl Surveys for the Falcon Ridge Substation Project, City of Fontana, San Bernardino County, California

Dear Mr. Keller:

This Letter Report presents the results of focused surveys for the western burrowing owl (*Athene cunicularia*) conducted during the species' nesting period (March 1 to August 31) on the Falcon Ridge Substation Project (hereafter referred to as "the Proposed Project") in San Bernardino County, California (Exhibit 1). The survey area for the Proposed Project is approximately 100 feet in diameter where new powerlines are proposed, and also includes alternative sites for a substation (Exhibit 2). The purpose of the survey was to determine the presence or absence of the western burrowing owl on the Project site. The survey was completed in accordance with guidelines provided in the California Burrowing Owl Consortium's (CBOC's) survey protocol for this species (CBOC 1993) and in the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP).

Project Location and Description

The approximate 412-acre survey area is located in the southwestern portion of the County of San Bernardino in the City of Fontana and in unincorporated San Bernardino County (Exhibit 1). The survey area is east of Interstate (I) 15, south of Riverside Avenue, north of San Bernardino Avenue, and west of Locust Avenue (north of State Route [SR] 210) and Cherry Avenue (south of SR-210). It is located on the U.S. Geological Survey's (USGS') Devore, Guasti, and Fontana 7.5-minute quadrangles. One named blueline stream, Etiwanda Creek, and an unnamed blueline stream are located in the survey area; Lytle Creek is located just east of the survey area. Topography in the survey area is relatively flat with elevations ranging from approximately 1,090 to 1,930 feet above mean sea level (msl).

The Proposed Project involves the construction of a new substation to meet forecasted electrical demands in the Cities of Rancho Cucamonga, Fontana, Rialto, and the surrounding areas of unincorporated San Bernardino County. The preferred Project alternative would include the construction of a new 66/12-kilovolt (kV) distribution substation (Falcon Ridge Substation), and the installation of 2 new 66-kV subtransmission source lines to connect the proposed Falcon Ridge Substation to the existing Etiwanda 220/66-kV Substation and Alder 66/12-kV Substation. In order to accommodate the connection of the subtransmission source line, a 66-kV switchrack position at Alder Substation would need to be equipped, and the operating and transfer bus would need to be extended. The Proposed Project would also include the construction of 3 new underground

12-kV distribution getaways, the installation of new telecommunications facilities at the proposed Falcon Ridge Substation, installation of telecommunications fiber-optic cable on the proposed 66-kV subtransmission source lines, and modification of the existing telecommunications facilities at the Etiwanda and Alder Substations to connect the proposed substation to the Southern California Edison (SCE) telecommunications network.

Fourteen vegetation types and other areas occur in the survey area. Vegetation types and other areas mapped in the survey area consist of Riversidean alluvial fan sage scrub, disturbed Riversidean alluvial fan sage scrub, disturbed Riversidean sage scrub, disturbed mule fat scrub, annual grassland, annual grassland/disturbed Riversidean alluvial fan sage scrub, vineyards, ruderal, ornamental, disturbed, developed, developed/ornamental, developed/ruderal, and flood-control channel. Where vegetation overlaps another type of mapping unit (e.g., a tree canopy over water or roads), the area was mapped according to the uppermost layer of vegetation.

Background

The western burrowing owl is a grassland specialist distributed throughout western North America, where it occupies open areas with short vegetation and bare ground within shrub, desert, and grassland environments. Burrowing owls use a wide variety of arid and semi-arid environments with well-drained, level to gently sloping areas characterized by sparse vegetation and bare ground (Haug and Didiuk 1993; Dechant et al. 2003). Burrowing owls in Florida excavate their own burrows, but western burrowing owls are dependent upon the presence of burrowing mammals such as ground squirrels whose burrows are used for roosting and nesting (Haug and Didiuk 1993). The presence or absence of colonial mammal burrows is often a major factor that limits the presence or absence of burrowing owls. Where mammal burrows are scarce, burrowing owls have been found occupying man-made cavities such as buried and non-functioning drain pipes, stand-pipes, and dry culverts. Burrowing mammals may burrow beneath rocks; debris; or large, heavy objects such as abandoned cars, concrete blocks, or concrete pads. Large, hard objects at burrow entrances stabilize the entrance from collapse, and may inhibit excavation by predators.

Burrowing owls often use “satellite” or non-nesting burrows, moving chicks into them from the nesting burrow, presumably to reduce the risk of predation (Desmond and Savidge 1998) and possibly to avoid nest parasites (Dechant et al. 2003). One pair may use up to ten satellite burrows (James and Seabloom 1968). Individual burrowing owls have a moderate to high site fidelity to previously used burrow complexes, often using the same burrows for nesting year after year.

The western burrowing owl was once abundant and widely distributed within coastal Southern California, but it has declined precipitously in Los Angeles, Orange, San Diego, Riverside, and San Bernardino Counties. A petition was submitted to list the California population of the western burrowing owl as an Endangered or Threatened species (CBD et al. 2003). The California Department of Fish and Game (CDFG) declined to list the burrowing owl as either Threatened or Endangered due to its distribution statewide. However, the CDFG considers the burrowing owl to be a California Species of Special Concern (CDFG 2009).

Survey Methodology

The Burrowing Owl Survey Protocol and Mitigation Guidelines prepared by the CBOC (CBOC 1993), which the CDFG has adopted, details a sequence of surveys based on the findings of each previous level of survey. In addition, the County of Riverside has also published a document titled Burrowing Owl Survey Instructions to assist biological consultants and agency personnel in addressing burrowing owl issues within the County of Riverside (County of Riverside 2006). Both protocols follow a sequence of surveys that are separated in three phases: (1) a habitat

assessment; (2) burrow surveys; and (3) four crepuscular (dawn or dusk) owl surveys. The surveys covered by this Report were conducted so as to be consistent with both accepted protocols.

Habitat Assessment

The first step, habitat assessment, identifies whether the Project provides potential habitat for the species. This determination is made by a Biologist that is knowledgeable in burrowing owl habitat, ecology, and identification. The Biologist conducts the assessment by walking the survey area (which should include land within an approximate 500-foot buffer area, if it is accessible) to visually inspect the survey area and assess its potential for burrowing owls. BonTerra Consulting Senior Biologist Amber Oneal conducted a habitat assessment on June 21, 2010. Ms. Oneal conducted the assessment by walking and/or driving the Project to visually inspect the survey area and to assess its potential for burrowing owls.

Burrow Survey

The second step, burrow survey, identifies suitable burrow(s) and location(s) of occupied burrow(s). A Biologist (with the qualifications identified in the first step) conducts the burrow survey by walking through suitable habitat within the Project via transects no more than approximately 100 feet apart in order to ensure 100 percent visual coverage of the ground surface. If no potentially active burrows are detected, then no focused owl surveys are required. BonTerra Consulting Biologist Brian Karpman conducted focused burrow surveys across the survey area on June 9 and July 1, 2, 3, 4, 5, and 6, 2010. Mr. Karpman walked transects at regularly spaced intervals to achieve 100 percent visual coverage of all potential habitat within the survey area. Any natural or man-made cavities large enough to allow a burrowing owl to enter were inspected for evidence of occupation. Evidence of occupation may include prey remains, cast pellets, white-wash, feathers, and observations of owls adjacent to burrows. The burrow survey was not conducted within five days of rain, which could have washed away potential sign.

Focused Burrowing Owl Surveys

If owls or potentially occupied burrows or cavities are located during the burrow surveys, then focused crepuscular (dawn or dusk) burrowing owl surveys are required. Focused surveys were conducted within several portions of the survey area where burrowing owls had a potential to occur based on the results of the habitat assessment and burrow survey (Exhibit 3). These surveys were conducted from either one hour before sunrise to two hours after, or from two hours before sunset to one hour after. These surveys are conducted only with sufficient light to follow burrowing owl flights. Focused crepuscular surveys were conducted by Mr. Karpman and Consulting Biologist Mike Couffer on July 5, 6, 7, 8, 9, 10, 11, and 12, 2010. All potential habitat within the survey area was surveyed to achieve 100 percent visual coverage of the area (Exhibit 3). Binoculars were used to inspect holes, crevices, and potential perches such as rocks, fence posts, and other elevated structures for the presence of owls while listening for owl calls.

Survey Results

Burrows suitable for burrowing owl occupation were observed in the survey area (Exhibit 3). These areas supported sparse and widely scattered California ground squirrel (*Spermophilus beecheyi*) burrows. Abandoned equipment, fence posts, abandoned irrigation pipes, debris piles, and other objects that could be utilized by the burrowing owl existed in the survey area, as well as immediately outside of the Project footprint. No burrowing owls or owl sign (i.e., cast pellets, white-wash, feathers, or prey remains) were observed within the survey area during the focused burrowing owl surveys. A complete list of all wildlife species observed during the surveys is provided in Appendix A of this Letter Report.

Please feel free to contact Stacie Tennant at (714) 444-9199 if you have any questions or comments.

Sincerely,

BONTERRA CONSULTING

Stacie A. Tennant
Senior Project Manager/Biologist

Attachments: Exhibits 1, 2, and 3
Appendix A – Wildlife Compendium

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References

California Burrowing Owl Consortium (CBOC). 1993. *Burrowing Owl Survey Protocol and Mitigation Guidelines*. Alviso, CA: CBOC. http://www.dfg.ca.gov/hcpb/species/stds_gdl/bird_sg/boconsortium.pdf.

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Regional Location

Exhibit 1

Falcon Ridge Substation Project

N W E S

10 5 0 10 Miles

BonTerra CONSULTING

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Map Book Key
Survey Area
Alder Substation
Etiwanda Substation

San Bernardino National Forest

A
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M
N
O
P
Q
R
S

Sierra
Lytle Creek
North Locust Ave
East Etiwanda Creek
East Ave
Cherry Ave
Citrus Ave
Sierra Ave
Locust Ave
North Etiwanda Ave
Baseline Rd
Foothill Blvd
Merrill Ave
San Bernardino Ave
Valley Blvd
15
210
10

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Project Location

Exhibit 2

Falcon Ridge Substation Project

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W E
S

4,000 2,000 0 4,000 Feet

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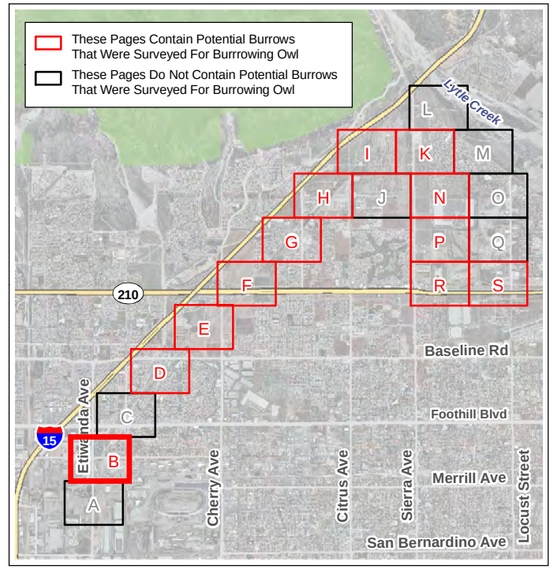
Focused Survey Area

Survey Area



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Burrowing Owl

Exhibit 3B

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

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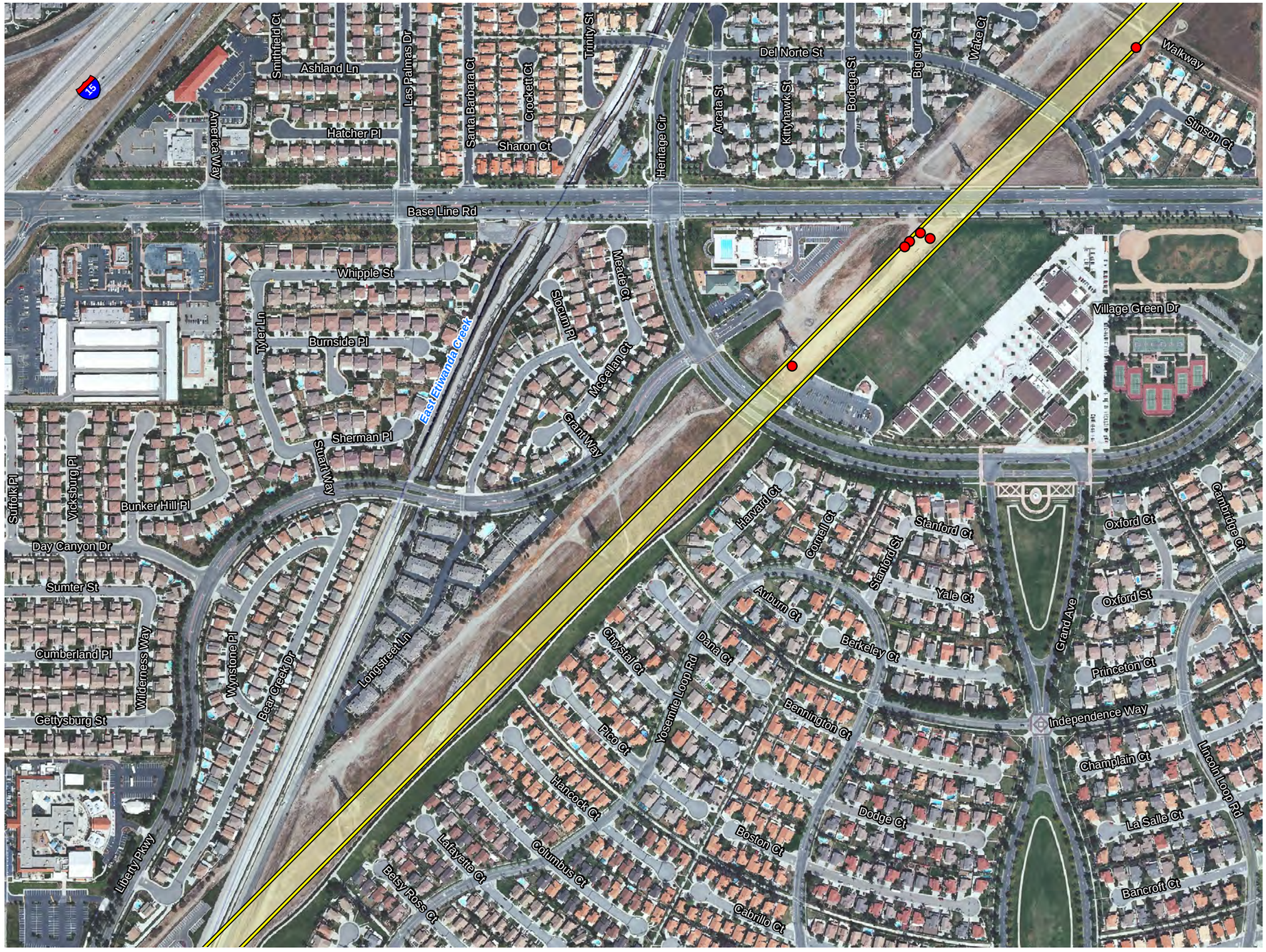

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Burrowing Owl

Exhibit 3D

Falcon Ridge Substation Project

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400 200 0 400

Feet

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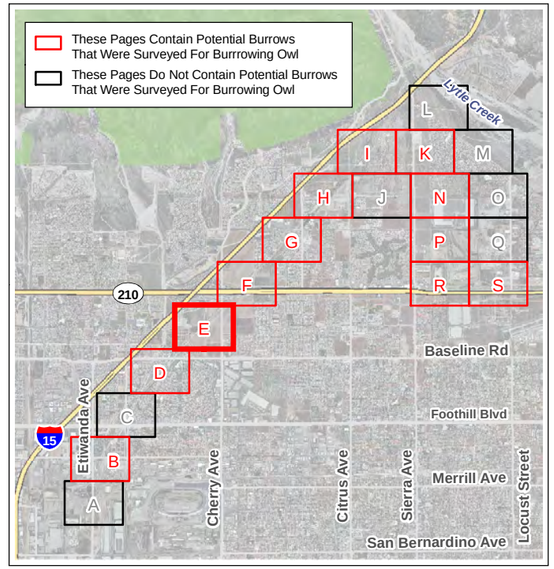
Focused Survey Area

Survey Area



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Burrowing Owl

Exhibit 3E

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

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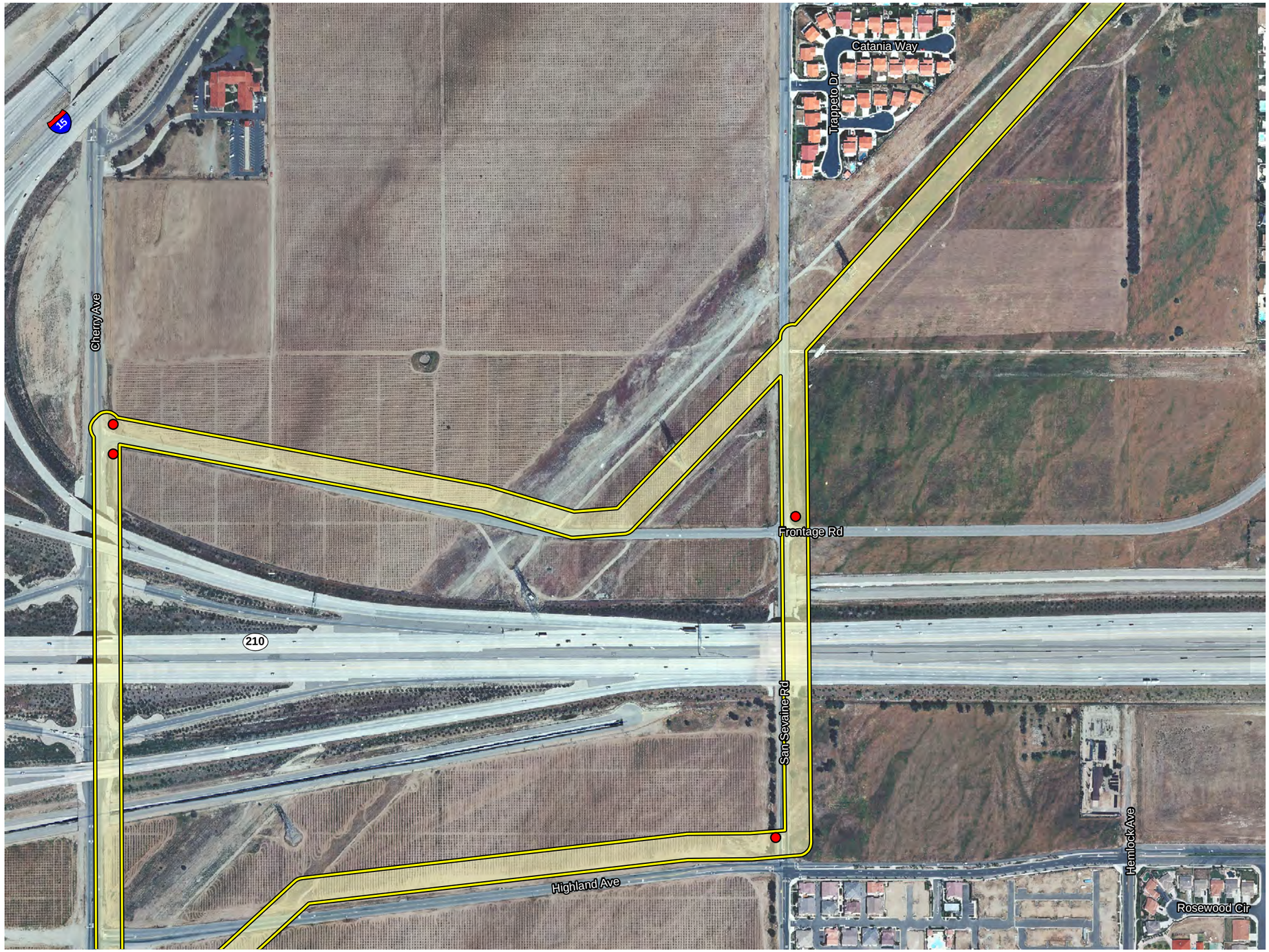
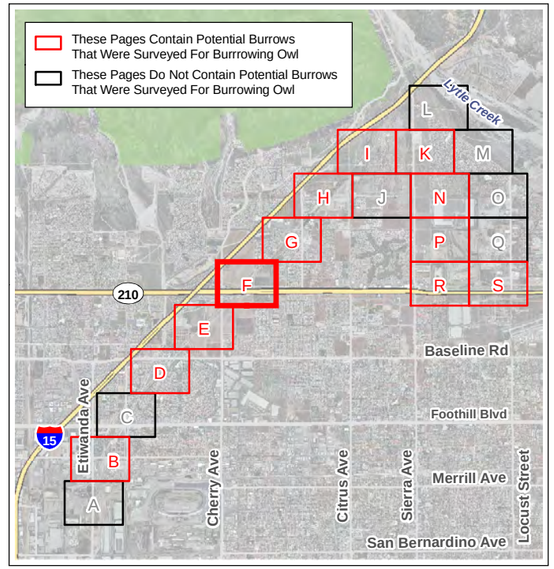


Focused Survey Area

Survey Area



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Burrowing Owl

Exhibit 3F

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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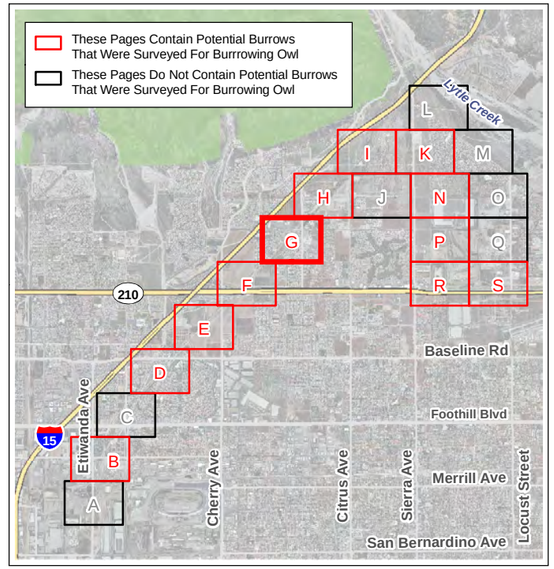
Focused Survey Area

Survey Area



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Burrowing Owl

Exhibit 3G

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

Benterra CONSULTING

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Burrowing Owl

Exhibit 3H

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

Benterra CONSULTING

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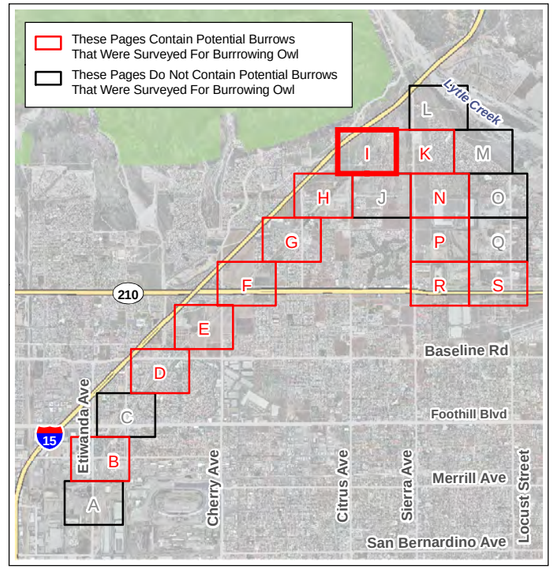
Focused Survey Area

Survey Area



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Burrowing Owl

Exhibit 3I

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

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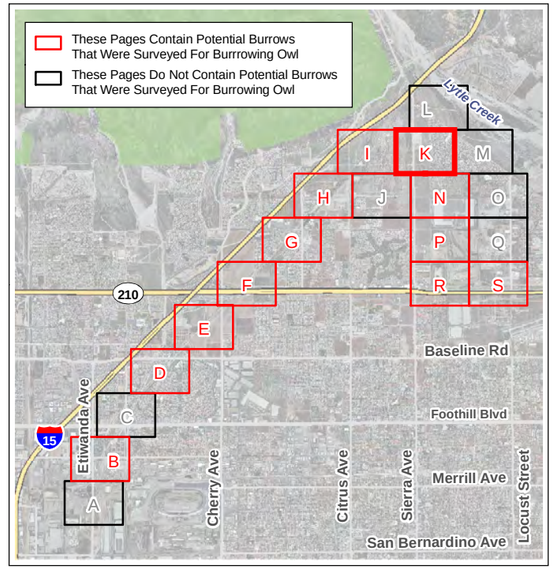
Focused Survey Area

Survey Area



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Burrowing Owl

Exhibit 3K

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

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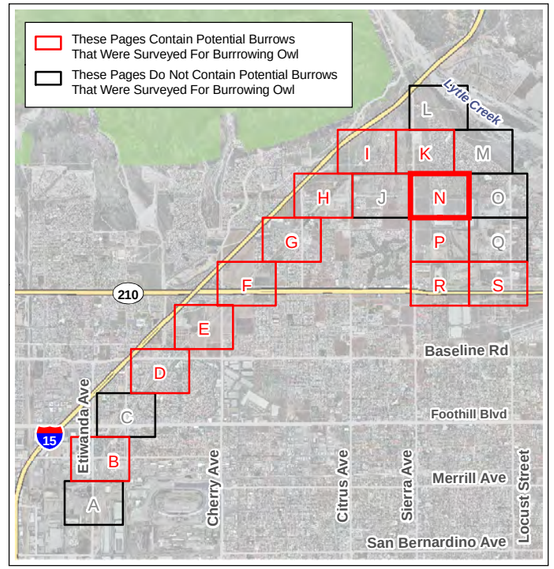
Focused Survey Area

Survey Area



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Burrowing Owl

Exhibit 3N

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

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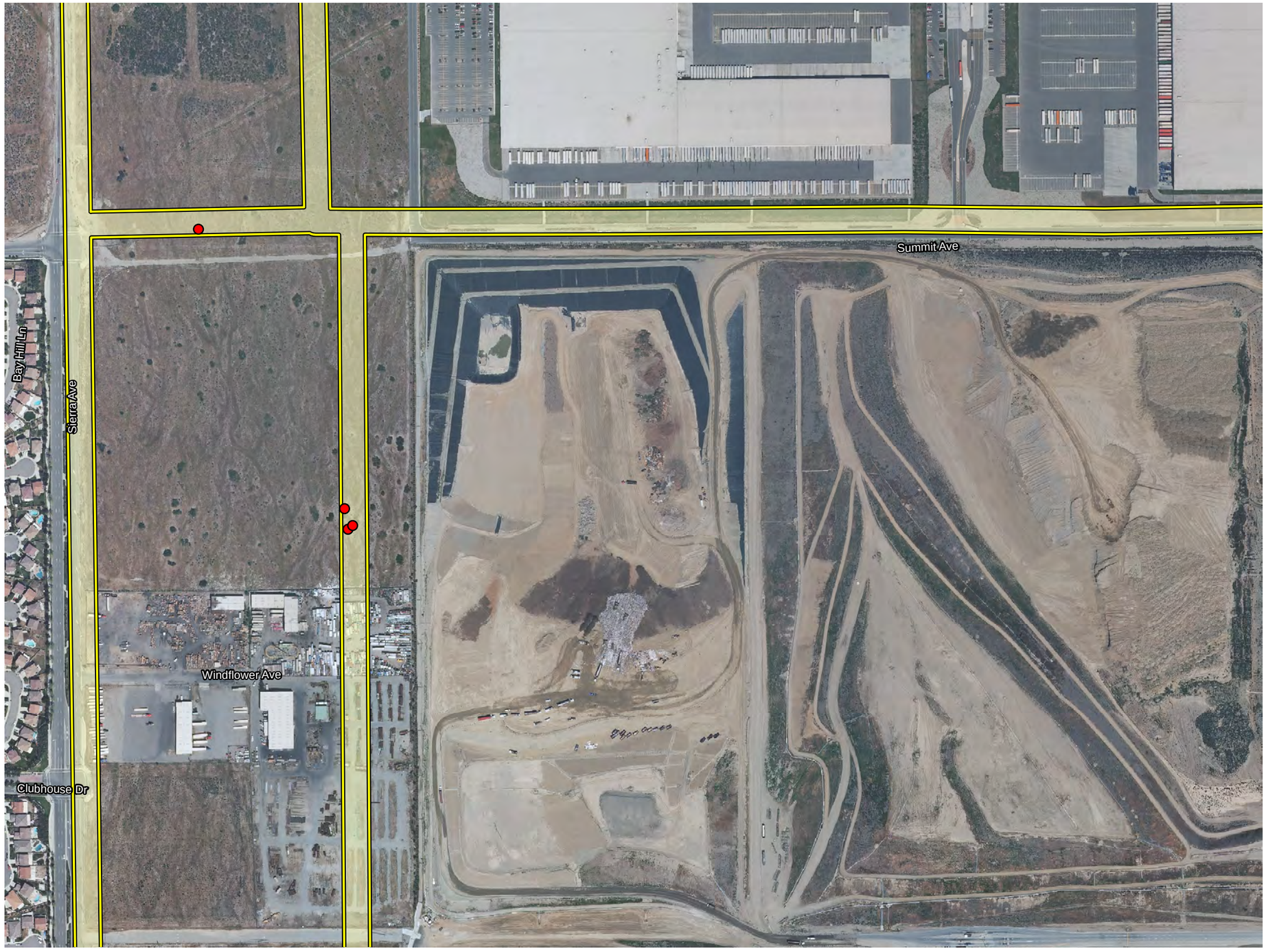
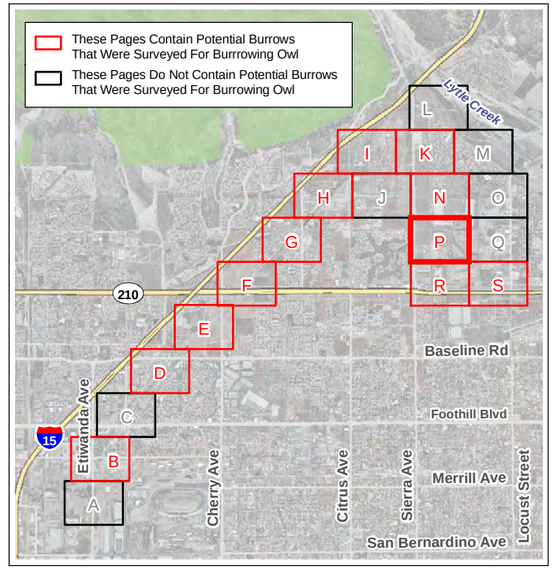


Focused Survey Area

Survey Area



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Burrowing Owl

Exhibit 3P

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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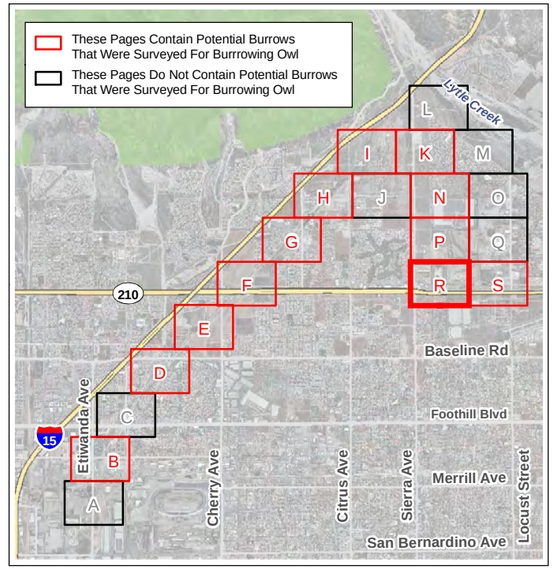
Focused Survey Area

Survey Area



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Burrowing Owl

Exhibit 3R

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

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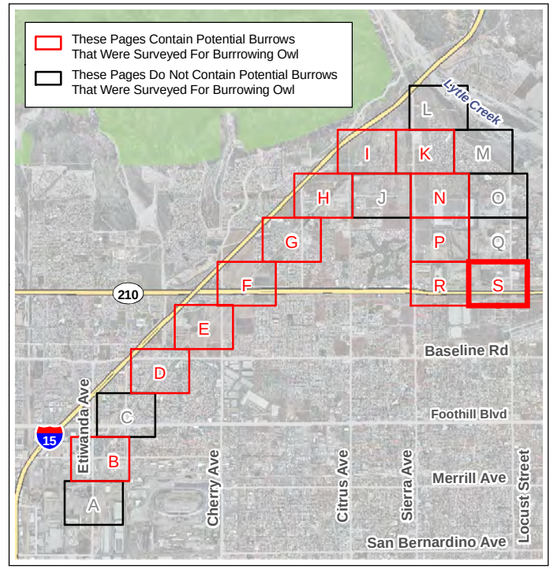
Focused Survey Area

Survey Area



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Burrowing Owl

Exhibit 3S

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

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Attachment **A**

WILDLIFE COMPENDIUM

WILDLIFE SPECIES OBSERVED DURING BURROWING OWL SURVEYS

Species
Reptiles
PHRYNOSOMATIDAE - ZEBRA-TAILED, FRINGE-TOED, SPINY, TREE, SIDE-BLOTCHED, AND HORNED LIZARDS
Sceloporus occidentalis western fence lizard
Uta stansburiana side-blotched lizard
TEIIDAE - WHIPTAIL LIZARDS
Aspidoscelis [Cnemidophorus] tigris stejnegeri coastal western whiptail
Birds
ODONTOPHORIDAE - QUAILS
Callipepla californica California quail
ACCIPITRIDAE - HAWKS
Buteo jamaicensis red-tailed hawk
FALCONIDAE - FALCONS
Falco sparverius American kestrel
Falco columbarius merlin
CHARADRIIDAE - PLOVERS
Charadrius vociferus killdeer
COLUMBIDAE - PIGEONS & DOVES
Columba livia * rock pigeon
Zenaida macroura mourning dove
TYTONIDAE - BARN OWLS
Tyto alba barn owl
TROCHILIDAE - HUMMINGBIRDS
Calypte anna Anna's hummingbird
TYRANNIDAE - TYRANT FLYCATCHERS
Sayornis nigricans black phoebe
Sayornis saya Say's phoebe
Tyrannus verticalis western kingbird
LANIIDAE - SHRIKES
Lanius ludovicianus loggerhead shrike

WILDLIFE SPECIES OBSERVED DURING BURROWING OWL SURVEYS (Continued)

Species
CORVIDAE - JAYS & CROWS
Corvus brachyrhynchos American crow
Corvus corax common raven
ALAUDIDAE - LARKS
Eremophila alpestris horned lark
HIRUNDINIDAE - SWALLOWS
Hirundo rustica barn swallow
MIMIDAE - THRASHERS
Mimus polyglottos northern mockingbird
STURNIDAE - STARLINGS
Sturnus vulgaris * European starling
EMBERIZIDAE - SPARROWS & JUNCOS
Chondestes grammacus lark sparrow
Melospiza melodia song sparrow
ICTERIDAE - BLACKBIRDS
Sturnella neglecta western meadowlark
Euphagus cyanocephalus Brewer's blackbird
Quiscalis mexicanus great-tailed grackle
Molothrus ater brown-headed cowbird
Icterus bullockii Bullock's oriole
FRINGILLIDAE - FINCHES
Carpodacus mexicanus house finch
Spinus [Carduelis] psaltria lesser goldfinch
PASSERIDAE - OLD WORLD SPARROWS
Passer domesticus house sparrow *
Mammals
LEPORIDAE - HARES & RABBITS
Sylvilagus audubonii desert cottontail
Lepus californicus black-tailed jackrabbit

WILDLIFE SPECIES OBSERVED DURING BURROWING OWL SURVEYS (Continued)

Species
SCIURIDAE - SQUIRRELS
Spermophilus beecheyi California ground squirrel
GEOMYIDAE - POCKET GOPHERS
Thomomys bottae Botta's pocket gopher
MURIDAE - MICE, RATS, AND VOLES
Microtus californicus California vole
CANIDAE - WOLVES & FOXES
Canis latrans coyote
Invertebrates
PIERIDAE - WHITES, SULFURS, & ORANGETIPS
Pontia protodice checkered white
* introduced species

APPENDIX E

SPECIAL STATUS MAMMAL TRAPPING REPORT

BonTerra CONSULTING
PASADENA COSTA MESA
T: (714) 444-9199 F: (714) 444-9599
www.BonTerraConsulting.com
151 Kalmus Drive, Suite E-200
Costa Mesa, CA 92626

November 17, 2010

Andrew Keller
Southern California Edison
2244 Walnut Grove Avenue, GO1 Quad 3A
Rosemead, California 91770

VIA EMAIL
Andrew.Keller@sce.com

Subject: Results of a Habitat Assessment and Trapping Survey for San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse on the Falcon Ridge Substation Project, City of Fontana, San Bernardino County, California

Dear Mr. Keller:

This attached Letter Report provides the results of the 2010 habitat assessment and follow-up trapping survey for the federally Endangered San Bernardino kangaroo rat (*Dipodomys merriami parvus*) (SBKR) and the Los Angeles pocket mouse (*Perognathus longimembris brevinasus*) (LAPM) conducted by Consulting Biologists Stephen J. Montgomery (Permit # TE-745541-10; CDFG Memorandum of Understanding [MOU]) and Daniel Grout (a sub-permittee to Mr. Montgomery for these species) along the Falcon Ridge Substation Project (hereafter referred to as the "Project site") in San Bernardino County, California. The proposed Falcon Ridge Substation Project is located in the cities of Rancho Cucamonga, Rialto, and Fontana, and a portion of unincorporated San Bernardino County on the U.S. Geological Survey (USGS) Devore, Guasti, and Fontana 7.5-minute quadrangles. The ultimate purpose of these surveys was to determine presence/absence of the SBKR and LAPM in the Project area. However, presence/absence confirmation trapping was only conducted in areas that will potentially be impacted by the Proposed Project. The methods and results of the surveys are discussed in the Letter Report attached.

Results

No SBKR were captured during the current trapping survey. A total of 48 LAPM captures (most of these being unique individuals) were recorded in sandy wash, scrub, and disturbed grassland habitats with sandy and/or loamy soils at the far southern end of the Project site. These captures occurred in a relatively undisturbed section of the Southern California Edison powerline easement that abuts a remnant of Etiwanda Creek, as well as in the fenced disturbed habitat at the Etiwanda Substation site. The absence of San Bernardino kangaroo rats at all trapping locations indicates that this species would not be affected by development or disturbance in any of the impact area. It cannot be determined, without trapping, if any impacts to the SBKR would occur from development/disturbance in un-trapped portions of the survey area.

If you have any questions, please feel free to call Stacie Tennant at 714-444-9199.

Sincerely,

BONTERRA CONSULTING

Stacie A. Tennant
Senior Project Manager/Biologist

Attachment A – SCE Falcon Ridge Mammal Report

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ATTACHMENT A

SCE FALCON RIDGE MAMMAL REPORT

SJM BIOLOGICAL CONSULTANTS

October 25, 2010 SJMBC.800

Stacie Tennant
BonTerra Consulting
151 Kalmus Drive, Suite E-200
Costa Mesa, CA 92626
(714) 444-9199

Subject: Results of a Habitat Assessment and Trapping Survey for San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse on the Falcon Ridge Substation Project, City of Fontana, San Bernardino County, California

Dear Ms. Tennant:

This Letter Report presents the results of a habitat assessment and follow-up trapping survey for the federally Endangered San Bernardino kangaroo rat (*Dipodomys merriami parvus*) (SBKR) and the Los Angeles pocket mouse (*Perognathus longimembris brevinasus*) (LAPM) along the Falcon Ridge Substation Project (hereafter referred to as the "Proposed Project") in San Bernardino County, California. The Proposed Project is located in the southwestern portion of the County of San Bernardino in the City of Fontana and in unincorporated San Bernardino County northwest of the City (Exhibit 1). The survey area for the Proposed Project is approximately 100 feet in diameter where new powerlines are proposed, and also includes alternative sites for substations (Exhibit 2). The ultimate purpose of these surveys was to determine presence/absence of the SBKR and LAPM in the Project area. However, presence/absence confirmation trapping was only conducted in areas that will potentially be impacted by the Proposed Project. Therefore, additional trapping would have to be conducted to confirm presence/absence of these species if impact boundaries change.

PROJECT DESCRIPTION

The Proposed Project involves the construction of a new substation to meet forecasted electrical demands in the Cities of Rancho Cucamonga, Fontana, Rialto, and the surrounding areas of unincorporated San Bernardino County. The preferred Project alternative would include the construction of a new 66/12-kilovolt (kV) distribution substation (Falcon Ridge Substation), and the installation of 2 new 66-kV subtransmission source lines to connect the proposed Falcon Ridge Substation to the existing Etiwanda 220/66-kV Substation and Alder 66/12-kV Substation. In order to accommodate the connection of the subtransmission source line, a 66-kV switchrack position at Alder Substation would need to be equipped, and the operating and transfer bus would need to be extended. The Proposed Project would also include the construction of 3 new underground, 12-kV distribution getaways, the installation of new telecommunications facilities at the proposed Falcon Ridge Substation, installation of a

telecommunications fiber-optic cable on the proposed 66-kV subtransmission source lines, and modification of the existing telecommunications facilities at the Etiwanda and Alder Substations to connect the proposed substation to the Southern California Edison (SCE) telecommunications network.

PROJECT AREA AND SPECIES BACKGROUND

The approximate 412-acre survey area is east of Interstate 15 (I-15), south of Riverside Avenue, north of San Bernardino Avenue, and west of Locust Avenue (north of State Route 210 [SR-210]) and Cherry Avenue (south of SR-210) (Exhibit 2). It is located on the U.S. Geological Survey's (USGS's) Devore, Guasti, and Fontana 7.5-minute quadrangles. One named blueline stream, Etiwanda Creek, and an unnamed blueline stream are located in the survey area; Lytle Creek is located just east of the survey area. Topography in the survey area is relatively flat with elevations ranging from approximately 1,090 to 1,930 feet above mean sea level (msl).

Prior to being heavily developed, the San Bernardino Valley was an expansive alluvial fan system dominated in many areas by sandy soils and alluvial sage scrub vegetation. As a result, much of this area exhibited conditions suitable for the two target species (SBKR and LAPM). Relatively recent aerials of the region show extensive tracts of land covered in vineyards. Even more recently, development in the region has eliminated extensive areas of both vineyards and potentially suitable scrub habitat. This process has resulted in the isolation of habitat patches and populations of both target species amidst unsuitable, often heavily disturbed or completely developed lands. The types of development and/or disturbance that currently occupy this region include housing tracts, industrial and commercial development, schools, heavily disturbed power line corridors, roadways, scraped/graded/disked areas, and other development. Some areas in the northern part of the Project area remain as old vineyards that have been or appear to have been abandoned. The northern area also exhibits sage scrub, alluvial fan scrub, and some chaparral habitats that are relatively undisturbed and exhibit some potential for the two target species.

Soils in the overall Project area vary from classic sands in locations in and adjacent to sandy washes (e.g., East Etiwanda Creek), to sandy loams and loams in northerly chaparral and sage scrub stands. Sandy soils are the preferred substrate type for the SBKR and LAPM. Photographs of examples of habitat conditions in different sections of the Project area are presented in Appendix A.

The SBKR and LAPM are both known to occur in and near the survey area. The SBKR has been reported in a variety of locations in the general Project area (McKernan 1997), and California Natural Diversity Database (CNDDB) records show this species at one location in the immediate vicinity of the current survey area eastward of I-15, as well as in nearby locations to the northwest of I-15 in the Etiwanda Fan area and Lytle Creek (CDFG 2010) (Exhibit 2). In addition, SBKR Critical Habitat occurs in the Lytle Creek drainage along Riverside Avenue, immediately adjacent to one stretch of the extreme northern end of the survey area (Exhibit 2). The LAPM is known to occur in the southern end of the survey area, as well as in other nearby lands to the south and west of the Project area (CDFG 2010) (Exhibit 2). In the Project area's general vicinity, the LAPM is still represented by scattered remnant populations associated with East Etiwanda Creek and other sandy habitat patches in the region that are large enough and undisturbed enough to maintain a population of LAPM.

SBKR Background

The SBKR was emergency listed (USFWS 1998a) and then confirmed as "Endangered" in 1998 by the U.S. Fish and Wildlife Service (USFWS) (USFWS 1998b). Final Critical Habitat was designated for this species in 2008 (USFWS 2008), and one of the Units of Critical Habitat for this species encompasses Lytle Creek in the immediate vicinity of the Proposed Project.

San Bernardino kangaroo rats are known to prefer habitats characterized by fine sandy soils, alluvial fan sage scrub vegetation, a relatively high percentage of bare (unvegetated or with minimal herb cover) ground and relatively low substrate disturbance by humans. SBKR may be found in habitats exhibiting (a) large-grain sandy or loamy soils, (b) sage scrub vegetation, (c) disturbed annual grassland, (d) chamise-chaparral vegetation types, (e) a relatively high cover of herbaceous vegetation, and/or (f) high human disturbance, also occasionally harbor this species. However, this typically only occurs when such conditions are in close proximity to the more preferred habitat types described above (McKernan 1997). Threats to this species' long-term survival include a variety of intensive human-related disturbances and activities that have greatly reduced the overall habitat available to and occupied by this species (e.g., sand/gravel mining, dam development and water diversion, housing developments, and agricultural developments) (USFWS 1998a, USFWS 1998b).

LAPM Background

The LAPM is a California Department of Fish and Game (CDFG) Species of Special Concern, but is not listed as Endangered or Threatened by either the CDFG or the USFWS. The species' sensitive status reflects the fact that its populations are declining in distribution and size, which increases their vulnerability to extinction. In this sense, it can be considered similar to a formally listed Rare/Endangered species. Additionally, the LAPM may presently warrant listing as Rare or Endangered by State and/or federal conservation agencies. The goal of the Species of Special Concern designation is to alert the biological community to a species' declining status and, hopefully, to halt or reverse its decline by addressing the factors responsible for the decline early enough to secure its continued existence.

The LAPM is not protected by any regulations in San Bernardino County. Nonetheless, the loss of certain of the larger known populations of this species would likely qualify as a significant impact according to Article 20, Section 15380, of the California Environmental Quality Act (CEQA).

The range of this species extends from "the Los Angeles Basin, from approximately Burbank and San Fernando in the northwest, to San Bernardino on the northeast, and Cabazon, Hemet and Aguanga on the east and southeast. Its range in the southwest is not clear but probably lies somewhere near the Hollywood Hills" (Williams 1986). Locations of noteworthy LAPM populations that have been confirmed in recent years include the following: (1) Lake Perris State Recreation Area (SJM 2003); (2) the outflow point of Massacre Canyon along the northern edge of the San Jacinto River floodplain (SJM 1994a); (3) in the San Jacinto River floodplain at the Gilman Springs Bridge and beyond (SJM 2002, SJM 2010); (4) in the area of Skunk Hollow east of Murrieta Hot Springs (SJM 1994b); (5) Double Butte County Park to the east of Sun City (SJM and Davenport 2005); (6) Aguanga and Vail Lake areas (Dudek and Associates 2003); (7) San Gorgonio Wash area and San Timoteo Canyon (Dudek and Associates 2003, CDFG 2010); and (8) Santa Ana River Wash near Redlands (SJM 2009). Populations are known from a number of other locations in San Bernardino County, but most of these appear to be limited in size. In general, although the LAPM exhibits a fairly widespread distribution, sizable populations

appear to be rare. As a result, and as stated previously, this pocket mouse may warrant formal listing as Rare or Endangered by State and/or federal conservation agencies.

The preferred habitat of the LAPM is not well defined. However, typical sites producing this species occur in or in close proximity to alluvial systems exhibiting fine sandy soils (Dudek and Associates 2003, SJM 1994a, SJM 1994b, and SJM 2002). Nonetheless, the LAPM also has been captured a considerable distance from distinctly sandy soil habitats, such as at the San Jacinto Wildlife Area and at March Air Force Base. The primary vegetation communities in which LAPM have been found include Riversidean alluvial fan sage scrub, disturbed (non-native) annual grassland, and Riversidean sage scrub; however, chamise and red shank chaparral associations also are used by this species.

METHODS

The current SBKR/LAPM survey occurred in the following two phases:

(a) an initial habitat assessment along a portion of the Project alignment, followed by a trapping survey in that portion; and
(b) a habitat assessment along an additional (new) portion of the Project area that was added following the commencement of trapping in the initial assessment area.

The field surveys were conducted (1) to evaluate areas with kangaroo rat sign potentially created by the SBKR and areas with suitable conditions and/or burrows that appeared to be attributable to LAPM, and (2) to identify areas exhibiting the highest potential for these species.

Habitat Assessment

The initial habitat assessment was conducted along a portion of the survey (impact) area (Exhibits 3A–3E, 3F[some], 3G [some], 3H[some], 3J, 3K[some], 3N[some], 3P[some], and 3S[some]) on April 16, 20, and 21, 2010, by Consulting Biologist Stephen J. Montgomery (Permit # TE-745541-10; CDFG Memorandum of Understanding [MOU]). This survey area was covered by vehicle and/or on foot in search of potential suitable habitat (i.e. soil characteristics and vegetation types, as described previously) and for sign of either target species (e.g., scat, tracks, burrows, dust bathing sites). Areas with potential or definite sign of kangaroo rats or pocket mice were noted on field maps and slated for subsequent trapping to confirm the presence/absence of one or both species.

A second habitat assessment was conducted by Mr. Montgomery and Consulting Biologist Daniel Grout (a sub-permitee to Mr. Montgomery for these species) on May 22 through May 29 and June 1, 2010, to assess the new areas (Exhibits 3E(some), 3F(some), 3G (some), 3H(some), 3I, 3K(some), 3L, 3M, 3N(some), 3O, 3P(some), 3Q, 3R(some), and 3S(some) that were added after trapping was already in progress in initial survey areas.

Trapping Survey

Trapping is required to determine presence/absence of LAPM because of its diminutive size and the cryptic nature of its diagnostic sign. Although LAPM burrows are somewhat distinctive in size and appearance, other small mammals can create similar burrows. Similarly, diagnostic SBKR signs can be confused with those of the larger, non-endangered Dulzura kangaroo rat (*Dipodomys simulans*); thus, trapping also is required to confirm SBKR presence in the Project area.

As mentioned above, an initial habitat assessment was conducted along a portion of the survey area (Exhibits 3A–3E, 3F[some], 3G[some], 3H[some], 3J, 3K[some], 3N[some], 3P[some[, 3R[some], and 3S[some]). Areas with kangaroo rat sign potentially created by the SBKR and areas with suitable habitat conditions, and/or burrows that appeared to be attributable to LAPM, were noted on a field map. A trapping program was then conducted to determine the presence or absence of the SBKR and LAPM at the selected locations. Large-sized collapsible Sherman live-traps were set out in lines or groups at locations exhibiting potential signs of the target species. The number of traps set at each location varied with habitat conditions and the density and distribution of sign. Areas with heavily disturbed soils (disked, graded) and no kangaroo rat sign were not included in the field trapping effort. Additionally, areas lacking kangaroo rat sign were also assumed to lack the LAPM due to generally inappropriate habitat conditions (including heavy substrate disturbance). Mr. Montgomery and Mr. Grout set and baited Sherman live-traps each afternoon/early evening with a mixture of millet and sunflower seeds on May 22 through May 30, 2010. Mr. Montgomery and Mr. Grout checked the traps near midnight and again early each morning before air temperatures reached a level that could harm animals. All mammals found in the traps were identified to species and released. All captured target species were released unharmed at their respective capture site. Traps were closed during daylight hours.

Several trap sets were placed in the location of the only CNDDB record of SBKR within the Project area (Exhibit 3J) (i.e., just west of Sierra Avenue and north of Summit Avenue). In addition, four trap lines were set in the area historically known to harbor the LAPM (Exhibits 3A and 3B). Mr. Montgomery also set traps (98 traps set) at locations with potential sign of the target species inside the fenced Etiwanda Substation facility (at the corner of Etiwanda Avenue and 6th Street) on July 17 and 18, 2010 (Exhibit 3A).

A total of 2,761 trap-nights was accrued at 34 trap locations during the ten nights of trapping.

The Project survey area was revised after the trapping program was initiated, as mentioned; therefore, the entire current survey area was not trapped. However, all areas of potential impact were included in the trapping effort, which occurred in the portion of the Project area covered by the initial habitat assessment. Areas identified in the second habitat assessment that were not included in the trapping effort exhibit a potential for both target species and may require trapping at a future date if impact boundaries change. Nonetheless, many of the new areas (Exhibits 3K, 3N, and 3P) occurred immediately adjacent to the initial survey area (impact area), so trapping in the impact area also covered the adjacent sections of the new area.

Due to the extensive acreages of narrow linear habitat patches within the Project area, complete coverage with trapping groups or lines of all potentially occupied habitat areas was not feasible. Instead, samples of potential habitat with the highest observed potential for the two target species were trapped. These sampled trapping areas were set at regular intervals throughout the large blocks of potentially suitable habitat in the survey area, and an attempt was made to sample all of the many different existing variations of habitat sub-types present in the survey area.

The standard protocol for SBKR and LAPM presence/absence trapping studies is five consecutive nights with traps remaining in the same locations throughout this period, unless the target species is captured prior to the fifth night. In the current field effort, the duration of trapping was three nights at most locations, and four nights at one location. Justification for a reduced number of trap-nights at selected locations included the following:

- Habitat conditions in most sections of the survey area were generally of low quality for SBKR and LAPM, in that they typically encompassed stands of very dense grassland and/or dense sage scrub and/or chaparral, with few areas of open sandy ground.
- Recent field studies in the immediate vicinity of the Project area, in alluvial scrub vegetation far superior in general quality for these species, failed to yield either species.
- The heteromyid (i.e., kangaroo rat and pocket mouse) sign in most undeveloped parts of the survey area with native habitat was typical of that produced by the Dulzura kangaroo rat, and included large-diameter burrows, large scat, and dense overall vegetation cover.
- The immediate and continuing (over three to four nights) capture of very high numbers of Dulzura kangaroo rats at all but four trap locations confirmed that this was the species responsible for the observed kangaroo rat sign at trapped locations. This included the capture of only Dulzura kangaroo rats in the relatively open sandy habitats at the far southern end of the Project area where LAPM were immediately captured. This location occurs on and in a remnant of Etiwanda Creek.
- The immediate and continuing (four-night duration) capture of noteworthy numbers of LAPM in the area that showed signs of this animal (i.e., at the southernmost end of the survey area) confirmed that a healthy population of this species continues to inhabit this isolated habitat patch.
- The fact that the Dulzura kangaroo rat was the only species of kangaroo rat captured throughout the entire Project area at locations exhibiting fundamentally similar low-quality habitat conditions strongly indicates that the San Bernardino kangaroo rat does not inhabit the scrub habitats or adjacent grasslands in the portion of the Project area encompassed by the trapping survey. Furthermore, the relatively open habitat conditions at the far southern end of the Project area, where LAPM were immediately captured, exhibits open sandy habitat that appears entirely suitable for SBKR. The absence of this typically very trappable kangaroo rat at this location indicates that any SKBR that may have inhabited this part of the Etiwanda Creek wash system are now extirpated.

RESULTS AND CONCLUSIONS

General

Most areas identified as potentially occupied by SBKR and/or LAPM, and where traps were set, appeared to be sub-optimal for both the SBKR and LAPM, in that they occurred considerable distances from the alluvial systems with sandy soils that are typically preferred by these species. The southern area with historical LAPM records (Exhibit 2) exhibited high-quality sandy alluvial habitat types preferred by both target species. However, the fenced Etiwanda Substation site exhibited very, disturbed habitat that appeared to be low–quality for both species.

Habitat Assessment

Habitat areas determined to have a reasonable potential to harbor SBKR and/or LAPM are shown in Exhibits 3A–3C, 3E, 3F, 3H–3N, 3P, and 3R-3S. These habitat areas included disturbed/ruderal grassland, alluvial and other sage scrub types, open chamise chaparral vegetation and abandoned vineyards in the northern Project area. These habitats occurred primarily in the northern part of the Project area but also at its far southern end. Many of these locations exhibited clear diagnostic signs of kangaroo rats (tracks, burrows and scat), most of which appeared to be those of the larger Dulzura kangaroo rat rather than of the smaller SBKR. The sandy and loam-sand soils at some of these locations also appeared to be at least

somewhat suitable for LAPM, and what appeared to be LAPM burrows were found at the southernmost extent of the survey area, as shown in Exhibit 3A.

The northerly Duncan Canyon Road segment (Exhibits 3I and 3K) contains scrub habitat that is somewhat more open than that observed to the south and east. Thus, it has a somewhat higher potential for the SBKR than the other sections of the overall Project area. Also, there is some potential for SBKR in the degraded scrub habitats at the northern end of Sierra Avenue (Exhibits 3K, 3N, and 3S) and in the strip of land immediately adjacent to Riverside Avenue (Exhibits 3L and 3M[some]). Riverside Avenue forms the southwestern edge of designated SBKR Critical Habitat, and the northern end of Sierra Avenue lies adjacent to the Critical Habitat boundary and associated Lytle Creek where SBKR are known to occur (Exhibit 2 and Exhibits 3L and 3M). Although Riverside Avenue forms the southwestern boundary of the SBKR Critical Habitat area, various types of substrate disturbance have greatly reduced the quality of scrub habitat along the edge of the road, and as a result, the SBKR is not likely to occur here. The proposed SCE alignment occurs along the edge of Riverside Avenue.

Since the Duncan Canyon Road area and the northerly sections of Riverside and Sierra Avenues were not included in the trapping survey, they would have to be trapped to confirm presence/absence of the two target species.

Trapping Survey

Weather conditions prevailing during the daylight periods of the trapping survey are summarized in Table 1. Weather was generally mild during the trapping survey, and included air temperatures between 50 and 72 degrees Fahrenheit, low wind speeds on most days, and clear to overcast skies.

Table 1. Summary of weather conditions during the 2010 Falcon Ridge SBKR/LAPM trapping survey

Date (2010)	Time	Cloud Cover	Air Temp (°F)	Wind Speed (mph)	Moon Cycle
22 May	1600	20%	68–72	not recorded	half full
23 May	0700	overcast	51	0–3	
23 May	1730	50%	60	3–8	
24 May	0700	70%	51	0–2	
24 May	1500	clear	70	2–7	
25 May	0000	not recorded	50	0	
25 May	1800	clear	66	3–8	
26 May	0630	clear	60	0	
27 May	0630	overcast	65	0	full
28 May	0630	overcast	61	0	
29 May	0630	clear	60	5–10	
30 May	0630	clear	62	10	
31 May	0630	mostly clear	60	5	
18 July	0000	mostly clear	82	0	half full

No SBKR were captured during the current trapping survey. In contrast, 547 captures of Dulzura kangaroo rats were recorded at 30 of the 34 locations in the survey area, including those in abandoned, partially disked vineyards in the northern part of the Project area. A total of

48 LAPM captures (most of these being unique individuals) were recorded in sandy wash, scrub, and disturbed grassland habitats with sandy and/or loamy soils at the far southern end of the survey area. These captures occurred in a relatively undisturbed section of the SCE powerline easement that abuts a remnant of Etiwanda Creek, as well as in the fenced disturbed habitat at the Etiwanda Substation site (Exhibit 3A). Several Dulzura kangaroo rats also were captured within the sandy Etiwanda Creek, on the adjacent benches, and inside the fenced substation. Other species trapped during this field effort included 288 deer mice (*Peromyscus maniculatus*), one California ground squirrel (*Spermophilus beecheyi*), one Audubon's cottontail (*Sylvilagus audubonii*), and one long-tailed weasel (*Mustela frenata*) (Table 2).

Table 2. Results of a trapping survey for SBKR/LAPM for the SCE Falcon Ridge Project in May and July 2010

Date traps checked	Trapline #	# Traps set	Species Captured*					
			LAPM	DKR	PEMA	SPBE	SYAU	MUFR
5/23/2010	1	25			4			
5/24/2010	1	25			3			
5/25/2010	1	25			4			
5/23/2010	2	25			5			
5/24/2010	2	25			6			
5/25/2010	2	25			6			
5/23/2010	3	25			5			
5/24/2010	3	25			3			
5/25/2010	3	25			4			
5/23/2010	4	25			6			
5/24/2010	4	25			6			
5/25/2010	4	25			6			
5/23/2010	5	25		4	4			
5/24/2010	5	25		4	5			
5/25/2010	5	25		5	5			
5/23/2010	6	25		4	4			
5/24/2010	6	25		3	5			
5/25/2010	6	25		4	4			
5/23/2010	7	25		4	2			
5/24/2010	7	25		1	2			
5/25/2010	7	25		3	2			
5/23/2010	8	25		5	2			
5/24/2010	8	25		5	2			
5/25/2010	8	25		5	1			
5/25/2010	9	20		4				
5/26/2010	9	20		5				
5/27/2010	9	20		6				
5/25/2010	10	20		6				
5/26/2010	10	20		6				
5/27/2010	10	20		5				
5/25/2010	11	40		16				

Table 2. Results of a trapping survey for SBKR/LAPM for the SCE Falcon Ridge Project in May and July 2010								
Date traps checked	Trapline #	# Traps set	Species Captured*					
			LAPM	DKR	PEMA	SPBE	SYAU	MUFR
5/26/2010	11	40		15	2			
5/27/2010	11	40		13	1			
5/25/2010	12	50		8	3			
5/26/2010	12	50		7	3			
5/27/2010	12	50		8	4			
5/25/2010	13	35		14	1			
5/26/2010	13	35		15	2			
5/27/2010	13	35		10	3			
5/25/2010	14	20		8	1			
5/26/2010	14	20		8	1			
5/27/2010	14	20		6	2			
5/25/2010	15	20		5	2			
5/26/2010	15	20		6	3			
5/27/2010	15	20		4	2			
5/28/2010	16	25		2	3			
5/29/2010	16	25		2	4			
5/30/2010	16	25		1	3			
5/28/2010	17	25		1	4			
5/29/2010	17	25		2	4			
5/30/2010	17	25		1	5			
5/28/2010	18	25		1	2			
5/29/2010	18	25		1	3			
5/30/2010	18	25		2	3			
5/28/2010	19	25		3				
5/29/2010	19	25		2	1			
5/30/2010	19	25		2	3			
5/28/2010	20	25		2	2			
5/29/2010	20	25		3	2			
5/30/2010	20	25		1				
5/28/2010	21	25		2				
5/29/2010	21	25		2				
5/30/2010	21	25		2				
5/28/2010	22	25		3				
5/29/2010	22	25		2				
5/30/2010	22	25		3				
5/28/2010	23	25		2	2			
5/29/2010	23	25		3	1			
5/30/2010	23	25		3	2			
5/23/2010	24	25		16	4			
5/24/2010	24	25		17	2			

Table 2. Results of a trapping survey for SBKR/LAPM for the SCE Falcon Ridge Project in May and July 2010								
Date traps checked	**Trapline #**	**# Traps set**	**Species Captured***					
			LAPM	**DKR**	**PEMA**	**SPBE**	**SYAU**	**MUFR**
5/25/2010	24	43		25	1			
5/26/2010	24	43		12	1	1		
5/23/2010	25	10		5	1			
5/24/2010	25	10		5	1			
5/25/2010	25	12		5	1			
5/26/2010	25	12		5	2			
5/23/2010	26	20		6	1			
5/24/2010	26	20		4	1			
5/25/2010	26	12		4				
5/26/2010	26	12		4	0			
5/23/2010	27	25		12	3			
5/24/2010	27	35		16	1			
5/25/2010	27	35		17				
5/26/2010	27	35		9	1			
5/23/2010	28	20		5	2			
5/24/2010	28	23		13	1			
5/25/2010	28	23		14				
5/26/2010	28	23		7				
5/23/2010	29	20		5	3			
5/24/2010	29	10		4				
5/25/2010	29	10		4				
5/26/2010	29	10			4			1
5/23/2010	30	35		12	7			
5/24/2010	30	35		17	2			
5/25/2010	30	35		15	2			
5/26/2010	30	35		9	1			
5/24/2010	31	25	2 (1AF, 1JM)		5			
5/25/2010	31	25	1 (AF)	2	15		1	
5/26/2010	31	25	5 (3AM, 2AF)	3	10			
5/24/2010	32	40	5 (3AM, 2AF)	2	8			
5/25/2010	32	40	4 (2AM, 2AF)	2	30			
5/26/2010	32	40	2 (1AF, 1J)		6			
7/18/2010	33	11	5(2A, 3SA)	1				
7/18/2010	34	87	29(4A, 25 SA	1	2			
TOTAL		**2761**	**48**	**547**	**288**	**1**	**1**	**1**

*** Species Captured**
LAPM = Los Angeles little pocket mouse (*Perognathus longimembris brevinasus*)
DKR = Dulzura kangaroo rat (*Dipodomys simulans*)
PEMA = deer mouse (*Peromyscus maniculatus*)
SPBE = California ground squirrel (*Spermophilus beecheyi*)
SYAU = desert cottontail (S*ylvilagus audubonii*)

Table 2. Results of a trapping survey for SBKR/LAPM for the SCE Falcon Ridge Project in May and July 2010								
Date traps checked	**Trapline #**	**# Traps set**	**Species Captured***					
			LAPM	**DKR**	**PEMA**	**SPBE**	**SYAU**	**MUFR**
MUFR = long-tailed weasel (*Mustela frenata*)								
A = adult J = juvenile M = male F = female								

The absence of San Bernardino kangaroo rats at all trapping locations indicates that this species would not be affected by development or disturbance in any of the impact area. It cannot be determined, without trapping, if any impacts to the SBKR would occur from development/disturbance in un-trapped portions of the survey area.

Trap results confirmed a sizable population of LAPM in the southern portion of the property adjacent to Etiwanda Avenue (Exhibit 3A). This population is entirely isolated by intensive development of various types but appears to be one of the more significant known populations of this species. Development or substrate disturbance in the southernmost sections of the survey area shown to harbor LAPM, including the fenced Etiwanda Substation to the west of Etiwanda Avenue, would result in the loss of LAPM individuals residing in heavily disturbed locations. The loss of a significant number of LAPM individuals in this area would likely be considered a significant impact according to CEQA Guidelines.

RECOMMENDATIONS

Development in the southern habitat areas occupied by the LAPM should be conducted in a manner that will minimize or avoid incidental take of this sensitive pocket mouse. A plan for development in this occupied habitat area should be formulated in coordination with CDFG biologists. Methods to avoid or minimize LAPM take would likely include the following:

- Coordination with development field crews during structure placement to avoid and minimize substrate disturbance in occupied locations.
- Placement of structures in locations not visibly occupied by the LAPM. Site specific trapping to confirm presence/absence of LAPM may be useful to determine precise locations where substrate disturbance and/or structures may be placed without harming LAPM.
- Minimization of substrate scraping or crushing in unavoidable occupied locations.
- Possible removal (by trapping) of individuals residing in unavoidable habitat sites, and holding and then release of these individuals back into the same home area following completion of construction activities. The installation of artificial burrows in the release areas would likely be required to provide immediate shelter in unoccupied burrows for released animals.

Development in the fenced Etiwanda Substation area would almost certainly eliminate relatively high numbers of LAPM. Therefore, if development is determined to be unavoidable at this location, a mitigation plan to offset the loss of individuals of this animal should be developed. Part of this plan could involve the translocation of individuals in the fenced area into a nearby area(s) exhibiting high-quality habitat. The methods mentioned above should be followed for activities in the fenced area.

Please contact me if you have any questions regarding this report or the associated field effort.

Sincerely,

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Regional Location

Exhibit 1

Falcon Ridge Substation Project

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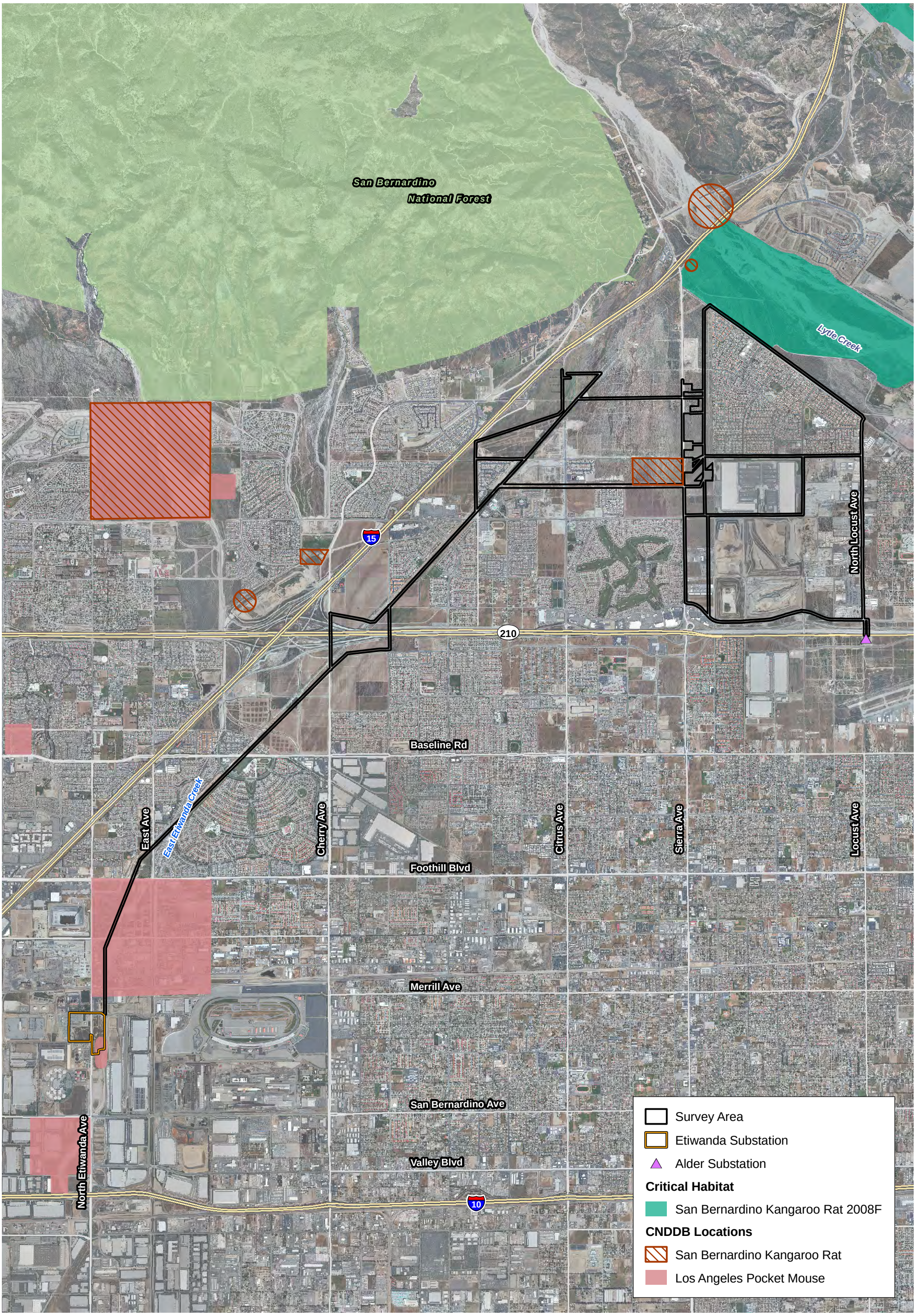

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Project Location

Exhibit 2

Falcon Ridge Substation Project

N W E S

4,000 2,000 0 4,000 Feet

BonTerra CONSULTING

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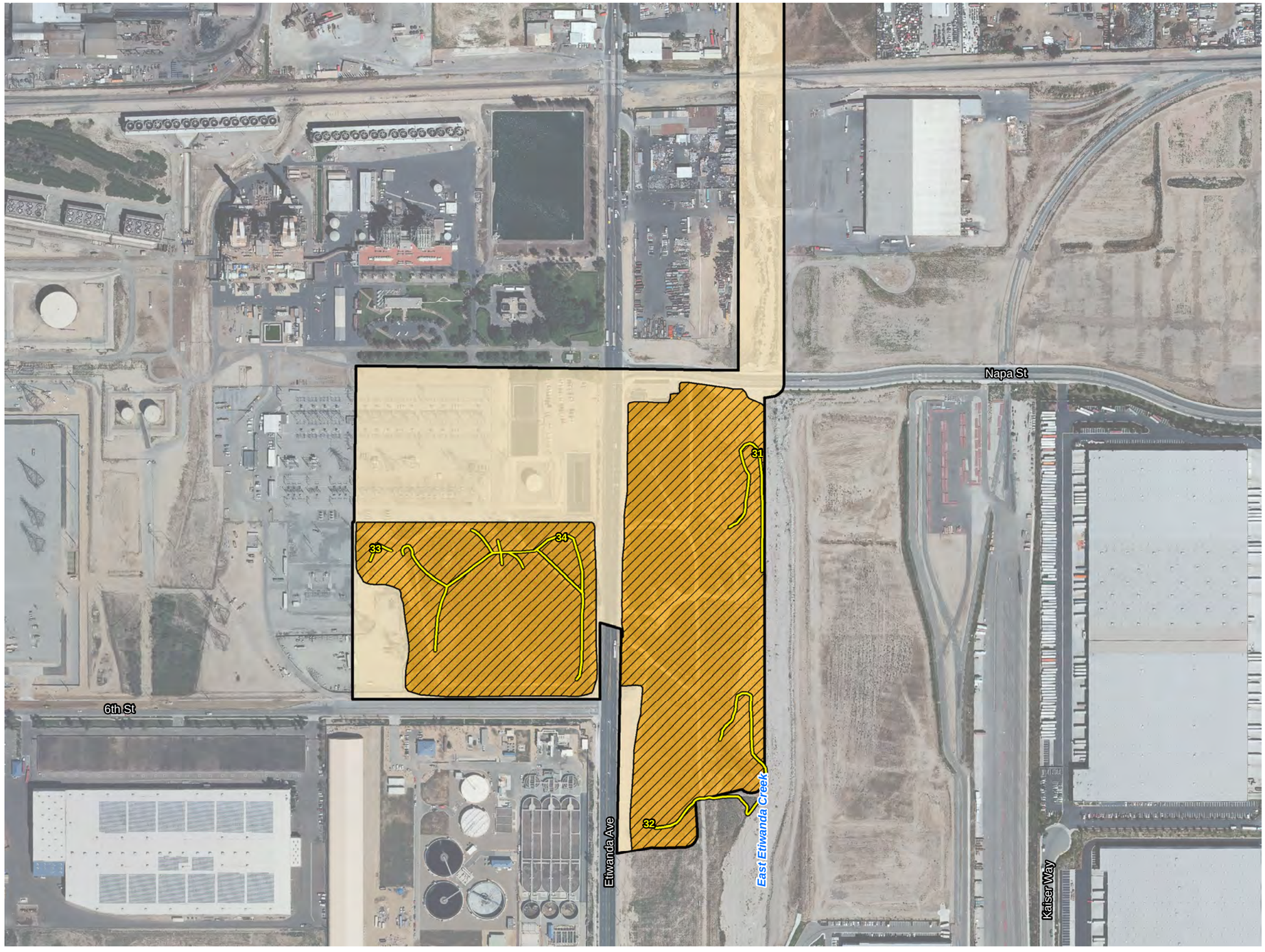


Approximate Traplines

Area Generally Occupied By Los Angeles Pocket Mouse

San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

Survey Areas

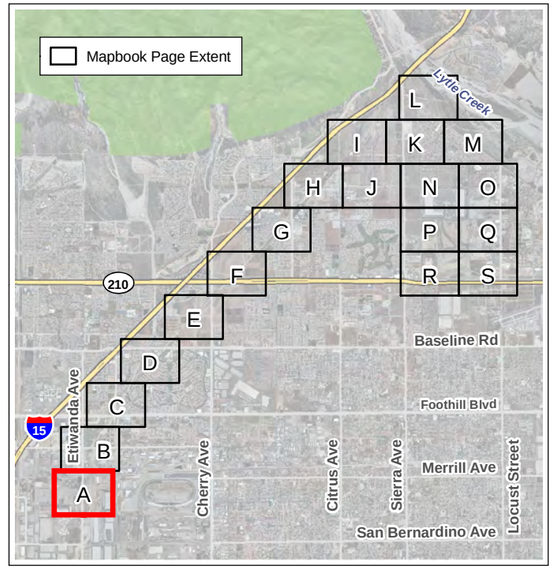
Initial Alignment

New Alignment

Habitat Potential

Suitable

Not Suitable



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San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 3A

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

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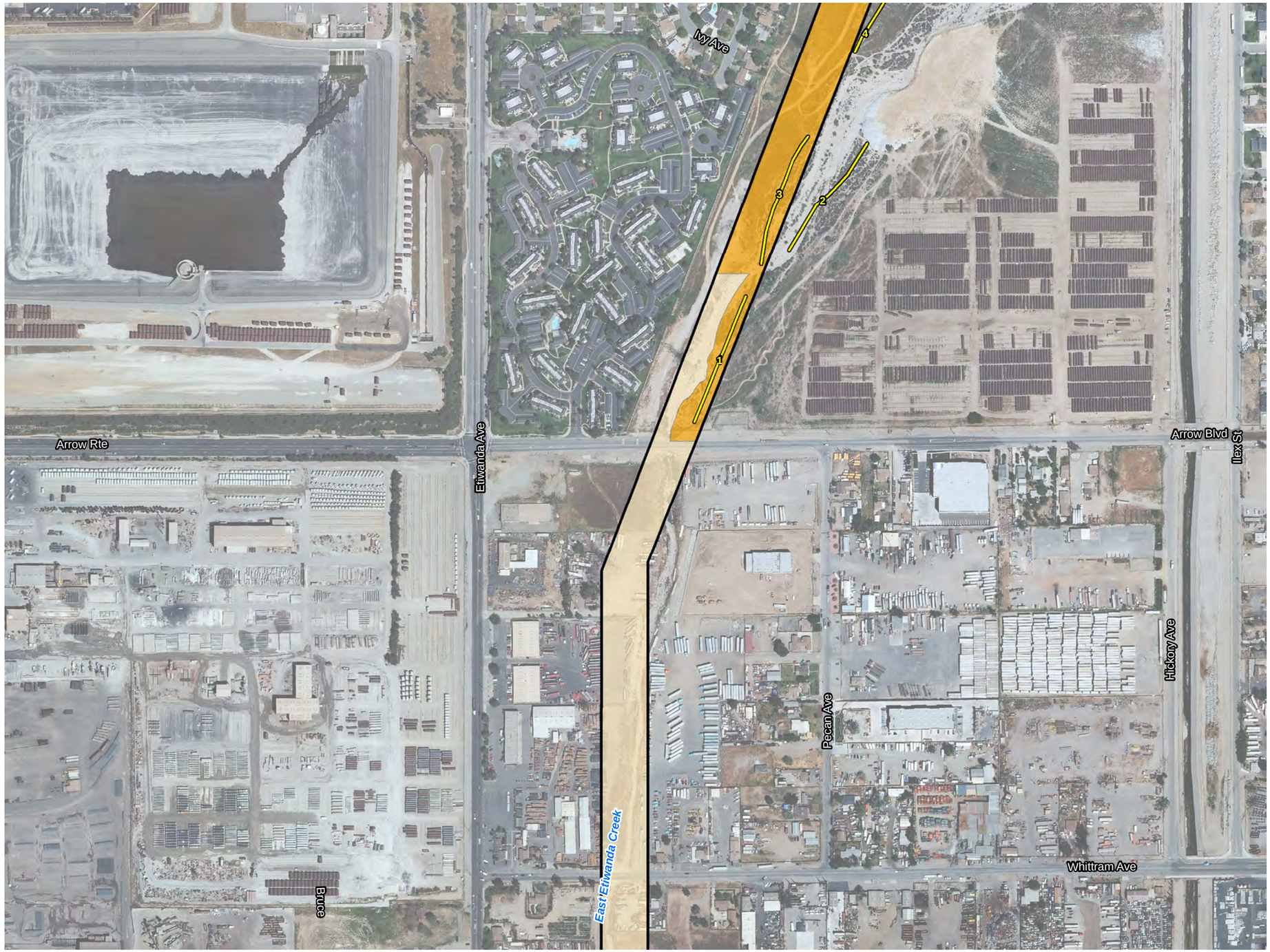


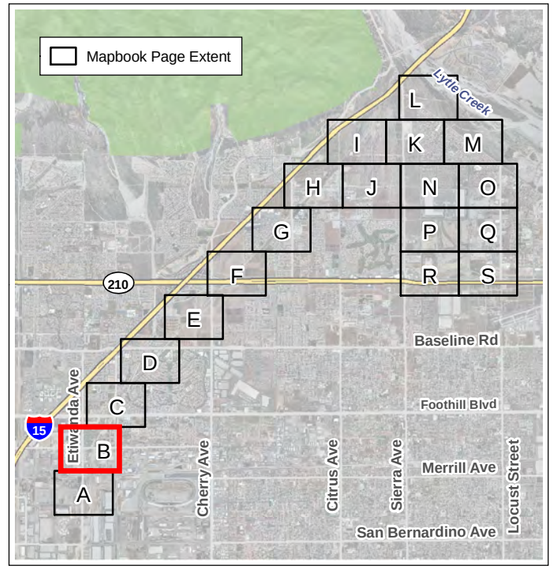
- Approximate Traplines
- Area Generally Occupied By Los Angeles Pocket Mouse
- San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

Survey Areas

- Initial Alignment
- New Alignment

Habitat Potential

- Suitable
- Not Suitable



San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 3B

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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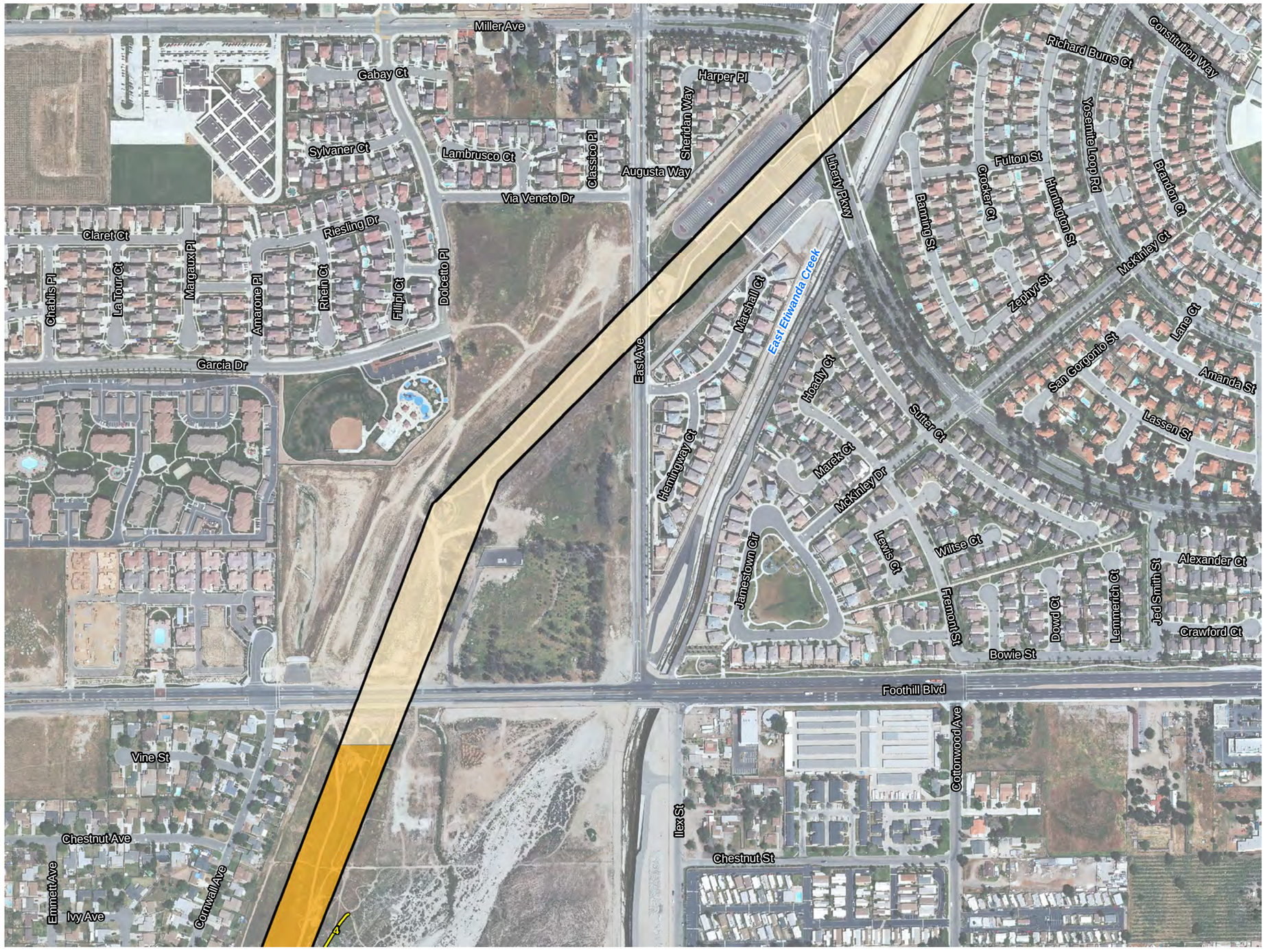


Approximate Traplines

Area Generally Occupied By Los Angeles Pocket Mouse

San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

Survey Areas

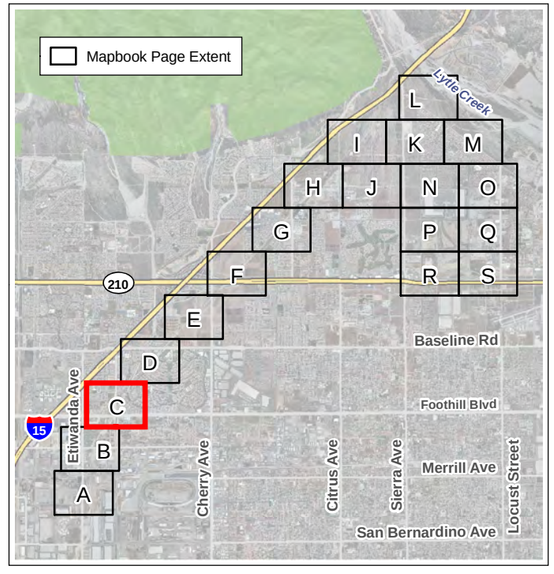
Initial Alignment

New Alignment

Habitat Potential

Suitable

Not Suitable



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San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 3C

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 3D

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

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Approximate Traplines

Area Generally Occupied By Los Angeles Pocket Mouse

San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

Survey Areas

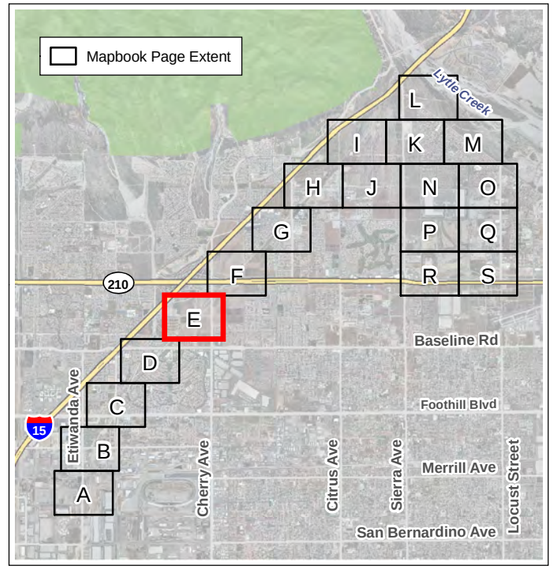
Initial Alignment

New Alignment

Habitat Potential

Suitable

Not Suitable



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San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 3E

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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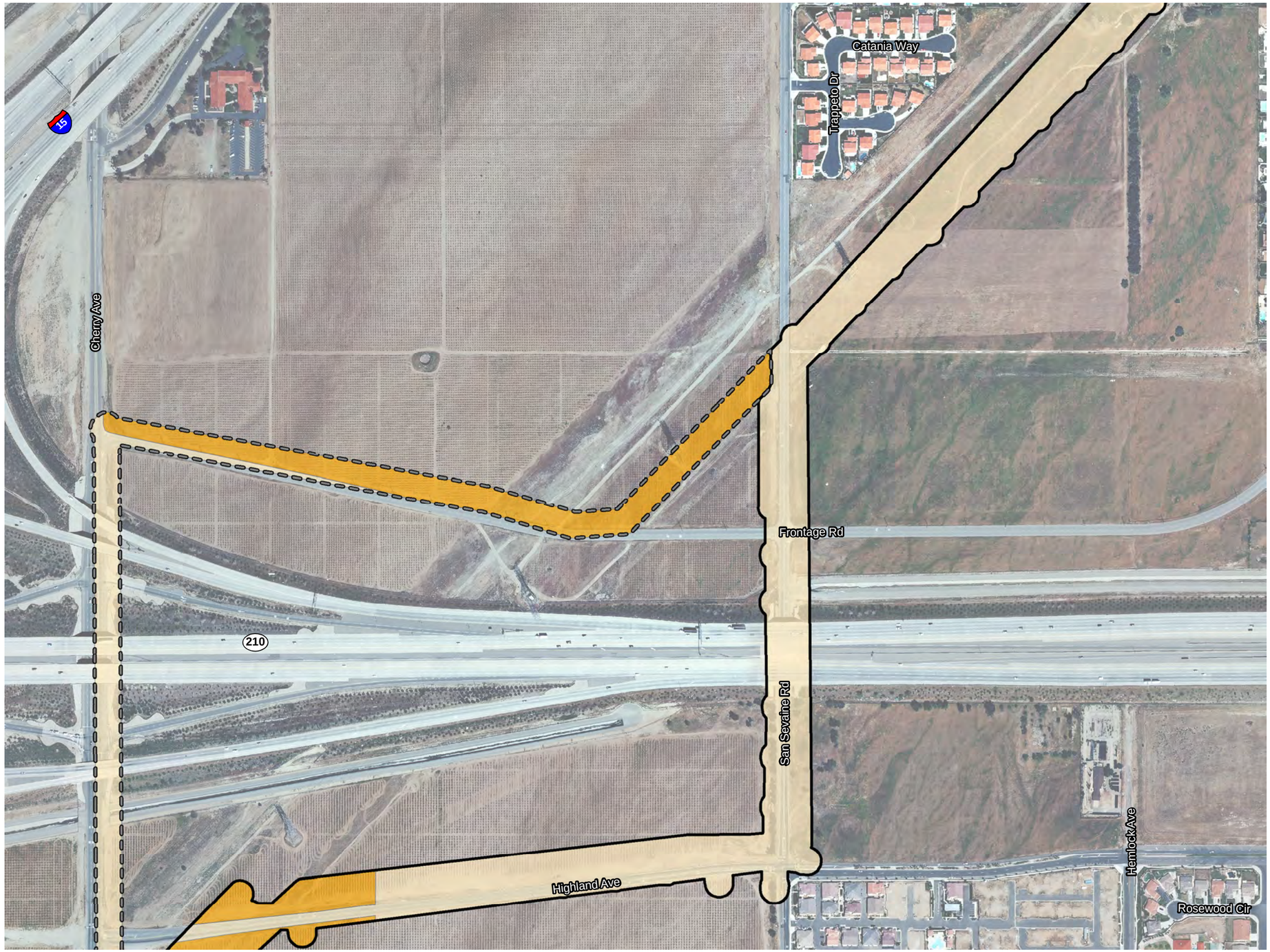


Approximate Traplines

Area Generally Occupied By Los Angeles Pocket Mouse

San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

Survey Areas

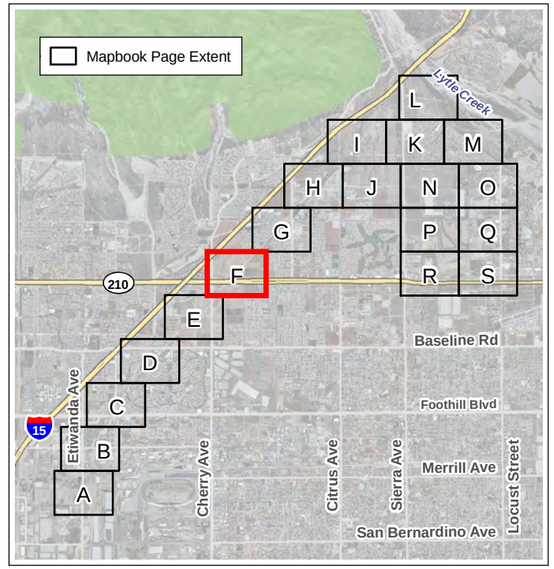
Initial Alignment

New Alignment

Habitat Potential

Suitable

Not Suitable



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San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 3F

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

Bonterra CONSULTING

(Rev 08/10/10 JFG) R:\Projects\Edison\J046\Graphics\Bio\ex11_mammmals.pdf

Approximate Traplines

Area Generally Occupied By Los Angeles Pocket Mouse

San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

Survey Areas

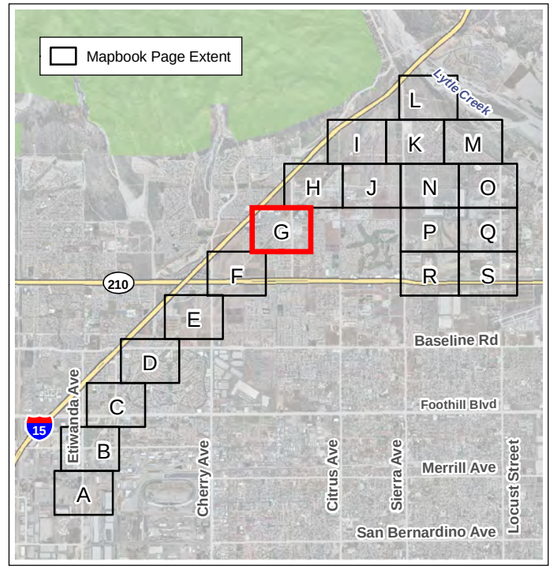
Initial Alignment

New Alignment

Habitat Potential

Suitable

Not Suitable



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San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 3G

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

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Approximate Traplines

Area Generally Occupied By Los Angeles Pocket Mouse

San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

Survey Areas

Initial Alignment

New Alignment

Habitat Potential

Suitable

Not Suitable

Mapbook Page Extent

San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 3H

Falcon Ridge Substation Project

400 200 0 400 Feet

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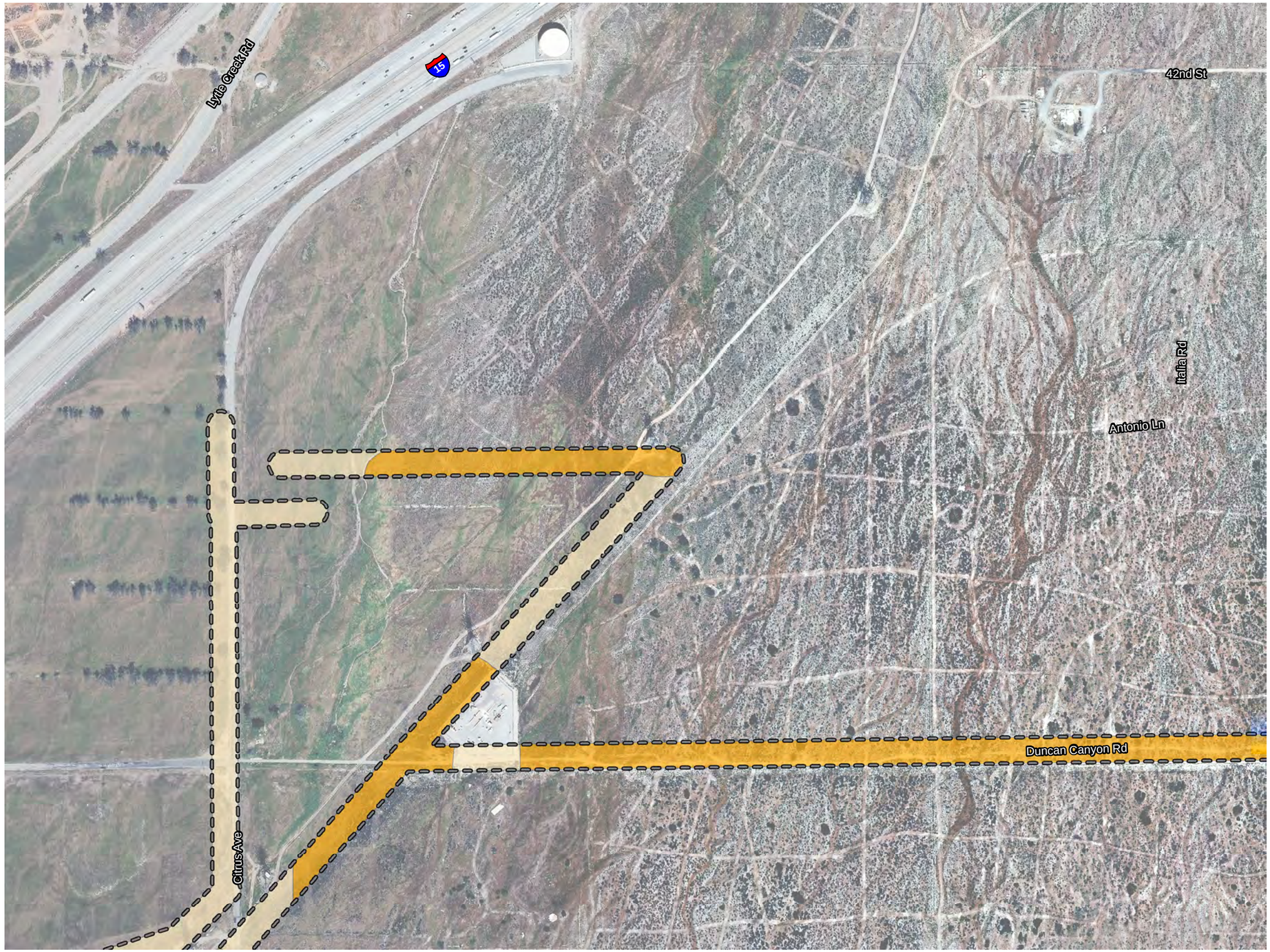


Approximate Traplines

Area Generally Occupied By Los Angeles Pocket Mouse

San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

Survey Areas

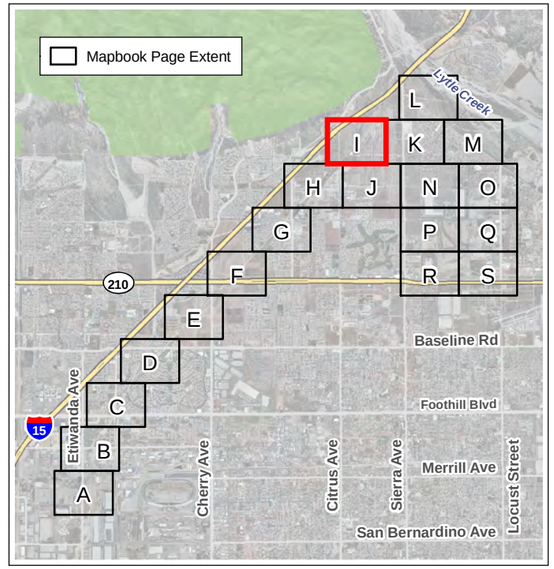
Initial Alignment

New Alignment

Habitat Potential

Suitable

Not Suitable



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San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 3I

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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Approximate Traplines

Area Generally Occupied By Los Angeles Pocket Mouse

San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

San Bernardino Kangaroo Rat CNDDB Record

Survey Areas

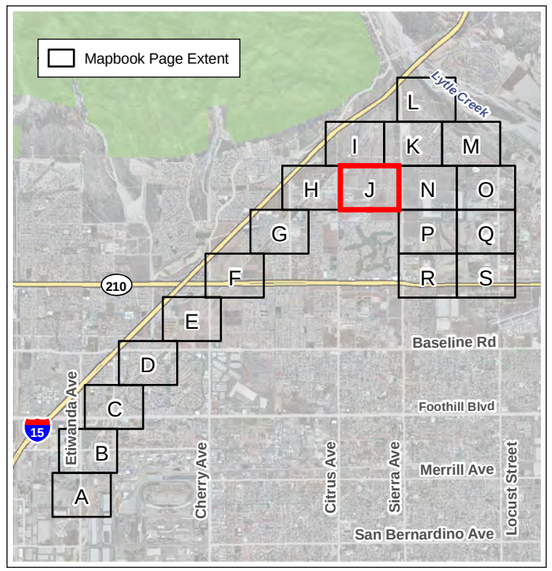
Initial Alignment

New Alignment

Habitat Potential

Suitable

Not Suitable



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San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 3J

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

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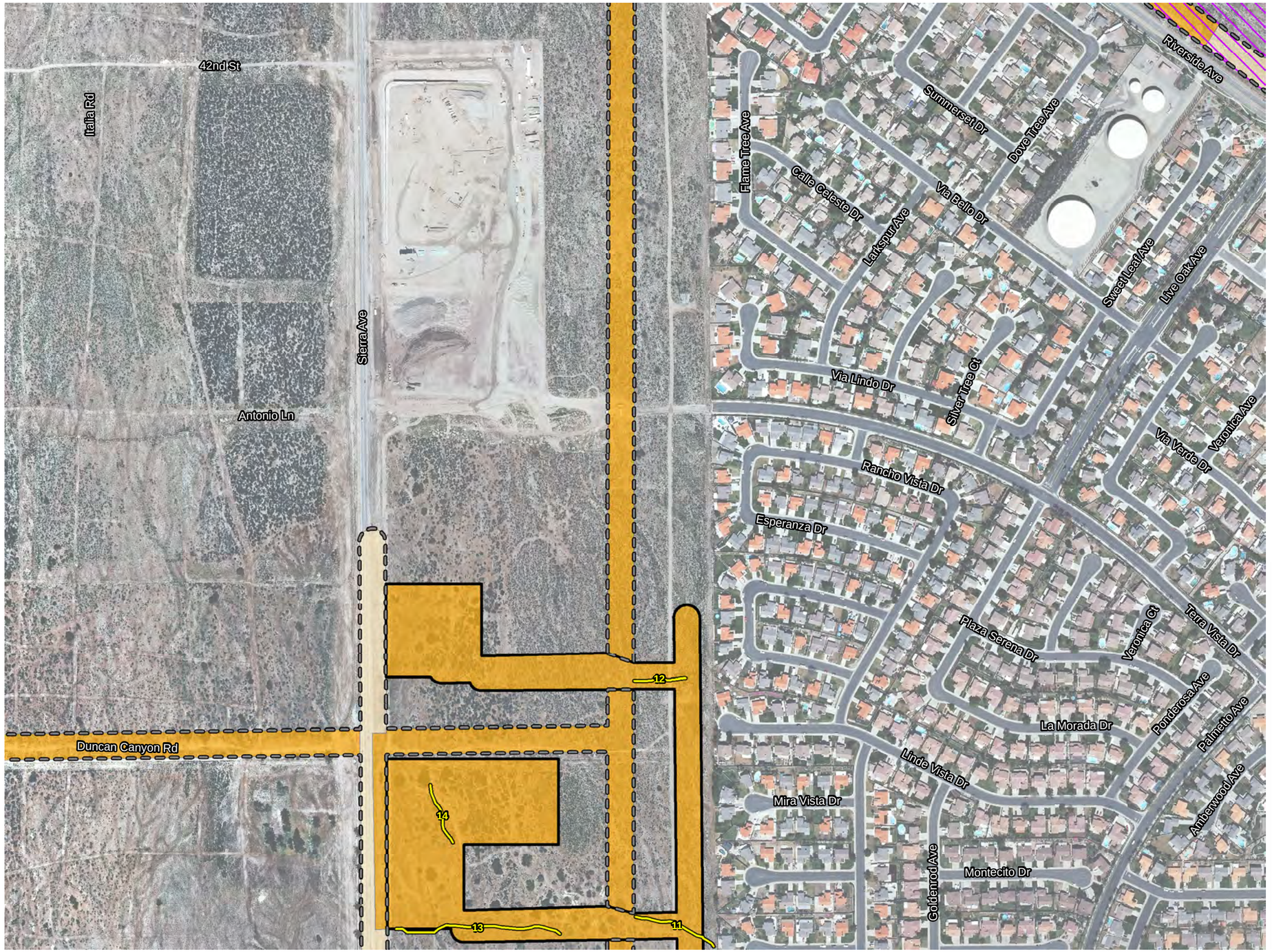


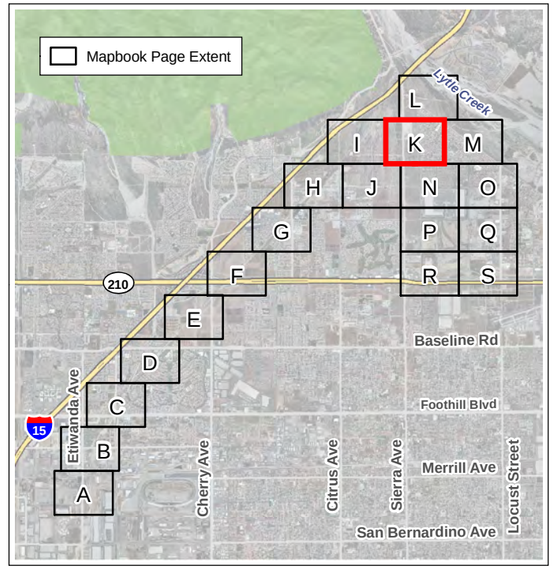
- Approximate Traplines
- Area Generally Occupied By Los Angeles Pocket Mouse
- San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

Survey Areas

- Initial Alignment
- New Alignment

Habitat Potential

- Suitable
- Not Suitable



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San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 3K

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

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Approximate Traplines

Area Generally Occupied By Los Angeles Pocket Mouse

San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

Survey Areas

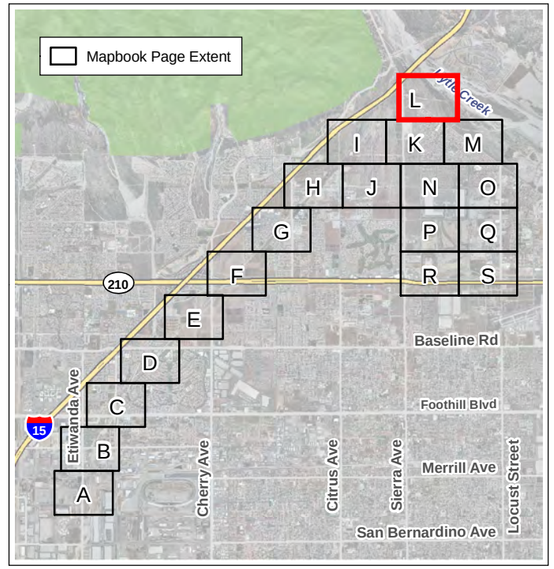
Initial Alignment

New Alignment

Habitat Potential

Suitable

Not Suitable



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San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 3L

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

(Rev 08/10/10 JFG) R:\Projects\Edison\J046\Graphics\Bio\ex11_mammmals.pdf

Approximate Traplines

Area Generally Occupied By Los Angeles Pocket Mouse

San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

Survey Areas

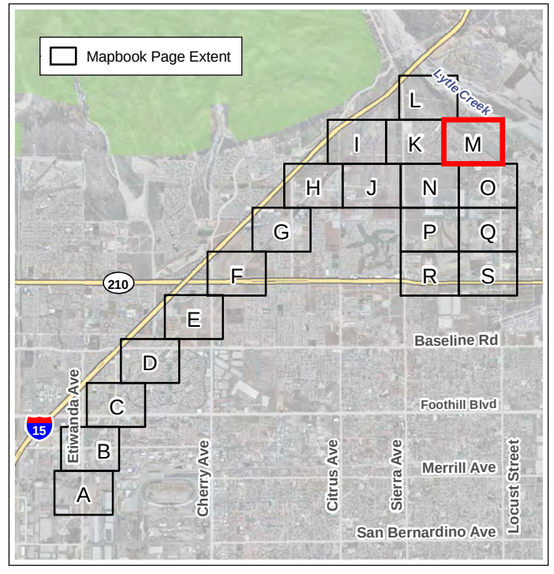
Initial Alignment

New Alignment

Habitat Potential

Suitable

Not Suitable



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San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 3M

Falcon Ridge Substation Project

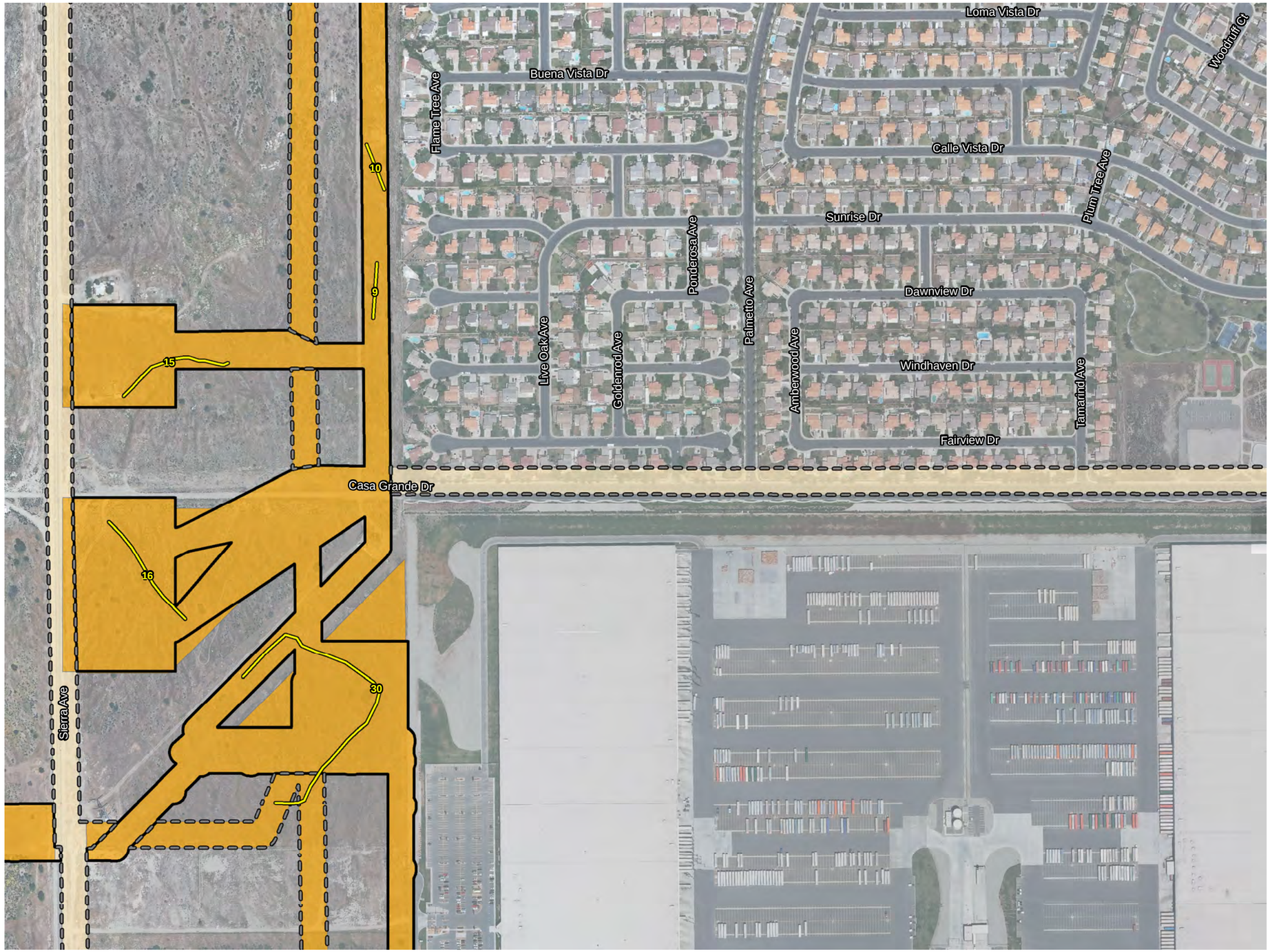
N W E S

400 200 0 400

Feet

BonTerra CONSULTING

(Rev 08/10/10 JFG) R:\Projects\Edison\J046\Graphics\Bio\ex11_mammmals.pdf



Approximate Traplines

Area Generally Occupied By Los Angeles Pocket Mouse

San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

Survey Areas

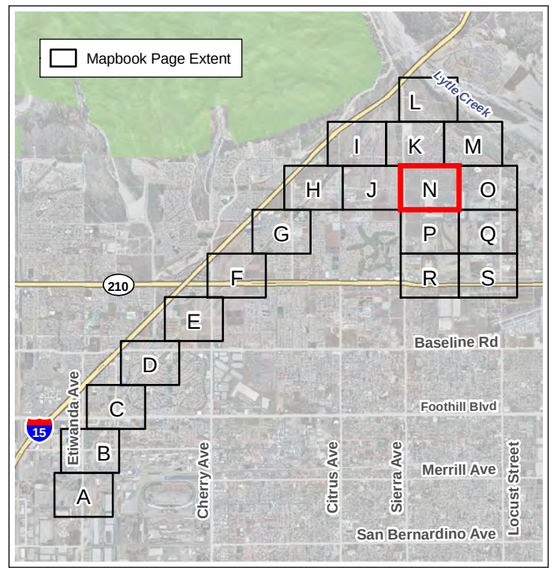
Initial Alignment

New Alignment

Habitat Potential

Suitable

Not Suitable



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San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 3N

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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Approximate Traplines

Area Generally Occupied By Los Angeles Pocket Mouse

San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

Survey Areas

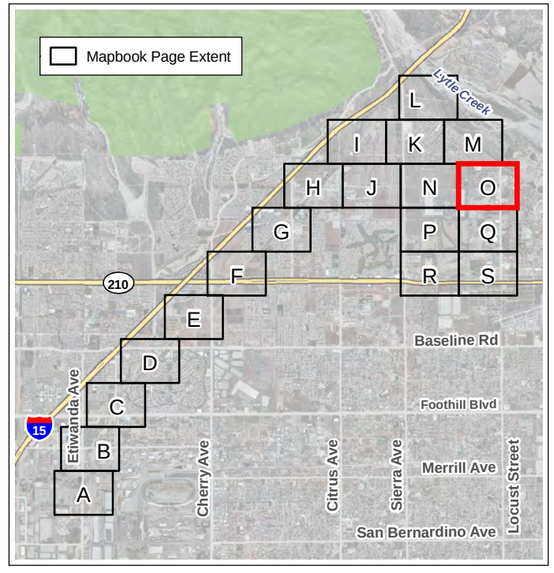
Initial Alignment

New Alignment

Habitat Potential

Suitable

Not Suitable



San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 3O

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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Approximate Traplines

Area Generally Occupied By Los Angeles Pocket Mouse

San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

Survey Areas

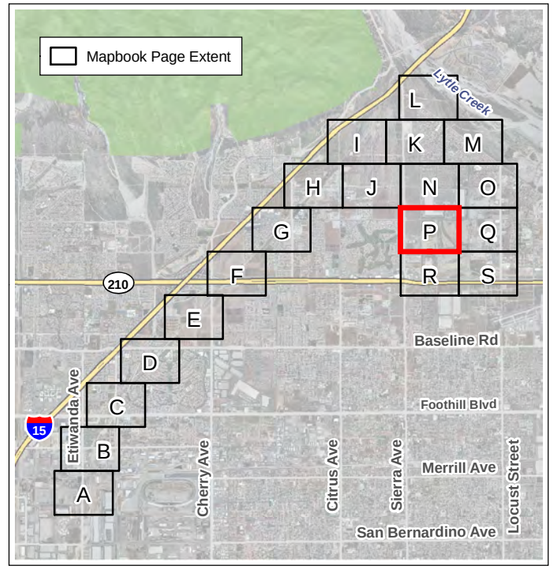
Initial Alignment

New Alignment

Habitat Potential

Suitable

Not Suitable



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San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 3P

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

(Rev 08/10/10 JFG) R:\Projects\Edison\J046\Graphics\Bio\ex11_mammmals.pdf

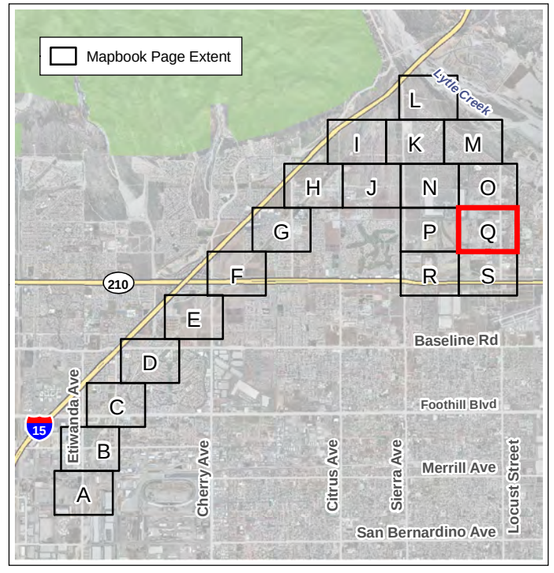
- Approximate Traplines
- Area Generally Occupied By Los Angeles Pocket Mouse
- San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

Survey Areas

- Initial Alignment
- New Alignment

Habitat Potential

- Suitable
- Not Suitable



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San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 3Q

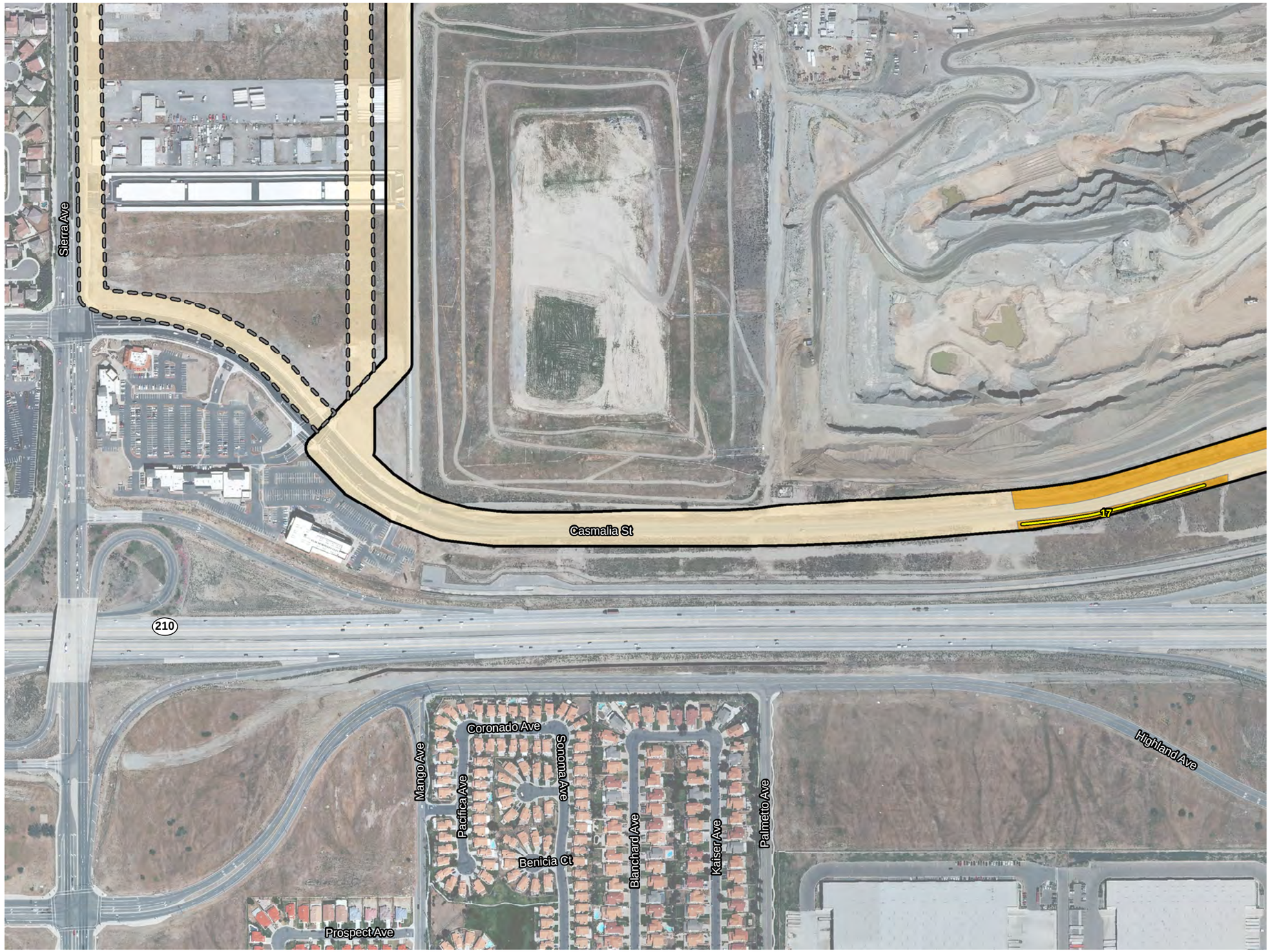
Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

Bonterra CONSULTING

(Rev 08/10/10 JFG) R:\Projects\Edison\J046\Graphics\Bio\ex11_mammmals.pdf



Approximate Traplines

Area Generally Occupied By Los Angeles Pocket Mouse

San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

Survey Areas

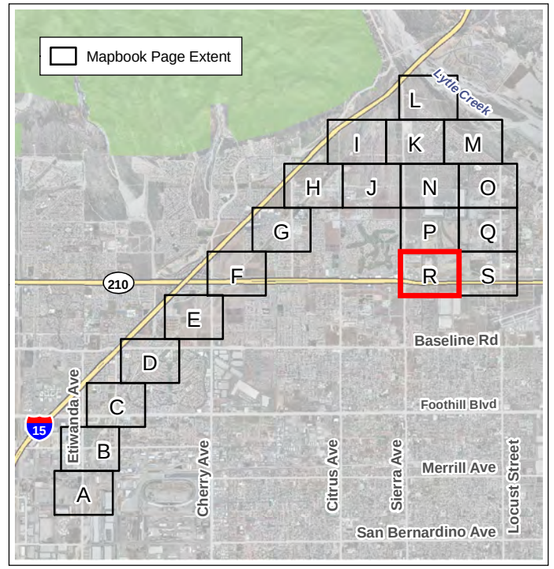
Initial Alignment

New Alignment

Habitat Potential

Suitable

Not Suitable



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San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 3R

Falcon Ridge Substation Project

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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Approximate Traplines

Area Generally Occupied By Los Angeles Pocket Mouse

San Bernardino Kangaroo Rat Critical Habitat (2008 Final)

Survey Areas

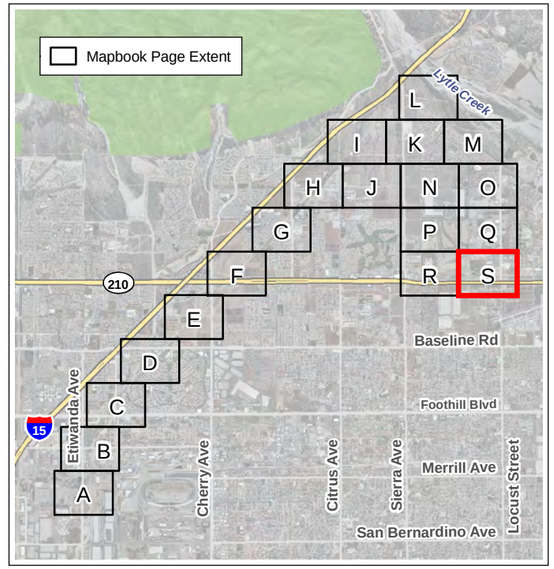
Initial Alignment

New Alignment

Habitat Potential

Suitable

Not Suitable



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San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Trapping Locations

Exhibit 3S

Falcon Ridge Substation Project

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

(Rev 08/10/10 JFG) R:\Projects\Edison\J046\Graphics\Bio\ex11_mammmals.pdf

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Attachment A

PHOTOGRAPHS OF EXAMPLES OF HABITAT CONDITIONS IN PROJECT AREA

PHOTOS OF SUBSTRATE DISTURBANCES IN THE ALIGNMENTS IN THE NORTHERN PART OF THE PROJECT AREA (RECENT DISKING, GRADING, PARTIAL DISKING)

PHOTOS OF DENSE GRASSLAND HABITAT (TOP 2 IMAGES), AND DIRT ROAD (BOTTOM) IN THE ALIGNMENTS IN THE NORTHERN PART OF THE PROJECT AREA. DKR ARE PRESENT ALONG THE ROAD (BOTTOM)

PHOTO OF DENSE GRASSLAND WITH PARTIAL DISKING. DKR ARE PRESENT IN DISKED AREA (TOP), AND GRASSLAND OPENING AROUND REMNANT CHAMISE INDIVIDUALS, WITH DKR BURROWS VISIBLE (BOTTOM)

ETIWANDA CREEK AT FAR SOUTH END OF PROJECT AREA, EAST OF ETIWANDA AVENUE. LAPM AND DKR OCCUR IN LESS DISTURBED SANDY WASH AND ON BENCH (TOP TWO PHOTOS), BUT ARE ABSENT IN THE HEAVILY DISTURBED GRAVELLY WASH SECTION (BOTTOM PHOTO)

APPENDIX F

DELHI SANDS FLOWER-LOVING FLY SURVEY REPORT

BonTerra CONSULTING
PASADENA COSTA MESA
T: (714) 444-9199 F: (714) 444-9599
www.BonTerraConsulting.com
151 Kalmus Drive, Suite E-200
Costa Mesa, CA 92626

November 17, 2010

Andrew Keller
Southern California Edison
2244 Walnut Grove Avenue, GO1 Quad 3A
Rosemead, California 91770

VIA EMAIL
Andrew.Keller@sce.com

Subject: Results of Delhi Sands Flower-loving Fly Surveys on the Falcon Ridge Substation Project in the City of Fontana, San Bernardino County, California

Dear Mr. Keller:

This attached Letter Report provides the results of the 2010 focused surveys for the Delhi Sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*) (DSF) conducted by Consulting Biologists Gilbert Goodlett (TE-005535-3) and Brian Drake (TE-006328-4) for the Falcon Ridge Substation Project (hereafter referred to as "Project site") in San Bernardino County, California. The proposed Falcon Ridge Substation Project is located in the cities of Rancho Cucamonga, Rialto, and Fontana, and a portion of unincorporated San Bernardino County on the U.S. Geological Survey (USGS) Devore, Guasti, and Fontana 7.5-minute quadrangles. Only the area of the Project that lies within the Ontario Recovery Unit was included in the survey area and was surveyed for the fly. The surveys focused on the determination of presence of the federally listed DSF in the survey area. The methods and results of the surveys are discussed in the Letter Report attached.

Results

No DSF were observed in the survey area during the 2010 survey season. Surveys were conducting according to U.S. Fish and Wildlife Service (USFWS) protocols and a total of 44 surveys were conducted between July 1 to September 20, 2010. The USFWS requires two consecutive years of negative survey findings to establish absence of the fly on the Project site. The first of these has been completed. However, the Falcon Ridge Project does not meet the protocol specification of Delhi series soils present on the site; therefore, additional surveys are not recommended. If you have any questions, please feel free to call Stacie Tennant at 714-444-9199.

Sincerely,

BONTERRA CONSULTING

Stacie A. Tennant
Senior Project Manager

Attachment A – SCE Falcon Ridge Fly Report

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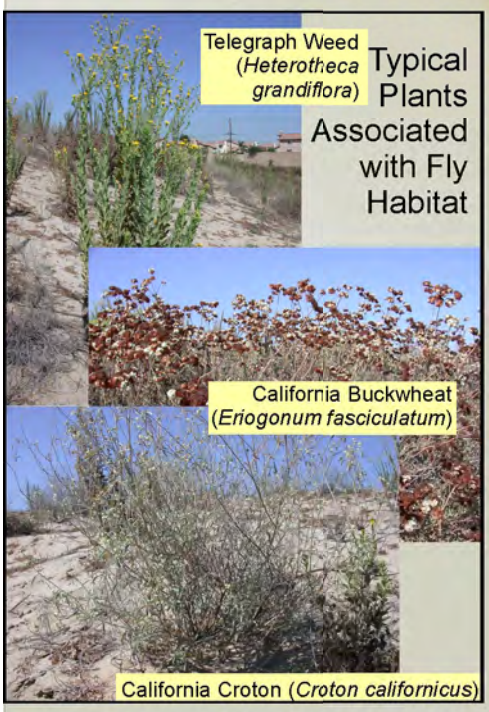
ATTACHMENT A

SCE FALCON RIDGE FLY REPORT

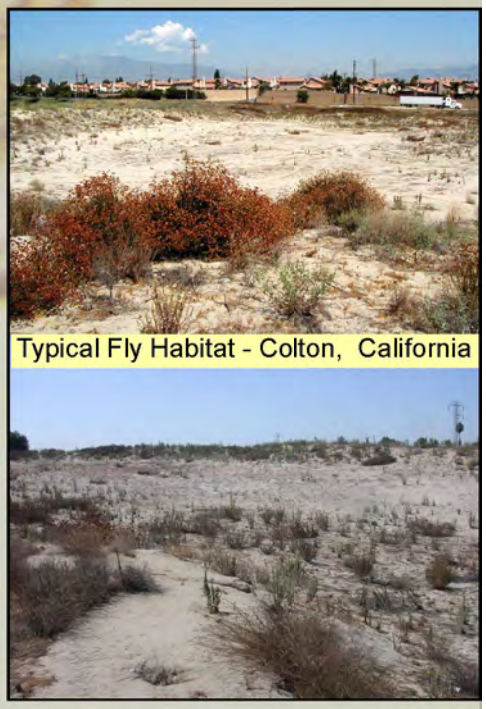
Delhi Sands Flower-loving Fly
(*Rhaphiomidas terminatus abdominalis*)
2010 Focused Adult Survey at Southern California Edison's Falcon Ridge Project in San Bernardino County, California

Submitted to:

BonTerra Consulting
151 Kalmus Drive, Suite E-200
Costa Mesa, CA 92626
Attn: Stacie Tennant
(714) 444-9199
stennant@bonterraconsulting.com



Pupal case - Photograph by Ellen Schafhauser

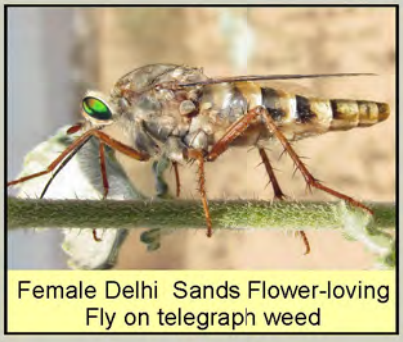

Typical Fly Habitat - Colton, California

Prepared by:

Gilbert Goodlett
EnviroPlus Consulting
1660 West Franklin Avenue
Ridgecrest, California 93555
(760) 371-3592 phone & fax
email: torthunter@aol.com

Male Delhi Sands Flower-loving Fly on California Buckwheat

Mating - Photograph by Brian Drake


Female Delhi Sands Flower-loving Fly on telegraph weed

October 9, 2010

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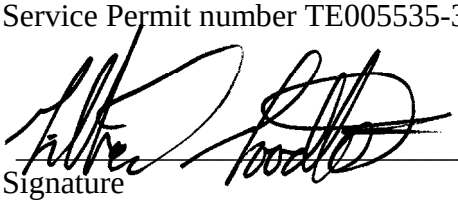
CERTIFICATIONS

I, **Brian Drake**, having performed focused surveys for the Delhi Sands Flower-loving Fly at the location covered in this report, have entirely read and reviewed the final report for the project and concur with the statements and conclusions made. A portion of this work was performed under U.S. Fish and Wildlife Service Permit number TE-006328-4, expiring 6/21/2013.

Signature

September 23, 2010
Date

I, **Gilbert O. Goodlett** of EnviroPlus Consulting, having performed focused surveys for the Delhi Sands Flower-loving Fly and prepared the report for the location covered in this report have entirely read and reviewed the final report for the project and concur with the statements and conclusions made. A portion of this work was performed under U.S. Fish and Wildlife Service Permit number TE005535-3 expiring 7/29/2011.



Signature

September 23 2010
Date

EXECUTIVE SUMMARY

No Delhi Sands Flower-loving Fly observations were made at the Falcon Ridge Project during the 2010 survey season. U.S. Fish and Wildlife Service protocols were followed for conducting the surveys. Surveys were conducted on 44 days (22 days on each subsite) between July 1 and September 20, 2010 between 1000 and 1400 local time. This is the first year that surveys have been completed at the Falcon Ridge Project. The U.S. Fish and Wildlife Service requires two consecutive years of surveys of negative findings to establish absence of the species on the site. However, while a portion of the Falcon Ridge Project is within the Ontario Recovery Unit, no Delhi series soils are found on the site and it therefore does not meet the minimum protocol specifications that require a focused survey. Additional surveys are not recommended.

BACKGROUND

Delhi Sands Flower-loving Fly

The Delhi Sands Flower-loving Fly (*Rhaphiomidas terminatus abdominalis*) (DSF) was listed as an endangered species by the U.S. Fish and Wildlife Service (Service) on September 23, 1993 (58 Federal Register 49881) and is protected under the provisions of the Endangered Species Act of 1973, as amended (ESA). The ESA prohibits anyone from "taking" a listed species. Take includes, but is not limited to, harming, harassing, or killing individuals of a listed species as well as destruction of habitat occupied by listed species.

The DSF is in the Dipteran (fly) family Mydidae (mydas flies). It is approximately one-inch long and orange-brown in color, with dark brown oval spots on the dorsal surface of the abdomen (inset cover photographs). This insect is a rapid flyer and its long proboscis is used to obtain nectar from flowers. The adult flight period lasts for several weeks in July, August, and September, making its observable presence on any site temporary and short.

The historic range of the DSF is estimated to have been approximately 40 square miles in northwestern Riverside and southwestern San Bernardino counties (USFWS, 1996). Habitat has been lost and fragmented by a variety of activities/circumstances including agriculture, manure dumping, urbanization, sand-mining, illegal dumping, off-road vehicles, and non-native plant invasion. It is estimated that the DSF's present distribution is less than 2% of its former range, and that the total adult population is on the order of only a few hundred individuals. Known current DSF populations occur in isolated pockets of habitat surrounded by urban development and invasive exotic vegetation (USFWS, 1997).

DSF habitat is limited to areas that include Delhi fine sand, an aeolian (wind-deposited) soil type. The Service has identified the presence of Delhi Sands as the baseline criterion for the determination of suitable or potentially suitable habitat for this species (USFWS, 1996). Fine unconsolidated soil is required for oviposition (egg laying) as females must insert their abdomens deep into the sand during this process (Rogers and Mattoni, 1993). The larval portion of the DSF's life cycle is largely unknown. Larval development apparently takes place in the sand and is presumed to take either one or two years. Soil disturbances associated with agricultural activities and urban development are primary causes of habitat loss and degradation.

Appropriate vegetative cover is typically sparse (0 to 50% cover) to absent (in blowout areas of dune formations and sand pits). The highest density of DSF have been found in habitat that includes a variety of plants including California buckwheat (*Eriogonum fasciculatum*), California croton (*Croton californicus*), and telegraph weed (*Heterotheca grandiflora;* see inset cover photographs).

Areas known to have been occupied by DSF or areas that contain restorable habitat for the fly have been divided into three recovery units (Colton, Jurupa, and Ontario Recovery Units). The recovery units (Figure 1) are defined as large geographic areas. However, the occupied and restorable habitat includes only those areas with Delhi Series soils and does not include residential or commercial development or other areas that have been permanently altered by human actions (USFWS, 1997).

Survey Protocols

The Service has developed specific standards for conducting DSF surveys with specific report requirements (1996), as amended. For DSF surveys these standards include the following:

1. Surveys must be conducted by a permitted biologist. Permits are acquired through a testing procedure administered by the Service.
2. Surveys must be conducted at least twice a week from July 1 to September 20 between the hours of 1000 and 1400 PDT. No more than 50 acres per day may be surveyed by an individual biologist.
3. Two consecutive years of surveys with no DSF observed are required to establish absence of the species.
4. Approval to conduct a DSF survey at a site must be obtained from the Service by submitting specific project information to the Service at least 10 working days prior to the anticipated start of the survey.
5. Surveys must be conducted at a relatively slow pace with care taken to avoid harassing any DSF that are located.
6. The Service must be notified within one working day if DSF are observed at a site.

For DSF reports the Service requires the following:

1. Submission of reports to the Service and the California Department of Fish and Game within 30 days of the completion of surveys.
2. A map delineating the boundaries of the site on a 7.5 minute U.S. Geological Survey topographic map.
3. Five color slides or similar photographic material of the site. Two of these are to portray the general landscape of the site and three are to show representative areas within the site that were surveyed for the animal.
4. A map at an adequate scale that indicates the precise location where DSF were located.
5. A qualitative description of the DSF community on the site and a list of plants, reptiles, birds, mammals, and invertebrates observed.
6. A description of methods utilized.

7. Dates and times of field visits, size of habitat surveyed, and weather conditions at the start and end of each survey.
8. Reporting any other significant observations relative to the survey.
9. Completing forms utilized by the Natural Diversity Data Base of the California Department of Fish and Game.
10. Photocopies of original field notes.

The Service standards allow for specific deviations from the protocols at the discretion of the Service. Provisions are also made for rejection of surveys if protocol methodology is not followed, the report is not completed within the time frame allocated, required information is not provided, or other information indicates that the survey is inadequate as determined by the Service.

SITE DESCRIPTION

Southern California Edison's (SCE) Falcon Ridge Project includes the construction of a new substation and 66 kV subtransmission source lines and fiber optic communication lines connecting to the existing Etiwanda and Alder substations. The objective of the project is to meet forecast electrical demands in the cities of Rancho Cucamonga, Fontana, Rialto, and the surrounding areas of unincorporated San Bernardino County.

The southern terminus of the project is the Etiwanda substation located at Etiwanda Avenue and Napa Street in the City of Rancho Cucamonga. The substation facilities would be expanded to the southeast of the existing facility and to the east of Etiwanda Avenue (Figure 2, Photograph 4). Two new 66 kV subtransmission source lines would be installed from the expanded Etiwanda substation north along an existing utility right-of-way. At Baseline Avenue, the project exits the Ontario Recovery Unit to the north and the continuation of the project which diverges into two alternatives was not considered for DSF surveys. The subtransmission line right-of-way is a 100 ft wide corridor that traverses a number of land uses including vacant land, parking lots, and paved roads. Adjacent land uses include vacant land, a variety of industrial activities, and residential housing. None of the soils within the proposed Etiwanda substation expansion area or along the subtransmission line route is mapped as Delhi series.

The vegetative component is highly diverse given the large scale of the project and the variety of habitats traversed. However, much of the vegetation along the route is ruderal. A comprehensive plant list is shown in Table 2.

METHODS

Site Selection

Only that area of the project that lies within a Recovery Unit was included in the survey area (Figure 1). Soils maps of the area indicated that Delhi series soils did not occur on the project footprint. However, Delhi series soils do occur in close proximity to the west, southwest, and south of the southern limits of the project near a substation (Figure 2). As a result, Southern California Edison elected to conduct a protocol survey of the site. Intensive land use areas that resulted in unsuitable habitat were eliminated. This primarily included denuded areas associated with the substation.

The survey area that remained after elimination of unsuitable areas totaled 68.2 acres and was divided into two different survey areas identified as FR1 (44.2 acres) and FR2 (24.0 acres, Figure 2). Since the total survey area exceeded the limit of 50 acres per day that a biologist can survey according to U.S. Fish and Wildlife Service Protocols (1996), the survey areas were lumped into survey-day units to total as close as possible to 50 acres. Survey area FR1 was nearly 50 acres and treated as a survey day. Survey area FR2 at 24.0 acres was treated as a ½ survey day unit. Each of the survey areas are mapped in Figure 2 and aerial oblique photographs are shown in Appendix 1.

Field Methods

A total of 44 surveys were conducted on the Falcon Ridge Project, 22 on the FR1 area and 22 on the FR2 area (but only ½ day survey effort at FR2), between July 1 and September 20, 2010. Surveys at the FR1 area were conducted between 1000 and 1400 PDT while survey efforts at the FR2 area were conducted within this same time period but for only 2 hours. At the beginning and end of each field visit, the time (PDT) was noted and weather conditions were recorded. Weather conditions included the shaded air temperature at 1.5 meters high measured with a 0.1°C precision thermister, the ocularly estimated percentage of cloud cover and type of clouds, and wind speeds and direction. Winds speeds were measured with a Kestrel® brand electronic wind meter. Measurements were taken until average wind speeds stabilized. The average and maximum wind speeds were recorded. Wind direction was estimated by observing the drift direction of a handful of fine soil that was dropped. These data are listed in Table 1.

The site was walked slowly in generally meandering transects and along land features (i.e., dirt roads). The times that each area of the site was surveyed was shifted between surveys such that the entire site was covered during all of the survey period during the day.

Digital photographs of the site were taken during the survey season by Gilbert Goodlett. Aerial oblique photographs of the site (Appendix 1) were taken by Brian Drake and Gilbert Goodlett on August 16, 2010. Photography locations were selected to fulfill Service protocols (2 site overviews and 3 representative habitat photos) and to most accurately represent the site.

Plant species were noted throughout the survey period. Identification of plants followed The Jepson Manual: Higher Plants of California (Hickman, 1993) and plant communities followed A Manual of California Vegetation (Sawyer and Keeler-Wolf, 1995).

During the field survey, the biologist generally focused on the ground and vegetation in his immediate vicinity in order to increase the likelihood of observing DSF, a low-flying species that is sometimes associated with vegetation. All other species including birds, mammals, reptiles, and invertebrates were recorded. These data were recorded on a digital recorder or scrap paper and transferred to a spreadsheet to log daily species, survey times, and weather data; hence there are no original data sheets so none are attached to this report.

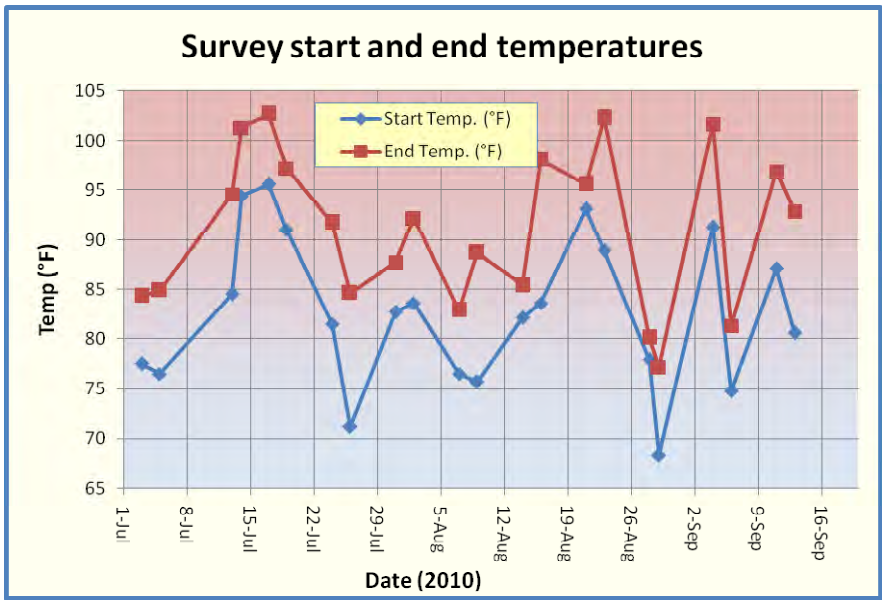
A global positioning system device accurate to 3 m was used to record corners and locations of features on the site. These points and polygons were later downloaded to a laptop computer to create an overlay of the points on a U.S. Geological Survey topographic map. These data were utilized to calculate the areas of features on the site and create an accurate map of the site.

Identification Resources

Bird identification resources included A Field Guide to Western Birds (Peterson, 1993), Field Guide to the Birds of North America (National Geographic Society, 1987), and Stokes Field Guide to Birds: Western Region (Stokes, 1996). Mammal identification resources included California Mammals (Jameson, 1988) and A Field Guide to the Mammals of North America North of Mexico (Burt and Grossenheider, 1980). Reptile identification resources included A Field Guide to Western Reptiles and Amphibians (Stebbins, 1985). Invertebrate identification resources included Insects of the Los Angeles Basin (Hogue, 1993), A Field Guide to Insects: America North of Mexico (Borror and White, 1970), California Insects (Powell and Hogue, 1979), How to Know the Insects (Bland and Jacques, 1978), Simon and Schuster's Guide to Insects (Arnett and Jacques, 1981), National Audubon Society Guide to North American Insects and Spiders (Milne, 1995), The Butterflies of Southern California (Emmel and Emmel, 1973), and California Butterflies (Garth and Tilden, 1986).

RESULTS

No DSF were observed during the 2010 survey season at the site. A total of 44 field visits were completed (22 at FR1; 22 at FR2 [1/2 day]). Approximately 110 hours were spent conducting surveys on the site.



The average temperature for surveys was 86.9 °F with an average survey start temperature of 82.7 °F and an average survey end temperature of 91.1 °F. The minimum survey start temperature encountered was 68.4 °F and the maximum ending temperature was 102.7 °F.

Winds at the start of surveys were generally from the south to the west while end of survey winds were most commonly from the west. The average wind speed for the surveys was 2.1 mph with an average survey start wind speed of 1.4 mph and average survey end wind speed of 3.7 mph. The average maximum wind speed encountered at survey start was 2.1 mph while the average maximum wind speed encountered survey end was 5.5 mph. Maximum winds encountered were 10.7 mph on August 29. Dates and times of surveys and weather data are listed in Table 1.

Plant surveys were conducted by Bonterra Consulting and a detailed plant list for the site was developed. These data are listed in Table 2.

At FR 1, a total of 72 species of invertebrates were detected on the site. Six additional invertebrates that were identified to family were also seen. Nineteen species of birds, five species of mammals and four species of reptiles were also observed. At Area FR 2, a total of 43 species of invertebrates were detected on the site. One additional invertebrate that was identified to order was also seen. Eighteen species of birds, three species of mammals and two species of reptiles were also observed. These are listed phylogenetically in Tables 3a (Areas FR 1) and 3b (Area FR 2) by survey date.

Five annotated photographs of the site are included in Appendix 1. Appendix 2 is a Service-required field form for use by the California Fish and Game Department to enter biological observations into the California Natural Diversity Data Base.

CONCLUSIONS

Two consecutive years of negative surveys are required to demonstrate absence of DSF according to U.S. Fish and Wildlife Service protocol. This is the first year of negative findings. However, the Falcon Ridge Project does not meet the protocol specification of Delhi series soils present on the site. Therefore, additional surveys are not recommended.

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TABLES

Table 1a. Survey Times and Weather Data – Area FR 1

Date (2010)	Biologist	Start time	End time	Start Temp. (°F)	End Temp. (°F)	Start Cloud Cover (%)	End Cloud Cover (%)	Start Average Wind Speed (mph)	End Average Wind Speed (mph)	Start Maximum Wind Speed (mph)	End Maximum Wind Speed (mph)	Start Wind Direction	End Wind Direction
3-Jul	Brian Drake	10:00	14:00	77.5	84.3	50%	0%	0.0	1.7	0.0	3.2	S	S
5-Jul	Gilbert Goodlett	10:00	14:00	76.5	84.9	100% haze	0%	0.0	5.4	0.0	7.3		SW
13-Jul	Gilbert Goodlett	10:00	14:00	84.5	94.6	0%	0%	2.1	4.6	3.0	7.6	SE	W
14-Jul	Brian Drake	10:00	12:00	94.4	101.3	10%	10%	1.1	6.6	2.0	8.8	SW	W
17-Jul	Brian Drake	10:00	14:00	95.6	102.7	0%	10%	0.0	3.1	0.0	4.4		W
19-Jul	Gilbert Goodlett	10:00	14:00	91.0	97.2	0%	0%	2.1	5.2	3.4	8.1	S	W
24-Jul	Brian Drake	10:00	14:00	81.5	91.8	10%	10%	0.0	4.4	0.0	5.2		SW
26-Jul	Gilbert Goodlett	10:00	14:00	71.2	84.6	5% thin cirrus	10% cumulus and cirrus	2.6	3.7	4.5	5.0	S	W
31-Jul	Brian Drake	10:00	14:00	82.7	87.7	30%	20%	0.0	3.1	0	4.2		NW
2-Aug	Gilbert Goodlett	10:00	14:00	83.6	92.2	10% thin cirrus	30% cirrus	3.1	3.5	4.3	5.2	W	W
7-Aug	Brian Drake	10:00	14:00	76.5	82.9	0%	0%	1.4	1.6	2.2	2.2	W	SW
9-Aug	Gilbert Goodlett	10:00	14:00	75.7	88.7	0%	0%	3.1	5.8	4.8	8.2	NW	W
14-Aug	Brian Drake	10:00	14:00	82.1	85.4	0%	0%	0	2.7	0	3.6		W
16-Aug	Gilbert Goodlett	10:00	14:00	83.6	98.1	0%	5% cumulus	2.4	3.9	3.8	6.1	VAR	W
21-Aug	Brian Drake	10:00	14:00	93.1	95.6	0%	0%	0	2.6	0	3.7		W
23-Aug	Gilbert Goodlett	10:00	14:00	88.9	102.3	0%	0%	2.7	3.1	3.4	4.4	W	W
28-Aug	Brian Drake	10:00	14:00	77.9	80.1	0%	40%	0	3.1	0	4.4		SW
29-Aug	Gilbert Goodlett	10:00	14:00	68.4	77.2	60% cumulus	10% cumulus	2.7	6.3	4.4	10.7	W	W
4-Sep	Brian Drake	10:00	14:00	91.3	101.7	0	0%	0	0.0	0	0.0		
6-Sep	Gilbert Goodlett	10:00	14:00	74.8	81.3	0%	0%	4.7	6.3	6.5	9.7	W	W
11-Sep	Brian Drake	10:00	14:00	87.1	96.9	0%	0%	0.0	1.7	0.0	2.8		SW
13-Sep	Gilbert Goodlett	10:00	14:00	80.6	92.9	0%	2% cumulus	2.9	2.5	4.4	6.5	S	W

Table 1b. Survey Times and Weather Data – Area FR 2

Date (2010)	Biologist	Start time	End time	Start Temp. (°F)	End Temp. (°F)	Start Cloud Cover (%)	End Cloud Cover (%)	Start Average Wind Speed (mph)	End Average Wind Speed (mph)	Start Maximum Wind Speed (mph)	End Maximum Wind Speed (mph)	Start Wind Direction	End Wind Direction
2-Jul	Brian Drake	12:00	14:00	88.0	89.2	0%	0%	2.6	3.0	4.5	3.9	SE	SW
4-Jul	Brian Drake	10:00	12:00	73.1	79.7	90%	0%	1.8	2.5	3.1	3.2	SE	SE
9-Jul	Brian Drake	12:00	14:00	83.6	87.8	20%	10%	0.0	3.5	0.0	4.5	S	S
13-Jul	Brian Drake	10:00	12:00	84.5	89,6	0%	0%	2.1	3.3	3.0	6.1	SE	W
16-Jul	Brian Drake	12:30	14:15	99.0	100.8	10%	21%	2.4	4.4	3.2	6.0	SW	S
18-Jul	Brian Drake	10:00	12:00	90.9	98.1	20%	10%	0.0	2.1	0.0	3.8		SW
23-Jul	Brian Drake	12:00	14:00	87.4	89.8	10%	10%	3.4	4.4	4.6	6.4	S	S
25-Jul	Brian Drake	10:00	12:00	85.0	82.5	50%	30%	0	3.3	0	5.4		S
3-Aug	Brian Drake	10:00	12:00	86.9	93.2	10%	20%	0	2.2	0	4.3		SW
4-Aug	Gilbert Goodlett	10:00	12:00	78.7	86.1	0%	0%	3.7	2.1	7.0	4.6	S	S
10-Aug	Brian Drake	10:00	12:15	80.6	85.7	0%	0%	0.0	3.3	0	4.3		S
11-Aug	Gilbert Goodlett	10:00	12:00	72.6	82.5	0%	0%	2.6	1.2	4.3	3.7	S	S
17-Aug	Brian Drake	10:00	12:00	90.2	100.7	0%	0%	0	3.4	0	3.8		SW
18-Aug	Gilbert Goodlett	10:00	12:00	88.9	93.6	25% strato-cumulus	30% cumulus and strato-cumulus	3.7	6.0	6.0	8.7	SW	S
24-Aug	Brian Drake	11:00	13:00	98.6	104.9	10%	10%	2.3	2.4	3.9	3.0	S	S
25-Aug	Gilbert Goodlett	10:00	12:00	85.4	108.3	5% cumulus	5% cumulus	1.8	5.4	3.7	8.7	W	W
31-Aug	Brian Drake	10:00	14:00	86.8	86.8	0%	0%	0	3.7	0	5.1		SW
1-Sep	Gilbert Goodlett	10:00	12:00	86.4	96.9	0%	0%	1.6	2.3	2.7	3.9	S	W
7-Sep	Brian Drake	10:00	12:00	65.8	73.2	100	80%	1.4	4.0	2.3	6.6	SW	SW
8-Sep	Gilbert Goodlett	12:00	14:00	65.8	66.4	100% cumulus	90% cumulus	3.3	2.7	4.4	7.9	S	S
14-Sep	Brian Drake	10:00	12:00	88.5	91.0	0%	0%	0.0	2.9	0.0	3.6		S
15-Sep	Gilbert Goodlett	10:00	12:00	84.0	88.7	0%	0%	1.3	2.5	3.8	4.0	S	W

Table 2. Plant Species Observed Within Survey Area

Species
GYMNOSPERMS
PINACEAE - PINE FAMILY
FLOWERING PLANTS
CLASS DICOTYLEDONES (DICOTS)
AMARANTHACEAE - AMARANTH FAMILY
*Amaranthus albus** tumbleweed
ANACARDIACEAE - SUMAC FAMILY
Rhus trilobata skunkbush
*Schinus molle** Peruvian pepper tree
APOCYNACEAE - DOGBANE FAMILY
*Nerium oleander** oleander
ASCLEPIADACEAE - MILKWEED FAMILY
Asclepias eriocarpa Indian milkweed
ASTERACEAE (COMPOSITAE) - SUNFLOWER FAMILY
Ambrosia acanthicarpa annual bursage
Artemisia californica California sagebrush
Baccharis salicifolia mule fat
*Centaurea melitensis** tocalote
Chaenactis glabriuscula yellow pincushion
*Chamomilla suaveolens** common pineapple weed
Conyza canadensis common horseweed
Ericameria sp. goldenbush
Ericameria pin goldenbush
Erigeron foliosus var. *foliosus* leafy daisy
Eriophyllum confertiflorum golden yarrow
Filago californica fluffweed
*Filago gallica** narrow-leaved filago

Table 2 (cont). Plant Species Observed Within Survey Area

*Gazania linearis**   gazania
Gutierrezia sarothrae   San Joaquin matchweed
*Hedypnois cretica**   Crete hedypnois
Helianthus annuus   western sunflower
Heterotheca grandiflora   telegraph weed
*Hypochaeris glabra**   smooth cat's ear
*Lactuca serriola**   prickly lettuce
Lepidospartum squamatum   scale-broom
Lessingia filaginifolia   California aster
Lessingia glandulifera var. *glandulifera*   valley lessingia
*Sonchus oleraceus**   common sow-thistle
Stephanomeria exigua   wreath stephanomeria
Stylocline gnaphaloides   everlasting nest straw
Tetradymia comosa   cotton thorn
Uropappus lindleyi   silver puffs
BORAGINACEAE - BORAGE FAMILY
Amsinckia menziesii   rancher's fiddleneck
Cryptantha intermedia   common cryptantha
Cryptantha muricata   prickly cryptantha
Pectocarya linearis   comb-bur
Pectocarya penicillata   winged pectocarya
Plagiobothrys canescens   valley popcornflower
BRASSICACEAE (CRUCIFERAE) - MUSTARD FAMILY
*Brassica tournefortii**   wild turnip
*Hirschfeldia incana**   shortpod mustard
Lepidium nitidum   peppergrass/shining peppergrass

Table 2 (cont). Plant Species Observed Within Survey Area

*Sisymbrium irio**   London rocket
CACTACEAE - CACTUS FAMILY
Opuntia littoralis   coastal prickly pear
Opuntia parryi   Parry's cholla
CAPRIFOLIACEAE - HONEYSUCKLE FAMILY
Sambucus mexicana   blue elderberry
CARYOPHYLLACEAE - PINK FAMILY
*Silene gallica**   windmill pink/common catchfly
Spergularia sp.   sand spurrey
CHENOPODIACEAE - GOOSEFOOT FAMILY
*Atriplex semibaccata**   Australian saltbush
*Chenopodium album**   lamb's quarters
Chenopodium californicum   California goosefoot
*Salsola tragus**   Russian thistle
CISTACEAE - ROCK-ROSE FAMILY
Helianthemum scoparium   peak rush-rose
CONVOLVULACEAE - MORNING-GLORY FAMILY
Calystegia macrostegia   morning-glory
CRASSULACEAE - STONECROP FAMILY
Crassula connata   pigmy-weed
CUCURBITACEAE - GOURD FAMILY
Marah macrocarpus   wild cucumber/man-root
EUPHORBIACEAE - SPURGE FAMILY
*Chamaesyce maculata**   spotted spurge
Croton californicus   California croton
Eremocarpus setigerus   doveweed/turkey mullein
*Ricinus communis**   castor bean
FABACEAE (LEGUMINOSAE) - LEGUME FAMILY
Lotus purshianus   Spanish clover

Table 2 (cont). Plant Species Observed Within Survey Area

Lotus scoparius deerweed/California broom
Lotus strigosus strigose lotus
Lupinus bicolor miniature lupine
Lupinus sparsiflorus Coulter's lupine
Lupinus truncatus truncate lupine/collar lupine
*Melilotus officinalis** yellow sweetclover
GERANIACEAE - GERANIUM FAMILY
*Erodium botrys** long-beaked filaree
*Erodium cicutarium** red-stemmed filaree
HYDROPHYLLACEAE - WATERLEAF FAMILY
Emmenanthe penduliflora whispering bells
Eriodictyon trichocalyx hairy yerba santa
Phacelia cicutaria caterpillar phacelia
Phacelia distans common phacelia
Phacelia ramosissima branching phacelia
LAMIACEAE (LABIATAE) - MINT FAMILY
*Marrubium vulgare** common horehound
Salvia apiana white sage
Salvia columbariae chia
Salvia mellifera black sage
Trichostema lanceolatum vinegar weed
MALVACEAE - MALLOW FAMILY
Malacothamnus fasciculatus chaparral bushmallow
*Malva parviflora** cheeseweed
MORACEAE - FIG FAMILY
Ficus sp.

Table 2 (cont). Plant Species Observed Within Survey Area

MYOPORACEAE - MYOPORUM FAMILY
*Myoporum laetum**   myoporum
MYRTACEAE - MYRTLE FAMILY
Eucalyptus sp.*   gum
ONAGRACEAE - EVENING PRIMROSE FAMILY
Camissonia bistorta   California sun cup
Camissonia californica   mustard-like evening primrose
OROBANCHACEAE - BROOM-RAPE FAMILY
Orobanche bulbosa   chaparral broom-rape
PAPAVERACEAE - POPPY FAMILY
Dicentra chrysantha   golden ear-drops
Eschscholzia californica   California poppy
PLANTAGINACEAE - PLANTAIN FAMILY
Plantago erecta   dwarf plantain/California plantain
POLEMONIACEAE - PHLOX FAMILY
Eriastrum sapphirinum   annual woolly-star/sapphire woolly-star
Gilia angelensis   Los Angeles phlox/Los Angeles gilia
Navarretia atractyloides   holly-leaved skunkweed
POLYGONACEAE - BUCKWHEAT FAMILY
Chorizanthe parryi var. parryi   Parry's spine-flower
Chorizanthe staticoides   Turkish rugging
Eriogonum fasciculatum var. *fasciculatum*   California buckwheat
Eriogonum gracile   slender buckwheat
Lastarriaea coriacea   lastarriaea
Pterostegia drymarioides   pterostegia/notch leaf
Rumex hymenosepalus   wild rhubarb
PORTULACACEAE - PURSLANE FAMILY
Calandrinia ciliata   red maids

Table 2 (cont). Plant Species Observed Within Survey Area

RANUNCULACEAE - CROWFOOT FAMILY
Delphinium parryi ssp. *parryi* Parry's larkspur/blue larkspur
ROSACEAE - ROSE FAMILY
Adenostoma fasciculatum chamise
Prunus ilicifolia holly-leaved cherry
SALICACEAE - WILLOW FAMILY
Salix exigua narrow-leaved willow
Salix gooddingii black willow
SCROPHULARIACEAE - FIGWORT FAMILY
Penstemon spectabilis royal penstemon
SOLANACEAE - NIGHTSHADE FAMILY
*Datura stramonium** jimson weed
*Nicotiana glauca** tree tobacco
Solanum douglasii Douglas' nightshade
ZYGOPHYLLACEAE - CALTROP FAMILY
*Tribulus terrestris** puncture vine
CLASS MONOCOTYLEDONES (MONOCOTS)
ARECACEAE (PALMAE) - PALM FAMILY
*Washingtonia robusta** Mexican fan palm
LILIACEAE - LILY FAMILY
Calochortus plummerae Plummer's mariposa lily
Dichelostemma capitatum blue dicks
Muilla maritima rough muilla
Yucca whipplei Our Lord's candle
POACEAE [GRAMINEAE] - GRASS FAMILY
Achnatherum coronatum giant needlegrass
*Avena barbata** slender wild oat
*Avena fatua** wild oat

Table 2 (cont). Plant Species Observed Within Survey Area

*Bromus diandrus**   ripgut grass
Bromus madritensis ssp. *rubens**   foxtail chess
*Bromus tectorum**   cheat grass
*Cynodon dactylon**   bermuda grass
*Hordeum murinum**   foxtail barley
*Lamarckia aurea**   goldentop grass
Leymus condensatus   giant wild rye
*Poa annua**   annual bluegrass
*Schismus barbatus**   Mediterranean schismus
*Vulpia myuros**   foxtail fescue
** non-native species*

Footnote – Plant list provided courtesy of Bonterra Consulting and includes plants observed over the entire project area rather than only the DSF survey area.

Table 3a. List of Invertebrates, Birds, Mammals, and Reptiles Observed at Area FR 1 During 2010 Survey Season Listed Phylogenetically

		July									August									September			
Scientific Name	**Common Name**	3	5	13	14	17	19	24	26	31	2	7	9	14	16	21	23	28	29	4	6	11	13
INVERTEBRATES																							
ORDER: ODONATA	**DRAGONFLIES AND DAMSELFLIES**	X	X		X		X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
Aeshnidae	**Darners**		X										X				X		X				
Aeshna multicolor	Blue-eyed Darner		X																				
Anax junius	Common Green Darner												X				X		X				
Libellulidae	**Common Skimmers**		X				X		X		X		X				X		X		X		X
Libellula saturata	Big Red Skimmer																		X				
Pachydiplax longipennis	Blue Dasher		X						X														
Perithemis intensa	Mexican Amberwing		X																X				X
Coenagrionidae	**Common Damselflies**																X						
Argia vivida	Violet Dancer																X						
ORDER: ORTHOPTERA	**GRASSHOPPERS, KATYDIDS & CRICKETS**	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Acrididae	**Short-horned Grasshoppers**	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Melanoplus sp.	Grasshopper			X																			
Trimerotropis pallidipennis	Pallid Band-winged Grasshopper		X	X			X		X		X				X		X		X		X		
Trimerotropis sp.	Short-horned Grasshopper	X			X	X		X		X		X	X	X		X						X	X
Subfamily: Gryllinae	House and Field Crickets											X				X		X		X			
ORDER: MANTODEA	**MANTIDS**																				X		
Mantidae	**Mantids**																				X		
Stagmomantis californica	Calfornia Mantid																				X		
ORDER: HEMIPTERA	**TRUE BUGS**					X	X				X								X		X		
Reduviidae	**Assassin Bugs**										X												
Apiomerus sp.	Robust Assassin Bug										X												
Pentatomidae	**Stink Bugs**				X	X	X	X											X				
Chlorochroa sayi	Say's Stink Bug				X	X		X											X				
Chlorochroa sp.	Stink Bug						X																
Cercopidae	**Spittle Bugs**								X												X		
ORDER: NEUROPTERA	**NERVE-WINGED INSECTS**			X	X	X		X			X								X		X		
Myrmeleontidae	**Antlions**			X	X	X		X			X								X		X		
Brachynemerus sp.	Antlion			X	X	X		X			X								X		X		
ORDER:LEPIDOPTERA	**MOTHS AND BUTTERFLIES**	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Hesperiidae	**Skippers**				X			X				X	X		X								
Atalopedes campestris	Field Skipper											X											
Hylephila phyleus	Fiery Skipper												X		X								
Pyrgus albescens	Common Checkered Skipper				X			X															

		July									August									September			
Scientific Name	**Common Name**	3	5	13	14	17	19	24	26	31	2	7	9	14	16	21	23	28	29	4	6	11	13
Lycaenidae	**Blues**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Brephidium exilis	Pigmy Blue	X	X	X	X	X	X	X	X		X	X	X	X	X		X	X	X	X	X	X	X
Icaricia acmon	Acmon Blue	X	X	X	X	X	X	X	X	X	X				X	X	X					X	X
Strymon melinus	Common Hairstreak						X		X						X							X	
Nymphalidae	**Brush-footed Butterflies**				**X**			**X**	**X**	**X**		**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Precis coenia	Buckeye				X			X	X	X		X		X	X	X	X	X		X	X	X	
Vanessa cardui	Painted Lady																		X		X		
Vanessa sp.	Unidentified Lady												X										X
Pieridae	**Whites and Sulfurs**	**X**	**X**	**X**	**X**		**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Colias eurytheme	Alfalfa Sulphur	X							X		X							X		X	X		
Pieris protodice	Common White	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Pontia protodice	Checkered White										X						X						
ORDER: COLEOPTERA	**BEETLES**	**X**	**X**		**X**			**X**	**X**	**X**			**X**		**X**						**X**	**X**	**X**
Coccinellidae	**Ladybird Beetles**		**X**		**X**			**X**							**X**								**X**
Coccinella sp.	Ladybird Beetle				X			X															
Hippodamia convergens	Convergent Ladybird Beetle		X												X								
Scarabaeidae	**Scarab Beetles**				**X**			**X**	**X**	**X**			**X**	**X**	**X**						**X**	**X**	
Cotinus mutabilis	Green Fruit Beetle				X			X	X	X			X	X	X						X	X	
Chrysomelidae	**Leaf Beetles**	**X**											**X**								**X**		
Lema trilineata	Three-lined Potato Beetle	X											X								X		
Curculionidae	**Snout Beetles**		**X**										**X**										
ORDER: DIPTERA	**FLIES**	**X**	**X**	**X**			**X**		**X**	**X**	**X**	**X**	**X**	**X**	**X**		**X**	**X**	**X**	**X**	**X**		**X**
Apioceridae	**Flower-loving Flies**	**X**	**X**	**X**														**X**	**X**	**X**			
Apiocera sp.	Flower Fly	X	X	X														X	X	X			
Asilidae	**Robber Flies**			**X**					**X**	**X**	**X**	**X**						**X**		**X**			
Mallophora fautrix	Bumble bee robber fly			X																			
Promachus aldrichii	Robber Fly								X	X	X	X											
Protocanthus sp.	Giant Robber Fly																	X		X			
Mydidae	**Mydas Flies**						**X**				**X**						**X**						
Nemomydas pantherinus	Mydas Fly						X				X						X						
Bombyliidae	**Bee Flies**		**X**	**X**			**X**		**X**	**X**	**X**	**X**	**X**	**X**	**X**		**X**		**X**		**X**	**X**	**X**
Exoprosopa sp.	Bee Fly		X	X					X						X								
Poecilanthrax sp.	Bee Fly						X		X	X	X	X	X		X		X		X				
Toxophora sp.	Bee Fly																						X
Villa sp.	Bee Fly						X					X	X	X	X						X	X	
Xenox sp.	Bee Fly									X									X				
Syrphidae	**Syrphid Flies**	**X**															**X**				**X**		
Eristalis sp.	Drone Fly										X												
Eristalis tenax	Drone Fly																X				X		
Hilopholus sp.	Flower Fly	X																					
Tephritidae	**Fruit Flies**								**X**								**X**						

		July									August									September			
Scientific Name	**Common Name**	3	5	13	14	17	19	24	26	31	2	7	9	14	16	21	23	28	29	4	6	11	13
Muscidae	**Muscid Flies**		**X**	**X**			**X**		**X**		**X**				**X**				**X**		**X**		
Musca domestica	House Fly		X	X			X		X		X				X				X		X		
Sarcophagidae	**Flesh Flies**	**X**	**X**							**X**	**X**		**X**					**X**	**X**	**X**	**X**		
Sarcophaga sp	Flesh Fly	X	X							X	X		X					X	X	X	X		
ORDER: HYMENOPTERA	**SAWFLIES, ICHNEUMONS, CHALCIDS, ANTS, WASPS, AND BEES**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Mutillidae	**Velvet Ants**						**X**		**X**														
Dasymutilla coccineohirta	Red Velvet Ant						X		X														
Formicidae	**Ants**	**X**	**X**	**X**	**X**		**X**	**X**	**X**	**X**	**X**		**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Iridomyrmex humilis	Argentine Ant		X	X			X						X		X		X		X		X		
Pogonomyrmex californicus	California Harvester Ant		X	X			X		X		X				X				X		X		X
Pompilidae	**Spider Wasps**			**X**			**X**					**X**		**X**		**X**		**X**	**X**		**X**		
Pepsis sp.	Tarantula Hawk			X														X	X	X	X		
Vespidae	**Vespid Wasps**			**X**	**X**	**X**	**X**	**X**		**X**	**X**		**X**	**X**			**X**		**X**			**X**	**X**
Polistes apachus	Paper Wasp						X												X				
Polistes fuscatus	Golden Polistes						X				X												
Polistes sp.	Paper Wasp			X	X	X		X		X			X	X			X					X	X
Sphecidae	**Sphecid Wasps**		**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**			**X**	**X**	**X**	**X**	**X**	**X**
Ammophila aberti	Thread-waisted Wasp														X								X
Ammophila azteca	Thread-waisted Wasp		X				X		X				X								X		
Ammophila sp.	Thread-waisted Wasp				X	X		X														X	
Bembix comata	Western Sand Wasp				X			X		X		X			X			X		X	X		
Cerceris sp.	Sphecid Wasp																						X
Chlorion aerarium	Steel Blue Cricket Hunter			X					X		X		X		X								
Microbembix californica	Sphecid Wasp		X	X							X			X	X								X
Philanthus multimaculatus	Sphecid Wasp						X		X		X		X						X				
Prionyx foxi	Sphecid Wasp					X																	
Prionyx sp.	Sphecid Wasp						X																
Sceliphron caementarium	Mud Dauber				X		X	X						X							X	X	
Subfamily: Larrinae	Sphecid Wasp						X																
Halictidae	**Halictid Bees**		**X**						**X**														
Agapostemon sp.	Metallic Sweat Bee		X						X														
Megachilidae	**Leafcutting Bees**			**X**			**X**				**X**		**X**										
Anthidellum sp.	Mason Bee										X												
Megachile sp.	Common Leaf-cutter			X			X				X		X										
Anthophoridae	**Carpenter Bees**	**X**																	**X**				
Melissodes sp.	Anthophorid Bee	X																					
Xylocopa varipuncta	Valley Carpenter Bee																		X				
Apidae	**Honey Bees and Bumble Bees**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Apis mellifera	Honey Bee	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Bombus sonorus	Sonoran Bumble Bee	X																					

		July									August									September			
Scientific Name	**Common Name**	3	5	13	14	17	19	24	26	31	2	7	9	14	16	21	23	28	29	4	6	11	13
ORDER: ARANEAE	**SPIDERS**		X	X			X		X		X		X		X		X		X		X		X
Salticidae	**Jumping Spiders**																				X		
Thomisiidae	**Crab Spiders**												X										
Agelinidae	**Funnel Web Spiders**		X	X			X		X		X		X		X		X		X		X		X
BIRDS		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ORDER: FALCONIFORMES	**HAWKS AND VULTURES**	X	X	X	X		X	X	X	X					X	X		X	X	X			X
Accipitiridae	**Hawks**	X	X	X	X		X	X	X	X					X	X		X		X			
Accipiter cooperii	Cooper's Hawk						X																
Buteo jamaicensis	Red-tailed Hawk	X	X	X	X		X	X	X	X					X	X		X		X			
Falconidae	**Falcons**																		X				X
Falco sparverius	American Kestrel																		X				X
ORDER: COLUMBIFORMES	**DOVES AND PIGEONS**	X	X	X	X	X	X	X	X	X	X	X	X		X		X		X		X	X	X
Columbidae	**Pigeons and Doves**	X	X	X	X	X	X	X	X	X	X	X	X		X		X		X		X	X	X
Columba livia	Rock Dove	X			X		X	X		X	X	X	X		X		X		X		X		
Streptopelia chinensis	Spotted Dove							X				X											
Zenaida macroura	Mourning Dove		X	X	X	X	X	X	X	X	X	X	X		X		X		X		X	X	X
ORDER: APODIFORMES	**HUMMINGBIRDS AND SWIFTS**								X	X			X			X	X		X		X		X
Trochidae	**Hummingbirds**								X	X			X			X	X		X		X		X
Calypte anna	Anna's Hummingbird								X										X		X		X
ORDER: PASSERIIFORMES	**PASSERINES AND PERCHING BIRDS**	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Tyranidae	**Flycatchers**	X			X	X	X	X	X			X	X			X	X					X	
Sayornis nigricans	Black Phoebe	X																				X	
Tyrannus verticalis	Western Kingbird				X	X	X	X	X		X	X	X			X	X						
Hirundinidae	**Swallows**				X			X								X							
Hirundo rustica	Barn Swallow				X			X															
Corvidae	**Jays, Magpies, and Crows**	X	X							X								X		X			
Corvus brachyrhynchos	American Crow	X	X							X								X		X			
Mimidae	**Mimic Thrashers**	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
Mimus polyglottos	Northern Mockingbird	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
Sturnidae	**Starlings**				X			X						X									
Sturnus vulgaris	European Starling				X			X						X									
Emberizidae	**Emberizids**	X	X	X					X														X
Icterus cucullatus	Hooded Oriole								X		X												
Melospiza melodia	Song Sparrow		X	X					X														X
Euphagus cyanocephalus	Brewer's Blackbird	X																					
Fringillidae	**Finches**	X	X		X	X	X	X		X		X		X				X		X		X	
Carduelis psaltria	Lesser Goldfinch	X	X																				
Carpodacus mexicanus	House Finch	X	X		X	X	X	X		X		X		X				X		X		X	
Passeridae	**Weaver Finches**	X			X	X		X				X		X		X		X		X			
Passer domesticus	House Sparrow	X			X	X		X				X		X		X		X		X			

		July									August									September			
Scientific Name	**Common Name**	3	5	13	14	17	19	24	26	31	2	7	9	14	16	21	23	28	29	4	6	11	13
MAMMALS																							
ORDER: CARNIVORA	**FLESH-EATERS**	X	X			X																X	
Canidae	**Dogs, wolves, and foxes**	X	X			X																X	
Canis familaris	Domestic Dog		X																				
Canis latrans	Coyote	X				X																X	
ORDER: RODENTIA	**GNAWING MAMMALS**	X			X			X		X	X		X		X			X		X		X	
Sciuridae	**Squirrels**	X			X			X		X	X		X		X			X		X		X	
Spermophilus beecheyi	California Ground Squirrel	X			X			X		X	X		X		X			X		X		X	
ORDER: LAGOMORPHA	**PIKAS, HARES, AND RABBITS**	X	X	X	X	X		X			X					X	X	X		X	X		
Leporidae	**Hares and Rabbits**	X	X	X	X	X		X			X					X	X	X		X	X		
Lepus californicus	Black-tailed Jackrabbit															X							
Sylvilagus auduboni	Audubon's Cottontail	X	X	X	X	X		X			X						X	X		X	X		
REPTILES																							
ORDER:SQUAMATA	**LIZARDS AND SNAKES**	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X
Iguanidae	**Iguanids**	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X
Sceloporus occidentalis	Western Fence Lizard	X	X			X	X																
Uta stansburiana	Side-blotched Lizard	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X

Table 3b. List of Invertebrates, Birds, Mammals, and Reptiles Observed at Area FR 2 During 2010 Survey Season Listed Phylogenetically

		July								August									September				
Scientific Name	**Common Name**	2	4	9	13	16	18	23	25	3	4	10	11	17	18	24	25	31	1	7	8	14	15
INVERTEBRATES																							
ORDER: ODONATA	**DRAGONFLIES AND DAMSELFLIES**		X	X			X	X		X	X	X	X				X	X	X	X	X	X	X
Aeshnidae	**Darners**												X				X						
Aeshna multicolor	Blue-eyed Darner												X				X						
Libellulidae	**Common Skimmers**										X		X				X		X		X		X
Libellula saturata	Big Red Skimmer												X				X						
Pachydiplax longipennis	Blue Dasher												X				X						
ORDER: ORTHOPTERA	**GRASSHOPPERS, KATYDIDS & CRICKETS**		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X		X
Acrididae	**Short-horned Grasshoppers**		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X		X
Trimerotropis pallidipennis	Pallid Band-winged Grasshopper												X		X		X		X				
Trimerotropis sp.	Short-horned Grasshopper		X	X	X	X	X	X	X	X	X	X		X		X		X	X		X		X
Subfamily: Gryllinae	House and Field Crickets								X	X		X											
ORDER: HEMIPTERA	**TRUE BUGS**																						X
Pentatomidae	**Stink Bugs**																						X
Chlorochroa sayi	Say's Stink Bug																						X
ORDER: NEUROPTERA	**NERVE-WINGED INSECTS**																	X	X				X
Myrmeleontidae	**Antlions**																	X	X				X
Brachynemerus sp.	Antlion																	X	X				X
ORDER:LEPIDOPTERA	**MOTHS AND BUTTERFLIES**	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Hesperiidae	**Skippers**									X	X	X	X		X		X		X	X	X	X	X
Atalopedes campestris	Field Skipper									X		X								X		X	
Hylephila phyleus	Fiery Skipper										X		X		X		X		X		X		X
Lycaenidae	**Blues**	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		X	X	X	X	X
Brephidium exilis	Pigmy Blue		X		X	X		X			X		X	X	X	X	X		X		X		X
Icaricia acmon	Acmon Blue	X	X	X	X	X	X	X		X		X	X	X	X	X	X			X		X	
Nymphalidae	**Brush-footed Butterflies**		X	X				X			X		X		X		X	X	X	X		X	
Precis coenia	Buckeye		X	X														X	X	X		X	
Vanessa cardui	Painted Lady										X				X		X		X				
Vanessa sp.	Unidentified Lady							X					X		X								
Pieridae	**Whites and Sulfurs**		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X				
Colias eurytheme	Alfalfa Sulphur				X	X					X		X				X						
Pieris protodice	Common White		X	X			X	X	X	X	X	X	X	X	X	X	X		X				
Pontia protodice	Checkered White												X				X						
Papilionidae	**Swallowtails and Parnassians**														X								
Papilio rutulus	Western Tiger Swallowtail														X								

		July								August									September				
Scientific Name	**Common Name**	2	4	9	13	16	18	23	25	3	4	10	11	17	18	24	25	31	1	7	8	14	15
ORDER: COLEOPTERA	**BEETLES**	X	X	X			X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X
Coccinellidae	**Ladybird Beetles**						X													X		X	
Coccinella sp.	Ladybird Beetle						X													X		X	
Scarabaeidae	**Scarab Beetles**	X	X	X			X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X
Cotinus mutabilis	Green Fruit Beetle	X	X	X			X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X
Chrysomelidae	**Leaf Beetles**		X				X	X	X		X		X		X		X		X		X		X
Lema trilineata	Three-lined Potato Beetle		X				X	X	X		X		X		X		X		X		X		X
ORDER: DIPTERA	**FLIES**		X				X	X		X		X	X		X	X	X	X	X	X	X		X
Asilidae	**Robber Flies**						X	X							X				X				
Mallophora fautrix	Bumble bee robber fly							X															
Promachus aldrichii	Robber Fly						X												X				
Protocanthus sp.	Giant Robber Fly														X								
Bombyliidae	**Bee Flies**	X	X	X			X	X		X		X	X	X		X	X	X	X	X		X	X
Poecilanthrax sp.	Bee Fly	X					X	X		X		X							X				X
Villa sp.	Bee Fly		X	X			X	X		X		X	X	X		X	X	X	X	X		X	
Muscidae	**Muscid Flies**														X						X		X
Musca domestica	House Fly														X						X		X
ORDER: HYMENOPTERA	**SAWFLIES, ICHNEUMONS, CHALCIDS, ANTS, WASPS, AND BEES**	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Formicidae	**Ants**		X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Iridomyrmex humilis	Argentine Ant										X		X				X		X		X		X
Pogonomyrmex californicus	California Harvester Ant												X		X		X		X		X		X
Pompilidae	**Spider Wasps**													X		X		X					
Pepsis sp.	Tarantula Hawk																	X					
Vespidae	**Vespid Wasps**	X			X	X		X		X	X	X	X				X		X				X
Polistes dorsalis	Paper Wasp																		X				X
Polistes exclamans	Paper Wasp												X				X						
Polistes sp.	Paper Wasp	X			X	X		X		X	X	X	X				X						
Sphecidae	**Sphecid Wasps**						X	X		X	X	X		X		X		X	X	X		X	X
Ammophila sp.	Thread-waisted Wasp							X						X		X		X					
Bembix comata	Western Sand Wasp						X	X		X		X						X					
Cerceris sp.	Sphecid Wasp																			X		X	
Chlorion aerarium	Steel Blue Cricket Hunter							X															
Microbembix californica	Sphecid Wasp									X		X											
Philanthus multimaculatus	Sphecid Wasp										X								X				X
Prionyx foxi	Sphecid Wasp							X															
Megachilidae	**Leafcutting Bees**														X								
Megachile sp.	Common Leaf-cutter														X								
Apidae	**Honey Bees and Bumble Bees**	X	X	X	X	X					X		X		X		X	X	X				X
Apis mellifera	Honey Bee	X	X	X	X	X					X		X		X		X	X	X				X
ORDER: ARANEAE	**SPIDERS**														X		X		X				X
Agelinidae	**Funnel Web Spiders**														X		X		X				X

		July								August									September				
Scientific Name	**Common Name**	2	4	9	13	16	18	23	25	3	4	10	11	17	18	24	25	31	1	7	8	14	15
BIRDS																							
ORDER: FALCONIFORMES	**HAWKS AND VULTURES**		**X**	**X**	**X**	**X**	**X**				**X**		**X**	**X**	**X**	**X**	**X**	**X**					**X**
Accipitiridae	**Hawks**		**X**	**X**									**X**	**X**	**X**	**X**	**X**	**X**					**X**
Accipiter cooperii	Cooper's Hawk												X				X						
Buteo jamaicensis	Red-tailed Hawk		X	X										X	X	X		X					X
Falconidae	**Falcons**		**X**	**X**	**X**	**X**	**X**				**X**												
Falco sparverius	American Kestrel		X	X	X	X	X				X												
ORDER: CHARADRIIFORMES	**GULLS AND SHOREBIRDS**		**X**																				
Charadriidae	**Plovers**		**X**																				
Charadrius vociferus	Killdeer		X																				
ORDER: COLUMBIFORMES	**DOVES AND PIGEONS**	**X**	**X**	**X**			**X**	**X**	**X**	**X**		**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**		**X**	**X**
Columbidae	**Pigeons and Doves**		**X**	**X**			**X**	**X**	**X**	**X**		**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**		**X**	**X**
Columba livia	Rock Dove	X	X	X			X	X	X	X		X	X	X	X	X	X	X		X		X	X
Streptopelia chinensis	Spotted Dove		X																				
Zenaida macroura	Mourning Dove	X	X	X			X	X	X	X		X	X	X	X	X	X	X	X	X		X	X
ORDER: APODIFORMES	**HUMMINGBIRDS AND SWIFTS**																		**X**				
Trochidae	**Hummingbirds**																		**X**				
Calypte anna	Anna's Hummingbird																		X				
ORDER: PASSERIIFORMES	**PASSERINES AND PERCHING BIRDS**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Tyranidae	**Flycatchers**	**X**			**X**	**X**			**X**		**X**		**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**		**X**	**X**
Sayornis nigricans	Black Phoebe								X										X	X		X	
Sayornis saya	Say's Phoebe																	X					
Tyrannus verticalis	Western Kingbird	X			X	X					X		X	X	X	X	X						X
Hirundinidae	**Swallows**			**X**				**X**					**X**				**X**						
Hirundo rustica	Barn Swallow			X				X					X				**X**						
Corvidae	**Jays, Magpies, and Crows**		**X**	**X**	**X**	**X**	**X**	**X**	**X**		**X**		**X**		**X**		**X**		**X**	**X**	**X**	**X**	**X**
Corvus brachyrhynchos	American Crow		X		X	X	X	X	X		X		X		X		X		X	X	X	X	X
Corvus corax	Common Raven		X	X					X														
Paridae	**Chicadees, Titmice**		**X**				**X**											**X**					
Psaltriparus minimus	Bushtit		X				X											X					
Mimidae	**Mimic Thrashers**	**X**	**X**	**X**	**X**	**X**	**X**		**X**	**X**		**X**	**X**	**X**		**X**	**X**	**X**					
Mimus polyglottos	Northern Mockingbird	X	X	X	X	X	X		X	X		X	X	X		X	X	X					
Fringillidae	**Finches**	**X**	**X**	**X**			**X**		**X**	**X**		**X**		**X**		**X**		**X**		**X**		**X**	
Carpodacus mexicanus	House Finch	X	X	X			X		X	**X**		**X**		X		X		X		X		X	
Passeridae	**Weaver Finches**	**X**	**X**	**X**	**X**	**X**	**X**		**X**	**X**		**X**						**X**					
Passer domesticus	House Sparrow	X	**X**	X	X	X	X		X	X		X						X					

		July								August									September				
Scientific Name	**Common Name**	2	4	9	13	16	18	23	25	3	4	10	11	17	18	24	25	31	1	7	8	14	15
MAMMALS																							
ORDER: RODENTIA	**GNAWING MAMMALS**	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X	X	X	X
Sciuridae	**Squirrels**	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X	X	X	X
Spermophilus beecheyi	California Ground Squirrel	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X	X	X	X
Geomyidae	**Pocket Gophers**		X	X																			
Thomomys bottae	Botta's Pocket Gopher		X	X																			
ORDER: LAGOMORPHA	**PIKAS, HARES, AND RABBITS**	X	X											X		X							
Leporidae	**Hares and Rabbits**	X	X											X		X							
Sylvilagus auduboni	Audubon's Cottontail	X	X											X		X							
REPTILES																							
ORDER:SQUAMATA	**LIZARDS AND SNAKES**	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X
Iguanidae	**Iguanids**	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X
Sceloporus occidentalis	Western Fence Lizard			X				X															
Uta stansburiana	Side-blotched Lizard	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X		X	X	X	X	X

FIGURES

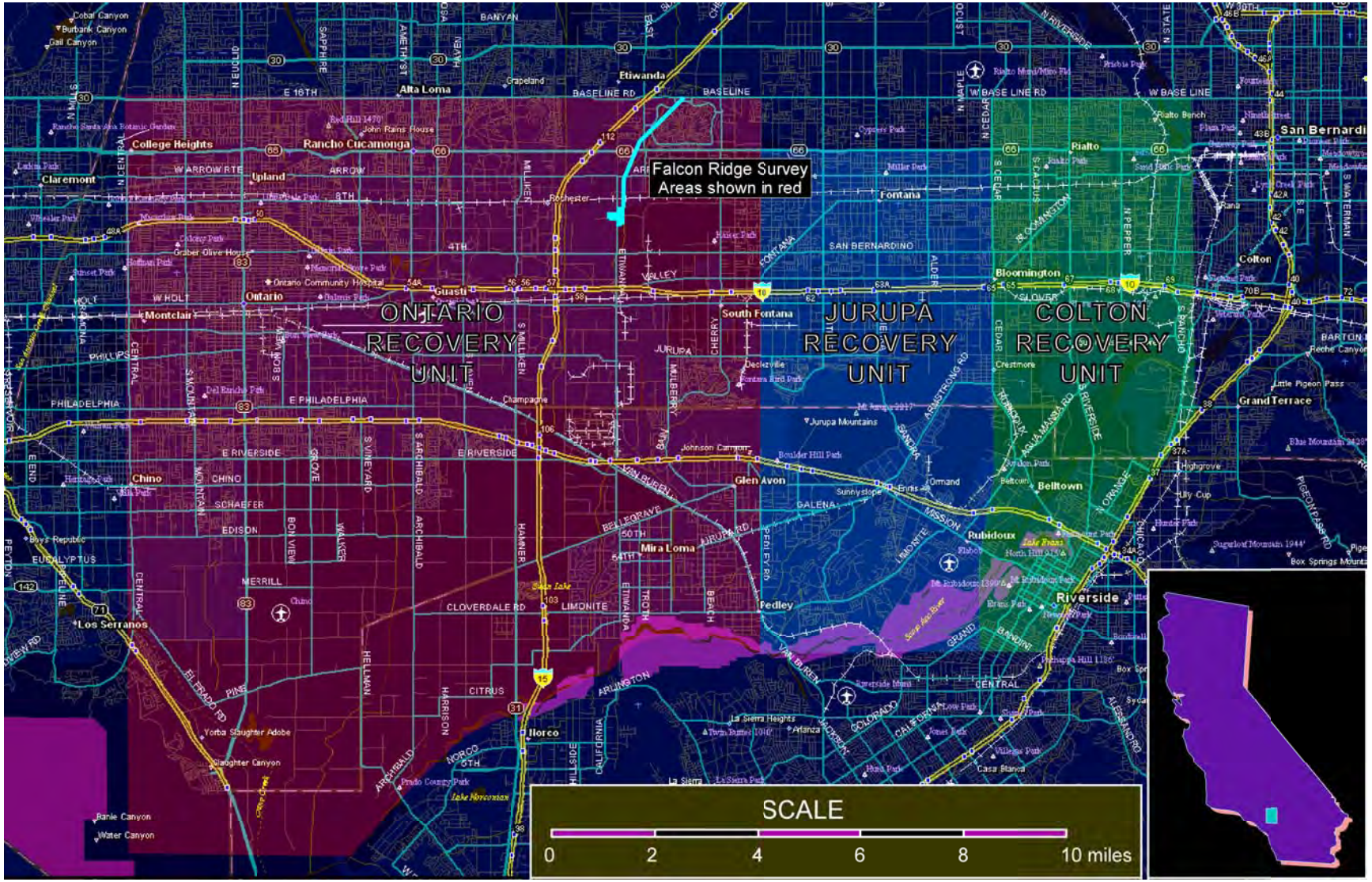

Figure 1. Project Vicinity and Recovery Unit Map

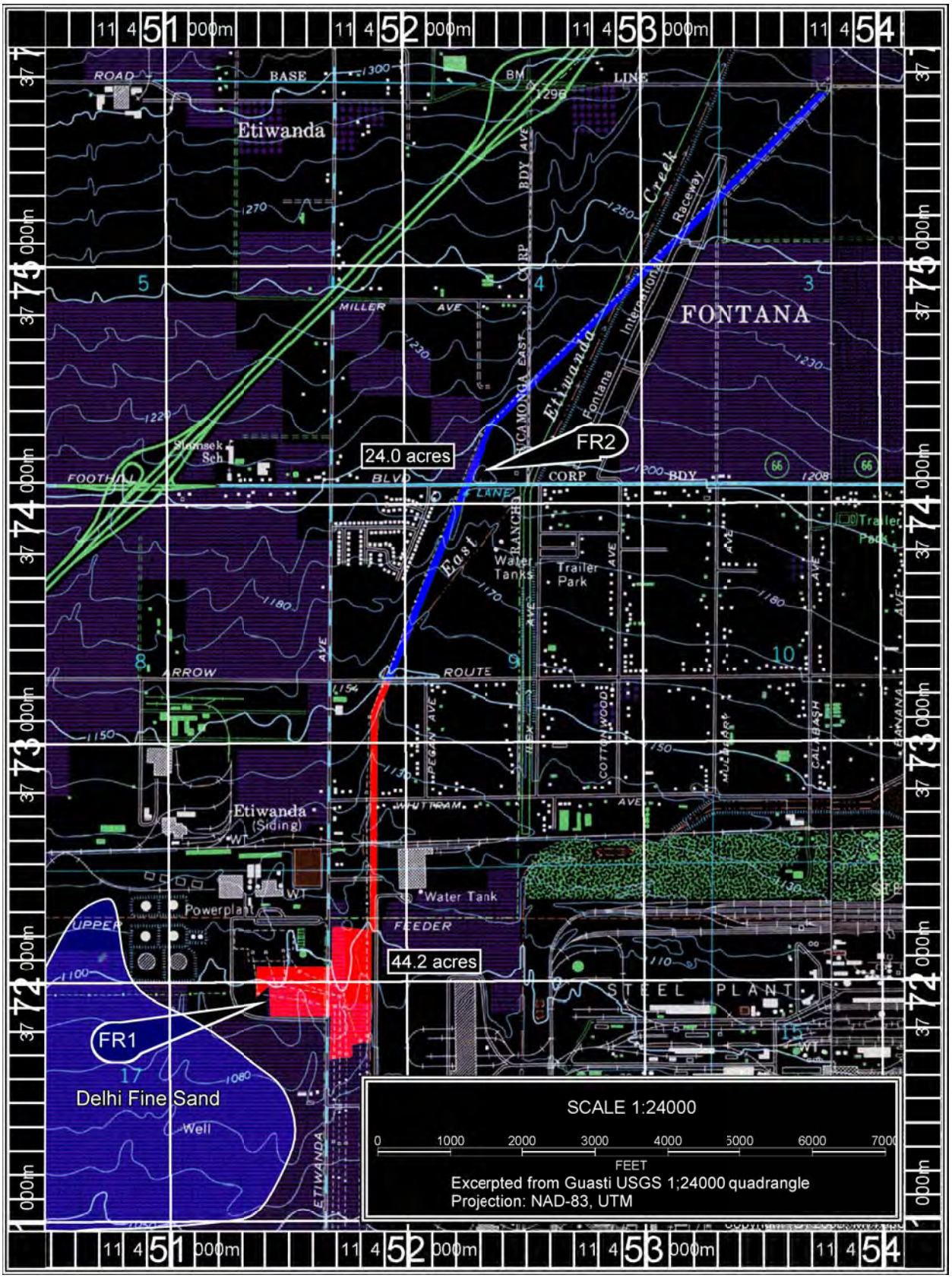

Figure 2. Site Map Showing Survey Areas

APPENDICES

APPENDIX 1. SITE PHOTOGRAPHS

Photograph 1. Northern portion of FR2 survey area (24.0 acres)

Photograph 2. Southern portion of FR2 survey area (24.0 acres)

Photograph 3. FR1 survey area from the north (44.2 acres)

Photograph 4. FR1 survey area from the west (44.2 acres)

Photograph 5. Typical habitat – FR1 from the northeast area looking south

APPENDIX 2. CALIFORNIA NATIVE SPECIES FIELD SURVEY FORM

California Native Species Field Survey Form

Mailto:
Natural Diversity Database
California Dept. of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95814

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work: 7/1 to 9/20 - 2010
month (mm) date (dd) year (yyyy)

Scientific Name: *Rhaphiomidas terminatus abdominalis*

Common Name: Delhi Sands Flower-loving Fly

Species Found? ☐ yes ☒ no _____ If not, why? 44 total

Total No. Individuals 0 Subsequent Visit? ☒ yes ☐ no

Is this an existing NDDB occurrence? _____ ☐ no ☒ unk.
Yes, Occ. #

Collection? If yes: _____
Number Museum / Herbarium

Reporter: Gilbert Goodlett
Address: 1660 West Franklin Avenue
Ridgecrest, California 93555

Email Address: torthunter@aol.com
Phone: (760) 371-3592

Plant Information

Phenology: 60 % vegetative 40 % flowering 20 % fruiting
Phenology data was not collected and these data are speculative

Animal Information

Age Structure: 0 # adults 0 # juveniles 0 # unknown
☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☐ other

Location ***(please also attach or draw map on back)***

County: San Bernardino Landowner/Mgr.: Southern California Edison
Quad Name: Guasti 1:24000 Elevation: 1172 ft.
T 1S R 6W _____1/4 of __ 1/4 of Section several T _____ R _____ _____1/4 of ____ 1/4 of Section _____
UTM: Zone: 11 (10, 11) Datum: NAD83 (NAD83, NAD27, WGS84, other)
Source: GPS (GPS, map & type, etc.) Point Accuracy: 10 Meters
UTM Coordinates 04 52 120E, 37 73 698N

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope)*
Ruderal areas

Other rare species? None observed

Site Information Overall site quality ☐ Excellent ☐ Good ☐ Fair ☒ Poor

Current/surrounding land use: commercial and industrial development, residential development, utility corridor

Visible disturbances/ possible threats: Development

Comments: This form submitted as per U.S. Fish and Wildlife Service protocols for Delhi Sands Flower-loving Fly surveys

Determination: *(check one or more, and fill in blanks)*
☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☒ Other: Extensive field experience in ID of species

Photographs: *(check one or more)*

	Slide	Print
Plant / animal	☐	☐
Habitat (Digital format)	☐	☒
Diagnostic feature	☐	☐

May we obtain duplicates at our expense? ☒ yes ☐ no

FG/WHDAB /1747 Rev.11/99

APPENDIX G

JURISDICTIONAL DELINEATION REPORT

JURISDICTIONAL DELINEATION REPORT

FALCON RIDGE (ETIWANDA) SUBSTATION PROJECT, CITY OF FONTANA, SAN BERNARDINO COUNTY, CALIFORNIA

Prepared for

Southern California Edison
2244 Walnut Grove Avenue, G01 Quad 3A
Rosemead, California 91770
Contact: Andrew Keller

Prepared by

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August 2010

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B	Soil Survey
C	National Wetland Inventory
D	Nationwide Permit Summary

1.0 INTRODUCTION

This Jurisdictional Delineation Report (report) was prepared for Southern California Edison (SCE) to provide baseline data concerning the type and extent of resources under the jurisdiction of the U.S. Army Corps of Engineers (USACE), the California Department of Fish and Game (CDFG), and the Regional Water Quality Control Board (RWQCB) for the Falcon Ridge (Etiwanda) Substation Project (hereafter referred to as the "Proposed Project"). This Jurisdictional Delineation Report is based on the jurisdictional delineation survey performed on June 10, 2010.

1.1 PROJECT LOCATION AND DESCRIPTION

A jurisdictional delineation was completed on the vacant southwestern portion of the existing Etiwanda Substation at the southern end of the Proposed Project (hereafter referred to as "the Site"). The jurisdictional delineation was conducted for (1) two drainages that run through the Etiwanda Substation portion of the Proposed Project and (2) two ponds. The Site is located in the City of Fontana in San Bernardino County, California (Exhibit 1). The Site is located on the U.S. Geological Survey's (USGS') Guasti 7.5-minute quadrangle of the San Bernardino Meridian (Exhibit 2). The Site is approximately 12.5 acres. Land uses in the Site's immediate vicinity consist of industrial uses to the north, south and west, and open space to the east. Topography on the Site is flat.

1.2 REGULATORY AUTHORITY

1.2.1 Summary of Regulations

U.S. Army Corps of Engineers

The USACE Regulatory Branch regulates activities that discharge, dredged, or fill materials into "Waters of the U.S." under Section 404 of the Federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. This permitting authority applies to all "Waters of the U.S." where the material (1) replaces any portion of a "Waters of the U.S." with dry land or (2) changes the bottom elevation of any portion of any "Waters of the U.S.". These fill materials would include sand, rock, clay, construction debris, wood chips, and materials used to create any structure or infrastructure in these Waters. The selection of disposal sites for dredged or fill material is done in accordance with Section 404(b)(1) guidelines, which were developed by the U.S. Environmental Protection Agency (USEPA).

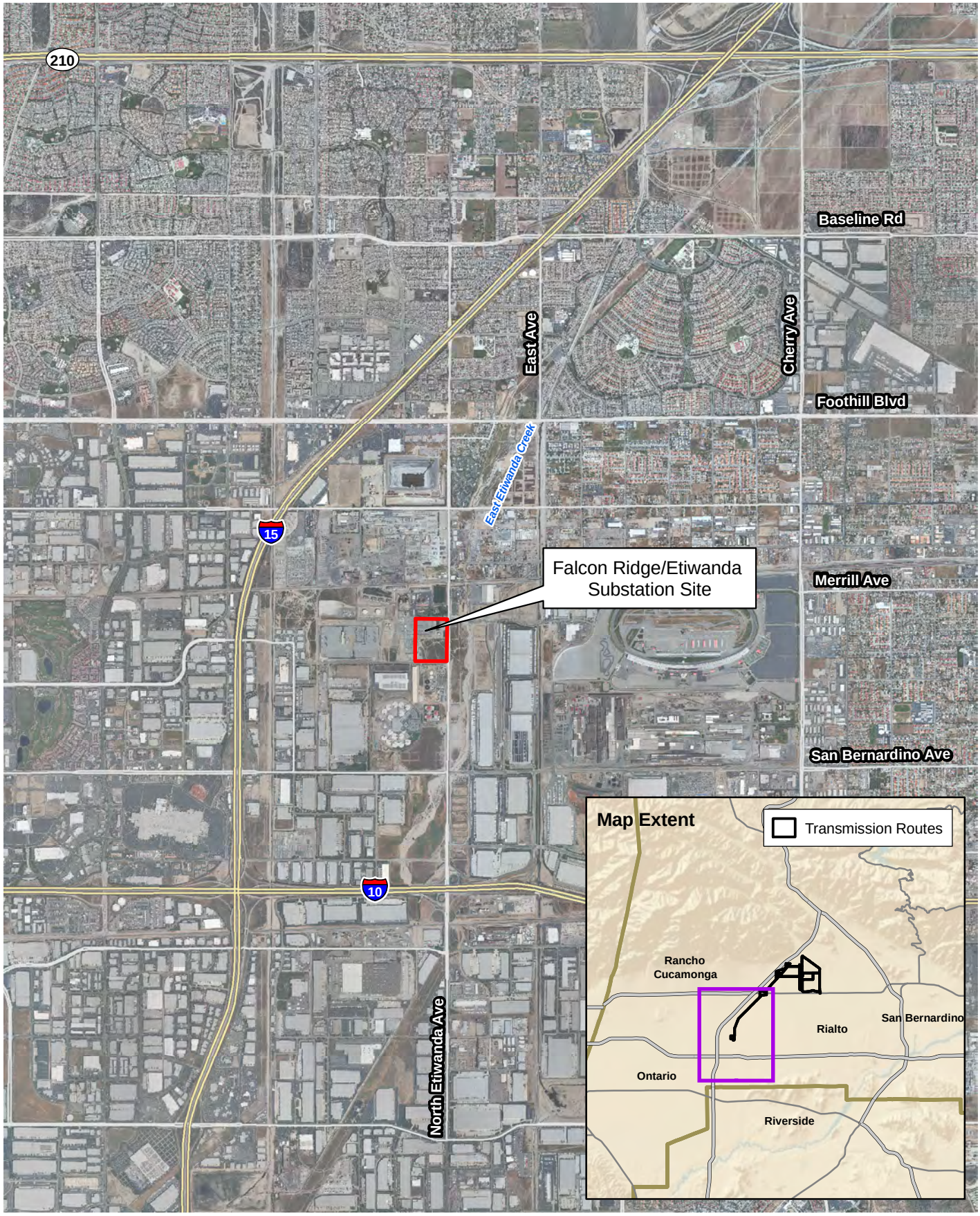
Waters of the United States

"Waters of the U.S." can be divided into three categories: territorial seas, tidal waters, or non-tidal waters. The term "Waters of the U.S." is defined by the *Code of Federal Regulations* (Title 33, Navigation and Navigable Waters; Part 328, Definition of Waters of the United States; Section 328.3, Definitions) and includes:

1. All waters that have, are, or may be used in interstate or foreign commerce (including sightseeing or hunting), including all waters subject to the ebb and flow of the tide;

2. All interstate waters including interstate wetlands;

3. All other waters such as intrastate lakes, rivers, or streams (including intermittent streams); mudflats; sand flats; wetlands; sloughs; prairie potholes; wet meadows; playa



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Project Location

Exhibit 1

Falcon Ridge Substation Project

N
W E
S

4,000 2,000 0 4,000

Feet

BonTerra CONSULTING

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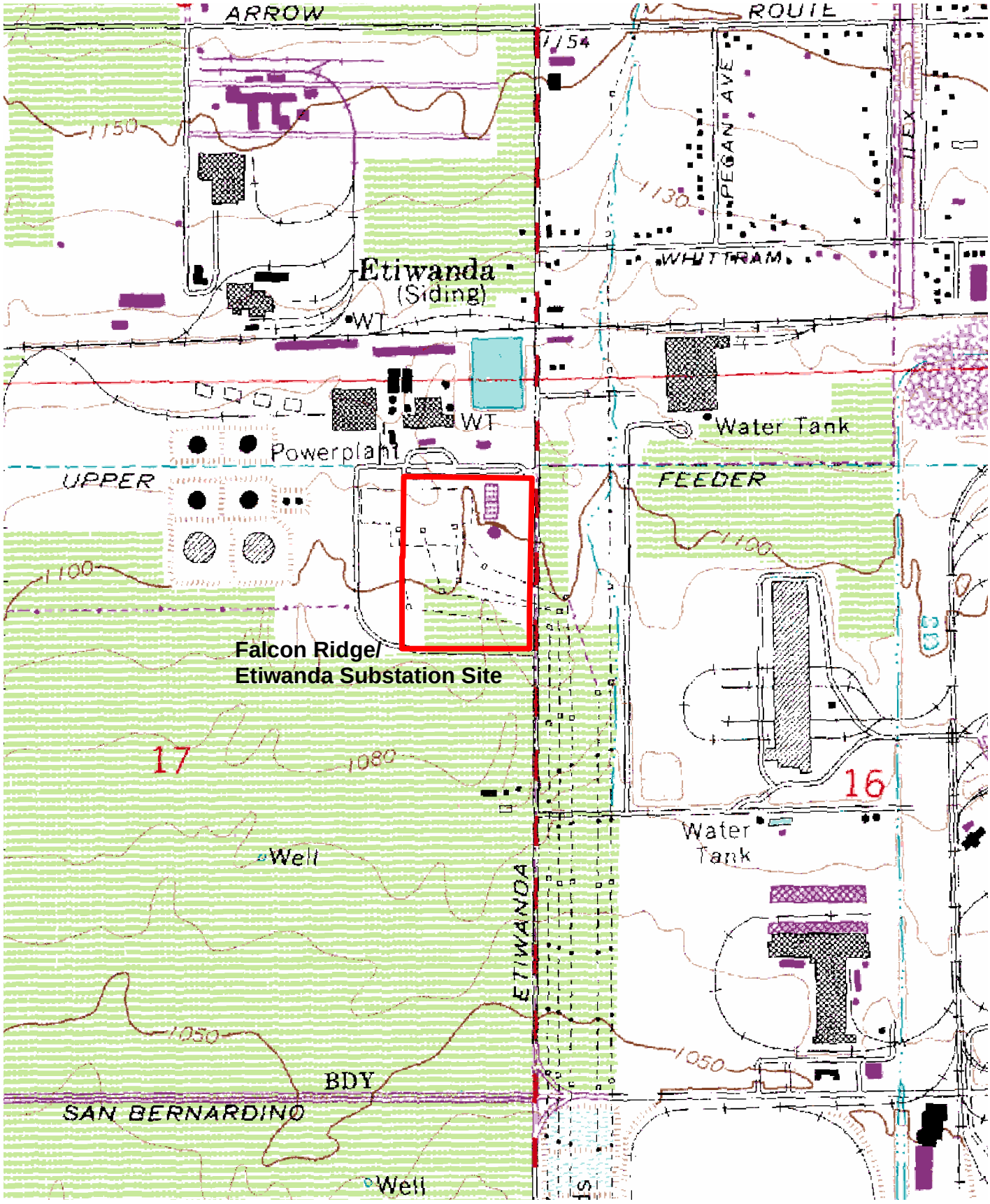

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U.S. Geological Survey 7.5-Minute Quadrangles
San Bernardino Meridian

Exhibit 2

Falcon Ridge Substation Project

N
W E
S

1,000 500 0 1,000
Feet

BonTerra CONSULTING

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lakes; or natural ponds where the use, degradation, or destruction of which could affect interstate or foreign commerce;

4. All impoundments of waters otherwise defined as "Waters of the U.S." under the definition;

5. All tributaries of waters identified above;

6. The territorial seas; and

7. All wetlands adjacent to waters (other than waters that are themselves wetlands) identified above.

Ordinary High Water Mark

The landward limit of tidal "Waters of the U.S." is the high-tide line. In non-tidal waters where adjacent wetlands are absent, jurisdiction extends to the ordinary high water mark (OHWM). In the absence of wetlands in non-tidal waters, the extent of jurisdictional limits is determined by the OHWM. The OHWM is defined as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" (33 CFR §328.3[e]).

Wetlands

A wetland is a subset of jurisdictional waters and is defined by the USACE and the USEPA as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR §328.3[b]). Wetlands generally include swamps, marshes, bogs, and areas containing similar features. The definition and methodology for identifying wetland resources can be found in the USACE's *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (2008b), a supplement to the USACE's *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987). The methodology contained in this supplement was used to identify the type and extent of wetland resources within the boundaries of the survey area.

On June 19, 2006, a majority of the U.S. Supreme Court overturned two Sixth Circuit Court of Appeals decisions, finding that certain wetlands constituted "Waters of the U.S." under the CWA. Justice Scalia argued that "Waters of the U.S." should not include channels through which water flows intermittently or ephemerally, or channels that periodically provide drainage for rainfall. He also stated that a wetland may not be considered "adjacent to" remote "waters of the United States" based on a mere hydrologic connection. On June 5, 2007, the USACE published a memorandum that provides guidance to both the USEPA regions and the USACE districts that implement the Supreme Court's decision in the Rapanos cases[1] (which address the jurisdiction over "Waters of the U.S." under the CWA). The memorandum includes a chart that summarizes its key points, which is intended to be used as a reference tool along with a complete discussion of issues and guidance furnished throughout the memorandum.

In summary, the USACE and the USEPA will assert jurisdiction over the following waters: (1) traditional navigable waters (TNW); (2) wetlands adjacent to a TNW; (3) relatively

[1] Consolidated cases: Rapanos v. United States & Carabell v. United States refer to the U.S. Supreme Court's decision concerning USACE jurisdiction over waters of the United States under the Clean Water Act.

permanent, non-navigable tributaries of a TNW that typically flow year-round or have continuous flow at least seasonally (e.g., typically three months); and (4) wetlands that directly abut such tributaries.

The USACE and the USEPA will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a TNW: (1) non-navigable tributaries that are not relatively permanent; (2) wetlands adjacent to non-navigable tributaries that are not relatively permanent; and (3) wetlands adjacent to but that do not directly abut a relatively permanent, non-navigable tributary.

The USACE and the USEPA generally will not assert jurisdiction over the following features: (1) swales or erosional features (e.g., gullies or small washes characterized by low volume, infrequent, or short duration flow) and (2) ditches (including roadside ditches) excavated wholly within and draining only uplands and that do not carry a relatively permanent flow of water.

The USACE and the USEPA will apply the significant nexus standard defined as follows:

1. A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of downstream TNWs.

2. A significant nexus includes consideration of hydrologic and ecological factors.

Regional Water Quality Control Board

The RWQCB is the primary agency responsible for protecting water quality within California through the regulation of discharges to surface waters under the CWA and the California Porter-Cologne Water Quality Control Act (Porter-Cologne Act). The RWQCB's jurisdiction extends to all "Waters of the State" and to all "Waters of the U.S.", including wetlands (isolated and non-isolated).

Section 401 of the CWA provides the RWQCB with the authority to regulate, through a Water Quality Certification, any proposed, federally permitted activity that may affect water quality. Among such activities are discharges of dredged or fill material permitted by the USACE pursuant to Section 404 of the CWA. Section 401 requires the RWQCB to provide "certification that there is reasonable assurance that an activity which may result in the discharge to 'Waters of the U.S.' will not violate water quality standards". Water Quality Certification must be based on a finding that the proposed discharge will comply with water quality standards, which contain numeric and narrative objectives that can be found in each of the nine RWQCBs' Basin Plans.

The Porter-Cologne Act provides the State with very broad authority to regulate "Waters of the State" (which are defined as any surface water or groundwater, including saline waters). The Porter-Cologne Act has become an important tool in the post-SWANCC (Solid Waste Agency of Northern Cook Counties vs. Unites States Corps of Engineers) and Rapanos era with respect to the State's authority over isolated waters. Generally, any person proposing to discharge waste into a water body that could affect its water quality must file a "Report of Waste Discharge" (WDR) when there is no federal nexus, such as under Section 404(b)(1) of the CWA. Although "waste" is partially defined as any waste substance associated with human habitation, the RWQCB interprets this to include fill discharge into water bodies.

California Department of Fish and Game

The CDFG had jurisdictional authority over wetland resources associated with rivers, streams, and lakes pursuant to *California Fish and Game Code* (§§1600–1616). Activities of State and local agencies as well as public utilities that are project proponents are regulated by the CDFG under Section 1602 of the *California Fish and Game Code;* this section regulates any work that will (1) substantially divert or obstruct the natural flow of any river, stream, or lake; (2) substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

Because the CDFG includes streamside habitats under its jurisdiction that, under the federal definition, may not qualify as wetlands on a particular project site, its jurisdiction may be broader than that of the USACE. Riparian forests in California often lie outside the plain of ordinary high water regulated under Section 404 of the CWA, and often do not have all three parameters (wetland hydrology, hydrophytic vegetation, and hydric soils) sufficiently present to be regulated as a wetland. However, riparian forests are frequently within CDFG regulatory jurisdiction under Section 1602 of the *California Fish and Game Code.*

The CDFG enters into a Lake or Streambed Alteration Agreement (SAA) with a project proponent and can impose conditions on the agreement. The notification process involves the completion of the applications which will serve as the basis for the CDFG's issuance of a Section 1602 SAA. Section 1602 of the *California Fish and Game Code* applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the State.

The CDFG jurisdictional limits are not as clearly defined by regulation as those of the USACE. While they closely resemble the limits described by USACE regulations, they include riparian habitat supported by a river, stream, or lake regardless of the presence or absence of hydric and saturated soils conditions. In general, the CDFG takes jurisdiction from the top of a stream bank or to the outer limits of the adjacent riparian vegetation (outer drip line), whichever is greater. Notification is generally required for any project that will take place within or in the vicinity of a river, stream, lake, or their tributaries. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish and other aquatic plant and/or wildlife species, and watercourses that have a surface or subsurface flow that support or have supported riparian vegetation.

2.0 METHODOLOGY

The three-parameter approach used to identify USACE wetlands is summarized in Sections 2.1 through 2.3; literature reviewed for the preparation of the delineation is outlined in Section 2.4; and the field delineation is outlined in Section 2.5. Methodologies for identifying USACE and RWQCB jurisdictions are contained in Sections 4.1 and 4.2. Methodologies for identifying CDFG jurisdiction is contained in Section 4.3.

2.1 VEGETATION

Hydrophytic vegetation (or hydrophytes) is defined as any macrophytic plant that is typically adapted to and subsequently grows within water or that is on a substrate at least periodically deficient in oxygen; this oxygen deficiency can be a result of excessive saturation conditions that range from open water to periodically saturated soils. Specifically, these plant species are specialized and can survive in permanently saturated to periodically saturated soils where oxygen levels are very low or the soils are anaerobic. The U.S. Fish and Wildlife Service (USFWS) has identified approximately 2,000 plant species of this type within the State of

California (i.e., Zone 0) and nearly 5,000 species throughout the U.S. (Reed 1988). The wetland indicator categories reflect the range of estimated probabilities (expressed as a frequency of occurrence) that a species occurs in wetlands versus non-wetlands. Therefore, a frequency of 67 percent to 99 percent means that 67 percent to 99 percent of sample plots containing the species randomly selected across the range of the species would be a wetland. A positive (+) or negative (-) sign was used with the wetland indicator categories to more specifically define the regional frequency of a species' occurrence in wetlands (Reed 1988). The positive sign indicates a frequency toward the higher end of the category (i.e., more frequently found in wetlands), and a negative sign indicates a frequency toward the lower end of the category (less frequently found in wetlands). The positive and negative modifiers are eliminated from the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* when determining if an area meets the hydrophytic plant criterion for a wetland. Species not listed by Reed (1988) are considered to be upland (UPL).

Plant indicator status categories are as follows:

- ***Obligate Wetland (OBL):*** Plants that occur almost always (estimated probability 99 percent) in wetlands under natural conditions, but which may also occur rarely (estimated probability one percent) in non-wetlands (e.g., cattails [*Typha* spp.] or common water hyacinth [*Eichhornia crassipes*]).

- ***Facultative Wetlands (FACW):*** Plants that occur usually (estimated probability 67–99 percent) in wetlands, but also occur (estimated probability 1–33 percent) in non-wetlands (e.g., mule fat [*Baccharis salicifolia*] or arroyo willow [*Salix lasiolepis*]).

- ***Facultative (FAC):*** Plants with similar likelihood (estimated probability 34–66 percent) of occurring in both wetlands and non-wetlands (e.g., California saltbush [*Atriplex californica*]).

- ***Facultative Upland (FACU):*** Plants that occur sometimes (estimated probability 1–33 percent) in wetlands, but occur more often (estimated probability 67–99 percent) in non-wetlands (e.g., giant wild rye [*Leymus condensatus*]).

- ***Obligate Upland (UPL):*** Plants that occur rarely (estimated probability 1 percent) in wetlands, but occur almost always (estimated probability 99 percent) in non-wetlands under natural conditions (e.g., coast live oak [*Quercus agrifolia*]).

The following are three procedures for determining hydrophytic vegetation: Indicator 1, "Dominance Test", using the "50/20 Rule"; Indicator 2, "Prevalence Index"; or Indicator 3, "Morphological Adaptation", as identified in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008b). Hydrophytic vegetation is present if any indicator is satisfied. If none of the indicators are satisfied, then hydrophytic vegetation is absent unless (1) indicators of hydric soil and wetland hydrology are present and (2) the site meets the requirements for a problematic wetland situation.

Dominance Test: Vegetative cover is estimated and is ranked according to its dominance. Dominant species are the most abundant species for each stratum of the community (i.e., tree, sapling/shrub, herb, or woody vine) that individually or collectively amount to 50 percent of the total coverage of vegetation plus any other species that, by itself, accounts for 20 percent of the total vegetation cover (also known as the "50/20 Rule"). These species are recorded on the "Wetland Determination Data Form – Arid West Region" (see Attachment A). The wetlands indicator status of each species is also recorded on the data forms based on the *National List of Plant Species that Occur in Wetlands* (Reed 1988). If greater than 50 percent of the dominant

species across all strata are OBL, FACW or FAC species, the criterion for wetland vegetation is considered to be met.

Prevalence Index: The prevalence index considers all plant species in a community, not just the dominant ones. The prevalence index is the average of the wetland indicator status of all plant species in a sampling plot. Each indicator status category is given a numeric code (OBL=1, FACW=2, FAC=3, FACU=4, and UPL=5) and is weighted by the species' abundance (percent cover). Hydrophytic vegetation is present if the prevalence index is 3.0 or less.

Morphological Adaptation: Morphological adaptations, such as adventitious roots (i.e., roots that take advantage of the wet conditions) and shallow root systems must be observed on more than 50 percent of the individuals of a FACU species for the hydrophytic vegetation wetland criterion to be met.

2.2 SOILS

The National Technical Committee for Hydric Soils (NTCHS) defines a hydric soil as a soil that is formed under conditions of saturation, flooding, or ponding that occurs long enough during the growing season to develop anaerobic conditions (or conditions of limited oxygen) at or near the soil surface and that favor the establishment of hydrophytic vegetation. It should be noted that hydric soils created under artificial conditions of flooding and inundation sufficient for the establishment of hydrophytic vegetation would also meet this hydric soils indicator.

The soil conditions are verified by digging test pits along each transect to a depth of at least 20 inches (except where a restrictive layer occurs in areas containing hard pan, cobble or solid rock). It should be noted that at some sites, it may be necessary to make exploratory soil test pits up to 40 inches in depth to more accurately document and understand the variability in soil properties and hydrologic relationships on the site. Soil test pit locations are usually dug within the drainage invert or at the edge of a drainage course within vegetated areas. Soil extracted from each soil test pit is then examined for texture and color using the standard plates within the Munsell Soil Color Chart (1994) and recorded on the Data Form. The Munsell Soil Color Chart aids in designating soils by color labels based on gradations of three simple variables: hue, value, and chroma. Any indicators of hydric soils such as redoximorphic features (i.e., areas where iron is reduced under anaerobic conditions and oxidized following a return to aerobic conditions); buried organic matter; organic streaking; reduced soil conditions; gleyed (i.e., soils having a characteristic bluish-gray or greenish-gray in color) or low-chroma soils; or sulfuric odor are also recorded on the Data Form. If hydric soils are found, progressive pits are dug along the transect moving laterally away from the active channel area until hydric soil features are no longer present within the top 20 inches of the soil.

2.3 HYDROLOGY

Wetlands hydrology is represented by either (1) all of the hydrological elements or characteristics of areas permanently or periodically inundated or (2) areas containing soils that are saturated for a sufficient duration of time to create hydric soils suitable for the establishment of plant species that are typically adapted to anaerobic soil conditions. The presence of wetland hydrology is evaluated at each intersect by recording the extent of observed surface flows, the depth of inundation, the depth to saturated soils, and the depth to free water in soil test pits. In instances where stream flow is divided into multiple channels with intervening sandbars, the entire area between the channels is considered within the OHWM. Therefore, an area containing these features would meet the indicator requirements for wetland hydrology.

2.4 LITERATURE

Prior to conducting the delineation, BonTerra Consulting reviewed the following documents to identify areas that may fall under agency jurisdiction: the USGS Guasti 7.5-minute topographic quadrangle; color aerial photography provided by Aerials Express (2009); the Report and General Soil Map, San Bernardino County Southwestern Part, California (USDA NRCS 2007); the National Hydric Soils List (USDA NRCS 2010); and the National Wetlands Inventory's Wetland Mapper (USFWS 2009). A description of this literature is provided below.

USGS Topographic Quadrangle: USGS quadrangle maps show geological formations and their characteristics; they describe the physical settings of an area through topographic contour lines and other major surface features. These features include lakes, streams, rivers, buildings, roadways, landmarks, and other features that may fall under the jurisdiction of one or more regulatory agencies. In addition, the USGS maps provide topographic information that is useful in determining elevations, latitude and longitude, and Universal Transverse Mercator Grid coordinates for a project site.

East Etiwanda Creek, a blueline stream, is shown along the eastern edge of the Site.

Color Aerial Photography: BonTerra Consulting reviewed an existing color aerial photograph prior to the June 10, 2010 site visit to identify the extent of any drainages and riparian vegetation occurring on the Site.

Most of the Site is disturbed as a result of maintenance and operation activities associated with the electrical substation. There is one drainage feature visible on the aerial photograph; this is an ephemeral drainage feature that conveys storm flows from the developed portion of the station via a reinforced concrete pipe. The flows then split and are conveyed south to a storm drain and also to a side drainage that flows under Etiwanda Avenue to East Etiwanda Creek at the eastern side of the Site.

U.S. Department of Agriculture, Natural Resources Conservation Service: The presence of hydric soil is one of the chief indicators of jurisdictional wetlands. BonTerra Consulting reviewed the U.S. Department of Agriculture (USDA) soil data for the survey area and determined that the soils were mapped as Hanford coarse sandy loam (2 to 9 percent slopes) and Tujunga gravelly loamy sand (0 to 9 percent slopes) (Exhibit 3; USDA NRCS 2007). Of these soils, Tujunga gravelly loam sand (0 to 9 percent slopes) is listed as "hydric" on the National Hydric Soils List for San Bernardino County Southwestern Part, California (USDA NRCS 2010). A brief description of the soil series mapped in the survey area is provided in Attachment B of this report.

U.S. Fish and Wildlife Service, National Wetlands Inventory: The Wetlands Mapper shows wetland resources available from the Wetlands Spatial Data Layer of the National Spatial Data Infrastructure (USFWS 2009). This resource provides the classification of known wetlands following the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979). This classification system is arranged in a hierarchy of (1) Systems that share the influence of similar hydrologic, geomorphologic, chemical, or biological factors (i.e., Marine, Estuarine, Riverine, Lacustrine, and Palustrine); (2) Subsystems (i.e., Subtidal and Intertidal; Tidal, Lower Perennial, Upper Perennial, and Intermittent; or Littoral and Limnetic); (3) Classes, which are based on substrate material and flooding regime or on vegetative life forms; (4) Subclasses; and (5) Dominance Types, which are named for the dominant plant or wildlife forms. In addition, there are modifying terms applied to Classes or Subclasses.

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Soil Types

Exhibit 3

Falcon Ridge Substation Project

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W E
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Feet

BonTerra CONSULTING

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The mapped wetlands resources are included in Attachment C. Two ponds associated with electrical generation activities at the Site are located north of the Site and are mapped as PUBKx.

The Description for code PUBKx is as follows:

- ***P:*** ***System PALUSTRINE.*** The Palustrine System includes all nontidal wetlands dominated by trees, shrubs, emergents, mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5 parts per trillion (ppt). Wetlands lacking such vegetation are also included if they exhibit all of the following characteristics: (1) are less than 8 hectares (20 acres); (2) do not have an active wave-formed or bedrock shoreline feature; (3) have at low water (i.e., less than 2 meters [6.6 feet] in the deepest part of the basin); and (4) have salinity due to ocean-derived salts of less than 0.5 ppt.

- ***UB:*** ***Class UNCONSOLIDATED BOTTOM.*** This includes all wetlands and deepwater habitats with at least 25 percent cover of particles smaller than stones (less than 6–7 centimeters), and a vegetation cover less than 30 percent.

- ***K*** ***WATER REGIME Artificially Flooded.*** The amount and duration of flooding is controlled by means of pumps or siphons in combination with dikes or dams.

- ***X*** ***SPECIAL MODIFIER Excavated.*** This area lies within a basin or channel that has been dug, gouged, blasted or suctioned through artificial means by man.

Please note that the large man-made pond southeast of the two small ponds within the facility is outside of the jurisdictional delineation survey area and would not be affected by Project activities.

2.5 JURISDICTIONAL DELINEATION

In September 2008, the USACE issued the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region.* This regional supplement is designed for use with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987). Both the 1987 Wetlands Manual and the Arid West Supplement to the manual provide technical methods and guidelines for determining the presence of "Waters of the U.S." and wetland resources. A three-parameter approach is used to identify wetlands and requires evidence of wetland hydrology, hydrophytic vegetation, and hydric soils. Wetlands generally include swamps, marshes, bogs, and similar areas. In order to be considered a wetland, an area must exhibit at least minimal hydric characteristics within the three parameters. However, problem areas may periodically or permanently lack certain indicators due to seasonal or annual variability of the nature of the soils or plant species on site. Atypical wetlands lack certain indicators due to recent human activities or natural events. Guidance for determining the presence of wetlands in these situations is presented in the regional supplement. Non-wetland "Waters of the U.S." are delineated based on the limits of the OHWM, which can be determined by a number of factors including erosion, the deposition of vegetation or debris, and changes in vegetation.

It should be noted that the RWQCB shares the USACE jurisdiction unless isolated conditions are present. If isolated waters conditions are present, the RWQCB takes jurisdiction using the USACE's definition of the OHWM and/or the three-parameter wetlands methodology pursuant to the 1987 Wetlands Manual. The CDFG's jurisdiction is defined as the top of the bank to the top of the bank of the stream, channel, or basin or to the outer limit of riparian vegetation located within or immediately adjacent to the river, stream, creek, pond, or lake.

The analysis contained in this report uses the results of one field survey conducted by Mr. Gary Medeiros and Mr. Jeff Crain on June 10, 2010. Photographs of the Site are included in Exhibit 4. The field survey included the collection of vegetation, soils, and hydrologic data from two sampling points within the unnamed drainage on the Site; analysis did not include the basin in the eastern portion of the Site or East Etiwanda Creek because SCE will avoid impacts on these basins and this creek. This information was recorded on a 1 inch equals 200 feet (1″=200′) scale aerial photograph (Exhibits 5A and 5B) and on Wetland Data Sheets (Attachment A).

3.0 RESULTS

3.1 VEGETATION

Vegetation was formally analyzed at two sampling points during the Site visit on June 10, 2010. Sampling Point 1 was located near the top of the drainage feature that runs north-south. Vegetation at this location is dominated by herbaceous plants including common cocklebur (*Xanthium strumarium*) (FAC+), shortpod mustard (*Hirschfeldia incana*) (UPL), and slender sunflower (*Helianthus gracilentus*) (UPL). Sampling Point 1 did not pass the dominance test and the prevalence index was greater than 3.0; therefore, the hydrophytic vegetation criterion for wetlands was not met in this area.

Sampling Point 2 was near the top of the drainage feature that runs north-southeast through the Site. At sampling point 2, vegetation coverage was estimated at 80 percent and consists of California Bay tree (*Umbellularia californica*) (FAC), blue elderberry (*Sambucus mexicana*) (FAC), Peruvian pepper (*Schinus molle*) (UPL), mule fat (*Baccharis salicifolia*) (FACW), and yellowstar thistle (*Centaurea solstitialis*) (UPL). Sampling Point 2 did not pass the dominance test and the prevalence index was greater than 3.0; therefore, the hydrophytic vegetation criterion for wetlands was not met in this area.

3.2 SOIL

Soil at Sampling Point 1 consists of sand and sandy clay. Soil at Sampling Point 2 consists of silty clay. No indicators of hydric soil were observed at either sampling point. Therefore, the hydric soil criterion for wetlands was not met at either sampling point.

3.3 HYDROLOGY

The Site contains two ephemeral drainage features that would be considered non-navigable tributaries that are not relatively permanent. These drainages are ephemeral and split to form one drainage that drains the Site from north to south and a second drainage that drains the Site from north to southeast. Storm flows that are conveyed to the south enter a storm drain system located along the southern boundary of the Site, which conveys flows to East Etiwanda Creek, located to the east and off site. The second drainage conveys flows to the southeast under Etiwanda Avenue via a culvert that conveys flows to East Etiwanda Creek. In addition, during the June 10, 2010, survey, open water was observed within the upper portion of the drainage feature that flows north to south. Therefore, the wetland hydrology criterion for wetlands has been met in this area.

The Site drainages convey flows to East Etiwanda Creek, which flows south to the San Bernardino Freeway [I-10]. At this point, the flows are conveyed by series of flood-controls channel and retention basins that flow into the Santa Ana River, a Relatively Permanent Water feature, and ultimately the Pacific Ocean, a Traditional Navigable Waterway. Therefore, the drainage features have a physical hydrologic connection to the ocean. Therefore, the significant nexus requirements of adjacency or a hydrologic and ecological relationship to a TNW was met.

Looking north at drainage feature under towers.

Looking north at 24-inch CRP.

Looking south at ephemeral drainage feature.

Looking south within the westerly ephemeral drainage feature.

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Site Photographs

Exhibit 4

Falcon Ridge Substation Project

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U.S Army Corps of Engineers

Exhibit 5A

Falcon Ridge Substation Project

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Feet

BonTerra CONSULTING

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California Department of Fish and Game

Exhibit 5B

Falcon Ridge Substation Project

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W E
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Feet

BonTerra CONSULTING

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4.0 JURISDICTIONAL DELINEATION

4.1 U.S. ARMY CORPS OF ENGINEERS DETERMINATION

Wetlands Determination: As previously described in Section 2.0 of this report, an area must exhibit all three wetland parameters, as described in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008b) and the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) in order to be considered a jurisdictional wetland. Wetland hydrology was present at the Site; however, hydrophytic vegetation and hydric soils were not present. Therefore, the three criteria for wetlands were not met.

"Waters of the U.S." (Non-Wetland) Determination: During the June 10, 2010, delineation, there was evidence of bed, bank, and OHWM of potential "Waters of the U.S." conditions within the ephemeral drainage features. Based on the field observations and data collection, non-wetland "Waters of the U.S." occur on the Site (Exhibit 5A; Table 1). Based on the current design plans, 0.004 acres of "Waters of the U.S." will be temporarily impacted by grading and/or structural development (Exhibit 5A; Table 1).

TABLE 1
USACE JURISDICTIONAL "WATERS OF THE U.S."

USACE Jurisdiction within Etiwanda Substation	Existing Jurisdictional Resources Acres (Hectares)	Temporary Jurisdictional Impacts Acres (Hectares)	Permanent Jurisdictional Impacts Acres (Hectares)	Total Jurisdictional Impacts Acres (Hectares)
Wetlands	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	**0.000 (0.000)**
Open Water	0.569 (0.230)	0.000 (0.000)	0.000 (0.000)	**0.000 (0.000)**
Other Non-Wetlands "Waters of the U.S."	0.177 (0.072)	0.004 (0.002)	0.000 (0.00)	**0.004 (0.002)**
Total "Waters of the U.S."	**0.746 (0.302)**	**0.004 (0.002)**	**0.000 (0.000)**	**0.004 (0.002)**

4.2 CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD DETERMINATION

The RWQCB jurisdictional boundaries are defined as those determined for the USACE under "Waters of the U.S.". However, the RWQCB takes jurisdiction over both connected and isolated waters. The drainages would be considered jurisdictional "Waters of the U.S." based on the presence of an OHWM and therefore, it would be considered jurisdictional by the RWQCB. Based on the current design plans, 0.004 acre (0.002 hectare) of resources under the jurisdiction of the RWQCB will be temporarily impacted.

4.3 CALIFORNIA DEPARTMENT OF FISH AND GAME DETERMINATION

The CDFG jurisdiction within the drainages extends from the top of the bank to the top of the bank and to the outer drip line in areas containing riparian vegetation. Based on the field observations and data collection, a total of approximately 1.424 acre (0.576 hectare) of resources under the jurisdiction of CDFG pursuant to the Section 1602 of the *California Fish and Game Code* are located within the boundaries of the Site (Exhibit 5B; Table 2). Based on

the current design plans, a total of approximately 0.006 acre (0.002 hectare) of "Waters of the State" will be temporarily impacted by the Proposed Project (Exhibit 5B; Table 2).

TABLE 2
CALIFORNIA DEPARTMENT OF FISH AND GAME
JURISDICTIONAL RESOURCES

CDFG Jurisdiction within Etiwanda Substation	Existing Jurisdictional Resources Acres (Hectares)	Temporary Jurisdictional Impacts Acres (Hectares)	Permanent Jurisdictional Impacts Acres (Hectares)	Total Jurisdictional Impacts Acres (Hectares)
Total Jurisdictional Area	**1.424 (0.576)**	**0.006 (0.002)**	**0.000 (0.000)**	**0.006 (0.002)**

5.0 CONCLUSION OF REGULATORY APPROVAL PROCESS

5.1 REGULATORY PERMIT REQUIREMENTS

The following is a general summary of the various permits, agreements, and certifications required prior to initiation of project activities which involve impacts to areas under the jurisdiction of the USACE, the RWQCB, and the CDFG. A summary of the regulatory permit requirements is as follows:

- USACE Section 404 Permit;
- RWQCB Section 401 Water Quality Certification; and
- CDFG Section 1602 Streambed Alteration Agreement.

It should be noted that the USACE and the RWQCB applications can be processed concurrently. The USACE permit would be issued subject to the receipt of the RWQCB's Section 401 Water Quality Certification. There is no filing fee for the Section 404 Permit. The Section 401 Water Quality Certification filing fee has a $640 base fee with additional fees based on the size of the dredge or fill unless the Project qualifies for a flat fee. For low impact discharges (e.g., discharge of less than 0.1 acre, 200 linear feet, and 25 cubic yards), there is no charge above the base fee. For fill and excavation discharges, there is a rate of $2,752 per acre of discharge. For dredging discharges, there is a rate of $0.102 per cubic yard of dredge volume. The Streambed Alteration Agreement filing fee is based on project cost and length of permit authorization (i.e., maintenance permit for greater than five years). For projects lasting five years or less, the maximum fee is $4,482.75 for projects costing $500,000 or more; the fee decreases as cost decreases. For projects lasting longer than five years, there is a base fee of $2,689.50 plus a maximum of $4,482.75. The CDFG application submittal will not be deemed complete until the application fees have been paid and the agency is provided with a certified California Environmental Quality Act (CEQA) document and a signed copy of the receipt of County Clerk filing fees for the Notice of Determination (NOD). In addition, land use jurisdictions can no longer make "de minimis" findings if they determine that the project will not impact resources under the CDFG's jurisdiction. Therefore, the finding of "No Impact" to the CDFG jurisdictional resources must now be made by the CDFG prior to the payment of CDFG fees.

A detailed explanation of the regulatory permitting requirements for impacts to jurisdictional resources is provided in Sections 5.2 through 5.4.

5.2 U.S. ARMY CORPS OF ENGINEERS

Regulatory authorization in the form of an NWP is provided for certain categories of activities (e.g., repair, rehabilitation, or replacement of a structure or fill which was previously authorized; utility line placement; bank stabilization). These permits are valid only if the conditions applicable to the permits are met. If the conditions cannot be met, an Individual Permit (IP) will be required. For some NWPs, the loss of "Waters of the U.S." is a threshold measurement of the impact to jurisdictional waters for determining whether a project may qualify for an NWP or must be authorized under an IP. "Waters of the U.S." temporarily filled, flooded, excavated, or drained but restored to pre-construction contours and elevations after construction are not included in the measurement of loss of "Waters of the U.S.". Based on the current conditions, a total of approximately 0.004 acre (0.002 hectare) of "Waters of the U.S." would be impacted by the Proposed Project.

Pursuant to USACE Regulatory Guidance Letter (RGL) 08-02 (dated June 26, 2008), the USACE can issue two types of jurisdictional determinations to implement Section 404 of the CWA: Approved Jurisdictional Determinations and Preliminary JDs. An Approved JD is an official USACE determination that jurisdictional "Waters of the U.S.", "Navigable Waters of the U.S.", or both are either present or absent on a site. An Approved JD also identifies the precise limits of jurisdictional waters within a project site (USACE 2008a).

The USACE will provide an Approved Jurisdictional Determination when (1) an applicant requests an official jurisdictional determination; (2) an applicant contests jurisdiction over a particular water body or wetland; or (3) when the USACE determines that jurisdiction does not exist over a particular water body or wetland. The Approved Jurisdictional Determination then becomes the USACE's official determination that can then be relied upon over a five-year period to request regulatory authorization as part of the permit application.

In addition, an Applicant may decline to request an Approved Jurisdictional Determination and instead obtain a USACE IP or General Permit authorization based on a Preliminary Jurisdictional Determination or, in certain circumstances (e.g., authorizations by non-reporting nationwide general permits), with no Jurisdictional Determination.

Preliminary Jurisdictional Determinations are non-binding, advisory in nature, and may not be appealed. They indicate that there may be "Waters of the U.S." on a project site. An applicant may elect to use a Preliminary Jurisdictional Determination to voluntarily waive or set aside questions regarding CWA jurisdiction over a site, usually in the interest of allowing the applicant to move ahead expeditiously with the permitting process. The USACE will determine what form of Jurisdictional Determination is appropriate for a particular project site.

On January 31, 2007, the USACE published a memorandum clarifying the Interim Guidance for amendments to the National Historic Preservation Act and the Advisory Council on Historic Preservation (ACHP) implementing regulations. The Interim Guidance applies to all Department of the Army requests for authorization/verification, including Individual Permits (standard permits and letters of permission) and all Regional General Permits (RGPs) and NWPs. The State or Tribal Historic Preservation Officer (SHPO/THPO) has 30 days to respond to a determination that a proposed activity, that otherwise qualifies for an NWP or RGP, has no effect or no adverse effect on a historic property. If the SHPO/THPO does not respond within 30 days of notification, the Los Angeles District may proceed with verification. If the SHPO/THPO disagrees with the District's determination, the District may work with the SHPO/THPO to resolve the disagreement or request an opinion from the ACHP. The USACE will submit the Draft Jurisdictional Delineation Report to the SHPO/THPO for review prior to initiating the actual regulatory process.

The USACE Regulatory Branch Offices will coordinate with the USEPA Regional Office and USACE Headquarters (HQ), as outlined in its January 28, 2008, memorandum entitled the "Process for Coordinating Jurisdictional Delineations Conducted Pursuant to Section 404 of the Clean Water Act in Light of the *Rapanos* and *SWANCC* Supreme Court Decisions" (USACE 2008a). The guidance provided in this memorandum is quoted as follows:

1. Effective immediately, unless and until paragraph 5(b) of the June 5, 2007, Rapanos guidance coordination memorandum is modified by a joint memorandum from Army and EPA, we will follow these procedures:

    a. For jurisdictional determinations involving significant nexus determinations, USACE districts will send copies of draft jurisdictional delineations via e-mail to appropriate EPA regional offices. The EPA regional office will have 15 calendar days to decide whether to take the draft jurisdictional delineation as a special case under the January 19, 1989, "Memorandum of Agreement Between the Department of the Army and the USEPA Concerning the Determination of the Section 404 Program and the Application of the Exceptions under Section 404(f) of the Clean Water Act." If the EPA regional office does not respond to the district within 15 days, the district will finalize the jurisdictional determination.

    b. For jurisdictional determinations involving isolated waters determinations, the agencies will continue to follow the procedure in paragraph 5(b) of June 5, 2007, coordination memorandum, until a new coordination memorandum is signed by USACE and EPA. (In accordance with paragraph 6 of the June 5, 2007, coordination memorandum, this is a 21-day timeline that can only be changed through a joint memorandum between agencies).

2. Approved JDs are not required for non-reporting NWPs, unless the project proponent specifically requests an approved JD. For proposed activities that may qualify for authorization under a State Programmatic General Permit (SPGP) or RGP, an approved JD is not required unless requested by the project proponent.

3. The USACE will continue to work with EPA to resolve the JDs involving significant nexus and isolated waters determinations that are currently in the elevation process.

4. USACE districts will continue posting completed Approved JD Forms on their web pages.

Please note that if the USACE determines that the drainages are jurisdictional and would be impacted by project implementation, the Applicant will be required to obtain a CWA Section 401 Water Quality Certification from the RWQCB before the USACE will issue the Section 404 permit. That is, the USACE may issue a "Denial Without Prejudice" as part of the issuance of the Section 404 permit that makes the permit valid once the Section 401 Water Quality Certification is issued. If the USACE determines that the impacted drainages are not jurisdictional, the Applicant will be required to obtain RWQCB authorization under the provisions of a Report of Wastewater Discharge (WDR).

5.3 REGIONAL WATER QUALITY CONTROL BOARD

As noted above, issuance of the USACE Section 404 permit would be contingent upon the approval of a Section 401 Water Quality Certification from the Santa Ana RWQCB. Also, the RWQCB requires certification of the project's CEQA documentation before it will approve the Section 401 Water Quality Certification or WDR. The RWQCB, as a responsible agency, will use the project's CEQA document to satisfy its own CEQA compliance requirements.

Upon acceptance of a complete permit application, the RWQCB has between 60 days and 1 year to make a decision regarding the permit request. That is, USACE regulations indicate that the RWQCB has 60 days from the date of receipt of a completed application that requests water quality certification to make a decision (33 CFR §325.2[b][1][ii]). The USACE District Engineer may specify a longer time (up to one year) or shorter time based on his/her determination of a reasonable processing time (33 CFR §325.2[b][1][ii]). If the RWQCB determines that more than 60 days are needed to process the request, it has the option of requesting additional time from the USACE. Also, the RWQCB has the option of issuing a "Denial Without Prejudice", which does not mean that the request is denied, but that it requires more information in order to make a decision. This effectively stops the processing clock until this information is provided.

The RWQCB is required under *California Code of Regulations* (CCR) (Title 23, Section 3858[a]) to have a "minimum 21 day public comment period" before any action can be taken on the Section 401 application. This period closes when the RWQCB acts on the application. Since projects often change or are revised during the Section 401 permit process, the comment period can remain open. The public comment period starts as soon as an application has been received. Generally, the RWQCB Section 401, USACE Section 404, and CDFG Section 1602 permit applications are submitted at the same time. However, the RWQCB Section 401 Water Quality Certifications may take longer to process.

The RWQCB requires the Applicant to address urban storm water runoff during and after construction in the form of Best Management Practices (BMPs). These BMPs are intended to address the treatment of pollutants carried by storm water runoff and are required in all complete applications. Please note that the application would also require the payment of a Section 401 Application Fee, which would be based the amount of project impacts.

5.4 CALIFORNIA DEPARTMENT OF FISH AND GAME

The CDFG regulates all work (including initial construction and ongoing operation and maintenance) that may substantially divert or obstruct the natural flow of or substantially change or use any material from the bed, channel, or bank of any river, stream, or lake through its Streambed Alteration Program. An Applicant must enter into an agreement with the CDFG to ensure no net loss of wetland values and acreages.

As previously indicated, the extent of the CDFG jurisdiction on the Site has been identified. Based on the current design plans, approximately 0.006 acre (0.002 hectare) within the CDFG's jurisdiction will be impacted as a result of Project implementation. Impacts resulting from Project implementation will require a Section 1602 SAA. The SAA must address the initial construction and long-term operation and maintenance of any structures within areas identified as "Waters of the State" (such as a culvert or desilting basin) that may require periodic maintenance if these are included in the project design.

Prior to construction, a notification (SAA application) must be submitted to the CDFG that describes any proposed streambed alteration contemplated by the proposed project. In addition to the formal application materials and the fee, a copy of the appropriate environmental document (e.g., MND) should be included in the submittal, consistent with CEQA requirements. The CDFG will prepare a draft SAA, which will include standard measures to protect sensitive plant and wildlife resources during project construction and during ongoing operation and maintenance of any project element that occurs within a CDFG jurisdictional area.

If an SAA is required, the CDFG may want to conduct an on-site inspection. The CDFG then prepares a draft agreement, which will include measures to protect fish and wildlife resources that will be directly or indirectly impacted by project construction. The draft agreement will be

transmitted to the Applicant within 60 calendar days of the CDFG's determination that the notification is complete. It should be noted that the 60-day timeframe may not apply to long-range agreements.

The Applicant has 30 calendar days to notify the CDFG concerning the acceptability of the proposed terms, conditions, and measures. If the Applicant agrees with these terms, conditions, and measures, the agreement must be signed and returned to the CDFG. The agreement becomes final once the CDFG executes it and an SAA is issued. Please note that all application fees must be paid and the final certified CEQA documentation must be provided prior to the CDFG's execution of the agreement.

If the CDFG does not respond in writing concerning the completeness of the Notification within 30 days of its submittal, the Notification automatically becomes complete. If the CDFG does not submit a draft SAA to the Applicant within 60 days of the determination of a completed Notification package, the CDFG will issue a letter that either (1) identifies the final date to transmit a draft SAA or (2) indicates that an SAA was not required. The CDFG will also indicate that it was unable to meet this date and that by law the Applicant must complete the project without an SAA and must comply with all avoidance, minimization, and mitigation measures described in the submitted Notification package.

5.5 RECOMMENDATIONS

Based on the conclusions of this jurisdictional delineation, the following recommendations are identified:

1. Schedule a pre-application meeting with USACE, CDFG, and RWQCB staff to discuss: (1) site conditions, biological and jurisdictional resources, the Proposed Project, impacts to these resources resulting from the Proposed Project, and proposed minimization measures and the mitigation program to offset these impacts and (2) the regulatory permit process.

2. Prepare an Approved Jurisdictional Determination Form to obtain the USACE's official written approval of the Jurisdictional Delineation Report and its findings.

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ATTACHMENT A

WETLAND DATA FORMS

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Falcon Ridge City/County: San Bernardino Co. Sampling Date: 6/10/10
Applicant/Owner: Southern California Edison State: CA Sampling Point: 1
Investigator(s): Gary Medeiros, Jeff Crain Section, Township, Range: S17, T1S, R6W
Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 1
Subregion (LRR): California Lat: 34.087996 Long: -117.525112 Datum: NAD83
Soil Map Unit Name: Tujunga gravelly loamy sand (0-9 percent slopes) NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ____ No X
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes X No ____
Is the Sampled Area within a Wetland? Yes ____ No X

Remarks:
Ephemeral drainage. Flows originate at a 36-inch reinforced concrete pipe. Urban runoff was noted.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5')			
1. Xanthium strumarium	20	yes	FAC+
2. Hirschfeldia incana	45	yes	UPL
3. Helianthus gracilentus	5	no	UPL
4.			
5.			
6.			
7.			
8.			
	70 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 50 % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species 20	x 3 =	60
FACU species	x 4 =	
UPL species 50	x 5 =	250
Column Totals: 70 (A)		310 (B)

Prevalence Index = B/A = 4.43

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 4/3	100					sandy	
3-20	10YR 4/2	100					sandy clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- X Sediment Deposits (B2) **(Nonriverine)**
- X Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No _____ Depth (inches): 1-2

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Falcon Ridge City/County: San Bernardino Co. Sampling Date: 6/10/10
Applicant/Owner: Southern California Edison State: CA Sampling Point: 2
Investigator(s): Gary Medeiros, Jeff Crain Section, Township, Range: S 17, T 1S, R 6W
Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 1
Subregion (LRR): California Lat: 34.088056 Long: -117.524893 Datum: NAD 83
Soil Map Unit Name: Tujunga gravelly loamy sand (0-9 percent slopes) NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes X	No _____	

Remarks:
Ephemeral drainage.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Umbellularia Californica	40	yes	FAC
2. Sambucus mexicana	10	no	FAC
3. Schinus molle	20	yes	UPL
4.			
	70	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5')			
1. Baccharis salicifolia	20	yes	FACW
2.			
3.			
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: 5')			
1. Centaurea solstitialis	80	yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	80	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species	20	x 2 =	40
FAC species	50	x 3 =	150
FACU species		x 4 =	
UPL species	100	x 5 =	500
Column Totals:	170 (A)		690 (B)

Prevalence Index = B/A = 4.06

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	10YR 4/3	100					silty clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- X Sediment Deposits (B2) **(Nonriverine)**
- X Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Dry drainage

ATTACHMENT B

SOIL SURVEY

The soil classifications identified below was obtained from the U.S. Department of Agriculture, Natural Resources Conservation Service. The Official Soil Series Descriptions were obtained from the Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture.

Hanford Series

The Hanford series is a coarse-loamy, mixed, superactive, nonacid, thermic Typic Xerorthent. It consists of very deep, well drained soils that formed in moderately coarse textured alluvium dominantly from granite. Hanford soils are on stream bottoms, floodplains, and alluvial fans and have slopes of 0 to 15 percent. The mean annual precipitation is about 12 inches and the mean annual air temperature is about 63 degrees F (°F).

Range in Characteristics:

The mean annual soil temperature at a depth of 20 inches is about 59 to 68 °F, and the soil temperature is not below 47 °F for any significant period. Soil between the depths of about 8 to 24 inches usually is dry all of the time from late April or May until November or early December and usually is moist in some or all parts of this section all the rest of the year. The 10 to 40 inch control section averages sandy loam, coarse sandy loam, fine sandy loam or gravelly equivalents of each. The coarse fragments range from 0 to 35 percent. The particle size control section has little or no stratification. Clay content usually averages 6 to 18 percent. Organic matter is less than 1 percent and decreases regularly with increasing depth. Below a depth of 40 inches some pedons have marked stratification. The soils are medium acid to slightly alkaline and usually become more alkaline with depth. Secondary free carbonates do not occur above a depth of 40 inches. In some cases carbonates have been added to the soil by farmers which results in slight effervescence in the surface layers.

The A horizon is pale brown or light brownish gray (10YR 5/2, 5/3, 6/3, 6/2).

The C horizon is very pale brown, pale brown or light yellowish brown (10YR 5/3, 6/3, 6/4, 7/3, 7/4).

Drainage and Permeability:

Hanford soils are well drained; have negligible to low runoff; and have moderately rapid permeability.

Tujunga Series

The Tujunga series is a mixed, thermic Typic Xeropsamment. It consists of very deep, somewhat excessively drained soils formed in alluvium weathered mostly from granitic sources. Tujunga soils are on alluvial fans and flood plains and have slopes of 0 to 9 percent. The mean annual precipitation is about 16 inches and the mean annual air temperature is about 62 °F.

Range in Characteristics:

The mean annual soil temperature at a depth of 20 inches is 60 to 66 °F. The soil temperature usually does not go below 47 °F or is below 47 °F for only a few days in January. The soil becomes moist below a depth of about 12 inches some time from October to December and remains moist in some part between depths of about 12 to 35 inches until April or May. Textures in the particle-size control section are sands or loamy sands, with more than 35 percent combined coarse and very coarse sand. Thin strata with silt sized particles or similar finer

textures are lacking, though considerable stratification of coarse material is present. Rock fragments make up 2 to 35 percent by volume. Clay content ranges from 0 to 5 percent. The soils are slightly acid to neutral in the upper part and are slightly acid to slightly alkaline in the lower part.

The A horizon have dry colors of 10YR 7/2, 7/1, 6/4, 6/3, 6/2, 5/3 or 5/2 and moist colors of 10YR 5/4, 5/3, 5/2, 4/4, 4/3, 4/2, or 3/3.

The C horizon has dry colors of 10YR 8/1, 8/3, 8/4, 7/4, 7/3, 7/2, 7/1, 6/4, 6/3, 6/2, 5/8, 5/6, 5/4, 5/3, 5/2, or 5/1 and moist color of 10YR 6/3, 6/4, 6/2, 6/1, 5/3, 5/1, 4/4, 4/3, 4/2, 4/1 or 3/1.

Drainage and Permeability:

Tujunga soils are somewhat excessively or excessively drained; have negligible or very low runoff; and have rapid permeability. Flooding is none to frequent.

ATTACHMENT C

NATIONAL WETLAND INVENTORY

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National Wetland Inventory

Attachment C

Falcon Ridge Substation Project

N
W E
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300 150 0 300

Feet

BonTerra CONSULTING

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ATTACHMENT D

NATIONWIDE PERMIT SUMMARY

Nationwide Permit (NWP) 12 (Utility Line Activities)

12. *Utility Line Activities.* Activities required for the construction, maintenance, repair, and removal of utility lines and associated facilities in waters of the United States, provided the activity does not result in the loss of greater than 1/2 acre of waters of the United States.

Utility lines: This NWP authorizes the construction, maintenance, or repair of utility lines, including outfall and intake structures, and the associated excavation, backfill, or bedding for the utility lines, in all waters of the United States, provided there is no change in pre-construction contours. A ''utility line'' is defined as any pipe or pipeline for the transportation of any gaseous, liquid, liquescent, or slurry substance, for any purpose, and any cable, line, or wire for the transmission for any purpose of electrical energy, telephone, and telegraph messages, and radio and television communication. The term ''utility line'' does not include activities that drain a water of the United States, such as drainage tile or French drains, but it does apply to pipes conveying drainage from another area. Material resulting from trench excavation may be temporarily sidecast into waters of the United States for no more than three months, provided the material is not placed in such a manner that it is dispersed by currents or other forces. The district engineer may extend the period of temporary side casting for no more than a total of 180 days, where appropriate. In wetlands, the top 6 to 12 inches of the trench should normally be backfilled with topsoil from the trench. The trench cannot be constructed or backfilled in such a manner as to drain waters of the United States (e.g., backfilling with extensive gravel layers, creating a french drain effect). Any exposed slopes and stream banks must be stabilized immediately upon completion of the utility line crossing of each water body.

Utility line substations: This NWP authorizes the construction, maintenance, or expansion of substation facilities associated with a power line or utility line in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not result in the loss of greater than 1/2 acre of waters of the United States. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters of the United States to construct, maintain, or expand substation facilities.

Foundations for overhead utility line towers, poles, and anchors: This NWP authorizes the construction or maintenance of foundations for overhead utility line towers, poles, and anchors in all waters of the United States, provided the foundations are the minimum size necessary and separate footings for each tower leg (rather than a larger single pad) are used where feasible.

Access roads: This NWP authorizes the construction of access roads for the construction and maintenance of utility lines, including overhead power lines and utility line substations, in non-tidal waters of the United States, provided the total discharge from a single and complete project does not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. This NWP does not authorize discharges into nontidal wetlands adjacent to tidal waters for access roads. Access roads must be the minimum width necessary (see Note 2, below). Access roads must be constructed so that the length of the road minimizes any adverse effects on waters of the United States and must be as near as possible to pre-construction contours and elevations (e.g., at grade corduroy roads or geotextile/gravel roads). Access roads constructed above pre-construction contours and elevations in waters of the United States must be properly bridged or culverted to maintain surface flows.

This NWP may authorize utility lines in or affecting navigable waters of the United States even if there is no associated discharge of dredged or fill material (See 33 CFR part 322). Overhead utility lines constructed over section 10 waters and utility lines that are routed in or under section 10 waters without a discharge of dredged or fill material require a section 10 permit. This NWP also authorizes temporary structures, fills, and work necessary to conduct the utility line activity.

Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if any of the following criteria are met:

(1) The activity involves mechanized land clearing in a forested wetland for the utility line right-of-way;

(2) a section 10 permit is required;

(3) the utility line in waters of the United States, excluding overhead lines, exceeds 500 feet;

(4) the utility line is placed within a jurisdictional area (i.e., water of the United States), and it runs parallel to a stream bed that is within that jurisdictional area;

(5) discharges that result in the loss of greater than 1/10-acre of waters of the United States;

(6) permanent access roads are constructed above grade in waters of the United States for a distance of more than 500 feet; or

(7) permanent access roads are constructed in waters of the United States with impervious materials. (See general condition 27.) (Sections 10 and 404)

Note 1: *Where the proposed utility line is constructed or installed in navigable waters of the United States (i.e., section 10 waters), copies of the pre-construction notification and NWP verification will be sent by the Corps to the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), for charting the utility line to protect navigation.*

Note 2: *Access roads used for both construction and maintenance may be authorized, provided they meet the terms and conditions of this NWP. Access roads use solely for construction of the utility line must be removed upon completion of the work, accordance with the requirements for temporary fills.*

Note 3: *Pipes or pipelines used to transport gaseous, liquid, liquescent, or slurry substances over navigable waters of the United States are considered to be bridges, not utility lines, and may require a permit from the U.S. Coast Guard pursuant to Section 9 of the Rivers and Harbors Act of 1899. However, any discharges of dredged or fill material into waters of the United States associated with such pipelines will require a section 404 permit (see NWP 15).*